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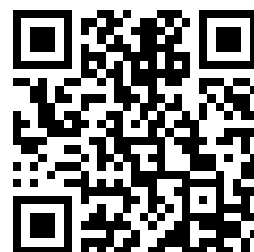
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THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology,
Chemistry, Pharmacology, Public Health, and News.

IN TWO VOLUMES ANNUALLY.

VOL. II. FOR 1888.

SIXTY-SIXTH YEAR.

EDITED BY THE PROPRIETORS:

THOMAS H. WAKLEY, F.R.C.S. ENG.,

AND

THOMAS WAKLEY, JUN., L.R.C.P. LOND.

LONDON:

PRINTED AND PUBLISHED BY THE REGISTERED PROPRIETORS, AT THE OFFICE OF "THE LANCET," 423, STRAND.

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ANOMALIA REPTILIS

Clinical Lecture

ON

O V A R I O T O M Y.

*Delivered in University College Hospital,*BY CHRISTOPHER HEATH, F.R.C.S.,
HOLME PROFESSOR OF CLINICAL SURGERY.

You know, gentlemen, that I have lately had here under my care a patient who was sent up to me from the country with the ordinary form of dropsy connected with the ovary—namely, dilatation of the cysts which form the natural structure of the ovary. When she was admitted on Feb. 16th she had an enormous abdomen, as you will remember. Although she was only thirty-one years of age, she looked a good deal older. She was somewhat sallow, but otherwise she seemed in very good health. The history of the case was that she had had one child, and her abdomen had been getting steadily larger for nearly a twelvemonth. You will remember that we went into the diagnosis at the bedside, and we found that there was very distinct fluctuation over the greater part of the swelling, that there was a dull note over the central portion where the tumour existed, and that there was a clear percussion note on the right side, but one not so clear on the left side. The left side was somewhat dull, and I ventured to predict that we should find that the tumour had formed a secondary cyst, or more cysts, in the left region, and so it afterwards proved. The fluctuation was so very distinct that it might almost have been thought to be a case of ascites as regards the wave of fluid, but of course the fact that the dulness was in the centre and the clear note at the side negated that. The only other thing that it might possibly have been was one of those exceedingly thin cysts which we find connected with the broad ligament, which are sometimes no doubt parovarian, and therefore correctly called parovarian cysts, but are better called cysts of the broad ligament; still the size negated that. You never see a parovarian cyst or a cyst of the broad ligament so large, and I had no doubt that it was a true ovarian cyst. I got Dr. Williams to see the patient, and he quite agreed with me in the diagnosis. The only question, then, was as to when and where the operation should be done. It so happened that the room in which we are in the habit of doing ovarian operations in this hospital, most of which fall into the hands of Dr. Williams, was occupied at the time, and I did not like to leave the patient unrelieved with such an enormous abdomen, because there is a risk in such cases that some cyst might give way accidentally and a quantity of fluid be poured into the peritoneum, and possibly a fatal result ensue. You will remember that a day or two after her admission, therefore, I tapped her in the median line with a large aspirator-needle—one of the largest size—and drew off slowly thirty-one pints and six ounces of thickish fluid. If you work that out, you will see that it is very nearly four gallons, and that will give you an idea of the size of the large cyst which was tapped. It was one cyst only that was tapped; the other cysts, which we found subsequently, of course not being interfered with by the trocar.

One word with regard to the question of tapping. You will find that there are differences of opinion amongst authorities as to the advisability of tapping. No doubt in this case it was advisable, because we wanted to give relief and tide the patient over a few days longer; but if that were not the case, would it or would it not be wise to tap the patient before operation? I think the general opinion is that it is better not to tap. You will certainly have a little risk in tapping; you might let out a little fluid into the peritoneum, and possibly set up a certain amount of peritonitis, and in that way get adhesions. Again, it is possible that you might disseminate a little portion of some growth out of the cyst itself into the cavity of the peritoneum. Therefore I think you will find that the majority of authorities say that it is better, save in exceptional cases, not to tap.

No. 3384.

But this was just one of the exceptional cases where it was well to tap, and I do not think it did the patient any harm.

Now to come to the operation of ovariectomy, which I performed upstairs in the isolated room on March 9th. The patient, you will remember, had a perfectly uninterrupted recovery. She was removed downstairs the week afterwards into my wards again, and I then took out all the stitches, and she is now fairly convalescent, and only requires a little time for the weather to moderate to go home. Then came the question whether the operation should be done with strict antiseptic precautions or not. It certainly was done with strict antiseptic precautions as regards everything we could do to render our hands, our instruments, and sponges aseptic, but it was not done with a spray. There was a spray ready, and those who were present may remember that I declined to use it, but I allowed it to play away in the room. There can be no objection to that, because it keeps the air of the room sweet, but there is a very great practical objection to having the patient covered with spray at the time of the operation. If you allow the peritoneum to be sprayed upon, undoubtedly you get a certain amount of fluid into it, which is undesirable; and, still more, the spray has a great cooling effect upon the intestines, which is certainly objectionable, for it lowers the patient's vitality, and is apt to produce shock. I think, too, it is better to avoid the possibility of a considerable quantity of carbolic acid being absorbed by the peritoneum. You will remember that the peritoneum does absorb extremely readily, and if you have a spray of 1 in 40 carbolic thrown over it, it is conceivable that you might get more carbolic acid absorbed than is good for the patient. Let me finish this question of using the spray by quoting a few sentences from a lecture given the other day at the College of Surgeons by Mr. Cheyne, who is a great authority, as you probably know, upon antiseptics. I quite agree with him when he says: "In former times the peritoneal cavity was looked upon as one especially liable to inflame, and it was thought to be one of the triumphs of antiseptic surgery that operations could be performed on the peritoneum without bad result. The experience of a number of surgeons has, however, now shown that it is not absolutely necessary for success in operations on the peritoneum that all bacteria should be excluded from the cavity; in fact, this seems to be much less necessary than where operations are performed on other serous cavities, such as joints, or on the subcutaneous or muscular tissues. The explanation of this surprising result is found in the nature of the lining wall of the cavity, and in the conditions under which pyogenic organisms find themselves there. The peritoneum has marvellous powers of absorbing fluids, and thus effusions into it are very rapidly removed, and in this way micro-organisms are deprived of the necessary nutrient material, while they are also, in all probability, absorbed along with the fluid and destroyed in the blood, or excreted." Then, in another part, he says: "It is evident, therefore, that when authors draw conclusions to the effect that aseptic treatment is unnecessary in surgical practice because they obtain good results in operations on the peritoneum without it, when they take care to introduce as few of these organisms as possible (in many cases probably none at all are allowed to enter), to introduce them in as dilute a state as possible, to remove all the fluid and other materials, such as blood-clot, in which they can grow, and to avoid injury to the peritoneum as far as they can, they make an assumption which is not at all in accord with other clinical and experimental observations. The points which I have mentioned amply explain the results, and bring them into unison with those of experiments and of clinical experience with regard to other tissues of the body." I do not for a moment say that we did the operation without antiseptics: we did use antiseptics, but the point that I want you to understand is that I purposely did not use the spray, and I think the result shows that it was not necessary. There are many surgeons who still use the spray for peritoneal operations, but I think that those cases which you have seen of other peritoneal operations where the spray was not used, such as gunshot injuries, and others which Mr. Barker has recently had under his care, most of which have been very successful, show that a spray is not necessary in operations upon the peritoneum, but had perhaps better be avoided.

Then as to the steps of the operation. Those who were present will remember that I simply made an incision three inches long; that I exposed the sac by dividing the peritoneum upon a director, and that the sac immediately came into view—a bluish-looking thin membrane, which is its ordinary condition. There was no peritoneal fluid, and the cyst was at once exposed. I put my hand in and broke down some slight adhesions; and then, as you will remember, I tapped the cyst at once with Wells's trocar. I first tapped the large cyst, which was of course the original cyst which had gradually been refilling, and then I found other secondary cysts, one of which I tapped again. I also found at the back part, as I expected, some almost solid material, and I thought it better to enlarge my incision slightly, perhaps a couple of inches more, making it five inches altogether. I was then able to deliver the cyst, as we say, to draw it out of the peritoneal cavity, and expose the pedicle. In drawing it out, I found again a few slight adhesions, and you may remember that the omentum was adherent at one or two points. I tore those through and got to the pedicle. It was, as you see, a wide pedicle, formed, of course, by the broad ligament of the uterus, and you can see here on the cysts the end of the Fallopian tube. I transfixed the broad pedicle with an aneurysm needle carrying carbolised silk. I tied it at first in two portions, and then, cutting one ligature short, I used the other to put round the whole of the pedicle, and tied it again in one piece. It is a little important to bear in mind that it is not safe to tie a pedicle simply round as you would an artery. Never mind what the size of the pedicle is, you should transfix it and tie it in two halves by separate ligatures. That may be in a great many cases sufficient, but then it is just possible that there might be a vessel in the middle which might have been transfixed by your needle or torn by the ligatures. It is therefore safer, though it is not essential, to take one of the ligatures and bring it round again behind the point where it has been tied before, so as to enclose the whole of the pedicle again. You will find that some operators lay a good deal of stress on looping one ligature into the other; they say it is not safe to tie the two halves separately, but that you should slip one ligature into the other. I have not done it, and I do not think it necessary, and I have never had trouble in any way afterwards by the ligature. I then cut the ligature short and divided the pedicle with scissors. Then came the examination of the peritoneum and stopping one or two bleeding points in the omentum, which we tied with fine silk. Then the peritoneum was sponged carefully out and the abdomen closed.

Now, it is in closing the abdomen that Sir Spencer Wells made the great improvement. Previously to his first operations, now thirty years ago, it had always been laid down in surgical works that in any case of wound of the abdomen you should be careful, in putting in stitches, not to include the peritoneum. He found on a post-mortem examination of one of his early fatal cases of ovariectomy that, although the upper part of the wound had united, the two peritoneal surfaces were asunder and had not united, and that there was suppurative between them. He made a few experiments on rabbits, the results of which you may see in the College of Surgeons' museum; and he found that when he carried the needles through the peritoneum and brought the two surfaces together he had at once adhesion of the peritoneum, and the wounds united rapidly and well. Sir Spencer Wells at once published his results, and ever since that the rule of surgery has been reversed, and everyone now would at once put needles through the peritoneum and bring the two adjacent peritoneal surfaces close together. That is exactly what I did. I used a silk thread with a needle at each end, passed it from within through the abdominal wall, about half an inch from the edge, and put in five sutures, which I tied fairly tightly. Then I blew a little iodoform on the wound, put a pad of wool over, and plaster over that, to keep the parts quiet.

The patient made a perfectly good recovery. We have here the temperature table. I performed the operation on March 9th, in the morning. The temperature went up a little towards the evening; it was as high as 101° at 7 P.M., and it was 102·2° at 11 P.M. The next day it went even a little higher—102·4° and 102·8°; and at 3 o'clock it was at 103°. Then it gradually came down, and in two days it was at the normal, and there it continued until the patient left the separate ward. With regard to the temperature in these cases, it is said that if you use the spray you get a

lower temperature than if you do not use it. I do not believe it for a moment. It is true that I did not use the spray here, and the temperature seems to have gone up a little, but I can show you in some old case-books of mine records of temperatures after ovariectomy illustrating this point. Here is the very first—that of a woman on whom I performed ovariectomy in 1870. The temperature is carefully recorded throughout, and it was as nearly a normal temperature as it could be, except on the evening of the operation, and then it was only 100·2°. It never went above 100·6°. And this was before the days of carbolic spray—practically before the use of antiseptics,—because we certainly took no precautions in those days to produce antiseptic results. We had cleanliness, but nothing more. I only want to illustrate the fact that a spray certainly does not keep down the temperature, and that the rise in temperature in this case was not due in any way to the want of spray. What it was due to I cannot say: it is one of those curious things which happen from time to time. It certainly did not mean any septic poison, because the patient made a perfectly good recovery.

So much for the case; now I want to say a few words with regard to the operation of ovariectomy. And first with regard to the circumstance that I and my surgical colleagues so seldom do it here. It is not our fault; it is our misfortune; we do not get the cases. The fact is that the gynaecological department see these cases much more frequently than we do, and Dr. John Williams does the operation so well himself that he does not call in his surgical colleagues to assist him. I am not particularly jealous of it; I am quite content that he should have his cases; but at the same time I should be sorry for it to be supposed that ovariectomy is not a strictly surgical proceeding. It is a surgical operation, and it was by surgeons really that ovariectomy was established. If you go into the history of ovariectomy, you will find it was first done by an American surgeon, Mr. McDowell. I have here a copy of "A Memorial Oration in honour of Ephraim McDowell, the Father of Ovariectomy," by Samuel D. Gross, M.D., the leading surgeon in America of his day. In 1879 there was a monument, of which I have here a photograph, set up to McDowell by the Kentucky State Medical Society, and after the manner of Americans they got Dr. Gross—a fine old surgeon—to make an elaborate speech (with which I will not trouble you) dedicating this monument to McDowell. Then, as a reward to Dr. Gross for having made the speech, they did an eccentric thing: they presented him with McDowell's knocker, which used to hang upon his door when in practice; and I have here a short speech made by a poor friend of mine, now dead—Dr. Cowling of Louisville,—in which he speaks in very high-flown terms of the different associations of this knocker with McDowell's practice. McDowell was, no doubt, the first to perform the operation, and it was occasionally done by different surgeons, the late Professor Lizars of Edinburgh being the first who did it in this country. In London it was done by one or two surgeons. Mr. Cæsar Hawkins was, I believe, the first who had a successful case in a London hospital a great many years ago. The late Mr. Baker Brown, I think, did the most at one time to bring ovariectomy into note, but he had no very great success. It was not until Sir Spencer Wells took it up in 1858 that the operation may be said to have been established. There were a few cases recorded, and they were mostly fatal, and it was not until after he had taken it up that the operation became an established thing.

Now let us see what was the precise operation in the early days. The abdomen was opened, not always in the middle line; I believe in the earlier operations the incision was made on one side. But certainly in the later operations the linea alba was incised, and then the tumour was removed without tapping. That is the great point, that when a large incision was made, sometimes from the ensiform cartilage to the pubes, and the whole mass of the tumour was dragged out, naturally a large quantity of intestines came out with it, and the only wonder is that any of these patients survived. The first great improvement was limiting the incision and tapping the cyst, reducing the bulk of the tumour, and so removing one great element of danger. Then came the question of the treatment of the pedicle. The first treatment of the pedicle was exceedingly simple. The surgeon tied it, and he left two large ends of thread hanging out of the lower end of the wound, and after a few days, if the patient lived so long, the ligature came away and was dragged out of the wound with a piece

of the pedicle in it. A few cases recovered even by that very rough method. But the first great improvement was the idea that it would be better to bring the pedicle outside, and I think that Mr. Jonathan Hutchinson is entitled to the credit of that. He thought that if the pedicle could be retained outside—I mean the cut end of it—we should avoid a considerable amount of risk of intra-peritoneal suppuration, and he advised what is called a clamp. I really had some difficulty in getting a clamp this morning to show you. The instrument is now so completely gone out of fashion that Mayer and Meltzer could not find a complete one; but here is the end of one, and you can easily imagine that it ought to have two handles. This is the original of Mr. Hutchinson's clamp, which was nothing more than a pair of callipers. The pedicle was put through and squeezed up as tightly as possible, and then the nut was screwed down. The handles were taken off for convenience; the wound was brought together, and the clamp was left outside the abdomen. There are various modifications of clamps. This was one of Sir Spencer Wells's last, I believe; but I think there is no clamp so good as this simple one, where the edges are parallel to each other and well serrated. Of course, the pedicle being outside the abdomen, any action on the end of the pedicle took place outside the peritoneum, and after a few days the pedicle got loose from the clamp. There was probably no hæmorrhage, the vessels being stopped by the ordinary process. Then the pedicle got retracted a little into the cicatrix, and became adherent there. That was one of the principal objections to the clamp—that the end of the pedicle, being entangled in the cicatrix, was left there, and sometimes remained raw and sore, and occasionally, not unfrequently I believe, it menstruated. The fact is, there was the end of the Fallopian tube included in the pedicle, and when menstruation took place on account of the other ovary you were apt to get a discharge of blood from it. Those who were not satisfied with the clamp tried to divide the pedicle with a cautery. Mr. Baker Brown, I believe, was the first who did it, and he did it rather extensively. I have here two of his cautery clamps. You will at once see how they were used. Supposing this towel to represent the pedicle, it was put through the clamp and the clamp was screwed up tight; in fact, it is very much like a magnified Smith's pile-clamp. These pieces of ivory protected the abdominal wall from injury. Then the cautery was worked against the metal bar, and the pedicle was cut through. Of course, if the cautery acted perfectly nothing could be better; but practically it was found—I found it myself—that when you came to let go the clamp you were apt to have a little bleeding, one or two vessels spouted, and then you were obliged to apply the cautery again or to pick up the vessels separately and put ligatures on. Then we had introduced into this country by the late Dr. Tyler Smith the suggestion that perhaps, after all, it would be better to tie the pedicle and cut the ligatures short, leaving the ends in the abdomen, and that is almost the universal practice in the present day. But it is right that it should be understood that it does not at all depend on the introduction of the Listerian method of treatment, because it was done long before that. I remember seeing Dr. Tyler Smith operate in 1868, long before Lister brought out his system, and then the pedicle was "tied and dropped," and the patient did perfectly well. Since the introduction of antiseptics Sir Spencer Wells has abandoned the clamp, and now drops all his pedicles in. In his book on the "Diagnosis and Surgical Treatment of Abdominal Tumours," I see that he takes more credit than I should for the antiseptic method. Other surgeons also think that his success during the last few years since 1878, when he began to drop the pedicle in and at the same time use antiseptics, has been due rather more to dropping the pedicle into the peritoneum than simply to the use of antiseptics. However that may be, here you have a case before you where the pedicle was dropped, where antiseptics were used but not the spray, and where the patient has done perfectly well.

Though I cannot speak of hundreds or thousands of cases like Sir Spencer Wells, I think it is right that I should give you the result of my own personal experience of the operation. I was attached for a time some years ago to the Hospital for Women at Soho-square. While there I had cases of ovariectomy—not very many. My first case was a very bad one, in 1870. There were two cysts of the broad ligament, and I used the clamp cautery. The patient died.

The second case was a woman aged twenty-eight; there was a multilocular cyst, and I used the clamp. That was the only case in which I have ever used the clamp; and you will easily understand why. I used an ordinary clamp, and apparently everything had done well; but I was sent for some hours afterwards in a great hurry, and I found the patient pale and apparently moribund; the pedicle had slipped out of the clamp and disappeared into the abdomen, and the patient was apparently bleeding to death. I at once opened the incision in the lower part of the abdomen, got hold of the pedicle, and tied it. Unfortunately the patient had lost too much blood, and died some few hours afterwards. In the third case I tied and dropped the pedicle; but it was a case of cancer, and cases of cancer almost invariably do badly, and the patient died on the thirty-fourth day. One can hardly say that she died from ovariectomy, but she did not eventually recover, and she died really of cancer. With my fourth case I was more fortunate, the patient making a recovery; but it was a curious recovery, because a singular accident happened during the operation. It was the case of a woman aged thirty-seven, with very great adhesions, on whom an unsuccessful attempt at ovariectomy had previously been made. The woman came to me, and I thought that, on the whole, I might try and do what I could. I performed ovariectomy, and succeeded eventually in removing a cyst, and she got perfectly well. I will give you short notes of the case from the Clinical Society's Records. She was thirty-seven years of age, and the circumstances of the operation were these: "I found it necessary to enlarge the incision upwards, and this I did in the usual manner, raising the abdominal wall with two fingers passed beneath it, and cutting between them with blunt-pointed scissors. On completing the section an unusual appearance at the upper extremity of the incision attracted my attention, and I then found that a piece of small intestine, perfectly empty and adherent to the abdominal wall, had been divided in three-fourths of its circumference. An assistant grasping the ends of the divided bowel, I proceeded to complete the removal of the ovarian tumour, in which I encountered great difficulties owing to the firm adhesions both to the abdominal wall and deeply in the pelvis, and also to the intestines on the right side. The cyst was connected with the right ovary, and there was a broad pedicle, which I tied in two parts with hempen ligatures afterwards cut short, and the same plan was pursued with a long vascular band of adhesions. I now returned to the divided intestine, which I treated on the ordinary principles of surgery by establishing an artificial anus in the following manner." With that I need not trouble you. I made an artificial anus in the wound, and the patient made a complete recovery. I was able to close the artificial anus to a certain extent, but there always was a little fistula left through which a little biliary fluid discharged, otherwise the patient completely recovered. Now, let me say at once that a wound of the intestine is one of those things that may happen, and I believe has happened, in ovariectomy both before and since my case. I see Sir Spencer Wells mentions having had a case subsequent to this, in which he found that he had torn the intestine; and he had to remove a piece of the intestine, and afterwards united the two portions together by sutures—what we now call the Lembert suture. The patient died, not apparently from anything to do with the intestine; for at the necropsy it was found that the intestine was watertight. In my case I did not venture to do that. I brought the two ends out and made an artificial anus, and I think that, on the whole, it was best for the patient.

To go on with my list, in which there now come some successes. There was a woman aged thirty-seven who recovered—that is the case I have just mentioned; and then there was a woman of thirty-six who recovered; and then there was a woman of thirty with a multilocular tumour simulating uterine tumour—indeed, it was so like a tumour of the uterus that when I opened the abdomen I was in doubt what I should find; it was a multilocular ovarian tumour, and the patient recovered. The next case was a woman of forty-nine, from whom I removed both ovaries with cautery, and she recovered. The next case was an unfortunate one—a woman of forty, with cancer of both ovaries. I removed one with cautery and the other with a ligature; but she died. Then I had a young woman of nineteen with a cyst of the broad ligament. Perhaps I ought to have enucleated that cyst, but it was not done in

those days—I am speaking of 1872; I removed the cyst therefore with the ovary, and she got perfectly well. Then in 1873 I had two cases, both of which I treated with cautery, and both recovered. There were eleven cases altogether that I had in the Hospital for Women. Then in this hospital, in 1872, I had a multilocular ovarian cyst, which I removed in this theatre, using the spray, and with all the precautions, as far as we could tell, of an antiseptic nature; but the patient died. Then in 1874 I had here another case, but fearing to operate in the hospital I availed myself of Dr. Graily Hewitt's offer to do it in a house he then had in Gower-street, and the patient was removed there. I removed the tumour, and she did perfectly well. Then the last, the fourteenth case, is the one I have done here, and she, I am happy to say, has made a good recovery. My experience, as I say, is very small compared with that of many other surgeons. The outcome of it is this, that certainly in the present day I think you should use the ligature, tie the pedicle carefully, and drop it in, taking all precautions of an antiseptic nature; but my advice is not to use the spray. It is better that the patient should be isolated, and particularly that she should be operated upon in the room where she is going to remain, so as to avoid all risk of going to and fro.

I think I ought to say that even the best ovariologists, of course, make mistakes in diagnosis. The late Mr. Baker Brown, who was an extremely able surgeon, used to say that no one could tell what an abdominal tumour was until he had his hand upon it inside the abdomen; and there is a great deal of truth in that. We make elaborate diagnoses sometimes, and we find them quite contradicted when we get inside. I might mention one case which I myself had some years ago, of a patient who had a cyst with very distinct fluctuation, as distinct as in the patient that I have lately operated on. I had another opinion upon her case from a gynaecologist of eminence, who was quite sure that it was an ovarian tumour, and he recommended me to do ovariectomy. I laid the woman's abdomen open, and on manipulation I found it was not an ovarian tumour at all, but an enormous cyst of the kidney. Then came the question what was to be done. I think, if I had then known as much about kidney surgery as I do now (it was many years ago), I should simply have tapped the patient from behind, closed the abdominal wall, and drained her from behind, much as in the case of the patient lately upstairs in No. 5. But in those days kidney surgery had hardly begun; therefore, recognising that it was a kidney cyst, I proceeded to remove it in the same way that you would do an ordinary nephrectomy from the front. I removed an enormous cyst, and without very much difficulty tied the pedicle, and the patient survived the operation for some days; but she died of a low form of peritonitis, which I believe might have been obviated by drainage. I say so now because we know so much more about these things than we did then. But this is by no means a solitary case. I myself have seen a well-known operator make the same mistake, and find a kidney cyst instead of an ovarian cyst. I have also seen the spleen mistaken for an ovarian tumour, and I suppose it is hardly possible to avoid occasional mistakes in diagnosis. But when you have a case before you, having made a fair diagnosis that it is ovarian, the only way really to settle its nature is to put your hand inside the abdomen, and then deal with it in the way I have described.

FEMALE PHARMACISTS IN RUSSIA.—A Russian decree, which has long been expected, on the subject of female pharmacists, has at last been promulgated. This permits females who have gone through a certain number of classes in the gymnasium, and who, besides, have undergone an examination in Latin, to enter pharmacies as apprentices. At the end of the regular period they must pass the ordinary examinations at a university or the Military Medical School, which answers to a medical faculty of the University of St. Petersburg, though the two institutions are entirely distinct. One of the provisions of the decree forbids a pharmacist to take male and female apprentices at the same time.

QUEEN'S HOSPITAL, BIRMINGHAM.—Miss Mary S. W. Roberts, head nurse of St. George's Hospital, has been appointed lady superintendent of the above-named hospital.

ABSTRACT OF THE Croonian Lectures

ON ANTIPYRETICS.

Delivered at the Royal College of Physicians,

By DONALD MACALISTER, M.A., M.D., F.R.C.P.,
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LECTURE I.

THE lecturer began by explaining that the lectures he proposed to deliver were complementary to the Gulstonian Lectures of last year. In these the treatment of fever had been intentionally passed over. But treatment could not long be absent from the thoughts of a physician, however theoretical the bent of his mind; and when very unexpectedly he was offered another opportunity of addressing the College as Croonian Lecturer, he had proposed, and the President and Censors had approved the choice, to deal with the practical bearing of the theory of fever. The regulations under the new scheme prescribed "lectures on one or more subjects in anatomy, physiology, and pathology, with a view to the prevention, control, and cure of diseases." Though the subject of the lectures was for brevity given as "Antipyretics," he did not propose to limit himself to the drugs so called or their pharmacology. He would discuss rather—(1) the light thrown on the nature of fever by the means employed successfully for its treatment, and (2) the lessons in the treatment of fever which flow from a right understanding of its nature.

The outlines of the theory presented last year were recalled. The nervous mechanisms of heat-loss or thermolysis, of heat-production or thermogenesis, of heat-balance or thermotaxis, constituted the thermal nervous system, and these mechanisms were in ascending order of complexity and of evolution. Fever was a dissolution beginning with thermotaxis and extending to the inhibitory mechanism of thermogenesis. Hyperpyrexia was a still deeper dissolution, and extended to thermolysis. Much still remained to render complete our knowledge of the anatomy and physiology of these several mechanisms, but contributions were constantly being made, and obscurities cleared away. As he was anxious to strengthen in their minds the conviction of the objective reality of the thermal system, he would first call attention to certain recently acquired anatomical and physiological facts which had not yet received sufficient notice.

First as to the physiology of thermolysis. The Harveian Orator, Dr. Stone, had pressed on the College the importance of physical investigations in medicine, and regretted that they were at present less regarded than researches in histology or bacteriology. A series of valuable experiments, involving high skill in physics and in mathematics, and therefore perhaps overlooked, had been made on the radiating power of the skin by Dr. Masje under Professor Eichhorst of Zurich. Probably 60 per cent. of the heat leaving the body did so by radiation. But the laws of this loss had not been inquired into, or had been assumed to be governed by physical analogies. At the Zurich Hospital, by the aid of an instrument of great delicacy and precision, on the principle of Langley's bolometer, the true laws of skin-radiation had been worked out and proved to be strikingly suggestive. A hot body radiates less as its temperature falls. This was the physical law, but not the physiological. A part of the skin suddenly uncovered naturally became cooler, but its radiation increased steadily as the temperature fell, until a certain limit was reached. Radiation was more intense in men than in women, in boys than in girls, in young persons than in old, in the vigorously healthy than in the feeble or convalescent. In other words, radiation was more active as the processes of nutrition and metabolism were more active. Reasons were given for believing that the radiating power of the skin, which could be shown to depend on its physical and chemical constitution, was subject to nervous control; and thus what was apparently the most purely physical of

all the thermolytic processes was not outside the domain of the thermal nervous system. In discussing the value of an antipyretic method, in explaining its mode of action, we could not in future ignore the questions—What changes does it call forth in the texture of the skin? How does it modify the great thermolytic function of radiation?

Another subject connected with thermolysis deserved some mention—namely, the connexion of peripheral temperatures with central. The lecturer, in common with many others, had been perplexed and baffled by the apparent lawlessness of surface temperatures as taken by any of the ordinary methods. So doubtful were any results based on them that experts regarded with suspicion all observations but their own. Recent inquiries also carried out at Zurich under Professor Eichhorst showed that the difficulty lay chiefly in an erroneous method of procedure. When peripheral temperatures are taken continuously for some hours (eight or ten) instead of some minutes, it appears that in health as well as in disease the curves obtained usually consist of two distinct portions. The first corresponds to a stage of an hour or so, in which the temperature is highly irregular and different from the central temperature. This is the *ambiguous* stage. The second is marked by much greater uniformity and by nearness to the central temperature. Like the latter, it tends to be constant and stable. This is the *continuous* stage, and it is so regular, so normal, that we are safe in drawing conclusions from its changes. Observers had hitherto seldom got beyond the ambiguous stage, and hence the irregularity and confusion already alluded to. The effects of antipyretic methods on the continuous stage of the peripheral temperature would form an interesting and trustworthy study.

Next, the anatomy and physiology of the thermogenic system had received valuable contributions. New points in the thermogenic tract had been made out (he would not call them *centres*) by Ott and others in America, using the methods and working under the inspiration of Professor Wood. In the rabbit four points in the cerebral axis were now known, the stimulation of which gave rise to increased heat-production, and not simply rise of temperature. Two were at the anterior and median borders of the corpus striatum, one between that body and the thalamus, and a fourth at the anterior end of the thalamus. Dr. Hale White had in part verified the localisation as regards the anterior striate centre, and had made out that unilateral irritation gave rise to bilateral pyrexia. It appeared that in the rabbit the lateral differentiation of the thermal tracts, like that of the motor, was still incomplete.

The question as to whether these points were on excitator or inhibitory tracts was next discussed, and the experiments of Girard in Geneva and Baginsky and Lehmann in Berlin were adduced as apparently bearing on the question in opposite senses. Reasons were given for thinking that the so-called "striate heat centre" might be a passing-place if not a meeting-place for both anabolic and catabolic fibres. Ott the other day had announced certain new discoveries which pointed to cortical areas being concerned in heat-regulation. An area at the upper end of the Sylvian fissure appeared to control the striate region. Thus, when thermogenesis was induced by puncture of the striate "centre," and an abiding pyrexia resulted, stimulation of the cortical area lowered the temperature and diminished the thermogenesis. The bearing of such observations on the localisation and nature of the thermotaxic mechanism was alluded to, and the probability of further advance estimated. In Dr. Gaskell's pregnant hint—namely, that his explanation of inhibition as anabolism is applicable to nerve centres as well as to peripheral organs—the lecturer saw the promise of much new light on the mechanism of thermotaxis.

LECTURE II

In the first lecture the anatomy and physiology of the thermal nervous system were dealt with, in order, among other things, to show that in the minds of those who are most actively engaged in experimental inquiry the conviction of its existence is a guiding principle, and no longer a plausible speculation only. Without a sufficient belief in the definite character of the apparatus of thermal nerves and centres, some of what was about to follow would appear more theoretical than it really was.

In the second lecture, partly by way of relief, certain questions would be discussed connected with what might be termed the teleological pathology of pyrexia. It was

admitted that fever is a sign of disorder, of disturbance, of a physiological function or functions. But in all ages some had maintained, and the proposition was now being revived, that this disorder is not wholly or not in itself injurious. It was regarded as a wholesome reaction against a *materies morbi*, a manifestation of the *vis medicatrix*. Cohnheim had asked: "What is the deeper meaning, the true significance, underlying the febrile process? Does the organism gain any advantage from the rise of temperature which characterises pyrexia?" He had answered that it might plausibly be maintained that in febrile heat we should recognise a sanative power, by which the body consumed and destroyed a virus it could not directly eliminate. From a practical point of view it might become more urgent to appraise the *dangers* which menace the body in fever, and before a conclusion was reached it would be necessary to distinguish with certainty and precision between the parts played by the specific febrile disease and the disorder of the body heat which accompanied it. "But," added Cohnheim, "when that time comes I anticipate that physicians will more and more regard fever, not indeed as a condition free from danger, but as on the whole a wise provision of nature." Hilton Fagge was inclined to take a like view, but had given few reasons other than those based on a possible explanation of the phenomena of relapsing fever and ague. It would be well to examine more closely the grounds of this view—that fever serves a salutary purpose.

After the long prevalence, especially on the Continent, of the idea that the dangers of fever are primarily due to the high temperature, and that to reduce the latter is the chief end of treatment, the reaction was remarkable. It was due, to some extent, to disappointment with the effects of vigorous antipyretic treatment, external and internal, on the course of some of the specific fevers. Expectations had been exaggerated, because based on a one-sided theory, and they had not been fulfilled. Another factor in the reaction was the growth of the germ theory. The thesis of those who extended their bacteriological speculations to fever appeared to be that the specific fevers are due to the intrusion into the body of certain specific living cells or microphytes; that these engage in a struggle for subsistence with the tissue cells of the body; that pyrexia is a reaction brought about (by natural selection) to favour the latter in the struggle, and to hamper or disable the former; and that the result is, or should be, that the microphytes are overcome and consumed, and thus through fever the body is restored to health.

It was true that some of the best-known microphytes were checked in their growth or multiplication by high temperatures. Gaffky showed that typhoid bacilli formed spores with difficulty at 107.5° F.; Koch, that tubercle bacilli ceased to grow after being kept for some weeks at a like temperature. The bacillus anthracis continues to grow, but loses in virulence, if kept for some weeks at 108.5° or for some days at 109.5°. Surely it could not be held that such facts were really relevant. A body temperature of from 107° to 109°, kept up for days or weeks, was too powerful a remedy. The body would be consumed before its parasite.

A less direct explanation was suggested in a recent lecture by von Ziemssen—namely, that the pyrexia so alters the constitution of the tissues that the microphytes no longer find in them a suitable soil, and so perish. But against this was the fact that the exanthemata tended strongly to run a definite course whether the fever was high or low. The gravity of the infection stood in no proportion to the less or greater intensity of the pyrexia. Rather was it the case that the highest fevers were the most enduring, the slightest fevers the briefest.

The cases cited by Hilton Fagge, by Murri, by Finkler, and others, in which the febrile paroxysm seemed to have a destructive effect on the living virus of relapsing and of intermittent fevers were then discussed, and were shown to admit of a simpler explanation, one applicable to all the specific diseases attributed to specific micro-parasites. These parasites seem, like other living creatures, to have a definite life-period, in which they grow, multiply, exert their special action, and decay. This period is independent of pyrexia, independent of antipyretic treatment, and independent of external conditions. The definite duration of virulence in typhus, measles, small-pox, &c., and the sudden extinction of its vitality at the crisis in croupous pneumonia, bespoke a normal biological property in the virus, a law of its life which forbade it to endure longer than a certain time. It had shrewdly been asked (by Goldschäider):

If pyrexial temperatures are not in themselves dangerous, but merely serve to purify the body without injuring it, why are they in ordinary cases confined within such narrow limits? If fever be a process with a purpose, would it not be better to nip the growth of the microphyte in the bud by a prompt and intense rise of temperature at the beginning of the illness?

In concluding this part of the argument, the lecturer asked a question of those who relied on the all-embracing doctrine of evolution, and argued that so universal a symptom as fever following on bacterial invasion could only in the course of ages be developed if it conveyed some advantage in the struggle for existence. Were not the bacterial plants also engaged in a like struggle? Had they not, too, in the course of ages acquired properties which helped them to grow and multiply? Might not the fever they induced be salutary—to the bacteria? He laid no stress on such an argument, but adduced it to show that the reasoning of the germ theorists on fever was two-edged, and could be turned against themselves. A general fallacy underlay many speculations of this kind. In speaking of fever generally, of its treatment, of antipyretics and antipyresis, the febrile process had been too much regarded as a single entity. There were many morbid processes having fever as a concomitant; some one or other of these was studied, and the laws arrived at for its causation, pathology, and treatment were too hastily generalised so as to apply to other and widely different morbid processes. Even if we were to admit it possible that in relapsing fever and in ague the pyrexial attack conveyed some benefit, it would be rash to infer at once that all pyrexia is beneficial and apply the law to the case of acute rheumatism or septicæmia. In fact, fever was at best a symptom, and a symptom whose significance was very different in different cases. Parallel illustrations from the phenomena of cough and of pain were given. The only sound therapeutic method was to study the particular circumstances in which the symptom arose. Yet there were two extreme schools: one insisting that all pyrexia is dangerous, and that high temperature must be lowered at any cost; the other, whose headquarters were at Vienna, maintaining that, as fever is salutary, it should not be meddled with—the school of pure expectancy. The postulate of the latter had been dealt with; it was worth while to examine the postulate of the former—that high temperature is purely mischievous and the efficient cause of all the dangers that threaten a fever patient's life. Dr. Cayley, in a previous course of Croonian Lectures (1880), had dealt with this question in a masterly way, and his conclusions were quoted. He thought it decisively proved that the view in question was only in part correct, and that many of the morbid phenomena accompanying fever occurred independently of it. The lecturer would not go over the same ground, but adduced new considerations bearing out and strengthening Dr. Cayley's conclusion. In the first place, he referred to his Gulstonian Lectures in illustration of the point that "high temperature" was an ambiguous term, and might or might not connote pyrexia. The temperature might be raised in various ways, some of them harmless. In thermal ataxia, in disordered thermolysis without other change, the temperature might rise and remain high. But there was ground for the conviction that such non-pyrexial elevation of temperature was not in itself a danger. Take, for example, the cases of aseptic operation or injury recorded by Volkmann and other surgeons, in which temperatures as high as 105° were accompanied by no loss of appetite, no distress, no symptom such as could be characterised as febrile.

Many of the current statements as to the baneful effects on tissue and function of mere high temperature were based on experiments in which animals were subjected to forcible over-heating. These experiments were reviewed, and, in the light of fresh researches by Naunyn, Welch of Baltimore, and others, shown to be capable of other interpretations. When proper precautions as to food, water, and air were taken, animals could be kept with body temperatures varying about 107° for days or weeks, and that without grave injury or even discomfort. Danger did not arise till a higher point was reached, and then the result showed that the thermal mechanism being overstrained, that dissolution of it which we called hyperpyrexia had set in. The phenomena of relapsing fever were taken as bearing in the same direction. In this disease, the subjects of which were commonly weak and ill-nourished, temperatures of 107°, lasting for five or six days, were frequent, and were

perfectly well borne. The small mortality of the disease corroborated this. The conclusion thus reached was (1) that high temperature in itself was not in general a salutary condition in the infective diseases, and (2) that it was not in itself the efficient and sufficient cause of all the disturbances commonly called febrile.

LECTURE III.

In the second lecture it had been shown that, when carefully examined, the experimental evidence had failed to prove the proposition that the high temperature of febrile diseases is the efficient cause of the morbid phenomena that accompany it. Both in man and in animals the temperature might be considerably raised, and for considerable periods of time, without permanent danger to the organs or their functions. In discussions on the subject, however, it appeared that the phrase "danger of high temperature" was used in two different senses, which were sometimes confused, and this confusion led to misunderstanding of the issue and ambiguity in the conclusions arrived at. By some the phrase was understood to mean the mischief caused by mere heating up of the body and its tissues. This was the sense in which it was taken by such an authority as Liebermeister when he said: "A patient whose temperature keeps persistently at 104° or higher will certainly die from this cause alone, either after a few days or after a somewhat longer interval, according as his power of resistance is less or greater." It might, on the other hand, imply that high temperature was an index or sign of the gravity of the disease from which the patient was suffering. In typhoid or pneumonia, for example, we might say, as a matter of experience, that danger threatens when the temperature rises to 106°, meaning that such a temperature usually indicates that the disease is taking a dangerous course. So long as a certain rough parallelism between temperature and the gravity of the disease was all that was postulated there was little to object to in this statement, but it must not be pushed too far, as cases constantly occurred in which the parallelism was not observed. Instances were cited where, with the gravest signs of danger in typhoid, the temperature was little, if at all, above the normal, and where improvement took place when the temperature rose nearer to the ordinary level. Wunderlich, who might be called the law-giver of the subject, insisted on this point, and had formulated statements which had been forgotten by some who thought their work was based on his principles. To illustrate some of these the lecturer gave examples from Dr. Warfvinge's experience at Stockholm, of which accounts had appeared in the Transactions of the International Medical Congress of 1884 and else where. From these it appeared that in typhus, in typhoid, in pneumonia, and other specific fevers it was not the height of the temperature *per se* that made a case dangerous for high maxima occurred frequently in mild cases, and low maxima in fatal cases. Among the fatal cases of typhoid there were more of the lowest maximal temperatures and fewer of the highest than among the severe cases that recovered. In pneumonia, while very high temperatures were, on the whole, rare, there was no appreciable difference in the maxima reached respectively by favourable cases that recovered and by unfavourable cases that were fatal. In the pneumonia of children especially it was noticeable that, though the temperatures ran unusually high, the prognosis was very favourable. So likewise, on comparing measles with scarlatina, the maxima in the former were higher than in the latter, and the duration of the fever was much the same, yet the latter was, on many accounts, a graver fever than the former.

Such considerations forced us to consider the other factors in these diseases—viz., the infection; it was obvious that in the grave morbid phenomena could not be set down to the pyrexial temperature we must attribute them in large measure to the action of the specific virus or poison. Experiments were cited to prove that some at least of the textural changes which were thought to be most undoubtedly induced by heat were capable of being produced by infective causes both in animals and in men. The granular or fatty change in the muscles, and more particularly in the heart was especially referred to, and even the cerebral disturbance and the disorders of the secretions could not be excluded.

Turning then to the question of treatment, it was pointed out that, as the chief pathogenic factor in the specific fevers was apparently the specific virus, our first

object of search must be for a specific remedy capable of destroying or counteracting the virus. Quinine in malarial fever, and salicylic acid and its congeners in rheumatic fever, were of this nature, and their claim to be antipyretics rested largely on their specific action. In other fevers such specifics remained still to be found, though some steps in this direction had been made; and though there was much promise of greater progress in the future, we were at present obliged to be content with less radical and more symptomatic remedies. The ideal febrifuge would allay fever by restoring to healthy function the disordered thermotaxic mechanisms, thrown out of gear, like other mechanisms, by the action of the morbid poison. Such a true febrifuge had not yet been found. The next best thing was to discover a mode of treatment which should act vicariously for the thermotaxic mechanism, compensating for its lost control over the thermal functions. A drug might conceivably act by checking thermogenesis simply, or by greatly increasing the inadequate thermolysis of fever. The former might be called an active antipyretic; the latter was properly a refrigerant.

To give a concrete turn to the discussion, it would be well to consider in some detail the physiological properties of a particular drug, as far as they were known, and inquire to which of these classes it might best be referred. Antipyrin had attracted so much notice, and had been so largely used and so closely investigated, that it would serve well as an example. Some of the effects of antipyrin on the thermolytic processes were then dealt with. It was shown by the data of an actual experiment that a full dose of antipyrin had a marked effect in increasing the rate of radiation from the unexposed skin, as measured by Masje with Eichhorst's radiometer. For example, in a case of febrile phthisis, while the temperature fell in two hours from 101° to 97.7° under antipyrin, the radiation increased rapidly, and was twice as great at the end of the second hour as just before taking the drug. The rate of radiation from the cheek, which, as mentioned in the first lecture, was pretty nearly constant in normal circumstances, increased in the same time from 57 units to 133 units. Antipyrin so modified the physical and chemical properties of the skin as to produce this protracted and steadily rising loss of heat by the single channel of radiation. Nothing but radiant heat was measured, and so nothing would be inferred as to the total heat-discharge.

Next as to the effect on peripheral temperature as determined by Schwarz. In fever the peripheral temperatures underwent from time to time extremely marked oscillations. If at the time antipyrin was given the peripheral temperature was not very different from the central temperature, no marked differential effect was produced in the former by the drug. After some oscillations, both central and peripheral temperatures began to sink, and at not dissimilar rates. But if the peripheral temperature happened to be low (under 95°F . or so) a remarkable effect was produced. A sudden ascent of its curve was almost invariably observed until it approached or overshot the central curve, and then after some oscillations the two again began to fall together.

On thermogenesis also the effect of antipyrin had been much investigated, both by directly physical and by chemical or indirect methods. Dr. Girard of Geneva, whose investigations on the thermogenic function of the corpus striatum had been mentioned, had induced pyrexia by stimulating that body, and found that a subsequent dose of antipyrin was able to reduce the temperature and to keep it down for a time. He had also first given antipyrin and then stimulated the thermogenic region, and found that the temperature still rose, but to a less extent. These results, though suggestive and interesting, were not conclusive as to the effect of the drug on heat-production, for in the first place the rise of temperature obtained was never very great, and in the second the experiments were thermometric only. The calorimeter must be used to determine whether the heat actually produced in fever was diminished by antipyrin. Dr. Wood and Dr. Hare had turned their attention to this point, and though their results were at present somewhat incomplete, and laboured under certain outstanding difficulties of interpretation, they appeared to show that heat-production was lessened by the drug. The fever they had tested was that induced by injecting a "pyrogenic" agent, especially an albumose derived from certain specimens of pepsin. Dr. Hare had tested antifebrin on animals suffering from this artificial fever with a similar result. It should be added that in the experiments in which they obtained a reduction in the rate of heat-production they also observed

a diminution (though a smaller one) in the rate of heat-loss. Dr. Wood had, moreover, assured himself that the result was apparently unaccompanied by any measurable effect on the circulation, at least when the antipyrin was given in therapeutic doses.

Lastly, two out of many inquiries into the effect of the drug on metabolism, as evidenced by the excretions, were considered. One by Robin, communicated to the French Academy, was vitiated by faults of method, inasmuch as it did not appear that any precautions were taken to secure nitrogenous equilibrium in the patients observed. Still the results, taken for what they were worth, were suggestive. Robin found, by examination of the urine of healthy and diseased persons before and after taking antipyrin, that the drug in health always diminished the urine, the total urinary solids, the urea, and the chlorides, and that it increased the uric acid. In acute febrile diseases these effects were less marked than in health, and varied somewhat with the particular disease. The conclusion he derived from his chemical examination was that antipyrin acted directly on the nervous system, lowering its excitability, and diminishing the catabolic and oxidative changes in the tissues.

A far more careful investigation had been carried out in 1886 by Riess of Berlin on typhoid patients. He chose patients in the height of the fever, and their diet and other circumstances being so regulated as to make the successive days comparable, he measured the entire excretion of nitrogen during nine consecutive days. During three days the fever was left untreated, for the next three the temperature was kept down by antipyrin, and for the last three it was allowed again to rise. The result was, briefly, that the nitrogen excreted during the days under antipyrin, when the fever was suppressed, was less by 15 to 30 per cent. than during the days before and after, when the fever was allowed free course.

ON THE ELEMENTS OF SUCCESS IN THE OPERATION FOR CLEFT PALATE.

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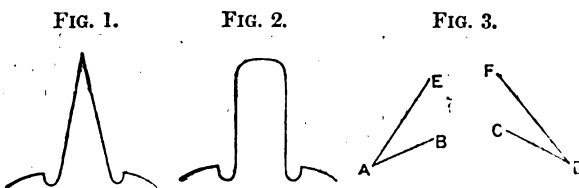
It is generally agreed that the plan of operating for cleft palate which Mr. Thomas Smith has introduced, and which includes the administration of chloroform and the use of the special gag which he has invented, is, in the hands of those who are familiar with it, one of the most satisfactory of all plastic operations. Cases, however, sometimes present themselves which show that there are certain particulars which still require to be advocated. Patients are not rarely admitted into the hospital in whom a previous operation has failed, apparently from the omission of some essential point, while in other instances the opinion has been expressed that the condition of the palate was so unfavourable that no operative treatment ought to be undertaken, and yet these cases presented no feature of unusual difficulty, and were subsequently cured by a single operation. I think, with these examples in view, it may be useful to state the circumstances upon which success mainly depends.

1. In the first place the age of the patient is very important. The mistake sometimes made is that of operating too early. No doubt it is possible to cure the slighter forms of cleft of the soft palate in children who are only a few months old. But even in the most favourable cases failure will be more frequent than success. Even when the cleft is limited to the soft palate the operation had better be postponed till the child is between two and three, or older still, unless he is well grown and strong. In cases in which the hard palate is involved operative treatment should be deferred till the child is at least three and a half. In the average run of cases it is better not to operate till the patient is between four and five. No doubt the sooner the operation can be performed with success the better, especially because the improvement in articulation will then be most marked. The fact is, however, that when done earlier than the time I have mentioned there is a great chance that the operation will fail, and then future cure will be rendered much more difficult. Besides, the operation is so considerable that in very young children it is by no means free from

danger to life. In instances in which the local conditions are very unfavourable (these are mentioned below) the operation should be delayed even beyond the fifth year, for, as growth proceeds, the fissure will tend to become narrower and the soft parts more fleshy and firm. Several cases have come under notice in which, though when the children were three years old the possibility of closing the fissure seemed very doubtful, all the conditions had become favourable when the patients had reached the age of six. Indeed, were the mere closure of the palate the only question, there is no doubt that the best age for operating—I mean the age at which the risk of failure would be least—would be between nine and twelve. Of course, there are many reasons for operating earlier; but the fact remains that in difficult cases the chance of success steadily increases as childhood advances.

2. Care must be taken to see that the patient is in good general health before the operation is performed. The temperature should be taken morning and evening for two or three days before it is proposed to operate, and if it is not absolutely normal the operation should be postponed. Care must also be used to ascertain that the child has not been exposed to any of the exanthemata, especially scarlet fever. Should the patient have a cough, no matter how slight, or diarrhoea, the operation ought to be postponed.

3. After the age and health of the patient come the width and the shape of the fissure and the conformation of the bones at the roof of the mouth. The mere antero-posterior extent of the cleft is immaterial. It is quite as easy to close a fissure that involves the whole length of the hard palate, as it is to close one of similar width that involves only the posterior part. Indeed, it is sometimes easier, because the closure of the anterior part removes tension from the sutures posteriorly, where union is most likely to fail. The really important points are the width of the fissure, the shape of its anterior end, and the height or pitch of the arch of the hard palate. As to the width of the cleft, it is obvious that, other things being equal, the wider the cleft, the more difficult it will be to close it. As to the anterior end of the cleft, when this is pointed like a thin wedge (Fig. 1) the shape is favourable; but when the anterior end is rounded like the bow of a hairpin (Fig. 2), even though the cleft



further back is not very wide, the difficulty of closure will be considerably increased. As to the height of the palate and the shape of the arch, the higher the arch and the more it approaches the perpendicular—the width of the cleft remaining the same—the easier will the closure be; while the lower the arch the more difficult does closure become. This is shown in Fig. 3. Supposing that in each of two cases the cleft is half an inch wide, and that in one the arch takes the direction of ABCD, and in the other the direction of AEFD: when the soft parts are brought down, the flaps AB and CD will be too short to bridge over the gap; but when the much longer flaps AE and FD are brought down, they will meet easily, and even overlap.

Supposing that the operation is performed in accordance with Mr. Smith's published directions, there are several points that have a considerable effect on the result. The first is that when the edges of the cleft have been pared, the soft parts on either side should be freely separated, not only from their general connexions with the bones which they cover, but especially from their line of attachment to the posterior border of the horizontal plate of the palate bone—that is, along the transverse line of junction of the soft with the hard palate. As this line of attachment is very firm, separation must be effected by the free, though careful, use of blunt-pointed curved scissors, employed first to divide the structures along this line, and then, their blades being closed, as an elevator to complete the separation further forward, if this has not been already done. When this proceeding has been thoroughly carried out, the palate

will hang in a flaccid state in its whole length, and in favourable cases its edges will admit of easy approximation. Another point is that when the cleft is extensive the soft parts should be detached from the bones, not only along the borders of the cleft, but outwards and forwards nearly to the teeth. Unless this is done, the rapid reunion that takes place between the soft parts and the bones will tend to restore the former to their original position, and will thus produce mischievous traction on the line of sutures. This wide detachment of the soft parts—varying, however, of course, with the extent of the cleft—will do no harm, for a blood reaches them chiefly from the sides (the branches of the posterior palatine artery running not far from the alveolar border) their mere separation does not materially injure their vascular supply. Another point is the relief of tension on the line of sutures by making lateral incisions. Those who operate only occasionally are a little uncertain as to the length to which the cuts should extend and the exact way in which they should be made, so that they are apt to cut either so freely as to endanger the vitality of the palate, or so sparingly that tension is not sufficiently relieved. The rule is that the incisions should run from before backwards and a little outwards, midway between the sutures and the alveolar border of the palate. The whole thickness of the palate should generally be divided only in the anterior half of the incision. In the posterior half it will be enough to divide merely the mucous membrane without cutting deeply into the other layers. By this course the large branches given off from the posterior palatine artery are preserved to supply the tissues, and the possible danger of injuring the posterior palatine artery itself is avoided. The relief of tension obtained by this proceeding is shown by the extent to which the edges of the divided mucous membrane immediately retract. The precise length of the lateral incisions will vary in different cases; the guide must be the amount of tension that has to be relieved. This can best be ascertained by examining the palate, after the edges of the cleft have been brought together, with the tip of the finger; and the operator must prolong the incisions until he finds that the parts have become distinctly flaccid, and that they no longer give the sensation of a tense dome, and that none of the sutures have the appearance of dragging. When the soft parts are scanty, and it is found that as the sutures are passed there is considerable tension, or even that the edges cannot be brought together, it will be best to make the lateral cuts at once, and then, except in cases in which the operation had better not have been attempted, the parts will come together. As to the sutures, these should be of silver for the hard palate, and of horse-hair, mainly or exclusively, for the soft; and the first to be passed should be a fairly deep silver suture, obtaining a secure hold, at about the junction of the hard with the soft palate. Then the soft palate should be closed to the tip of the uvula; and, lastly, the hard from behind forwards. If the sutures in the hard palate are producing marked tension, they should be only loosely twisted for the moment, and should be tightened with torsion forceps only after the side cuts have been made.

For four or five days after the operation the child should be fed exclusively upon milk and beef-tea, with a little brandy added to the milk if this seems necessary. From the sixth day to the fourteenth he may have, in addition, fine bread crumbs well softened in gravy; bread sauce, made by scalding finely-grated bread crumbs in milk; potato finely minced in gravy or beef-tea; corn-flour, or ground rice puddings made with milk and eggs, or soft custard pudding. Only when the palate has healed, and the sutures have been removed should solid food be allowed. As harm may be done by asking the child to open his mouth to show how the palate is getting on, it is best to follow the plan of requesting that no one should look at the palate for the first week. Looking can obviously do no good; for even if union is failing to take place nothing can be done. The best chance always is to keep the palate at complete rest. Should the child flag, or look pale, or not take his food, he should, even on the second or third day, if the weather is warm, be sent out for a drive—if this can be done—twice a day; or he should be allowed to be up and walking about; for this will do no harm if he is carefully watched. Several times I have followed this plan with advantage. When children are evidently doing well, they may be kept in bed, where they are most easily managed, for a week, and then allowed to be up. As a rule, no local appli-

cation should be made to the palate. Certainly there should be no syringing. Sometimes, however, chlorate of potash may be usefully added to the milk, in which it is nearly tasteless, or the mouth may be rinsed with a 2 per cent. solution of boroglycerine. The sutures are sometimes, I believe, removed much too soon. As a rule, they should not be taken out till the tenth day. It will do no harm to leave them in for a fortnight. It is remarkable how much closure may occur by granulation in cases in which primary union has partially failed. In several cases, though at the end of a week only a narrow bridge remained between the two edges of the cleft, complete union has subsequently occurred by the gradual extension of granulations.

But little assistance, in regard to prognosis, in particular instances, can be derived from statistics in such an operation as staphylorraphy. Each case must be judged upon its own merits. It may, however, be said that in instances in which the patient has reached an appropriate age, and is in good health; in which the soft parts are fairly abundant; and in which the details alluded to above receive attention, failure will be so rare that operative interference may be confidently recommended. I have made no reference to other forms of operation that have been recommended by different writers, for, so far as I have been able to judge, the proceeding devised by Mr. Smith is by far the best with which I am acquainted.

Bruton-street, W.

A CASE OF IDIOPATHIC SUPPURATION OF THE SPINAL DURA MATER.

By ROBERT MAGUIRE, M.D., M.R.C.P.,

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THE existence of an idiopathic inflammation of the spinal dura mater has been very generally doubted. In the majority of cases the inflammation is produced by extension of disease from neighbouring parts. Caries of the vertebrae, extension of a bed sore, and rupture of an abscess into the spinal canal are the most usual causes. The question of deciding whether the suppuration is idiopathic or not is complicated by the fact that the pus, when formed inside the canal, may make its exit amongst the muscles of the back or beneath the thoracic pleura, as in a case recorded by Mueller, and another by Dr. Spencer.¹ The external abscess may then be considered as the primary cause of the disease, and was so considered by Mueller. Dr. Spencer showed that in his case the arguments were strongly in favour of the meningitis being primary. In the instance I have to record, the disease, as will appear, was certainly primary in the spinal canal, and, as no cause whatever could be discovered before or after death, must be considered as of idiopathic origin. The rarity of the affection renders it desirable that each individual case should be recorded. The notes from which the clinical account is reported were carefully taken by Mr. Roberts, house physician to St. Mary's Hospital.

C. W.—, aged seventeen years, a groom, was admitted into St. Mary's Hospital on Nov. 27th, 1887. On Nov. 13th he had slept in damp sheets, and a few days afterwards complained of pain in the lumbar region, but kept at his work until Nov. 20th, when the pain became much worse and almost prevented him moving. The patient was at this time treated at home for rheumatism, by salicylate of soda and counter-irritation of the loins. The pain increased in severity, and on the 23rd the patient was quite unable to move his legs, and could move the arms only with great difficulty. At this time it was noticed that there was actual paralysis, and that it was not merely pain which prevented movement. On Nov. 24th the arms were entirely paralysed, the motions were passed involuntarily, and the urine was retained. There had been no shooting pains, rigidity, twittings, or hyperæsthesia of the limbs, and no rigidity of the spine or retraction of the head. The patient had, however, complained of numbness in the feet and legs, and his medical attendant had noticed a blueness of the lower extremities. There had been no previous disease,

and there were no other points of consequence in the history. It may be mentioned, however, that the patient had suffered no injury.

On admission into hospital the patient was fairly well nourished, but looked exceedingly ill. The face was pale and somewhat cyanosed; the lips were blue. The legs and feet were flaccid, showed no wasting, and were of a bluish tint. There was total absence of voluntary movement and of all forms of sensation. The knee jerk was entirely absent on both sides, and no ankle clonus could be elicited. The plantar reflex was very feeble, if present at all, and the cremasteric reflex on each side was absent. The arms were flaccid, the hands and fingers bluish, and showed absolute loss of voluntary motion and sensation. There was no loss of sensation over the chest or abdomen. The respiratory movements, both abdominal and thoracic, were good. None of the trunk reflexes could be produced. There was no retraction of the head. The movements of the eyeballs were perfect. The pupils were moderately dilated, and contracted perfectly on exposure to light and on accommodation. There was no paralysis of the face, and the movements of the tongue and lips and of deglutition showed no abnormality. There was also no anaesthesia of the head and neck. The motions were passed involuntarily. The urine was retained. Some pain was complained of in the lower part of the abdomen, which was relieved by drawing off thirty-eight ounces of urine from the distended bladder. There was slight pain in the vertebral region on moving the patient, and severe pain was complained of when pressure was applied to any part of the vertebral column. There was no pain when the patient was completely at rest. No oedema or puffiness was observed in the skin of the back, nor were there any bedsores. The skin generally perspired freely. The patient was quite conscious, and answered questions intelligently. The temperature on admission was 100° 6'; pulse 100, regular and soft. Heart normal. The respirations were shallow; a few moist râles were heard at both bases, but there was no dulness. The urine was normal.

During the night after admission the patient's breathing became more laboured, and the thoracic movements less observable. The skin of the trunk became anaesthetic. The patient was able to swallow nourishment, and was perfectly conscious. At 4 o'clock in the morning both thoracic and abdominal respiratory movements were very slight, and the patient was becoming very cyanosed. During the night the temperature had risen, and at 6.15 A.M. was found to be 110° in both axillæ. At this time the pulse-rate was 140 in the minute, small and weak; the respirations were 80 in the minute, and very laboured. The skin was perspiring profusely, and the patient was still conscious. An ice-bag was applied to the nape of the neck, and ten grains of quinine were administered. The temperature was taken at frequent intervals up to noon, and varied from 103° to 106°. During this time the patient perspired freely. He was quite conscious and rational, and swallowed nourishment. Nevertheless he gradually became weaker, and died soon after noon.

A necropsy was made about twenty-four hours after death. On removing the skin and muscular layers from the spine, a large quantity of somewhat thick pus was found infiltrating the muscular planes in the lumbar and lower cervical regions, though much more marked in the former part. The pus was seen on both sides of the vertebral column, and in the lumbar region was most copious on the left side. On careful examination it seemed to proceed from near the arches of the vertebrae. There was no pus found in the muscles of the dorsal region. On opening the vertebral canal, pus was seen lying between the dura mater and the bone from the sacral termination of the canal to about the level of the second cervical vertebra. The pus was similar to that found outside the canal, somewhat thick, and of no particular odour. It was limited almost entirely to the posterior part of the dura mater, and was most copious in the lumbar region and at the upper part of the dorsal and lower part of the cervical regions, corresponding to the cauda equina and the two enlargements of the cord. On opening the dura mater, the other membranes of the cord were seen to be congested, but presented no sign of inflammatory exudation. The cord itself showed no abnormal appearance whatever. A careful examination was made of the bones of the vertebral column, but no disease was found. Similarly no abscess formation, other than those described, was discovered in the tissues adjacent to the

¹ THE LANCET, VOL. I. 1879, p. 536.

vertebræ, or in any other part of the body. The brain and its membranes were perfectly healthy. The state of the other organs of the body need not be detailed, since beyond the general effects of high temperature nothing abnormal was seen.

There was, therefore, suppuration between the vertebræ and dura mater limited to the posterior part of the membrane. The relation of the external abscess formations to the suppuration inside the spinal canal cannot, in this case, be considered doubtful. One cannot believe that two suppurations, one in the lumbar and the other in the cervical region had formed primarily on each side of the vertebral column, and had both pierced the spinal canal. The rational explanation is that the spinal suppuration, being most intense in the neighbourhood of the cervical lumbar enlargements, had here made its way between the laminæ of the vertebræ amongst the muscular planes. The interest of the case is mainly pathological. Yet there may be noted amongst the clinical features the presence of excessive perspiration, together with an extremely high temperature and the blueness of the skin of the extremities. In Dr. Spencer's case there was also excessive perspiration, and the skin of the chest and abdomen showed a purplish mottling. The absence of cerebral inflammation and symptoms is probably explained by the much firmer attachment of the dura mater to the bone in the upper cervical region, approaching to the condition of the cerebral dura mater. This anatomical formation would probably hinder the spread of inflammation.

Seymour-street, W.

ACUTE INTESTINAL OBSTRUCTION; EARLY OPERATION; SUCCESSFUL RESULT.

By W. J. PENNY, F.R.C.S.,

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IN November of last year Mr. Luffman of Bristol kindly asked me to operate for him on a case of acute intestinal obstruction. The patient, a healthy, well-nourished boy of four, had an attack of diarrhoea on Nov. 2nd. While straining at stool he complained of a sharp pain in the abdomen. After that he had frequent desire to defecate with straining, but passed no motion. In the course of a few hours sickness supervened, primarily of the contents of the stomach; the vomiting increased in frequency and intensity, and the ejected material gradually assumed stercoraceous characters. When I saw him on Nov. 4th his countenance was pale, with dark rims under the eyes, and he had an anxious, pained expression. He was very restless, tossing about the bed and complaining of pain in the abdomen. His tongue was furred and rather dry. Pulse 136. The abdomen was flaccid, with a very slight appearance of fulness in the right iliac region. There was no particular abdominal tenderness except at this part. The appearance of fulness extended diagonally from the right flank towards the spine of the pelves.

Mr. Luffman and Dr. Newnham of the General Hospital (who gave the anæsthetic) examined the rectum for me; both found it clear, but both described a feeling of fulness in the right side of the pelvis. The abdominal symptoms beyond the constipation and sickness were not well marked. An exploratory operation was decided on, the chief grounds for this being the sudden onset of the symptoms and the appearance of the patient, who had previously been in robust health. After this had been settled the patient vomited again, the material being decidedly stercoraceous. A two-inch incision was made in the middle line, and the finger passed at once to the right iliac fossa. A tangled mass of intestine was met with, and something was felt to slip, giving me the impression that the lesion was an intussusception, though the shape did not accord with this. To be quite clear, I brought the mass to the surface, and then found that about ten inches of the lower part of the ileum had passed through a hole in its own mesentery and subsequently become twisted on itself. The strangulated part was of a darkish-claret colour, but retained its lustre. It was easily replaced, and the abdominal wound sutured. The entire operation lasted less than ten minutes. In the evening the patient's pulse dropped to 100. The tempera-

ture, which before operation was subnormal, rose to 100° F. The sickness ceased.

On Nov. 5th the boy's expression was more natural; pulse 100; temperature 99°. He had passed a good night, and had not vomited since the operation. The bowels had not been opened. There was no abdominal tension, pain, or marked tenderness. From this time he progressed rapidly towards recovery. The bowels were opened on the fourth day. On the seventh day the wound was dressed, and all stitches removed. On bidding him adieu, he answered my farewell greeting with a lively childish retort—a very satisfactory indication of restored health. There was an obscure history of a fall from a ladder a few days before the illness. The rent in the mesentery however, did not give me the impression of being a recent lesion, as the edges were rounded. The patient was in such a weak condition that I completed the operation as quickly as possible.

The case illustrates the value of early operation. About a fortnight afterwards I had occasion to make a post-mortem examination, on a case of intestinal obstruction, at the hospital. The patient had been treated for a fortnight by medicines and applications to the abdomen, evidence of which existed in the blistered condition of the skin of that region. She was admitted to the hospital under the care of my then colleague, Dr. Markham Skeritt, a few hours only before she died. In this case the abdomen was also flaccid. The lower part of the jejunum and almost the whole of the ileum had become strangulated under a thin fibrous band passing from the lower part of the jejunum to the ileum, two inches above the ileo-cæcal valve. Evidence of old pelvic cellulitis existed; the left ovary was adherent to the uterus, suppurating and discharging pus through a sinus which existed between it and the rectum. The undistended condition of the abdomen in this case was probably due to the lesion involving the intestinal tract at such a high level. The duodenum and upper part of the jejunum were rather distended, and the rest of the intestines collapsed. Before opening the abdominal cavity, I passed my finger through a small median incision and came at once on the band. This case could easily have been remedied by operation, and for lack of it the patient died. One so often hears of cases in which the diagnosis of some obscure abdominal condition is only cleared up on the post-mortem table that I do not think it is sufficiently appreciated that an exploratory operation through a small incision, with antiseptic precautions, is often less hazardous than delay. In many of these cases delay means death, while the risk of an exploratory incision is infinitesimal. In the earlier stages, before peritoneal effusion and intestinal distension have occurred, operative measures are comparatively simple, the finger can be passed freely round the abdominal cavity, without embarrassment from either the mechanical impediment caused by the distension or the stickiness of the intestines and peritoneum, and the operation can be completed in a few minutes—a very important point. When these troublesome conditions are present operation is difficult, and enterotomy has frequently to be resorted to as a palliative measure, instead of the more satisfactory plan of removing the primary cause of the trouble.

Clifton.

DISORDERS OF SPEECH IN THE INSANE.

By LLOYD FRANCIS, M.A., M.D. OXON.,

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I HAVE selected for report three cases illustrating aphasic phenomena occurring in asylum inmates, which appeared to present some features of interest. The investigation of such morbid conditions, when manifested by an insane individual, is sometimes far less easy than in the case of a person of sound mind. In the former it has seemed difficult to separate the mental symptoms from those properly attributable to physical causes: to judge, for example, how far an aphemia may be merely the outcome of delusion, how far it may be the manifestation of damage to speech centres; to discriminate between inability to comprehend spoken or written language due to defect of memory and general mental failure from true sensory aphasia (word-deafness, word-blindness). In Case 1 one of these difficulties finds, I

think, an exemplification—mental disorder and delusions coexisting with physical conditions such as accompany true aphasia. In Case 3 there were, and are, superadded to the aphasia impairment of memory and defective intelligence, with slow, hesitating, quavering utterance—suggestive of, but apparently not due to, general paralysis. Case 2 derives what interest it possesses from the post-mortem appearances, viewed in conjunction with the persistent character of the aphasia.

CASE 1.—A. B.—, aged forty-two, married, manufacturer. Admitted into St. Andrew's Hospital on Nov. 17th, 1885. His previous history was to the effect that a year ago he slipped down a steep flight of steps in his warehouse, striking his head violently. There was no evidence of fracture, but severe concussion, and his life was at first despaired of. He had incomplete, though considerable, left hemiplegia. From the date of the accident his speech increasingly failed, and within three weeks of the fall he was entirely wordless. His power of hearing deteriorated in the same gradual manner, ending in total deafness. This latter phenomenon the patient describes in the following words: "Also my hearing left me in the same way, with a peculiarity that I have never yet heard an explanation of—viz., that for about four months after I could not hear anything else I could hear music of any kind. I could hear a piano played, but not a sound if a gun was fired near me. But even the power to hear music gradually left me." Mental symptoms of a marked character accompanied the physical. He had dangerous delusions, one being that he was bound to kill his wife in order to save his own life—which, in fact, he attempted to do. Eventually, after being treated at home for two months, he was placed under certificates and sent to an asylum. During his stay there he improved much, both mentally and physically.

On admission he is described as being stoutly built and well nourished. Pulse 80, regular. Heart sounds healthy; radials slightly thickened. Pupils of average size, equal, active. Face symmetrical. Tongue protruded straight. No evidence of defect of general sensation or voluntary motion. Grasp of hands firm and equal. Gait natural. Knee jerks equal and not exaggerated; in short, there remained no trace of the left hemiplegia. He was completely wordless; and beyond giving vent to an occasional low whistle when surprised, amused, or perplexed, he made no attempt even at phonation. He was master of the deaf-and-dumb alphabet, and answered questions on his fingers rapidly and correctly. He readily comprehended pantomime, could read with intelligence both print and manuscript, and wrote in firm legible hand spontaneously and from copy. Deafness appeared to be absolute. He could not hear the ticking of a watch applied to either ear, and gave no indication of being startled by the slamming of doors or other sudden loud sounds. In his mental condition nothing abnormal could be discovered. He appeared to be entirely free from his former delusions; was grave, calm, and quiet in manner, intelligent in expression, and natural in behaviour. He appeared fully to realise and be contented with his position, and constantly occupied himself in various ways—reading, writing, playing chess and billiards, and attending and taking interest in all entertainments. He described himself as right-handed, but it would be more correct to designate him "ambidextrous"; at billiards, for example (in which he excelled), he would make right-handed or left-handed strokes with equal facility and precision.

He remained under observation for nearly six months, being discharged on May 4th, 1886—mentally, to all appearance, well; with regard to speech and hearing, in precisely the same state as when admitted.

His after-history is rather peculiar. On April 11th, 1887, two years and five months after the accident, he wrote: "Dear Sir,—I think you will be glad to know that on the 1st instant I quite regained my hearing. It came during a fit of coughing at breakfast, caused by a difficulty I had in swallowing my food. It caused me to choke and cough very much, and in an instant I could hear quite well." He further intimated that the aphasia persisted, and at the same time expressed a pious and confident hope of ultimate complete recovery.

In August, 1887, he sent the following further communication: "On the morning of the above date (Aug. 18th), about 5 A.M., I dreamed that a big butcher stood over me with a cleaver uplifted ready to split my head. This gave me a terrible fright and awoke me; and I found I could speak and did speak, to my wife, and thereby frightened

her very much; I also frightened many of my friends when I first went out and spoke to them in the street."

Remarks.—The onset of the aphasia was comparatively gradual, and in time roughly coincident with the loss of hearing. The dates of recovery, however, are seen to be separated by a considerable interval. Deafness disappeared on April 1st; speech was not regained until Aug. 18th; so that during a period of four months and a half the patient, though hearing normally, remained totally aphasic. The recovery of both faculties was effected with equal suddenness, and under the pressure of emotional excitement—in the one case dread of impending suffocation, in the other the horror of a vivid dream. The hemiparesis, though undoubted and considerable at first, underwent gradual improvement; and within a year of the accident no trace of it was discoverable. As remarked above, he was practically ambidextrous. It is possible that delusion, carefully and cleverly suppressed, may have dominated his conduct; but it is certain that, at least during the latter seventeen months of his illness, he was judged by everyone who came in contact with him to be entirely free from mental disorder. He presented on the motor side an extreme degree of aphemia, on the sensory complete deafness. As he himself pointed out, he retained the power of appreciating music for four months after deafness to ordinary sounds had been established.

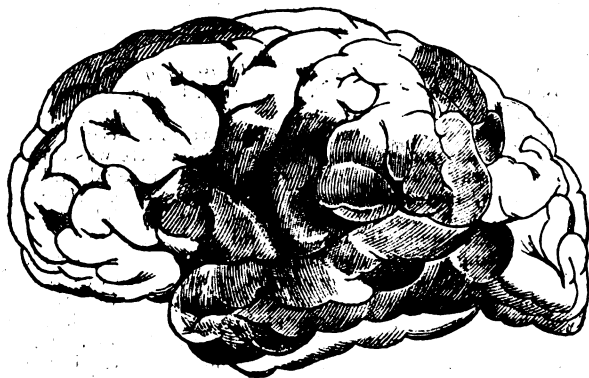
CASE 2. *Aphasia in a doubtful case of general paralysis.* B. C.—, aged thirty-seven, married, baker. Admitted on Nov. 11th, 1885, with symptoms of acute mania, stated to be of four weeks' duration. This was his second attack, the first having occurred ten years ago. He was then also under treatment at this hospital, made a good and rapid recovery, and had remained well ever since. He was in the habit of drinking to excess, was of violent temper and quarrelsome disposition, and had led a reckless life, ill-treating his wife and neglecting his business. Drink was the assigned cause of the present attack. He was reported to have had at least one epileptiform seizure since the onset of his illness. He was a stoutly built, muscular, well-nourished man, with dark-brown hair and eyes and ruddy complexion. Heart and lung sounds healthy. Urine free from albumen. Tongue protruded straight and firm. No tremor of lips. Pupils of average size, equal, reacting normally to light and during accommodation. Fundi normal. No affection of speech. No indication of loss of sensation or voluntary motion. He was right-handed. He was extremely restless, wandering aimlessly about, trying the doors, &c.; wild and bewildered in aspect, agitated and apprehensive in manner, shrinking from contact with everyone, and calling out "There are knives about"; intractable and troublesome, but showing no disposition to violence; sleepless and frequently noisy at night; irrational and incoherent in his remarks, and giving random answers to simple questions. He improved steadily at first, and, by the end of three weeks from admission was considerably better. Though still quite irrational, he was entirely free from excitement, amiable, docile, and well-behaved. He helped in the ward with much readiness, ate heartily, and slept well. He exhibited much confusion of ideas and mental enfeeblement, only dimly realising his position. He was placid, contented, and good-humoured, but did not give expression to any exalted ideas.

On Dec. 13th he was reported to have had a "seizure," and was found to have lost power in his right arm, which lay limp and helpless. Face drawn to the left. No apparent loss of sensation or paralysis of the lower limbs. Knee-jerks active, equal; no ankle clonus. There was, in addition, aphasia, in the first instance complete, not a single articulate sound being uttered. He regained the power of speech to a limited extent during the ensuing forty-eight hours; but from the date of the apoplectic seizure to his death, two months later, he exhibited definite aphasic symptoms. Most of his replies to questions consisted of unintelligible gabble. Occasionally he would give utterance to a sentence with one or more words wrongly pronounced—as "lays" for "days." Rarely he enunciated a phrase correctly. A very constant expression of his, repeated on diverse occasions, was "Pretty well, thank you." He acquired power in the right arm and side of face within a few days of the attack. A month later he had a second paralytic seizure, affecting the left arm and left side of face. This was succeeded in a few hours by a series (a dozen or more) of violent epileptiform attacks, the fit beginning always in the left arm, with deviation of eyes to the

left; finally, as a rule, becoming general. The paralysis, as before, was transient. He now passed again into a state of excitement, rolling about the floor of a padded room, noisy at night, making unintelligible sounds, or shouting loudly, frequently grinding his teeth. On Feb. 17th he again had a succession of strong fits, the convulsions beginning in the right arm and becoming general. He died comatose on the 18th.

Necropsy.—Cranial bones extremely thick and dense. About eight ounces of serous fluid escaped from the cranial cavity. The membranes were thickened, more opaque than normal, and extensively adherent to the summits of the following convolutions on both sides: 1. The superior frontal (slightly). 2. Inferior frontal (posterior portion, more on left than right side). 3. Ascending frontal and ascending parietal (lower half). 4. Parietal lobule (slightly); supra-marginal, angular, and annectant gyri. 5. Superior and middle temporo-sphenoidal convolutions, especially anteriorly. There was a small cavity, the size of a pea, with smooth walls, containing yellow fluid, in the substance of the right lenticular nucleus. Brain softer in consistence than normal. Grey matter pale and slightly wasted; white

FIG. 1.



matter oedematous. No gross lesion in pons, medulla, or cerebellum. Basal arteries, cranial nerves, and sinuses apparently healthy. (Fig. 1.)

Remarks.—Recurring epileptiform attacks, with transient paralyses, and latterly frequent grinding of the teeth, were the only symptoms observed during life at all suggestive of general paralysis. The pupillary phenomena were throughout normal. There was no tremor of tongue or lips, no quivering utterance, no difficulty in swallowing—none of the more striking and usual physical manifestations. His mental state alternated between acute maniacal excitement and placid secondary dementia. There was no evidence of self-exaltation or grandiose ideas. Yet the brain, post mortem—with extensive worm-eaten areas arranged in rough symmetry over the surface of both cerebral hemispheres,—afforded an unusually good illustration of the familiar morbid changes. The lesions were, generally speaking, more marked on the left than on the right side; the left inferior frontal gyrus, in particular, showing a more extended and deeper adhesion than the corresponding right convolution. Transient aphasia, with or without temporary hemiplegia or monoplegia, is, of course, not uncommon in general paralysis. But I am not acquainted with an instance of impairment of speech persisting as in this case.

CASE 3. Motor aphasia, with some symptoms suggestive of general paralysis.—C. D—, aged thirty-one, married, jeweller. Admitted on June 6th, 1887. First attack of one month's duration; cause unknown. There was a history of primary syphilis eight years ago. Twelve months ago he had an apoplectic seizure, and has ever since been under treatment for right hemiplegia with aphasia. Mental symptoms developed about four weeks before admission.

On admission he presented no nodes, scars, or other evidence of past syphilitic mischief. Pupils equal, reacting well to light and during accommodation. Fundi normal in appearance. The right side of the face was more wrinkled than the left when the patient smiled. Tongue steady, protruded straight. There was quivering of the lips during speech. His utterance was impaired, slower than normal, with pretty frequent slurring, thickness, or tremor. He also made various errors in the use of words—e.g., saying

"wife's wife" instead of "wife's father"; "haven't any objection any it," instead of "haven't any objection to it"; and when he attempted to express his ideas in writing, he made so many blunders in spelling and arrangement of words and phrases as to be almost unintelligible. For instance, in a note to one of the medical officers, complaining that certain articles of wearing apparel had not been given him by the attendants, he says, "Mr. Robbortson. Dear Sir,—How it be can altered. I have for three days collars, and even kept all studs, and there is (for use) great great use to me, because the pins I think. I hope this favour be greater and worry me." Grasp of hands strong and equal. Gait brisk, but right leg thrown out more stiffly than the left. Left knee jerk about normal; right distinctly exaggerated, and there was slight ankle clonus on that side. Handwriting firm and good. No disorder of sensation, or sign of muscular wasting. Heart and lung sounds healthy. Radial arteries not thickened. Urine free from albumen. Mentally he showed good powers of memory and average intelligence, but exhibited confusion of ideas and want of coherence in his conversation, relating detached incidents, and enlarging upon what "he" or "she" said or did without giving any clue as to what he was talking about. He appeared to be in good spirits, and on excellent terms with himself—claiming to be very skilful in his trade, able to prosper without the aid of money &c., and volunteering the information (known to be incorrect) that he had invented a patent electrical apparatus by which he was going to make a fortune rapidly. He was fanciful, unduly excitable, and emotional; restless at night. His excitability culminated, soon after admission, in an attack of acute mania, with hallucinations of sight and hearing, extreme restlessness, noisy excitement, and sleeplessness, which persisted more or less for six weeks, and left him much deteriorated mentally and physically, irrational, wayward, and irritable, shouting and swearing on slight provocation; faulty in habits; more definitely aphasic, and with more impaired utterance.

The only other noteworthy incident in his case was the subsequent occurrence (Sept. 23rd, 1887) of a rapid series of seven severe epileptiform fits. In the first six the left side was mainly affected, and there was deviation of the head and eyes in that direction. During the seventh the right side was chiefly convulsed, with right-sided deviation. Pupils dilated, inactive; slight nystagmus; limbs flaccid in the intervals of the fits; breathing stertorous. This attack was followed by temporary paresis of the right upper limb, and transient total aphasia.

He is still an inmate, and at present is in a quiet stationary condition. He is docile, contented, and well-behaved; correct in habits; clean and tidy. His mental powers are enfeebled. He smiles in a vacant childish way when spoken to, and exhibits impairment of memory. He reads, attends morning chapel, and takes regular exercise. His utterance is extremely slow, halting and quivering; there is marked tremor of lips during speech, but the tongue is protruded straight and firm. He has been treated with antisyphilitic remedies since admission—first iodide of potassium with bark, and subsequently (since the epileptiform attack in September) mercury. The exhibition of the latter drug has been attended with benefit to his physical state. He has gained greatly in weight, and is now robust and healthy-looking.

The following is a summary of his present condition as to speech, reading, writing, &c.:

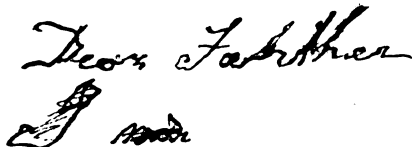
Speech.—His expression and gestures indicate that he understands all that is said to him. He never volunteers a remark, though he makes strenuous efforts to reply to the questions put to him. The following are some of his answers: "How are you to-day?" "Oh, fairly, fairly, fairly." The word "well" having been repeated to him two or three times, he succeeds at length in saying "fairly well." "Have you been out to-day?" "Yes, morning." "What morning?" "Oh, morning, MORNING!" After similar prompting, he bring out "this morning." "When did anyone come to see you last?" "No, no! Oh, no! Friends, not any, any!" (shaking his head). "How old are you?" "Twenty." "You mean thirty?" "Yes, thirty." "Are you a hundred?" "Oh, no" (smilingly). "Are you twenty?" "Yes, twenty." Endeavouring to reply to the question, "Where do you usually walk?" he gave utterance to a series of unintelligible sounds and syllables, the words "front" and "outside" only being distinguishable; finally making a diagram to illustrate (very imperfectly) the grounds in which he takes daily

exercise. Asked "Do you know what place this is?" he answers, "Oh, yes," in a confident tone; but he entirely fails to give the name "St. Andrew's Hospital." He repeats the words "fairly well" after two or three promptings; immediately afterwards, however, he is unable to complete the phrase, saying only "fairly, fairly," as before. He fails at "Constantinople," repeating the syllable "Con" several times, but getting no further. "Birmingham" he pronounces "Birmam-un-un-un"; but he succeeds in enunciating the three syllables of the word repeated slowly and very distinctly. "Poker" he calls "poter"; "box" becomes "bota." Shown a pen and pencil, he names them correctly, but an ink-bottle he fails to give a name to. Similarly with a table: asked "Is it a bed?" he answers, "No." "Is it a ladder?" "No" (smilingly). "Is it a table?" "Yes, a little table." He calls attention to the snow lying on the ground outside, but he cannot give it a name. Asked how deep it is, he says, "It is three parts of a —" (pointing to his foot). "Match-box" he names correctly, after prompting by two or three repetitions of the word "match."

Reading.—He reads slowly and with much apparent effort the following passage: "Under the failure of this debtor, who was formalalaly (formerly) governor of New South Ways (Wales), and has been for fifty (fifty) years in the servisisis (service) of the Foreign Officisisis (Office)." "Law Intelligence" he reads "Law Intell-tell-tell-tell." Shown a column of advertisements, he points out London, Brighton, and Oxford as names of places where he has been.

Writing.—The facsimile in Fig. 2 represents the results of

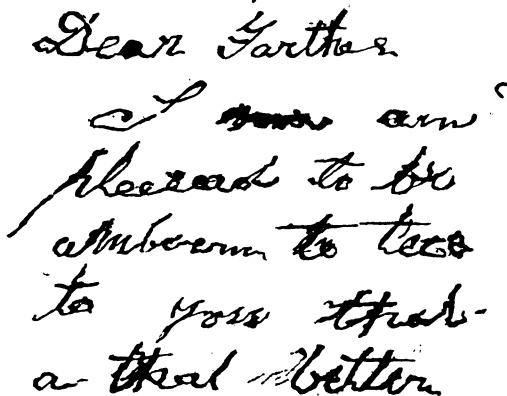
FIG. 2.



Dear Father
I am

efforts occupying half an hour or more, in obedience to a request to write a letter to his father. That in Fig. 3 was

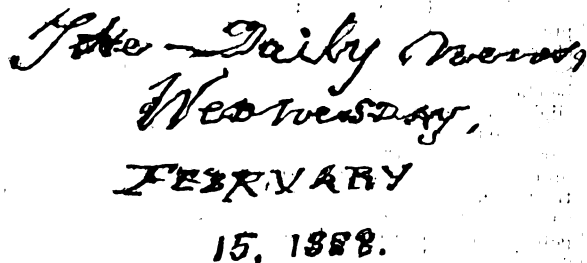
FIG. 3.



Dear Father
I am
pleased to be
able to tell
you that
I am better

written from dictation ("Dear father, I am pleased to be able to tell you that I am better.") very slowly and

FIG. 4.



The Daily News
Wednesday,
FEBRUARY
15, 1888.

laboriously, with frequent halts. The facsimile in Fig. 4 was copied from the heading of the *Daily News*, Feb. 15th,

1888. The copy is seen to be executed partly in manuscript, partly in printed characters—"February" entirely in the latter. He can read this very slowly, and gives indications of comprehending its purport.

Remarks.—The aphasia appears to be mainly, if not exclusively, motor (a high degree of aphenia with motor agraphia). Present to an appreciable extent on admission, it has since been throughout progressive, marked deterioration being observed to follow both the attack of acute mania and the later epileptiform seizure. The tremor of lips, slow quavering utterance, and epileptiform fits suggest general paralysis. On the other hand, pupillary and other symptoms are entirely absent; whilst there is a history of syphilitic infection, and, of late, definite physical improvement under mercury. Exaggerated knee jerk and clonus are still present on the right side.

Northampton.

A PRACTICAL POINT IN CONNEXION WITH PRIMARY VACCINATION.

BY JAMES NIVEN,

MEDICAL OFFICER OF HEALTH, OLDHAM.

It has been a matter of some discussion how so well vaccinated a town as Sheffield should have suffered from such a severe outbreak of small-pox. One cause has no doubt been the absence of a system of compulsory notification of disease. It is quite possible, I think, that the high proportion of vaccinated persons protected by only one vaccination may have acted in conjunction with the absence of notification. I have always regarded the possibility of small-pox being propagated as a result of mild ambulant cases of small-pox as a theoretical possibility, and practically during the recent outbreak in Oldham it has proved a matter of serious moment. A certain number of medical men in practice have probably never seen a case of small-pox, and while the great majority of these would at once recognise most cases of unmodified small-pox, it is little wonder if they fail to see small-pox in the trivial and atypical cases which come before them. Not only so, but the patients themselves, suffering only from a trifling illness, which disappears with the appearance of the eruption, do not think of seeking advice. It may thus be a question whether, given general efficient compulsory notification, we are safer with the partial protection we now enjoy than we should be if the population were entirely unvaccinated. This question could only arise, however, if compulsory notification were universal, so that one town should not have to suffer for the absence of safeguards in another. The logical outcome of the position is either in universal compulsory notification, extending both to medical men and householders &c., or in an enforced second vaccination at the age of twelve, and even of a third, should it prove necessary. In either case we should be interfering with the liberty of the subject, and by making compulsory notification general we are bound to occasionally come into collision with parents and relatives. So great, however, is the fear of small-pox, that the difficulty is not so much felt with regard to this disease as most others. It is a question whether the enforcement of a second vaccination could be carried in this country, still less of a third; and it may even be a question whether so great a stretch of paternal legislation is consistent with the genius of the people.

The number of small-pox cases which have come under my notice since the beginning of the outbreak in December last is 76. In every case the most careful inquiries have been made as to the origin of the attack, and the source of infection has been made out in 62; but in 14 instances absolutely no clue could be obtained, although the possibility of the patients having come across previously known cases was carefully considered. It is true that most of these had been at places of public resort, such as public-houses; but we may safely infer that in the majority of instances the infection was derived from mild cases, which had either been overlooked altogether, or had been so mild as to escape detection by people other than the affected person.

Some of the cases in which the source of infection was discovered are also instructive.

1. A child three months old was admitted into the Small

pox Hospital with a discrete attack. The mother was found to have had a modified attack of small-pox, which had not been diagnosed.

2. A girl aged twelve, seen on suspicion, was found to be suffering from a very mild attack of small-pox. No medical man had been consulted. The father refused to admit that it was small-pox. She was removed to the hospital. Two other cases subsequently occurred in the same house.

3. This case has no direct bearing on the point in question, but is of interest otherwise. E. S—, aged fifteen, was removed suffering from modified small-pox. M. S— was also removed, believed by me to be suffering from chicken-pox, and was vaccinated. The vaccination took, and she did not contract small-pox. One of these girls had small-pox and the other chicken-pox exactly a fortnight after a previous case had developed what the medical attendant regarded, no doubt correctly, as chicken-pox. There is some evidence that chicken-pox cases become more numerous when an outbreak of small-pox is beginning, and it has been thought possible that some connexion existed between them. The above experience shows that chicken-pox is radically distinct from small-pox, and also how easy it would have been either to draw a false conclusion as to the connexion or to misjudge the nature of these two very distinct eruptions.

4. A man aged thirty-two contracted a modified attack of small-pox, which was undiagnosed, and led, as far as could be ascertained, to three persons contracting small-pox from him—a child, a friend who visited at his house, and a female operative working in the same room with him. His attack was ascertained from seeing the friend, but he had distinct marks of the eruption, with a history of the initial illness of small-pox. He was removed to the hospital and placed among small-pox patients without contracting the disease. These particulars are given because the case was denied to be one of small-pox.

5. The next case is that of five patients moved from one house not above 400 yards from the Small-pox Hospital. Four of these had occurred about the same time, and I satisfied myself that it was almost impossible that they could all have been exposed together to infection at any meeting outside the house. The hospital then came under review. But I fortunately examined the aged grandmother, and found that she had distinct marks of what had been a very mild, evidently modified attack of small-pox. A clear history was also given of the initial illness, which, however, had not been severe. No medical man had been consulted about the grandmother.

6. A woman aged twenty-one had a modified attack of small-pox. They refused to admit that it was small-pox, and said that a medical man, consulted after the one who reported the case, denied that it was small-pox. A case of a child occurred about the same time two doors off. Passing from one house to the other was a young man, who had one or two marks of small-pox on him, and gave a clear history of initial illness a fortnight previously, with eruption two days after. The child of the first case subsequently took unmodified small-pox and died.

7. Three cases were reported to me of children who had not been under a medical man. In all only the marks of eruption without scabs remained. In two the distribution of the marks and their varying size indicated chicken-pox. In the third only one or two marks were found, but there were none on the chest, and an initial illness had occurred two days before the eruption came out. The case was, no doubt, one of small-pox, modified by vaccination, which had been overlooked.

These examples will suffice to show that it is no mere chimera that the amelioration of small-pox by primary vaccination is liable to become a factor in the propagation of the disease, in the absence of the renewal of protection. To what extent it will be so depends on the character of the people, and on the amount of experience of all the medical men of any given district. The remedy, to a great extent, lies in the extension of compulsory notification, which, in my opinion, should rest mainly in the hands of medical men. I should not, however, like to say that if there were no vaccination we should altogether escape these difficulties of diagnosis. In one of my recent unvaccinated cases there were only two pocks, which, however, were typical, and I have seen one case of unmodified small-pox abort just like a modified one. Jenner, in the record of his experience, mentions that he knew of a district assailed by small-pox where the cases were so mild that children were brought

from neighbouring places that they might have the disease in the same form. Still it remains that the amelioration produced by vaccination is not an unmixed advantage. Oldham.

SEVERE ERUPTION OF BILATERAL HERPES OPHTHALMICUS,

OCCURRING IN THE COURSE OF A CASE OF CHRONIC PNEUMONIA, WITH DIFFUSE INTERSTITIAL NEPHRITIS.

By WM. ROBERTSON, M.D.,

SURGEON TO THE THROAT AND EAR HOSPITAL, NEWCASTLE-ON-TYNE.

BRIEFLY stated, the history of the case previously to the appearance of eruption is as follows.

M. M—, aged sixty-two, a tall bony man, had only passed through one serious illness, and that was an attack of pleurisy of the left side previously to the present attack. Fifteen years ago his life was refused by an insurance company on account of heart disease, but beyond one or two fainting attacks he betrayed no serious symptoms of cardiac affection. The only other point attracting attention was an undue somnolence, which became overpowering when he was at rest, as for example, going to sleep in tram-cars and when at leisure at home. Habits: total abstainer; diet principally milk and farinaceous food. The present illness was no doubt induced while assisting his men at the repair of an



old foul drain, during which he got heated and exhausted, and while in this condition lay down on the grass to rest. Languor, debility, fever, and want of appetite supervened, and after fourteen days' suffering from these I saw the case. The house in which he lived was, besides, in an insalubrious condition.

On examination, I found a morning temperature of 101° F., rising to 102° in the evening. There was, besides, slightly impaired resonance, with weak respiratory murmur over the right base. Urine 30 oz.; sp. gr. 1010; slight cloudy precipitate. Heart: a mitral systolic murmur, slight in character, as first noticed. Pulse 78, soft and regular. Stools semi-consistent, and of bad odour. Gurgling could be elicited in the right iliac fossa, while the abdomen was slightly distended.

Without much variation these symptoms, in spite of various forms of treatment, continued. The cardiac murmur became intensified, granular casts began to appear in the urine, with an increase in the albumen, and the patient showed an increased amount of lethargy. Sciatic and other pains caused considerable exhaustion. Quinine, sulphocarbonate of soda, antifebrin, digitalis, &c., were all in turn sufficiently tried, but without much benefit. The appetite meanwhile was such as to keep up fair nutrition. After

three months of such symptoms, associated with slight feelings of chill, a herpetic eruption appeared, ushered in quietly, and without pain or much itching. The vesicles appeared in a thickly-set patch under each eye, extending to the external canthus and internally well up the bridge of the nose on each side; round the palpebral margins, amongst the cilia, and thickly set on each eyebrow; several on each frontal region; several vesicles behind each ear; three on the right helix and over the upper lip; one on the nose over the bridge, and one on the right side of the tip of the nose. There was soon associated with the specific eruption considerable cutaneous disturbance, with swelling of the eyelids to absolute closure. The eruption was characterised by the usual multififormity of the herpetic lesion—here vesicular, there bullous, and again pustular; all present simultaneously. The eruption under the lower lids and on the eyebrows broke down on the third day with the formation of foul ulcers discharging freely. These had fairly cleared by the fifth or sixth day, exposing corium papillae. Throughout the attack no ocular symptoms of any gravity appeared. The conjunctivæ became suffused slightly. Vision and tension and sensation of the eyeballs remained normal throughout the attack. This lasted in all about three weeks, the only traces of its presence afterwards being a rugged scaly state of the cuticle under each eye. During the attack the patient's condition underwent very little change. In the succeeding week, however, uncontrollable hiccup, with rigors, occurring nightly, set in, the temperature rising from 102° to 103°. The albumen in the urine increased in quantity, being 35 oz.; sp. gr. 1010; granular casts. Shortly afterwards vomiting became a constant symptom, and shortly terminated the case.

Remarks.—The post-mortem examination generally bore out the diagnosis which heads the article, and was conducted by Dr. Drummond of Newcastle, who kindly saw the case with me once or twice during its progress. As to the eruption, the clustering together of the vesicles into groups, and its appearance on other parts in the course of the nerve distribution, all so characteristic of herpes, established the diagnosis at the onset. Subsequently viewing the lesions when the vesicles became confluent, purulent, and broken down, leaving large freely discharging ulcers under the eyes and on the upper orbital boundaries, a different opinion might have been formed. This, with the extreme swelling of the lids, presented a close resemblance to erysipelas. The striking features of course were the bilateral occurrence of the eruption and the absence of any serious ocular sympathy in the process from first to last. Mr. Hutchinson states that the severity of the disease is in proportion to that with which the tip of the nose was affected; and if the disease occurred in the latter situation the eye suffered. It will have been observed from the above account that the ophthalmic nerve in all its terminal branches was affected—viz., the lacrymal, the frontal (supra-trochlear), and the oculo-nasal; of the superior maxillary nerve, the inferior palpebral, the lateral nasal, and the superior labial branches were affected; and of the inferior maxillary nerve the auriculo-temporal suffered in its branches behind the ear. As previously stated, the eyeball remained perfectly normal throughout, during the weeks the patient survived, after the attack of herpes had entirely disappeared. At no time was vision at fault; the corneæ remained perfectly clear, with normal tension of globes.

Newcastle-on-Tyne.

THE MOTHERS' LYING-IN HOME, SHADWELL—

This institution, established about four years ago by Mrs. Ashton Warner, recently held its annual meeting of governors. The Earl of Meath presided. Since the opening of the Home, 405 patients had been registered, and 327 admitted and discharged well. During the past year, 103 mothers were treated with satisfactory results. The expenditure amounted to £810 11s. 2d. The present limited accommodation was represented as quite inadequate to meet the increasing demands upon the Home, and necessitated its periodical closing at intervals for sanitary requirements.

POLLUTION OF THE THAMES.—The Chertsey Rural Sanitary Authority were on Wednesday, at the Petty Sessions, fined £50 and ten guineas costs for suffering polluted matter to flow into a tributary of the River Thames at Chertsey, and £5 in respect of a similar offence committed at Addlestone.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMOVAL OF THREE INTRA-UTERINE FIBROIDS BY ENUCLEATION.

BY D. MACGREGOR, M.A., M.D. EDIN.

AN urgent summons to attend Mrs. R— reached me on March 30th of this year. Flooding had suddenly become alarming, and the patient fainted. She is aged forty-seven, the wife of a farm servant, and the mother of six children, four of whom are adults. She is a thin, anæmic-looking woman. For the past two years menstruation had been irregular, occurring once on an average once in three months. At these periods she lost much blood and suffered pain. During the two years she had also had difficulty and pain in both defecation and micturition: bowels constipated; micturition frequent. The patient attributed these symptoms to "change of life." Family history unimportant.

I found the patient in bed, blanched and weak. On abdominal palpation there was found a central tumour reaching from the pubes to the umbilicus; the tumour was only slightly painful to the touch, and appeared to be uterine. The abdominal superficial veins were distended. On examination per vaginam, there was felt a smooth globular tumour, large enough to fill the hollow of a hand. The os uteri was widely dilated, and the tumour protruded into the vaginal canal. The tumour was sessile, and was continuous with the posterior lip of the cervix and with the posterior uterine wall. The attachment was extensive. The uterine sound entered the uterus to the extent of six inches and a half; and there seemed to be an impediment, overcome only by some manœuvring after the sound had entered two inches. Ergot, nuxvomica, iron, and opium were administered, the vagina was plugged, absolute rest enjoined, and the patient given the most nutritious diet. As soon as the plug was removed hemorrhage recurred. It was evident that an operation was the only safe course; and the method of enucleation was adopted on the suggestion of my friend Dr. Mitchell Penman, who saw the patient with me.

On April 26th, Dr. Penman having administered chloroform, and the patient having been put in the lithotomy position opposite the only window in the room (in patient's own house), I seized and drew down the tumour with a vulsellum, slit the capsule, and proceeded to enucleate. The process of enucleation was found tiresome to the finger, and we found it convenient to relieve each other; after enucleating as far as possible, separation of the tumour was effected by avulsion. After the first tumour was removed another appeared, and after the removal of this a third presented itself. The three tumours having been removed, the capsule treated, and the uterus washed out, the patient was removed to bed. There was no hemorrhage. The time that elapsed from the moment the patient was placed on the operating table until she was again in bed was forty-five minutes. On the evening of operation the temperature was 103° F., and the pulse 100; and a sharp attack of bronchitis, to which the patient is subject, kept the temperature somewhat above normal for the first eight or nine days. On the subsidence of the bronchitic attack the patient made rapid progress. She now (May 20th) takes open-air exercise on foot daily, and feels in every respect well. The three tumours together weighed twenty-eight ounces; the measurements, in order of their presentation, were six inches by three, seven and a half inches by four, and six inches by three and a half.

Denholm, Hawick, N.B.

NOTES ON A

CASE OF POISONING BY HYDROCYANIC ACID.

BY E. M. GARSTANG, M.R.C.S., L.R.C.P. EDIN.

ON July 29th, 1887, I was called in haste to Miss B—, fifty-eight years of age, who was reported to have been suddenly seized with apoplexy. I saw her about 9.25 A.M., and found her perfectly insensible; breathing stertorous and irregular; severe twitchings of face; eyes directed

upwards and towards the right side; slight opisthotonos and tonic spasm of both arms and legs; very slight frothing at mouth; jaws firmly clenched; heart's action slow, laboured, and irregular; pulse imperceptible at wrist; extremities cold and bathed with clammy perspiration. Mustard and hot water fomentations were applied to the legs and thighs, and hot sinapisms over the heart. On inquiring as to what the patient had taken, I was informed that she had had a cup of tea and also a dose of medicine, which had been dispensed on the previous day by a chemist. On smelling the bottle a strong odour of bitter almonds was clearly perceptible. I then asked for the prescription, which I found was as follows:—"R Pot. bicarb., ʒiv.; acid. hydrochl. dil., ʒi.; aqua ad ʒviii. Allow the effervescence to subside before placing in the bottle. Cap. ʒss. ter in die." However, by an unfortunate mistake hydrocyanic acid had been used instead of the dilute hydrochloric acid. The patient took one dose of the medicine, which would be equal to half a drachm of the B.P. acid, and died one hour and twenty minutes from the time of taking the dose, and about half an hour after my arrival.

Necropsy, eight hours after death.—Body well nourished; no external marks beyond those of already commencing decomposition (the day being unusually hot). Heart somewhat fatty and its muscular tissue friable; odour of almonds distinctly perceptible on opening the pericardium, which contained about an ounce and a half of fluid. Left ventricle found firmly contracted and empty; right ventricle somewhat thin and relaxed, containing about an ounce of dark-coloured fluid blood. The lungs were somewhat congested, and adherent in places to the chest wall; also slightly emphysematous. Liver somewhat congested; friable. Kidneys and spleen healthy. All the viscera of both chest and abdomen were characterised by the peculiar odour of bitter almonds. The membranes of the brain were found considerably engorged, as also the sinuses. But in the brain tissue the puncta were almost imperceptible owing to the anemic character of the brain substance itself. The cerebro-spinal fluid and brain tissue gave off the characteristic smell. About two ounces of yellowish semi-transparent fluid were contained in the stomach; this was afterwards submitted to analysis, and found to give slight but unmistakable evidence of the presence of the prussic acid.

This case appears to me to be interesting, first, on account of the smallness of the dose, which was followed within about five minutes by complete insensibility, owing doubtless to the rapidity with which the poison became absorbed, the stomach being almost empty at the time of taking the fatal dose; and, secondly, that, the dose being so small, it should afford such conclusive and unmistakable signs of its presence in all the tissues.

Haulgh, Bolton.

A FOREIGN BODY IN THE EAR FOR EIGHTEEN YEARS.

BY ALFRED SWANN, M.D., M.R.C.S.,
SURGEON TO THE BATLEY AND DISTRICT COTTAGE HOSPITAL.

THE following case came under my care recently, and may be deemed interesting.

G. L., aged twenty-seven, consulted me in May, complaining of irritability of the fauces, particularly on the right side, and deafness on the same side. He said that eighteen years ago, when a child, he was playing with a piece of slate pencil, and poked it into his ear. He went to a medical man, who attempted to remove the body, but did not succeed. Deafness gradually supervened, and unless some conducting medium was used the man could not detect sounds at all. On examining the ear with a speculum, it was found to contain cerumen, but nothing else could be seen. A few syringefuls of warm water and carbonate of soda soon dislodged a long plug of what appeared to be cerumen, but embedded in this was a piece of slate pencil half an inch long, with its rounded end towards the drum of the ear. Hearing was immediately and perfectly restored, and on examination the tympanum was found to be perfectly whole and healthy. The throat symptoms cleared up in the course of a few days.

This case seems to be interesting as showing the toleration which the auditory canal may have for foreign bodies, and also on account of the sympathetic irritation of the throat.

Batley, Yorkshire

A FORM OF UMBILICAL SINUS OCCURRING IN ADULTS.

BY ALEX. G. R. FOULERTON, M.R.C.S., L.R.C.P.

THE form of umbilical sinus to which I would draw attention, although doubtless frequently met with in practice, has not, I believe, been generally recognised in surgical works. Umbilical fistulae of greater or less extent depending upon non-coalescence of the urachus or omphalo-mesenteric duct are described. So also a fistula leading down to an abscess cavity within the abdomen, usually seen in children and often in connexion with diseased mesenteric glands. Biliary and faecal fistulae may in like manner find their point of discharge at the same spot. The sinus now under consideration, however, does not extend deeper than the abdominal walls: it is merely the normal umbilical depression converted into a suppurating cavity. Its chief clinical characteristic has been a marked obduracy to treatment, depending probably on the fact that its exact pathology has not been understood. The cause of the irritation in four cases of this complaint, all occurring in women, which have come under my notice has been the same—viz., retained sebaceous matter. The presence of a hard plug of mingled dirt and sebaceous matter can frequently be demonstrated in the umbilicus, especially in persons who give not due regard to personal cleanliness. It will vary in size from a hemispherical mass the size of a small split-pea, lying deep down in the umbilicus, to a larger concretion filling the whole depression, and presenting itself as a black disc, its upper surface being flush with the surrounding skin. This being so, it is easy to conceive that such a plug may set up considerable irritation, and the suppuration so induced is likely to continue until the cause has been removed. Bearing this in mind, the treatment is simple. The cavity should first be thoroughly scraped out, particular attention being paid to the deeper parts; the application of nitric acid will then ensure a healthy granulating surface. For the scraping, a most convenient scoop may be extemporised by inverting a pen-nib in its holder. The cases thus treated have all healed rapidly after having already resisted various other methods. In one of the cases, after application of nitric acid the sinus still refused to heal. It was then found that what had been mistaken for a large granulation at the bottom of the sinus was in reality an encapsuled mass of sebaceous matter, presumably an obstructed follicle. On this being turned out, the whole thing was well within a week. There is yet another form of umbilical sinus caused by the spreading downwards of eczema, but as to the treatment of this I have no experience.

St. Bartholomew's Hospital, Chatham.

SYMPTOMS OF POISONING BY *ÆTHUSA CYNAPIUM* (FOOL'S PARSLEY).

BY E. SCOTT SUGDEN, M.B.,
SENIOR HOUSE SURGEON, BIRKENHEAD BOROUGH HOSPITAL.

JOSEPH P., aged nineteen, applied at the Birkenhead Borough Hospital at 8.30 A.M. on June 29th. He stated that on the previous evening he gathered by the hedgeside several leaves of a herb he thought to be tansy. Before going to bed he ate a few of these leaves, and about 3 o'clock in the morning he began to vomit; this vomiting continued for three or four hours off and on till he came to the hospital. When I saw him at 8.30 A.M. he complained of nausea and headache, with a burning sensation about the mouth and throat. The pupils were widely dilated, and the pulse very quick and feeble. The patient was put to bed, and no treatment ordered beyond a five-grain calomel powder and an ounce of castor oil. By the next morning he was quite well. The lad brought with him a piece of the herb, which was undoubtedly fool's parsley, and the case is interesting in view of the experiments made some years ago by Dr. John Harley (St. Thomas's Hospital), which were supposed to prove that the herb was completely harmless.

Birkenhead.

GREAT NORTHERN CENTRAL HOSPITAL.—The Prince and Princess of Wales have now arranged to open the new buildings on Tuesday, July 17th, at 4.30 P.M.

A Mirror

OF

HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF ŒSOPHAGOTOMY FOR AN IMPACTED ARTIFICIAL PLATE; RECOVERY; REMARKS.

(Under the care of Mr. H. H. CLUTTON.)

THE following case presents several points of interest, and is an example of an operation and the after-treatment required which from its rarity is seldom recorded. The shape and size of the plate made its detection with the Œsophageal forceps difficult; it was probably flattened against the posterior wall whilst they from their curve passed in front of it. It will also be noticed that the length of incision required was unusually short.

A woman, aged thirty-nine, was admitted on April 28th, 1888, with the following history. She was in the habit of wearing a vulcanite plate, which carried one central incisor tooth, and was kept in position by two hooks. It had latterly been reduced in size by several small pieces having been broken off, and was consequently very easily displaced. Two days before her admission, whilst eating a hard crust of bread, she accidentally swallowed the artificial plate. She was unable to take any solid food afterwards, and could only swallow fluids, such as tea, with great difficulty and pain. On the advice of her neighbours she took castor-oil, but she did not consult a doctor before she came to the hospital two days after the accident. Mr. Bidwell, the house-surgeon on duty, found on examination with forceps and coin-catcher, that the foreign body was fixed to the walls of the Œsophagus opposite the cricoid cartilage, and that any attempts at drawing it towards the mouth caused such intense dyspnoea as to make it impossible to proceed, even if he had otherwise thought it safe to make any prolonged effort at extraction. The patient was therefore admitted into the hospital.

After the administration of an anæsthetic, Mr. Clutton introduced a pair of Œsophageal forceps in order that he might be quite sure of the exact position of the foreign body. Again and again the forceps passed beyond the artificial plate without giving any indication of its presence. This was easily explained afterwards by the small size of the artificial plate, but at the time it gave the impression to the operator that the foreign body had passed onwards down the Œsophagus. By external manipulation there was an abnormal swelling to be felt opposite the cricoid cartilage, and after several further attempts the foreign body was eventually caught by the forceps, but it was so firmly fixed that it was obviously hopeless to attempt its extraction through the mouth. The operation of Œsophagotomy was therefore commenced by an incision two inches in length opposite the cricoid cartilage on the left side of the neck. After drawing the sternomastoid and omo-hyoid muscles to the outer side, the carotid sheath came into view and was similarly displaced outwards by a retractor. The Œsophagus was then seen at the bottom of the wound, and on introducing the finger one of the hooks belonging to the artificial plate could be felt protruding through the Œsophageal wall. After an incision had been made upon the foreign body, there was still some difficulty in extraction on account of the hooks. This was eventually overcome by turning the plate round and disentangling one hook at a time. The superficial incision was not enlarged, as the difficulty in extraction was not due to the size of the plate. The wound in the Œsophagus was then carefully closed with three catgut sutures, and a drainage tube being placed in the lower angle of the wound, the superficial parts were brought together with silk, and an antiseptic dressing applied.

From April 20th to May 8th she was fed entirely by nutrient enemata, and, as her chief complaint was then found to be that of thirst, from six to ten ounces of tepid water

were injected into the rectum in the intervals between the administrations of the nutrient enemata. She was forbidden to have anything by the mouth, and after the water had been given by the bowel she made much less complaint of thirst. But by May 8th she began to get so discontented at being (as she called) starved that it was found desirable to change the method of giving her nourishment. She was therefore fed by an Œsophageal tube from the 8th to the 15th, when, the wound being healed, she resumed the ordinary mode of taking food by the mouth.

On the day after the operation (April 29th) the dressing had to be changed on account of the quantity of the discharge. On the 30th the discharge was almost as copious and offensive, and left no doubt as to the fluid having come from the Œsophagus. The dressing was therefore changed to warm boracic lotion every four hours. The discharge continued to be very copious and offensive till May 10th, when two large sloughs were removed from the wound. The skin also became much excoriated. As soon as the sloughs were removed the wound quickly began to close, and was soundly healed by the 15th. The temperature rose to 101.4° on April 29th, but after May 2nd did not reach beyond 99.2°, except on one occasion (the 7th), when it rose again to 100.2°.

The patient left the hospital perfectly well in every respect on May 16th.

Remarks by Mr. CLUTTON.—First let me thank Mr. Stabb, the house surgeon to the case, for the attention and trouble which he took in carrying out the details of the treatment. Although the vulcanite plate was a small one, it was difficult to extract, the hooks being firmly embedded in the Œsophageal walls. There is one other feature in the case deserving of notice. An attempt was made to close the wound in the Œsophagus with sutures, in the hope that the whole wound might close by first intention; but from the nature of the discharge it is clear that this entirely failed, and the sloughs which were eventually removed must have come from the walls of the Œsophagus. No suppuration, however, extended from the wound, which was soundly healed in a little over a fortnight. The method adopted in feeding the patient was of material assistance, in my opinion, in promoting this desirable result; for, had any particles of food escaped from the Œsophagus, some suppuration beyond the limited area of the wound might naturally have been expected.

HOSPITAL FOR SICK CHILDREN, BRIGHTON.

A CASE OF INTUSSUSCEPTION OF THE CÆCUM AND VERMIFORM APPENDIX; DEATH; NECROPSY; REMARKS.

(Under the care of Dr. CHAFFEY.)

FOR the following report we are indebted to Dr. Bird, who was acting as house-surgeon.

A. B—, aged three years, was admitted on April 26th, 1888, complaining of pain in the abdomen. The patient was a pale, thin boy, with a somewhat pinched cast of countenance. His mother stated that he had been in about the same condition for six weeks, but had never been a strong child. There was an uncertain history of his having swallowed some kind of button a long time previously. During the ten days previously to admission he had vomited several times. The bowels had acted regularly except for the previous three days, during which time he had only passed a little slime and blood.

On examining the abdomen, an elongated sausage-shaped hardness could be observed, somewhat uneven in outline, situate in the region of the transverse colon, not pitting on pressure, and apparently not tender to the touch. It descended with each inspiration. The abdomen was not preternaturally distended at any part, and was quite symmetrical. A simple enema, consisting of fifteen ounces of soap-and-water, was administered, and belladonna fomentations were applied externally.

April 27th.—Child in a semi-collapsed, drowsy condition; has vomited twice this morning; complains frequently of pains in the abdomen, in the region of the tumour. On examination under chloroform the tumour became less evident in its first position, but there was a distinct swelling in the right hypochondrium, beneath the margin of the liver. The patient was ordered a mixture of ether with three minims of tincture of opium every four hours, together with brandy by the mouth, whilst small enemata of

concentrated beef-tea and peptonised milk were administered every three hours.

28th.—Tumour again evident. Patient not quite so collapsed. Chloroform being administered, a pint and a half of warm milk-and-water was slowly injected, whilst the abdomen was gently manipulated in the region of the tumour. The latter disappeared, with the exception of a body in the right ilio-hypogastric region, feeling very like a movable kidney, though not so defined. The greater part of this injection was retained from 11 A.M. to 2.30 P.M. The child seemed much better; no vomiting. The quantity of stimulants and opium were increased.

29th.—Small quantities of beef-tea and peptonised milk given every hour; brandy increased to three ounces in the twenty-four hours, the patient appearing more collapsed; pupils contracted; motions very offensive, containing undigested milk. Opium diminished, and a little castor oil mixture ordered.

30th.—Blood appeared in the motions for the first time, along with some mucus and undigested milk. Temperature 98° 2' to 99° 4'.

May 1st.—The tumour has reappeared at its old site; patient very restless and in evident pain. Castor oil mixture discontinued, and opium fomentations substituted for belladonna, as more tenderness and less movement of the abdominal wall created a suspicion of peritonitis supervening. Temperature 98° 5' to 102°. At 4.30 P.M. an anæsthetic was again administered, and two pints of warm water were injected, the abdomen being manipulated the while. The tumour disappeared.

5th.—The patient has now continued free from any appearance of the tumour for four days. Lies in a drowsy condition, his pupils being contracted by the repeated small doses of opium. Respiration 8 per minute. Thinner and weaker. The effects of the opium on the respiratory centre quickly subsided under small doses of belladonna tincture, and the patient was able to take small quantities of strong beef-tea with brandy by the mouth, whilst the enemata of peptonised milk and of beef-tea were administered as before every two hours.

6th.—Respiration 18; pulse 120; temperature 98° to 98° 8'. Patient still much collapsed.

7th.—The tumour reappeared, but was apparently reduced after the injection of two pints of warm water under ether and chloroform, aided by external manipulation. Small and repeated doses of tincture of opium were recommended. At 7 P.M. the tumour, having again returned, was reduced as before. At 9 P.M. the patient was sleeping; respiration 20; pulse 120. At 11.15 P.M. he was much exhausted, but sleeping quietly. He was taking a fair amount of food and stimulants by enemata.

8th.—The patient became gradually weaker, and died at 2.45 P.M.

Necropsy, made twenty-four hours after death.—Some rigor mortis in the extremities. Toes and finger-tips much discoloured; no post-mortem congestion elsewhere. Small intestines semi-distended with flatus; in some places collapsed, and contracted in others; no general peritonitis. Great omentum drawn over to the right side and fixed down to the parts in the vicinity of the cæcum by firm old adhesions. Here there was also a little flaky, recent lymph; no pus. The place of the cæcum was occupied by a rounded tumour (about three inches by two), composed of the cæcum partly invaginated into itself along with the ileo-cæcal valve, the parts being held in this relationship by tough, rounded, cord-like bands of old adhesions stretching across the fissure between the small gut and the caput cæci. No tail of the vermiform appendix could be discovered, though diligently sought for, but the proximal end of that structure had become inverted, so as to form a little polypoid projection (about one inch in length) into the cavity of the cæcum close to the ileo-cæcal valve; this, moreover, appeared surmounted on a boss-like protuberance of the adjacent part of the caput coli, which was likewise partially inverted by the contraction of the adventitious bands applied to it externally. The mucous membrane covering these projections had become almost gangrenous, being deep purple in colour and softened, and there was a line of demarcation in one direction. The apex of the polypoid protuberance presented a well-marked ostium leading into a tubular cavity, about half an inch in length. A little gritty yellow concretion adhered to its summit, and something of the kind existed in the cavity of the polypoid projection. The cæcum was more roomy than natural; its

walls were much hypertrophied. The ascending colon commenced rather abruptly from the cæcum. The coats of this and of the rest of the large bowel were considerably hypertrophied, the rugæ being very marked. There was no ulceration anywhere, and no localised patch of congestion, nor any recent peritonitis along its course. It occupied the usual position. There was no accumulation of faeces anywhere within the large bowel. Some yellow feculent material with mucus existed in the small bowel just above the ileo-cæcal valve. The margins of the valve were of a slate colour, not ulcerated or thickened to any extent, if at all. The orifice was not contracted, being about normal in dimensions. There was no sign of blood having been extravasated into the tissues in its vicinity. The mucous membrane of the Peyer's patch immediately above the valve was swollen, not ulcerated. The cæcum was not very movable, but the adventitious bands were perhaps sufficiently long to allow of the change in its position to be observable apparently during life. The liver was enlarged and fatty. The spleen was also enlarged and congested.

Remarks by Dr. CHAFFEY.—The special points of interest are 1. The unusual condition of parts. The old adventitious bands originated probably in some inflammatory mischief about the vermiform appendix; but I have thought it possible that they may have resulted from an old intussusception. Their subsequent contraction would account for the inversion of the vermiform appendix and adjacent portion of cæcum. One can easily understand how the polypoid projections thus occasioned would act in exciting the intussusception reduced during life. I can find no similar case recorded, notwithstanding the many and excellent papers on the subject. 2. Abdominal section would probably not have afforded any material relief. The obstruction to the passage of faeces was by no means complete at any time, and, moreover, the extreme state of collapse, from which the patient died, almost precluded the idea of further surgical procedure. 3. External manipulation very materially aided the action of the injections per rectum. This was particularly insisted on by Dr. Cheadle in a former paper on the subject. It seems to me a point that should always be remembered, as until this was performed the tumour remained fairly fixed, notwithstanding the bowel was forcibly distended from below.

LIVERPOOL NORTHERN HOSPITAL.

A CASE OF ACUTE GLOSSITIS.

(Under the care of Mr. DAMER HARRISON.)

FOR the following report we are indebted to Mr. William Permewan, house-surgeon:—

Joseph C., a lad of fourteen, apprentice to a carrier, was admitted on April 20th, 1888. He stated that on April 17th he got wet through and felt chilled, but went home and went to bed shortly afterwards. He remained apparently in good health till the 19th. On that day, while eating his dinner, about 12 noon, he bit his tongue severely on the right side about the middle. He went to his work as usual, but in the afternoon he suddenly felt a pain in his right ear, and to relieve it he put his ear under a tap and let cold water run into it. Most of the water returned, but a small quantity, he says, did not come back for half an hour; none ran into his mouth. The pain was not relieved by this treatment, and in the evening he felt his throat sore and had difficulty in swallowing. However, he seems to have been fairly comfortable when he went to bed. On awakening the next morning (April 20th) at 6 A.M., he had great pain in his tongue, and found that his tongue was very much swollen. He felt weak and ill. At 12 noon he was admitted into the Northern Hospital.

On admission the patient, a rather delicate-looking lad, was evidently very ill. The tongue was much swollen, was protruded about three-quarters of an inch in front of the teeth, and the frænum was pressed forcibly down on the lower incisors and canines. The upper and lower teeth were separated about an inch. The tongue almost completely filled the cavity of the mouth, and was immovable, and no view could be had of the fauces. There was considerable swelling below the jaw, extending to the hyoid bone. The patient was quite unable to speak or swallow, and salivation was profuse. Breathing was carried on almost entirely through the nose, but there was no marked dyspnoea, and apparently no very acute pain. There was a

perforation of the right membrana tympani. Temperature 102°. The patient was at once put into a "tracheotomy tent," with a steam kettle; a linseed poultice was applied under the chin, and five grains of calomel put as far back as possible on the tongue. The tongue continued to enlarge, and at 2 P.M. two incisions were made with a sharp bistoury into the dorsum, half an inch on either side of the raphe, about an inch and a quarter long and a quarter of an inch in depth; they extended forwards quite to the tip of the tongue; they were encouraged to bleed by warm sponging, but only about an ounce of blood escaped. Four leeches were then applied under the jaw, which drew off about two ounces, but the leech-bites continued to ooze for two or three hours, and quite three ounces were afterwards lost. The tip of the tongue was kept moist with glycerine of borax, and poultices reapplied under the chin. The patient was ordered to suck ice, but only very small pieces could be put into the mouth. At 8.30 P.M. a nutrient enema of beef-tea, milk, brandy, and five minims of tincture of opium was administered, and through the night two other enemata were given, beef peptonoids being substituted for the beef-tea. The patient slept very little. Temperature at 9 P.M. 101.2°.

April 21st.—Temperature at 8 A.M. 99°. Tongue much reduced in size; hardly protruded between the teeth. Under the tip there is now seen a sloughy patch, three-quarters of an inch wide, where the tongue had pressed on the lower teeth. The incisions have apparently healed by primary union. The right first lower molar is carious. The patient can now speak with some difficulty, move his tongue slightly, and swallow milk slowly and in small quantities. The sloughy patch was painted with a solution of nitrate of silver (five grains to the ounce), and the patient ordered to wash his mouth with "sanitas," mixed with equal quantities of water. He was given a pint each of milk and beef-tea during the day, and four ounces of port-wine. The temperature rose at night to 102°.

22nd.—Temperature 99.4°. Tongue nearly of natural size; swallowing and speaking easy. The slough is separating. During the day the patient developed a cough, with expectoration slightly tinged with blood; and the temperature at night was 103.2°.

23rd.—Temperature 101°. There is a patch of localised pneumonia at left apex; sputa more rusty-coloured, but only small in amount. Linseed poultices were applied to the chest, and the steam kettle continued. Temperature at 8.30 P.M. 100°.

24th.—Temperature 98.4°. Still some cough and slight expectoration. The tongue is now of normal size and perfectly movable; the patient eats, swallows, and speaks with ease, and breathes in a normal manner. The slough has separated from under the frenum, and the ulcer is healing. On the right side of the tongue there is an ulcer a quarter of an inch deep, evidently the result of the bite.

27th.—Tongue still healthy; the ulcer at the side almost healed. Expectoration smaller in amount; contains very little blood. Temperature has been normal for the last two days. The patient has gained much in strength, and now takes some solid food.

From this date convalescence continued without interruption. The carious molar tooth was extracted a few days afterwards; the pneumonia cleared up in the usual way, and the patient left the hospital well on May 10th.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Adjourned Debate on Electrolysis in Gynecological Practice.

A MEETING of the above Society was held on Thursday, June 21st, Dr. John Williams, President, in the chair.

The debate on the papers on Electrolysis in the Treatment of Diseases of Women, read at the last ordinary meeting by Drs. Stevenson, Lovell Drage, Gibbons, and Shaw, was resumed.

Dr. PLAYFAIR declared that those who had really mastered the technical details of electrolysis had never found that method useless. It must be justly tried, and then established or condemned as results may prove. Dr. Playfair, through

personal experience, had sufficient evidence to satisfy himself that the agent had great power, but that much was yet to be learnt. Cases should be treated by gynecologists, and not left to professional electricians and to managers of the electrical department of hospitals. Passing sounds and electrodes required special knowledge of the diseases of women, and the electrician might not necessarily possess that knowledge. Turning to his own clinical experience, Dr. Playfair believed in the hæmostatic effect of the positive pole in the treatment of fibroids and other forms of uterine hæmorrhage. It sometimes acted most powerfully, and, as far as he could ascertain, permanently, in arresting hæmorrhage. In other cases it did good for a time; in only one case had he found it worthless. As to the treatment of non-hæmorrhagic fibroids by puncture and the negative current, he had only experience through two cases. He believed this variety of treatment to be the most questionable and dangerous manner of applying electricity; besides, very few such fibroids required any kind of treatment. In both of Dr. Playfair's cases a large mass was impacted in the pelvis, causing severe pressure-symptoms. In the first the tumour had practically disappeared, but there was great constitutional disturbance. In the second, where the pressure had rendered voluntary micturition impossible for a long time, the tumour was much lessened, the patient no longer required the catheter, and felt quite well and comfortable. Dr. Playfair then described some cases which tended to prove that the negative current was of great value in the treatment of severe dysmenorrhœa, membranous dysmenorrhœa, and aggravated uterine catarrh. Dr. Playfair, in conclusion, declared that his clinical experience proved that electrolysis was an agent occasionally capable of doing much good. It might do much harm if injudiciously and unskillfully used, but that truth furnished no argument for rejecting electrolysis as a therapeutic agent, but rather demonstrated that the effects of the new method must be carefully studied, its indications noted, and its dangers detected and avoided.

Dr. INGLIS PARSONS said that in the case of uterine fibroids the results of electrolysis would vary according to the position and structure of the tumour. He had found by experiment that electrolysis occurred only at the poles, and the free acids and alkalies resulting from it also acted locally. When fibrous tissue predominated, very little reduction in size was possible, even by puncture; whereas a soft myoma could be disintegrated by puncture. In one case he passed a small platinum needle, insulated to within a quarter of an inch from the end, through the anterior vaginal wall, and one inch into the substance of the tumour. The current only came off in the tumour, the vaginal wall remained intact; no sinus was left, as would have been the case had the actual cautery been used, but the puncture closed up at once, whilst at each sitting a large piece of the tumour was destroyed. By February last the tumour was reduced to one-third its original size, and had since remained unaltered. What was left appeared to be fibrous tissue.

Dr. BANTOCK could not express himself in favour of electrolysis. There had been much assertion as to what this treatment was going to do, but little evidence of what it had done. He did not believe that there was a tittle of evidence in support of the idea of electrolytic action extending between the poles. Apostoli himself and some of his followers had acknowledged the correctness of this opinion. Through the failure of the supposed electrolytic method they had taken to the totally different practice of thrusting one of the electrodes into the substance of the tumour. This resembled Dr. Greenhalgh's way of treating fibroids, by thrusting the actual cautery into their substance—a practice which had fallen into well-merited neglect on account of unfavourable results. Both methods sought to bring about the destruction of the integrity of the tumour, it being supposed that if once the degenerative process were started it continued till the fibroid tumour entirely disappeared, leaving, contrary to Dr. Parsons' statement, not a trace behind. The caustic action at the poles Dr. Bantock admitted, but he thought that this method offered no advantages over other practices in the treatment of those granulations on which uterine hæmorrhage so often depended. The alleged diminution in the size of the tumour was due rather to a change in the condition of the uterus itself. Dr. Bantock opposed the manner in which this system of treatment of electricity had become a fashion of the day, only too apt to degenerate into

quackery. Dr. Bantock concluded by saying that his mind was still open to conviction, and he was content to allow others to pursue the electrical treatment provided it was done in a truly scientific spirit, free from that empiricism and imposture which at present characterised it.

Dr. ROUTH compared the opposition to the electric treatment of women's diseases to the similar opposition to the sound and to ovariectomy in past days. Only those who had some experience of the method could judge of its merits. He believed that it was efficient in many cases. Thus the negative pole caused dilatation of the contracted passages, as in stenosis of the uterine canal; the extent of its dilating power in this respect had not been sufficiently dwelt upon. In one extreme case he could introduce two or three fingers into the uterine cavity after employing electricity. Hoping to dilate the cavity further, he gave ergot, when to his surprise he found it closed. Errors of diagnosis had discredited electricity, as in one case of a tumour impacted in the pelvis. Dr. Bantock had exhibited elsewhere a uterus removed for fibroid disease. In its cavity were found a number of small tumours. The case recovered, but had the uterus been first dilated, and the tumours removed one by one, the patient would have retained her sexual organs. In 1872 Dr. Routh cured two cases of large fibroid tumour by the electrical cautery, but the wounds made by the electrical agents then in use proved very troublesome to heal. This disadvantage was overcome by Dr. Apostoli's appliances. Dr. Routh stated that clinical experience showed the necessity of antiseptic injections after the application of electricity to fibroids, especially when rise of temperature occurred. The electric wire allowed the operator to limit the application of his remedy, both as to place and time, with great exactness. This was a great advantage, especially in fundal endometritis accompanied with discharge of tenacious mucus or pus. An ordinary caustic could not be applied with the same precision. Lastly, though hysterectomy was often justifiable, we must not forget that it unsexed a woman—a serious effect indeed; so that if electricity could also cure a fibroid, it would be far preferable to a mutilating operation.

Dr. CHAMPNEYS considered that discussion on the subject, especially as to permanency of success, was premature. Those who disbelieved in the method were not necessarily either ignorant, prejudiced, or even inexperienced; those who did not publish their successes might be perfectly capable of forming a judgment. He had given the method a trial, but did not consider that the time had arrived for the publication of his results.

Dr. GALABIN wished to know if electrolysis, and consequent absorption, of the cells of the tissues or tumour took place midway between the positive and negative poles, or only at the poles. He criticised the former opinion very strongly on physical grounds, and was inclined to believe that the effects of electric treatment in cases of fibroid were due to caustic action. Dr. Galabin regretted that so little satisfactory evidence on the treatment of fibroids had been brought forward. As a caustic, electricity was valuable when the interior of the uterus required treatment and the cervix was narrow; in other respects it was hardly superior to other caustic agents.

The PRESIDENT did not object to Dr. Playfair's claim that electricity should be placed on its trial. It had been already tried in the treatment of women's diseases for some time. The literature of the subject was not inconsiderable, but it was very disappointing, for it mainly consisted in the description of instruments and the mode of using them. Dr. Apostoli, in particular, had published little else, except a series of general assertions and sweeping statements. Now, in estimating the value of the published work of an author not personally known to the reader, and whose powers of observation could not be tested personally, the reader should be acquainted with more than one of that author's published writings. He should know the author's record, for one work might throw much light upon the value of another. In 1881 Dr. Apostoli read before the International Medical Congress a paper wherein he proposed to treat the uterus during the lying-in period by faradisation, with a view to prevent subinvolution, metritis, and other evils. Every Fellow of the Society might form his own estimate of that proposal. In a later work by Dr. Apostoli on "Chronic Metritis and its Treatment by Electricity" there was much about instruments and many sweeping assertions, but not a single case in support of the latter. Dr. Steavenson's paper was not free from similar statements.

He said that the contracted cervix could be dilated by electricity with results more permanent than after dilatation by other means. We had, however, no data which made it possible to form any valid conclusion on the permanency of the effects of tents, bougies, &c. How, again, could Dr. Steavenson justify his assertion that electricity cured the stenosis of the cervical canal caused by amputation of the cervix by the galvano-cautery? The President severely criticised the statements of Dr. Carlet, a pupil of Dr. Apostoli, in a work on the treatment of fibroids by electricity after the method of his master. Dr. Carlet declared that small interstitial fibroid tumours were often regarded as chronic metritis, engorgement of the uterus, ulceration of the neck, anteversion, anteversion, and especially retroflexion and retroversion. Such was the dominant idea in Dr. Carlet's work, as revealed by the ninety-four cases which he described. Fifty-nine were treated by positive galvano-caustic. In four cases only did the canal of the uterus measure over four inches, the greatest length being five inches and a half. In twenty-five it measured less than three inches! Together with the slight elongation of the canal there was enlargement and induration of the uterus, with hemorrhage. The President was not ashamed of the ignorance which regarded these cases, with two or three exceptions, as cases of subinvolution or chronic metritis. These cases were treated for hemorrhage for periods varying from two months to a year; yet in none did the diminution in the length of the canal exceed 1.5 centimetre. They could have been effectively treated in a shorter time by other means. The President then showed that the evidence in respect to twenty-one out of the ninety-four cases treated by negative galvano-caustic was equally unsatisfactory. Five cases were treated by puncture, mostly large fibroids, but in only one could Dr. Apostoli introduce the sound. The canal measured fifteen centimetres before and eleven and a half after treatment. This was a diminution of three and a half centimetres, a little less than an inch and a half, a decrease known to occur as a part of the cyclical changes of fibroids. Inconclusive, in a similar manner, was the record of nine cases treated by positive and negative galvano-caustic. In none out of all these cases did any alteration in size take place which might not be prevented by fibroids when not treated at all. The method had thus been put to the test by its founder, and with very unsatisfactory results. There might be a place for the employment of electricity in the treatment of diseases of women, but as yet no case had been made out for it.

Dr. STEAVENSON felt some difficulty in replying to all the questions included in the discussion. He hoped that it would be remembered that he wrote his paper more than a year ago; the method had since undergone modifications. He had not admitted that the electrolytic action of electricity was limited to its cauterising properties; but advocated a more extensive use of electrolysis in those diseases of women where caustics were most usually employed. The apparatus was cumbersome and its management difficult, so that the new method was not likely to supplant others; but to those who could manage the apparatus, electrolysis would prove, as Dr. Horrocks had said elsewhere, a more efficient and elegant way of applying caustic than any other that we possessed. In reply to Dr. Bantock, he maintained that this caustic action was true electrolytic action. Electrolysis certainly took place at the poles, and, though this important point was not settled, Dr. Steavenson believed that it also went on in the tissue between the poles—as, for example, in the substance of a tumour. Turning to the treatment of erosions and catarrh, he brought forward evidence to prove that electrolysis, instead of being a longer, was usually a shorter method of cure than any other; for it was a better local remedy than any caustic. Some of his cases certainly required three or four months' treatment by electrolysis, but they had mostly undergone, without benefit, prolonged application of mineral caustics, in some instances for one or two years. Turning to Dr. Playfair's remarks, Dr. Steavenson said that gynecologists should not attempt this treatment without some knowledge of electricity, nor electricians without some knowledge of gynecology. In reply to the President, he thought it premature to say that the enlargement of the cervical canal for dysmenorrhoea produced by electrolysis was more permanent than when it was effected by mechanical dilatation or by incisions; but the President admitted that some contraction occurred at once after the canal had been stretched to a large size by dilatation. Dr. Steavenson declared that

the case was different after electrolysis; there was no immediate contraction, and certainly none for a month or six weeks. But for how long the enlargement of the canal was maintained he had not sufficient experience to prove. As to the taut that if cicatricial tissue out of sight in the pelvic cavity could be made to disappear by electrolysis cicatricial tissue on the surface of the body might be, and ought to be, removed by the same method, though the advocates of electrolysis shirked that test, Dr. Steavenson said that, on the contrary, he had tried electrolysis with success on cicatrices at the meatus of the urethra and on the brawny tissue around old perineal and scrotal fistulae. The dense tissue visibly softened down.

Dr. GIBBONS admitted that some of his cases might have been cured by other means, but maintained that the results seemed more satisfactory; and where he could trace the history the patients seemed more thoroughly cured by electrolysis than by other methods. The caruncle case criticised by Dr. Herman required two applications, for a special reason which he explained. He further admitted that the method was very unsuitable for private and general practice; yet with all its present disadvantages it was a means of treatment well worthy of prolonged trial by those who have patience and material at their disposal.

Dr. SHAW believed that an increase of arterial tension really took place and continued after the application of the current, and had no doubt that what was understood by electrolysis really took place; for at the positive and negative poles, together with acids and alkaline bases respectively, there were acid and alkali albumens. Some of the cases of failure were due to local irritation, the result of a too early or too vigorous use of the hæmostatic action of the positive pole. A preliminary or occasional resort to the derivative action of the negative pole appeared advisable. The negative pole acted, he believed, in a twofold manner on a stricture or a closed cervix. Firstly, it caused the swelling up of capillary granulations; secondly, it exercised a directly solvent action on the fibrous tissue. Dr. Shaw had satisfied himself by a series of experiments, a description of which were appended to his paper, that electrolysis went on between as well as at the poles.

EPIDEMIOLOGICAL SOCIETY OF LONDON.

Relationship of Diphtheria to Throat Illness.

A MEETING of this Society was held on June 13th, Dr. THOMAS THORNE, President, in the chair.

Dr. ARTHUR DOWNES read a paper entitled "Diphtheria and its attendant Throat Illness," of which the following is an abstract. The author, after pointing out that the incidence of diphtheria on the great towns had markedly increased since 1881, proceeded to consider the relationship of this disease to "croup" and to the minor throat illness which so constantly attends it. Examples from his official experience were given in illustration of the danger to the public health which the present nosological chaos entails. He contended that the throat illness associated with epidemic diphtheria, using the word in its narrowest sense, was absolutely *ejusdem generis*. Referring to theories of development of diphtheria from simple sore-throat by a process of evolution, he observed that *a priori* the general laws of evolution appeared to be opposed to such a development under the given conditions; that none of the supposed transformations of harmless organisms into pathogenic had stood the tests of time and criticism; and, finally, that in Dr. Burdon Sanderson's well-known experiments on infective inflammations, there was nothing to show that the results were not simply due to the survival of a particular pathogenic organism over all others in successive cultivations. Epidemics of diphtheria in rural districts were of two kinds—"smouldering" and "explosive." In the former unrecognised cases generally bridged the gaps between the severe outbreaks. The explosive type of outbreak seemed often to be occasioned by increased infectiousness of some particular case. The virulence and spreading power of an epidemic, however, though usually associated, were not necessarily concomitant. The usual mode of spread of diphtheria by ordinary personal infection and occasionally by fomites was illustrated by examples. Milk epidemics were unknown in those rural districts where little milk is consumed and no evidence exists of water-spread diphtheria.

Dr. DOWNES related a remarkable example of outbreaks of membranous sore-throat extending over a period of five years, and ceasing suddenly and entirely on remedying a definite soil-pipe defect; but as the outbreaks never spread beyond the one house, and the cases were not followed by any typical sequelæ, he considered their relationship to true diphtheria unproven.—In the discussion which followed, the President, and Drs. Buchanan, Michael Taylor, and Jacob took part.

Dr. CORY read a paper on the Condition as to Vaccination of one hundred and fifty persons scarred by Small-pox, which has already been commented upon in a previous number of the journal.—In the discussion which followed Drs. Buchanan and Lloyd and Mr. Collins took part.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Suprapubic Lithotomy.

A MEETING of the Surgical Section of the Academy was held on April 13th.

Mr. KENDAL FRANKS read a paper on Suprapubic Lithotomy and Vesical Suture, and referred to the case of a man, aged sixty-five, who had suffered from stone in the bladder for two years. He was a tall, large, heavy man, with a deep perineum and a large prostate, and on account of these conditions the suprapubic operation was performed on May 10th, 1887, the rectum and bladder having been both distended. The distance of the pre-vesical fold of peritoneum from the pubis was three inches. Three uric-acid stones were extracted of nearly equal size, shape, and weight, without any facets, and weighing in all 666 grains. The bladder was sutured—firstly, by Lambert's method, with catgut, and a second row of sutures (continuous) were inserted so as to completely cover in the first row. The external wound was drained from the pre-vesical space to the upper angle of the wound, and the bladder was drained with a soft rubber catheter, passed per urethram, which was kept *in situ* for five days. The bladder wound healed by first intention, and at no time was there any leakage of urine through the wound. The patient passed urine without the aid of a catheter on the twelfth day and subsequently. The drainage tube was retained in the wound until the tenth day, and Mr. Franks explained that this was done to prevent any mischief being done should the bladder sutures not hold. He recommended that the drainage tube should always be retained in the external wound for at least seven days, as statistics showed that the vesical suture might yield as late as the sixth day. The patient was out of bed and walking about the wards on the fourteenth day. Mr. Franks said that the causes of failure in suturing of the bladder in the high operation were: (1) An anatomical one, that the external coat of the bladder in this region was fibrous and not serous; (2) a thinned and diseased condition of the bladder walls; (3) injury to the edges of the wound by the manipulations employed to extract the stones; (4) a putrid condition of the urine. The advantages of suture were a shortened convalescence, ten days being on an average gained, and an effectual preventive against urinary infiltration. Mr. Franks considered the operation would gain in favour, and would be adopted for other than large stones, on account of its ease of performance, its freedom from hæmorrhage, and the greater security it afforded for thoroughly clearing out the bladder.

Mr. F. ALCOCK NIXON read a paper on Suprapubic Lithotomy in a gentleman, eighty-one years of age, who had fifty-seven years ago suffered from "bleeding from the bladder and a stoppage of water"; the bleeding recurred at intervals every five or six years for fifty years. The bladder was opened above the pubes and two calculi were removed, one weighing 2 oz. 30½ gr., the other 150½ gr. They were composed of the ammoniaco-magnesian and calcium phosphates. The bladder was sutured and drained, the tube being placed in the abdominal wound and a catheter retained in the bladder. The temperature, which was 101°F., became normal on the evening of the third day; the urine became acid; the patient was quite free from pain, able to take food well, and enjoy long periods of sleep. On the fifth day the patient died suddenly from syncope, from which he had previously suffered on several occasions. After death, the wound in the bladder was found to be healed, except about half an inch in the centre, from which urine had escaped

through the abdominal wound for a short time on the second day, while the catheter was plugged by a blood clot. There was no trace whatever either of peritonitis or of cellulitis.

In the unavoidable absence of Dr. Heuston, a paper on Vesical Tumour removed by Suprapubic Cystotomy was read by Dr. ALFRED SCOTT. The patient, aged forty-eight years, suffered for four years from symptoms of vesical irritation, accompanied at gradually increasing intervals by hæmorrhage of an arterial character, which for the later five months came freely at each period of micturition in a considerable quantity. On his admission to hospital a tumour was diagnosed by sounding, and a roughened condition of the bladder throughout was noticed. The presence of the larger tumour was also demonstrated by rectal examination. The bladder being now washed out, a portion of the tumour came away, which was proved by Dr. Alfred Scott to be papillomatous in its nature. On March 15th, 1888, the bladder was opened by the usual suprapubic method, and a tumour somewhat larger than an orange, composed of three lobules, attached to the right wall of the bladder by narrow pedicles, was removed, as were also a number of smaller growths about the size of hazel-nuts. The hæmorrhage, which was very copious, was at once controlled by a solution of tannic and gallic acids, subsequently to which the bladder was illuminated by the electric light, and then a stream of a weak solution of hazeline was passed into the bladder until it returned clear. The bladder was then closed, except sufficiently to allow of the introduction of a drainage tube, care being taken to close the areolar spaces in connexion with the bladder wound. Subsequently to operation the patient progressed favourably for twelve days, the urine becoming normal in its characters; but then the temperature suddenly rose to 104.2° F., the patient became delirious, and, although the temperature was subdued by quinine within twenty-four hours, the patient gradually sank and died sixteen days after operation. Dr. Bewley, pathologist to the Adelaide Hospital, performed a post-mortem examination, and found that there was no peritonitis, the bladder being firmly united to the abdominal parietes at the seat of the wound, which was healthy. The bladder was contracted; anterior wall normal, posterior wall thickened and cutting hard. In the centre of this surface, a space about the size of half-a-crown was covered with white flocculi of seemingly gangrenous tissue; this was the seat of the removed papilloma. Spleen and kidneys healthy, there being no evidence of septic infection.—Mr. W. THORNLEY STOKER said that Mr. Franks had not referred to what was attracting a good deal of discussion in connexion with suprapubic lithotomy—namely, the class of cases in which that operation should be selected. As far as any rule had yet been established on the subject, it was this: that suprapubic lithotomy was to be performed in the adult in cases where the stone was too large to admit of its probable successful removal by perineal operation—i.e., where the stone exceeded two ounces in weight, or where, because of its hardness or the great size of the prostate, there was not alikelihood that lithotomy would be successful. In Fellisen's drawings, to which Mr. Franks referred, and which Sir William Mac Cormac adopted in his paper, the extreme distance obtained by hyper-distending the bladder was between two and three centimetres. Another remarkable difference between his specimen and Fellisen's was that under hyper-distension the latter assumed a globular form, whereas his was more of a pyriform shape, as taught in the schools.—Mr. TOBIN suggested, with reference to the different expedients of obtaining room to make an incision, holding the patient's legs aloft. He had tried the experiment on a subject in the post-mortem room. Having half filled the bladder, he measured the amount of space uncovered by the peritoneum while the subject was lying flat on the table. He then raised the subject, holding the legs aloft, and on measuring again he found he had double the space with the subject in the raised position than he had when prone.—Mr. J. H. SCOTT mentioned a case of a gentleman, aged sixty, who had been under his care for urinary irritation, from which he suffered for several years. He discovered a very large stone. The urine was fairly healthy. He thought the best chance was afforded by the suprapubic operation, which he accordingly performed. There was great difficulty in suturing the bladder. For three or four days the case went well; but then diarrhoea set in, and on the ninth day the patient died. At the time

he feared the distension of the rectum might have caused the irritation which produced the diarrhoea, but he did not think so now, having ascertained that the patient had contracted a form of dysentery on the Ganges.—Mr. M'ARDLE said that with Mr. Stoker's views on the selection of cases he fully agreed, while he emphasised the necessity of accurate records of suprapubic lithotomy, especially the fatal cases. If such records were to be of statistical value, the conditions prior to, during, and after operation must be detailed to enable operative surgeons to determine the real dangers of the operation *per se*.—Deputy Surgeon-General JOYNT did not think that a case had been made out for suprapubic lithotomy to displace the lateral operation, with which he had been familiar in India, where he had operated in not less than one hundred cases. Out of that number he could only recollect one fatal case, and whether that was due to the operation or not he could not now say. He could understand, however, that the suprapubic operation would be an acceptable one in women, there being a good deal of trouble in operating on them. He had had cases in which he removed stones an inch and a half in circumference from young girls by dilatation of the urethra, aided by incision.

Reviews and Notices of Books.

Clinical Lectures on Important Symptoms: On Albuminuria.
By T. GRAINGER STEWART, M.D. Edin. Pp. 250.
Edinburgh: Bell and Bradfute. 1888.

THIS is not only one of the most important of recent contributions upon the subject of albuminuria, but from its clinical character it is also entertaining and easy reading. The author has retained the original form and expression of the lectures to a very large extent. The quaint old-time style of printing the term "Gentlemen" at the commencement of each lecture serves to lend an air of professorial dignity and authority, and almost seems to imply that those to whom the lectures are addressed must receive the information in the unquestioning spirit due to the lecturer. It is but fair to add that, as a rule, Professor Grainger Stewart has taken considerable pains to verify his conclusions and to justify his theories. The second edition of his book upon "Bright's Diseases of the Kidneys" has been out of print for many years, and apparently a third edition of that work is not to be expected, since he has sought to embody in these lectures his present views concerning the chief clinical questions formerly discussed.

The first of the fifteen lectures composing this volume deals with the forms of albumen met with in the urine, and their qualitative and quantitative tests. The forms of albumen are enumerated in a concise manner, with a few apposite remarks upon each variety, and they are followed by a very valuable table showing the reactions for the chief forms of albumen with each of the dozen or more tests which are occasionally employed. Some space is devoted to a defence of the picric acid test, which has been so frequently assailed. The possibility of erroneous conclusions resulting from the presence of mucin is discussed, with the conclusion that a little practice only is needed to obviate all likelihood of error. Upon the whole, the author is inclined to regard this as the "most reliable and delicate test" which we at present possess. In a table on a subsequent page he shows that this delicacy extends to the recognition of the presence of 0.00065% of a grain of serum albumen per ounce. The incidence of albuminuria among the presumably healthy forms the subject of the second lecture; and as this is still, to a large extent, a debatable question, the author's experience and conclusions are of considerable interest. Posner's statement of the possibility of demonstrating albumen in every case, provided that sufficiently delicate methods are employed, is explained and put aside with extreme gentleness and modesty. Still, we cannot but feel that Professor

Grainger Stewart must have been somewhat unfortunate in the selection of the 505 individuals from whom he learnt that albumen was present in 32·8 per cent. Before startling us with the statement that albumen can be found in nearly one in three of the male population, if the urine be examined "during the active period of the forenoon, an hour or two after breakfast," it might perhaps have been well to consider whether among the 205 soldiers and recruits and the 100 men about or over sixty, there might not have existed numerous sources of fallacy. The 100 healthy male adults engaged in civil employments only gave a percentage of 10 showing albuminuria. Perhaps the safest course is to admit the accuracy of Professor Grainger Stewart's numbers, and to regard them as probably arising from local conditions of climate, habits, or occupation. From a southern point of view the percentage appears excessive. The author's results of the influence of diet, muscular exercise, severe exertion, blowing wind instruments, cold bathing, and mental excitement are drawn from such small numbers that they could hardly stand alone. As a whole, however, they agree with the investigations of previous observers.

The various theories of the precise mechanism of the production of albuminuria are dealt with in an extremely lucid manner in the fourth lecture. The transudation of albumen from the Malpighian tufts is regarded as proved for most cases, and the suggestions of an altered character of the blood, an altered state of the filtering apparatus, an abnormal vascular tension, or some changes in epithelial cells and stroma, are each in turn carefully examined. While many will demur at Professor Grainger Stewart's conclusions, and occasionally at his somewhat sweeping method of brushing aside objections, yet there is obviously much to be said in support of his views. "I would have you believe that albuminuria is very often due to changes of an inflammatory character in the epithelium of the tubules and in the stroma of the organ, and that in a very large proportion of the cases in which it occurs in practice it is dependent upon this cause; that increased blood pressure is a factor of some importance; that increased permeability of the filtering apparatus induces it in many instances; and that there may be some conditions of the blood which account for it or favour its occurrence." This *résumé* is of an all-embracing type, allowing room for each observer to hold his own opinion, and leaving disputants merely to argue upon the most common cause, instead of the cause. The struggle is thus simply one for pre-eminence, admitting that, under certain conditions, all theories may be right.

In the next lecture, the author does not maintain this charitable frame of mind, nor does his pathology remain so free from objection. He narrates cases of chronic albuminuria (one lasting for more than thirty years), and he considers that during the whole time chronic inflammatory action continued. Clearly he would appear here to employ the term *inflammatory* in a sense which is not usually recognised. The same objection might be urged against his view of the causation of albuminuria in cirrhosis of the kidney. In the seventh lecture the author once more attempts the difficult task of harmonising the apparently opposing views of various observers. The cardiac hypertrophy associated with chronic renal changes is "to be referred partly to the obstruction of the renal circulation inevitable in the disease, partly, no doubt, to the widespread disease of arteries, arterioles, and capillaries, partly to the greater difficulty experienced by the heart in its efforts to drive an impure blood through the vascular system, perhaps in part also to the spasmodic contraction of the small vessels as suggested by Dr. George Johnson." Again, in speaking of the vascular changes, and admitting that his own observations confirm those of Dr. George Johnson

regarding the hypertrophy of the middle coat of the smaller arteries, the author considers that "alterations of the inner and outer coats are common, and that the thickening and tortuosity of arteries are often due to them." And yet he holds that "arterio-capillary fibrosis often exists without any renal cirrhosis." The lecture upon uræmic symptoms occurring in the course of advanced kidney disease is extremely interesting and instructive, the notes of several cases lending to it an air of downright earnestness which fixes the attention. Here again, unhappily, the lecture, to our thinking, is marred by a lack of precision. In dealing with the explanation of uræmic symptoms, the author, with characteristic Scotch caution, hesitates to pin his faith to any single theory, but allows that uræmia may result from the direct poisonous action upon the nerve centres, or from cerebral anæmia, the consequence of vascular spasm, or of serous effusion within the cranium, or from organic degeneration, minute hæmorrhages or softening processes occurring in the substance of the brain. On the other hand, as a practical hint, for which many will be thankful, he states that in cases of cerebral hæmorrhage in which "the condition seems almost hopeless, I am comforted rather than otherwise if I find that it is complicating a renal lesion." The lecture dealing with albuminuria resulting from fever, diseases of the circulatory, alimentary, or nervous systems, and with albuminuria complicating glycosuria, is necessarily incomplete in the present state of our knowledge. The facts are stated calmly and with judicial caution, and explanatory hypotheses are set forth with full consciousness of their limitations. We cannot, however, refrain from noting the masterly deductions drawn from the action of digitalis in cases of cardiac albuminuria.

Perhaps the lecture to which most observers will turn with the greatest interest is that upon forms of albuminuria of a cyclical or intermittent type. A brief summary of recent contributions is first given, and the author then describes with illustrative cases (1) paroxysmal albuminuria, (2) dietetic albuminuria, (3) albuminuria from muscular exertion, and (4) a form of *simple* persistent albuminuria, this last being characterised by a normal elimination of urea, by the absence of tube casts and of any obvious cause for the appearance of albumen. He considers it probable that the first form may have a slight tendency to culminate in organic renal disease, but that this result is less likely to follow the second and third categories. In the fourth class he thinks the prognosis is less hopeful, but is to be guided by observation of the occurrence of any subsequent interference with eliminative work, together with any sign of later vascular changes. The differential diagnosis and the prognosis in albuminuria follow the lines naturally indicated by the preceding lectures, and do not call for any special remark here. Those who disagree with the author concerning the occurrence of paroxysmal and dietetic albuminuria, will certainly not be prepared to believe that the prognosis can be good in any form of albuminuria. The whole question is one which is hardly yet ripe for definite statement.

The concluding lectures upon diet in albuminuria, and upon the effect of medicines, are relatively brief though essentially practical. They form a very satisfying ending to this work.

Professor Grainger Stewart has produced a book which will be eagerly consulted by all who are interested to learn his present views. He has evidently studied the recent literature with considerable critical care. He has submitted every statement and every theory to rigorous examination, and has instituted numerous fresh researches to confirm or refute opinions currently held. Every page is characterised by laborious sifting of a vast amount of material, sometimes chemical, sometimes clinical, sometimes theoretical,

but always stated with such fluent ease that the labour is likely to be overlooked.

The book is provided with a good index, and with a very servicable list of books and papers referred to, in the lectures. In a future edition the misprint upon p. 223, line 20, should be corrected.

The Electric Illumination of the Bladder and Urethra as a means of Diagnosis of Obscure Vesico-Urethral Diseases. By E. HURRY FENWICK, F.R.C.S., Surgeon (Out-patient) to St. Peter's Hospital, Assistant-Surgeon to the London Hospital, &c. London: J. & A. Churchill. 1888.

DURING the last twelve months the subject of the electric illumination of the bladder and urethra has been somewhat prominently before the profession, and we have been able to publish in our pages more than one record of the valuable results of this mode of investigating obscure diseases of the bladder. The old endoscope, illuminated by an oil lamp only, was of such limited use that very few surgeons ever employed it at all; and the earlier electric endoscopes, in which a platinum loop was used with a current of cold water flowing through the instrument to keep it cool, was too cumbrous and expensive to be at all widely resorted to. With the introduction of the incandescent electric lamps of Swan and Edison, and their adaptation to the cystoscope and urethroscope, a new era opened. The instrument was simplified and cheapened. The current of water is dispensed with, and the space in the instrument formerly occupied by the water tubes is now utilised for the passage of rays of light. Even now, in its most modern and its simplest form, it is an elaborate instrument which is not likely to become so widely and generally used as the ophthalmoscope and laryngoscope. Like these instruments, its use requires practice and some skill, while there is far greater need for care, as it is by no means difficult to inflict serious injury on the bladder if the tiny lamp is allowed to remain too long in contact with its surface. When we remember how completely the ophthalmoscope and the laryngoscope have revolutionised the practice of ophthalmic and laryngeal surgery, it is impossible not to hope that a like result may accrue from the ability to see the interior of the bladder and urethra. Up to the present time this mode of examination has been of most service in the detection of vesical growths, especially when small or scattered. But it has also given help in the detection of foreign bodies, stone and some other conditions of the bladder. We cannot, however, yet assign a limit to its usefulness. The whole subject is still in its experimental stage, and we most gladly welcome any additions to our ability to deal successfully with the early stages of vesical growths, or with those obscure conditions not certainly recognisable by other senses than by sight. Mr. Fenwick's work gives a short account of the gradual evolution of the present instruments, of their mode of use, and of the results obtained by them so far as present experience goes. It is pleasantly written, and will, no doubt, have a large circle of readers.

IPSWICH AND EAST SUFFOLK HOSPITAL.—The governors held their anniversary meeting at the Town Hall last week. The report showed a falling off in the annual subscriptions and in the Sunday and Saturday collections. To meet the deficit of last year, with the sanction of the governors, the committee had appropriated £865 for that purpose instead of investing capital and legacies. But there was this year a debit balance of £347 0s. 4d. Two important alterations had been made affecting the medical supervision of the hospital—namely, the abolition of the distinction between physicians and surgeons, and the addition of an assistant house surgeon to the officers of the institution.

THE CASE OF THE EMPEROR FREDERICK.

IN the *Berliner Klinische Wochenschrift* of July 2nd, the editor, Dr. Ewald, writes as follows:—"We have not thought it desirable, either during the lifetime or by the open grave of the Emperor Frederick III., to discuss from a medical standpoint the symptoms, history, and treatment of his malady, and to comment upon it from the critical and prognostic aspect, because it seems to be impossible even now, as at an earlier period, to satisfactorily detach this deeply-deplored case from political and personal considerations, nor to judge it objectively, without having the fullest knowledge of all that has been played both upon and behind the stage of this tragic episode in our history. We have confined ourselves to publishing authentic accounts furnished to us by the physicians engaged in the case, and we ought, for our satisfaction, to state that the German medical journals, apart from some brief remarks, have all viewed it in the same light, leaving the arena of contests about diagnosis and treatment to the more or less inspired pens of the political press, because they, like ourselves, were not willing to accept at secondhand from the English papers, and without any proof of its accuracy, their information as to the condition of the German Crown Prince and later Emperor during the greater part of his illness. We have previously expressed our regret that we have been so long deprived of bulletins from the German doctors, and consequently of an accurate (*massgebenden Bilde*) picture of the course of the disease. It was thought by this means to entirely dam up the broad stream of publicity; but, on the contrary, it has by this very attempt been made to flow in a much greater and uncontrollable volume. We do not take up the position of those who from the commencement were not satisfied with the English physician merely because he is not a German. Science, and especially so supremely humane and cosmopolitan a science and art as medicine, stands above nations, and for us it remains *sub judice* whether, in the case of the head of the State, the only thing that remains to a deeply suffering patient—personal trust and hope in his doctor (and the Emperor Frederick repeatedly expressed this confidence)—should be dependent upon national motives. But this hope—which we will admit to have been given *bonâ fide* to the illustrious patient, and maintained as long as possible (since we do not feel called upon to play the part of a State lawyer, and, through Sir M. Mackenzie, confront those who more or less worked in agreement with him for a long time)—has, in the course and issue of the malady, been sadly refuted, and the diagnosis declared from the beginning by the German physicians on the ground of clinical experience and observation is absolutely verified. While we once more state this fact before the whole world, and therewith demonstrate to superfluity the superiority of our authorities, we think that, for our part, we are neither called upon nor justified to make further retrospective observations; but we hold this to be the business of the German physicians concerned, in case they should at all find themselves called upon, or rather compelled, to do so. Although the German physicians, as was their sacred duty, did all in their power to give full weight to their convictions, and although a Vienna medical journal, without any exact knowledge of the circumstances, is so bold as to reproach the German doctors with a lack of courtesy towards colleagues ("*mangel an collegialität*"), and in so doing to cast reproach on the leading men of our University, whose scientific and social position stands, and must stand, high above personal jealousies and intrigues, yet it is well enough known that everything must of necessity be esteemed and judged under the *ægis* of *esprit de corps*. We may, both as to form and substance, place our claims on such omissions as low as possible; but this at least we are entitled to demand: that these injurious statements should not be circulated through the world on chance newspaper paragraphs without any knowledge of the motives on which they are based—statements which not only strike individuals, but, through them, the order of which they are eminent representatives."

Analytical Records.

PURE COMPRESSED MILK EXTRACT, PREPARED BY THE SWISS MILK COMPANY, ST. GALL
(CARL LAWINSKI, 50, MARK-LANE, LONDON, E.C.)

A very interesting and valuable preparation. It is literally and truly a skim-milk powder, prepared without antiseptics, and easily soluble in hot or cold water. We obtained by analysis the following results:—

	Per cent.
Water	3.00
Ash	7.75
Fat	0.20
Casein and lactose	89.05

100.00

The directions are that each tin, which contains about 150 grammes of powder, is to yield 1 litre of milk. So prepared, the milk contains more than 14 per cent. of milk solids other than fat. It is therefore a highly nutritious food, in spite of the absence of cream.

PURE COMPRESSED CREAM MILK.

This article comes from the same source as the last, and is evidently prepared by the same method. But in this case the milk has not been skimmed, and the powder when suitably diluted with water yields ordinary cow's milk of excellent quality. We found by analysis—

	Per cent.
Water	1.70
Ash	6.06
Fat	21.80
Casein and lactose	70.44

100.00

After dilution according to the printed directions, this gives a milk containing in each 100 volumes, solids not fat 11.48, and fat 3.27 parts by weight. The preparation is an excellent and useful one, and will doubtless meet with an extensive sale.

MILK CHOCOLATE POWDER. (SAME MAKERS.)

The idea of mixing the milk powder with cocoa was as sensible as simple. Two teaspoonfuls make a cup of excellent chocolate, which can be prepared in a minute.

BISCUITS AND BREAD FOR THE DIABETIC. (E. BLATCHLEY, 167, OXFORD-STREET.)

The treatment of diabetes has been wonderfully aided during the last few years by new dietetic preparations, and we have from time to time to record fresh improvements. We have lately received from Mr. Blatchley, and have submitted to chemical examination, nearly a dozen kinds of biscuits and bread, all of which are palatable and valuable. Some of them are absolutely free from starch, while the others contain very little. Most are flavoured with almond, the others with cocoanut or chocolate, and six of them are sweetened with saccharin. Four of them gave no reaction at all with the iodine test, so that the physician has now a considerable choice before him.

WINES AND SPIRITS. (POWNCEBY & Co., 183, OXFORD-STREET.)

The sample of port is a good example of the excellent wine that can be sold at a moderate price if matured in wood. It is tawny and dry, and, although light and easily assimilated, is generous. It is said to be over forty years old, but to have been from time to time "filled up"—Solera fashion—with its own wine. Our examination is entirely in accord with this statement. We have also examined samples of very old Scotch whisky and liqueur brandy, both good—the latter, indeed, extremely fine.

REAL TURTLE SOUP.—PURE ESSENCE OF BEEF.—PURE BEEF-TEA.

(THE VIKING FOOD AND ESSENCE COMPANY, LIMITED, HEARN-STREET, CURTAIN-ROAD, LONDON.)

These preparations seem to us as good as they could possibly be. They are contained in glass bottles, so that the slightest change could be perceived at once. They are entirely sterilised, and one sample which we have had for months is as good as another received the other day. They are delicate in flavour, and, it is needless to add, they are excellent and concentrated forms of animal food.

New Inventions.

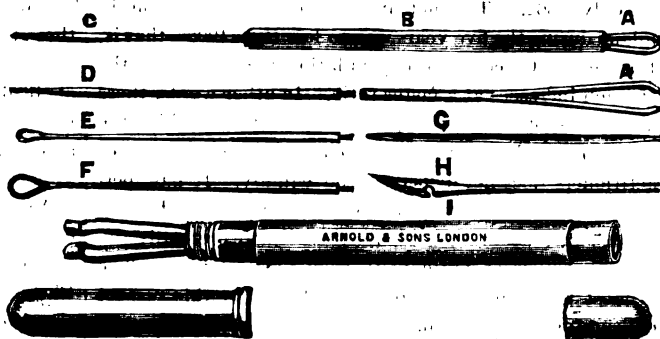
POISON BOTTLES.

Two patterns have been submitted to our notice—Hermes' Patent Poison Bottle, and Holt's Patent Poison Bottle. Both have been devised with a view to checking the fatalities which occur so frequently by patients mistaking poisonous lotions, liniments, &c., for medicines for internal use. Hermes' bottle, an illustration of which is appended, has the appearance of an ordinary poison or dispensing bottle, but is entirely different from it in construction, as the usual mouth of the bottle is closed. This alone obviates pouring out the contents in the customary manner or mistaking it for an ordinary mixture bottle. The mouth is at the base of the bottle; therefore, before the contents can be poured out it must be reversed: this action, being so entirely novel, compels the most thoughtless or negligent to reflect as to its contents. The inventor is Mr. Hermes, 6, Fairleigh-road, Stoke Newington, N. The bottle patented by Mr. Holt, of 63, Faulkner-street, Manchester, is shaped like a coffin, this form being relied upon to draw attention to the death lurking in its contents. Both contrivances are well calculated to accomplish what is desired, and will doubtless come into general use, though of the two preference may perhaps be given to the production of Mr. Hermes.



A PORTABLE INSTRUMENT CASE.

We have received from Messrs. Arnold and Sons, of West Smithfield, a portable combined silver caustic case and



receptacle for various instruments. This case can be easily carried in the waistcoat pocket, like the ordinary silver caustic case, whilst the receptacle contains the following useful instruments, all fitting a universal screw and small handle. Figs. A, B, and C show tweezers and exploring needle ready for use; the tweezers are useful for the removal of splinters or for epilation. The instrument B forms the handle for the following:—Exploring needle, C; sharp and blunt pointed probes, D and E; ear scoop, F; grooved director, G; suture needle with slot, H; and I, the case which contains them.

THE LANCET.

LONDON: SATURDAY, JULY 7, 1888.

AMONGST other valuable matter in the recently published volume of Minutes of the Medical Council is the Fourth Report of the Statistical Committee of the Council, which gives a Census of registered medical practitioners of England and Wales for the years 1881 and 1886 severally and comparatively. The various chapters of this Report, and the tables and charts accompanying them, will supply data for those who watch the development of the profession and compare its growth with that of the population of the country. It will afford material for judgment to those who contemplate entering the profession, and equally so to those who have already entered it, and are casting about for a place or a neighbourhood in which their services may be required. It is not always possible to decide the choice of a sphere of labour on mere statistical grounds; but they are an element in judgment, and will be found in abundance here. We have taken many opportunities of informing our readers that the medical profession is getting too numerous. The chief interest of the Report is to emphasise and demonstrate the same conclusion. Without going into minute details, we shall give a few illustrations. The object of the framers of the Report is to give the chief statistics as respects the medical practitioners of England and Wales in two years—1881 and 1886—the first and last of a quinquennial period. They show how many acres and how many persons on an average were assigned to each practitioner in the respective periods. Roughly, the result is that the profession grows faster than the population; that a medical man in England had fewer acres and fewer patients in 1886 than in 1881. In 1881 there were to each practitioner 2479 acres, in 1886 only 2199·6. In 1881 there were 1747 persons, possible patients, to each practitioner; in 1886 only 1662. The net increase of the profession in England during the five years was no less than 1908—that is, 381 a year. Of course the population increases, but the profession increases at a faster ratio. In other words, there is an excess of 826 in the profession over that which the growth of population requires. The increased number of practitioners does not disperse itself equally. It has, perhaps, a natural tendency to make for good places. It thus comes about that in such places there is theoretically the smallest number of patients to each medical man. The two most unhappy places for medical men in this respect are Brighton and London. In the former place there are only 726 persons to a practitioner, and in London only 939; whereas in Bristol there are 1232, in Liverpool 1564, in Wolverhampton 2062, and in Sheffield 2593. If medical happiness consists in the number of possible patients, Salford must be regarded as the paradise of the medical profession, for there are 3908 persons to a practitioner. But even here such happiness is not secured, for the number of the profession has increased from thirty in 1881 to fifty-five in 1886, and in the latter year there were only 64 per cent. of the possible patients of five years before. In a few districts

there is an actual increase of population to each practitioner. In the South Midland District, comprising the extra-metropolitan portion of Middlesex, Hertfordshire, Buckinghamshire, Oxfordshire, Northamptonshire, Huntingdonshire, Bedfordshire, and Cambridgeshire, there were 1849 persons to each practitioner in 1886, as against 1841 in the former period. Similarly in the Eastern District, comprising Essex, Suffolk, and Norfolk; and in the North Midland District, comprising Leicestershire, Rutlandshire, Lincolnshire, Nottinghamshire, and Derbyshire. The district in which the largest increase of persons to practitioners took place was the Northern, comprising Durham, Northumberland, Cumberland, and Westmoreland. The population in the five years increased by 153,090, and the profession only by 49. The report indicates three districts in which there is an excess, and a growing excess, of practitioners to population—viz., 1. London. 2. The South-Eastern Division of England. 3. The South-Western. In Table 1A the facts are set forth. From this it appears that in 1886 London contained no less than 1943 registered practitioners over and above its due share, an excess the more significant when the crowding of its population is considered.

We have only taken a few of the principal facts from this instructive and interesting Report, and we cannot much prolong our notice of it here. There are two valuable tables giving the proportion of persons to practitioners in, respectively, twenty-eight large towns, and in the counties of England and Wales. In towns the mean number of persons to a practitioner is 1284, and in counties 1936. The committee say that their lists show where practitioners are most needed, and where they are superabundant. This is too bare a way of stating the case, but the facts are collated with much clearness and interest. Other sections of the Report have reference to the sources of the qualifications of the registered practitioners of England and Wales in the two years, to foreign qualifications and their sources, and to the death-rate of the different districts and divisions of England; and Section 7 is meant to indicate the wealth of the different portions of the kingdom. We must leave these tempting mines of information for the present. It is somewhat pathetic to notice that there were on the Register of 1886 only seven practitioners who were in practice before 1815,—i.e., seventy-one years before. This remarkable kind of man must soon be a matter of history.

AN article of considerable interest appears in the *Edinburgh Medical Journal* for the present month, from the pen of Dr. FRANCIS TROUP, on the Diagnosis of Early Phthisis by the Microscope. The works of this author on the microscopical examination of the sputum in various forms of pulmonary disease have prepared the profession to expect further researches from so accurate and earnest an observer, and in this, his latest contribution, he fully justifies the expectation. On the matter of diagnosis the essay is fruitful, but it is most interesting in relation to the controversy which is now going on as to the cause and origin of phthisis pulmonalis. In this controversy, which is likely to become historical, Dr. TROUP holds a position at once independent and thoughtful. With true ardour, as his book on sputum indicates, he entered the ranks of

those who thought that the development in one particular direction of the little corner of natural history which treats of the deposit of germs and increase of bacilli in the pulmonary tissues of phthisical subjects might open up a clue to the unravelling of the nature of the most formidable disease, with one exception, of our time; and, although his ardour may not have abated a jot, his excellent common sense has controlled it and has brought him, apparently, to the admission that the extreme and dogmatic views which prevailed a few years ago cannot now be declared with the high hand and tone which for a long season confused the whole argument and led many who were willing to listen gratefully to leave the arena disgusted with the childish conceit of the new teachers, and half inclined to look upon them with their prophecies, promises, and idols, as mere creatures of impulse who thought, in their vanity, that they were going to carry all before them and to set the old and long-tried clinical school of medicine at complete defiance, or bring it into ignominious contempt.

Dr. TROUP sets out by giving a smart rap on the knuckles to those trimmers on the germ hypothesis who have suggested that some extra-bacillary matter secreted or excreted during the growth of the bacillus is the cause of the mischief, not the bacillus itself. "This suppositious matter," he says, "seems so identical with the bacillus that it is never noxiously operative save in its presence, and is transmitted from generation to generation of bacilli in pure cultivations. If this chemical virus therefore does exist, it ought to be easily demonstrable in pure cultivations, and should be searched for in them alone. To examine sputum and find in it alkaloids of a poisonous nature is not scrupulous enough; there are many micro-organisms which flourish side by side in expectorated matter, and it is random work to say that any noxious matter detected is the derivative of one microbe rather than another." To those who suppose that an alkaloid must be constructed out of material secreted by a bacillus this argument is no doubt a difficulty which they will find very hard, if not impossible, to meet; and as we must assume that, with those who do not want such material for the production of the alkaloidal poisons the author has no desire for controversy, he stands, on his own side of the question, upon a sound and logical basis. But while putting forward the statement, about which he believes there can be no dispute, that inoculations of pure cultivations of tubercle bacilli, or of tubercular stuff containing them, into animals susceptible of the disease will produce tuberculosis, Dr. TROUP sees the difficulty of extending the argument further, and boldly admits the difficulty of making the experimental knowledge account for the every day fact of the development of spontaneous localised tuberculosis, a chronic phthisis for instance in a man; or a lower animal, who has not been subjected to the direct process of inoculation. On this point his views are of peculiar importance. He confesses that there is no reasonable probability that in consumptives the bacilli have been inhaled, and that the lungs have been fertilised by the bacilli or their germs from without, as soil may be fertilised, if we may so express it, by the seeds of mustard and cress; and he rather cruelly demolishes the mustard-and-cress idea, so brilliantly upheld not very long since, by reciting, in brief, BAUMGARTEN'S experiments,

which conclusively prove that except when the forced inhalation of great masses of bacilli is carried out there is no chance of inducing tuberculosis of the lung, and that it cannot therefore be assumed that pulmonary tuberculosis in the human subject is propagated in this manner. But if there be no direct inhalation of the kind named; if the free and easy mode of conveyance of tubercular disease by direct pulmonary fertilisation must be given up as devoid equally of experimental and of clinical proof, how does the tubercular mischief arise in the thousands upon thousands of persons, between 40,000 and 50,000 a year in England and Wales alone, who suffer from it? Dr. TROUP supposes other possible factors. One of these is the use of milk of tubercular mothers of the human species, and the eating of flesh and drinking of the milk of tubercular animals, by which the specific bacillus may be introduced into our bodies. Another view is that phthisis may be a secondary infection, from pre-existing cheesy tubercular foci, in some distant region of the body, a view which, as it is admitted, only throws back the question a stage, and does nothing towards its solution. But the most curious hypothesis of all is that the bacillus itself, and not a mere disposition to its growth, may be inherited. "This," says Dr. TROUP, "is not unthinkable"; and he adds that in a recent communication BAUMGARTEN informs him that he stands almost alone in Germany in the adoption and advocacy of this view—a view which one of the most determined of the opponents of the bacillus origin of phthisis suggested four years ago in this country as the only logical ground on which the hypothesis could be sustained, on the argument that if the germ of the bacillus can be transmitted to others through man as a progenitor, then the germ of life itself must be of the same nature, and the old speculation of diseases as existences or entities is open to revival, after ages of banishment, as sound medical doctrine.

We notice this view of the direct propagation of the bacterial germ, *ab genitura*, in order to show the straits to which the consistent advocates of the bacillus hypothesis, in its application to pulmonary consumption, are driven in their endeavours to connect the results of what they consider conclusive evidence from experimental research, with the every day facts of practice. And, if on the question of such reconciliation we cannot feel that our northern *confrère* has led us out of debateable ground, we are not less grateful to him for having given us additional food for thought on one of the most absorbing subjects that can possibly occupy the mind of the profession of medicine. In connexion with this point we may call attention to an article published in our impression of June 4th, 1887, p. 1141.

Of a part of Dr. TROUP'S paper which is not speculative, and which deals with the diagnosis of pulmonary consumption by the microscopical determination of elements of elastic tissue and of bacterial elements in expectorated material, we would speak with much commendation. The combination of the two elements as specific signs of disease is a new point in diagnosis, and may render it absolute in those early stages of pulmonary phthisis when the stethoscope yields indications that are doubtful, and at the very moment when the precise treatment that is demanded is so critical that life may actually

depend upon the turn which diagnostic skill may give to practical recommendation and direction.

A REPORT on an outbreak of enteric fever at Buckingham, by Dr. PARSONS,¹ has just been issued by the Medical Department of the Local Government Board, and it has some features of very considerable interest. The outbreak may be divided into two portions, each having different characteristics and each due to a different cause; the first and the most interesting, from an etiological point of view, being due to the specific contamination of a local water service, and the second having its source in an extension of the disease under sanitary circumstances which go to show that Buckingham is a place to be avoided. Into these special sanitary circumstances we do not propose to enter; they are dealt with at length in Dr. PARSONS' report, both from an administrative point of view and with the intention of indicating, by a process of exclusion, that they were not concerned with the earlier and more important prevalence of the disease.

Premising that Buckingham has for years past had an amount of fatal enteric fever in excess of that prevailing in England and Wales generally, certain definite but isolated occurrences of the disease are referred to in November and December, 1887, until we come to the case of a boy living in a district called Church End, the character of whose illness was not at first recognised, but who appears to have had some very typical indications of enteric fever, and whose stools—*pea-soupy* and streaked with blood—were early in January of this year cast into a privy having communication with a drain of "imperfect construction, full of sediment, and often blocked." Church End receives almost all its water supply from a copious stream rising in a spring in the hill side, and which is brought down—first in a rubble-stoned drain, and then in one of socket pipes—to the iron spout from which it issues. This spring is locally referred to as the "Bath-lane Spout," and at its source it is above suspicion. But, according to the description and to certain illustrations embodied in the report, the line of the conduit is crossed some fifty feet above the spout by the drain, which received, among other things, the sewage and privy contents of the house where the unrecognised case of enteric fever occurred. The drain is, in the greater part of its course, only laid with common field pipes; and, extraordinary to relate, immediately over the course of the water conduit was a catch-pit inlet with a bottom of bare earth only. Examination into the details of construction, both of the conduit and the drain, showed that leakage from the drain into the water conduit must often have taken place; indeed, at one point the earth in which the water pipes were lying beneath the drain was "black, fetid, and sewage-sodden." In January and February some eighty people, living in twenty-five households, were attacked with enteric fever in three thoroughfares in Church End, twenty-two cases occurring just outside the borough boundary, and, including extension of the disease to other parts of Buckingham, there had been 114 cases at the date of inquiry.

Some interesting lessons may be learned from this occurrence. First, there is the futility of trust in the negative

results of chemical analysis of a single sample, or even of repeated samples, of water which has been examined with a view to the discovery of a source of mischief which was in operation some weeks previously. By the end of February, when the main evil had been produced, an expert in chemistry could only discover that the sample submitted to him had the characteristics of a first-class water; but even if the analysis had been made when specifically diseased excreta were actually finding their way into the water, it is well known that the specially dangerous character of such a supply could not have been detected. Another difficulty in the way of such chemical analysis, even so far as ordinary chemical indications are concerned, lies in the fact that in a rapidly-flowing spring like that which found its exit at the Bath-lane spout, there could only have been, in any given sample, a relatively small quantity of the dangerous quality which it was important to detect, this being mingled with a large body of an otherwise very pure water. And this leads to the second point of interest—namely, the accumulating evidence as to the comparative mildness of enteric fever epidemics which are due to a water which can only contain small portions of a specifically diseased particulate material, and this especially in cold weather. On this point Dr. PARSONS quotes the experience which was derived on the occasion of the well-known epidemic at Caterham in January and February, 1879, when it appeared that "by far the majority of the cases were of an exceptionally mild character, and, although when subjected to examination they were ascertained to be genuine cases of enteric fever, it is certain that had it not been for the prevailing epidemic no medical advice would in many cases have been sought, and some of the patients would not even have taken to their beds." This experience was characteristic of the epidemic at Church End, where it was also found, as in the case of Caterham, that the majority attacked were women and children. "This distribution of the disease," again quoting the Caterham report, "is by no means uncommon in epidemics in which water is the vehicle in which the infection is conveyed, for children drink much more water than adults, and, amongst the latter, men as a rule drink less than women." The Bangor epidemic, in 1882, also referred to by Dr. PARSONS, is another instance which aptly illustrates the points adverted to, and which are well worth remembering during investigations into the causes of enteric fever occurrences.

FROM time to time one hears complaints more or less distinct of the scientific temper—the scientific method—the demands which Science (spelt with a capital letter) makes, or the results at which she arrives; but it is seldom that a writer of eminence embarks upon such a root-and-branch denunciation as Miss CORBE has fulminated in the *Contemporary Review*. This lady alleges that the modern scientific spirit is intrusive and oppressive in regions where it has no proper work, predominant in others where its place should be wholly subordinate; that it has "sprung a mine under the deepest foundations of morality"; that it has elevated bodily health into the *summum bonum*; that it threatens the production of a hard and pitiless temper; for that, "with some noteworthy exceptions, the Scientific Spirit is callous"; that "Irreverence appears to be another note

¹ Eyre and Spottiswoode, East Harding-street, E.C.; Adam and Charles Black, Edinburgh; Hodges, Figgis, and Co., Dublin.

of the Scientific Spirit"; that the same abstraction is responsible for the brushing away of "a certain modesty which has hitherto prevailed among educated people"; and, lastly, that its advance has been "the signal for a subsidence of religious faith and religious emotion." Upon the assumption of such grounds of objection, one cannot feel much surprise—save at its moderation—at the conclusion to which all these considerations conduct our author, that Science has given us "many precious things, but she takes away things more precious still."

It often happens that persons who write under a strong impulse of emotion make the fact of their being deeply moved much clearer than the reasons for their feeling. This appears to us to be the case with Miss COBBE on the present occasion. No one who reads her paper can doubt the strength of her sentiment, but of its depth the evidences are far less manifest. For the dreadfully demoralising tendencies of Science she appears to draw upon the single instance of Mr. DARWIN's æsthetic deficiencies. From the life of that great man she extracts the following passage: "Up to the age of thirty, or beyond it, poetry of many kinds, such as the works of Milton, Byron, Wordsworth, Coleridge, and Shelley, gave me great delight, and even as a schoolboy I took intense delight in Shakespeare. I have also said that formerly pictures gave me considerable, and music very great, delight. But now for many years I cannot endure to read a line of poetry. I have also almost lost my taste for pictures or music." And upon this solitary instance, supplemented here and there with vague and generalised observations, Miss COBBE builds her terrible indictment. Surely there is some little freedom here. Must it be inferred, because Mr. DARWIN lost on the æsthetic side as he gained in the scientific, that therefore the tendency of advancing science must in every case, or even generally, be adverse to the higher nature of men? "Must he be shorn of the glory of humanity who is ordained her (Science's) priest?" asks Miss COBBE. We can only reply, Must he? Mr. DARWIN represents one particular type of scientific man. In grasp of facts and patience of research he was almost without a rival. It may well be that had his energies been diffused over the whole field of intellectual life, he would have been less successful than he was in the particular path in which he did, in fact, walk. But surely it is as fair to regard the repression of the æsthetic as the cause of the great development in him of the scientific side, as it is to regard the development of the scientific as being the cause of the repression of the æsthetic. Nay, it is more so. For everybody can see that the gradual weaning of his affections from other topics would have had a direct tendency to promote that concentration of attention on the remaining branches of study which his career so strikingly displays; but it certainly requires a clearer discernment than we can boast to discover why a knowledge of the origin of species or the habits of earth-worms and snadows should make a man "blind to the loveliness of nature, deaf to music, and insensible to poetry." Our best efforts to follow out the train of consequence only result in a confirmed conviction that we have here an absolute *non sequitur*.

But Miss COBBE is by no means satisfied with mere generalities. Warming to her theme, she launches a violent attack upon the medical profession. "The political press

has adopted the practice of reporting the details of illness of every eminent man who falls into the hands of the doctors, and affords these gentlemen an opportunity of advertising themselves as his advisers. The last recollection which the present generation will retain of many an illustrious statesman, poet, or soldier will not be that he died like a hero or a saint, bravely or piously, but that he swallowed such and such a medicine and perhaps was sick in his stomach. Death-beds are desecrated that doctors may be puffed and public inquisitiveness assuaged." This at least is unmistakable, and it is the one thing for which, in referring to it, we have to thank Miss COBBE. A charge so baseless does but little harm if it is unequivocally made. For what is the patent and indisputable fact? Is it not that at the present day those newspapers which Miss COBBE denotes political do, as a matter of fact, serve up to their readers every kind of literature that is of the smallest public interest? The complaint is that the diseases of eminent men are made the subject of accurate description and discussed in a way that is quite modern. We deprecate no less strongly than does Miss COBBE the publicity sometimes thus given to medical details of disease and its treatment. But we cannot forget that it is only part of a still larger fact. Is there not more law reporting in one week's file of *The Times* to-day than there was in a whole year's journalism at the beginning of the century? A third-rate politician cannot make an after-dinner speech to-day but it is published in a thousand newspapers and served up at a million breakfast tables on the following morning. And what is the increased publicity of medical bulletins of which Miss COBBE complains but the development in a particular connexion of the journalistic enterprise? That angry reference to the puffing of doctors is, no doubt, creditable to Miss COBBE's feelings, but at the expense of her discernment; and we, for our part, feel sufficiently confident of the general excellence of Science to be sanguine that she will survive Miss COBBE's castigation.

THE question of the nature and cause of malignant new growths is attracting a large share of attention from pathologists of the present day. The older controversy between localists and constitutionalists has practically died out, or rather has resulted in a sort of *via media*, wherein the truth of the localistic doctrine is maintained, modified it may be by the view of some underlying proclivity or tendency, which in a sense may be held to be constitutional, inasmuch as it expresses the condition of the tissues of the individual who becomes the subject of malignant disease. But there is little support nowadays given to the notion that cancer is a "blood disease," whilst the view that there is any special cachexia in sufferers from cancer has been practically abandoned. In a suggestive paper contributed to our columns last week, Dr. BRAITHWAITE attempts to carry the inquiry a stage further, so as to offer an explanation not only of the mode of growth of cancer, but to a certain extent of its cause. His remarks, which are based upon the epithelial character of cancerous growths, apply, it will be seen, only to those malignant formations; they leave out of the reckoning the large group of equally malignant tumours—the sarcomata. Indeed, the more the subject is studied the wider appear the differences between carcinoma and sarcoma, differences

which must depend on something more than the epiblastic or hypoblastic source of the one, and the mesoblastic origin of the other. For although VIRCHOW and others long ago maintained the connective-tissue origin of carcinoma, the instances are few and far between where this type of new growth can be proved to have arisen apart from epithelial or glandular tissues. That there are exceptional cases, especially in the osseous system, we fully believe; but in view of the general truth of the doctrine of the epithelial origin of cancer, such aberrant growths may perhaps be best explained on COHNHEIM'S hypothesis of embryonic rudiments. As to the growth and extension of cancer, Dr. BRAITHWAITE shows that epithelium cells, once they become removed from the normal limits imposed on them by the basement membrane, must, from their nature, continue to grow unchecked. To be sure, on a free surface and in a gland, they do this, and their continual renewal is one of the most striking evidences we possess of nutritive activity. But where there is no free surface, and the cells are lodged in the interstices of a vascular connective tissue, from which they are no longer separated by a basement membrane, that they should continue to develop with a luxuriance more or less great in accordance with the individual nutritive powers is not only probable, but most reasonable. Indeed, once the epithelium has transgressed the bounds of the basement membrane, it must almost of necessity infiltrate the tissues in which it comes to lodge. According to its primary seat, whether this be a gland, or a mucous surface, or the skin, so will it reproduce its original characters when it becomes so displaced. But being no longer, as it were, held in check, by having to subserve a definite function, its new development is irregular and wild, and the symmetrical cell arrangement of the physiological formation is often barely to be recognised in the disorderly massing of cells that constitutes the pathological product.

A great deal, then, upon this view, depends on the lack of integrity of the basement membrane. This delicate structure literally forms the line of demarcation between normal and morbid cell growth. So long as it persists, so long are the cells prevented from exercising their natural powers of proliferation at the expense of the integrity of other tissues. Dr. BRAITHWAITE suggests various ways in which this barrier, delicate though it be, may be broken down, and, in addition to mechanical or traumatic agencies, he hypothecates a diminution in its resistance from general nutritional failure. This is a new and ingenious reading of the old term "constitutional taint." The view is withdrawn for the moment from the cancer cells; it is centred on the structureless hyaline substance that forms the outer boundary of the mesoblast. If from nutritional defect there be weak places found in this rampart, then the way is open for the invasion of cells which become "malignant," not by virtue of any new property, but by the simple continuance of their normal capacity for growth, pursued under circumstances which offer no obstacle, but rather every facility, to their indefinite expansion. Yet, says Dr. BRAITHWAITE, it is probable that this proliferating power may be increased or stimulated by conditions of the environment. He does not allude to any mysterious force or irritant as exciting such prolifera-

tion; the parasitic theory of cancer is, on his view, not needed to explain the unnatural cell growth. The cause of cancer, in fine, is to be sought in nutritive excess on the one hand—the high and luxurious living of modern times being a large factor in the production of such excess,—combined with diminished vital resistance of tissues, on the other. This solution may appear to be paradoxical, but pathology (at present) is full of paradox; and in all but one particular we must confess that Dr. BRAITHWAITE'S reply to the question "What is cancer?" is at least as satisfactory as the answer which would point to its being a product of bacterial infection. That one particular is the character of malignancy as expressed in secondary formations. No explanation of the disease can be a working hypothesis which does not cover this the most remarkable of its features. We cannot admit that epithelium normally has the power of infecting distant parts, or even (as COHNHEIM and MAAS showed) that the transplantation of living epithelium into the substance of an organ by embolism will result in the production of a new growth capable of indefinite increase. The question "What is cancer?" embraces the more important question, "What is the cause of cancerous infectivity?" and that question, we venture to say, has not as yet received an answer.

Annotations.

"No quid nimis."

THE ROYAL COLLEGE OF SURGEONS.

WE are glad to see that the Members of the College of Surgeons have enlisted on their side the sympathy and support of Lord Randolph Churchill. In the House on June 28th he asked if the claims of the Members of the College to take part in the election of, and to representation on, the Council of the College had been recognised in the Supplementary Charter. Mr. W. H. Smith replied in the negative, whereupon Lord Randolph Churchill gave notice that on an early day he would move that a humble address be presented to Her Majesty praying Her Majesty not to grant a Supplementary Charter until such time as full inquiry had been made into the constitution of the College. Mr. W. H. Smith repeats the puerile plea, that there is no occasion to postpone the grant of a Charter which does not affect any of the questions which have been matters of controversy. Under this rule of procedure no settlement of disputed matters can take place. This plan would fail in the nursery, and must fail at the College. The Council of the College has pertinaciously declined to entertain the just and increasing demand on the part of the Members of the College for representation—a moderate demand on their part, and one not lacking in good argument or in repeated precedent. The Council has been compelled to apply for a new Charter to enable it to hold more revenues. What could be more natural than to opportunely grasp the idea of settling (up to date) the claims of the Members? And what could be more legitimate than for them to press their views at so convenient a time? The Council, however, wish to retire gracefully and leave all but the financial element as before. To this the Members say No, emphatically; they feel that if the Council of the College, having a present interest in conciliating opposition, and being compelled to seek for a new Charter, thus shelve their claims, it will be far more difficult to impress their views when the Members force the hands of the Council, to reopen the Charter at

an early date, and to do *then* what it ought to do *now*. Meanwhile, as the Council of the College is the persistent opponent of moderate reform, the motto of all who wish well to the College should be—*Reformandum est concilium*.

The general meeting of the Association of Fellows was held in the Arbitration Room, at the Inns of Court Hotel, on Thursday, the 5th inst., and was largely attended by metropolitan and provincial Fellows. There were present many surgeons of representative views and of distinguished repute; a glance around the room betrayed no expression of excitement or of fierce intolerance, but rather the serenity of minds working in and for a good cause, with the anticipation of eventual success in their object. The programme of the Association of Fellows is well known now to the profession, but a statement of its objects and claims for support was placed by the chairman before the Fellows, and a completed list of rules was accepted by the meeting (a report of which appears in another column). The proceedings were characterised throughout with much unanimity; and we may anticipate a further accession of Fellows to the Association, especially so, if the good tone of the meeting of 1888 may be taken as a sample of what is to follow at successive annual gatherings. At the conclusion of the business not a few Fellows expressed their regret that such orderly deliberations on collegiate matters had not been conducted *within* the walls of their own College. On the present occasion, the Fellows subsequently traversed the square, and took their part in the election of Councillors then proceeding at the College.

CHANGES IN THE EXAMINATIONS OF THE UNIVERSITY OF LONDON.

ONE result of the agitation in favour of increasing the facilities for obtaining degrees by London medical students has been the revision of the present scheme of medical examinations by the University of London, and the Senate has adopted the necessary resolutions for making great alterations in every one of these examinations. Of course, they cannot come into effect until they have been officially announced in the University Calendar of next year. At the Matriculation Examination, "Botany" will be added to the optional subjects. At the Preliminary Scientific M.B., "Mechanics" will be greatly reduced, the mathematical character of the questions in Experimental Physics lessened, a practical examination in the use of physical instruments introduced, and the syllabus in Biology revised. The examination will be divided into two sections: (a) Chemistry and Physics; (b) Biology; and candidates will be allowed to present themselves and pass in either section or in both. At the Intermediate M.B. Examination the pass and honours papers will be offered to every candidate, so that he may make his selection at the examination, and he will not be placed in the honours division unless he obtains half-marks. This part of the scheme seems rather complicated, and we shall be anxious to see how it will work; but it is a great improvement on the method adopted for last year and for the ensuing examination on Monday next. The requirements in Organic Chemistry and Materia Medica will be reconsidered and modified. The M.B. Pass Examination will be held twice a year. At the M.D. and M.S. Examinations, candidates will be allowed to submit a thesis upon a subject in Medicine, Surgery, Obstetrics, or Psychological Medicine, which, if accepted, will exempt them from the written and clinical examination in Medicine and in Surgery for the respective degrees. This is a somewhat surprising alteration; and, unless the character of the thesis be maintained at a very high standard, must inevitably lower the prestige of the examination. But perhaps the most startling change is the admission of registered medical practitioners of three years' standing and twenty-five years

of age, who have passed the Matriculation and Preliminary Scientific Examinations, to the subsequent examinations, on producing certificates that they have gone through the required curriculum at any time previously—i.e., either before or after having passed the two preliminary examinations. These alterations are wisely conceived in increasing the facilities for taking degrees at the University, although they will probably lower somewhat the standard of the examinations, but they of course only touch the fringe of the difficulty as to the proper means for London medical students to obtain degrees on terms and conditions similar to those by which they may be acquired in the other centres of medical education in Great Britain.

THE CAUSES, DEGREES, AND MEANS OF SLEEP.

THE probable causation of sleep is a subject which has often in the history of physiological research attracted the efforts of scientific speculators. It cannot be said that, after all, we are now able to define the processes involved in its restorative influence; but some suggestion of its nature is, nevertheless, within the reach of rational explanation. Most of our readers have doubtless formed some opinion on this subject, and have, perhaps, accepted as a provisional creed one or other of the theories advanced with regard to it. To some it may appear that the accumulation of waste products in the brain is enough to account for sleep. Deficient oxygenation offers another tempting hypothesis. Each of these processes, no doubt, may exert a certain soporific power, and probably thus operates in its degree; but it is difficult to see how either can be taken to afford the sole interpretation of that state of rest which comes with singular regularity of recurrence to all more or less, whether sick or healthy, idle or actively employed. There is something to be said also for the theory that sleep is a consequence of cerebral anæmia. The pathological drowsiness of hemicrania, of epilepsy, and some hysterical states favours this view, as does also the fact that pallor of the fundus of the eye has been noted in connexion with natural sleep. These observations do not, however, settle the question whether such anæmia is commonly a cause or merely a part of the general relaxation of energy implied in the soporific process. So far, we can only say of sleep that, following and preceding a period of wakefulness and constant stimulation of the senses, it represents a transient interval of rest from the activities of tissue change. It therefore corresponds with the quiescence of every organ and more especially of the nervous system, and with a timely languor of circulation in the resting tissues. By the gradual changes of evolution it has now virtually become a mere habit of mind and body. At first it was doubtless the outcome of exhaustion and an expression of the well-known law, which it still fairly illustrates, that action is balanced by reaction. The opposite condition of sleeplessness will commonly be found to originate in some continually acting cause of nerve excitement. This may consist in the presence of a local irritation or very usually in the abnormal irritability of a sensorium over-wrought and unduly sensitive to the most trifling impressions. We have already spoken of morbid somnolence in its relation to certain diseases, and have alluded to its connexion with a defective cerebral blood supply. We might also refer to instances of an altogether different condition, in which anæmia and sleeplessness are closely associated. This fact is sufficient to show that healthy sleep requires a certain due nutrition of brain tissue, and that cerebral anæmia or hyperæmia has with respect to it only a relative significance. The influence of various toxæmic states must also be remembered in dealing with this subject. Whether due to impairment of function in the lung, liver,

or kidney, the only reliable remedy for inconvenience thus caused is, of course, to be found in correcting the failure of excretion. Whatever, indeed, the form of error, be it the want or the excess of sleep, relief by means of so-called sleeping-draughts and the like is and must be only palliative. The one effectual means of cure in any case is no mere drug, but a method, and consists in the detection and removal of the source of mischief by a well-considered system of treatment.

HULL SANITARY ASSOCIATION AND FUTURE SANITARY ADMINISTRATION.

THE Honorary Secretaries of the Hull Sanitary Association refer, in a letter addressed to us on June 26th last, to the fact that we in a previous issue had expressed the opinion that the Local Government Bill provided that in cases where the power of compulsion under such sections as 42 and 299 of the Public Health Act, 1875, were not vested in the newly constituted County Councils—as, for example, in the case of boroughs which will remain exempt from the superintending county body—such compulsory powers remained as heretofore with the Local Government Board, and they imply that we wrote to that effect by inadvertence. This was not the case. Annexed to the third part of the first schedule of the Bill, to which our attention was drawn, will be found a number of “exemptions and modifications”; and although we admit that the tenth paragraph under that heading is a clause that might itself have required modifications, yet it was understood that the words “where a County Council are the sanitary authority.....the power in this part of this schedule mentioned shall continue in the Local Government Board, and shall not be transferred to the Council,” were intended to cover the point to which we adverted. The matter is, however, now of less importance than when we made our first comments on the subject, since the transference of such powers as those adverted to remains in abeyance for all districts alike.

A NEW IDEA IN HOUSE-BUILDING.

AN American physician, Dr. Gouverneur M. Smith, following in the footsteps of Dr. B. W. Richardson, has published an interesting little paper on the advantage of utilising the upper storeys and roofs of modern houses in the interests of health and recreation. After alluding to the defects of the present system of building, with its frequently dark, dusty, and overcrowded attics, he proceeds to suggest what is in several ways a better arrangement. This consists in securing free ventilation by means of shafts, in a great extension of window surface, and in providing convenient access to the roof, which is to be laid out as a pleasure-garden. The roof space thus gained would form an agreeable promenade in summer, while the bright and airy upper rooms would be equally suitable for nurseries or play-rooms. Dr. Smith dwells on the amenities afforded by such a well-kept roof-garden to the dwellers in tenements. At the same time he is not forgetful of possible inconveniences arising from a promiscuous association of neighbouring tenants on this common ground; but he argues that, as a rule, the scheme is not open to any really grave objection on this account. The point is necessarily one which experience alone could settle. So far as we can learn, however, a similar principle in house-building already adopted in this country has not been discredited by any serious difficulties of the kind in question. It has always appeared to us, however, that in the event of fire the very thorough ventilation allowed by this plan of construction could not but tend to assist the conflagration. This drawback might, perhaps, be met by some specially contrived safeguard. The advocates of the project are also,

doubtless, prepared to guarantee that houses constructed on this plan will not be too cold or draughty; for, unless objections like these can be satisfactorily disposed of, the proposed reform is not likely to prove as useful in practice as it looks plausible on paper.

THE OXFORD AND CAMBRIDGE CRICKET MATCH: A POSSIBLE SOURCE OF INFECTION.

WE have it from an eye-witness that on Sunday last, the day before the Oxford and Cambridge cricket match should have begun, there were between one and two hundred carriages drawn up, horseless, outside Lord's Cricket Ground, *en queue*, awaiting their turn to be taken into the field early on the Monday morning. In several carriages groups of ragged urchins had assembled, and were enjoying themselves by “bear fighting” with the cushions. Our informant called the attention of a man and his wife, who were the only caretakers of one solitary carriage, to the state of things going on around, and to their credit, be it said, they speedily cleared the vehicles of their unwholesome occupants. No policeman or detective was in sight. We should think it would be worth while for the proprietors of these hired carriages to combine and engage an officer on their own account, if only to protect their property from damage. From our own standpoint we cannot but think that such incidents may possibly explain the advent of scarlatina, small-pox, and other disorders in families where every precaution against infection is invariably observed.

SMALL-POX AT MILAN.

NO Italian city receives so many British subjects throughout the year as Milan, and though these seldom remain more than a day or two, being simply birds of passage, their sojourn is long enough to make them liable to one or other of the diseases apparently endemic in the city. Small-pox and typhoid are never wholly absent from the Milanese population; the former especially having periods of recrudescence, sometimes so sudden and so pernicious as to amount to positive “explosions.” One of these has declared itself within the last week, and, as usual, there is a whipping-up of the people to the vaccinating-stations in the vain hope that such spasmodic and unsystematic precautions can stay the disease. It is deplorable to witness the appeals addressed by the sanitary authorities to the population, urging them to do at the eleventh hour what should have been done effectively at the first. With the educated classes these appeals are scarcely required, for by the Italian law no child can enter a school for education, and no youth can fill a position of trust or be enrolled in the civil or military services, without an authentic certificate of vaccination. But how about the proletariat? How about the thousands of the lower orders who never go to school or never see the inside of an office, private or public, and whose insanitary lives and surroundings make them candidates for infectious disease and active agents for its spread? Legislation moves slowly in Italy, and it will be long before the salutary provisions in Bertani's hygienic code are translated into fact; but meanwhile a stimulus might be applied which, if operative on such a populous and important centre as Milan, might react for good on the minor cities throughout the peninsula. That stimulus is the refusal of foreign, particularly British, travellers to stop at Milan, with the consequent diminution of the custom they bring to it, until she stamps out the variolous and typhoid presences she continues to harbour. It was the dread of such a falling-off in her visitors that at last obtained for Florence the potable water and the improved sanitary regulations for which her

own citizens so long and so fruitlessly agitated. Let the British tourist or traveller know, therefore, that Milan is at present severely visited by small-pox; that the one small-pox hospital she has for the isolation and treatment of such cases is miserably inadequate; that the lazaretto for which her communal council two years ago voted a sum of 600,000 francs (£24,000) will not be finished for another twelve months; that her physicians are protesting against the scandalous mode in which small-pox patients are transported from their homes to the hospital—the car in which they are conveyed being taken through the most populous quarters at the most crowded time of the day; that the burial of the dead from small-pox is conducted in a similarly public and perilous manner; and that, finally, her very bad water supply has now produced a typhoid epidemic, which is found at its worst in the neighbourhood of the railway station! Let these facts be made public; and let the stream of foreign travel on which Milan fattens, as Lower Egypt does on the Nile, be deflected into another channel; and then it may come to pass that pecuniary loss to the city will impart a stimulus to her sanitary precautions which a sense of public duty has so long prescribed in vain.

A NEW MATERIAL FOR ABSORBING AND DEODORISING FÆCAL MATTER AND URINE.

AMONGST the many materials that have been suggested and used from time to time for the purpose of absorbing and deodorising fæcal matter, not one perhaps is so interesting to those engaged in sanitary science as the one whose properties were demonstrated at a meeting held in St. Stephen's Hall, Princes-street, Westminster, on Tuesday last, inasmuch as the material used—viz., common slag—has puzzled for a long time many a practical chemist and engineer to know to what purpose it may with profit be applied. We remember hearing, however, some months back, of the application of crushed slag as a dressing in agriculture for heavy clayey soils. It is said to be extremely porous, rendering the soil more absorbent, and is also of manurial value on account of the notable quantity of phosphoric acid it contains. This most important subject of dealing with the sewage of our towns has been so much discussed, and is so well worn, that to point out the advantages or disadvantages of the dry-earth system over that of the water-carriage system were superfluous. Suffice it to say, the inventors of this new material for the defecation of sewage matter (Messrs. M'Gregor and M'Arthur, of Dundee) take for granted that the advantages of the former system, at least in many cases, are unquestionable. They further claim for it the following additional advantages: (1) the cheapness of the material, the cost being roughly estimated to be from 5s. to 10s. per ton, including crushing and carriage; (2) its supply being practically inexhaustible; (3) its porous property, which, independent of (4) its manurial qualities, renders it valuable to clayey soil. Dr. Redwood gives the following analysis of the material after use:—

	Per cent.
Fixed inorganic matter, after ignition ...	71·68
Insol. silicious matter	60·50
Lime	2·85
Phosphoric acid	2·31
Organic matter, with ammonia and water ...	28·32
Ammonia, ready formed	·08
Organic nitrogen	·13
Equal to ammonia	·15

A sample was exhibited which had been in use five weeks ago, in which we failed to detect the slightest smell. The method of using it is similar to that adopted in the other earth-closets. The pan is first charged with a certain quantity of the crushed slag, and after use another quantity

is put in, the total quantity necessary, according to the inventor, being a third less than ordinary dry earth—that is to say, six persons would require one-third of a hundred-weight of defecating matter per week. These claims are so strong that a careful trial of this method, and, indeed, of any new method which aims at the healthy as well as useful disposal of so great a nuisance from our midst, is well worthy the consideration of every sanitarian.

THE SUPPOSED TRANSITION OF BENIGN GROWTHS OF THE LARYNX INTO MALIGNANT.

It has been suggested that benign growths of the larynx are liable to become transformed into malignant tumours as a result of intra-laryngeal operations for their removal. This suggestion, if proved to be well founded, would do much to show that Van Bruns's introduction of intra-laryngeal operation for tumours was not the great improvement it has been held to be; but, on the contrary, a very mischievous procedure. The plan of collective investigation has been employed to throw light upon this subject by Dr. Semon, the editor of the *Internationales Centralblatt für Laryngologie*, &c., and in the July number of that journal the results of the inquiry are briefly given. These are so important that the profession ought at once to be made fully acquainted with them. Returns have been furnished by 107 observers, who, have together recorded 10,747 cases of benign growths in the larynx and 1550 cases of malignant tumours. Of these 10,747 cases of benign growths, 8216 have been submitted to intra-laryngeal operation, and among this number there are 3382 cases of papilloma. An apparent transformation from benign into malignant growths has been noticed in thirty-two instances. Each one of these cases must be submitted to a very careful criticism, but, apart from that, as many as sixteen of the number are marked by those who record them as "doubtful," and they cannot therefore be used. It is quite open to question whether the remaining sixteen cases do not include examples of "mixed" growths, and it is noteworthy that the tables include twelve cases not submitted to intra-laryngeal operation, in which a similar change in the nature of the growth was thought to be noticed. But putting aside this view altogether, we are met with this supposed change in one case out of every 513 cases thus treated. It must be at once admitted that if the operation had any appreciable influence in modifying the nature of a neoplasm, the proportion of cases in which it would be observed would be much greater than this. Considering the enormous advantages the intra-laryngeal method of operating possesses, it is a matter of considerable satisfaction that it is thus conclusively shown not to be attended with the grave danger that has been suggested in some quarters.

ISOLATION ARRANGEMENTS AT TEIGNMOUTH.

THE Teignmouth Local Board of Health are in difficulties as to their hospital for infectious diseases. It must be a structure of very limited usefulness, for it is stated to be capable of accommodating two patients only, and these must be of the same sex. It is also worse than useless, for its sanitary arrangements are described as most defective. Under these circumstances the Sanitary Committee recommended that it should be done away with. On this a discussion arose, and the fear of being without a hospital, and of resulting complaints on the part of visitors, led to the matter being referred back to the Sanitary Committee. We imagine, however, that visitors will not be less inclined to complain should it transpire that so insufficient and unwholesome a structure is retained on the plea of promut-

ing health. It would have been far better to have decided at once on the provision of a small, useful, and sanitary building. The question of a floating hospital transpired during the discussion. As to this, we would advise the sanitary authority to consider Mr. Henry Armstrong's contribution to the last report of the medical officer of the Local Government Board, and the description there given of such a hospital. It should also be remembered that a mere "hulk" does not readily lend itself to the due separation of different diseases, to laundry work, and other matters essential to a hospital for infectious diseases.

THE PUBLIC HEALTH BILL

IT is stated that there is considerable opposition in the dairy trade to the proposal of the Public Health Bill to make it obligatory on any cowkeeper, purveyor of milk, or occupier of a dairy, milk store, or milk shop, to supply a full and complete list of the names and addresses of all his customers whenever it shall be certified by the local medical officer of health that the spread of infectious disease is attributable to the milk supplied. The proposal is perhaps open to the objection that no opinion ought to be formed until careful inquiry has been made; and this, of course, cannot be done until the milk supplies and their distribution are known. But we believe if the Legislature can be made to realise the important part which milk plays in the dissemination of infectious disease, it would not hesitate to arm the medical officer of health with the powers that are sought. If milk vendors fear that a house-to-house inquiry, conducted especially in the neighbourhood of a particular milk supply, would tend to prejudice it, even if it were subsequently discovered that this milk had no concern with the outbreak under investigation, they should plead for compulsory notification of cases of infectious disease rather than for the prevention of an amendment of the law of the character proposed. A medical officer of health, already possessed of information as to the existence of all cases of infectious disease in his district, would find it unnecessary to make the inquiry which the dairy trade fear, but would at once, on receipt of the list of customers of any business, be able to see how far the milk supply was likely to be concerned in the occurrence. For this purpose the proposed Act should preferably not make the medical officer of health wait until he is of opinion that the disease is attributable to the milk supplied before empowering him to demand a list of customers, but should afford him an opportunity of considering this point by the supply of such list whenever he is of opinion that the infectious disease *may* be attributable to the milk. No injury could possibly be inflicted by this procedure on any milk business, and the public would be much better protected than they would be if the medical officer of health had to wait for demonstration of injury of a very definite kind before proceeding to obtain information which should be in his possession at a much earlier stage.

POISONOUS NATURE OF ANIMAL EXHALATIONS.

THE exhalations from living and dead animal tissues are known to be deleterious to the health; the evils of overcrowding and bad ventilation being chiefly attributable to the devitalising influence of a contaminated atmosphere. Dr. Brown-Séquard has been studying very carefully the material substances on which depends the poisonous nature of pre-breathed air. It has been known for a long time that, besides carbonic acid gas, the expired air contains small quantities of very powerful poisons, to which chiefly the unpleasantness of a stuffy atmosphere is due; the effect of the poison on the brain which is supplied with contaminated blood is to depress and even to pervert its activity. Dr. Brown-Séquard has

devised an apparatus for condensing the vaporous part of the breath of animals, and he finds the liquid so obtained to be powerfully poisonous even when obtained from animals in a state of health. The liquid injected into the veins of sound animals produces much distress from the action of the poison on the nerves and brain. Moreover, the nervous apparatus of breathing is disturbed in its rhythm, the animal generally taking many fewer respirations than usual; the surface of the body grows cold, and the pulse-rate is quickened. Micro-organisms do not exist in expired breath, and, besides, the liquid remains after boiling as poisonous as before. It is quite probable that a man excretes from his lungs and skin in twenty-four hours more poison, though in a more diluted form, than a snake manufactures in the same time. Dr. Brown-Séquard also proves that this vitiated air is specially harmful to consumptive patients. Rabbits, which are notoriously prone to become consumptive, can throw off consumption or tuberculosis if the general health is maintained by proper food and fresh air, whilst their fellows succumb if placed in unhealthy surroundings.

PROVIDENT MEDICAL SERVICE.

THE annual meeting of the Metropolitan Provident Medical Association was held on the 28th of June, at the residence of Lady Trevelyan, Eaton-square. Lord Brassey presided, and referred to the fact that the Association was founded by the late Sir Charles Trevelyan. He defined the objects of the Association as being to provide, in return for small periodical payments, efficient medical treatment and medicine for the working classes and their families, and co-operation with the governing bodies of hospitals. Sir Edmund Currie did questionable service to the cause of provident dispensaries by urging the establishment of provident hospitals. This idea will not commend itself to the public. Hospital managers have enough on hand in providing beds for those who are overtaken with calamitous accident and sickness, without looking after the fairly well-to-do working man, who can secure ordinary medical attendance without the help of hospitals.

"PHARMACEUTICAL SPECIALTIES" IN BELGIUM.

THE Liège Medico-Chirurgical Society has addressed a communication to the Belgian Minister of the Interior on the subject of a Royal order referring to "pharmaceutical specialties," which was published in March, and which, though admirable as far as it goes, leaves, in the Society's opinion, considerable room for improvement. The order provides that pharmaceutical specialties must bear a label indicating the names of the substances comprised in them. The object of this being to prevent the pharmacist from selling medicines of the composition of which he is ignorant, it does not apply to specialties sold directly to patients (*malades*) by the pharmacist when he has made them up himself. This regulation the Liège Society suggests should be extended so as to include the obligation to affix not only a qualitative but a quantitative label, and also to compel all pharmacists, even those who have themselves made up the specialties, to conform to the rule. It is also hoped by the Society that the Government will see its way to a considerable amount of restriction on the pharmaceutical advertisements in political journals. The Society remarks that pharmaceutical specialties intended for prescription by medical men ought certainly to indicate the dose of each component for the prescriber's guidance. As to those intended for the indiscriminate use of the public, and which are supposed to cure nearly all diseases, the existence of these is objectionable; but if they are allowed at all the dosage should be clearly indicated. This might, perhaps,

operate as a caution to a purchaser, as it would suggest a doubt as to whether the dose was a proper one for his particular case. The exemption from the regulation of the pharmacist who has himself made up the medicine would seem to encourage pharmacists to take upon themselves the functions of medical men—a rôle they are only too apt, as it is, to play. This exemption ought certainly to be abolished.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES: THE KINGSTON-ON-THAMES IMPROVEMENT BILL.

THIS Bill came before a committee of the House of Lords presided over by Lord Basing, on Thursday, the 5th inst., a clause providing for the notification of infectious diseases being opposed by the medical profession of that town. The clause is drafted on the lines of that known as the "Model Clause" recommended by the Special Sanitary and Police Committee of the House of Commons, and commonly known as the "dual system," which makes notification incumbent upon the medical attendant as well as the householder. Dr. North, medical officer of health, York, and Dr. Henry Tomkins, medical officer of health, Leicester, gave evidence showing that in both these towns a similar system had been in force since 1883 and 1879 respectively, without causing any unpleasantness or friction between either medical attendant and patient, or between the medical men and the health authority. On the other side, medical practitioners were called from Bolton and from Bury, whose evidence tended to show that in the former town the working of this Act was still strongly objected to by many of the local medical men; whilst in Bury, where the law laid the obligation *entirely* upon the medical attendant and left the householder free, it was considered an unjust arrangement. All the witnesses called in opposition admitted that they did not object to notifying voluntarily, but objected strongly to being *legally compelled* to do so, and, moreover, thought that this was a matter which ought to be provided for by imperial legislation, thus avoiding the creation of an invidious distinction between medical men residing in different parts of the country, or within a few yards possibly of each other, such as happens when one man resides within the boundaries of a town where these Acts are in force and another is just outside such boundary. The committee, after a very short deliberation, unanimously agreed that the Bill should proceed with the clauses unaltered.

"GASTROSCOPY."

THE following passage from Dr. Ewald's work, "*Die Krankheiten des Magens*" (Berlin: Hirschwald), which has just been published, will be read with interest in connexion with the suggestion made last week by Dr. Cole. After speaking of the various methods of physical diagnosis, he says: "Finally, we might employ a special means of examination introduced by Mikulicz—viz., the direct inspection of the gastric mucous membrane by means of a specially constructed gastroscope, to be termed *gastroscopy*. Unfortunately, with the name of this author the literature of this event is exhausted; for the gastroscope, as constructed by Leiter, is so costly and its application so difficult—an instrument requiring long practice by patient and doctor,—that it has not, as yet, been employed by anyone else. From a diagnostic point of view the results obtained by Mikulicz in carcinoma of the pylorus are interesting. In the normal stomach the pylorus appears as a long fissure, or as a triangular, oval, often circular, opening, which is surrounded by a zone of bright-red ridges and folds of mucous membrane, that are in active movement and

exhibit all kinds of changes of shape. In neoplasms at the pylorus, this region, on the contrary, appears smooth, pale, without the above-mentioned ridges and folds, and in a state of complete rest, so that a good diagnostic criterion would be found herein, had not Pribram in one case of pyloric cancer (not examined gastroscopically) found marked movements of the tumour—i.e., an enlargement and diminution of it—synchronous with active contractions of the whole stomach."

THE LATE EMPEROR OF GERMANY.

IN the last number of the *Deuts. Med. Woch.* we are somewhat severely taken to task for some of the reports on the progress of the case of the late Emperor of Germany and for some of our criticisms thereon. We can only reply to these remarks by stating that the reports we published were received direct from an authoritative source, and that our criticisms could only be based upon them, as there were no other sources of information open to us. We shall be happy to give the same publicity to any other authentic statement of facts that may be submitted to us, and to criticise it with the same impartiality that we have all along endeavoured to maintain. But we may at once state that we have not the smallest sympathy with those who would endeavour to make this case a text for national glorification. There is no place for any international jealousies in scientific medicine, and the fact that two English physicians were called in to attend the late Emperor, in conjunction with several distinguished German physicians and surgeons, has in no way influenced our opinions.

TRANSPLANTATION OF THE CORNEA.

THIS operation has been frequently performed, but hitherto without permanent success. Various cases have been recorded by Mr. Power, Sellenbeck, and others, in which the new cornea taken from cat or dog, the eye of which is preferable to that of the rabbit, has formed adhesions and retained its transparency for some days or weeks, but sooner or later the new cornea becomes hazy, contracts to a button, and is finally absorbed or sloughs out, and the patient remains unimproved.

RESEARCH SCHOLARSHIPS OF THE GROCERS' COMPANY.

ON Monday and Tuesday next, July 9th and 10th, Dr. Woodhead, of Edinburgh, will deliver two lectures on Phthisis and Tuberculosis; in the first dealing with the general aspects of tuberculosis as studied at different ages, especially in children. Tabes mesenterica, and its relation to infection by the alimentary canal, will be considered, and then the relation of tabes mesenterica to other tubercular processes. The various forms of tuberculosis of the lung, and the modes of extension, will be treated of in the second lecture. The lectures will be illustrated with drawings and photographs, and also by means of a lantern, by which screen pictures of specimens will be projected.

PLEURISY IN INFANTS.

AN important paper upon two cases of pleurisy in newborn infants has recently been written by Dr. J. Vilcoq. (*Arch. de Tocologie*, vol. xv., No. 6.) The author draws attention to the comparative rarity of primary idiopathic pleurisy in infants; in both of his cases this condition was found after death, which occurred near the end of the first week. In each case the birth had been premature; in each the pleurisy was dry and fibrinous, and was most marked upon the diaphragmatic surface of the pleura. One case was complicated with pericarditis with effusion, and also with

melena during the last three days. Dr. Vilcoq, in commenting upon his cases, suggests that they may possibly have resulted from the action of some infectious principle, since there were no indications of any primary affection of the lungs. He considers it probable that in the one case this principle simultaneously infected the pleura, pericardium, and intestine. Cultivation experiments are being conducted in support of this hypothesis. Meanwhile, the records are in themselves of considerable interest.

BRITISH COLUMBIA.

A CORRESPONDENT writes as follows:—"The Medical Council of British Columbia, at its last meeting in May of this year, decided to enforce the Act of the Provincial Legislature which renders it compulsory on every medical man wishing to practise in this province to obtain a licence from the Medical Council. In pursuance of this policy, a practitioner, who describes himself as coming from London, Eng., was on the 14th of June summoned before the police magistrate of Vancouver, British Columbia, charged with practising his profession in this province without having obtained the necessary licence. The Medical Council was represented by its solicitor, Mr. Walker, of Victoria, British Columbia, and the defendant was fined £5 and costs. There are a number of other cases of a similar nature which are to be proceeded with at once, as it is the intention of the Medical Council to prosecute vigorously all offenders against the Medical Act, 1886, and its amendments."

SELF-MEDICATION.

THE sad death of Mr. Edmund Gurney affords another illustration of the danger attending the employment of chloroform as a narcotic, a danger to which we very recently had occasion to refer in a similar case. Self-medication is at all times a most unsatisfactory employment, and yet with many individuals it is cultivated until it becomes a confirmed pernicious habit, in which the risks are gradually lost sight of in comparison with the temporary relief obtained. Even with purgatives the probability of increasing rectal congestion by the employment of aloes is sufficiently serious; but when insomnia is combated with continuous and increasing doses of chloral or chloroform danger to life becomes very real. It would be far better to lay bare all the circumstances of the case to an experienced physician, who would be able to ascertain the cause of the insomnia, and who could be trusted to prescribe judiciously and safely. It is very disquieting to learn from frequent sad records of fatalities that it is still perfectly possible to procure large quantities of active and dangerous remedies without a prescription.

PRECAUTIONS AGAINST THE SPREAD OF SMALL-POX IN LIVERPOOL.

At the last meeting of the Liverpool Workhouse Committee the cases of small-pox occurring to a tramp and one of the tramp masters was the subject of discussion. A letter was read from Dr. Robertson (physician to the parish infirmary), from which it appeared that the disease in the tramp's case was of a very mild character, and only to be detected by minute observation. He suggested that for the present all tramps applying for admission to the casual wards should be subjected to medical examination, which should take place hourly from 7 P.M. till midnight. This, with all the other elaborate arrangements which have been made by the health authorities for the reporting and isolation of any cases of small-pox, would, he believed, prevent, as far as possible, any further spread of the disease.

CARELESS DISPENSING AND LEGISLATION.

THE recent lamentable case of death from a huge overdose of strychnia, dispensed by the son of a chemist, who had sadly misapprehended the intention of the prescriber, has been brought before the notice of the House of Commons. Sir Henry Roscoe asked the Vice-President of the Council if, in view of such an alarming accident, he could promise facilities for the consideration of the Pharmacy Bill, which is intended to give the Pharmaceutical Society more power to secure the fitness and intelligence of chemists. The Vice-President expressed his willingness, but was by no means reassuring as to his power to forward the wishes of Sir Henry Roscoe. We are of opinion that such measures should be considered by a committee of experts and others, and then presented to the House. With all its virtues Parliament cannot do justice to a question of this kind, which, however, is of vital importance.

FOREIGN UNIVERSITY INTELLIGENCE.

Algeria (Medical School).—M. Malosse of Montpellier has been appointed Professor of Chemistry.

Barcelona.—Dr. D. Pedro Bassagaña y Bonhome has been appointed Dean of the Faculty of Pharmacy.

Belgrade.—It is proposed to establish a Medical Faculty for Servia. There is in Belgrade a university containing all the faculties except that of medicine. Hitherto Servian medical students have been obliged to go abroad for their medical education, and they have usually gone to Paris or Vienna, the French and Austrian Doctorate of Medicine being recognised as qualifications for practice in Servia. Those who have gone to Germany and other foreign countries and have obtained doctorates from their respective universities have been obliged to pass an examination before a Government medical commission in Belgrade in order to obtain the right to practise.

Berlin.—Professor Preyer, Director of the Physiological Institute in Jena, has been invited to Berlin.

Freiburg.—Dr. von Kahliders has qualified as *privat docent* in pathological anatomy.

Greifswald.—The number of medical students has been for some time increasing, and the roll of clinical students for the current summer session shows the largest number on record—viz., over 200. It is satisfactory to learn that, notwithstanding the recent disastrous fire in the University Hospital, scarcely any interruption or interference with the clinical instruction has taken place.

Leipsic.—The University is fuller than ever, the total number of students being 3273, of whom 783 belong to the Medical Faculty.

Montpellier.—The Professorship of Anatomy is vacant.

Moscow.—Dr. Smolenski has been recognised as *privat docent* in Hygiene.

Nantes.—A chair of Clinical Ophthalmology has been created. To this Dr. Dianoux has been appointed.

Utrecht.—Dr. Engelmann, Professor of Comparative Physiology and Histology, has been appointed Professor of Physiology, in succession to Professor Bonders, who has retired, Dr. Pikelharing taking Dr. Engelmann's post. Dr. Spronck has been appointed Professor of General Pathology and Pathological Anatomy.

THE sudden death from heart disease of Mr. Baker Greene is announced. Mr. Greene, after finishing his course of study at Trinity College, Dublin, joined the army as a surgeon in 1853, went through the Crimean campaign, and obtained the medal and clasps for Alma, Inkermann, and Sebastopol. He was subsequently called to the Bar, with a certificate of honour, in 1858. For the last thirty years he was engaged on the press, and was held in high esteem by his literary friends.

A CHOLERA scare last week in Messina has had the effect of stirring up the local hygienic authorities to that feverish activity which seems the normal condition in which sanitary ameliorations are begun, and never quite finished, in the Italian peninsula. Neglected *pozzi neri* and abominable water supply, in spite of recent choleraic explosions, had, it seems, to wait till a prominent citizen was seized with violent colic before the chief town of eastern Sicily awoke to the necessity of making its drains and its drinking water compatible with health.

FROM the report of the metropolitan water supply during the month of May by the water examiner appointed under the Metropolis Water Act, 1871, it appears that the reduction in the proportion of organic matter present in the Thames water which was observed in April was further continued during May, the absolute amount being in every sample small for river water. The water derived from the Lea also exhibited a corresponding diminution in the organic matter. All the samples were clear and bright.

MR. J. G. FITZGERALD, F.R.C.S. Ed., M.R.C.S. Eng., has been elected member of Parliament for the South Longford Division of the county of Longford, in the room of Mr. L. Connolly, who has accepted the Chiltern Hundreds.

MR. A. W. HARE, M.B., F.R.C.S.E., has been elected Professor of Surgery in the Owens College, Manchester, in place of Mr. Edward Lund, F.R.C.S., resigned.

WE regret to have to announce the death, on the 28th ult., of Dr. Milner Fothergill, at the age of forty-seven.

Pharmacology and Therapeutics.

SOLUBLE PODOPHYLLIN AND ACETANILIDE-MONOBROMO.

SOLUBLE podophyllin in scales (Messrs. Burgoyne, Burdidge, Cyra, and Farries, of Coleman-street) is an elegant and useful preparation; it is soluble in water, proof spirit, or glycerine. We can recommend this preparation. The acetanilide-monobromo is another new preparation, which may be found of value in rheumatic, muscular, and arthritic pains. We have tried it in a case of facial neuralgia, and with some good effects.

TREATMENT OF MALIGNANT SCARLATINA.

DR. A. SHARKHOVSKI, writing in the *Russkaya Meditsina*, strongly recommends hourly doses of salicylic acid or salicylate of soda in malignant scarlet fever, saying that since he adopted this treatment his mortality has been very greatly reduced, only three cases having proved fatal out of 125, all of them malignant, these three being cases where some other disease or bodily defect was present. The prescriptions which he gives are: Forty grains of salicylate of soda in six ounces of distilled water; a teaspoonful to a tablespoonful to be taken every hour according to the age of the patient. Or, better still, fifteen grains of salicylic acid in six ounces of hot distilled water and one ounce of syrup of orange. This does not deposit on cooling, and is not disagreeable, so that children take it readily.

STICKING-PLASTER TREATMENT OF ERYSIPELAS.

Dr. Welfler of Graz, remarking that Otto had met with considerable success in treating erysipelas on the plan recommended by Barwell and Freer—viz., the application of a thick layer of paint to the affected part, which they thought acted by keeping the air away from the erysipelas cocci and prevented them from multiplying,—determined to carry out the principle of exclusion of air in a somewhat different and more effectual manner. The substance he used for this purpose was linseed-oil varnish, but he found that not a perfectly impermeable coating necessary, but some

degree of pressure as well. He then tried gutta-percha paper fastened to the skin with chloroform. This, however, was not entirely satisfactory, and so he turned his attention to something simpler—viz., strips of isinglass sticking-plaster about the breadth of the thumb. This proved exceedingly efficacious, the fever rapidly declining and the erysipelatous blush showing no disposition to spread.

DELICATE TEST FOR BISMUTH.

Mr. F. B. Stone recently showed a very delicate test for bismuth before the Society of Chemical Industry, which depends upon the fact that a strong solution of iodide of potassium produces a bright yellow colour when added to a very dilute solution of sulphate of bismuth, containing only a small quantity of free sulphuric acid. One part of bismuth in 1,000,000 parts will thus show a distinct colouration.

REPORT OF THE LANCET Special Sanitary Commission

ON THE

SWEATING SYSTEM IN GLASGOW.

(Concluded from our last number.)

WHEN we commenced our inquiry into the sweating system as existing in different industrial centres, we anticipated that our descriptions would be short, that in the different towns much the same grievances would be brought forward, and that there would be no cause to dwell at any particular length on each centre of the sweating trade. Experience has proved that this impression was fallacious. Every centre has its special feature, and it is impossible to witness so much human suffering without dwelling at some length on the subject. In Glasgow the most notable and special feature of the sweating workshops is their proximity to degraded localities. We have now to describe one of them, which in itself is not particularly remarkable. It is in a court off a crowded street, frequented by a low class. The top floor of an old house in this court was occupied by a Jew sweater who has recently left, and his successor is, we believe, an Englishman. At the time of our visit there were only ten girls and two men working, and the room was not nearly full. We will not describe the dark rickety staircase and the dirty condition of this place, which was no worse than many other workshops we have visited, but would call special attention to the surroundings. For all the houses in this court, consisting, we are told, of eighteen separate tenements, there was but one closet. This is in a small side court, which is reached by groping under a stone staircase that blocks a passage going under one of the houses. In broad daylight this passage looks dark and threatening, and, with its winding stone stairs, seems more like the entrance to the dungeon of an old castle. The aperture beneath the staircase is just four feet high, and the under part of the stone steps is polished by the friction of people's backs as they pass through. The court beyond is only a little over six feet wide, and this space is in a great measure taken up by a huge and overflowing dust-bin. Dead and mangled rats lay on the dirty and moist flagstones. At the far end of this little inner court is the closet. When the door is shut it is perfectly dark within. There are two holes in the one seat, and under them two pails. We found no ashes, no disinfecting powder; nothing but soil and urine, fully exposed to the open air; the seats sopping wet, covered with filth; the ground in an equally revolting condition, and the smell so powerful as to make it difficult to remain long enough to note the condition of the place. Yet looking on to this yard, this well of poisonous stenches, was the window—fortunately closed—of a restaurant. Far worse, however, than the material horrors of this small inner court are its moral surroundings. The inhabitants of the eighteen tenements that frequent this one closet comprise several prostitutes, thieves, and drunkards. The tenements are brothels and places where spirits are sold when the public-houses are closed. On questioning the neighbours and the police on the beat, this court was

pointed out to us as one of the most dangerous rookeries of Glasgow. Here almost every night riots, fights, thefts, and drunken brawls occur. In this immediate neighbourhood, and in the morning, a murder of so brutal a character was committed that, though many years have elapsed since the deed was perpetrated, it is still well remembered by the inhabitants, particularly as the culprit was never caught. A young girl, the daughter of a fish dealer, was violated and murdered in the open air and in broad daylight, within a stone's throw of the place. A little before this a policeman was killed in the court next to that we are describing, and the quarter has so bad a reputation that the authorities gladly assented to the pulling down of some of the houses. Yet in this villainous district and court, ten, sometimes twenty or thirty, young girls have to go to earn the scanty wages the sweater chooses to give them. The only sanitary accommodation existing they have to share with tenants of so low class a character that they are made to pay their rent nightly and in advance. In one of these tenements, consisting of two rooms, there were three men and three women living together. The rent charged is 8d. per day for a room and kitchen, and 6d. for a single room. The fire-grates in some instances have been destroyed, and the fire has to be lighted on the level. There had been fights and riots the three nights previous to our visit. The tailor's girls, as they go to work, are in danger of being insulted by the brawny and half-drunken women who listlessly stand about in the court, vying with each other in the use of obscene and violent language. To be over-worked, poor, half-starved in ill-ventilated, insufficiently lighted, over-crowded, over-heated, and badly drained workshops is evil enough; but to be compelled to work in the same courts, to pass under the same narrow, dark, low passages, rendered historical by the serious records above referred to, to be surrounded by vice which, in Glasgow, has reached the last expression of degradation and bestiality, is a danger, a humiliation, an insult against honest workers and against womankind at large, which should evoke the indignation and shame of the entire community.

At no great distance from this court we entered a house of, comparatively speaking, respectable appearance. On the first floor lived a Jew sweater, who on the day of our visit was employing four girls and four men to make a large number of military uniforms. They worked in his private apartment, and the closet was so placed that it could ventilate only through the bedrooms. We were taken to the kitchen and shown outside the window an iron grating which covered the roof of a little outhouse built in what had been a small inner court. This grating protected the roof and skylight, and was covered with garbage, domestic refuse, filth, and even faecal matter, so that the smell prevented the opening of the kitchen window. All this, we were told, was thrown out by the tenants upstairs, who occupied an apartment where there was no closet whatever. Further, we were informed that these tenants kept a sort of brothel, and also sold drink on Sundays and after the closing of the public-houses. The Jew tailors complained very bitterly about their neighbours; and, what with the dirt outside their kitchen windows and the scenes stated to be going on upstairs, they were afraid to receive some of their customers.

In the next house we visited we found two Jew tailors occupying tenements of the same floor. Both denied that they employed hands or did any work at home, but from the general appearance of the place we must take the liberty of doubting this assertion. There were waterclosets, but evidently one of them was out of order, as the stench was very bad. From this house we went to a workshop, where as many as 600 garments have been made in a week, where thirty girls have been employed, and where, nevertheless, there was no sanitary accommodation whatever. The premises are now, we are glad to say, closed. Another Jew on whom we called had also removed. He had been engaged making entire suits for boys for the sum of 11d.! He employed ten or more persons, and has been known to turn out men's suits for 2s. Still another Jew, on whom we likewise called, had very recently changed his domicile, but this under compulsion of a somewhat energetic character. He employed some twenty persons, and they worked in a dirty apartment, with the plaster falling from the walls, and the boards innocent of soap and water; but the place caught fire. The workshop is therefore closed, and has at last been thoroughly purified, and this by the most heroic

of disinfectants—a good conflagration. On the same landing there is another tailor's workshop, where suits are made to order, yet we found that the tailors had barely more than 180 cubic feet of space each to work in. On the landing there was one closet, well constructed and well placed, but dirty. This was not surprising, as it was the only accommodation available for ten different tenements. These comprised tailors, shirt makers, boot makers, and private families.

In Glasgow, as elsewhere, the order shops also want active sanitary superintendence. For instance, we visited the workshop of a high-class and one of the oldest established tailors in the town. The workshop was halfway below the level of the street, and so dark that gas has to be lighted during the day. This cellar is also damp, but there is an ingenious method of ventilation. A metallic pipe, drilled with small holes, passes along the ceiling and communicates with the stove, where the heat produces suction and draws off the atmosphere. In the same house there are more suitable premises upstairs, which, however, would entail a higher rent; and, to still further economise, this tailor gives out a part of his work to sweaters. Formerly he had about twenty-four men in his employ; now he has only ten or twelve good tailors in his service; yet the business has not decreased, but, on the contrary, increased. It is the sweaters, and not the properly qualified and properly paid journeyman tailors, who profit by this growing prosperity of their employer. The public, on the other hand, have no suspicion that a portion of the clothes they order at this shop is sent out to the places where the sweater employs unskilled labour.

There are several wholesale sweaters at Glasgow. One of these we found employing some fifty workers, for the most part girls, and they were nearly all engaged making soldiers' red coats. Here the closet was in the workshop, against the wall with no window, surrounded only by a few boards, and therefore ventilating in among the workers. Some of the tables were so crowded that the girls had to sit sideways when sewing. Close by, the brother of this Jew sweater had an equally large establishment. We then called on two Jewish families who work at home on a small scale. The first denied that they did any work where they lived, and the other that they lived where they worked. The latter occupied a small shop abutting on the street. A sort of bed had been made up of wooden cases covered over with dirty rags and bits of cloth. Here some unwashed children sprawled about in a state of semi-nudity. In the back part of the shop there was a bed, though hardly any other furniture. There was no closet, but the Jews stated they used the closet of a neighbour, who was a very cleanly milk dealer. The latter, however, indignantly denied that she ever allowed such dirty people to come near her closet, which was very clean and carefully locked. The milk-woman complained energetically of her neighbours, who, she said, instead of sleeping elsewhere, as they had stated, came in great numbers at night, slept on the floor and counters of the shop, made everything dirty, and over-crowded the place. That such careless, uncleanly people, with rags and dirt, should be next door to a milk-shop is a serious matter; and, while we felt sorry for the apparent poverty of these foreign Jews, the preservation of public health renders it necessary to compel them to provide better accommodation for their numerous family and friends.

Finally, we would describe the house of one or two poor Scotch home workers, and then we shall have given some idea of the tailoring trade in the central districts of Glasgow. Tailoring, of course, is not restricted to the centre of the town; but here sanitary difficulties are greatest in consequence of the overcrowding and want of space. The first Scotch home worker on whom we called was sewing in her kitchen. In one corner of the kitchen there was a bed, in the other a mangling machine. Some sort of dinner was on the fire. The place was hot and close, but nevertheless very clean. In the bedroom a sewing-machine stood next to the bed; and, though the bed was not made and the slops not emptied, tailoring work had already begun. In another tenement we found great misery. Some old women were sitting round a dirty kitchen table. There was a powerful odour of fish, and the furniture was so scanty that one person was working on the box used to collect ash and domestic refuse. The women, who were unwashed and unkempt, explained that formerly they earned enough to live with fair comfort, but now the Jews had beaten down the prices, and they were obliged to make waistcoats for 6d. each. They were themselves

dressed in soiled rags, and looked utterly wretched. A corner of a little bedroom was taken a year ago to construct a closet, which has an absurdly small opening on to the stairs, and is therefore very dark and insufficiently ventilated. In the bedroom thus reduced in size was placed a bed, a large chest of drawers, and a sewing-machine. The standing space remaining is barely four feet square, and yet here work is done, for the other and front rooms of this tenement are too dark.

If in such a place as this infectious disease broke out, there would be no means of isolating the patient, and the question arises whether the sanitary authorities would be informed in time to prevent contaminated clothing being delivered to the tailors who employ these poor workers. Dr. Russell, the medical officer of health, informed us that in the most important district of Glasgow there had been to his knowledge, from Jan. 1st this year to March 5th, no less than 1053 cases of infectious disease; out of this large number only forty-seven are described as having occurred among persons engaged in making clothes—tailors, dressmakers, milliners, &c. Twenty-five out of the forty-seven were cases of scarlet fever. Considering the mode of life of tailors &c., the proportion of those who belong to these trades, as compared to the total number of those known to be infected, is somewhat less than 5 per cent., and this seems very small. A much greater number must have suffered from infectious disease, but, as no compensation is offered, such disease is successfully concealed from the authorities. Yet the reputation of Dr. Russell as a medical officer of health is well established, and the inspectors in his service have given many proofs of energy and ability. The staff certainly should be increased, the principle of compensation applied, and a sense of responsibility spread throughout the whole trade. The revelations in regard to sweating will evidently impose new obligations on the Legislature and on public functionaries. The state of affairs in Glasgow clearly proves the necessity of such increased control. The condition of the sweating trade in the other towns, as described in the course of these reports, shows that in the provinces equally with London the need of reform is urgent. To understand and to appreciate this necessity should suffice to bring about a successful endeavour to cope with the evil and check its further development.

ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A GENERAL MEETING of the Members of this Association was held on Thursday last at the Inns of Court Hotel. The business of the meeting was to hear a general *résumé* of the work done by the Association, to receive the reports of committee meetings, and to consider the draft of the rules. The President of the Association (Mr. Pollock) occupied the chair, and there was a large number of Fellows present.

The Minutes of the last general meeting, which was held in Exeter Hall, having been read and confirmed,

The CHAIRMAN said that in the interval several meetings of the committee had taken place, and he thought that members would find that the executive had not been unmindful of the interests of the Association.

Mr. BRUCE CLARKE, hon. secretary, then read the report which was published in February last, and forwarded to every member of the Association.

Mr. SWAIN moved the adoption of the report. The method of voting at the Royal College of Surgeons would, he said, be materially altered by next year. Proxy voting would have come into use, and the circumstance would necessarily put a different complexion upon the Council. The plan of the Association was to organise during the current year, and so bring themselves into touch with all the Fellows of the College. With regard to the Association of Members, there was, in his opinion, a great deal of consideration due to Members of the College, and he would, under certain restrictions, be inclined to admit them to the franchise. The Council of the College had not the courage of its convictions, and it was an imperative duty on members of the Association to endeavour to secure the return to the Council of Fellows whose views were in harmony with the objects of the Association.

The report having been unanimously adopted, the Secretary

read the list of proposed rules. They were all of a formal nature and similar to those which govern other associations of this kind.

Mr. TWEEDY proposed their adoption, and said that it was remarkable that although the Association had been in existence for some years, no rules had ever previously been drawn up. It was, he said, only reasonable that Fellows should have a voice in the affairs of the College, and it was not right that alterations should be made in its constitution without their consent being asked and obtained. The Council of the College had, however, made such alterations, and he instanced the amalgamation with the Royal College of Physicians and the expensive buildings on the Embankment and in Lincoln's-inn-fields as proof of his statement. The Fellows and Members had not been consulted in the matter. The Council of the College accepted the principle of the justice of the claim of the Fellows to recognition and a voice in the management of the affairs of the corporation, but in practice entirely ignored it. Further, no bye-law should be altered without the consent of the Fellows. When a Fellow was admitted he subscribed to the bye-laws, and it was not equitable that they should be altered without the consent of one of the contracting parties; but they were so altered, not only without their consent, but even without their knowledge. The bye-laws were, in his opinion, exceedingly far-reaching, and deserved the careful attention of the Association. Another important point which had of late somewhat passed out of view was that the Association was intended to interest itself in all matters relating to the social status of the Fellows, and a time might come when the rights and privileges of Fellows would have to be considered. The Royal College of Surgeons of Edinburgh formerly admitted candidates to the Fellowship without examination, and their Fellows did not then enter into competition for hospital appointments &c. with the Fellows of the English College. Now, however, it was different. An examination had been instituted, and Scotch Fellows might, perhaps, in the immediate future claim equality with their English *confrères*. In such a matter this Association would be interested. With regard to the assertion of Mr. Swain, that voting by proxy would in future be allowed at the College, he begged to correct the statement. Voting by proxy would not be allowed, but instead of the personal tender of the vote, as at present, the use of voting papers would be permitted.

Mr. TIMOTHY HOLMES seconded the adoption of the rules, and urged that the object of the Association should be kept prominently before the Fellows. He was not prepared with Mr. Swain to go with the Association of Members. Each Association ought in his opinion to work for itself, and the affairs of the Members were not subjects which necessarily concerned Fellows. The action of the Association would be to make the presidency of the Royal College of Surgeons a more useful, dignified, and important office in the future than it had been in the past, and the position of both Fellows and College would be strengthened.

Mr. SWAIN deprecated the imposition of any entrance fee, and after a short discussion, in which Mr. Tweedy and other Fellows joined, the entrance fee was abolished, and the annual subscription fixed at half-a-crown. With this modification the rules as submitted by the committee were adopted. A list of the executive officers for the coming year was then read out, Mr. Pollock being elected President, Messrs. Timothy Holmes and Swain Vice-Presidents, and Mr. Allingham Hon. Secretary. Votes of thanks to Mr. Bruce Clarke, Mr. Allingham, and Mr. Pollock, for their services during the past year, brought the proceedings to a close.

HOSPITAL SUNDAY COLLECTIONS.

THE following are among the principal amounts received at the Mansion House in aid of the Fund since our last issue:—

St. Paul's, Camden-square, £69 6s. 7d.; St. Andrew's, Ealing, £22 12s. 3d.; Christ Church, Chislehurst, £67; St. John's, Upper Holloway, and Mission, £30 0s. 6d.; St. Paul's Finchley, £36 0s. 6d.; St. Giles's, Cripplegate, £84 2s. 7d.; Royal Military Chapel, Wellington Barracks, £74 1s. 8d.; Beddington Parish Church, £26 2s. 10d.; "Delta" (tenth donation), £200; St. Stephen's, Shepherd's-bush, £20 2s. 3d.;

St. James's, Clerkenwell, £26 8s.; St. Peter's, Paddington, £38 6s. 9d.; Thomson Hankey, Esq., £20; All Saints', St. John's-wood, £105; St. John's, Paddington, £152 6s. 5d.; Chas. Hemery, Esq., £20; St. Alban's, Holborn, £20 17s. 10d.; St. Stephen's, Westbourne-park, £101 2s. 8d.; St. Thomas's Chapel of Ease, Westbourne-park, £60 12s.; Upper Norwood Congregational Church, £24 5s. 6d.; Trinity Presbyterian Church, Notting-hill, £42 11s.; Denmark-place Baptist Chapel, £20 9s. 6d.; Regent-square Presbyterian Church, £63 5s. 5d.; Church of the Immaculate Conception, Farm-street, £54 8s. 6d.; Streatham-hill Congregational Church, £35 8s. 1d.; St. John's-wood Presbyterian Church, £85; Blackheath Congregational Church, £114 3s. 10d.; St. John's-hill Wesleyan Church, Wandsworth, £24 1s. 6d.; North Finchley Congregational Church, £40; St. Peter's, Clerkenwell, £21 11s. 3d.; Holy Trinity, Upper Tooting, £41 15s.; New Jerusalem Church, Palace-gardens-terrace, Kensington, £27 13s.; Camden-road Baptist Church, £35 16s. 6d.; St. Barnabas', Pimlico, £40 9s. 10d.; Elstree Parish Church, £205s.; Christ Church, Mayfair, £125 16s. 8d.; St. Saviour's, South Hampstead, £24 10s. 6d.; Dartford Parish Church, £21 16s. The total sum realised up to Thursday evening last was £37,475.—N.B. Last year on same number of days' receipts the total was £37,000.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Brandon and Byshttles Urban District.—A general death-rate of 17·9 per 1000 prevailed in this district during 1887. Dairies and cowsheds are now placed under suitable regulations, and Mr. Blackett observes with satisfaction that parents are becoming more impressed with the importance of the sources of milk, and of boiling it or scalding it before giving it to their children; and he looks forward in consequence to a diminution in the mortality from infantile diarrhoea and other causes which in the young were so often "uncertified." A house-to-house inspection has been in progress; the cottage hospital is maintained in readiness, but apparently for small-pox only; and the district is declared to be in a fairly satisfactory condition.

Derby Urban District.—Mr. W. Hiffe has, in the main, a satisfactory report to present for 1887; indeed the general death-rate of 17·07 per 1000 is the lowest yet recorded. But underlying this there is an admission in the report that Derby, though outwardly clean, has in it a great amount of disgusting filth which can only be effectually removed from the midst of the population by means of a proper system of sewerage. The zymotic rate was 2·3 per 1000, and those causes of death which, under this heading, may be regarded as more or less associated with conditions of filth included 19 of enteric fever, 7 fatal attacks of diphtheria, and 65 of diarrhoea. Of enteric fever 105 cases came under notice, 64 occurring in the last quarter of the year, and in over 75 per cent. of the houses affected filth accumulations were found in proximity to them. The proportion of deaths to attacks was heavy—namely, 1 to 5·5. Twenty-seven cases of diphtheria were heard of. The cause of the epidemic was not obvious, but it is stated that there are frequently attacks of sore-throat in the town, and that in regard of a slight membranous deposit in the fauces the throat malady resembles diphtheria. The diarrhoeal deaths were above the average of the previous nine years. Under the system of compulsory notification 812 certificates representing 1071 cases were heard of. With 64 cases of scarlet fever, 105 of enteric fever, 27 of diphtheria, and 874 of measles, it is stated that the borough infectious hospital was not utilised during the year, "but it was kept always ready in case of an emergency." The explanation of this extraordinary attitude must be that the hospital is not fit for current use; it is one of those so-called temporary structures which become permanent and almost entirely do away with the chance of securing isolation; indeed, it is described as "very much the worse for age and wear," and we hope no needless delay will take place in the erection of the new one which is in immediate contemplation. In dealing with the current work of nuisance removal, Mr. Hiffe more than

once hints at the need for abolishing old privies of a disgusting type, and for a proper cleansing of the pails where pail-closets have been adopted.

Maidstone Urban District.—Estimating the present population of the borough to the best of his ability, Mr. Adams records a birth-rate for 1887 of 29·48 and a death-rate of 12·31 per 1000. Small-pox made its appearance in two houses; Maidstone being especially liable to occurrences of this disease, owing to the existence in the district of paper-mills, and the attendant sorting of rags. The excellent infectious hospital which has been provided continues to serve its intended purposes, and during the year twenty-five patients, nineteen of whom were suffering from scarlatina, were admitted into it. Disinfection work is still well carried out, and, as regards the form of stove, Mr. Adams thinks that, notwithstanding certain admitted advantages in the use of moist heat, the balance of advantage probably lies with the system of dry heat, as adopted in the borough. Serious pollution of well waters still exists, but there appear to be difficulties in inducing the water company to arrange for an alternative supply in one part of the district. Although work remains to be done before Maidstone can be regarded as beyond risk of disease due to preventable causes, Mr. Adams cannot but think that the small death-rate for 1887 was not due to mere chance, but was largely attributable to recent improvements in respect of drainage, water supply, isolation of infection, &c.

Bridlington Urban District.—The average death-rate from all causes during the past seven years has been 16·68 per 1000, and last year it was 16·84. The various causes of death are considered by Mr. Wetwan, the state of the district is referred to as regards vaccination, and some details are given as to sanitary inspection, but there is not much in the report as to the present sanitary circumstances of the district or of its existing needs.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5290 births and 2864 deaths were registered during the week ending June 30th. The annual rate of mortality in these towns, which had been 16·2 and 15·5 per 1000 in the preceding two weeks, rose again last week to 15·9. During the thirteen weeks of the quarter ending Saturday, the 30th ult., the death-rate in these towns averaged 18·1 per 1000, and was 2·7 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 10·4 in Brighton, 12·6 in Huddersfield, 13·8 in Bristol, and 14·2 in Birmingham. The rates in the other towns ranged upwards to 20·7 in Bolton, 21·2 in Manchester, 26·0 in Salford, and 27·8 in Preston. The deaths referred to the principal zymotic diseases, which had declined from 330 to 248 in the preceding six weeks, rose again last week to 304; they included 85 from whooping-cough, 73 from diarrhoea, 43 from scarlet fever, 34 from diphtheria, 32 from measles, 22 from "fever" (principally enteric), and 15 from small-pox. No death from any of these zymotic diseases was registered during the week in Birkenhead, whereas they caused the greatest mortality in Salford, Wolverhampton, and Preston. The greatest mortality from whooping-cough occurred in Cardiff, Halifax, Manchester, and Salford; from scarlet fever in Bolton and Cardiff; and from measles in Bradford. The 34 deaths from diphtheria included 28 in London and 3 in Leeds. Small-pox caused 11 deaths in Preston, 3 in Sheffield, and 1 in Hull, but not one in any of the twenty-four other large provincial towns or in London. The Metropolitan Asylum Hospitals contained only 2 small-pox patients at the end of last week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 925 at the end of last week, against numbers declining from 928 to 895 on the preceding three Saturdays; 98 cases were admitted during the week, against numbers declining from 102 to 81 in the previous three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 213 and 184 in the preceding two weeks, further fell last week to 156, and were 67 below the corrected average. The causes of 54, or 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were

duly certified in Brighton, Portsmouth, Norwich, Oldham, Leeds, Newcastle-on-Tyne, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Liverpool, Sheffield, Hull, and Bristol.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20.0 and 18.4 in the preceding two weeks, further declined to 18.2 in the week ending June 30th; this rate exceeded, however, by 2.3 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 11.5 and 14.2 in Greenock and Dundee, to 20.8 and 21.6 in Perth and Glasgow. The 461 deaths in the eight towns showed a decline of 5 from the number in the previous week, and included 13 which were referred to measles, 12 to diarrhoea, 10 to whooping-cough, 6 to scarlet fever, 6 to "fever," 2 to diphtheria, and not one to small-pox; in all, 49 deaths resulted from these principal zymotic diseases, against 36 and 46 in the preceding two weeks. These 49 deaths were equal to an annual rate of 1.9 per 1000, which exceeded by 0.2 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 13 and 12 in the previous two weeks, were 13 last week, of which 12 occurred in Glasgow. The 12 deaths from diarrhoea corresponded with the number in the preceding week, and included 5 in Glasgow and 3 in Paisley. The fatal cases of whooping-cough, which had been 5 and 9 in the previous two weeks, further rose to 10 last week, of which 7 occurred in Glasgow. The 6 deaths from scarlet fever corresponded with the number in the preceding week, and included 3 in Glasgow and 2 in Dundee. The 6 fatal cases of "fever" showed a further increase upon recent weekly numbers, and included 2 in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 94 and 75 in the preceding two weeks, rose again last week to 89, and exceeded by 6 the number returned in the corresponding week of last year. The causes of 52, or nearly 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 24.7 and 20.7 per 1000 in the preceding two weeks, rose again to 24.8 in the week ending June 30th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 24.6 per 1000, the mean rate during the same period being 16.9 in London and 19.0 in Edinburgh. The 168 deaths in Dublin showed an increase of 28 upon the number in the previous week; they included 4 which were referred to whooping-cough, 3 to "fever" (typhus, enteric, or ill-defined), 3 to diarrhoea, 2 to scarlet fever, 1 to measles, and not one either to small-pox or diphtheria; in all, 13 deaths resulted from these principal zymotic diseases, against numbers declining from 14 to 8 in the preceding four weeks. The annual death-rate from these zymotic diseases was equal to 1.9 per 1000, the rate from the same diseases being 1.7 in London and 0.8 in Edinburgh. The fatal cases of whooping-cough, which had declined from 11 to 4 in the preceding three weeks, were again 4 last week. The 2 deaths referred to scarlet fever also corresponded with the number in the previous week. The fatal cases of "fever" and of diarrhoea exceeded those recorded in recent weeks. The deaths of infants showed a slight increase, while those of elderly persons corresponded with the number in the preceding week. Five inquest cases, and 3 deaths from violence, were registered; and 52, or one-third, of the deaths occurred in public institutions. The causes of 22, or more than 13 per cent., of the deaths in the city were not certified.

THE SERVICES.

Mr. G. T. Hewlett, M.R.C.S., C.I.E., Deputy Surgeon-General, and Sanitary Commissioner, Bombay, retires from the Service on a pension of £950 a year. Mr. C. W. MacRury, F.R.C.S., S.Sc.C. Cantab., has been appointed to succeed him in the Sanitary Commissionership.

THE GREENWICH HOSPITAL PENSION.—The Greenwich Hospital pension of £100 a year for Inspectors-General of

Hospitals and Fleets, vacant by the death of Peter Leonard, M.D., has been awarded to Inspector-General of Hospitals and Fleets William Macleod, M.D., C.B.

ARMY MEDICAL STAFF.—Surgeon-Major Horatio Scott, M.B., is granted retired pay (dated July 4th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major Clement Cuthbert Walter, 2nd Brigade, Cinque Ports Division, Royal Artillery, to be Surgeon-Major, ranking as Major (dated July 4th, 1888); Acting Surgeon Richard Marsden Pilkington Low, M.B., 1st Middlesex Engineer Volunteer Corps, to be Surgeon, ranking as Captain (dated July 4th, 1888).—The following notification is substituted for that which appeared in the *Gazette* of June 19th, 1888:—Surgeon Robert Ross Brown to be Surgeon-Major, ranking as Major (dated June 20th, 1888).

MILITIA (Infantry).—4th Battalion, the Connaught Rangers: Surgeon A. O'Kelly Nolan, M.D., resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated July 4th, 1888).

MILITIA MEDICAL STAFF.—Surgeon-Major C. W. Marriott, M.D., 4th Battalion, the Royal Warwickshire Regiment, resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement (dated July 4th, 1888).

ADMIRALTY.—The following appointments have been made:—Staff Surgeon Alfred T. Corrie, to the *Defiance* (lent), and Surgeon George L. Baker, to the *Ganges* (both dated July 4th, 1888).

ARTILLERY VOLUNTEERS.—1st Cheshire and Carnarvonshire: Acting Surgeon A. J. Jefferson, M.B., resigns his appointment (dated July 4th, 1888).

RIFLE VOLUNTEERS.—13th Middlesex: Surgeon J. G. Webb resigns his commission (dated July 4th, 1888).—4th (Eton College) Volunteer Battalion, the Oxfordshire Light Infantry: Acting Surgeon E. S. Norris, M.B., to be Surgeon (dated July 4th, 1888).

Correspondence.

"Audit alteram partem."

CONCURRENCE OF FEBRILE DISEASES IN THE SAME PATIENT.

To the Editors of THE LANCET.

SIRS,—In last week's "Mirror of Hospital Practice" Dr. S. Ringer reports a very interesting case of measles occurring during the course of typhoid fever in a patient under his care in December, 1887. I now send you notes of a case occurring during the same month, in which not only had the patient measles and fever concurrently, but a severe attack of diphtheria, followed by scarlatina and chicken-pox, all within the space of seven weeks.

During a very severe outbreak of fever in the neighbourhood of Kells, and when there were forty cases of fever under my care in the Kells Fever Hospital, K. B.—, aged fourteen, was admitted on Dec. 10th, 1887, together with two brothers and three sisters, all suffering from a severe form of bilious fever, similar to the outbreak described by me in the paper I read at the meeting of the British Medical Association last August. She and one younger sister had been exposed to the contagion of measles five days before admission into hospital. On the 8th she was suddenly struck down with fever—a fever very similar to that described by Dr. Ringer, and with the points I so strongly dwelt upon in my former paper: sudden onset, great prostration, bowels constipated, motions pale and offensive, bright red tip to tongue, splenic enlargement, distended abdomen, no delirium, high temperature, and severe muscular pains. On the 18th a sudden crisis occurred; temperature normal. On the 20th she had an attack of modified or German measles, with the symptoms so well described by Dr. Tonge Smith, except that the temperature never rose above 99°. By the 26th this attack had passed away, leaving nothing but a few enlarged glands on both sides of the neck. Appetite fair; tongue clean. Bowels still costive; motions feid. On the 28th she complained of sore throat. High fever. Gland

enormously enlarged; stony hardness. Both tonsils covered with diphtheritic membrane. The urine became albuminous, and the attack was so severe that for three days I looked on the case as hopeless. On Jan. 2nd there was slight improvement, which was steadily maintained until the 8th, when she had a severe attack of vomiting of greenish, bilious fluid, and next morning exhibited all the signs of a mild attack of scarlet fever—strawberry tongue, eruption, &c. By the 16th she was desquamating freely. On the 18th a papular eruption appeared, pushing off in the strangest manner the flakes of desquamating skin. This eruption became vesicular, and she had a mild attack of chicken-pox. By the 25th she was beginning to convalesce—a very tedious process. Naturally, after running the gauntlet of so many diseases, she remained anæmic and weak for eight weeks longer. One sister developed measles after the fever on Jan. 12th; the other sister, who was exposed to the contagion of measles at the same time as K. B.—and remained in the same ward, escaped altogether; the youngest sister, aged five, had a mild attack of scarlatina when convalescent, followed by an enormous axillary abscess.

Now, I ask, was all this conglomeration of diseases only different phases of one continuous blood poisoning, nature's endeavours to expel the poison resulting in violent storms, each storm being attended with the group of symptoms that we are accustomed to describe as different diseases? Or did the germs of five different diseases live harmoniously and flourish synchronously in the blood of this sorely-tried patient, feeding on the same diet and avoiding internecine warfare? Or did each attack, contrary to usual experience, leave in her system for food the germs of each successive disease during the last six months? I have treated several cases of fever followed by either measles or scarlatina before the patients have really become convalescent.

Treatment in this case consisted in the free administration of stimulants and nourishment, alternate doses of iron and bichloride of mercury—a mode of treatment I have found most successful in many of the exanthemata, and one strongly sanctioned by Dr. Illingworth. Locally I applied equal parts of glycerine and strong solution of perchloride of iron to the diphtheritic membrane.

I am, Sirs, yours faithfully,

JOHN RINGWOOD,

June 30th, 1888. Medical Officer, Kells Fever Hospital, Ireland.

WEIL'S DISEASE.

To the Editors of THE LANCET.

SIRS,—The annotation in your last issue on the peculiar type of jaundice described by Weil induces me to lay before your readers a short account of a case which occurred in my practice last summer, which then puzzled me considerably, but which, in the light of your note, I am inclined now to set down as a case of Weil's disease.

The patient, a healthy man of twenty-five, a dock labourer, was admitted into the Liverpool Northern Hospital on Aug. 23rd, 1887, deeply jaundiced. There was a history of exposure to wet fourteen days before, and the jaundice had come on two days before admission. No other cause for the jaundice could be found, except the fact that the patient was a heavy drinker, and the case was put down as one of catarrhal jaundice. The temperature was normal. On the following day the temperature rose to 101° 2', and the patient became much worse. He began to complain of severe headache and of photophobia; there was distressing sickness; and the urine passed during the day was only four ounces, sp. gr. 1012, and containing a large quantity of bile, a little albumen, and some renal casts. These symptoms continued unabated, the next day the patient getting very prostrated. In the evening (Aug. 25th) the patient had a severe attack of epistaxis, which was only stopped by plugging the nostrils with perchloride of iron. The temperature fell to 100°. The urine still continued scanty—viz., only six ounces in the twenty-four hours. On the following morning the patient was much exhausted by the loss of blood, and his temperature had fallen to 98° 4', sinking still lower to 98° in the evening. Early in the morning of the 27th there was another attack of epistaxis, even more severe than the first. This was followed by violent diarrhoea and rectal tenesmus, the bowels acting involuntarily every fifteen minutes. This reduced the temperature to 97°, at which it remained during the

day. The photophobia was still severe in the morning, but towards night the patient sank into a condition of stupor. The jaundice continued unchanged, and there was flatulent distension of the abdomen, masking almost completely the liver dulness. The patient passed thirty ounces of urine during the day, after turpentine stupes had been applied to the loins. His condition became very much worse during the night, and he died at 4 A.M. on the 28th, his temperature just before death being 98° 4'.

Whether this case was simply one of catarrhal jaundice, death resulting from asthenia caused by epistaxis and dysenteric diarrhoea; whether it was a case of malignant jaundice, causing death before the liver had time to atrophy; or whether the fatal issue was due to uræmia associated with jaundice, does not seem clear. The post-mortem appearances were, however, noticeable, and seemed to lend some colour to the idea that the link between the various symptoms in this case was to be found in the presence of the specific virus, which Fiedler supposes to be characteristic of Weil's disease. The liver was enlarged, and weighed sixty-four ounces. There was no jaundice of the liver substance, the bile-ducts contained no bile, and the gall-bladder was empty and collapsed. The kidneys were swollen and congested, averaging eleven ounces in weight. On microscopical examination, the cells of the liver were swollen and granular, presenting rather the appearance of cloudy swelling, and there was some increase of connective tissue between them. The kidneys were manifestly inflamed. The epithelial cells were granular, and many of the tubules were filled with exudation, which was mostly translucent, but in some tubules was pigmented, having a dark, granular aspect. The spleen was small, weighing only an ounce and a half. No abnormal appearance was noted in the mucous membrane of the intestines. The brain was healthy.

This case differs of course in some important respects from some other recorded cases of Weil's disease; notably in the severe and repeated epistaxis, in the absence (as far as noticed) of severe muscular pains, in the fatal issue, and in the shrunken appearance of the spleen after death. Still, I cannot but think that there are very many and striking points of resemblance, and that the coexistence of the intense jaundice, the nephritis and uræmic symptoms, the severe headache and photophobia, occurring in the case of a young healthy man, twenty-five years of age, in the middle of a hot summer, accompanied by some amount of fever and marked gastric disturbance, and coming on suddenly after a chill, indicates pretty clearly that some toxic agency was at work. The post-mortem appearances were certainly not very striking, but at any rate they resembled with some closeness those which have been noted by other observers in cases of Weil's disease.

I am, Sirs, yours faithfully,

W. PERMEWAN, M.B. Lond.,

July, 1888. Senior House-Surgeon, Liverpool Northern Hospital.

MANCHESTER.

(From our own Correspondent.)

INCORPORATION OF ADJOINING TOWNSHIPS.

WE have just now considerable agitation going on concerning the desirability, or otherwise, of certain of the adjoining townships being amalgamated with the city. Crumpsall, Moss-side, and Newton-heat are the three which it is now proposed to add to Manchester. The most important factor concerned in this agitation is the question of sewage disposal, which in each of these districts appears to be a problem which can only be satisfactorily solved with the help of Manchester proper. To all intents and purposes these outlying suburbs are part of Manchester, and have a community of interest with it.

HIGH DEATH-RATE OF THE CITY.

One result of the recent conference, called to consider our high mortality, has been the formation of a "Working Men's Sanitary Reform Association," by which it is hoped the working classes may be led to take a more practical interest in a matter which so largely and so closely concerns them, and to help as far as they themselves can in measures to diminish it. One of the greatest bars to much diminution

is undoubtedly the large amount of wretched cottage property that exists, and preliminary steps have been taken for the formation of a company with a philanthropic purpose, but which, it is hoped, may also prove financially a success, whose aim will be to provide healthy cottage homes at a rate within the means of the ordinary labourer and artisan. The Sanitary Association have petitioned the Home Secretary to take some steps to provide more effective control over the practice of insuring the lives of young children, as they are convinced that this insurance of infants, in many cases, tends to carelessness and neglect on the part of mothers and others. The same Association has also petitioned Mr. Ritchie to provide in his Local Government Bill for the appointment of medical officers of health by the County Councils, and not by the smaller district ones, and that more "security of tenure" should be provided for those officials than at present exists.

OWENS COLLEGE.

At the annual prize day and presentation of associates it was reported by the principal that twelve graduates had, on the recommendation of the Senate, been elected to the Associateship. The Platt Physiological Scholarship was declared awarded to Mr. G. H. Cooke, and the Turner Medical Scholarship to Mr. J. E. Platt. The total number of students during the past session had been 1269. Allusion was also made to the large growth of the medical faculty, and the probable need in the near future of enlargement in this department.

HOSPITALS.

By the munificence of the trustees of the late Sir Joseph Whitworth, whose liberality towards Owens College has been on a magnificent scale, a new cottage hospital is about to be erected between Darley Dale and Matlock Bridge, this district having hitherto been unprovided with any hospital accommodation within a convenient distance. Considerable enlargements will shortly be made at the Ancoats Hospital, which for many years has been doing much good work in a quiet way in a very crowded part of the city, and for a long time, with very limited funds. The present scheme when completed will provide for seventy-two beds.

UNWHOLESOME FOOD.

A scandalous case of dealing in meat unfit for human food was lately exposed in the police-court at Salford. A butcher was fined £10 and costs for having in his shop ready for sale not only mutton and pork, but also horse-flesh, all in a diseased condition and unfit for consumption. The authorities are active, too, in prosecuting offending milk dealers, scarcely a week passing without someone being before the magistrates for tampering with this important article of food.

SMALL-POX.

Small-pox here has almost subsided, only some two or three cases per week having been met with during the past month. Since the beginning of the year 270 cases have been received into the small-pox hospital belonging to the infirmary, which practically receives all the small-pox of the district. It is worthy of note that not one case has been received from amongst the large Jewish population here, the bulk of whom are of the very poorest, and contribute many hundreds of scarlet fever patients to the hospital. This is believed to be due to the fact that the Jewish infantile population are most thoroughly vaccinated and the adults largely revaccinated, this being brought about by a rule of the Jewish board of guardians not to grant relief to any family whose children are unvaccinated or its adults not revaccinated.

Manchester, July 4th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE ROYAL INFIRMARY.

SINCE the abolition of the letter system and the development of the Newcastle Royal Infirmary into a free hospital, it appears, as it were, to stand on a wider and more popular base, and consequently more interest is being taken in its support by our citizens of all classes. Last week an influential meeting of ladies was held at the request of the

Mayor, and for the first time in its history an auxiliary ladies' committee was formed, a step which cannot fail to have a good effect on the fortunes of the institution. A praiseworthy and successful effort was also made to augment the funds by a performance of the "Garriek" Amateur Dramatic Club, given in the Theatre Royal in this city on last Friday evening. The house might be said to be full in every part. The efforts of the ladies and gentlemen who exerted themselves on the occasion called forth repeated rounds of well-merited applause from the audience. A comedietta, by a member of the club, entitled, "A Mean Advantage," was anything but an ephemeral production, although written for the occasion, for, as well as possessing humorous points in abundance and laughable situations, its literary excellence and dramatic qualities will cause it to be called for again. I have been told that the performance is likely to realise a very handsome sum. Mr. Page has lately operated on a girl in the infirmary for hydronephrosis. The whole kidney was removed, and the patient lived ten days. I believe that this is the first time this operation has been performed in the north of England.

AMBULANCE WORK IN THE COUNTY OF DURHAM.

Surgeon-Major Hutton has been inspecting a number of colliery hands who have been instructed in ambulance work by Dr. Branskill of Coxhoe. Surgeon-Major Hutton addressed the men at the close of the inspection, and said they had gone through the practice in a most creditable manner, and reflected credit on their kind instructor, Dr. Branskill, and themselves; and also remarked that he had always taken a great interest in the Volunteer movement, not only as a strong arm of defence, but as developing the physique of our great industrial classes.—Mr. Sutherland, surgeon, has received a silver teapot in recognition of his services as instructor to the South Shields and River Tyne police ambulance classes. Mr. Sutherland, in the course of a reply to a vote of thanks, mentioned that close upon 3000 policemen in the northern counties now held certificates of the St. John Ambulance Association.

HEXHAM.

The people of Hexham had a jubilation last week, and not without a cause, as they had succeeded in getting a Bill giving a better supply of water to the town through committee in the House of Lords. The ancient abbey town of Hexham has much historical interest in itself to invite visitors, and, with the picturesque attractions of its vicinity and its sheltered situation, it must be of great value in some seasons to invalids. Now that the water supply will be pure and abundant, the popularity of Hexham and its claims to medical recognition as a health resort are certain to increase.

SMALL-POX IN DURHAM COUNTY.

Dr. W. T. Bolton of Ebchester reported to the Lanchester sanitary authority that he had seven cases of small-pox in the village of Allendale Cottages during the month ending June 23rd. The Government inspector requested that everything possible should be done to prevent the spread of the disease.

Newcastle-on-Tyne, July 4th.

DUBLIN.

(From our own Correspondent.)

THE EPIDEMIC OF MEASLES AT SKIBBEREEN.

THE epidemic of measles at Skibbereen and at Cape Clear has been greatly exaggerated, and on Saturday last Dr. Jennings, medical officer of Skibbereen Workhouse, stated there was but one case in the house, which was now convalescent. As regards the numerous deaths said to have taken place on Cape Clear Island, and the prevalence of measles of a most malignant kind, Dr. Hadden, the medical officer of the district, visited the island on June 25th, and states that he found only one case of measles, that of a child, who is now recovered. Certainly five deaths have taken place on Cape Clear Island within the past few weeks, but there is no proof that they succumbed from measles or its complications.

THE MEATH HOSPITAL, DUBLIN.

I am informed that Mr. Wharton, one of the surgical staff, has sent in his resignation, and it is rumoured that

the vacancy will be filled up by the election of a leading member of the profession in Dublin, who formerly was attached to the hospital. Mr. Wharton has been connected with the Meath Hospital since 1858, a period of nearly thirty years, and leaves the hospital with the esteem and regard of the colleagues with whom he has been associated for so many years.

POISONING BY OPIUM.

A gentleman aged thirty was found lying in an unconscious state last week by the police and removed to the Meath Hospital. He had poisoned himself with laudanum, and died shortly after admission notwithstanding all treatment. The deceased had swallowed four ounces of tincture of opium, an amount equivalent to one hundred and thirty-two grains of the drug.

It is rumoured that Mr. Colles, Surgeon to Her Majesty in Ireland, has resigned the surgeoncy of the Richmond Hospital.

Dublin, July 3rd.

PARIS.

(From our own Correspondent.)

ALCOHOLISM.

AN extra Parliamentary Commission has been held, under the presidency of M. Léon Say, to investigate the question of alcohols, and the following are the conclusions of the report drawn up so far as hygiene is concerned: "The cause of alcoholism resides as well in the quality of alcohol consumed as in the quantity. In order to restrict its consumption, the tax thereon should be augmented and the number of public-houses diminished; but the tax cannot be increased without at the same time undertaking energetic measures in view of the repression of fraud. As regards the quality of alcohols, it is necessary to distinguish the alcohols of industry and those of brandies (*eaux-de-vie*). A maximum of impurity may be tolerated in the alcohols of industry, but those for consumption should be as pure as it is possible to have them, and any infringement in this direction will be severely punished."

THE BACILLUS OF FOWL CHOLERA FOUND IN DUCKS.

An epidemic lately broke out among the ducks of the Jardin d'Acclimatation, when more than eighty of them succumbed in a few days. Professor Cornil, after having established that the alimentation was the source of the malady, searched for and cultivated the pathogenic microbe. He found in the blood of the ducks which died a very small bacillus, the culture of which on gelatine is identical with that of the microbe of the cholera of fowls described by M. Pasteur. The anatomical lesions are also the same as the alterations produced by this microbe; and yet, observes M. Cornil, this malady of the ducks is not at all the cholera of fowls, as the bacillus inoculated kills only ducks. It is *inoffensive* for fowls, pigeons, and rabbits, which, on the contrary, rapidly succumb after the inoculation of the choleraic microbe.

TREPHINING.

At a recent meeting of the Academy of Sciences, Professor Verneuil read a very interesting paper for Dr. Lucas-Championnière on the innocuousness of the operation of trephining. The author recalled that this operation is frequently performed by the Kabyles in medical cases, and that they consider it very harmless. Encouraged by the researches of Broca and Charcot on cerebral localisation, which furnished valuable data and indications for the application of a crown of the trephine on certain parts of the skull, with the view of obtaining the cure of traumatism or of any morbid accident, he performed the operation in five cases of traumatism and in fifteen for medical affections. Of the five surgical cases (fracture of the arch of the skull), three were attended with success. The two unsuccessful cases were due to the gravity of the injuries. One of these died twenty-four hours after the operation; in this case, however, the post-mortem revealed a focus of suppuration, and a quantity of pus around the brain. The other fifteen cases were trephined for divers medical affections: six for cephalalgia, attended with vertigo (three cures); four for epilepsy,

with improvement; one for incomplete syphilitic hemiplegia. The recovery took place in four days. There was only one case in which the patient felt a little pain for some time after the operation. The cephalo-rachidian liquid was observed to be more abundant in the epileptics than in the other subjects trephined. Once a large arachnoidian vein was opened, and at another time the superior longitudinal sinus. Hæmostasis was obtained by plugging the opening made by the trephine with catgut. This latter was easily reabsorbed. Dr. Lucas-Championnière employs a trephine of three centimetres in diameter. The results of the trephining were remarkable. When there is no suppuration the cicatrix is resistant even so hard that after a certain time the pulsations of the brain are not felt. It is not necessary to wear a protective apparatus. The operation may be performed at all ages, except, perhaps, in extreme old age. Youth, however, is the most favourable period for it. In no case except one was there any fever or suppuration, not even in a case where Dr. Lucas-Championnière removed a piece of the skull measuring eight centimetres in its largest diameter and three centimetres in its smallest.

AGE-STATISTICS OF PARISIANS.

The following curious statistics have just been published by the Prefecture of the Seine. Paris counts 6386 persons who are more than eighty years of age, 2247 vary between eighty-five and eighty-nine, 640 have passed ninety years, and 138 are more than ninety-five years old. There are 20 centenarians: 4 bachelors, 1 married man, 6 widowers, 1 unmarried woman, 1 married, and 7 widows. The population of Paris amounts to 2,260,945.

New hospitals in different quarters of Paris are to be erected by private initiative, and will be under the direction of the sisters who have been expelled from the public institutions.

Dr. Paul Loye, tutor in Forensic Medicine at the Paris Faculty of Medicine, is charged with a mission to study the organisation of the teaching of that branch in Germany and in Austria.

Dr. Raymond, *agrégé* of the Faculty of Paris, is commissioned to proceed to Russia for the purpose of studying in its universities the questions of medical teaching relative to diseases of the nervous system.

Paris, July 3rd.

THE COLLEGE ELECTION.

THE voting at the above election, which took place in the Library of the College of Surgeons of England on the afternoon of Thursday, the 5th inst., resulted as follows:—

Mr. WILLIAM CADGE ...	116,	including	9	plumpers
Mr. THOS. BRYANT ...	106	"	3	"
Mr. T. PICKERING PICK ...	93	"	18	"
Mr. John Couper ...	65	"	4	"
Mr. Arthur Trehern Norton ...	56	"	5	"

Mr. William Cadge of Norwich, and Mr. Thomas Bryant, were therefore declared by the President to be duly re-elected, and Mr. T. Pickering Pick to be elected to the vacancy caused by the resignation of Sir Joseph Lister. No papers were declared invalid.

The interest in the election was even less than that taken in the election of last year, only 180 Fellows voting, against 199 in 1887.

There was the usual interesting exhibition of pathological specimens, and of the additions to the department of Comparative Anatomy.

THE MARGARINE ACT.—In the Report of the Cheshire County Analyst (Mr. J. Carter Bell) it is remarked that "the Margarine Act had had a most remarkable effect upon the adulteration of butter, for out of fifty-one samples only one was adulterated, and this came from the Hyde division. It would be well if a similar Act could be passed with regard to lard, the adulteration of which had now reached alarming proportions, for more than fifty per cent. of the lard samples were adulterated with cotton-seed oil."

Obituary.

ISAAC HARRINSON, F.R.C.S.

THE borough of Reading has sustained a great loss in the death of Mr. Harrinson, who was in active practice in Reading for over fifty years. He took a chill and died from pneumonia. Mr. Harrinson's professional career was exceptional, and well worthy of record for the example it affords that the greatest success is attainable in private practice among the educated and refined class of a district without the aid and publicity which a hospital or other appointment is supposed to give. The whole of Mr. Harrinson's energies were given to private practice, in which he succeeded to such an extent as to command the greatest confidence of his patients and the highest respect among his professional brethren in the neighbourhood. He might, indeed, be said to have been for many years the popular family doctor of the better class of the inhabitants of Reading. He was quiet in manner, unobtrusive, and guarded in speech, precise in professional knowledge, and singularly exact in its application. His success enabled him to realise a large income, which he used most liberally for the good of the poor and others of the parish of St. Mary, in which he resided, giving for public purposes sums, not in hundreds of pounds, but in thousands. By his liberality the almshouses were restored, and £1000 was given to the rebuilding of the Town Hall. A new side aisle was added to St. Mary's Church at his expense for the comfort of the poor. Old and dilapidated buildings were bought and razed to the ground at his cost to give more open space to a poor district, and to afford a better approach to and view of the church of St. Mary, for which he seemed never able to do enough, and at which he was a regular attendant, notwithstanding the calls of his extensive practice. He was singularly reliant on his own judgment, basing it at all times as he did on careful thoughtfulness and that higher guidance which he at all times sought and trusted in the acts of daily life, which was uniformly one of unostentatious piety. Like others of the elder generation of practitioners in Reading, he seldom left home for a holiday, for he found recreation sufficient in his professional studies, in his home, and in the interest he took in all around him. Mr. Harrinson might be instanced as an example of Wordsworth's beautiful lines:—

"Type of the wise who soar, but never roam,
True to the kindred points of heaven and home."

He was one of the founders of the Reading Pathological Society, of which he was first annual president. He established a social and ethical club called the "Aston Key Club," the members of which dine at each other's houses in succession, to promote good feeling and to encourage the preservation of a high professional tone. It was a great satisfaction to him to see this club well sustained during the last year of his life, and to have met as guests distinguished men from London. Though his funeral took place in the forenoon of a busy market day, the church was filled by his fellow-townsmen and a large number of the profession, who assembled to pay this last respect to the remains of one whom in life they had loved so well. The full choir of St. Mary's Church, accompanied by the organ, which was there largely through Mr. Harrinson's liberality, and which is justly celebrated for its excellence, made the service deeply impressive by the rendering of the music to the beautiful and specially suitable hymn, with which the service terminated, in the appropriate words—

"Father, in Thy gracious keeping
Leave we now Thy servant sleeping. Amen."

THE RABBIT PEST IN AUSTRALIA.—A Royal Commission has been appointed in Sydney to inquire "as to whether the introduction of disease amongst rabbits by inoculation or otherwise, or the propagation of disease, natural to rabbits, for the purpose of promoting their destruction, would be accompanied by danger to human or animal life." The terms of the inquiry, as officially expressed are certainly open to criticism.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At the third examination for the degree of M.B. the following gentlemen were approved:—

PART 1.—Ds. Battersby, Trin.; Ds. Blaker, H. Cav.; Ds. Bowen, King's; Ds. Campbell, H. Cav.; Ds. Chaplin, Joh.; Ds. Colbeck (E. H.), Caius; Mag. Courtney, Pemb.; Ds. Crisp, Caius; Ds. Elmore, Christ's; Ds. Foster, Trin.; Ds. Gervis, Trin.; Ds. Goddard, Caius; Ds. Gordon, Trin.; Ds. Hawkins, Caius; Ds. Hopkinson, Emman.; Ds. Lloyd (G. T.), Joh.; Ds. Murray, Trin.; Ds. Musson, King's; Ds. Ogilvie, King's; Ds. Roberts (R. J.), Ds. Rutherford, Sidney; Ds. Saunders (G. R.), Caius; Ds. Sortain, Caius; Ds. Syfret (S. B.), Trin. H.; Ds. Veale, Christ's; Ds. Weber, Trin.; Ds. Wickham (G. H.), Caius.
PART 2.—Ds. Barber, Cath.; Ds. Copeland (W. H. L.), King's; Ds. Harris (H. E.), Christ's; Ds. Hicks, H. Cav.; Ds. King, H. Cav.; Little, Down; Ds. Percival, Trin.; Pollock (W. R.), Trin.; Ds. Prowse; Ds. Smithson, Christ's; Ds. Watts (A. T. G.), Corpus.

At the examination for the degree of B.C. the following gentlemen were approved:—

Ds. Beddoes, Pemb.; Ds. Whishaw, H. Cav.

UNIVERSITY OF DUBLIN.—At a meeting of the Senate held last week the following degrees were conferred:

Bachelor in Medicine.—Henry Cooke Drury, Henry Nason Dunn, Charles Fitzmaurice Harkin, James William Henry Jellett, Vernon Lanphier Jones, Joseph George Auriol Kane, Edward Kingsbury, Malcolm Charles Moore, Francis Bernard Nowlan, Herbert Holmes Orr, John Alfred Scott, Alfred Arnold Sproule, William George Theaker Story, and William M. Wilson.

Bachelor in Surgery.—Henry Cooke Drury, Henry Nason Dunn, Charles Fitzmaurice Harkin, Robert Warren Herrick, James Wm. Jellett, Vernon L. Jones, Joseph George Auriol Kane, Edward Kingsbury, Malcolm Charles Moore, Francis Bernard Nowlan, Herbert Holmes Orr, Alfred Arnold Sproule, William George Story, and William Macnelly Wilson.

Master in Surgery.—Henry Moore Brabazon (*stip. cond.*)

Bachelor in Obstetrics.—Henry C. Drury, Henry N. Dunn, Charles M. Harkin, James Wm. Jellett, Vernon L. Jones, James Joseph Auriol Kane, Walter Kiddie, Edward Kingsbury, Malcolm Charles Moore, Francis B. Nowlan, Herbert Holmes Orr, Alfred Arnold Sproule, William George Story, and Wm. Macnelly Wilson.

Doctor in Medicine.—Henry Moore Brabazon, Thomas Gordon Kelly, and Thomas Leahy.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At meetings of the Court of Examiners, held last week, the following was admitted a Fellow of the College:—

Henry Michael O'Hara, of Melbourne.

SUPERANNUATION.—Mr. Charles Holtom, late medical officer, Fenton District, Stoke-upon-Trent Union, has been granted an allowance of £15 per annum.

ROYAL BERKSHIRE HOSPITAL.—Mr. Martin Hope Sutton has sent a donation of £100 to the funds of this hospital, in prospect of the Hospital Saturday collections made at Reading on Saturday last.

A MEDICAL BARRISTER.—Dr. Cooper Rose of Hampstead was called to the Bar at the Middle Temple on June 13th, but he does not, we understand, intend to relinquish his medical practice.

WHITWORTH MEMORIAL HOSPITAL, MATLOCK.—The executors of the late Sir Joseph Whitworth, of Stancliffe Hall, have decided to erect a cottage hospital on a plot of ground situated on the high road between Darley Dale and Matlock Bridge.

A NEW INFECTIOUS HOSPITAL, WILTS.—At the Wilts Quarter Sessions, held on the 3rd inst. at Warminster, the Court approved of the erection and furnishing, at the County Asylum, of a detached hospital for infectious cases, at a cost not exceeding £2100.

SANITARY INSTITUTE OF GREAT BRITAIN.—At the anniversary meeting of the Institute, to be held on Thursday, July 12th, at 3 P.M., an address will be delivered by Dr. B. W. Richardson, LL.D., F.R.S., entitled "The Storage of Life as a Sanitary Study."

THE NEW CROMER COTTAGE HOSPITAL.—The opening of this new building took place on Saturday last, when, at a meeting of the committee, its formal presentation to the trustees was made by the donor, Mr. G. W. Collison of Cromer, who, entirely at his own expense, has given to the parish this commodious, substantial hospital. It contains on the ground floor convalescent and accident wards, consulting-room, and other requisite accommodation, with a small mortuary outside. There are four wards on the upper floor, matron's and nurses' bedrooms, and a bath-room.

FATAL ACCIDENT TO A SURGEON.—Mr. W. Ballinghall, Surgeon, Bean-street, Hull, on attempting, on Tuesday evening, to get out of a tram-car in which he was riding towards home, accidentally slipped and fell upon his head. He apparently suffered from internal injury, and was taken home in a semi-conscious state. Medical aid was immediately obtained, but he never rallied, and died at noon on the following day.

ROYAL COLLEGE OF PHYSICIANS.—On the 27th ult. the President of the Royal College of Physicians, Sir Andrew Clark, received a large and distinguished company in the hall of the College. An interesting collection of works of art and curiosities was on view for the entertainment of visitors. Especially interesting to medical men, who of course formed the great majority of the gathering, was the diploma of Harvey, the discoverer of the theory of the circulation of the blood. It is from the University of Padua, and is dated April 25th, 1602. There were also a manuscript book in the handwriting of Jenner, a number of relics of Dr. Priestley, many autographs of medical celebrities, and some scientific exhibits. The band of the Royal Artillery, under the Cavaliere Zavertal, played a selection of popular music during the evening.

PROPOSED CHILDREN'S HOSPITAL AT LEICESTER.—Hitherto Leicester has been without any proper provision for the treatment of children in hospital. A few beds have been available for accidents and urgent cases in the general wards of the infirmary, but lately attention has been drawn to the urgent need for something more than this, and the present Mayor, Mr. Thos. Wright, has taken up the matter with much spirit. Under his auspices an open-air fancy dress ball and fête was arranged, and held on the 28th prox. (Coronation Day) in the Abbey Park, which, thanks to fine weather, was a great success, more than £800 being taken for tickets. His worship, at a luncheon given by him on the same day, was able to announce that, in response to an invitation for subscriptions which he had sent out, a sum of between £4000 and £5000 had already been promised. It is estimated that about £7000 will be required to build and furnish the new hospital, which it is proposed to erect in connexion with the infirmary on part of the spare ground available there. On this question of site, however, some little difference of opinion exists, many advocating that the new hospital should be built on higher ground, and not on the low-lying site of the present infirmary.

THE NEW ST. MARYLEBONE INFIRMARY, NOTTING HILL.—The fourth anniversary of the opening of the training-school in connexion with this infirmary was held in the Home on June 25th. The probationers, who are about to finish their year's training, having been subjected to a written and *visu-voce* examination by Mr. Lunn, F.R.C.S. Ed., the medical superintendent of the infirmary, and Mr. Croft, F.R.C.S., of St. Thomas's Hospital, Mr. Boulnois, J.P., chairman of the infirmary Visiting Committee, and Mr. Bonham Carter, secretary of the Nightingale Fund, addressed the meeting. The school appears to be making most satisfactory progress, and, independently of supplying the infirmary with highly-trained nurses, is drafting them into other institutions. The Home is built on the most approved plan; it is liberally supplied with baths, &c., and each probationer has a separate bedroom. Lectures and classes are carried on in the large class-rooms of the Home. Probationers are bound to the Infirmary Committee for three years, having passed through their year of training. Those who are drafted on to the infirmary staff receive a salary commencing at £20 and rising to £25 per annum, with uniform and washing. Having finished their first and second year of service satisfactorily, they receive in addition from the committee of the Nightingale Fund a gratuity of £2 for the first and also for the second year of service, a letter of approval accompanying each gratuity.

ST. GEORGE'S HOSPITAL.—At the meeting of the Weekly Board of Governors, held on Wednesday, the 27th ult., a resolution of thanks, engrossed on vellum, was presented by the chairman, Mr. Charles Hawkins, to Mr. R. T. Poole Collyns, the resident medical officer of Atkinson Morley's Convalescent Hospital, Wimbledon, who is about resigning his office, which he has held for twelve years, to commence practice in Wimbledon. The resolution was to the following effect: "The Weekly Board, on the

occasion of the resignation of Mr. R. T. Poole Collyns, of the offices of resident medical officer and master of Atkinson Morley's Convalescent Hospital, beg to tender to Mr. Collyns their hearty thanks for the mode in which he has performed all the duties of the offices he has held for twelve years. Beyond the satisfactory treatment of the patients under his care, which has met with the approbation of the visiting medical officers, Mr. Collyns has exhibited a great power of administration by the tact with which he has carried out all the details of the internal working of the hospital, and the good discipline he has maintained. His constant supervision of all works that were necessary, within as well as without the hospital, whether as to the buildings, gardens, or grounds, has resulted in an economical expenditure of the funds. The Weekly Board feel that much of the present satisfactory position of the hospital is due to the energy and devotion in the performance of his duties ever exhibited by Mr. Collyns."

THE LONDON HOSPITAL.—A public meeting was held at the Bow and Bromley Institute on the 26th ult., under the presidency of Mr. Childers, M.P., to consider the excellent work done by the London Hospital amongst the crowded population of the East-end, and to invite the residents and working men of the district to assist the management in their endeavours to maintain the present efficiency of the hospital by means of clubs and subscriptions. The hospital has received a donation of £2000 from the Goldsmiths' Company, and £210 from the Fishmongers' Company.

MEDICAL NOTES IN PARLIAMENT.

Royal Barracks, Dublin.

In the House of Lords on the 2nd inst., Earl Beauchamp moved that an humble address be presented to Her Majesty thanking Her Majesty for laying before Parliament the report on the prevalence of enteric fever in the Royal Barracks, Dublin, and praying Her Majesty to give directions that the recommendations contained therein may be carried out.—Lord Harris said that he would consult Sir T. Crawford on the subject. It was hardly necessary for the noble earl to move the latter part of his motion, because the Government were endeavouring to carry out as quickly as possible the recommendations made in the report.—Lord Herschell said that when this subject was before their lordships on the last occasion the condition of Richmond Barracks was also referred to. There could be no doubt that the amount of sickness at the Richmond Barracks was much greater than it ought to have been, and he should like to know whether anything had been done in the matter.—Lord Harris promised to make inquiries. After some further remarks from Earl Beauchamp, the Duke of Cambridge said he thought that some allowance should be made for the difficulties experienced in carrying out the recommendations made in the report. Every endeavour had been made, and was being made, to meet those difficulties and to give effect to the recommendations. They had to dispose of the garrison, and only short notice had been given of the arrangements; but he could assure the noble earl that the subject was receiving every consideration. It was intended to build new cavalry barracks, but that was a matter of time; and meanwhile the garrison must be kept up.

The motion was then withdrawn.

Pharmacy Act (Ireland), 1875, Amendment Bill.

On the 3rd inst., this Bill was read a third time.

The Pollution of Rivers.

In the House of Commons on the 29th ult., on the consideration of the Local Government Bill, on Clause 16, which empowers the County Council in addition to any other authority to enforce the Rivers Pollution Act, 1876, Mr. Brunner moved an amendment with a view to provide for the appointment of a joint committee of the counties through which any river flows to enforce the Act; but the Attorney-General opposed the amendment, pointing out that the clause merely gave a concurrent jurisdiction to enforce the Act. Sir W. Barttelot and Sir Lyon Playfair, however, strongly supported the amendment, but in the end it was withdrawn on Mr. Ritchie promising to bring up a new clause to carry out its object. The clause was then agreed to.

"Denatured" Tea.

On the 2nd inst., the Chancellor of the Exchequer, replying to Mr. Dixon-Hartland, said that the resolutions authorising the removal of "denatured" tea from bond for the manufacture of caffeine would be issued in a few days.

Evidence of Medical Men.

On the 2nd inst., in reply to Dr. Tanner, Mr. Matthews said that a medical man was paid a guinea for attending to give evidence in a coroner's court. The allowance to medical witnesses for attending as witnesses in a London police-court varies from 10s. 6d. to 21s., according to the distance travelled. It was certified by the magistrate and paid by the Receiver of Police.

The Vaccination Officer of the Mile-end Union.

On Thursday, in reply to a question by Mr. W. MacLaren respecting a resolution of the Mile-end guardians in reference to certain charges brought against their vaccination officer, Mr. Ritchie said it was not usual in these cases to order an inquiry; but, in deference to the views which the guardians had expressed, and in consideration of the gravity of the charges, he had determined to institute the inquiry asked for.

Telegrams.

Mr. W. A. Macdonald asked the Postmaster-General whether titles, which it is often inconvenient to omit in telegraphing, consisting of two letters, such as P.P., C.C., M.D., M.P., &c., may not in future be counted as one word, in the same way as the letters indicating the postal districts of London are counted at present.—The Postmaster-General: I regret that I am not prepared to adopt the honourable member's suggestion. The effect would be to reduce the receipts from telegraph business, and, as a loss is already incurred on that business, I do not consider that I should be justified in taking any steps which would tend to increase the loss.

Anti-vaccination.

Mr. Picton asked the President of the Local Government Board whether his attention had been called to the case of Mr. M. H. Neah, of Kenfield, Sussex, who has been sixteen times summoned for refusal on conscientious grounds to have his children vaccinated? Whether the total fines inflicted, with costs, have amounted to £16 14s.? And whether the Local Government Board has any means of urging or enforcing the advice given in the letter to the Eresham Guardians?—Mr. Ritchie said that the defendant in question has three children; he has been summoned sixteen times and fined on eight occasions. The fines and costs amounted to £12 1s., and not £16 14s. Mr. Neah had declared that no power on earth would ever force him to surrender what he felt to be the course of duty to his family. The Local Government Board had distinctly intimated to boards of guardians their views as to the course to be pursued where persons persisted in their refusal to comply with this law. But it was for the guardians themselves to determine what course they should take in individual cases.—Mr. Picton: Does not the right hon. gentleman think it desirable to introduce some legislation to prevent prosecution degenerating into persecution?—Mr. Ritchie: The administration of the Act is committed to an elective tribunal which must exercise its own discretion.

Insanitary Condition of Emigrant Ships.

In the debate in Committee of Supply on the vote of £69,000 for the Board of Trade and subordinate departments, Dr. Tanner called attention to the very inadequate inspection of emigrant ships by the sanitary inspectors of the Board of Trade, and insisted on better sanitary accommodation for steerage passengers on transatlantic liners. The hospital accommodation on board these vessels, he said, was often misappropriated to other purposes.—Sir Michael Hicks-Beach said the officers of the Board of Trade had no power to deal with the passenger ships; but with regard to the emigrant ships he would do his best to secure better inspection.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

- ARMITAGE, W. H., L.R.C.P. Edin., L.F.P.S. and L.M. Glasg., has been appointed Medical Officer of Health for the Darwen Union District, Lancashire.
- BARTON, S. J., M.B., T.C.D. and M.Ch., L.M. Dub., has been appointed Honorary Physician to the Norfolk and Norwich Hospital, vice Eade, resigned.
- BEARBLOCK, W. J., M.R.C.S., L.R.C.P., has been appointed Assistant House-Surgeon to the Royal Albert Hospital, Devonport.
- BEVERLEY, M., M.D. Edin., M.R.C.S., L.S.A., has been appointed Honorary Surgeon to the Norfolk and Norwich Hospital, vice Crosse, resigned.
- BOND, F. T., M.D. Lond., M.B., A.B., M.R.C.S., has been re-appointed Medical Officer of Health for Gloucester Combined District.
- BURD, G. V., L.R.C.P. Edin. and L.M., M.R.C.S., has been reappointed Medical Officer of the Fifth and Sixth Districts, Okelampton Union.
- COLLINS, W. J., M.S., F.R.C.S., has been elected to the office of Surgeon to the London Temperance Hospital, Hampstead-road, N.W., vacant by the resignation of Mr. A. Pearce Gould, M.S., F.R.C.S.
- CURRAN, J. J., L.R.C.P. Edin., L.R.C.S.I., has been appointed Medical Officer of the Sick Fund Society of the Cork and Youghal section of the Great Southern and Western Railway Company, Ireland.
- DANIELL, E. P., M.R.C.S., L.R.C.P., has been appointed Resident Surgical Assistant, for six months, to the Wolverhampton General Hospital.
- GALLOWAY, W., L.R.C.P. Edin. and L.M., L.R.C.S. Edin., has been appointed Medical Officer for the Birtley Sub-district, Chester-le-Street, Durham.
- MAKINS, G. H., L.R.C.P. Lond., F.R.C.S., L.S.A., has been appointed Surgeon to the In-patients, Evelina Hospital, Southwark-bridge-road, S.E., vice C. J. Symonds, resigned.
- MOORE, J. W., M.R.C.S., has been appointed Medical Officer of Health, Newton Heath, Manchester, vice Gornall, resigned.
- MOORES, S. GUISE, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House-Surgeon to the South Devon and East Cornwall Hospital, Plymouth, vice P. H. Whistoun, resigned.
- ROBINSON, T., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House-Surgeon to the Sheffield General Infirmary, vice P. Priestley, resigned.
- SMITH, JAMES W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for Doncaster West District Union.
- STEER, WILLIAM, M.R.C.S., L.S.A., has been appointed Medical Superintendent of the Fulham Workhouse Infirmary.
- STOCK, F. K., has been appointed Analyst for the Borough of West Hartlepool.
- TARGETT, J. H., M.B., F.R.C.S. Eng., has been appointed Surgeon to the Out-patients, Evelina Hospital for Sick Children, Southwark-bridge-road, S.E., vice G. H. Makins.
- WILLIAMS, F. N., L.S.A., has been appointed Medical Officer to the Fourth Division of the Brentford Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

- BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—Surgeon to out-patients.
- BRISTOL GENERAL HOSPITAL.—Assistant Surgeon.
- CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House-Surgeon. Board and rooms.
- CHELSEA HOSPITAL FOR WOMEN, Fulham-road, London, S.W.—Three Clinical Assistants. The fee is 5 guineas for a period of three months.
- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician; Resident Clinical Assistant; and Pathologist. Salary 100 guineas per annum for the latter appointment.
- CUMBERLAND INFIRMARY, Carlisle.—House-Surgeon. Salary £70 per annum and pupil's fee. Assistant House-Surgeon. Salary £40 per annum and pupil's fee. Board, lodging, and washing provided in each case.
- GENERAL INFIRMARY, Northampton.—Assistant House-Surgeon. Salary £80 per annum, with furnished apartments, board, attendance, and washing.
- HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House-Physician.
- HOSPITAL FOR WOMEN, Soho-square, London.—House-Physician. Salary £75 per annum, with board, &c.
- ST. MARY'S HOSPITAL, London, W.—Surgical Registrar. Salary £50 per annum.
- THE QUEEN'S HOSPITAL, Birmingham.—Resident Physician, tenable for two years. Salary £50 per annum, with board, lodging, &c.
- WESTERN GENERAL DISPENSARY, Marylebone-road, N.W.—Honorary Surgeons.
- WESTMINSTER GENERAL DISPENSARY, Gerrard-street, Soho, London, W.—Honorary Physician.

Births, Marriages, and Deaths.

BIRTHS.

- HAYWARD.—On the 26th ult., at Brixham, S. Devon, the wife of Arthur E. Hayward, M.R.C.S., &c., of a daughter.
- HEAD.—On the 30th ult., at Heavitree, Exeter, the wife of Dewar Head, M.R.C.S., of a daughter.
- HODGES.—On the 27th ult., at Guildhall-street, Bury St. Edmunds, the wife of James Hodges, M.R.C.S., L.S.A., A.K.C., of a son.
- ROBERTS.—On the 19th ult., at Milton-under-Wychwood, the wife of Henry Roberts, M.D., M.R.C.S., L.R.C.P. Lond., of a daughter (prematurely).
- TAIT.—On the 30th ult., at Hornsey-rise, the wife of Henry Brewer Tait, F.R.C.S., of a daughter.
- WATSON.—On the 29th ult., at Heigham Hall, Norwich, the wife of Charles J. Watson, M.R.C.S., of a son.
- WHITTLE.—On the 4th inst., at 65, Dyke-road, Brighton, the wife of Ed. Geo. Whittle, M.D. Lond., F.R.C.S. Eng., of a son.

MARRIAGES.

- ARMSTRONG—RITCHIE.—On the 26th ult., at Christ Church, Lancaster-gate, Henry Armstrong, Surgeon, Indian Medical Service, Madras, to Lily, daughter of the late S. Ritchie, Esq., and Mrs. Ritchie, Sussex-gardens.
- BOGLE—MAIN.—On the 3rd inst., at Babington Parish Church, by the Rev. C. P. Ford, Vicar of Godley, assisted by the Rev. Canon Feilden, Rector, James Linton Bogle, M.B., of Victoria West, Cape Colony, to Mary Strang, daughter of William Main, M.D., of New Ferry-park, Birkenhead.
- FIELDEN—INCE.—On the 30th ult., at Croydon, William Eckett Fielden, M.D. Lond., of Burlington-street, Chesterfield, to Lillie Louise, daughter of William Ince, Esq., of Sutton House, South Croydon.
- KIDD—CROZIER.—On the 28th ult., in the First Presbyterian Church, Newry, Frederic William Kidd, M.D., of Lower Fitzwilliam-street, Dublin, to Annie Armstrong, eldest daughter of the Rev. John A. Crozier, of Newry.
- STOWERS—SHEPHERD.—On the 28th ult., at the Church of St. John the Evangelist, Red Lion-square, James Herbert Stowers, M.D., fourth son of Nowell Stowers, Esq., of Clapham-road, S.W., to Henrietta, youngest daughter of Edward Shepherd, Esq., of Bedale, Yorks.

DEATHS.

- FOTHERGILL.—On the 28th ult., at his residence, 3, Henrietta-street, Cavendish-square, London, John Milner Fothergill, M.D., son of the late Dr. Fothergill, of Morland, Westmoreland, aged 47.
- HARRISON.—On the 26th ult., at his residence, Badsey, Bath-road, Reading, Isaac Harrison, F.R.C.S. Eng., in his 79th year.
- M'CULLOCH.—On the 25th ult., at Dumfries, James Murray M'Culloch, M.D. Edin., aged 83.
- RICHARDSON.—On the 28th ult., at Balham, John Richardson, M.D., aged 71.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 5th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maxi- mum Temp. Shade.	Min. Temp.	Rain- fall.	Remarks at 8.30 a.m.
June 29	29.57	W.	61	55	111	70	55	.16	Cloudy
" 30	29.63	N.	57	53	106	66	52	.13	Cloudy
July 1	30.03	N.	59	51	111	69	48	..	Bright
" 2	30.02	S.W.	59	55	74	61	54	..	Overcast
" 3	29.68	N.W.	61	57	119	72	56	.40	Cloudy
" 4	29.53	S.W.	60	57	114	68	54	.10	Cloudy
" 5	29.50	S.W.	62	57	113	68	55	.10	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

TRAINING OF DEAF-MUTES.—ARE PATIENTS ABLE TO SPEAK DISTINCTLY?

*Mr. J. J. Harding (Ballincollig).—*The question cannot be answered collectively, because there is a very great difference in results. Some of this class, naturally the most intelligent, may be taught to speak distinctly; but the majority of these, although classed as deaf-mutes, have only lost their hearing a variable time after birth, and have in consequence lost the power of speech. Such children, although practically deaf-mutes, are not congenital cases, and sometimes quickly regain what they have lost. Probably a very small proportion, indeed, of the truly congenital deaf-mutes ever learn to speak distinctly. The whole subject is in the hands of a Royal Commission upon the Education of the Blind and Deaf and Dumb, which has been sitting for the last year or two, but has not yet issued a full report.

*Ignorans.—*1. Keetley's Guide to the Medical Profession, published by Ballière, Tindall, and Cox, King William-street, may be of use.—2. The Secretary of the Prison Department of the Home Office.

*Mr. Patrick (Manchester).—*It is well to adhere to the custom which has heretofore been followed in the locality.

*Strenue.—*There is nothing impossible in the "feat."

THE WARDELL CONVALESCENT HOME.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to avail myself of your journal for the purpose of inviting medical gentlemen and others likely to be interested in my Home for Convalescents from Scarlet Fever at Stanmore to pay it a visit on Saturday afternoon, July 14th. The Home is undergoing cleaning, whitewashing, re-painting, and colouring, and the committee have thought it a favourable occasion for holding a meeting in a tent in the grounds, and giving the subscribers and others an opportunity of seeing the Home before it again becomes filled with patients. The meeting is fixed for 4.30 P.M.; Sir J. Risdon Bennett will preside, and anyone presenting his card or the card of invitation I am now issuing will be admitted. The nearest stations are Edgware on the G.N.R. and Elstree on the Midland Railway; but the Home is only ten miles distant from the Marble Arch by road.—Yours faithfully,
Stanley-gardens, N.W., July 4th, 1888. MARY WARDELL.

PHALLUS IMPUDICUS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly give me their experience with regard to the effects of the offensive odour from the fungus called "Phallus impudicus" in producing sore-throats similar to those caused by bad drainage? I am, Sirs, faithfully yours,

Bexley, July 3rd, 1888.

T. WHEELER.

MICRO-ORGANISMS IN THE STOMACHS OF INFANTS.

DR. M. D. VAN PUTEREN, who has been engaged in examining the micro-organisms in the stomachs of infants in St. Petersburg, finds that during the first two months of life the microbes existing in the stomach are very various, no single form being constant. Their presence must therefore be merely accidental. The number of microbes in the stomach is always in direct proportion to that of those existing in the mouth at the same time; consequently, by means of a micro-biological examination of the mouth, the condition of the stomach may be pretty accurately inferred. It is evident, therefore, that the way to prevent the access of micro-organisms into the stomach is to exclude them from the mouth. It must also be remembered that the stomach in such young infants, containing much less acid than it does in older persons, presents a decidedly favourable field for the development and multiplication of micro-organisms. Dr. van Puteren's investigations are described in detail in the *Vratch*, Nos. 21, 22, 1888.

W. H. P.—The book is entitled "Treatise on the Physical Cause of the Death of Christ, and its relation to the Principles and Practice of Christianity. By William Stroud, M.D. London: Hamilton, Adams, and Co. Second edition. 1871." Dr. Stroud was an Edinburgh graduate (1819), and after years of good work in connexion with the Northern Dispensary of London he retired to devote himself to Biblical studies until his death at Highgate, June 29th, 1858. Sir J. Y. Simpson had the highest opinion of the treatise, and endorsed its conclusion that "the immediate cause of His dissolution was rupture of the heart and the escape of His life-blood from the central cistern of the circulation."

THE USES OF ANTIFEBRIN.

To the Editors of THE LANCET.

SIRS,—This is a drug which, I am convinced, is not sufficiently appreciated by the profession; therefore I feel no compunction in directing attention to this very useful and safe drug—in this latter respect in direct contrast to antipyrin. Antifebrin is cheaper and safer than antipyrin. The temperature is reduced quickly by antifebrin, and the duration of its effects lasts many hours, and frequently is permanent. It is usually administered by myself in ten-grain doses suspended in water (cold); it has no bad taste or smell. In the cases below mentioned there were no bad after effects, no malaise. About nine months since I administered this drug in a case of enteric fever. Although the temperature was very considerably reduced, I could not say that the result was satisfactory. In a case of acute rheumatism with this drug I certainly saved my patient's life; instant relief was given, and despite the appearance of cardiac symptoms the case was carried through to a most successful issue, and the heart affection disappeared. In chronic rheumatism antifebrin is most useful. Patients have frequently obtained immediate relief. One person to whom I administered this drug was relieved within two minutes, although racked with pain before. The powders never failed to have a speedy and good effect. In tonsillitis, in almost any stage, I have seen immense relief given by this drug. In several cases where deglutition was performed with the utmost difficulty the relief has been speedy and permanent. J. H.—, almost choking, had two powders, one night and morning. After the first great relief was obtained, and after the second he was, as he said, all right. W. A.—, a great sufferer from quinsy, was in a similar predicament. He was treated in a similar manner, and the same effect was produced. J. G.— was a similar case, and the same result was obtained. J. S.—, with catarrh and pharyngitis, was almost immediately relieved by this drug. In erysipelas I have found antifebrin very useful. In colds with increase of temperature and in sore-throat this drug is invaluable; and in rheumatism and tonsillitis (in any stage) there is nothing to equal it. When salicylate of soda fails, antifebrin relieves and cures. It is also useful in sciatica. I shall try it in pneumonia. Of course, this drug must not be given haphazard, although I have not observed any ill effects from its administration. I think fifteen grains too large a dose.

I am not aware that antifebrin has been prescribed in acute or chronic rheumatism, tonsillitis, sciatica, or erysipelas by any physicians or general practitioners but myself. If my opinion is incorrect, I shall be glad to hear their experiences.—I am, Sirs, yours faithfully,

Maryport, June 21st, 1888.

W. H. SPURGIN.

AUSTRALIAN JUVENILE GIANTS.

AN interesting family, consisting of Clara, aged fourteen, who weighs 23 st.; Tom, ten years, 13 st.; and Anna, eight years, 12 st., are now on view at the Royal Aquarium. The health of the three children is fairly good, and they are far more pleasant to look upon than the ordinary "fat women" usually exhibited as specimens of over-development of adipose tissue. The father and mother are decidedly lean in appearance, as also are two daughters, aged respectively seventeen and twelve, who accompany the exhibition. It is stated that the diet of all the members is the same both in quantity and quality. About the age and weight of the children there can be no doubt.

Scotia.—1. Lumley's Medical Officers' Manual is the only book necessary.—2. All printed forms are found by the guardians.

Mr. C. Rogers.—Simonilla and Doradilla might perhaps be obtained from Mr. Christy.

HOSPITAL ABUSE IN BELGIUM.

A CORRESPONDENT of *Le Scalpel* complains that every day more than a hundred persons in comfortable circumstances obtain advice, medicine, and dressings at the hospitals in Brussels and its suburbs; and he instances, amongst other flagrant cases with which he is acquainted, one of a rich hotel-keeper who attended the hospital of St. Jean daily to have ulcers on his legs dressed, and another of a well-to-do farmer who came constantly to Dr. Crocq's clinic in his carriage, which waited for him at the hospital door! In this way, he says, the Brussels hospitals take away the incomes of at least ten medical men, and at the same time rob their own resources in a most unwarrantable manner. In order to remedy this state of things he suggests that every applicant for hospital relief *pro deo* shall be compelled to produce a certificate of poverty. The editor of *Le Scalpel* fully agrees with his correspondent on the subject of the abuse of hospitals, and mentions that it is just the same in Liège, where there are two large hospitals which afford gratuitous attendance, including medicines and the performance of minor operations, to all comers; and that it is a common custom for people who have doubts as to whether their ordinary medical attendant is treating them properly to go to the hospital for a second (gratuitous) opinion, instead of asking for a consultation with the professor; also that numbers of well-to-do people dress themselves in shabby clothes and mingle with the poor in order to obtain gratuitous advice.

Veritas might with advantage apply to the hon. secretary of the Medical Defence Union, Dr. Leslie Phillips, 393, Moseley-road, Birmingham. Dr. H. J. Hardwicke's paper is marked for insertion.

"IS ECZEMA CONTAGIOUS?"

To the Editors of THE LANCET.

SIRS,—I have just had the pleasure of reading the letter of Dr. A. S. Myrtle on the subject of the contagiousness of eczema, in this week's issue of THE LANCET. I have not the advantage of having perused the correspondence which has brought forth Dr. Myrtle's letter, but I find sufficient of the context of his correspondent's letter quoted to enable me to grasp the point at issue between them.

If I may be allowed to put the question in a different form, I would not ask "Is eczema contagious?" but would formulate my proposition thus: "Where does scabies end and eczema begin?" I have had opportunities of observing the course and incidence of both scabies and eczema in several of our English workhouses whilst acting as assistant to the respective medical officers of these institutions. Notably to my recollection at the present moment occurs the Helmsley Workhouse, Yorkshire, in the working of which institution I had the pleasure of assisting Dr. R. Bruce Low, now of the Local Government Board. My observation in the incidence of scabies and eczema was this: that a robust tramp comes into the workhouse, and on examination by the medical officer he is found to be suffering from scabies; isolation and treatment with either sulphur ointment or sulphide of lime results in a perfect cure in a day or two. *Per contra*, a poor widow with several children, tramping from a distant manufacturing town, who have been exposed not only to the lowering influences of insufficient food and other privations, but also to depressing mental influences, come into the workhouse after an accidental exposure to the infection of scabies. Subjected to the course that we would have found most efficacious in the treatment of the robust tramp, we find that instead of the rapid cure we have to contend all winter with a pseudo-eczema cum scabei, not only defying treatment by sulphur ointment or solution of sulphide of lime, but seemingly aggravated by them. My contention is that a patient exposed to the infection of scabies, and in a lowered condition from whatever cause, having once contracted the disease, is extremely liable to develop chronic eczema during the treatment to which a patient suffering from scabies is generally subjected. I can quite conceive that a patient in this condition of health having contracted the disease is peculiarly well fitted to furnish a favourable site for the development of the eggs of the acari, and the consequent irritation leads by short steps to eczema. Such at any rate is my experience. Certainly if there was any chance of reinfection, a stray female acarus, seeking whom she might devour, would find a favourable hiding in the subjects whose cases I have indicated.

I am writing on this subject purely from the general practitioner point of view, but I feel convinced that some of our consultants in the department of skin diseases will bear me out in what I have ventured to adduce in support of my views.—I am, Sirs, yours truly,

Farnworth, June 30th, 1888.

J. A. MACKENZIE, M.B.

To the Editors of THE LANCET.

SIRS,—The reply to be given to the above question would appear to be simple enough, and is this: Some cases are, others are not, contagious. The direct causation of the latter kind is a germ, and this germ has not in the first place the power to produce a specific disease; but, being placed under varied and at the same time suitable surroundings, assumes a definite character, and then exerts its sway. May it not be that the epidemic of pneumonia, which is at present prevalent in the neighbouring town of Middlesbrough, had such a starting point? Given a harmless microbe planted on a favourable soil—e.g., a marsh with cold, damp, east winds—typhoid pneumonia breaks out. If we do not accept this proposition of contagiousness, how else can we account for the following facts? I have seen children inoculated with eczema from a vaccine vesicle by the eighth day. These results were by no

means mere coincidences. Culture experiments, however, are needed to clear up this point. For this very reason I maintain that all vaccinations should be performed from fresh calf lymph. What public vaccinator ever inquires into the life-history of a family for a hundred years, nay, fifty, or even for one year. He is totally ignorant as to whether the infant's father or mother may not have some skin disease. Moreover, I am informed by an eminent veterinary surgeon that eczema and syphilis are quite unknown in the calf. I am sure of another point—namely, that vaccination, at all times efficacious in the modification of small-pox from calf lymph, will often cure a case of eczema. Over and over again have I noticed and performed this. The spore from the vaccine vesicle kills outright its opponent, or so alters it as to render it utterly useless, or change its character entirely. The fittest survives. Lastly, who has not seen an eczema of the upper lip produced by an oxera? Is this not sufficient evidence of the contagiousness of certain kinds of this vesicular disease? In conclusion, let me remark that another variety is dependent on a nervous cause—neurotic; still another on the blood—sanguineous; and so on, all of which are non-contagious. For practical purposes, however, a far better classification would be into "those which are beneath the covered parts of the body and those which affect the unclothed." There is much vanity in the world, and medical men cannot afford to scoff at it.—Yours faithfully,

Stokesley, July 2nd, 1888.

J. A. WETHERELL, M.B.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 23rd you published a clinical note of mine relating to several cases of eczema occurring in the same family, which apparently spread by contact. In your last week's issue Dr. Myrtle asks whether they were cases of eczema or cases of scabies. I did not look for the acarus scabiei, but I feel convinced that I had to deal with simple eczema, for the following reasons: (1) Although I looked very carefully I could see no cuniculi; (2) the amount of irritation was not nearly so much as in itch; (3) large excoriated surfaces were formed much more rapidly than is the case in scabies; (4) the localities of the body usually affected by scabies were in most of my cases free from eruption. According to Dr. Liveing, "scabies is never found on the scalp and face in adults, and in infants only occasionally." In my cases the father had patches of eczema on the face and nowhere else, all the children had it more or less on the face, and two or three had it also on the scalp. (5) All my cases improved rapidly under a treatment in which (besides arsenic &c. internally) a soothing ointment of zinc and vaseline was the only external application used. No parasiticides whatever were applied.

Penge, S.E., June, 1888.

Yours faithfully,

EDWARD A. OPIE.

Inquirens.—A long extract of the communication of Drs. Finlay and Delgado to the Cuban Academy of Sciences concerning Yellow Fever and the "tetragens" connected with it is published in the *Revista de Ciencias Medicas*, No. 88 (Habana, May 20th, 1888).

"AURAL REFLEXES."

To the Editors of THE LANCET.

SIRS,—In connexion with the letter of Mr. Albert E. Kynaston, in your issue of to-day, describing a case of reflex vomiting from irritation of the auditory canal, perhaps the following case may be of interest. Two days ago I removed a polypus from the right ear of a lady who had suffered from disease of the middle ear when a child, with loss of the tympanic membrane. The canal was almost entirely blocked up by the polypus, but I managed to get a few drops of a 5 per cent. solution of cocaine into the ear and removed the polypus, without the lady complaining of any pain or discomfort; but on touching the root, from which the polypus had been removed, with nitric acid she complained of sharp pain, and on syringing the ear with warm water she manifested symptoms of syncope, and was violently sick. These symptoms ceased in a few minutes, and she had no further trouble.—Yours truly,

Ipswich, June 30th, 1888.

JAS. NORMAN VOGAN.

Mr. C. P. Behn.—We cannot assist our correspondent further than by recommending him to consult the *Charities Digest*, published by Longmans.

Juventus.—The letter has been mislaid. Will our correspondent kindly repeat his question?

AN ANTISEPTIC FOR MIDWIVES.

To the Editors of THE LANCET.

SIRS,—In your issue of June 23rd "Dispensary Surgeon" asks what is the best antiseptic to put into the hands of midwives. I think he will find the silico-fluoride of sodium, which is commonly sold under the name of "Sulfer" to be both safe and efficient. It presents the following advantages. It is cheap, inodorous, non-irritating in a solution of one grain to an ounce of water, non-poisonous, does not stain or alter in any way the hands or linen, and it can be conveniently carried in the form of compressed discs or powders in amount sufficient to make a quart of solution. I have proved its efficiency as an antiseptic in a large number of surgical cases, such as hernia, abdominal sections, amputations, &c., and have the evidence of several obstetricians as to its efficiency as a vaginal and uterine douche. Messrs. Reynolds and Branson of Leeds have supplied me with the compressed discs.—Yours truly,

Leeds, June 26th, 1888.

A. W. MAYO ROBINSON.

ERRATUM.—In Mr. F. Marsh's paper, published last week, p. 1201, fifth line from bottom for "mark" read "subl." &c.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Niven, Oldham; Dr. Robertson, Newcastle-on-Tyne; Mr. Garstang; Mr. T. Laffan, Cashel; Dr. B. Park, Glasgow; Mr. W. Hewett, Sittingbourne; Mr. Wunderlich, London; Mr. Somers-Smith; Mr. Sandiland; Mr. G. T. Trowman, Portsmouth; Dr. Ringwood, Kells; Mr. Mayo Robson, Leeds; Mr. J. A. Gough, London; Messrs. Debenham and Co., London; Mr. E. S. Sugden, Birkenhead; Messrs. Caldwell and Son, Dublin; Mr. Wheeler, Bexley; Mr. J. B. Johnstone; Mrs. Ashton Warner, London; Mr. W. H. Thomas, Maesteg; Messrs. Pryce and Whitelegge, Nottingham; Mr. Sanderson, Glasgow; Dr. Castle, New York; Mr. Taylor, Richmond; Dr. Rose, London; Messrs. Truax and Co., Chicago; Dr. Wetherell, Stokesley; Messrs. Burgoyne and Co., London; Rev. Dr. Roberts, Hackney; Messrs. Macmillan and Co., London; Dr. Woodhead, Edinburgh; Mr. Lynd, Bournemouth; Dr. McMordie, Belfast; Dr. W. Pasteur, London; Dr. Macgregor, Hawick; Dr. McVail, Kilmarnock; Mr. Klugh, London; Mr. Gillies, Brockley; Dr. Permacwan, Liverpool; Dr. Tripe, London; Dr. Lillie, Farnworth; Mr. H. W. White, London; Dr. J. A. Mackenzie, Farnworth; Mr. Pentland, Edinburgh; Dr. Wolf Smith; Dr. Naismith, Ayr; Mr. C. H. Byers, London; Mr. Vogan, Ipswich; Mr. Charlton, Jarrow; Dr. A. E. Garrod, London; Mr. Sell, London; Mr. Wolff, London; Dr. Benthall, London; Mr. Lawley, London; Mr. Diggins, Lancaster; Dr. Adam, West Malling; Dr. Allwright, Maidenhead; Messrs. Stern, London; Mr. C. L. Todd, London; Mr. Gellenschafft, Wien; Mr. Allan, Liverpool; Dr. Walker, Southport; Mr. Tunmer, Harrogate; Mr. Watt, London; Mr. Elliott, Carlisle; Messrs. Beal and Sons, Brighton; Mr. Birchall, Liverpool; Messrs. Robertson and Scott, Edinburgh; Mr. Hulme, Birmingham; Messrs. Orridge and Co., London; Dr. Dowling, Suffolk; Mr. Collins; Dr. Tennant, Ben Rhydding; Mr. Whitford, London; Mr. Browne, London; Mr. Draper, London; Mr. Foulerton, Chatham; Chirurgus, Leeds; Clericus; H.; Scotia; J. P.; Veritas; Anxious, Llandilo; Geddes Manufacturing Co., London; Strenue; Beta, Wakefield; L. M. S., London; An Inmate; H., London; Matron, Bristol Royal Infirmary; R. M. B., London; Matron, Stockport.

LETTERS, each with enclosure, are also acknowledged from—Mr. Cook, Cirencester; Mr. Popman, London; Dr. Fountain, London; Dr. Day, London; Mr. Petherick, Norfolk; Mr. Head, Exeter; Dr. Thompson, Totnes; Dr. Emerson, Biggleswade; Mr. French, Dublin; Dr. Bell, co. Down; Mr. Lee Good, Norwich; Mr. Lee, Leeds; Miss Garlick, Leeds; Dr. Dunn, Preston; Mr. Kelvin, Manchester; Mr. Williams, Monmouth; Mr. Ritchie, Oxley; Mr. Harvey, London; Mr. Murray, Halifax; Mr. Bayes, Wellingboro'; Mr. Juler, London; Mr. Ralph, Burton-on-Trent; Messrs. Spickett, Pontypriid; Messrs. Hooper and Co., London; Mr. Heywood, Manchester; Messrs. Reynolds and Branson, Leeds; Mr. Grier, Hirwain; Dr. Smith, Dumfries; Dr. Boyle, Redcar; Dr. Sutton, Queensland; Mr. Johnson, Leicester; Mr. Essex, Pontypool; Mr. Linker, Lymington; Mr. Wormald; Mr. Appleton, Cornwall; Mr. Walker, Southport; M.D., London; Radius, London; A. B. C., London; Bristol Royal Infirmary; G. T., Bath; Sternum, London; Spes, London; Surgeon, Bristol; S. P., London; Appenzel, London; E. B., London; M. S., Southport; Vendor, London; M.B., London; Alpha, Manchester; Rectus, London; M. L., London; A. B., London; M.D., Bristol; L. M., London; L. J. C., London; Horton Infirmary; B. Y., London; C. S. H., Tufnell-park; X. Y. Z., Clevedon; Medicus, Wilton; Mirror, London; W. E. G., London; B.Sc., London; X. Y. Z., London; Medicus, Hatcham; Sudor, London.

Burton Chronicle, Reading Mercury, Hertfordshire Mercury, Herald and Weekly Free Press, Scottish Leader, Surrey Advertiser, Windsor and Eton Express, East Essex and Halstead Times, Townsville Daily Bulletin (Sydney), Manchester Courier, &c., have been received.

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Medical Diary for the ensuing Week.

Monday, July 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 10.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
COLLEGE OF STATE MEDICINE (Theatre of the Chemical Society, Burlington House).—4 P.M. Sir J. Crichton Browne: Responsibility and Disease.

Thursday, July 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
SANITARY INSTITUTE OF GREAT BRITAIN (Lecture Theatre of the Royal Institution, Albemarle-street, W.).—3 P.M. Anniversary Meeting (Mr. Edwin Chadwick in the chair). Dr. B. W. Richardson: The Storage of Life as a Sanitary Study. The medals and certificates awarded to the successful exhibitors at the Exhibition held at Bolton in 1887 will be presented.

Friday, July 13.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 14.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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CONDENSED REPORT OF A

Lecture
ON

TUBERCULOSIS AND TABES MESENTERICA.

Delivered before the Hon. the Grocers' Company in the University of London, July 9th, 1888,

By G. SIMS WOODHEAD, M.D., F.R.C.P. Ed.,

SANITARY RESEARCH SCHOLAR; SUPERINTENDENT OF THE ROYAL COLLEGE OF PHYSICIANS LABORATORY, EDINBURGH.

THE lecturer began: "Sir James Paget and Gentlemen,—When the Hon. the Grocers' Company did me the honour of electing me to one of their scholarships, I set out with a light heart and bright anticipations to continue some researches on the subject of Tuberculosis in general, and Pulmonary Phthisis in particular, which I had initiated some little time before. Under the influence of my teachers in the Edinburgh school, and under the inspiration of the researches of Koch (which had so recently been published), Burdon-Sanderson, Wilson Fox, Baumgarten, Klein, and others, whose works I was reading, I aspired to go into the whole subject of tuberculosis. Since that time my ideas, I need hardly say, have assumed less ambitious proportions, the area of my investigations has been considerably limited, and I have been content to take one or two points for consideration in the first instance, leaving the remainder for further investigation as time and opportunity offer. In the present lectures I shall attempt to give an outline account of part of the work on which I have been engaged during the last two years. I say part of the work, for I intend to leave the experimental work, except where absolutely necessary for purposes of elucidation, for further consideration. The subjects of tuberculosis and phthisis have, from earliest times, received the attention of our best observers, and in this country, where the conditions are specially common, much has been written, and many most valuable treatises have come from the pens of these observers. With all this, however, the intimate connexion between certain conditions was never made clear until we had Koch's detailed experiments on tubercle as a point from which to start further observations."

He then went on to point out that the presence of tubercle nodules, though latent, in any part of the body, now comes to have a much greater significance than formerly, as each mass of tubercle, whether recent or caseous, must be looked upon as a focus from which invasion of any part of the body may take place. It was with this in view that he was led to make a most careful examination of all the material that fell into his hands, to see what light could be obtained on the subject.

Writing recently on the subject of phthisis, Dr. James pointed out that the "general mortality is excessive at birth, rapidly diminishes till about the fifth year, more gradually till about the fifteenth, and then first slowly and then rapidly rises to the end; the phthisis mortality shows during the early years of life a comparatively low rate, a rapid rise from fifteen to twenty-five, and then a somewhat gradual decline." During the first five years of life he believes that errors of diagnosis are specially common, but all the errors tend to an under-statement rather than to an over-estimation of the number of deaths from tuberculosis of some form or other.

As an outcome of the whole of the more recent observations, tuberculosis has come to be looked upon as the result of a specific morbid irritant, acting on tissues which are so far devitalised that they are not able to cope with this irritant. Although Metschnikoff's views on this subject have been referred to, especially in connexion with the more acute specific infective diseases, it never seems to have been fairly grasped except by those who have made a careful and special study of tuberculosis, that what holds good in the case of micro-organisms in the more acute specific diseases may be equally true as regards the action and reaction of the bacillus tuberculosis and the tissues in the human body; that the battle of the cells and bacilli may go on as really and as continuously in

No. 3385.

the case of tubercle as it does in a localised anthrax or in a suppurating wound; and that the conditions for the development of the tubercle bacillus in the human or animal body must be just as definite and as favourable to the existence of that bacillus as they must be to the development of the organisms of pyæmia or allied processes. Of these conditions the lecturer mentioned the following—(a) Some weak point in the epithelial surface at which the organisms, now generally admitted to be the cause of tuberculosis, may invade the deeper tissues in sufficient numbers to be able to hold their own in the struggle for supremacy that ensues. (b) The comparatively low vitality of these deeper tissues, the cells of which they are composed being no longer able to deal successfully with any large number of bacilli that can under ordinary circumstances find their way so far. It should be borne in mind that, although tubercle bacilli are so widely disseminated, they are under ordinary conditions seldom present in sufficient numbers in the atmosphere to render them in any way formidable to any but the most unhealthy (as regards tissue resistance) individuals. It was pointed out that it is a matter of common observation that tubercle affects different organs at very different periods of life; or, at any rate, that in tuberculosis certain organs are more frequently affected, and at an earlier period of the disease, than are the rest. For example, tubercular meningitis occurs much more frequently between the third and the eighth years than it does at any other period of life. Rilliet and Barthez give the results of the examination of 98 cases of this condition. They state that during the first year there were only 2 cases; between one and two years and a half, 17; from three to five years and a half, 34; from six to seven years and a half, 23; from eight to ten years, 15; and from eleven to fifteen years, 7 cases.

Of 54 cases of tubercular meningitis examined by the lecturer, not one was under one year (adopting the same classification); between one and two years and a half there were 15; from three to five years and a half, 21; from six to seven years and a half, 8; from eight to ten years, 8; and from eleven to fifteen years, 2. These figures corresponded fairly closely, and might serve as a basis for comparison. In these 54 cases, tuberculosis was in 39 so widely disseminated that it might fairly be said to be general; in only 2 cases could no primary centre of infection be found. In 6 the only foci that could be primary were to be found in the lymphatic glands of the mediastinum alone or along with those of the mesentery; in 3 the lungs were the only other organs affected; and in 1 the lungs and mediastinal glands contained the older tubercle nodules.

In the brain or in its membranes, the embolic tuberculosis must be looked upon as part of a general process. Intestinal tubercle, it was stated, is said to be most common in the years following childhood from twelve upwards for six or seven years. From an analysis of 127 cases of tuberculosis in children it was found that in 43 instances there was tubercular ulceration of the intestine. During the first year after birth there was only 1; between one and two years and a half, 14; from three to five years and a half, 10; from six to seven years and a half, 7; from eight to ten years, 5; and from eleven to fifteen years there were 6. So that in this series of cases the intestines are frequently affected during very early life as well as in somewhat later years. Although the intestines are directly affected by tubercle in such a small proportion of cases, the mesenteric glands are found to be in some stage or other of tubercular degeneration in no less than 100 instances, or in nearly 79 per cent. of the whole. This was considered to be a point of sufficient importance to be worthy of special note. The age at which these tubercular glands in the mesentery were found is also significant. During the first year of life there were 4 cases; from one to two years and a half, 33; from three to five years and a half, 29; from six to seven years and a half, 12; from eight to ten years, 13; and from eleven to fifteen years, 9 cases. Here, again, the figures are higher during the earlier periods than during later years, but the maximum is reached (as with ulceration of the intestine) at a distinctly earlier period than in the case of tubercular meningitis. In 14 cases the glands only were affected—i.e., there was no tubercle found in any other part of the body. In these cases the glands had become calcified, but in the others the structure and degeneration of the glands were tubercular, bacilli were very few in number and in some cases could

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not be demonstrated, and the nature of the mass could only be determined by inoculation experiments. Here, again, the second and third periods account for more than all the others together, 5 and 4 from one to two and a half years and from three to five and a half years, against 5 for the other four periods (1 under one year; 1 between six and seven and a half years; 2 from eight to ten years; and 1 from eleven to fifteen years). These 14 cases were accompanied by neither ulceration nor cicatrization of the intestine; there was no peritonitis, and secondary tubercle could be found in no other parts of the body, so that the tuberculosis of the mesenteric glands must be looked upon as the primary lesion. Continuing the analysis, it was found that in this 160 cases the glands at the root of the lung are simultaneously affected in 69 cases, and in 62 the lungs were also affected; in 13 there was tubercular peritonitis, and in 18 ulceration of the intestine was also found. Of the remaining cases, 4 had tubercular peritonitis and 4 ulceration of the intestine. In 12 cases the mesenteric and mediastinal glands, the peritoneum, the intestine, and the lungs were all affected; whilst in no fewer than 53 of the 100 cases there was evidence of localised peritonitis, recent or old, occurring between the spleen or liver and the diaphragm. Of the whole 160 cases, only 20 were diagnosed as having abdominal tubercle, and this 20 would be considerably reduced were the doubtful diagnoses eliminated. In these cases, then, the symptoms associated with tubercle in other organs are so predominant that the tubercle in the abdomen was practically overlooked. Dr. Goodhart, speaking of this condition, says: "Caseous or tubercular disease of the mesenteric glands is not uncommon; nevertheless, it is rare indeed in comparison with the consumption of the bowels which is so often heard of in the dwellings of the poor. From a large out-patient department of the Evelina Hospital during several years, and when at least 6000 or 7000 children must have come under observation, and probably considerably more, I have only notes of 46 cases, and half of these were but of doubtful nature. Some few others are to be associated with phthisis, but as a substantive ailment we might have supposed it to be more common than it is." And Professor Gairdner, in his *Lectures to Practitioners*, draws attention to the fact that as pathological descriptions can deal with fatal cases only, a far too grave prognosis is arrived at in cases of tabes, and that consequently many cases of tubercular disease, not only of the mesenteric glands, but also of the peritoneum, recover, only the more grave cases succumbing. It is evident from all this that tubercular conditions of the abdomen are much more common than can be inferred even from the figures above quoted, where only one-fifth of the real number are stated in the diagnosis charts to be suffering from abdominal tubercle. That there is a great tendency towards calcification and cicatrization, especially where the tissues have a high resistant power, is well known to all pathologists, who constantly find cicatrices which are to be recognised as of tubercular origin (by the presence of small caseous or calcareous nodules, &c.), in which, however, the tubercle has become quiescent. These are the result of local tubercular changes, the localisation being due to the activity of the tissues.

In the Registrar-General's Supplement, 1871-80, a most interesting summary is given of the deaths from tubercular diseases. The death-rate from phthisis in the years 1851-60 was 1305 per million; from tabes mesenterica and scrofula, 1920. In 1861-70 the figures are 968 for phthisis, 2213 for hydrocephalus and tubercular meningitis, and 2267 for tabes mesenterica and scrofula; whilst in 1871-80 the figures are 767, 1800, and 2550. The differences in the proportions between these figures in the various years might be due in part to more accurate diagnosis, but in part they are to be accounted for by the increase in the death-rate from tabes. Including, as these cases do, the diagnosis of physicians both skilled and unskilled, it would appear from the results of post-mortem examination of the cases described that the last group might safely be multiplied by five to give the actual number of cases in which the mesenteric glands were affected, giving no less than 12·75 per 1000 as the rate of disease. If, in addition, those cases are taken in which the tubercular is followed by a reparative process, the numbers must be enormously greater.

It had already been noted that the maximum affection by mesenteric tubercle is attained between one and five years, whilst in tubercular meningitis the maximum is attained

between three and seven, amongst the cases of tubercular meningitis being included, of course, those cases in which there is also mesenteric tubercle. This fact, taken in connexion with the very large percentage of all tubercular cases (in children) in which mesenteric disease is developed, points very decidedly to the supposition that in these tubercular glands is the primary lesion in the body. Further, on examination of the statistics of these cases it is found that in 69 of the 100 cases of mesenteric tubercle the glands at the roots of the lungs are tubercular (the glands at the root were tubercular in 27 cases in which the mesenteric glands were not affected); but in by far the larger proportion of these cases, the tubercle in the lung is of more recent growth—i.e., caseation and calcification are not so frequently met with. On the other hand, taking the cases of lung tubercle altogether, it is found that the proportion of cases of early tubercle (catarrhal pneumonic and grey miliary or racemose tubercle) to older caseous tubercles or where cavities are formed, is as 36·3 to 63·7 per cent.

In what way can the causation of mesenteric tubercle in children at these ages be explained? In the class from which the patients in the Royal Hospital for Sick Children are drawn, the infants are during the first year of life, and sometimes longer, suckled at the breast, but afterwards the diet is extremely mixed; as a rule it is very unsuitable, but of course it is almost invariably partially composed of milk. It is after this first year that there is such a rapid rise in the number of cases in which the mesenteric glands are affected.

Although tubercle in the human subject is so frequently met with in young married women, tubercular mammitis is extremely rare; eight cases have, however, been collected and recorded by Dr. O. Hubermaas.¹ In cattle, on the other hand, where the mammary gland carries on its functions under conditions which are far from healthy, or at any rate far from normal, tuberculosis is not by any means of rare occurrence. The first experiments from which actual proof of the infective nature of tubercular material was obtained were performed by Gerlach, who used the milk of tuberculous cows as the material with which he fed young animals. His results were not all positive, but he was successful in a sufficient number to justify his conclusion that there was some specific virus in the milk of tuberculous cows, which would when ingested produce tuberculosis of the alimentary tract or mesenteric glands. Albert then recorded the case of a litter of young pigs, which were fed on the rejected milk from a tuberculous cow, the whole of the animals succumbing to tuberculosis.

Numerous other observers—Klebs, Bollinger, Stein, John, Bang, Toussaint, Chauveau, and many others, besides Koch—concur in stating that if milk from cattle with tubercular udders be given for any lengthened period tuberculosis will be developed. At the International Medical Congress in Copenhagen, Bang gave the results of an examination of no fewer than 27 cases of tubercular mammitis, and he was able to demonstrate the presence of tubercle bacilli in the milk or in the sediment, and with this milk or sediment he was able to produce tuberculosis both by inoculation and by ingestion. Nocard was able to demonstrate the presence of the specific bacillus in milk in 11 cases.

The lecturer then gave an account of a most careful and systematic examination of over 600 cows in the Edinburgh dairies, which he, along with Professor McFadyen, had carried out. Of the whole, they found 37 beasts in which there was mammitis, but only 6, or 16 per cent., in the milk of which they could demonstrate the presence of tubercle bacilli, and then only in small numbers. In 1 of the 6 cases, and subsequently in 5 other cases, they made sure of the existence of the bacilli in enormous numbers in the udder by microscopic examination. They find that new tubercular tissue is disseminated in patches of various sizes throughout a portion of the gland, and that all the more minute elements of tubercle may be distinguished—the small round cells in which the nuclei are comparatively large, and the epithelioid cells, between or amongst which is a fairly well developed reticulum. The giant cells are very numerous, but are not so well defined as one sees them in the human subject; they are scattered throughout the new tissue. The tendency to caseation of tubercle in the udder is not nearly so well

¹ Beitrage zur Klin. Chir. Mitth. aus der chir. Klinik zu Tubingen Band II., Heft 2.

marked as in other parts of the body, but it does undoubtedly occur at points. The new growth of tuberculous tissue gradually invades the lobules of the gland, passing in along the lines of the lymphatics of the interlobular septa, so that a gradual transition from the healthy gland substance to the dense tubercular mass may be seen. In the mass itself the characteristic bacilli are present in almost inconceivable numbers. They are seen first as small stained rings (masses of bacilli) around a slightly granular or homogeneous mass—in fact, the giant cells seem to consist of the debris of cells, the result of the activity of the bacilli. In the smaller cells bacilli may also be seen, and others may be demonstrated lying in the spaces between the cells. On careful examination of the more healthy parts of the gland, especially at the margin of the new growth, ulceration into the ducts may be made out. In consequence of the interference with the nutrition of the tissues immediately around the ducts or acini, the basement membrane has given way and a small mass of tubercular granulation may be seen projecting into the lumen; the epithelium is also proliferating. In the granulation tissue, in the epithelial cells, and even lying free in the lumen, there are frequently numerous bacilli, and it can be easily understood how, once in this position, they find their way into the milk. This ulceration is not, however, of such frequent occurrence as might be expected, for in the greater part of the gland substance left there is little or no catarrhal proliferation, and the ducts and acini appear to be obliterated in great measure by compression. The lecturer pointed out that in connexion with this it would suggest itself to most of those who examined carefully the sections exhibited that what are called giant cells may in reality be nothing more than acini or ducts in which the bacilli have attacked and destroyed the epithelium. This idea would be greatly strengthened if some of the larger ducts were examined, for in these similar degenerative changes of the epithelium could be seen; in this epithelium bacilli could be demonstrated, and in the lumen itself there are frequently similar granular or homogenous masses in which a few bacilli may be seen. In addition to these positions, bacilli could be demonstrated in epithelial cells still attached, and also in rare cases in those lying free in the apparently healthy milk ducts, in which position Professor McFadyean had first demonstrated them. These facts, when considered along with the occurrence of bacilli in milk, with the feeding experiments recorded by so many observers, and the great prevalence of tubercle in certain classes of animals, go far to prove, he thought, that milk is a source of tubercular infection, especially to young children. He referred to the cases constantly cropping up in which pigs on dairy farms are affected with tuberculosis of a most typical character, and mentioned an outbreak (amongst pigs) on a dairy farm which could be distinctly traced to the milk of three cows in which the udders were markedly affected. It is a curious and significant fact, he observed, that all veterinary authorities concur in stating that cattle and swine are the two species in which genuine tuberculosis most frequently occurs. When it is remembered that on all dairy farms, and even on farms where pedigree cattle (cattle which are very frequently highly tubercular) are reared, the milk, especially that of cows suspected of disease, is given to the pigs, which often become tuberculous, it will appear in the light of recent researches that the disease is *propter hoc* rather than, as so many still hold, merely *post hoc*. It has often been objected, of course, that, if all tuberculous cattle gave tubercular milk, the human race would run a risk of being rapidly exterminated; but it might now be maintained, as the result of most careful clinical observation, that it is only when the functions of the intestine are interfered with, and when, in consequence, there are temporary or permanent alterations in structure and in the chemical constituents of the fluids and gas in the alimentary canal, that tubercle bacilli can make their way unaltered through the epithelial barrier. The importance of Koch's experiments on anthrax and cholera bacilli, when ingested, cannot be over-estimated, and most of those who have followed him in this line of experimentation have come to the same conclusions on this point, however widely they may differ on others. It is not only the intestine itself, however, that is affected by these functional disorders. The mesenteric glands are also placed at a great disadvantage. This may be easily understood when it is remembered how the slightest irritation in any position is almost immediately followed by changes in the lymphatic channels

and glands. Everyone is familiar with the peculiar condition of enlargement, congestion, and succulence that is found in such glands. This condition must be looked upon as the result of stimulation; the cells are roused into greater activity, they proliferate more rapidly, and take up the foreign matter; the gland as a whole acting as a kind of vital sieve. In this process, however, the store of resistant energy, if such a term might be used, is gradually diminished, and should tubercle bacilli find their way into the gland during or shortly after this extra stimulation, they run less risk of being destroyed by active epithelioid and lymph cells than when these cells are not already partially exhausted. This is true in greater degree only in the glands than in the other tissues. Everyone engaged in practice could recall the numerous cases in which tubercular disease of bone, of synovial membranes, &c., has followed on measles, scarlatina, small-pox, and similar conditions, or in which an attack of typhoid or intestinal mischief of some form had been looked upon as marking the date, soon after which serious tubercular mischief was developed. All this should be considered, leaving out of account the fact that healthy glands might find it difficult to cope with any large number of bacilli finding their way through the unhealthy surface. It should be borne in mind, also, that during the growth of the individual these glands are, under normal conditions, called upon to do much more work than during later life, owing to the fact that in the building-up process in the body there is excess of nutritive material required for the tissues, in consequence of which the secondary digestive function, which the lymphatic system performs, is severely taxed. Under normal conditions this is provided for, but in imperfectly and badly nourished children this is not the case. In the first instance, then, the glands act as vital filters, but, should the stimulation be too great, there comes a period at which they are destroyed; they degenerate, and may become encapsuled in fibrous tissue, or they may suppurate and so become foci from which other areas are affected. Where this sequence is preserved there is a still further danger at the second stage. So long as the gland is active, the irritant material passed along to it is so modified that it is removed almost inert, but as soon as the degeneration sets in the area connected with that gland is much more liable to ulceration, especially in the case of children.

As regards the identity of the bacillus tuberculosis in man and cattle, the lecturer said that he felt compelled to arrive at a conclusion directly at variance with that of Klein, and in accordance with that of Koch, Bland Sutton, Watson Cheyne, and numerous other workers, that any differences there may be between the size, manner of growth, and position of human and bovine tubercle bacilli are not sufficient to constitute a specific or even a varietal difference. As a matter of fact, these differences he found it impossible to detect, and stated that he had observed quite as great differences in size between the bacilli under the same cover glass from sputa of a phthisical patient as he had been able to detect between those taken from a cow and those from the human subject. In confirmation of this he handed round photographs, placed at his disposal by Drs. Troup and Edington, of bacilli in sputa, in which it could be seen that some are at least one-third, or even one-half larger than others (just the proportions mentioned by Klein). As regards position, he directed attention to the specimen of tuberculous udder (microscopic), in which were tubercle bacilli, some embedded in epithelial cells, and others lying singly in the spaces between the cells. The only point on which he could agree with Klein was as regards the granularity, and this he believed could be accounted for, not by any specific difference, but rather by the temperature at which the two forms are developed.

Klein's experiments and observations, by which he proved that fowls may be successfully inoculated with tubercle taken from a human subject, that in the same way one can inoculate from a guinea-pig to a cow, but that when it is attempted to inoculate from a cow to fowls the results are negative, were then spoken of, and in connexion with this Koch's statistics concerning the temperature at which tubercle bacilli can be successfully cultivated were quoted. Koch states that between 86° and 105° F. tubercle bacilli grow, but that outside these limits it is exceedingly difficult to obtain a luxuriant growth. If, then, the power of growth, the activity, and virulence of bacilli can be, even to a slight extent, modified by altering the temperature when they are growing outside the body, is it not probable that they may be equally modified within the body? and when it is

remembered that in the cow and pig the temperature is from 101° to 102° , in the calf 103° , in the horse 101° , and in the hen 104° to 105° , it could be readily understood that a very slight rise in temperature in these animals might modify very considerably the power of propagation, and indirectly also the virulence of the bacilli. He did not think either that Klein's statement, that "it is not experimentally proved that human beings can contract human tuberculosis by feeding on milk and flesh derived from tuberculous animals," could be backed by clinical experience and pathological evidence, both of which appear to be greatly in favour of the identity of the virus in the two subjects. It is of course impossible to bring direct experimental proof to bear in the case of the human subject, but the indirect evidence recently adduced by various continental observers and the examination of series of cases, such as those to-day brought forward, should be very strong evidence indeed that in children, especially in those who are subject to the wretched hygienic treatment and had feeding to which unfortunately so many of our poorer-class children are exposed, tuberculosis may be contracted as the result of the ingestion of milk from tuberculous udders.

Some of the difficulties which at present stand in the way of dealing in any adequate manner with tuberculous cattle were then mentioned and commented upon. It was well known among cattle breeders that in many cases the animals may be in an advanced stage of tuberculosis and still be what they call "prime fat." When making the observations on tubercular mastitis, Professor McFadyean and he had found that the udder might be tuberculous (proved by microscopic examinations) without the slightest falling off in the general condition of the animal. It was also found to be an exceedingly difficult matter to determine whether they were dealing with a simple or a tubercular mastitis. In some instances they were aided by a consideration of the history of the disease; but very frequently, on the other hand, no history was to be obtained, the animals being brought in shortly after calving for the sake of their milk supply, and coming from all parts of the country, from Denmark, and elsewhere. In spite of what Bang and others had taught, they found that the only reliable method of detecting the tuberculous disease was by staining specimens of milk for the tubercle bacilli. Then, too, it was an exceedingly difficult matter to control the treatment during the life of the cattle which are to give our milk supply. From Denmark alone, in which country the veterinary profession has demonstrated the extreme frequency of tuberculosis in cattle, and where tuberculosis of the udder was first thoroughly described and the presence of tubercle bacilli in milk first systematically demonstrated, we get no less than one million pounds sterling worth of cattle annually, and from Hamburg and other ports we also derive a considerable number of cattle which, in coming to this country, especially in stormy weather, battered down in the badly ventilated hold of a steamer, are undoubtedly in some cases infected by a few tuberculous animals in the cargo. In Copenhagen the late Professor Panum, Herr Bille (formerly Danish Minister in America), and Dr. Borch considered the matter of the milk supply so important that they allowed themselves to be appointed a Committee of Control to the Copenhagen Milk-supply Company. This committee shortly after last February declared, with Professor Bang, that tuberculosis of the udder is not difficult of detection, and that a diagnosis can be made at a very early stage of the disease, as it presents so many marked characteristics. From the experience as above stated, the lecturer would be somewhat inclined to doubt this statement, more especially as Bang, in a paper on "Tuberculosis in Domestic Animals," read before the Copenhagen Medical Society on Feb. 28th last, stated that the milk from cattle affected with pulmonary phthisis contained bacilli, even when the udder was not in any way affected. Unless the udder was examined most carefully after death, there could be no proof of this. It was pointed out that the development of the disease in the udder is extremely rapid, and that an early diagnosis is imperative if the great danger that would arise from mixing the milk from affected cows with the milk of healthy cattle is to be avoided. In consequence of this report the Control Committee advised the directors of the Milk-supply Company to order a fortnightly examination by a veterinary surgeon of all cows supplying milk to their company; this examination to include a most careful inspection for tuberculous udders. When will some such course be adopted in this country?

ABSTRACT OF THE Croonian Lectures

ON

ANTIPYRETICS.

Delivered at the Royal College of Physicians,

By DONALD MACALISTER, M.A., M.D., F.R.C.P.,
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LECTURE IV.

IN the cases of typhoid fever investigated with so much care by Riess, the effect of antipyrin had been to diminish the total excretion of nitrogen from 15 to 30 per cent. Müller reported a case in which the urinary nitrogen was diminished by 28 per cent. on days when the pyrexia was suppressed by antipyrin, as compared with alternating days when it was allowed to rise unchecked. Engel, again, found the diminution, in similar circumstances, to be from 16 to 25 per cent. The agreement in these and other similar results appeared to establish the fact that in typhoid at least antipyrin exercised a constant influence in diminishing the metabolism of the nitrogenous tissues. It might be argued that the effect was not primary, but simply followed the lowering of febrile temperature. Umbach and others had accordingly made careful estimations of the effect of the drug on persons in health. By adopting a uniform diet for many days together Umbach brought about in himself a condition of nitrogenous equilibrium, and then took full doses of antipyrin on certain days. One series of observations extended over fourteen days, another over six days. The results were accordant, and showed that on the antipyrin days the nitrogen excreted was less by some 10 per cent. than on the normal days. This was due to diminished production of nitrogenous waste, not to retention, for on the days following the use of the drug the excretion gained its ordinary level and no more. There was thus good ground for the belief that in fever the lowering of temperature was a secondary phenomenon, the effect of nitrogenous excretion a primary one.

The effect of antipyrin on perspiration was next considered. Too much importance had probably been attributed to the production of sweating as a thermolytic process in discussions in fever and its treatment. Profuse sweating was compatible with high temperature, as was seen in rheumatic and septicæmic fevers. The absence of sweating did not necessarily result in pyrexia from heat retention. The high temperature of fever was not reduced appreciably when the injection of pilocarpine gave rise to abundant sweating; sometimes it actually rose. Though in many cases antipyrin was followed by sweating, this did not sufficiently explain its cooling effect. Sometimes the sweating did not appear; it could be artificially suppressed by the simultaneous administration of atropine, yet the temperature fell notwithstanding. In certain cases of phthisis with colligative sweating, the lecturer had seen antipyrin lower the hectic temperature and at the same time check the sweats, to the great comfort of the patients. Moreover, if the temperature of a fever patient be taken continuously, or at intervals of ten or fifteen minutes, it is occasionally observed that the fall of temperature begins before the perspiration appears.

Turning to the effect of the drug on the circulation, the lecturer recalled Dr. Wood's observation, that its thermal effect was independent of any measurable effect on the circulation. Demme of Berne, one of the first inquirers into the physiological action of antipyrin, stated that when very large doses were administered to animals, doses very much greater in proportion than any used in therapeutics, the first effect was to raise the blood pressure, the second to lower it. Ultimately the heart showed signs of paralysis, and then another dose of antipyrin failed to raise the pressure again. On the isolated heart, antipyrin, circulating with the blood in full doses, produced the effect of relaxation or paralysis; but if pure blood, or blood containing caffeine, were sent through it, the heart recovered per-

fectly. The net effect of the first rise of pressure and the subsequent fall might be apparently zero, as Wood had found.

The effect of therapeutic doses on man was then described. The effect on the pulse of fever patients was, in general, to slow the rate as the temperature fell. But this did not always happen. Sometimes the pulse kept at its febrile rate in spite of the lowering of temperature. The experience of Reihlen at Nürnberg, gathered from 90 cases, and that of Welt in Zürich from 120, was not quite in accord in this matter, and the inference was that though the heart was generally slowed by the drug, this result depended on various other factors and was not invariable. In some cases the lecturer had found that the pulse became slower before the temperature began to fall, arguing that an influence was at work other than the mere cooling of the blood. As regards the quality of the pulse, it was almost always found that the arterial tension rose somewhat after a dose of antipyrin; sphygmographic traces confirmed the impression conveyed to the finger. But there was no certain relation between the thermal effect produced and the strengthening of the pulse, and sometimes the pulse was unmistakably softer, even though the other symptoms were improved. A good deal, no doubt, depended on the initial condition of contraction in which the radial artery stood when the dose was taken. As was well known, this condition was in fever somewhat irregular.

Summing up the results so far enumerated, it appeared that antipyrin increased skin radiation, diminished the difference between peripheral and central temperature, lowered the temperature as a whole, diminished thermogenesis, diminished the production of nitrogenous waste and therefore nitrogenous metabolism, and frequently, but not always, increased perspiration, while it generally slowed the heart and slightly increased the tension of the radial artery. Before attempting to seek a physiological explanation of these various actions, it would be well to consider some other effects of antipyrin less obviously related to the thermal economy.

It had been found that large doses of antipyrin, subcutaneously injected, gave rise to clonic convulsions, succeeded by tonic spasm or rigidity, and by paralysis. But if the sciatic and crural nerves of one limb were first divided, the muscles of that limb remained free from convulsions. Smaller doses injected into one limb appeared to produce a diminution of sensibility in that limb, and sometimes also in the opposite one—at least, the response to ordinary irritations and stimuli was feeble or absent. See, who describes this result, speaks of it as if the effect were merely anæsthetic or analgesic. If the sciatic of the injected side be stimulated electrically, the contractions of the other limb are very slow and limited; they seem to be performed with difficulty. This he attributes to the enfeeblement of the sensory nerves of one side, and to diminished conductivity of the reflex arc through the cord to the other side.

Choupe last year communicated to the Société de Biologie some results concerning a peculiar antagonism between antipyrin and strychnine which were instructive. Strychnine, as everybody knew, appeared to increase greatly the excitability of the sensory nerves and the cord, without affecting the muscles directly. A slight stimulus was enough to throw the muscles into general convulsions, and it was said that the conductivity of the reflex arcs was augmented. If antipyrin were first injected into a vein, the subsequent injection of strychnine failed to produce its characteristic effects. A dose of antipyrin large enough to induce clonic spasms, however, did not prevent the strychnine convulsions from appearing, though they did not prove fatal. If strychnine were first injected and produced its poisonous effects, antipyrin diminished these, and sometimes the clonic spasms of antipyrin displaced the strychnine convulsions.

The striking effect of antipyrin in abolishing pain of a neuralgic character was alluded to, and the lecturer gave his experience of its marked anodyne influence in such affections as the "lightning pains" of tabes, cancer, otalgia, rheumatoid arthritis, supra-orbital neuralgia, &c. Hypodermic injections of antipyrin were with many physicians taking the place of morphine for the simple allaying of pain. In France, where the name "antipyrin" was patented, it was proposed to compete with the German production of the drug by manufacturing it under the name of "analgesin." Another condition in which it had an excellent effect—some called it a specific action—was megrim. In his own person

he had found that nothing acted so promptly or so certainly in averting or assuaging the paroxysm.

It was now time to attempt to give some general explanation of these several effects. It was not enough to say with Demme that antipyrin in large doses was a general protoplasmic poison. That was true of many alkaloids and other substances when administered in sufficiently large amount. We must try to discriminate the special action of therapeutic doses. The remarkable progression in the effects on the muscles, as already described, suggested to his mind a more promising explanation. After small doses there was an appearance of apparently diminished excitability; stimulation induced only slow or difficult contraction of the muscle. Larger doses seemed to induce increased excitability, and spontaneous contraction or clonic spasms followed, then rigidity and paralysis. He thought the first decrease of excitability was due, not to a numbing action, but to stimulation of the inhibitory muscular nerves or tracts in the cord. The existence of such nerves, from reasons explained in the Gulstonian Lectures, Dr. Gaskell's work justified us in accepting. The muscles contracted with difficulty because of the intense stimulation of the inhibitory fibres. Intense stimulation was followed by exhaustion and paresis, and the motor nerves then acted without check. This accounted for the peculiar spasms, and when by them the motor nerves were in turn exhausted rigidity and paralysis were the result. The mutual influence exerted by antipyrin and strychnine bore out this explanation. The convulsions of strychnine he believed to be due to paralysis or at least paresis of the inhibitory nerves. That view accorded better with the facts than any other. The appearance of increased excitability was the expression of the unchecked activity of the motor nerves and tracts in the cord. Antipyrin stimulated the inhibitory mechanism, and so at first antagonised strychnine. But if the dose of antipyrin were excessive the inhibitory influence might become exhausted or paretic, and then the signs of strychnine poisoning made their appearance.

Passing from the nerves to the brain, the diminution of thermogenesis and of nitrogenous catabolism, healthy as well as morbid, by antipyrin, was attributed to a like stimulation of the inhibitory centres connected with the thermal system. Paresis of these centres was one of the conditions of pyrexia, and the action of antipyrin was to restore their lost tone and power. Even the thermolytic influence on the peripheral temperature could be explained in the same way. In fever the surface vessels were irregularly contracted, irregularly with regard both to time and to locality. Leyden and Fraenkel had long ago pointed out that, so far as the cutaneous vessels were concerned, this was probably due not so much to spasm of the vaso-constrictors as to paresis of the vaso-dilators. These oppositely acting nerves Dr. Gaskell had included in his great generalisation, and they were now to be regarded as catabolic and anabolic respectively. The anabolic or vaso-inhibitory nerves actively dilated the calibre of the vessels. Now, when in a fevered limb the peripheral temperature was low, it had been shown that antipyrin produced a prompt and intense increase of its temperature. This was attributed to a stimulation of the vaso-inhibitory centre, the analogue of the vagus centre; the vessels of the limb were thereby promptly dilated, and the slight increase of blood pressure already noted sufficed to drive the hot blood through the patent channels. The slowing of the heart under the drug, at least when it preceded any marked fall of temperature, he could not account for entirely as the result of simple cooling, but believed it might depend on a like stimulation of the inhibitory nerve of the heart—namely, the vagus.

The account of the phenomena of megrim given by Dr. Lauder Brunton was quoted, and the analogy pointed out between the irregular contraction of the temporal artery and its branches and that just alluded to as explaining the vagaries of the peripheral temperature in fever. The conditions which gave rise to megrim were more allied to exhaustion than to irritation, and his own experience suggested that paresis of the vaso-inhibitory mechanism of the cephalic, and especially the cerebral, vessels played a large part in its causation. If this were so, the study of the properties of antipyrin might almost have enabled us to predict its efficacy in relieving the affection; for its primary and characteristic physiological action seemed to be—to stimulate to greater activity, to more regular function, the inhibitory mechanisms generally, whether muscular or vascular, and in particular those seated in the brain.

LECTURE V.

To complete the account of the physiological action of antipyrin, it was necessary to say something of the remarkable effect it had in allaying certain forms of pain, especially that which we are accustomed to call neuralgic. Without going too deeply into the views the lecturer entertained as to the nature of pain, it would be enough to consider one or two aspects of it. The seat of pain was in the brain. Ferrier had localised the tactile sensation in a particular region; the hippocampal convolution and its neighbourhood. When this centre is destroyed, though the sensory nerves are intact, there is loss of common sensation, and insensibility to pain when the peripheral nerves are irritated or injured. When it is intact such irritation calls forth the movements which are recognised as the outward manifestations of inward pain. It is possible, however, without injury to the centre to inhibit the manifestations of the sense of pain. Centres higher than the tactile are capable by their action of repressing its over-excitation, even when the peripheral stimulus is urgent. In the heat of a battle a wound is unfelt. "The labour we delight in physics pain." Intense concentration of the attention is an analgesic. In the hypnotic state it is probable that powerful stimulation of inhibitory centres plays the chief part in producing the analgesia often observed. The afferent nerves were regarded as catabolic to the pain-perceiving organ; the higher inhibitory centres were capable of sending it anabolic impulses. Over-excitation of a sensory nerve led thus to excessive disintegration of the cerebral tissue, and therefore, if we could check the waste or intensify the anabolic influences reaching the tissue, we might abolish the pain which was the psychical counterpart of that waste. This was apparently what the nerve antipyratics accomplished. They acted, not by numbing the sensory nerves, but by stimulating the inhibitory centres. The new drugs, which reduced fever by their action on the thermo-inhibitory mechanism, were found, by a like action on other centres, to be each in turn capable of abolishing pain.

The effect on the sweat glands was not wholly accounted for by the increased circulation through the skin. To flush a secreting gland with blood was not all that was required to induce it to perform its function. The secretory nerves required to be simultaneously stimulated to action. The surface might be highly hyperæmic in fever and yet remain harshly dry. Antipyrin doubtless furnished the necessary nervous stimulus, and it was in accordance with the other actions suggested that it should do so by stimulating the anabolic component of the secretory nerves and centres.

Antipyrin, therefore, on review of all its properties, was to be classed as a true antipyretic, and not merely as a refrigerant; it was not, however, a febrifuge. It repressed thermogenesis, and at the same time did something to make thermolysis more efficient. It imitated nature; it produced an artificial crisis by the same mechanism as nature used in producing a true crisis. In neither case, however, was thermotaxis at once restored. As after a true crisis the temperature, though lowered, was still very unstable, so after antipyrin the temperature was ready to rise again on slight occasion, and did, in fact, rise as soon as the drug was eliminated. It did not cure the specific fever, it only allayed the pyrexia. In pneumonia, for example, the temperature could be brought down by antipyrin on the second or third day and kept down continuously, but the other physical signs remained unaffected, and did not change till the true crisis appeared. This of course would not be indicated by any abrupt fall in the temperature; but the pulse, breathing, sputum, and physical signs all showed that resolution had begun, that the acute phase of the disease was at an end. The *symptom* fever was separated from the other symptoms, but the morbid process was not thereby appreciably altered. In typhoid, in like manner, though the disease might occasionally be made to run an almost apyretic course by the use of antipyrin, it did not appear to exert any specific action, the duration of each case was about the same, and relapses were as common, if not, indeed, somewhat commoner than under a purely expectant treatment.

In the hectic fever of phthisis antipyrin was capable of lowering the daily accessions of fever, and the comfort of the patient was in consequence increased. But the influence was essentially transitory, and no real or permanent improvement in the signs of the disease accompanied it. The

drug counteracted the effect of some morbid poison on the thermal mechanism; it did not affect the *generation* of this poison. It was purely a symptomatic remedy, like codeine for the cough, atropine for the sweating, mineral acids or opium for the diarrhoea. But it was none the less an acquisition to our therapeutic resources to possess a means which at once was potent to reduce the febrile temperature, and that *cito, tuto, ac jucunde*.

In rheumatic fever, on the other hand, something like a specific action was observed. The pain and fever were in many instances very promptly allayed, at times within twenty-four hours. But it was still doubtful whether this argued an action analogous to that of the salicylates. The lecturer had seen cases in which, though there was neither pain nor fever, the swelling and redness of the joints remained unimproved, and when the antipyrin was discontinued for a day the attack resumed its previous severity. However, the causation of rheumatism was so bound up with excessive or perverted metabolism in the muscles that he was prepared to believe that a medicine capable of checking muscular metabolism might go far towards striking at the root of the disorder. The question was, in fact, still an open one.

The relative merits of antipyrin, thallin, antifebrin, and phenacetin were very briefly dealt with. The discussion of these must rest largely on accounts of clinical experience, and the conditions of the lectureship appeared to exclude any long digression in this direction. So far as their physiological action was known, it was similar to that of antipyrin, which he had taken as their type. They all repressed thermogenesis, and probably all in the same way, though there were differences in the intensity and duration of their effects. Antifebrin was especially to be commended for its smaller dose and its cheapness, and it proved an efficient and pleasant antipyretic and analgesic.

Turning next, for comparison's sake, to another antipyretic method, by some considered the antipyretic method, that of cold bathing, the lecturer said that though its application was originally based on a theory which he regarded as erroneous and one-sided—namely, that high temperature is the primary source of danger in fever—the practice had, in typhoid fever at least, proved itself remarkably efficient. It had been so widely used abroad, that statistical data for a judgment on its success were unusually abundant. Within late years exhaustive discussions on the bearing of these data had been published. He instanced that of Dr. Cayley in 1880, that of Dr. Sidney Coupland and others at the Medical Society in 1884, and those at the first and fourth Congresses for Internal Medicine at Wiesbaden (1881 and 1885). The special memoirs of Küchenmeister, Naunyn, and others dealt with the same question, and he would therefore refrain from going over the same ground, confining himself to reciting what he took to be the verdict at present. Naunyn, who was not affected by the prepossession of the extreme school that fever as such was the chief enemy to be combated, who had indeed done a great deal to overthrow this doctrine, nevertheless could say: "I consider it proven, as a matter of statistics, that the cold-water treatment of typhoid shortens the duration of individual cases, and, above all, very considerably reduces the mortality—namely, from 15 or 20 per cent. to 5 or 10 per cent. And von Ziemssen, who was not an enthusiast, who had contributed much to our knowledge of other methods of treatment, and who had a very large experience of all, concluded that "of all the therapeutic methods which have been adopted for typhoid, hydrotherapy deserved to be put foremost. The experience of all competent observers undoubtedly goes to justify this preference." Two questions might, he said, be asked regarding a therapeutic method: first, does it exert a favourable influence on the individual case? secondly, does it show a like influence on the general run of the cases, as indicated by the mortality? Both of these questions, on the ground respectively of clinical observation and of statistics, must be answered in the affirmative. As regards the disease in Germany there was hardly room left for doubt as to the value of the method: it was difficult to believe that the conditions were different in England. The experience of those in this country who had judiciously and systematically applied the cold bath treatment was cited, and proved on the whole to be in accordance with that on the Continent. Dr. Sidney Coupland's account of the obvious effects of bathing was taken by way of indicating the questions concerning its physiological action which had to be studied.

First, several reasons were given to show that the benefit of the cold applications could not be exclusively due to mere refrigeration, to simple abstraction of heat from the body by *force majeure*. Naumyn had insisted on this point, and had furnished good reasons, clinical and experimental, in its support. The most efficient method of keeping down the temperature in typhoid was the continuous tepid bath of Riess, in which patients were kept in water at 88° F. or so, from ten to twenty hours at a time. In this way the temperature might oscillate about the normal throughout the greater part of the illness, yet Riess's rate of mortality was not of the lowest. Including all cases, it was on the average 22 per cent. The same observer had previously forcibly suppressed pyrexia in his patients by the continuous use of sufficient doses of salicylic acid, but notwithstanding he lost 24 per cent. of his cases. Other instances were given in illustration, and the conclusion drawn that we must seek for an explanation of the wholesome effect of cold bathing in its influence on the nervous system, transmitted in the first instance through the sensory nerves.

The effects on the several factors of the thermolytic system were then considered in detail. The primary contraction, followed by reactive dilatation of the cutaneous vessels, was compared with the vaso-inhibitory action of antipyrin. The radiation from the skin was increased after tepid baths immediately; after cold baths it was at first diminished until the skin temperature rose to a certain height, when it again increased. Diuresis was a usual result of the bath, and might be credited, among other more important and valuable results, with a certain thermolytic effect. The changes in the respiration, the increased depth and slowness of the breathing, were described and evaded from the same point of view. Incidentally it was remarked that the fear some physicians entertained lest cold bathing might bring about pulmonary congestion was not justified by experience, or indeed by physiology. On the contrary, the pulmonary tissue was more fully opened up, bronchial and vascular obstructions removed, and the signs of partial collapse or engorgement usually gone away.

As to the effect of cold bathing on thermogenesis, there was still a great deal to learn. Direct calorimetric experiments which would be at all decisive on the subject were very difficult to devise, and the lecturer had not been able to suggest any satisfactory contrivance. A number of observations had, however, been made on the changes in metabolism that accompanied the baths, but in most the method used was not free from physiological objections, and in few had the temperature been effectively kept down for any length of time by the application of cold. Riess, whose experiments on antipyrin had been alluded to, had made a parallel series on the effects of his continuous tepid bath, and his results were the most directly comparable with those on the effect of drugs. Three days of the continuous bath were interpolated between two periods of three days each when the fever was unchecked. Cerebral disturbances were absent, and no difficulties in making exact determinations of the excreted nitrogen were met with. In four cases the increase of nitrogenous excretion during the bath days over the average of the fever days was respectively 13.1, 12.4, 2.7, 37.0 per cent. In the last case defervescence had probably commenced during the course of the experiment; but, if the last days of low fever were excluded, and the bath days compared only with the preceding fever days, the percentage of increase was still 25.8. This effect was just the opposite of that obtained under antipyrin, and it pointed most suggestively to a different *modus operandi* for the two antipyretic methods. During the bath days it was, moreover, to be observed that the urine excreted was greater than on the fever days by 3310, 2450, 2650, 2750 cubic centimetres respectively. There was thus no direct evidence of diminished thermogenic metabolism under the continuous bath. Was it possible that in unchecked typhoid fever the nitrogenous excretion, though in excess of that in health, is yet inadequate to eliminate all the waste that is produced? If so, the baths might be supposed to lead, not to increased metabolism, but merely to increased discharge of the accumulated nitrogen. Dr. Murelison's supposition that the cerebral and other symptoms in typhoid were "uræmic" in character was recalled, and correlated with this hypothesis of retained nitrogen, and with the ascertained effects of bathing on the kidney.

One inference which might be drawn from this apparently

fundamental difference of action in two methods of treatment, both potent to lower the temperature, was that the two methods were, as Riess had said, complementary. Combined antipyresis in typhoid, an evening bath, and antipyrin or other efficient drugs during the day, would be eminently rational, and it was certainly more suitable for English practice than the frequent cold bath. It should not, in the present state of our knowledge, be held as a reason for condemning the baths that they led to increased discharge of nitrogenous excreta; but it certainly was in favour of antipyrin that it diminished not merely the discharge, but the production of such waste. In certain cases—such, for example, as those presented by feeble, emaciated, or aged patients—it would be preferable to employ an antipyretic method which was proved capable of checking metabolism; while in robust and previously healthy patients, the fact that metabolism was apparently increased by cold applications would not hinder us from resorting to a mode of treatment which clinical experience had abundantly proved to be useful.

RESULTS OF

MAJOR AMPUTATIONS TREATED ANTISEPTICALLY IN THE ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

By FREDERICK PAGE, M.D. EDIN., &c.,

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DURING the year 1887, as will be seen from Table I., it has been found necessary to perform a major amputation upon sixty different patients, and on two occasions a double amputation has been resorted to, making the total number of major amputations sixty-two in number. Of the sixty patients two only have died (3.3 per cent.), the remaining fifty-eight having now all recovered. The table gives the results of major amputations treated antiseptically in the Royal Infirmary during the year 1887.

TABLE I.

	FOR INJURY.			FOR DISEASE.			Total.
	Cases.	Rec.	Died.	Cases.	Rec.	Died.	
Double amputations	2	1	1	0	0	0	2
Hip-joint	0	0	0	1	1	0	1
Thigh	5	4	1	15	15	0	20
Leg	2	2	0	7	7	0	9
Ankle-joint	2	2	0	10	10	0	12
Shoulder-joint	1	1	0	3	3	0	4
Arm	2	2	0	5	5	0	7
Forearm	3	3	0	2	2	0	5
Total	17	15	2	43	43	0	60

(1) Leg and thigh; (2) both forearms.

Precise cause of death.—1. A man, aged thirty-six years. Compound fracture of thigh and opposite leg. Thigh and leg amputated. Death in two hours. 2. A man, aged

TABLE II.

	FOR INJURY.			FOR DISEASE.			Total.
	Cases.	Rec.	Died.	Cases.	Rec.	Died.	
Double amputations	2	1	1	0	0	0	2
Hip-joint	0	0	0	12	7	5	12
Thigh	31	27	4	106	100	6	137
Knee-joint	7	6	1	5	5	0	12
Leg	43	39	4	57	55	2	100
Ankle-joint	18	18	0	56	55	1	74
Shoulder-joint	6	6	0	8	8	0	14
Arm	27	25	2	17	16	1	44
Forearm	24	23	1	16	16	0	40
Wrist	7	7	0	0	0	0	7
Total	165	149	16	277	262	15	442

seventy years. Compound comminuted fracture of leg. Refused primary amputation. Gangrene set in at once, and five days after the accident the thigh was amputated, the

gangrene then having extended to the buttock. Death from gangrene of the stump.

Table II. gives the results of major amputations treated antiseptically in the Royal Infirmary from April 1st, 1878, to Dec. 31st, 1887, a period of nine years and nine months. The mortality is 7 per cent. For injury it is 9·6 per cent.; for disease 5·4 per cent.

I regret that I am unable to give the precise cause of death in those cases which proved fatal during a period of four years and nine months—viz., from April 1st, 1878, to Dec. 31st, 1882; the actual mortality of amputation was, however, during that time, for injury, 18·4 per cent.; for disease, 5·2 per cent.; and of the whole number of amputations (160), 10·6 per cent. For the later period of five years—viz., from Jan. 1st, 1883, to Dec. 31st, 1887—I have already given the precise cause of every fatal amputation either in this or other papers published in THE LANCET; and it is exceedingly satisfactory to find that the results of the later are distinctly better than those of the earlier period, and this notwithstanding the fact that ten amputations at the hip joint are recorded during the five years, against two during the four years and nine months.

Table III. gives the results of major amputations treated antiseptically in the Royal Infirmary from Jan. 1st, 1883, to

TABLE III.

	FOR INJURY.			FOR DISEASE.			Total.
	Cases.	Rec.	Died.	Cases.	Rec.	Died.	
Double amputations	2	1	1	0	0	0	2
Hip-joint	0	0	0	10	7	3	10
Thigh	15	13	2	66	66	3	84
Knee-joint	4	4	0	1	1	0	5
Leg	23	23	0	33	31	2	56
Ankle-joint	14	14	0	40	39	1	54
Shoulder-joint	3	3	0	6	6	0	9
Arm	16	16	0	11	10	1	27
Forearm	16	15	1	12	12	0	28
Wrist	7	7	0	0	0	0	7
Total	100	96	4	182	172	10	282

Dec. 31st, 1887. The mortality is 4·9 per cent., against 10·6 per cent. For injury it is 4 per cent., against 18·4 per cent.; for disease it is 5·4 per cent., against 5·2 per cent. During the five years there has been only one death from pyæmia or other form of blood-poisoning.

The mortality from amputation has always been looked upon as a fair criterion of the hygienic condition of a hospital, and when the precise cause of death as well as the actual mortality is given no better test can be applied. It would be interesting to know what is the mortality from amputation at the present day in the small or cottage hospitals of England. It was when Mr. Burdett published his statistics, in 1882, 17 per cent. It would also be exceedingly interesting to know what, during the last five years, has been the mortality from amputation in some of the large London hospitals, and particularly in Sir J. Lister's wards at King's College Hospital. I venture to hope the combined mortality from amputation in the provincial hospitals of the north of England, Leeds, Liverpool, Manchester, North Staffordshire, and Newcastle-on-Tyne will compare not unfavourably with the mortality of St. Bartholomew's, Guy's, the London, Middlesex, and St. Thomas's Hospitals combined, and I should like to see a comparison made.

Newcastle-on-Tyne.

CATARRHAL FEVER; ITS CAUSE, COMPLICATIONS, AND CONSEQUENCES.

BY MICHAEL THOS. SADLER, M.D. LOND., &c.,
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IN medicine, as in other branches of science, it is very possible to overlook or misunderstand the lessons to be learnt from the commonest things; and it has often seemed to me that the causes, complications, and consequences of ordinary febrile catarrh have not been sufficiently dealt with by medical writers, possibly because those to whom we look up to for instruction are rarely consulted about such simple matters as the milder and commoner forms of

this disease. Those, however, who are engaged in general practice must be aware that perhaps the commonest of all diseases, especially amongst children, is a febrile affection, often beginning with a more or less distinct rigor, followed by a rise in temperature, which may not exceed 100° F. or may reach 104° or even more; is attended with pain in the limbs, back, and head; runs a definite course (usually of seven days); and may be attended with, or followed by, more or less irritation of the mucous membranes, varying from a little running at the nose to a serious bronchitis, or, in some constitutions, and especially in hot weather, diarrhoea. Moreover, if there is one case of this description in a household there are almost sure to be more. Usually the whole family is affected sooner or later—most of them, perhaps, very slightly, but still perceptibly; and one is told that "a cold has been going through the house." The popular belief is that this and many other diseases are the consequence of exposure to cold; possibly because a rigor is a common way in which they first make themselves known; but, as Dr. Ransom has lately pointed out, this is for the most part an unsatisfactory theory. Many medical men are somewhat reluctant to admit infection as a cause of disease, except in certain well-known and clearly defined cases; but it seems difficult for anyone who has seen how inevitably, in spite of the greatest care to avoid all other causes of ill-health, one child after another will fall ill with catarrh when once it has been introduced into a nursery, not to admit that infection is, at any rate, one way in which it spreads; and if infection is admitted to be one cause of the disease, is it not as illogical to look for others as it would be in the case of small-pox or scarlatina? Nor is a characteristic eruption wanting, as in other febrile diseases, in the shape of herpes labialis, though of course it is not invariably present, as may be said even in the case of scarlatina. All the facts connected with the disease are easily explained on the hypothesis that it is caused by the action on the system of a definite morbid poison received from some person already suffering from the same complaint, and which may perhaps be some day isolated and shown under a microscope. As in the case of other morbid poisons, the effect produced varies enormously according to the constitution of the person affected. One attack seems usually to protect a patient for a limited time, and, as in many other diseases, it is the complications rather than the disease itself which are apt to become serious.

The poison of catarrh, like that of measles, seems to have a special tendency to cause irritation of the mucous membrane of the respiratory tract, though that of the digestive organs is by no means exempt. In the colder months of the year, and especially among the poorer classes, there is an enormous mortality from what is usually certified as bronchitis. Now, I believe that, when these cases are investigated, it will be almost invariably found that some, often all, the other members of the family have been having catarrh in one form or another; and, in the very numerous cases of non-fatal bronchitis in infants that the ordinary practitioner is called on to attend, a little inquiry will, I believe, show the same to be almost invariably the case and the seven-day period to be equally the rule. The same applies to a large proportion of attacks of bronchitis in adults, though, in their cases, other causes, such as old-standing heart disease, kidney disease, and chronic lung affections of different kinds and degrees, often introduce complications. Pneumonia, again, in a large number of cases, is associated with the presence in the same house of ordinary febrile catarrh, and has also a distinct tendency to crisis at the end of seven days from the rigor which so often marks its onset. The existence of an apparently infectious form of pneumonia has often been pointed out, and is more easily explained if it be admitted that pneumonia is a not infrequent complication of catarrhal fever as well as of typhoid and other fevers. Everyone, again, must have noticed how largely, in the death returns of populous places, bronchitis in infants and the aged is, during hot dry autumn weather, replaced by diarrhoea, rendering probable some connexion between the two; and those whose practice lies much amongst children must have noticed that autumnal diarrhoea is a febrile complaint, often attacking in succession members of the same family, frequently beginning with more or less bronchial trouble, with a tendency to a seven-day period, and that when one child in a family has distinct diarrhoea others will often have some degree of ordinary catarrh, with or without

bronchial irritation. Moreover, the way in which influenza or epidemic catarrhal fever, which seems to be only a more violent form of common catarrh, has on more than one occasion accompanied or preceded Asiatic cholera seems to indicate some connexion between the two diseases; and is it not, therefore, the more probable that there may be a similar connexion between ordinary catarrh and ordinary autumnal diarrhoea? Nor is this view of autumnal diarrhoea incompatible with the observations that make it probable that the germs or other causes of this disease are more abundantly produced during hot weather, in connexion with decaying organic matter, and especially at that time of the year when the first vigour of vegetable growth is over. It may either be that the catarrhal germs under such circumstances grow and multiply outside the body like microbes in the cultivating media of the pathologist, thereby obtaining a special kind of potency; or the diarrhoea-causing germs may be a distinct species, only able to multiply freely and produce their full effects when they obtain lodgment in a body already made less resistant to such influences by the catarrhal poison, either on account of a diminished power of the white blood cells to destroy invading microbes or from other causes. This diminished resistant power induced by catarrhal fever seems also often to afford the starting point of phthisis, perhaps because the tubercular bacillus, which must be plentiful enough in the air of most towns, can then find a suitable soil wherein to multiply.

Other complications and consequences of catarrh might be mentioned, but this paper is probably already too long, and I would conclude by the suggestion as to whether it is not probable that the majority of cases of common colds, influenza, bronchitis, croupous pneumonia, and perhaps autumnal diarrhoea, are not different forms of one and the same disease—catarrhal fever—conveyed by infection having a strong tendency to a seven-day period, and, like other infectious diseases, best prevented, when isolation is impracticable, by free oxygenation of the blood—that is, by plenty of fresh air.

Barnaley.

A CERTAIN CUTANEOUS AFFECTION OCCURRING IN DIABETES.

By T. DAVIES PRYCE, M.R.C.S.,

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IN discussing this subject, I propose to narrate two cases of diabetes with which there was associated a condition of "erythematous oedema" of both feet, to consider the cutaneous affection in its relationship to other complications of diabetes, and to make a suggestion as to its nature and pathology.

Charles B—, aged sixty-seven, admitted May 14th. He has suffered from double sciatica for a period of ten years. For the last three years pains of a lightning and burning nature have been especially marked in both lower extremities. The left foot and leg have, however, been the seats of the greatest pain. Both knee jerks are diminished, and can only occasionally be obtained on reinforcement. There is marked muscular incoördination in the dark or with closed eyes. There is no evidence of muscular paralysis, but distinct anæsthesia of the extremities is present, associated with pricking and burning sensations. Most of the teeth have fallen out in a fairly sound condition. There had been occasional neuralgia of the fifth nerve, but not to any marked extent. The patient complains of thirst, and passes an unusual amount of urine, which is acid, sp. gr. 1025, and contains sugar, but no albumen or peptone. A week after admission the pains in both feet and legs had greatly increased, the burning sensation of these parts being almost unbearable, and the left foot presented a peculiar erythematous and oedematous condition—which I will venture to call "erythematous oedema"—over the whole of the external portion of the sole. It was especially swollen and painful over the heads of the fourth and fifth metatarsal bones. There was also a painful and discoloured spot over the plantar aspect of the left great toe. The right foot presented a similar condition of erythema and oedema, but to a lesser degree. There was no resemblance between the condition described

and the oedema of dropsy. Urine: sp. gr. 1030; contained much sugar; average daily amount seven pints. This condition continued to increase for a period of three weeks, when it attained its height. During this time the dark spot on the left great toe had increased in size and become extremely painful; a pit-like depression had formed in its centre, and it was surrounded by a distinct anæsthetic zone a quarter of an inch in radius. I ventured to think that a perforating ulcer would be formed. The patient was then given antipyrin, in addition to the morphia already prescribed, and from this time onward the condition of both feet gradually improved. The improvement in the local affection was coincident with a gradual diminution and final disappearance of the glycosuria, which has, however, occasionally reappeared, but has not been accompanied by any other symptoms than a decided increase of the pains in the extremities. In this case there were no gastric crises, eye symptoms, or further characteristics of *tabes dorsalis*.

William A—, aged fifty-eight, admitted Oct. 12th. He has suffered from thirst and passed an excessive amount of urine for more than two years. Complaints of shooting and burning pains in both feet and legs, but more especially in the right foot. Both feet are extremely painful, and present the condition of "erythematous oedema" already described. Knee jerks diminished, but not totally abolished. Slight muscular incoördination; pricking and numbing sensations in both feet; no evidence of paralysis; no gastric crises or other further symptoms of *tabes dorsalis*. The teeth have been falling out, in a fairly sound condition, for a period of three years. Urine: sp. gr. 1036; acid; contains sugar, but no albumen or peptone. Says he passes about fifteen pints every twenty-four hours. The patient was given morphia, and a slightly restricted diet and rest were insisted upon, with the result that in two weeks the local affection had much improved, the amount of sugar passed had much diminished, and the general condition of the patient had become decidedly better. Urine: sp. gr. 1026; still contains sugar; average daily amount eight pints. There has been an occasional return of the erythema, but only to a very slight extent, and occurring for the most part together with variations in the general diabetic condition.

In neither of these cases was there a history of syphilis, alcohol, or rheumatism, but in both there had been considerable exposure, and the last-mentioned patient, owing to his occupation, had been continually on his feet. The following are the points most worthy of note:—(1) The association of the cutaneous affection with diabetes; (2) the simultaneous improvement in the local affection and in the general diabetic condition; (3) the symmetrical distribution of the cutaneous disease; (4) the presence in both these cases of marked evidence of nerve disease, central or peripheral, as shown by muscular incoördination, almost total abolition of the knee jerks, pain of great intensity, anæsthesia, &c.; (5) the absence of gastric crises, girdle pains, and prominent eye symptoms, apparently pointing to some peripheral sensory rather than central nerve change; and (6) the condition of "erythematous oedema" was accompanied in one case with evident tissue destruction, as shown by commencing ulcer formation. Other points of less importance are the falling out of the teeth in a sound or fairly sound condition,¹ and the distinct improvement in the pain and glycosuria which followed the administration of antipyrin in the first case.

Having pointed out the chief characteristics of the above cases, it will be well to mention a few considerations which appear to throw considerable light upon their nature and pathology. For some time past it has been known that diabetic patients are peculiarly liable to suffer from certain nerve troubles, central or peripheral. A form of peripheral neuritis has been described as occurring in diabetes. Ziemssen, Worms,² Buzzard,³ and others have described cases of diabetic neuralgia, and the first-named believes this affection to be due to a neuritis, caused by the circulation of glucose in the blood, acting in a very similar manner to the poison of lead or alcohol. At a meeting of the Nottingham Medico-Chirurgical Society held in January, 1887, I suggested that in many of those cases of diabetes with

¹ M. Magitot believes that diabetes causes alveolar osteo-periostitis, and consequent shedding of teeth (see annotation in THE LANCET of Jan. 14th, 1882). This has also been observed in another case of diabetes and ataxia by myself. Compare with Sir James Paget's case of alveolar necrosis and shedding of teeth following herpetic eruption and neuralgia of the fifth nerve (Brit. Med. Jour., vol. ii., 1866, p. 402).

² Bulletin d'Académie de Médecine, 2e série, t. ix.

³ THE LANCET, vol. i. 1882, p. 302.

associated ataxia this latter condition was due to a neuritis of the peripheral nerves, more especially of the sensory muscle nerves; and I instanced a case in which there were present diabetes, ataxia, and perforating ulcer of the foot,⁴ and in which very extensive peripheral nerve change was found, but in which no true tabetic lesion of the cord could be discovered. In this case there was also present in both feet a very similar condition of erythematous oedema to that already described. The comparatively frequent occurrence of symmetrical neuralgia in diabetes would appear to point to the conclusion that this disease is especially liable to affect the sensory nerves or nerve fibres. I venture to think that there is some resemblance between this condition of erythematous oedema and the earlier stages of Raynaud's disease, and diabetic gangrene,⁵ and would suggest that the pathological processes in these diseases may be of a somewhat similar nature. Bearing in mind these considerations, and comparing them with the chief characteristics of the cases related, it appears to me that the condition of erythematous oedema described is due to a peripheral nerve disturbance (probably a neuritis), the result of the circulation in the blood of the diabetic poison; and that this neuritis is more especially located in the sensory, vaso-motor, and trophic nerves, as evidenced by pain congestion, oedema, and commencing tissue destruction.

I will briefly enumerate the grounds upon which my conclusion is based, and they are:—1. The comparison of the cases related with the case of diabetes, ataxia, and perforating ulcer, in which there was also present erythematous oedema, and in which extensive peripheral nerve changes were found; with cases of oedema and erythema resulting from injury or disease of nerves; and with those cases of diabetic neuralgia related by Ziemssen, Buzzard, and others, which some have considered to be due to a neuritis of the affected nerve. 2. The symmetrical nature of the disease pointing to a general cause. 3. The simultaneous improvement in the diabetes and in the cutaneous affection. 4. The association of the disease described with marked evidence of nerve change, central or peripheral.

Nottingham.

ONE LUSTRUM OF DIPHTHERIA AT ST. GEORGE'S HOSPITAL.

By H. T. GRIFFITHS, M.D., M.R.C.P.,
LATE MEDICAL REGISTRAR.

DURING the years 1882-86 ninety-one cases of diphtheria were admitted—a small number as compared with similar admissions at the large hospitals, but keeping well up to the proportion of other diseases. In all these ninety-one cases tracheotomy was performed fifty-eight times, with only two recoveries, or a mortality of over 96 per cent. Taking the years separately, in 1882 eight cases were admitted, all of a malignant type; seven of the eight died within thirty-six hours. Tracheotomy was advised in seven cases and performed in six, all being fatal, the one not operated on living for seven days. Albumen was found in the urine of every case in varying amounts. In 1883 twenty cases were admitted, with a general mortality of 70 per cent., one case of tracheotomy out of eleven operated on being successful. Albumen was absent in the urine of one case, doubtfully present in three cases, present in the rest. In 1884 twenty admissions are recorded, with a mortality of 90 per cent. Eighteen times tracheotomy was performed, with one recovery; that case, however, developed symptoms of diphtheritic paralysis five weeks after membrane was first seen, death occurring from involvement of the diaphragm in the paralytic progress. No post-mortem examination was obtainable. As regards albuminuria, of the twenty cases eight were children, and in eight cases no urine was forthcoming, but albumen was absent in two only of the twelve examined, the rest varying from a trace to one-half. In 1885 twenty-three cases were admitted, with a mortality of 83 per cent. Fourteen cases were submitted to the operation of tracheotomy, but were all fatal, though one patient died on the eighteenth day from pneumonia. In 1886 twenty cases were admitted, with a

mortality of 75 per cent., tracheotomy proving *uniformly* fatal in nine cases; albumen being present in the urine in fourteen cases only. Thus, then, of the ninety-one cases admitted 83.6 per cent. proved fatal, and of the cases of tracheotomy the mortality was over 96 per cent.

Statistics of the larger hospitals are not easy to separate, as they mingle together in some cases diphtheria and croup; but the St. Thomas's Hospital records for the lustrum 1881-85 show that they admitted 194 cases, with an average mortality of 53 per cent; while of the 106 tracheotomy cases the mortality averaged 74 per cent. "At the Hospital for Sick Children, Great Ormond-street," writes Mr. E. Owen in the *British Medical Journal*, May, 1887, "there have been in a little less than five years sixty-six cases of tracheotomy for laryngeal diphtheria, out of which there have been twenty-five recoveries" (mortality 62 per cent.); "and at St. Mary's Hospital during the last four years there have been also sixty-six cases, with a mortality of 61 per cent. In laryngeal diphtheria tracheotomy should not be regarded as a last resource, but as a valuable therapeutic measure, if only it be performed early enough."

Of the alternative operation, intubation, we have no experience at St. George's; but even Dr. Symonds, in a thoughtful paper published on Nov. 19th, 1887, does not prove a much larger percentage of recoveries with intubation than with the more severe operation. Why, then, do we not obtain a larger number of recoveries after tracheotomy at St. George's? Apart from the operation on very young subjects in whom rallying powers are feeble, and who die in an enormous percentage, more ought to be successful. The elements of success depend on several factors: early operation, careful nursing, and removal of membrane when possible. I have seen many cases in which the operation has been postponed until too late, owing either to unwillingness to operate, or to not putting sufficient pressure on the parents to obtain their consent. Careful and intelligent nursing is all-important, with strict attention to detail: such cases should never be handed over to probationers in nursing, as is often the case; in fact, I remember a child who died with symptoms of pneumonia, and in whose bronchi after death numerous portions of feathers were found, which had become separated during the wiping out of the tracheal tube. Removal of membrane can be effected shortly after operation by the insertion of a catheter safely armed with cotton-wool, or by an instrument resembling the wire pipe-cleaners commonly sold in shops. Other details it is unnecessary to insist on here; but in the early stages, before tracheotomy has been performed, surely it must be an error to keep a patient in a warm moist atmosphere: warm dry air should easily be obtained (more easily in private than in hospital cases) by the aid of gas stoves, lamps in the corners of the room, &c. I remember a quoted case in which—I think in Scotland—the little patient was taken out to the end of the pier, warmly wrapped up, and kept there for many hours in the summer time, which case did well. The operation of tracheotomy, though simple in itself, is too often left in the hands of junior house surgeons, though necessarily so sometimes at night and in cases of urgency.

Shall we in the future, then, see intubation taking the place of tracheotomy, and reducing the high average of mortality? I think not, as the operation requires more readiness of hand and demands more practice than the other operation—an operation which confessedly is fatal in over 60 per cent. of cases under favourable circumstances, and which at our own hospital, in the five years under notice, resulted in the alarmingly high mortality of 96 per cent.

Kensington-square, W.

A CASE OF ANEURYSMAL VARIX IN A STUMP.

By A. H. ROBINSON, M.D., M.R.C.S.

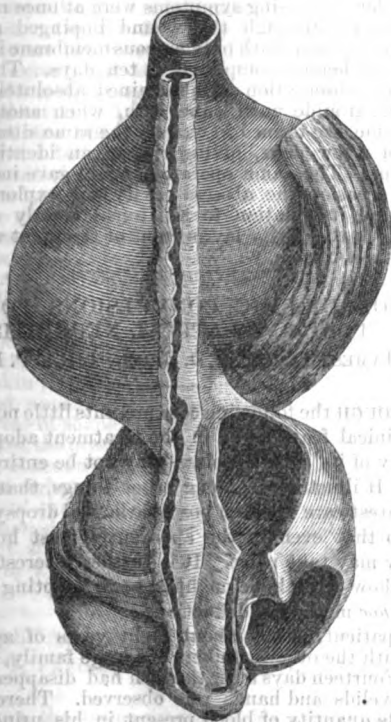
IN this case a communication existed between the ends of the divided popliteal artery and vein after amputation below the knee, together with two varices upon the popliteal vein simulating sacculated aneurysm of the artery. The man in whom this condition existed is a tinner by occupation, and at the time of operation was thirty-two years of age. He has enjoyed the best of health, and is of powerful physique. His family history also is excellent. The pre-

⁴ Ibid., vol. II. 1887, p. 11.

⁵ Lizé, Holmes' System of Surgery, vol. I., p. 127. Compare with first case.

vious history of the condition in question dates back to the year 1867. At that time the patient was employed in an oil mill, and there sustained a severe crush of one of his feet, followed by gangrene, for which amputation of the leg four inches below the knee was performed. He made a good recovery after this operation, and shortly afterwards began the use of a box leg of the ordinary form, the knee joint becoming ankylosed at a right angle. With this he became able to walk long distances, on more than one occasion as much as thirty miles in a day. Beyond slight abrasions about the knee no untoward result followed this severe exercise, nor had he any trouble with the stump of any kind until the year 1884, in the summer of which he came under my care. Six weeks before my first seeing him he sustained a severe blow on the extremity of the stump. This caused him very severe pain, which lasted for some time and gradually abated. He was, however, unable to undertake the walk to his place of employment, some two miles distant, owing to the recurrence of pain brought on by movement. He was compelled to rest at home, and I was then asked to see him.

On examining the stump, its whole posterior aspect presented a swelling which was pulsatile, the pulsation



possessing a heaving character. The pulsation was synchronous with that of the femoral artery, and compression of that vessel controlled the beating in the stump. There was no redness or heat of the integuments, but pain was constant, aching, and severe, and increased on the least movement. The pulsation was distinctly expansile, but no bruit could be detected in any part of it. The man was unaware of the existence of this pulsation prior to the accident above mentioned. He represented that the pain was becoming more and more severe, and the swelling increasing in size. Under these circumstances I advised an immediate exploration of the stump, to which he readily assented. He was placed under the influence of chloroform, an Esmarch's compressor placed on the thigh, and a longitudinal incision made over the course of the popliteal vessels. After some dissection, what appeared to be the sac of an aneurysm the size of a walnut sprang into the incision. For the purpose of getting beyond this and ligaturing the vessels higher up, I extended the incision upwards, when a second and larger sac was exposed. Having got well above this, a ligature was placed round the vessels, and the two sacs, together with the internal popliteal nerve, were dissected out and removed. The ligature was applied almost exactly op-

posite the knee joint. The wound was completely closed and the patient able to resume his employment in six weeks. The pain he suffered before the operation left him entirely, and he was able to resume the use of the box leg. On examining the portion of vessels thus removed, it was found that the supposed aneurysmal sacs were in reality two varices of the popliteal vein, nearly globular in shape. The distal and smaller of these constituted the extremity of the popliteal vein after its ligation at the time of the amputation, and it opened above almost directly into the upper and larger varix, beyond which the trunk of the vein apparently resumed its normal calibre. The popliteal artery showed no alteration in its walls, though its lumen was diminished. The artery was laid open on a probe, and at its termination the probe passed easily by a flap-like opening into the distal varix. The internal popliteal nerve, increased in thickness, wound spirally round the varices, to which it was firmly united by connective tissue. The specimen is in the museum of the Royal College of Surgeons. (See annexed woodcut.)

Bancroft-road, E.

A CASE OF

PUERPERAL ECLAMPSIA TREATED BY INDUCTION OF PREMATURE LABOUR.

By N. WINGFIELD MEADOWS, L.K.Q.C.P.

THE patient, Mercy R—, aged eighteen, a strong and healthy primipara, six and a half months advanced in pregnancy, first consulted me on Sept. 20th, 1887, for persistent headache and giddiness of a week's duration. On examination, I found the urine to contain 30 per cent. of albumen, high coloured and scanty, with marked œdema of both legs and a considerable degree of general malaise. She was ordered a brisk cathartic, to rest in bed with the feet raised, and to take tincture of digitalis (twenty minims), acetate of potash (five grains), and camphor water (one ounce), every four hours.

Early on the following morning I was summoned in great haste, the messenger stating that she was having fits and dying fast. On arriving, I found the patient in a condition of clonic spasm, unconscious, and with difficulty held in bed by two nurses, the seizures recurring every half-hour, each lasting about five minutes. They presented the usual characteristics of puerperal eclampsia as described in text-books: the pupils dilated, lids open and eyes directed upwards, teeth clenched, breathing in gasps, the face intensely cyanosed, and twitching violently with each respiration. The tongue had unfortunately been bitten through before I arrived. On attempting to examine per vaginam, the convulsions redoubled in severity, the mere contact of the hand with the labia throwing the patient into a condition of opisthotonos, rendering impossible the completion of the examination. On placing the hand over the fundus uteri no contractions could be felt. The inhalation of chloroform to the full extent slightly reduced the duration of each attack; it produced, however, no permanent effect either upon the seizures themselves or upon the length of the intervals between them, the condition of the patient becoming the same each time its administration was suspended. Two scruples of chloral having been administered per rectum, and repeated an hour afterwards, without producing any better result, I performed venesection from the basilic vein to the extent of eight ounces. The blood thus obtained was of an almost black colour, and coagulated rapidly upon exposure to the air, with its flow the cyanosed aspect of the face and neck gradually disappeared, and the patient relapsed into a state of absolute coma, which persisted throughout the night and until 4 P.M. of the following day, a period of thirty hours, during which interval the catheter was employed frequently, and her strength supported by enemata of egg and brandy. Towards midnight, consciousness becoming partially restored, I was enabled to administer a strong cathartic by the mouth, and a mixture containing half a drachm of chloral and one scruple of bromide of potassium. Copious watery evacuations were produced, and the patient expressed herself towards morning as feeling much better, but with no recollection of her previous state. On again testing the urine, the amount of albumen was found unaltered.

Judging the opportunity favourable to obtain a few hours' much-needed sleep, I now left the patient in charge of two nurses, giving them strict injunctions as to the treatment I wished employed until I could visit her in the evening. I had, however, barely reached home (a distance of six miles) when I received a note stating the fits had recurred with unusual severity, and urging my immediate return. On arrival with all possible speed, I found the seizure to be marked by no intermissions, the patient being in one continuous fit, with her limbs violently convulsed at intervals, her face congested to the last degree, the pulse full and wavering, respiration jerky, and at times suspended for half a minute. Employing the same remedies as before, but with no better result, and finding her strength to be fast sinking, I obtained a hasty consultation with Dr. Paxton, at that time acting as *locum tenens* to Dr. James at Biggleswade, in which we agreed that the sole chance of recovery lay in emptying the uterus of its contents without further delay. Chloroform accordingly being administered to the fullest extent, a thorough vaginal examination was with some difficulty obtained, the introduction of the hand causing uncontrollable contortions of the whole body, notwithstanding that the administration of the anæsthetic had been pushed to its utmost. Finding the os undilated and a vertex presenting, the membranes were punctured in the expectation that the escape of the liquor amnii, aided by hypodermic injections of ergotine, would induce uterine action and the case so terminate naturally; six hours having, however, elapsed without bringing any change, the uterus during the latter part of this time being in a state of continuous spasmodic contraction and the patient's powers fast failing her, an attempt was made to dilate the os by means of a small-sized Barnes's bag (the finger having been previously employed, in the absence of a sponge-tent, to allow of its introduction), but this proved fruitless, owing to the irritation it set up causing the patient's movements to increase to such a degree as to render its retention impossible. The os was therefore forcibly dilated by the fingers, and at 11 P.M. I was enabled to apply the long forceps and to deliver the patient of a seven-months fœtus, which bore traces of having been dead in utero about a week. Very little subsequent hæmorrhage occurred, the uterus, aided by pressure at the fundus, contracting well upon its contents as they were withdrawn. The convulsions ceased entirely within half an hour after delivery, but the pulse became almost imperceptible, the face blanched, and syncope imminent. A nutrient enema, together with hypodermic injections of ether, happily counteracted these effects of shock; but it was not until nine o'clock of the following evening, twenty-two hours after delivery, that partial consciousness was restored. The subsequent progress of the case was one of uninterrupted convalescence. The œdema of the legs was absorbed by the end of the second day, and the amount of albuminuria reduced to one-third its original amount. A week later this had entirely disappeared, and the patient was allowed to sit up.

New Cross.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ABSCCESS OUTSIDE THE TONSIL, IN AN INFANT, CAUSING DYSPHAGIA AND DYSPNŒA, RELIEVED BY OPERATION IN THE NECK.

By W. PASTEUR, M.D. LOND.,

PHYSICIAN TO THE NORTH-EASTERN HOSPITAL FOR CHILDREN.

THIS case seems worthy of publication on account of its rarity. I was unable to discover the exciting cause of the suppuration. The region involved was the cellular tissue outside the right tonsil and the tonsil itself. The posterior wall of the pharynx was quite free, and there were no signs of spinal caries. There were no enlarged glands in the neck.

J. P—, aged three months, was brought to the outpatient department of the North-Eastern Hospital for Children last February, with the following history. The infant had been breast-fed, was always fairly healthy, and

had been well cared for. Ten days previously the mother noticed that the child had some difficulty in swallowing, and breathed badly when he was at the breast. A doctor was called in, who ordered hot fomentations to the neck. The child became rapidly worse. After three days a swelling was noticed in the right side of the neck. A week later the child's condition was so alarming that the mother brought him to the hospital. The patient was a rather wasted, pallid infant, with laboured, catching breathing, not unlike that of a bad case of catarrhal laryngismus. Swallowing was practically impossible. There was a diffuse, deeply fluctuating swelling in the right side of the neck at the anterior border of the sterno-mastoid. The skin over it was moderately tense, but not reddened. On looking into the mouth the passage of the fauces was seen to be almost entirely occluded by a large swelling in the position of the right tonsil. By passing the little finger carefully behind this, it was ascertained that the pharynx was perfectly free, and that a distinct fluctuation was also communicable from the tonsil to the tumour in the neck. At my request, Mr. Blake, the house surgeon, made a short incision in the most dependent part of the tumour in the neck, and evacuated three ounces of inodorous green pus. The swelling at the back of the mouth immediately disappeared, and all the distressing symptoms were at once relieved. A probe passed through the wound impinged against the finger on the tonsil with only mucous membrane intervening. The wound healed completely in ten days. The child was kept under observation. He remained absolutely free from all throat trouble until June 19th, when another abscess of the same size formed in exactly the same situation in the course of a few days, giving rise to an identical train of symptoms. The same operation again gave instant relief. On this occasion the abscess cavity was explored with the finger, and its relation to the tonsil clearly established. In the neck the cavity lay in front of the great vessels.

Queen-street, Mayfair, W.

CASE OF URÆMIC CONVULSIONS FOLLOWING POST-SCARLATINAL NEPHRITIS.

By JAMES MASON, M.D. BRUX., L.R.C.P. ED., &c.

ALTHOUGH the following case presents little novelty either in its clinical features or in the treatment adopted, still a summary of its salient points may not be entirely without profit. It illustrates, among other things, that even when the greatest care is taken post-scarlatinal dropsy may occur, and also that even in the apparently most hopeless cases recovery may take place. It is further interesting as illustrating how careful one ought to be in adopting the *post hoc propter hoc* method of deduction.

The patient, a boy about eight years of age, suffered, along with the other members of a large family, from scarlet fever. Fourteen days after the rash had disappeared œdema of the eyelids and hands was observed. There was a considerable quantity of blood present in his urine, for which Hæzeline, among other drugs, was tried, but without obvious benefit. The usual fomentations were applied, and he had several hot baths; but on the fourth day after the appearance of the œdema he was seized with a convulsive fit, the clonic spasm being, however, entirely confined to the left side. On being called, I at once gave him a hot blanket bath, and injected an eighth of a grain of pilocarpine over the deltoid. Although free perspiration soon followed these agents, the stertor seemed to increase and the coma to deepen. After consultation it was decided to try venesection. The median basilic vein was opened, but so altered was the blood and so weak was the circulation that only a few drops of thick treacly fluid escaped; after trying various means to increase the flow, which were ineffectual, the incision was covered up and the boy was left to die. Next morning, however, he was laughing and chatting with his brothers, who were convalescing from scarlet fever, and in three weeks more he was fit to go to the seaside.

Had we obtained a free flow of blood from the boy's arm, I certainly should have been inclined to credit the venesection with the cure, and, reasoning from that, would have been more inclined to adopt that practice in any similar case. The moral to be drawn is obvious.

Whitwell, Chesterfield.

A CASE OF HYDRAMNIOS AND MONSTROSITY.

BY W. N. HEYGATE, M.R.C.S.,
HON. MEDICAL OFFICER, BATH EASTERN DISPENSARY.

THE following may be of interest from the rarity of these cases, and it also gives an illustration of Dr. Leith Napier's "Remarks on Hydramnios" in THE LANCET of June 2nd and its connexion with monstrosities.

Mrs. F—, whom I had previously attended for membranous dysmenorrhœa, engaged me to attend her in her first labour, which she expected at the end of May or the beginning of June. I was requested to visit her on April 27th, as she had pains, which came on at long and irregular intervals, and prevented sleep. I saw her again on April 30th and May 1st. The pains had continued, and she mentioned that her stomach was very hot and red. On examination I found very great distension, and marked erythema of the abdominal parietes. I thought it probable that she was dropsical as well as pregnant. I was sent for again on the evening of May 2nd, when I examined per vaginam, and found the cervix dilated to nearly the size of half-a-crown. The pains occurred at long intervals, and were very slight. I was unable then to diagnose the presentation. On the following day, at 4 P.M., I was requested to see her, when I found the cervix nearly dilated to the full extent, and the bag of membranes projecting; still I could not make out the presenting part. After waiting a short time I drained off the liquor amnii, which nearly filled two full-sized chamber vessels, besides partly saturating the bed and other things. I could not, however, quite satisfactorily determine the presentation; but, as the pains became sharp and the labour progressed, I did not trouble myself about this. In about an hour the child was born, and presented the following abnormalities: The mouth, nose, and ears were natural in appearance; the eyelids were open; the eyeballs very large and protruding, and looked highly repulsive; the cranial head was absent; immediately above the orbits and a short distance above the ears on each side (and this was covered with skin and hair), the base of the skull was filled in by undeveloped bone and skin; and behind, in the ordinary position of the occiput and upper cervical vertebrae, there was a deep depression, oval in shape, with sharp edges; and it was these which formed the presenting part and which puzzled me even after I had evacuated the liquor amnii. The fœtus appeared to be one of eight months, and showed no signs of life. The other parts of the body were natural. My patient objected to be questioned upon the subject, and I did not press her further, but she told the nurse that she had been much frightened by a cat in the early months of her pregnancy.

Bath.

THE ALKALINE TREATMENT OF ECZEMA.

By T. FREDERICK PEARSE, M.D., F.R.C.S.

ACTING on the principle that acids applied to an acid-secreting surface and alkalies to an alkaline surface diminish the respective secretions, I have treated cases of eczema for many years by alkaline applications. It may be termed unphysiological, and that the morbid exudation of eczema has no parallel with the normal secretion of glands. My answer is in the results. There is not the slightest doubt that an acid applied to an eczematous surface will irritate and increase the exudation, and I am equally satisfied that alkalies judiciously applied will have a contrary effect. Whatever views we may have on the pathology of eczema, the great diversity of methods shows that we have no definite *rationale* of treatment. At the same time, I do not argue that alkalies have any "specific" action. No one who has seen much of eczema can doubt that the associated disorder to which these patients are subject is that connected with their digestive organs. The internal treatment is undoubtedly of paramount importance. The one thing also, which appears most successful is some saline aperient which produces a "weeping" from the mucous surface of the intestines, and hurries on the contents. This clinical fact suggests that the cause of eczema lies in some imperfect process of digestion, whereby some abnormal chemical compounds are absorbed, and, circulating in the blood, irritate especially the skin structures. These compounds are, I

admit, unknown. Not only, however, are saline aperients successful in the treatment of eczema, but alkaline combinations especially so. The most common prescriptions contain these drugs in endless variety. This treatment is very successful for adult life, but it is not nearly so useful in the eczemas of young children. In these cases, however, alkaline applications are equally successful in those of riper years, if not more so. Whether the fault in adult life lies in deficiency and that of eczematous children in excess of secretion of acid gastric juice is difficult to decide, but the internal administration of alkalies combined with saline aperients in the eczemas of grown-up people is that on which the greatest reliance is generally placed. In children, however, an exactly opposite line of treatment will often be found successful. It is especially in scrofulous children and in the general eczema of infants that I have found benefit from the administration of hydrochloric acid. These little patients have generally some palpable digestive disturbance. I have frequently found unexpected benefit from the internal administration of nitro-hydrochloric acid combined with sulphurous acid, and at the same time the external application of alkalies. These latter may be used as bicarbonate of soda solutions, 5 to 10 grains to the ounce, sometimes combined with small quantities of glycerine, or by weak solutions of liquor potassæ 10 to 30 drops to the ounce. As a general rule, it may be said that the more acute the eczema, or rather the more copious the exudation, the weaker must be the application. It should be applied, whenever possible, continuously. In chronic cases ointments may sometimes be used, such as bicarbonate of soda, 10 to 30 grains to the ounce of vaseline.

The above is very briefly some idea of the methods I have successfully adopted in a very large number of cases, many of which had been treated on other principles and with entirely different drugs without avail. In a future communication I hope to enter into details of cases and the treatment applicable to the variations through which the eczematous stage passes.

Montague-street, W.C.

A Mirror

OF

HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

TWO CASES OF CEREBRO-SPINAL MENINGITIS; DEATH; REMARKS.

(Under the care of Drs. ANDERSON and CURNOW.)

THE following are instances of the onset of this fatal disease in the persons of two sailors, who were apparently in good health before they were attacked. In one, where the symptoms of the spinal affection were obscured by those of the cerebral disease, the duration of life was only about seven days. In the other, the patient lived for nearly a fortnight; but here the disease was so masked by the presence of pneumonia that its exact duration cannot be accurately given. For the notes of these interesting cases we are indebted to Dr. E. F. Trevelyan, B.Sc., the house physician.

CASE 1.—The patient, a Norwegian aged twenty-one, was admitted under the care of Dr. Anderson on May 30th, 1888. His last voyage was from Norway, and he was sent direct to the hospital from his ship by the port medical officer of health. He had been ill for four or five days with severe headache. There had been no vomiting; no fit. There was no history of ear disease. Constipation was present.

Condition on admission.—Drowsy, though restless at times. Seems to have much pain in the head. If the head or neck be moved, he cries out with pain. The head is much retracted. There is an eruption of herpes at the right angle of the mouth. Pupils equal, reacting naturally; no squint. Tongue moist, slightly coated. Temperature 102°; pulse 92, regular. No abnormal physical signs in the chest. Abdomen slightly retracted, otherwise natural.

Tachic cérébrale present. No albumen in the urine. An ophthalmoscopic examination revealed nothing, except slight fullness of the veins.

May 31st.—The patient had laid all day yesterday in a half-dazed condition, uttering a hydrocephalic cry every now and again. He was very delirious last night. There was some general hyperæsthesia this morning. Passed urine under him. Slight twitchings were noticed about the mouth yesterday; none in the limbs. No ocular palsy. Head very distinctly arched backwards. Abdomen retracted. Pulse 100.

June 1st.—Quieter night, but the patient was crying out in the early part of the evening. Semi-comatose this morning. Bowels opened by an enema (calomel having failed to act): first stool since admission. There is a crop of herpes about the left angle of the mouth, very symmetrical with that of the other side. Arching of neck still present. The urine contains abundant phosphates. The patient was seen by Dr. Anderson to-day. The diagnosis of cerebral meningitis was confirmed; and the nature of the meningitis was more obscure.

2nd.—Was singing and shouting out yesterday afternoon, scarcely to be recalled to himself. Refused food about 6 P.M. Became gradually more comatose. Was unable to swallow during the latter part of the night. The temperature, taken hourly, rose from 104° at 10 P.M. to 108·2° at 5 this morning; the pulse having varied during the night from 100 to 120. The patient died deeply comatose shortly before 6 A.M. The temperature, taken twenty minutes after death, was 109·6°.

At the post-mortem examination there was much dark-stained hæmorrhage from the veins about the occiput. When the brain was removed, much yellow pus was found in the following situations: in the interpeduncular space, extending into the Sylvian fissures; over the upper surface of the cerebellum; over a considerable area of the anterior surface of both frontal lobes; also in one or two places over the convexity of the hemispheres. Pia mater intensely injected; small extravasations of blood at the bottom of some of the sulci; no pus visible to the naked eye in the sulci. In some places the pia mater was adherent to the brain surface, the latter being torn when the membrane was removed. On section many puncta cruenta were seen. Brain substance decidedly softer than natural. Ventricles filled with a turbid, serous fluid; not distended. No pus in the sheath of the optic nerves. Much pus on the posterior surface of the spinal cord, in the lumbar and dorsal regions, also about the medulla oblongata. Substance of cord softer than natural. Lungs very œdematous. Other organs healthy. No tubercle anywhere.

CASE 2.—The patient, an Italian, aged thirty, was admitted, under the care of Dr. Curnow, on June 8th, 1888. His last voyage was from India in a Genoese vessel, and he had probably touched at an Italian port. He gave the following history. He had been quite well up to three days before, when he shivered. He has had cough since then. The expectoration has been tinged with blood for the last two days.

Condition on admission.—Flushed face; alæ nasi working; cough; rusty expectoration. Respiration 36; pulse 116, regular, good volume. Tongue moist, slightly coated at the back. Urine contains no albumen. Chest: slightly impaired percussion at the right base behind; bronchial breathing at the upper limit of the dullness; weak breathing below; bronchophony; no râles; pleuritic rub in right axilla.

On June 9th he was seen by Dr. Curnow, when he only showed the usual symptoms of a pneumonia of the right lower lobe.

For the next two days the patient's condition became somewhat worse, more and more of his right lung becoming involved. Delirium was noted for the first time on the afternoon of June 9th, but it was always slight, and lasted only for a short time until the night before his death (June 18th).

On June 16th the following note was made: No crisis yet (twelfth day of disease), although there was some sweating last night. The patient holds his ground well. Had a fair night; no delirium. Tongue moist; appears to be cleaning from the edges. Pulse 130, regular, fair volume; respiration 52. Cough still troublesome; expectoration fairly abundant; not so rusty. Temperature: evening, 102°; morning, 101·6°. Bowels open twice daily. Chest: Impaired percussion all over the right side (front, back, and axilla). Bronchial breathing, and bronchophony all down the right back. Breath sounds faintly bronchial over the right apex in front, distinctly so lower down and in the

axilla. Supplementary breathing over the left front. Urine contains a cloud of albumen.

From this time up to the afternoon of June 18th, the patient's condition remained much the same, except that he was weaker. A change came over him about 3 P.M. on that day. He began to refuse food, ceased to cough and expectorate, passed everything under him, and lay in a semi-conscious state, although restless at times. At 11 P.M. sores were seen on his lips and teeth. Pulse 140, regular, fair volume; respiration 48, effective; no cyanosis; temperature 103·2°.

On June 18th he became comatose about 8.30 A.M., after a very restless and delirious night. The temperature rose to 105°; pulse and respiration still fairly good. He died at 2.30 P.M., deeply comatose.

At the post-mortem examination the whole of the right lung was completely solid, in no place breaking down; towards the upper part it was more red and granular; lower down passing on towards grey hepatisation. Brain: The dura mater was more adherent than natural. Much yellow pus was to be seen in the following situations: in the interpeduncular space, extending on either side along the vessels into the Sylvian fissure; on the under surface of the pons Varolii; over the upper surface of the lateral lobes of the cerebellum, and also, but to a less extent, on the under surface. Two or three patches on the convexity of the brain. Intense injection of vessels of the pia mater, and dulling of membrane. Thickening and adhesions of the membranes about the fourth ventricle. On section many puncta cruenta were seen. Ventricles filled with sero-purulent fluid, blood-stained. Spinal cord: much pus about the medulla oblongata; some pus covering the posterior aspect of the cord in the lumbar region. Other organs healthy, excepting that the spleen was enlarged.

Remarks.—In the first case the clinical picture was fairly complete, except that the spinal symptoms were greatly masked by the severity of the cerebral disturbance. The diagnosis of cerebral meningitis was clear enough, but the nature of the meningitis was perhaps more obscure, as cases of cerebro-spinal fever are not so often seen, and therefore their existence might not present itself to the mind. The difficulty is well described by Professor Strümpell in his very complete text-book when he says: "The diagnosis is less easy in sporadic cases, if the patient be in a bad way and unable to give an account of himself when he comes under observation." The mind of the patient in question was far from being clear, and what history was to be got was obtained through an interpreter. The acute onset and rapid development of severe mental disturbance, the rigidity of the neck, and labial herpes, should perhaps have decided one as to the extent, and therefore the exact nature, of the disease. In the second case the presence of cerebro-spinal meningitis was not suspected during life, and, reviewing the case with the knowledge obtained after death, it is difficult to see how the diagnosis was to be made. In the treatise referred to above it is said, in speaking of a purulent meningitis complicating pneumonia, that intense headache, rigidity of the neck, and a stupor passing into deep coma, are the principal characteristics. In this case there was an entire absence of headache, there was no rigidity of the neck, and coma was only present at the extreme end. The mental condition never approached a state of stupor, except within the last twelve hours—indeed, even delirium, which might well have been expected, considering the amount of lung involved, and the delayed crisis with the consequent exhaustion to the patient, was only noted on two or three occasions. It was then slight, and only lasted a short time. Indeed, if there had been no post-mortem examination, the case would have been put down as simply one of acute pneumonia with a most unusual termination. The examination of the head was undertaken—and Dr. Curnow laid stress on this—to explain this termination.

HOSPITAL FOR SICK CHILDREN, PENDLE BURY, MANCHESTER.

A CASE OF CARIES OF THE SPINE WITH ANGULAR CURVATURE, IN WHICH THE SPINE WAS TREPHINED TO RELIEVE PRESSURE ON THE CORD.

(Under the care of Mr. G. A. WRIGHT.)

FOR the following account we are indebted to Mr. J. Hilton Thompson.

John O—, aged seven years, was admitted on July 25th, 1887, for angular curvature of the spine. There was a family

history of phthisis. He had always been a delicate child, and had a history of lung affections. Disease of the spine was noticed about seven months before admission.

When admitted there was a marked angular curve in the mid-dorsal region, with some lateral thickening; there was also paresis of the lower limbs. The muscles of the right lower extremity were wasted, and when at rest the limb was involuntarily drawn up. The condition of the patient became gradually worse, and on Sept. 14th, 1887, was as follows:—The muscles of the lower limbs were in a state of tonic contraction with marked flexion, which was more easily overcome on the left side. The plantar reflexes were exaggerated, the cremasteric very feeble; the deep reflexes could not be obtained. The feet were slightly swollen and cyanotic, both symptoms being more marked on the right side. There was analgesia extending from the level of the eleventh rib on the right side to about the middle of the leg; below this point there was anaesthesia. There was no hyperaesthetic band. On the left side sensation was normal.

Notwithstanding the application of all the usual methods of treatment—viz., absolute recumbency, the administration of hydrargyrum cum creta and of iodide of potassium (the latter in gradually increasing doses, up to fifty grains, three times daily), and the application of the actual cautery, which were all given a fair and prolonged trial,—the condition of the patient became worse. The anaesthesia gradually extended upwards to the level of the eleventh rib on the right side; on the left side, also, decrease, and finally loss, of sensation became developed, the anaesthesia extending from the toes to the level of the pubes; and thence to the line of the eleventh rib a condition of analgesia existed. Not the slightest voluntary movement could be made with either limb; there was also incontinence of urine and faeces. No sign of any abscess was found. It was decided to open the spinal canal, and, if possible, relieve pressure.

Operation.—On Jan. 26th, 1888, an incision about four inches in length was made along the line of the most prominent spinous processes, and the soft parts on each side separated so as to expose the osseous surfaces. Three laminae were divided on each side, and were removed with their attached spines, uncovering the theca of the spinal cord, which, at the lower part exposed, was found surrounded by a buff-coloured, tough, leathery substance; this was cut away with scissors. The cord did not appear to pulsate, but no point of constriction could be found. The muscles were brought together by deep sutures of catgut, and the skin with waxed silk; a small drainage tube was left in. The wound, having been dusted with iodoform and boracic acid in equal parts, was dressed with sublimated wood-wool wadding. Careful antiseptic precautions were observed before and during the operation. The trunk was supported by a special iron splint.

The wound healed rapidly by first intention except at the drainage opening, which, however, also quickly closed. No change was noticed until Feb. 7th, when pin pricks could be felt about three inches below Poupart's ligament on each side. Nine days later there was slight voluntary flexion of the left thigh, and on Feb. 17th distinct voluntary contractions of the right quadriceps extensor were observed. On the 20th pin pricks could be felt as far as the knees, and both thighs could be slightly flexed. On the 21st pin pricks could be felt in the left foot, but on the right side there was no return of sensation below the knee. No further improvement took place, the condition of the patient remaining *in statu quo* until March 17th, when the area of anaesthesia was found to be increased, and a few days later was practically the same as before the operation; about the same time he lost all power of voluntary movement in the lower limbs.

Remarks.—This case demonstrates the possibility of safely exposing the spinal theca, and, although only temporary and imperfect relief was afforded, appears to justify the hope that operative procedure may give permanent relief in similar cases. It is of course doubtful whether the paralysis was entirely due to the pressure of the lymph that was found lying on the theca; it is possible that an abscess in front pressing upon the nerves may also have been present, but it was not perceptible. The child is now (June, 1888) at home, practically *in statu quo*, and the question arises whether any further operation is worthy of trial. The brief summary of the case given above is thought to be of sufficient interest to be recorded, especially now that the question of spinal surgery is again brought forward.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Vernal Conjunctivitis.—*Prevention of Hemorrhage in Iridectomy.*—*Embolism of Central Artery of Retina.*—*Hemorrhage after Iridectomy for Glaucoma.*—*Partial Ophthalmoplegia.*

AN ordinary meeting of this Society was held on July 6th, Mr. J. W. Hulke, F.R.S., President, in the chair.

Dr. ADOLF BRONNER recorded three cases of Vernal Conjunctivitis. One case, a boy of ten, showed the typical changes as described by Saemisch and others, on the limbus corneae and conjunctiva of the upper lid. In the second case, a youth of eighteen, the limbus only was affected. In the third case, a woman of thirty, the limbus was much affected, and the conjunctiva of the upper lid slightly. Dr. Bronner thought that vernal conjunctivitis was not a distinct and separate disease, but a hypertrophic form of chronic conjunctivitis, not rare in children, and generally classified under follicular conjunctivitis.

Dr. BRONNER also spoke of a suggestion of Dr. Bell, for Preventing Hemorrhage into the Anterior Chamber after Iridectomy. The iridectomy scissors were placed in boiling water until just before use. In most cases hemorrhage could thus be prevented. In some cases, however, especially cases of glaucoma, there was abundant hemorrhage.

Dr. MILES related the case of a young woman, aged twenty-one, who perceived a blank over a portion of the upper segment of her right visual field. Within an hour she was at the Manchester Eye Hospital. Her right visual field was found contracted above. Seen under direct ophthalmoscopic examination, the fundus showed a blocked lower retinal artery, the clot being visible and extending from the entrance on the disc to the first bifurcation. The retina was slightly oedematous. Massage was tried, and the clot disappeared, sight at once improved, and the vessel was seen well filled. Certain difficult points of diagnosis and pathology were submitted to the members for explanation. Charts taken by McHardy's perimeter, by Dr. Griffith, Dr. Roberts, and Dr. Miles, were shown, explaining the course of the field changes. The patient's physical condition was normal.—Dr. MONEY asked what evidence there was that this was a case of embolism. He further asked whether the patient was the subject of megrim, as in cases of nerve storm of that character vascular spasm was well known.—Dr. W. J. COLLINS asked whether there was leukaemia, and thought that, if so, the white appearance might have been due to the clot being entirely composed of leucocytes.—Mr. FROST thought that the white appearance was not due to clot, but to emptiness of the vessel.—Mr. JESSOP wished to know what was the condition of the vessels beyond. He had seen a somewhat similar case about two hours after the occurrence. He had tried nitrite of amyl, but without improvement.—Dr. ABERCROMBIE referred to a paper by Mr. Priestley Smith on the Association of Spasm of the Retinal Artery with Uterine or Ovarian Disorder, and asked whether this might not have been of that nature. He thought that the condition described was unlike embolism.—Dr. MILES, in reply, said that his first idea was against the theory of embolism. Dr. Graefe, whom he consulted, considered it undoubtedly a case of embolism. Professor Hirschberg thought that the appearance was due to aggregation of white corpuscles, and that the embolism was further back. It was noteworthy that the massage was completely effectual in removing the clot. A year previously the patient had a similar occurrence, and recovered at once upon rubbing her eye. The patient was a very healthy young woman, not subject to migraine, and free from menstrual disorder.

Dr. ROCKLIFF contributed notes of a case of Secondary Hemorrhage after Iridectomy for Glaucoma. Mrs. D—, aged fifty-six, the subject of chronic glaucoma, had iridectomy performed at 11 A.M. on March 17th under cocaine. The wound was dressed with eserine and cotton-wool. She drove home—a ride of ten minutes—and remained well until 5.30 P.M., when sudden hemorrhage set in. A large clot protruded through the iridectomy incision. The eye was enucleated on the third day.—Mr. HULKE asked what anæsthetic had been used. The hemorrhage was too early to call secondary.—Mr. LAWFORD said cocaine was used.—

Mr. SIMEON SNELL had had a case of severe hæmorrhage soon after iridectomy; the eye shrank, but was not removed.—Mr. GUNN thought the case one of exaggerated hæmorrhage, like those more numerous ones in which extravasation occurs between the retina and choroid.—Mr. MCHARDY agreed with Mr. Gunn, and said that he did not perceive what good there was in leaving the globe after such an accident had happened. The accident only showed how necessary it was to avoid any exertion on the part of the patient after iridectomy for glaucoma.

Dr. ROCKLIFFE also communicated a case of Partial Ophthalmoplegia in a clerk aged twenty-three. There was dimness of vision and pain in the right eye when looking at near objects. Eserine and spectacles +1 D were prescribed. Eighteen months afterwards internal strabismus of the right eye with diplopia of one week's duration occurred. The vision was normal, with homonymous diplopia. Both pupils were now widely dilated and fixed, but the range of accommodation of the left eye was six inches. There were no other symptoms. Iodide of potassium, the intermittent current, and mercury were prescribed. There was a remarkable toleration for mercury and iodide.

The following card specimens were shown :—

Mr. JONATHAN HUTHINSON, jun.: Traumatic Choroiditis.

Mr. MARCUS GUNN: Closure of Perforated Corneal Ulcer by Transplanted Conjunctiva.

The report of the Council was read by the secretary, showing that the roll of the Society numbered 218, the highest number yet reached. Reference was made to the Donders Memorial Fund and the share taken by the Society in that work. Mr. Power proposed and Dr. Stephen Mackenzie seconded the adoption of the report, which was duly carried. The President read a letter from Professor Donders, thanking the Society for their kindness to him, and presenting to the Society a bronze medal struck in commemoration of the event. Dr. Ord (treasurer) read the financial report, which was exceedingly satisfactory. The ballot was then taken for the officers and Council. On the proposal of the President, a vote of thanks was accorded to the retiring secretary, Dr. Sharkey.

The following is the list of officers and Council for the ensuing year:—President: Mr. John Whitaker Hulke. Vice-Presidents: Dr. T. Buzzard, Mr. Jonathan Hutchinson, Mr. David Little (Manchester), Mr. E. Nettleship, Dr. D. Argyll Robertson, and Mr. Priestley Smith. Treasurer: Dr. W. M. Ord. Secretaries: Mr. R. Marcus Gunn and Dr. James Anderson. Other members of Council: Drs. W. A. Brailey, J. B. Lawford, P. H. Mules, Seymour J. Sharkey, Samuel West; and Messrs. A. H. Benson, Edgar A. Browne, H. E. Juler, William Lang, J. G. Mackinlay, M. M. McHardy, and A. Stanford Morton. Librarian: W. Adams Frost.

OBSTETRICAL SOCIETY OF LONDON.

Mercurialisation in Lying-in Women.

A MEETING of this Society was held on Wednesday, July 4th, John Williams, M.D., President, in the chair.

Specimens.—Dr. J. PHILLIPS showed a Living Infant, eleven days old, with a Malignant Tumour on the Forehead. Dr. W. T. A. GRIFFITH exhibited Microscopical Sections of Fibroma and Myoma of the Uterus and Ovary.

A report was read on the Microscopic Appearances of Portions of Suspected Placental Tissue, from the specimens exhibited by Drs. Aust Lawrence and Penrose at the meeting of the Society on March 17th.

Dr. ROBERT BOXALL read a paper on the Conditions which favour Mercurialism in Lying-in Women, with Suggestions for its Prevention. The question was debated under two separate headings—(1) increased absorption (2) defective elimination. Under the first head the site of absorption was discussed; the question whether the solution obtains entrance to the cavity of the uterus when the uterine tube has not been employed was debated, and an experimental investigation undertaken with a view to determine the point was related. It was suggested that absorption not infrequently occurs inside the uterus, even when the uterine tube has not been employed, but that it may also take place through the lacerated surfaces of the cervix, vagina, and perineum, or even

through the intact mucous membrane. Reference was made to the experimental research conducted by MM. Doléris and L. Butte, which bears on this point. With a view to diminish the risk of absorption, it was suggested (1) that not only should care be exercised to obtain contraction of the uterus, but that it should be also carefully maintained, and, above all, that the douche should always be given at such a temperature as will stimulate the uterus to action; (2) that the douche should invariably be administered in the supine position, the uterus at the same time being supervised by one hand placed on the abdomen; (3) that, when the administration is completed, the precaution should invariably be taken of ascertaining that the uterus is contracted by palpating the abdomen, and, if distended, the fundus should be squeezed like a sponge in the palm of the hand, and at the same time should be depressed, with the object of evacuating the vagina; and (4) that the surfaces of lacerations about the external orifice should be brought together, and any abrasions which remain should be coated with some material impervious to the solution. Under the second head, the relative eliminative power of the different excretory organs was discussed, and especial attention directed to the condition of the kidneys and intestine. The following suggestions were offered: (1) That chronic nephritis, and probably also those changes which occur in the kidneys during pregnancy, may by diminished elimination produce an accumulation in the septum; and (2) that the intestine possesses an equal if not a greater eliminative power than the kidneys. With a view to obviate the risks arising from defective elimination: (1) That when the kidneys are affected the sublimate douche should not be employed, or, if used, extreme caution should be exercised; (2) that a free watery flow should be promoted by the kidneys, and that especial care should be directed to this point in hot weather; and (3) that the bowels should be evacuated daily, either by salines or by the administration of such agents as produce copious and loose stools. A tabulated series of eleven cases which presented symptoms of slight mercurialism was appended, and also a fatal case of mercurialism narrated.

Dr. MATTHEWS DUNCAN called attention to the easy distension of the puerperal uterus by injections, even long after delivery. Distension shortly after the birth of the child, as in post-partum hæmorrhage, was better known. Dr. Boxall had apparently overlooked a mode of conveyance, otherwise than by absorption, into the circulation. This was easily understood after delivery, when there were open sinuses at the placental site; but it might take place in the unimpregnated uterus, as Dr. Duncan had shown in a case of injection of a solution of perchloride of iron. The sudden deaths on injection of this agent were to be explained only in this way. The fluid entered in bulk, not by absorption.

Dr. ROUTH considered that Dr. Boxall's paper was admirable. Nevertheless, he thought that the routine practice of sublimate injections was carried too far. In one of the recorded cases the redness of the gums on the third day might not have been caused by the sublimate, but the mercurial symptoms came on by the sixth day. This proved that they were due to the prolonged use of the sublimate injections. The strength of the solution was reduced to 1 in 4000 after the third day. This practice, however, might cause the evil it was designed to avert, for a weak solution could be readily absorbed; a stronger preparation would coagulate the albumen and thus stop the mouths of the absorbing vessels, preventing the entrance of septic substances from without. The cases where he had seen nephritis and albuminuria following this absorption were precisely those where weak solutions had been employed. Dr. Routh recorded the case of a patient who, in consequence of pendulous abdomen, had gone one month beyond the usual term of gestation. Septicæmic symptoms occurred at the end of every week for four consecutive weeks; iodine injections always removed the serious symptoms, but as they recurred so often, he used a corrosive sublimate injection, one grain in two ounces of water, at the end of the fifth week. A considerable quantity of albuminous flakes came away, and the patient made a perfect recovery. In ordinary cases, Dr. Routh preferred iodine vaginal injections (thirty drops of the tincture to half a pint of warm water), the water being as hot as the patient could bear, whenever there was any smell. Only when there were feverish symptoms threatening septicæmia was it necessary to inject the uterus; a strong solution

of the perchloride, one part in 960 at least, should then be used.

Dr. SAMUEL SLOAN (Glasgow) favoured the abolition of the routine practice of vaginal injections in natural cases. He had discontinued routine injections, both in private and in hospital practice, for some years, and since then his results were better than before. He could not say whether this signified that injections interfered with natural processes, or that it was difficult to keep the tubes &c. used in routine injections absolutely clean. When any cause for suspecting sapræmia or septicæmia arose, he then used mercurial injections, but in private practice this was an extremely rare event. In such cases, however, mercurialism was most unlikely to occur, because the need for the drug would diminish its activity. He did not advise the discontinuance of antiseptics in hospital practice, but he objected to the routine use of injections even there. In private midwifery practice he had to a large extent given up antiseptics, for he believed that women could be kept aseptic by absolute cleanliness, healthy surroundings, and skilful management during pregnancy, labour, and the puerperium, their resisting power being at its maximum and the tendency to decomposition at the minimum. The lochia did not naturally decompose. When mercurial injections were skilfully given ballooning of the uterus could not take place. The organ must be firmly grasped by the hand during the process of injection; and by pressing back the perineum whilst the woman coughed retention in the vagina was avoided, especially if the patient were placed in the semi-supine position.

Dr. CHAMPNEYS thought that the days were past in which a speaker who talked about "antiseptics in midwifery not being necessary" would find supporters in the Society. There was some difference of opinion as to routine injections; but before discussing the subject he referred to Dr. Sloan's insinuation that Dr. Boxall's cases had not been carefully treated. Sepsis had for some years been entirely abolished at the General Lying-in Hospital. Dr. Sloan did not appear to have been so successful in his own practice at Glasgow. Dr. Champneys thought it strange that Dr. Boxall had been accused of want of care by a gentleman who attributed his own results to "dirty enemas." Routine use of vaginal douches might not be absolutely necessary, in private at least; they were far less important than antiseptic cleanliness of the hands. Still, Dr. Champneys had used routine douches for years and years, and was more satisfied than ever with them; they proved beneficial in several ways. The material to be used for the injections was open to debate. In ordinary cases he did not use sublimate on account of the risk of mercurialism, and a weak antiseptic such as iodine would probably suffice, except in special cases, at an institution like the General Lying-in Hospital, where the midwives and nurses so thoroughly understand the antiseptic system. Dr. Champneys did not see how the semi-supine position could be the best when vaginal injections were employed. It was highly inconvenient, the bed would be with difficulty kept dry, and gravitation of the injection into the uterus and subsequent absorption would be favoured rather than prevented. He regretted to hear about the "germ-resisting power" of a woman. In the old days before antiseptics, young, healthy women succumbed in large numbers to puerperal fever.

Dr. HERMAN had noted, in his own experience, a frequency of mercurialism nearly the same as in Dr. Boxall's series of cases. Assuming idiosyncrasy was the reason of the mercurialism, it appears that this idiosyncrasy was present in about 5 per cent. of all cases. He had seen a temporary trace of albumen in the urine in only two out of the eleven cases of mercurialism in his own hospital practice (referring to 182 patients admitted into the General Lying-in Hospital in the first half of 1886; in two of the eleven cases it was not certain that the symptoms were really due to mercury). In two cases of Bright's disease during pregnancy, sublimate douches, administered as in all the other hospital patients, had caused no symptoms of poisoning. Anæmic patients were not specially prone to mercurialism. Altogether perchloride of mercury was the best antiseptic in hospital practice. It was not so safe in private cases, excepting under two conditions. The nurse who gave the douche should know the dangers of ballooning of the vagina and how to prevent it. Secondly, the obstetrician should attend the case at least daily, so that he might perceive the first symptoms of mercurialism; when he ceased his daily visits

the use of sublimate should be left off. "Germ-resisting power" must not be trusted.

Dr. CULLINGWORTH laid greater stress on cleanliness of hands, instruments, sponges, and everything brought into contact with the genital tract, than on uterine and vaginal injections. It was questionable whether germicide solutions should be introduced into the body of the patient. It was not the organisms already there, but those which might be introduced from without, which were to be feared. The antiseptic method must not be made too complicated, else practitioners could not adopt it. Warm vaginal injections were both soothing and useful. They, above all, promoted cleanliness, which could be obtained by harmless ingredients as easily as by poisons like sublimate. Even in cases of sapræmia, where at least one thorough intra-uterine injection was of value, milder chemical agents than sublimate were probably sufficient. Chemical products of decomposition apparently caused the harm in these cases, as the symptoms disappeared as soon as the uterus was emptied. When septicæmic symptoms had developed it was useless to employ sublimate, for no douche could reach germs which had entered the circulation.

Dr. LEITH NAPIER thought that in private practice a hot saturated solution of boracic acid was best for douches. In hospitals sublimate solutions were suitable, but they should be very diluted. Strong preparations coagulated albumen. It seemed better to employ a solution which, by absorption, might act generally as well as locally. He thought that mercury was eliminated not only by the intestine (where the unabsorbed portion was found as an insoluble sulphide), but by all the secretions.

Dr. LEWERS said that, during the year 1887, 962 women had been delivered in Queen Charlotte's Lying-in Hospital, with only two deaths.

Dr. BOXALL then replied. He thought that the direct passage of sublimate into the system was quite exceptional, and occurred when other antiseptics were used. In the rules for the administration of the douche, included in his paper, he had made allowance for ballooning of the vagina and uterus. The coagulating action of sublimate did not necessarily imply that its antiseptic influence was strictly local, still less that absorption of mercury was prevented. The coagulum at first formed was soluble in excess of albumen. Sublimate brought into contact with albumen was at first precipitated, and mercury in considerable quantity might thus be retained within the passages. But the action of the albumen of the blood and tissues dissolved the coagulum, which was then liable to be absorbed. The primary precipitation of the mercury tended to retention (hence a further reason, were any needed, for complete evacuation of the uterus), whereas the faculty for being redissolved might ultimately result in a large influx into the tissues. Whether the solution of albuminate in excess of albumen was itself a reliable antiseptic required elucidation. In conclusion, Dr. Boxall insisted on the superiority of perchloride of mercury over iodine and other antiseptic agents.

HARVEIAN SOCIETY.

Antiseptics in Internal Urethrotomy.

A MEETING of the above Society was held on May 17th, Mr. W. Sedgwick, President, in the chair.

Mr. BRUCE CLARKE read a paper on the Value of Antiseptic Precautions in Internal Urethrotomy. Attention was drawn to the fact that this operation had been advocated for many years in certain cases of stricture which do not yield readily to dilatation, yet it had never been generally accepted by surgeons. This was due partly to the fact that its results were not supposed to be good, and partly to the dangers of the operation itself. As to its results, it was often urged that the worst strictures were always those in which urethrotomy had been performed. Of course this was perfectly true, but it would be fairer to state that it was only the worst strictures that were submitted to urethrotomy. If strictures were neglected after the operation they of course recurred, and this gave a certain currency to the idea that it was the internal urethrotomy that had made them relapse. The dangers of the operation were dependent upon septic fever; and it depended upon either self-infection from a septic urethra or on dirty instruments.

The latter source of infection could be easily guarded against by the thorough cleansing of instruments and catheters; whilst the purification of the urethra was no easy matter. To effect this, however, as far as possible, the urethra should be irrigated with sublimate (1 in 2000) for several days beforehand, and, upon the stricture having been divided, the bladder should be washed out with a similar solution and then with hot water at a temperature of 105° F. Afterwards a catheter should be tied in for twenty-four hours. By this means the urine came very little into contact with the urethra, and septic infection was avoided. Fifteen cases were related in which the plan had been successfully tried by the author, and he alluded to some in which the plan had been suggested to other surgeons.

Mr. SWINFORD EDWARDS said that in the last six internal urethrotomies which he had performed he had not only carried out the suggestions of Mr. Bruce Clarke, but had administered boracic acid before the operation and for a few days after with a view of sterilising the urine, as suggested by Dr. Palmer. In none of these cases did urinary fever supervene. But, brilliant as was internal urethrotomy, he believed that the time was soon coming when it would be almost if not entirely supplanted by electrolysis for strictures in the deep or fixed urethra which were unfitted for the simple treatment by dilatation.

The PRESIDENT spoke in favour of corrosive sublimate as an antiseptic. But he regarded the prolonged suppression of urine and other severe symptoms which had followed the operation in the case referred to early in the paper as more due to shock than blood poisoning.

Mr. BUCKSTON BROWNE was interested in finding that an advocate of electrolysis in the treatment of urethral stricture still practised the operation of internal urethrotomy. He should like to know why electrolysis was not employed in the cases first detailed. He had practised internal urethrotomy now for fifteen years, and had never lost a case; he therefore knew nothing of septicæmia as following the operation. He took great care to ensure the utmost cleanliness of all instruments employed. He entirely dissented from Mr. Clarke's view that urethral fever was of septic origin, and maintained that the most perfect antisepticism would never do away with urinary fever in certain cases after urethral operations, because the fever was caused by urethral shock or irritation, acting reflexly through the nervous system upon the excretory renal apparatus.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

The Society held its summer meeting at Cambridge, on Saturday, June 23rd. A very full meeting assembled to hear papers upon a number of topics.

Professor Macalister showed a series of specimens which, in the short space of three months, he had collected from the Cambridge dissecting-room. Very curious conditions of the bones of the skull were exemplified by specimens shown by Dr. Curnow and Dr. Johnson Symington, and the latter gentleman also had a very instructive series of frozen sections through the pelvis. Perhaps Dr. Gaskell's communication excited the greatest interest. He laid before the Society his latest views upon the morphological value of the neuroglia of the spinal cord and brain, and exhibited specimens illustrating a canal which he has lately discovered at the hinder part of the tuber cinereum, and which he deems equivalent to the cephalic stomach of crustaceans. The brain was also the subject of Dr. Alex. Hill's paper on the subcallosal convolution; and Dr. A. M. Paterson, of Manchester, showed a series of specimens illustrating the development of the spinal nervous system. Mr. Treves described a case of hernia into the foramen of Winslow, which, he incidentally said, had been found in a patient operated upon for abdominal obstruction.

After the meeting the members and visitors, to the number of sixty, were entertained by the President, Professor Humphry, to dinner in the hall of King's College. After-dinner speeches were made by Sir George Paget, Professor Newton, Professor Michael Foster, and others. The toast of the evening, "Success to the Anatomical Society of Great Britain and Ireland," proposed by the President, was received with great enthusiasm, and responded to by the secretary, Mr. Lockwood, who was able to report that the Society was making most satisfactory progress.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Unreduced Dislocation Backwards of Bones of Forearm.—Acute Lobar Pneumonia and Chronic Bright's Disease.—Intestinal Obstruction.—Secondary Cancer of the Lung.—Pulmonary Artery with two Valves.

A MEETING of the Pathological Section was held on May 4th.

Dr. E. H. BENNETT exhibited a specimen of Unreduced Dislocation Backwards of the Bones of the Forearm, preserved in spirit, and with it six similar specimens, preserved after maceration. He said his object in bringing forward these specimens was to draw attention to the fact that, although the varieties and conditions of elbow-joint dislocation had been very fully described as regarded the point with which he was about to deal, the descriptions of this commonest of dislocations were, even at the present day, such as were calculated to mislead. They tended to errors of diagnosis. It had been admitted by Malgaigne and others that incomplete dislocation of the elbow was more common than complete dislocation. Incomplete dislocations, such as were illustrated by the recent and dry specimens before the Academy, had been allowed to go unreduced because they had not been recognised. To ignore the existence of the incomplete dislocations, or to teach that they were recognised by displacement of the olecranon "half an inch or more above the condyle" was to ensure that they would remain unreduced. Now, it was admitted that backward dislocations of the elbow were the most common variety of displacement of the joint, and of these the incomplete were the more common. In the moist preparation before the Academy no doubt could exist as to the relative position of the bones—a doubt that some might entertain in the case of the macerated specimens. In the words of Malgaigne, "the projection of the olecranon is on a plane sensibly beneath the projection of the epitrochlea, whilst in the complete luxation the olecranon is placed sensibly above that process." His attention having been directed to the subject by obtaining this recent specimen, he had thought it well to reiterate the statement of Malgaigne—though it was sufficiently distinct, and though it ought to be familiar to writers on the subject—that the incomplete form of dislocation backwards at the elbow does occur; that it is the more common form of dislocation of both bones, which, by being left unreduced, subsequently become museum specimens; and that it probably remained unrecognised because the test of the elevation of the olecranon, relied on in the descriptions of complete dislocation, is applied to it. It was very easy for an incomplete dislocation to be overlooked when a certain amount of swelling conceals the various features. The PRESIDENT said there had been no more important communication recently in the Section than that with which they had just been favoured. He would ask what symptoms this partial dislocation presented during life, whether it was easy of diagnosis, and whether Dr. Bennett had satisfied himself of its existence in the case of any living subject.—Sir WILLIAM STOKES asked what the signs were that would enable them to diagnose this injury during life. Where there was little or no alteration in the position of the olecranon relatively with the other osseous points, and remembering how rapidly swelling set in in the case of such injuries, the diagnosis of the exact nature of the injury seemed almost an impossibility.—Dr. BENNETT, in reply, said he desired first to refer to one point in which the complete dislocation, when unreduced, differed very markedly from the incomplete. In the latter form, when it was unreduced, the displaced bones assumed at their ends a quadrilateral shape, whereas in the complete dislocation there was nothing of the kind; the bones lay all free of each other, and there was no unusual modification of shape. With regard to the questions put by the President and Sir William Stokes, he could only repeat the words of Malgaigne, that in the incomplete dislocation "the forearm being a third flexed, the projection of the olecranon was on a plane placed sensibly beneath the projection of the epitrochlea, whilst in the complete dislocation the olecranon was placed sensibly above."

Dr. JAMES LITTLE communicated a case of Acute Lobar Pneumonia and Chronic Bright's Disease in a boy aged four years. This boy was admitted into the hospital under his care on March 31st of this year. According to his mother's account he was in perfectly good health until two

days previously, and on the day before his admission was playing about the house. The only thing she noticed—and it was what led her to bring him to the hospital—was that he had become swollen all over the body. The swelling first appeared in his face. When admitted he presented the typical appearances of a case of acute Bright's disease. He was extensively anasarcaous, and there was some ground for believing that fluid existed in the peritoneal sac. He passed only four ounces of urine during the first twenty-four hours he was in the hospital—a quantity insufficient to float a urinometer, so that the specific gravity of the fluid could not be ascertained. It was muddy rather than high-coloured, and when boiled proved to be exceptionally albuminous, the coagulum filling three-fourths of the bulk of the urine. Under the microscope it showed an immense number of uric acid crystals and numerous granules. His temperature was rather high, exceeding 104°. He had a little cough, not much, and no special hurry of breathing, save that on one occasion, when put into a warm bath, his breathing rose to 76. He was recognised as a child that had been in the hospital ten months before under the care of Dr. Beatty for acute Bright's disease; and the record showed that before he left the hospital at that time his urine was entirely free from albumen. He lived only three days after his admission. The post-mortem showed a great deal of anasarcaous fluid and some pleuritic fluid. The kidneys, instead of being bloody and congested, were pale, with the exception of a slight zone of congestion at the base of the pyramids. On the thorax being opened, it was found that he had suffered from acute croupous pneumonia, which was not discovered during life. Three centres of pneumonic process existed, one in the middle lobe, and two in the lower lobe of the same lung. The kidneys were microscopically examined by Dr. Bewley, who found the convoluted tubules almost completely choked by swollen epithelium and albuminous material. It was difficult even in the light of the post-mortem to read the case. The impression on his mind after post-mortem examination was that it was acute pneumonia occurring in a patient who had previously been the subject of chronic Bright's disease; because it had been his experience that when pneumonia attacked a person who had previously been the subject of chronic Bright's disease it was rapidly fatal. The microscopic appearances found by Dr. Bewley hardly accorded with the existence of chronic Bright's disease. On the other hand, it was very difficult to understand why a child could become so extremely anasarcaous as this child was from acute Bright's disease, and have kidneys which, instead of being bloody and dripping, were much paler than kidneys usually were after death in cases of acute Bright's disease.

The chair having been taken by Dr. Bennett,

The PRESIDENT gave an account of three cases of Intestinal Obstruction, the Viscera of which were on the table. The first case was that of a man aged twenty-seven, who stated that he was quite well until Feb. 12th in the present year. On the 17th of that month he came to the dispensary, and was examined by Dr. Little, who found symptoms of intestinal obstruction; but after a minute examination could only discover a slight tumour in the inguinal region, which appeared to be obviously not a hernia, but an enlarged gland. On March 7th he came under his (Dr. Ball's) care in the hospital, and stated that since he applied to the dispensary he had had no fecal motions, save a little mucus, and that only after great straining. The glands on both sides of his groin were then enlarged, and in the right iliac fossa was a tumour nearly as large as a cocoanut. An examination by the rectum discovered a tumour pressing back the sacrum, which was as large as a fetal head. There was no fluctuation in any part of the swelling. All attempts to procure evacuation having failed, an exploration was made, and the interior of the peritoneum was found to be studded with small tumours, while in the iliac fossa was a large soft tumour, to which the small intestines were adherent. The colon, being free, was taken out, and an artificial anus was formed at its middle line, from which copious motions came that at first gave the patient great relief. Gradually, however, the fecal flow through the artificial opening stopped, and the man died with symptoms of obstruction higher up. At the necropsy an enormous mass of brown-like tumour was found filling up the greater part of the abdomen. When freed from the intestines and surrounding parts it weighed 10 lb.; and yet it had grown in less than six weeks. A portion of it surrounded the

rectum and pressed it so completely that nothing could pass through. The portion of the sigmoid flexure which was drawn out to make the artificial anus could be seen in the specimen. The immediate cause of death was not obstruction of the large intestine, but a secondary obstruction of the small intestine caused by the pressure of the tumour against the parietes of the abdomen. That this pressure produced complete obstruction was evident from the appearance of the intestine both above and below the seat of pressure. Dr. Purser had examined the tumour and pronounced it to be a sarcoma. The second case was that of a woman aged thirty-six, who was admitted into the hospital on March 20th. For a week previously she had been constipated with vomiting every day, and had taken a variety of medicines, but without effect. A marked feature of the case was that there was no evidence of distension of the intestines by gas. That led to the diagnosis of an obstruction high up, and on the same day laparotomy was performed. After searching for obstruction at the usual hernial point, they were guided by a portion of inflamed intestine to the left hypochondrium, and there found a large mass of intestine several feet in length, much congested, roughened on the surface, and tightly constricted by a ring formed in this way. A loop of the jejunum was adherent to another knuckle of the small intestine by a band from behind—the remains of which could be seen in the specimen,—and underneath this band was protruded the great mass of the ileum, which was constricted by a ring formed by the mesentery below, and at the sides by the knuckle of small intestine and the bands that connected the two of these together. A curious feature noticed at the time was that the greatest amount of congestion of the intestine, and presumably, therefore, the point of greatest strangulation, was not in the portion of intestine protruded underneath the band, but in the upper of the two loops of intestine connected by the band, as if the seat of obstruction and strangulation was at the higher loop. The operation relieved the symptoms; but the wound opened six days afterwards, and a portion of the omentum prolapsed, and the case became septic and the patient died. At the necropsy they were just able to find out where the obstruction existed. There was no general peritonitis about the seat of the obstruction. There was some inflammation of the omentum and also in the pelvic cavity. Although the case was septic, it was also afebrile, the woman's temperature never having risen above 99° during the ten days that she lived. The third case was that of a man aged sixty-nine, who was quite well until about three weeks before his admission to the hospital, when he began to suffer from loss of appetite, constipation, and distension of the abdomen. When he came in the distension was so excessive that no examination could be made. An examination by the rectum revealed nothing. A localised tympanitic distension of the abdomen was at first thought to be due to a dilated stomach, but that was negated by the passing of a tube. Ascites was noticed on April 4th, a week after he came in. The bowels ceased to act on the 11th of that month, and on the 14th he died somewhat suddenly. At the necropsy, a large quantity of ascitic fluid was found in the peritoneum, and the surface of the intestine was covered with little masses of secondary cancer like boiled sago. In the liver were found several little depressed umbilicated patches, such as they were familiar with in cases of secondary cancer. On searching for the focus of obstruction, it was found to be in the tissues surrounding the cæcum, where there was a large hard mass, the gut itself being considerably constricted. Below that point the large intestine did not appear to be obstructed, the great distension observed during life being apparently of the transverse colon, and therefore below the seat of the greatest narrowness. A section of the growth made by Dr. Weir showed it to be an ordinary cylinder-celled carcinoma, such as was commonly met with in the intestinal tract. A point which he was at a loss to understand was that they were unable to find any portion of the intestine in which the mucous membrane was implicated. The mass at the cæcum was entirely in the structure and outside the mucous membrane, differing in that way from ordinary cases of cylinder-celled carcinoma, in which the growth originated in the gland tissues of the intestinal mucous membrane.

The President having resumed the chair,

Dr. G. P. L'E. NUGENT communicated a case of Secondary Cancer of the Lung. T. K—, aged twenty-six, a metropolitan policeman, was admitted into the Whitworth Hospital on Feb. 8th, 1888. On admission he complained of great

weakness, and slight pain between the shoulders and lower part of the abdomen. He had a wasted, haggard, and anxious expression, and was sweating profusely. His temperature was normal, and pulse slightly accelerated. He had a slight cough, of which he did not complain, and a very scanty frothy expectoration. The respirations were not appreciably hurried. On examination of his chest very few physical signs could be discovered. There was slight dullness behind over the base, and fine râles could be heard over the lungs generally. The chest expanded well on deep inspiration without producing a cough, and there was no difference between the two sides as regards vocal fremitus and resonance. A few days after admission his right testis was found to be hard, slightly nodular, of about equal size with the other, without any adhesion of the skin. He remained in much the same condition for over a week; being greatly troubled by obstinate constipation. Enemata brought away a large quantity of scybalous masses, but this gave no relief to the steadily increasing pain in the lower part of the abdomen. The latter was retracted and tender on pressure, and the muscles rigid. On Feb. 23rd he was troubled with vomiting of a green fluid, which continued for some days. Hiccough was also present from time to time. On the 26th he complained of great pain over his heart and distressing palpitation, his pulse at this time being 130. These symptoms moderated in a few days, but the pain in his abdomen had by this time become so intense as to be almost unbearable. The sweating continued to be most profuse, occurring by night and day, and increased by the paroxysms of pain. He occasionally complained of a slight pain in the right testis. His temperature during his illness never exceeded 99° in the evening, and was normal or subnormal in the morning. His expectoration became abundant towards the close, but was always frothy and never bloody. He never complained of dyspnoea. Shortly before his death, however, his respirations were heard, and loud bubbling râles could be heard over both lungs. He died of asthenia on March 22nd. The patient's family history was good, and he never had had any serious illness himself. He noticed the hard lump in his testis about three months prior to admission, and began to feel generally unwell at the same time. He remained on duty till one month before admission.—*Necropsy*: On raising the sternum a small quantity of clear fluid escaped, and a large mediastinal gland had to be detached from the bone. The right lung was perfectly free and easily removed, but the left had some pleuritic adhesions, notably at the apex, and there was a small quantity of clear fluid in both pleural cavities. Both lungs were covered over in all parts with innumerable nodular masses, varying in size from that of a walnut to that of a pin's head, more or less round in shape, projecting externally and into the lung, covered over with a perfectly smooth layer of pleura. The nodules were yellowish-white on section, and were of rather soft consistence. The lungs internally were congested and œdematous. The mediastinal glands were much enlarged, and the weight of the lungs, heart, and glands collectively was 177 oz. The glands on the left side of the neck were enlarged and softened in the centre. The liver was enlarged; weight 84 oz.; pale in colour. Right kidney, 6 oz. in weight; pale. Left, normal. Spleen normal. Stomach and peritoneum free from disease. The abdominal glands greatly enlarged, particularly along the course of the aorta; some overlapping it, and one particularly large lying on the inferior vena cava, at the level of the third lumbar vertebra. Of the testicles the left was normal, but the right was hard and heavy, slightly nodular, but little increased in size.

Dr. A. W. FOOT exhibited a specimen of a Pulmonary Artery with Two Valves of equal size, and presenting no abnormal appearance other than unusual size. The heart exhibited was taken from a man aged sixty-nine, who had long been subject to aortic regurgitation.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—A silver wedding commemoration *fête* took place at this hospital on the 5th inst. It consisted of a flower show, concert, and floral competition between the various wards. The Princess Louise graciously attended, and was received by a deputation of the board of management and the medical staff, and conducted through the tastefully decorated wards. Her Royal Highness subsequently handed the awards to the successful competitors. The *fête* was well attended, and remained open till a late hour in the evening.

Reviews and Notices of Books.

Lectures to Practitioners. Tabes Mesenterica, by W. T. GAIRDNER, M.D., LL.D. *Phthisis Pulmonalis*, by JOSEPH COATS, M.D. London: Longmans, Green, and Co. 1888.

THIS volume contains the substance of lectures delivered by Professor Gairdner and Dr. Coats in the Western Infirmary, Glasgow, in October, 1886. It might suffice to say in their behalf, and as a recommendation for their perusal, that they are worthy of the distinguished writers who have judged rightly in submitting them to publication. In saying this we imply that they are characterised by a clearness of diction and directness of aim which makes such lectures especially valuable. Indeed, we may truly say that no one who reads them can fail to profit by their teaching, or even rise from their perusal without having his ideas upon tubercular disease in general, and upon pulmonary phthisis in particular, made clearer and more definite.

Dr. Gairdner takes for his subject "*tabes mesenterica*," which, as he properly points out, is a peritoneal rather than a mesenteric disease. His aim is to show—and he is successful in the endeavour—that both his own experience and that of others does not justify the unduly grave prognosis that is usually assigned to this affection. He quotes largely from French writers, especially Guersent, upon "*carreau*" (the common French term for the affection), and gives a lucid account of the clinical signs and symptoms of the malady. He proves to demonstration that its clinical features are so marked as to overturn the bias or prejudice which a too strict attention to morbid anatomy has been apt to create against its curability. He distinguishes two classes of the affection. The one is where abdominal swelling predominates early from peritoneal effusion, which rarely amounts to sufficient quantity for paracentesis; nor does he advocate recourse to this procedure, although cases (referred to at the close of the lecture) more recently recorded seem to show that not only simple paracentesis, but free incision and irrigation of the peritoneal cavity, are justifiable and successful remedial measures. The other variety is characterised by symptoms of peritonitis with gastro-intestinal derangement—as diarrhoea and vomiting. In treatment he dwells on the importance of well-regulated diet and the hygiene of the infant as prophylactic measures, and gives a modified approval to the application of cold recommended by Professor McCall Anderson, and to antipyretic remedies, his objection to such drugs being founded on their liability to derange digestion. The cases which form an appendix to the lectures are remarkable illustrations of the truths inferred, and support the statement that "*the dark prognosis of what has been termed tabes mesenterica, and the still gloomier picture given in systematic works of tubercular and chronic peritonitis, may, in some, even not a few, cases be relieved of its darkest shades.*"

In his five lectures Dr. Coats discusses the pathology of pulmonary phthisis in all its bearings. Distinguishing broadly the two forms—caseous and fibrous,—he shows how they are both essentially tubercular in nature, their anatomical differences depending upon individual powers of resistance. He then briefly describes the conditions of lung disease which are closely allied to phthisis, but in which the origin of the destructive process is dissimilar. These conditions are (1) syphilitic disease of the lung; (2) glanders and actinomycosis; (3) diseases due to foreign bodies, an admirable exposition of the pathological anatomy of "*pneumokinosis*"; (4) gangrene; and (5) chronic pneumonia. Caseous necrosis, he points out—thereby vindicating the position taken more than half a century ago by Laennec—is the central fact of phthisis. The relation of the bacillus tuberculosis to the lesions is, of course, fully

dealt with ; and it is shown that it is not the bacilli *per se*, but their products, which form the noxious agency leading to tubercular inflammation and necrosis. These products are probably soluble, and it is ingeniously suggested that, becoming more diluted as they spread from their source, they set up in remoter parts—e.g., the pleura—simple, non-infective inflammation. Another suggestive and true description, which goes far to explain the frequent limitation of phthisical lesions and their arrested spread, is that of tuberculosis being primarily a superficial process. It is unable to extend beyond the barriers set by animal membranes, although it spreads through lymphatic channels by continuity, just as it spreads along the track of mucous membranes. It is clearly shown that tuberculosis is not a blood disease primarily, nor does the blood become the channel of infection in any case unless and until the vessel walls are destroyed and the virus thereby gains entrance into the blood stream. We have seldom met with the localistic doctrine more explicitly stated, and the facts cited in its support are certainly very striking. The hopefulness which this deduction from pathological study gives to the treatment of the disease is apparent, and it is further strengthened by the description of the healing processes which are so frequently met with in the lungs. Dr. Coats also touches upon such etiological questions as inheritance, contagion, defective sanitation, soil, &c., and does not hesitate to express the conviction that, like leprosy, isolation might materially diminish the prevalence of the disease. The “early hæmorrhage” of phthisis is attributed to obstructed circulation from the presence of the initial lesions, and the rapid advance of the disease after hæmoptysis is set down to the effused blood forming possibly a favourable nidus for the bacillus. The doctrine of *phthisis ab hæmoptoe* cannot, of course, be accepted in any other sense than this according to present knowledge. There are also excellent descriptions of the concomitant lesions of phthisis ; and a section is devoted to the symptom of fever, the cause of which is to be sought in the local inflammatory processes, as well as in the suppuration and hæmorrhage, rather than regarded as evidence of constitutional infection. There is undoubtedly in this volume much that is original and suggestive, whilst the text is not overburdened with details and theories, which would have been out of place. In a word, these lectures are highly practical and thoroughly scientific.

A Text-book of Physiology. By JOHN GRAY MCKENDRICK, M.D. Vol. I. Glasgow : James MacLehose. 1888.

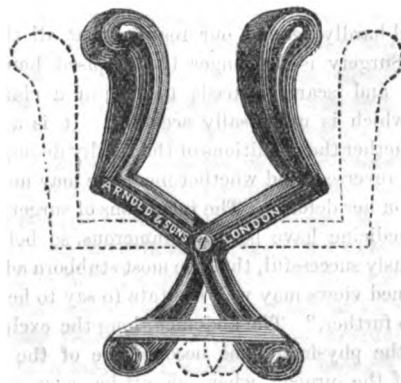
THIS book is practically a new one, and not merely a new edition of Dr. McKendrick's former treatise, entitled “*Outlines of Physiology*.” It is clearly the outcome of no small labour. It is written by a master of the subject, and contains an immense mass of information in a highly condensed form. As Physiology was formerly, and in some universities still is, termed the Institutes of Medicine, so the subjects treated of in the present volume might fairly be termed the Institutes of Physiology, for it deals with the foundations of that science, with its chemistry, physics, and methods of research. It is a matter of regret that the physics of physiology are not more fully discussed—a subject that has been well treated by Wundt amongst others. Some points have, indeed, been introduced, and doubtless others—such as light, heat, and sound—will be considered in subsequent sections. It is difficult to make the chemical relations of the body and its compounds attractive, but the first two hundred pages appear to us to be uncommonly dry reading, and some of the formulæ might well be a nightmare to the unfortunate student who, acting without the advice of a tutor, attempts to learn them, under the impression that they are of the slightest importance, or that they “might be asked.” A special chapter is devoted to the pigments, which is probably the most complete that has yet been published, and gives an account of all that have hitherto been

discovered, with drawings of characteristic spectra. A good account of fermentation is given. The next section deals with the physiology of the tissues, and with the earliest stages of the development of the ovum, the description stopping suddenly with the formation of the blastodermic layers. The apparatus employed in physiological research are then considered, including the microscope, staining agents, and section cutters, followed by an account of the properties of the connective tissues. The last section is devoted to the apparatus and details of the graphic method, and to the structure and properties of muscle. The drawings, tracings, and illustrations generally have been taken, by permission, from the *Lehrbuch der Histologie* of Professor Stöhr of Würzburg, and are extremely good. The perusal of the volume leads us more and more strongly to the view that some form of preliminary education should be insisted on before a youth is dedicated to the medical profession. It ought not to be necessary to explain the nature of a battery to the student, especially if on the very next page the teacher finds it imperative to give a formula of electric action so complicated that none but a highly educated student could understand it. Whilst giving a due meed of praise to the treatise, it is difficult to say for whom such a book as this is really intended. Surely no ordinary medical student would find it serviceable to burden his memory with the fact, and the formidable equation which follows it, that uric acid is regarded by Baeyer as formed by the union of a radical cyanamide with tartronic or oxymalonic acid. Yet the number of students of pure physiology is too small, we should have thought, to enable Dr. McKendrick to obtain a sale for his book at all compensating him for the great pains and trouble he must have had in writing it.

New Inventions.

COLOTOMY DILATOR.

IT not unfrequently happens after colotomy that at the end of the first week there is a tendency for the opening unduly to contract, and if this be not prevented, in the course of a few weeks it becomes so small as to destroy the benefit of the operation. The accompanying woodcut shows the form of a dilator made for me by Messrs. Arnold, which answers its purpose well. It is made of two pieces of vulcanite hinged in the middle. The blades are introduced closed into the opening, and, being curved, are self-retaining.



A light indiarubber ring slipped over the opposite ends of the instrument and kept in place by a notch causes the blades to expand, as shown by the dotted lines, and to exert pressure on the edges of the colotomy opening. The ring must be small, as the pressure required to gradually dilate the opening is very slight. If during the second or third week after a colotomy there is a tendency to contraction, the dilator worn for a few hours a day will effectually counteract it. When the wound is once firmly healed there is seldom any further contraction.

HARRISON CRIPPS.

THE LANCET.

LONDON: SATURDAY, JULY 14, 1888.

THERE are few things more remarkable in the history of our art than the altered relations established during the present century between surgery and medicine, a subject to which Sir WILLIAM STOKES has drawn attention in his recent Cavendish Lecture. A generation which has been dazzled with the brilliant achievements of surgery, and has watched with pride its victorious and unrelenting advance, finds it hard to realise that it was once a despised mechanical craft supposed to be fitly associated with the labours of the common barber. To this day one may see in the villages of Italy and elsewhere upon the Continent the sign of "barber and surgeon" hung out, to inform the passer-by that within he can be shaved or bled by the same operator as occasion may arise. Even in our own country, within the memory of men still living, the surgical branch was universally regarded as inferior to the medical, a striking instance of this prevailing view being given by Sir WILLIAM STOKES, who relates that the well-known Dublin surgeon ABRAHAM COLLES was accustomed to tell how, at the commencement of his practice, when consultations were held, "the surgeon was not, as a rule, permitted to be in the room where the physicians held their deliberations, but after the consultation was over he was informed whether his services would be required or not." This presumed inferiority of surgery to medicine probably arose from the mistaken notion that the surgeon was simply an operator, and that diagnosis was the exclusive function of the physician. Probably, too, the universal prevalence at one time of the practice of bloodletting helped to degrade surgery in the eyes of the world. It is not surprising that the man who was chiefly seen with lancet in hand should sink in popular repute to the level of the wielder of the razor.

We need hardly remind our readers that all this is now altered. Surgery is no longer the despised handmaid of medicine, and scarcely needs to put in a claim to an equality which is universally accorded. It is a question indeed, whether the conditions of the rivalry do not threaten to become reversed, and whether medicine may not ere long be put upon her defence. The incursions of surgery into the field of medicine have been so numerous, so bold, and so conspicuously successful, that the most stubborn adherent of old-fashioned views may well hesitate to say to her, "Thus far and no further." The abdomen, long the exclusive province of the physician, has become one of the favourite domains of the surgeon, where his art has won some of its most amazing triumphs; and even the brain has yielded to surgery results which medicine would in vain strive to achieve. The growing relative popularity and success of surgery are no doubt due to the fact that its methods admit of greater precision than those of medicine. Even if we demur to the truth of the celebrated sneer that surgery might be defined as "*quod in medicina non dubium*," it cannot be denied that surgical diagnosis

and treatment are now securely founded on a basis firmer and less hypothetical than the sister art. Another secret of the rapid growth in favour achieved by surgery in recent years is to be found in the fact that its progress has been positive, while that of medicine has been to a large extent negative. Surgery has been adding to the contents of its treasury, while medicine has been heavily handicapped by the necessity of devoting much time to the inevitable but unsatisfactory work of clearing out the debris of exploded systems and worn-out theories.

Sir WILLIAM STOKES acknowledges, however, without stint, the great obligations of surgery to medicine, such as Professor FERRIER'S investigations regarding the functions of the brain, which laid the foundation of the surgery of that region; and comments upon that most gratifying sign of these times—that surgery and medicine, no longer mutually opposed in a strife that was truly internecine, are now heartily co-operating, with the promise of a more rapid progress in the future and of untold benefit to the race.

There can be no doubt that medicine and surgery appeal to different types of mind and call different faculties into play, and it is one of the glories of our profession that it can afford scope and satisfaction for the most diversified intellectual gifts. There need be no unseemly rivalry between those who, although employed in different departments, are yet labourers in a common field and co-workers towards a common end—namely, the advancement of knowledge and the relief of human suffering. The surgeon cannot say to the physician "I have no need of thee," nor would similar language be any less inept if employed by the latter towards his colleague and co-worker. Surgery has gained much of late, but its gain has been less the loss of medicine than the extension of its own legitimate domain.

THE occurrence in lunatic asylums of fatal and unexplained casualties periodically produces in the public mind a feeling of suspicion in regard to the management of these institutions, manifested in the daily papers by condemnatory articles; and it is noteworthy that the excitement thus engendered is usually exactly proportioned to the proximity to the metropolis of the asylums implicated.

Vague memories of the past history of the asylum treatment of the insane still tend to give a mystery to these institutions, and to attach a peculiar horror to any untoward event occurring in them. These feelings are only too apt to sway the judgment of popular opinion, leading to the wholesale condemnation and denunciation of all connected with asylum management—conclusions that a better informed and less emotional view of the subject would show to be unjust and not calculated to help in the prevention of these deplorable incidents. The popular conscience, as expressed in the newspapers, having relieved itself by its execrations, goes virtuously to sleep until its next spasm of activity; nor does it reflect that it is itself responsible for permitting a condition of asylum organisation which renders such occurrences inevitable, and causes their comparative rarity to be the real source of astonishment.

To arrive at a dispassionate conclusion in a given case of unascertained injury, a general consideration of the circumstances under which they occur is desirable. That

the bones of the insane are in certain conditions diseased, in a manner that increases their fragility, is a well-established pathological fact, and although an excited fellow-patient would not probably be influenced by this consideration, it should be an additional reason for gentle treatment and constant skilled supervision, but should not constitute a plea in excuse of fractures resulting from violence. These casualties may be relegated to the following categories—viz., those resulting from the acts of the patient (suicidal, from excitement &c.); from the violence of fellow-patients; from accidents in struggles with attendants, who fail to report them from ignorance or fear; and, lastly, from intentional violence by attendants from loss of temper, &c. The question in any given case is, To which of these classes can it be referred? Let an impartial inquirer visit some of our monster asylums and mark the number of excitable inmates associated, not infrequently crowded, together. Let him inquire of an attendant who has charge of a ward containing, it may be, more than a hundred patients, whether some of these are not at times in places where they cannot be seen, and whether it is possible for him to supervise the whole of his ward at any given moment. Ask a medical officer responsible for the care of a thousand or fifteen hundred lunatics if he knows them all, even by name; ask him the number of hours the medical staff has to devote to making reports, filling up returns, "keeping" statutory books, and other multifarious duties, apart from their true medical functions. Then let our inquirer compute the number of hours that would be occupied did each patient obtain the attention of a medical officer for one minute daily, and let him compare even this impossible amount of attention with that given to a medical case in an ordinary hospital by clinical clerks, medical registrars, resident and visiting physicians. A further inquiry in regard to the general character of asylum attendants would show that these are not, as a rule, the monsters in human form whose sole amusement consists in promenading on the forms of their prostrate charges, as they are commonly depicted in the panic sketches, but that they earn the gratitude and friendship of many of the five or six thousand persons annually discharged recovered from these institutions. If the inhumanities charged against asylum attendants were so rife, surely some of the thousands yearly liberated would bring their grievances before the public. That black sheep may be found among them, as in other classes, is only to say that they are human; but to assert that they are generally inhumane is a libel on a class of persons, many of whom bring to the discharge of their duties untiring patience and sympathy, deserving of high praise. That asylum attendants are comparatively deficient in special technical training is only one result of the insufficiency of the medical staff of asylums; improvement in this respect would do much to remove the ignorance that prompts to the employment of force in place of skill.

The conclusions to be drawn from these considerations are: that opportunities constantly occur for patients to come into collision with one another, or with their junior attendants, apart from higher supervision; that the true cause for astonishment is the infrequent occurrence of such

casualties, or that they are not more commonly overlooked by the inadequate medical staff.

The British public in its philanthropic moods is wont to point with pride to our gigantic, often palatial, pauper asylums; but this feeling might well be replaced by one of shame, that the practical utility of these costly structures is in many cases greatly impaired and their working rendered defective, by a mistaken parsimony in their medical equipment. If the cost of the medical staffs of these institutions be compared with their total expenditure, it will be evident that niggard outlay in this, their most important function, is indeed a "spoiling the ship for a ha'p'orth of tar."

We have for many years urged that these institutions should no longer be regarded as mere places of detention for lunatics, but as hospitals for the treatment of the insane, and that their medical organisation should be approximated to that of ordinary hospitals. In asylums adjacent to London this could be effected with little additional cost, with great advantage to the treatment of the insane, and with an increase of skilled supervision that would reduce the possibility of undetected injuries to a minimum.

A weekly contemporary quotes a definition of manslaughter as "death caused by the culpable negligence of someone on whom the law casts a duty," and in this way would convict of manslaughter the authorities of an asylum in which such a death occurs; if this were admitted, some share in this indictment should also be borne by the Commissioners in Lunacy who tolerate the existing defects.

We trust that both the Lunacy Commissioners and the Asylum Committees will appreciate at length the necessity for a more thoroughly medical organisation of our pauper asylums, and until this is done we venture to predict that the public will still be horrified from time to time by the deplorable incidents we have had under consideration.

AFTER taking the initiative and originating the agitation which has culminated in the appointment of a Royal Commission by the House of Lords to investigate the Sweating System as practised in the East-end of London, we have sought to carry the question further afield. Consequently we have prepared and published special and lengthy reports on sweating at Liverpool, Manchester, Birmingham, the Black Country, Leeds, Edinburgh, and Glasgow. This has been a work fraught with many difficulties and some personal risks, but it has resulted in the collection of a mass of evidence which clearly establishes that the grievance exists in the provinces as in London, and that there is as much need for inquiry there as here. We have also shown that, so far as the interests of public health are concerned, legislation is urgently required that will affect not merely the sweating dens, but also the first-class order shops and the private homes of the individual workers. In this respect the evidence collected in each town, in each great centre, always coincided. There were master tailors who worked for the best families in the district, who charged the highest prices and paid their workpeople the best wages in the trade, and yet were content to provide workshops that were as dirty, as overcrowded, as badly ventilated and drained as some of the sweating dens. Indeed, it often happened that, from a sanitary point of view, the sweater's workshop was preferable to the workshop where gentlemen's

clothes are made to order. Sanitary regulations must therefore be enforced with even hand in all branches of the trade.

It does not follow that because a customer pays a large price for his clothes, and orders them from a tailor of the best repute, that they will be free from the danger of contamination. Not only may these clothes be contaminated, but they may be made by sweaters. Even where the customer—to relieve his anxiety—is shown into the workshop, it will often be found, on closer inquiry, that it is only the coats that are made in such places. The trousers and vests are given out to be made elsewhere—sometimes by home workers, sometimes by sweaters. This is more particularly the case when the clothes have to be made in great haste. The customer will do something towards abolishing the sweating system by ordering his clothes well in advance, so that the master tailor may have time to have them made by his own hands and on the premises. But, unfortunately, the tendency on the part of master tailors is to employ a smaller and still smaller quantity of workpeople and to send their orders out to the sweaters. It is therefore really necessary that the public should know how and where the clothes they wear are made. At present, though the customer may pay the highest prices, go to a first-class tailor, and even visit a model workshop that may possibly be shown to him, still he is not safe. If the coat is put together in the model workshop by men who are fully competent and receive a good rate of wages, the trousers and waistcoat, we repeat, may either be given over to a sweater or taken to the private home of some journeyman tailor.

The question of work done in private homes is a very serious matter. In every town visited a special point was made of this phase of the problem. By home work both sanitary laws and the Factory Act are defied. The tailoress remains the regulation hours in the order shop, in a factory, or in a sweater's workshop; but then she takes more work home, and there continues to labour, though she has already done the ten hours' work, which is the farthest limit fixed by the Legislature of this country. Also the workshop or factory may be in a good sanitary condition, but who shall answer for the state of the private and poverty-stricken homes, tenements, or lodgings, where the tailoress takes the work during the night? Sometimes the wages book is shown, and the visitor is called upon to believe that the workwomen are earning an ample livelihood. This would be the case if they only worked the stipulated number of hours; but when to these we add the night-work done privately at home, and the help perhaps received from friends or relatives, then the pay will seem shamefully insufficient. Again, there is much to be said concerning the irregularity of employment. Wages should never be judged by a weekly return, but by a yearly average. As the tailors remarked at Liverpool, they "often did nine days' work in a week." The private purchaser can do a great deal to remedy this by not waiting until the last moment before ordering his summer or winter suits. The great companies that require many uniforms, and, above all, the Government and the municipalities, can do still more by giving their orders in the dull season. This was advocated at some length in the report on sweating at Edinburgh. In Liverpool, the

most urgent representations were made to our Commissioner against overtime; so much so, indeed, that the tailors showed themselves disposed to see the provisions of the Factory Act extended to male adults. The better class tailors were also very willing to place their private homes under sanitary inspectorship. It is under the cover of the secrecy which the privacy of the home renders possible that most of the abuses have arisen. Throw these private homes open to the sanitary and factory inspectors, and it will be possible to control at once the hygienic and the economic condition of the workers.

With regard to extending the provisions of the Factory Act to the adult male population, it will be objected that this will expose England to disastrous foreign competition, as abroad even longer hours are worked. On the other hand, it must be borne in mind that at the great International Congress of Hygiene held in Vienna last September the extension of the principles of our Factory Act to the male population was approved by the adoption of a resolution in favour of an International Ten Hours Bill. For the preservation of public health the representatives of thirty nationalities endorsed the opinion that ten hours' work was enough for men as well as for women; and, to prevent unfair competition, it was agreed that such rules should be equally applied by all civilised peoples. Some of the governments of Europe are not indisposed to entertain proposals of this description; and it is hardly necessary for us to say that, so far as the health of the community is concerned, the limitation within reason of the hours of labour must be beneficial. Overtime, or the excessive prolongation of labour, is doubly injurious, first to the health of the overworked, and secondly to those whom such overwork keeps out of employment, and who too often are thus deprived of the necessities of existence. Frequently, in the tailoring trade, we have found that, while one tailor is working sixteen hours a day, another is literally starving in idleness; both are therefore injuring their health, and thus compromising not only their own existence but that of their children. These are the sort of influences which cause a population to degenerate, and which the great publicity given to such questions must help to remove.

DR. RUSSELL, medical officer of health for Glasgow, has now issued a complete history of the peculiar outbreak of febrile disease which took place in March last in St. Mary's Roman Catholic Industrial School in that city, and he includes in it a note on the clinical aspect of the disease by Dr. SAMSON GEMMELL. The disease commenced on March 2nd, when a boy, complaining of headache, was sent to bed in his dormitory. Next morning, when he rose, he was noticed to be unsteady, and was hence sent to the sick-room, where he died at 8 A.M. Four other boys died with much the same rapidity, generally after becoming unconscious, by the 8th of the month; and then followed no less than thirty-one attacks between that day and the 13th. With intervals between two fresh batches of attacks, 66 boys and 2 girls in all sickened, out of a total of 207 boys and 194 girls, the only girls attacked being two who worked in a kitchen common to the two schools. Amongst the more prominent symptoms were headache, nausea and vomiting, pain down one or both

sides, a temperature of from 102° to 105° F., pneumonia in seventeen cases, herpes and certain spots about the skin, such as purpuric and other patches. The disease was practically limited to one of two kindred institutions—namely, the boys' school; and it was found that no special set of boys was exempt, whether age, condition, habits, or location are considered. The schools lie near an old burial ground, where many who died of cholera in 1848 were interred, and which has been used for recent interments until it is both greatly overcrowded with bodies and in a state of rank disorder. The schools were remarkable for general unhealthiness, for their unwholesome position, for overcrowding, and for maintained prevalence of infectious disease; the boys' school being in almost all respects the worse of the two. Pneumonia and chronic lung disease were also very constantly prevalent, especially amongst the boys, the disease being associated with deficient air space both within and without; and in the face of these conditions, such ameliorations as were carried out had, practically, no effect in improving the standard of health. An institution thus unhealthy serves to receive the waifs of a large city, tainted with a proclivity to scrofula, and generally of low vitality; and amongst the causes of death that usually prevail there, that from pulmonary mischief has been enormous. After considering the special outbreak clinically and etiologically, one is bound to assume, with Dr. RUSSELL, that the disease in question bore much resemblance to a specific febrile affection tending to implication of the lungs and to pneumonia. The post-mortem appearances also went to indicate a poison much resembling that of enteric fever, and, as is pointed out in the report, much is already known that suggests a causal affinity between certain forms of pneumonia and enteric fever. The prevalence of an epidemic pneumonia is also now generally recognised, the disease being at times of a pythogenic type. Dr. FINLAYSON, who saw some of the cases, believed them to be instances of epidemic or infectious pneumonia; Professor GAIRDNER was inclined to style them influenza of a malignant type; but Dr. GEMMELL regarded the clinical features as pointing not so much to the epidemic type of pneumonia as to the same disease having a local origin, and telling with exceptional severity upon boys of low constitutional vigour living under unwholesome circumstances. The possibility of a chemical poison due to changes in food was excluded, because both the girls' school and the boys' school were dealt with alike as regards food supplies, and the only two girls affected had been working in the boys' school. A number of somewhat similar occurrences in other places are recorded by Dr. Russell in the report he has prepared; but whilst the story is interesting in the extreme, we find much the same difficulty that he does in distinctly assigning to the disease any special name, and in expressing a definite opinion as to the precise condition by which it was induced. There seems, however, little doubt that the condition in question was either included in, or brought about as the result of, those grave sanitary defects under which the children of this school have been aggregated together, and it is to be hoped that those who are responsible for this condition of things will forthwith take the proper measures to secure their remedy.

Annotations.

"Ne quid nimis."

THE CASE OF THE LATE EMPEROR FREDERICK.

A COPY of the report in German issued in Berlin by a majority of the German medical men lately in attendance on the Emperor Frederick has been brought to our notice. A summary of a portion of this has been published in the daily press, and has naturally excited the deepest attention. The report certainly appears to us to be of an *ex-parte* nature, and, until the reports of the other medical attendants on his late Majesty are produced, of a one-sided character. Some of the statements in this document are so strong and so grave that we feel it would be unjust to make the slightest comment until these additional reports are also before us. We wait with anxiety for further evidence, fully prepared when the proper time shall arrive to criticise the case in its entirety.

THE LATE ELECTION OF COUNCILLORS AT THE ROYAL COLLEGE OF SURGEONS.

ONCE more have the Fellows of the College discharged their ephemeral duty in personally repairing to Lincoln's-inn-fields and recording their votes in favour of their chosen candidates. The majority of votes were given to Messrs. Cadge, Bryant, and Pick. Mr. Cadge, a provincial surgeon, and one of the least conservative of the three in his leaning, headed the poll. We notice that one candidate, out of ninety-three votes, secured no less than eighteen plumpers. This practice of plumping appears to be foolish and undignified; it is far better to vote for as many candidates as there are vacancies; and considering how infinitesimal the exercise of any Fellow's privilege is on Collegiate discipline, it is not asking too much that his individuality should be impressed on each vacancy, and that he should be competent to select the best number of men for the number required. We cannot imagine that the defeated candidates are much to be pitied; any really independent man would soon chafe under the rub of traditions, and tire of the monotony of routine in the council-room. We cannot but think that some special inducements must exist in explanation of the long-suffering and tenacity therein exhibited; or possibly, amongst the *secreta Collegii*, some precious balm is stored for assuaging or preventing such sources of irritation and *ennui*. Nor are we by any means surprised at the resignation by surgical leaders and men of high fame of their seats on the Council, or of the disinclination exhibited by our best men to offer themselves as candidates. The position of an enlightened administrator at that board is not an enviable one; his steps in progress are hampered by the trammels of officialdom, and he retires disheartened. The interest evinced by the Fellows in the recent election was small; only 180 Fellows took part in it; this want of sympathy is due partly to the marked indifference of many Fellows to collegiate matters, as well as to the restraining inconvenience of personal service. Moreover, its tameness may be accounted for from a general feeling that it was the last to be conducted on ancient lines and under ancient influences. Now let us consider the position of members of Council towards those Fellows who have elected them. After the day of election, so far as the transaction of business is concerned, or the discussion of collegiate subjects of interest (surgical, social, or political), the twenty-four elders inside bolt the College doors against the Fellows outside. For eight long years the councillor is master of the situation; he can snap his fingers at any complaining or indignant Fellow or Member; he, individually, exercises more power, more influence, than the

totality of Fellows and Members outside the Council; even at the annual meeting a Fellow's control over his representative is *nil*. He may speak, he may vote; but neither speech nor vote carries any direct power over the Council. We are of opinion that the present octennial duration of a councillor's existence is far too long; and that his power for good or evil should be reduced in time by one-half; the arrangement that six men should retire annually from the Council, instead of three, would fulfil this condition. This proposition was made to the Council by the Association of Fellows, but the committee of Council refused to entertain it, giving as its reason that "the usefulness of any member of the Council very largely depends on his experience of all the varieties of College business, whether in the Council or in the several committees." By parity of reasoning, we think that his harmfulness very largely depends upon the time allowed him for the exercise of his function. But the increasing force of these complaints on collegiate custom does not augur well for the College. We uphold the truism that the strength of any body corporate depends upon the strength of its individual component parts; that the house divided against itself cannot stand; and that a comprehensive yet moderate reform would tend to promote the well-being of the College, raise it in the estimation of its Fellows, Members, and the public; and render its working more pleasant and effective by reducing to a minimum the friction of many against the counter-stroke of a few.

THE DETECTION OF SACCHARIN.

THIS product, prepared from that apparently never-ending source of new compounds, coal-tar, has now found its way into so many valuable therapeutic preparations that the identification of its presence has become important. Its composition is expressed by the formula $C_6H_4 \left\{ \begin{smallmatrix} CO \\ SO_2 \end{smallmatrix} \right\} NH$, and the name given to it by chemists is, therefore, benzoyl sulphonic imide. It combines easily with bases—indeed, even with alkaloids; and displaces the carbonic acid in alkaline carbonates, salts being formed which are very much more soluble in water than saccharin itself, and which do not lose in any degree the well-known powerful sweet taste. It is on account, in fact, of its poor solubility in water that most of the saccharin preparations of commerce contain it, combined with a base—carbonate of soda being very generally used. If to such a solution a little sulphuric acid be added, saccharin is thrown down as a white amorphous powder. With alkaloids, such as quinia and morphia, the reverse is the case; they are soluble in acids, forming salts from which the alkaloid may be precipitated by the addition of a base or alkali. Hence the following simple method for the separation of saccharin from preparations said to contain it, such as biscuits, bread, cakes, &c. The sample is macerated thoroughly with water, to which a little solution of carbonate of soda has been added. The liquid mass is then filtered, and the clear liquid made acid with a little sulphuric acid. It is then shaken up with ether. The ether will readily dissolve the saccharin which has been freed by the acid. The ether is then drawn off and evaporated, and if saccharin is present a white residue of intensely sweet taste will be obtained. The residue may be examined further. When saccharin is fused with a mixture of nitre and carbonate of soda the fused mass contains sulphuric acid. Accordingly, if the mixture is dissolved in water and acidified with hydrochloric acid, the addition of barium chloride gives a white precipitate of barium sulphate. Saccharin, when heated with a small quantity of caustic soda at 250° centigrade for half an hour, is converted into salicylic acid, which can be separated by the addition of acid and ether, and detected in the usual manner, an aqueous solution of salicylic acid giving a beautiful blue colouration with perchloride of iron.

THE PROGRESS OF THE ROYAL COMMISSION.

THE Royal Commission on Higher Education in London has now heard Sir George Young, Mr. Erichsen, Dr. Wace, Sir Joseph Lister, and Dr. Priestley on the part of University and King's Colleges; Professors Bastian, Graham, Lankester, Hudson, and Thomson as representing the professorial staff; the Bishop of London at his own request; Sir Andrew Clark, Sir Henry Pitman, Mr. Savory, and Mr. Bryant on behalf of the scheme of the Royal Colleges of Physicians and Surgeons; and Lord Justice Fry, Sir James Paget, Sir John Lubbock, and Dr. Wood as representing the Senate of the University of London. Sir P. Magnus, Mr. Anstie, and Dr. W. J. Collins will be called on Saturday next to express the views of the members of Convocation of the University; and Dr. Allchin will attend as representing the wishes of the staffs of several of the medical schools. Dr. Norman Moore, Dr. Bristowe, and Mr. Rivington have been appointed to give evidence on behalf of their respective schools; and Mr. Marshall has still to be heard for the Association for promoting a Teaching University in London. So that, unless representatives of the Scotch and other Universities and other interested bodies are also forthcoming, the evidence will soon be brought to a close. Whatever may be determined on by the Commission as regards the medical difficulty, we hope that no credence is to be attached to the rumour that a proposal has been made by the authorities of the University of London to institute a second medical degree of a much lower standard than the present, differentiating it from the M.D. London by some such title as "M.D. Middlesex."

SUSPENSION OF THE UTERUS FOR PROLAPSUS.

DR. MALANCO has recently brought before the Mexican Academy of Medicine an operation which was practised for the first time more than three years ago for the relief of prolapsus uteri, and which, it is claimed, possesses advantages over the use of pessaries and over Alexander's operation of shortening the ligaments. The Mexican operation is denominated "suspension of the uterus," and it has been performed during the course of the last twelve months no less than eight times in the hospital Angel González Echeverría in Mexico, the unilateral and the bilateral operation being each employed four times. In all the cases the results were satisfactory in a greater or less degree. The operation consists essentially in making a track, whose walls become indurated and indistensible, between the fundus of the vagina and the external surface of the abdomen just above the horizontal ramus of the pubes. At first it was proposed to employ the thermo-cautery, but this was abandoned on account of the danger of the heat given out by it affecting the peritoneum, and also because it was found that the retraction caused in the subperitoneal cellular tissue was insufficient, though that set up in the dermis is, as is well known, considerable. It was then determined to pass a thread or ligature through the track, and thus temporarily to tie the vagina to the abdominal wall until the tissues had become sufficiently retracted. Catgut was employed for this purpose, but, though admirable for its antiseptic qualities, it did not last long enough to accomplish the desired effect. A thread of silver wire has latterly, therefore, been substituted. This is made into a loop, which passes round a bit of metal in a piece of gum-elastic catheter, which acts like the quill in a suture, and is retained in the vagina. The other end is passed out above the pubes, and retained by a piece of lead. Iodoformed ether is injected into both extremities of the canal. Cotton-wool and collodion impregnated with corrosive

sublimate is applied to the external wound, and frequent antiseptic irrigations are practised per vaginam, with the object of keeping the internal wound free from septic matter. There is no need to tighten the wire much. It is then well borne, and it can remain until the track around it becomes lined with tissue of a sufficiently resistant character. This of course forms a hollow cord connecting the vaginal mucous membrane with the skin of the abdominal wall. In one case by some accident the wire got broken in a fortnight. This was quite time enough to fix the uterus in its proper position. If, however, this kind of thing happens, there is no difficulty in passing a new wire without making any fresh wound. Indeed, the patient herself may be taught, in case of need, to reapply the wire ligature. The advantages of the suspension operation over pessaries are said to be that the vagina is not obliterated or dilated, the neck of the womb is not irritated, and the facilities for cleanliness are perfect. It is expected by the Mexican practitioners who have devised the operation, that it will be much practised abroad, and they even suggest that the credit of its invention will probably be claimed by some foreigner!

WHAT IS THE PRESENT POPULATION OF OUR LARGE TOWNS?

ON Monday evening last Clause 30 of the Local Government Bill was so amended, on the motion of the President of the Local Government Board, that all boroughs which on the 1st of June, 1888, had a population of not less than 50,000 will by the Act be constituted as counties, and will be exempt from the jurisdiction of the County Councils. In the discussion which took place upon this amendment, and on a further amendment to the effect that all boroughs having a population of 25,000 should be exempted from the jurisdiction of the County Councils, Mr. Ritchie explained that it was the intention of the Government to exempt "any borough which gave to the Local Government Board satisfactory proof that it now had 50,000 inhabitants." Bearing in mind that it is now more than seven years since the last census was taken, it will be more than interesting to know the nature of the "proof" that will be held by the Local Government Board to be "satisfactory" as to the present population of our large towns. There are many towns, judging from the population enumerated in 1881, that must now be on the border-land of that coveted 50,000 inhabitants that will entitle them to be exempted from absorption in the County Councils, and to existence as separate counties. The marked and long-continued commercial depression which has undoubtedly affected the growth of towns since the last census forbids the acceptance of the Registrar-General's usual hypothesis that the rate of increase of population since 1881 has been the same as that which prevailed between 1871 and 1881. To take a single instance: the population of the borough of Barrow-in-Furness increased from 18,774 in 1871 to 47,100 in 1881; but who would assert that this phenomenal rate of increase has been maintained since 1881, even if it were not well known that this town, as a centre of iron production, has specially suffered since 1881 from the exceptional depression, which must for a time have more than paralysed its rate of progress? What shall be deemed satisfactory proof of the present population of Barrow-in-Furness? This question of the population of our large towns in intercensal years is one of constantly increasing importance. It has been held that the rate-books afford almost the only satisfactory means for estimating such populations, but medical officers of health who have sought assistance from this source know only too well how unreliable is the information thus obtained. There is no uniformity in the system on which these books are kept;

there is no consensus of opinion as to the definition of a house; there is difficulty from compounding for the payment of rates; and there is inevitable difficulty about the average number of persons to a house, which is the crucial element of all population estimates based upon the number of inhabited houses, even if this can be ascertained. With regard to the twenty-eight largest English towns dealt with in the Registrar-General's Weekly Return, that official announces his inability to frame satisfactory estimates of the present population of Leicester, Salford, Bradford, Nottingham, Newcastle-on-Tyne, and Cardiff, although he has been furnished with information as to the inhabited houses on the rate-books of those boroughs. All interested in the vital statistics of our large towns will therefore anxiously await the decision of the Local Government Board as to what constitutes "satisfactory proof" of the present population of our large towns. It is, at any rate, gratifying to learn that the Local Government Board have at the present time under their consideration a memorial from the Council of the Royal Statistical Society urging that, when the next Census Act is submitted to Parliament, power shall be taken to hold intermediate quinquennial enumerations of the population of all large towns, and of such other urban aggregations as may at the time of such intermediate census appear to be desirable. It is earnestly to be hoped that the present dilemma in which the Local Government Board is placed—its necessity to decide what is "satisfactory proof" of the present population of our large towns—will incline them favourably to consider the application of the Council of the Royal Statistical Society in the interest of all concerned in the construction of urban vital statistics, and of sanitary progress generally.

THE INFLUENCE OF SCARLATINA HOSPITALS.

IN his annual report on the sanitary condition of the Hackney district during 1887, Dr. Tripe discusses the question of the possible spread of scarlatina from the Metropolitan Asylum Board hospital within that district, and he sets out a table showing the number of infected houses, the percentages of houses infected to total cases, the mean number of houses infected to total cases, and the percentage of houses in certain radii to total houses. Under each of these headings statistics as to scarlatina are given in the several quarter-mile zones up to a mile, and then outside the mile radius. The arrangement followed differs from that which has been resorted to in the case of small-pox diffusion, and, in order to show that there is possibly similar diffusion of infection in the case of scarlatina, the material for three separate years—viz., 1882, 1886, and 1887—has to be dealt with *en masse*. But last year, when dealing with the information available to the end of 1886, Dr. Tripe, to use his own words, "arrived at the conclusion that the evidence up to that time showed that, unlike small-pox, there was not such an aggregation of cases in the vicinity of the hospital as to lead to the belief that the disease was spread from it by aerial infection"; and even now we do not gather that he distinctly attributes a scarlatinal diffusion to aerial agencies, although it is difficult to understand how personal infection from one single centre can properly account for the circumstances he refers to. And, looking at the table, we find extreme difficulty in discovering from the returns for 1887, whether standing alone or in conjunction with that of the previous two epidemics, sufficient data to explain a complete change of opinion. Then again, as Dr. Tripe himself admits, he does not receive information of the existence of scarlatina in more than a small proportion of the houses of the more wealthy classes; and hence the "comparisons and conclusions are open to grave objections." The truth is that the data as yet obtained in Hackney do not suffice for a judgment on the

subject; and we are further inclined to doubt whether, even if such as are set out in the table accompanying the report could be regarded as sufficient, they go to prove that the aggregation of scarlatina cases tends to the same result as has been found to be the case in small-pox. Any trustworthy contributions to the elucidation of the subject have distinct value; but, as Dr. Tripe himself says, the inquiry must be extended over a longer period and over a wider area before a definite conclusion can be arrived at. We feel also that the statistical data on which any opinion is expressed must be complete.

PATHOLOGY OF THE GANGLION OF THE TRUNK OF THE PNEUMOGASTRIC.

DR. ALEXANDER LEVIN, chief of Professor Manassein's Clinic in St. Petersburg, has published as his graduation thesis an interesting series of observations on the pathological changes in the ganglion of the trunk of the pneumogastric nerve in different diseased conditions. He examined this ganglion in 102 bodies where during life there had been disease of some of the organs receiving their nervous supply from the pneumogastric, including cases of heart disease, pulmonary phthisis, and croupous pneumonia, or where the patient had suffered from some general disease, such as typhoid, scurvy, diphtheria, cholera nostras, hydrophobia, and others. He finds that in typhoid the ganglion is frequently affected by an inflammatory process, there being marked hyperemia, and sometimes extravasation of blood or granular changes in the nerve cells, which leads to their atrophy or breaking down, and to hyperplasia of the connective tissue of the nerve. These morbid changes have as their result, as Dr. Levin believes, typhoid laryngitis and paralysis of the pharynx, cardiac irregularities unconnected with high temperature, the so-called "sudden death of typhoid," spasmodic dysphagia and vomiting, and finally dilatation of the stomach, observed by many authorities in cases of typhoid. In cardiac disease the pneumogastric ganglion is found to be affected by chronic venous stasis, extravasation of blood, thickening of the external tunic of the small vessels and of the walls of the nerve cells, with degenerative changes in these last. This condition of the ganglion may perhaps be connected with special forms of irregularity observed in cardiac cases, in chronic pneumonia, and often existing in aortic aneurysm, and also with paralysis of the pharynx and vomiting observed in some cases of heart disease. In pulmonary phthisis the ganglion of the pneumogastric is found to have undergone degenerative changes of the nerve cells, which are atrophied, shrunken, or eaten away, the stroma being at the same time hyperplastic.

IMPORTATION OF DIRTY GRAIN.

THE acres of the British farmer have long ceased to yield a corn supply sufficient for the national requirements. Imports of foreign grain therefore, however undesired by home growers, are advantageous to the population generally, provided of course that their quality can be guaranteed. The fulfilment of this all-important condition unfortunately cannot always be relied upon, and the cheap loaf, that valued memorial of free trade, is consequently a somewhat discounted benefit. By way of illustration we need only refer to a recent report by Miss Ormerod at a meeting of the Royal Agricultural Society. The observations contained in this paper go to show that the cleanliness of foreign grain occasionally leaves much to be desired, and that some cargoes of corn are almost alive with weevils. The effect of this potent though apparently insignificant pest is well known. The question of its eradication is as much one of profit as of taste, since the grain which it has inhabited and

reduced to a mere husk is obviously of no market value. The presence of a few of the insects in a relatively large bulk of corn is doubtless of no great moment, and it is not easily avoidable; but a cargo populated by them is for the luckless buyer and the consumer a more serious consideration. We are no advocates for trade protection, but we must contend for a reasonable degree of official oversight on behalf of the public health and the food supply of the country. In the case of goods so obviously faulty as the grain above mentioned the tax of confiscation is not unduly heavy, and it should, if occasionally exacted, act as an effectual check upon the culpable carelessness of exporters.

CHOLERA IN EAST SICILY.

THE municipality of Messina are, we fear, showing more energy in contradicting reports as to the appearance of cholera in their town than in taking steps to keep out the invader. The cases of illness to which the adjective choleraic has been applied are only, they say, cases of epidemic gastro-enteritis, which, occurring for the most part in the neighbourhood of the harbour, have found ready and widely diffused acceptance as cases of cholera. Meanwhile, other local authorities are not of the same view as the municipality, but maintain that cholera has indeed effected a landing in Messina through a merchant ship lately arrived from Bombay with grain on board. Be this as it may, there can be no doubt that if ever city made itself a "candidate" for a cholera visitation it is Messina. For one thing, its water supply, at the best of times inferior as to quality, is sadly defective in volume and in regularity of distribution, while the chief conduit is in many places broken and leaking. The people do not share, it may be added, the municipality's sense of security. The dread of a return of the frightful mortality and misery of the last few years has produced an almost frantic excitement, and already the house of the syndic (or mayor) has been mobbed.

TECHNICAL EDUCATION.

ON any question relating to industrial development Lord Armstrong writes with an authority second to none, and it is therefore with great satisfaction that we find him reiterating and enforcing the views which we ourselves recently put forward upon the subject of technical education (THE LANCET, vol. i. 1888, p. 1040). We then spoke of the importance of developing the faculties of the child by this means, and pointed out that something quite different from a mere anticipated apprenticeship was required, both from an economical and a hygienic point of view. Looking at the same problem from the standpoint of a large and enlightened employer of labour, Lord Armstrong discerned the same features in the case. He deprecates any attempt to teach trades to school children, knowing full well that this can better be done when they come in riper adolescence to enter the factories and workshops where actual work is being carried on. But he also points out how great is the advantage to the grown man or woman of coming into possession, when mature age is reached, of mobile and manageable fingers and of trained eyes and ears. Knowledge, as distinct from the faculty of acquiring it, he estimates at a comparatively low value, since the knowledge that can be imparted to a child is necessarily of a somewhat vague description, and in most cases not such as will prove to be of any use to him in after-life. And this must be admitted to be in a large measure true. Orthography is of much less importance to a stonemason than a knowledge of the structure of stone, or to a bricklayer than the use of the plumb line. But the answer to such an objection to the ordinary curriculum of our elementary schools is that the

special knowledge of one trade is even more completely useless to the craftsman of another than is the general knowledge which has of late been so unsparingly denounced as "bookish." Nothing would be gained by substituting the study of chemistry for the study of grammar in ninety-nine cases out of a hundred, and something would in every case be lost. We doubt therefore if it is necessary, or even wise, to depreciate the studies to which by our present system the attention of children is chiefly directed, but we heartily concur in the opinion, expressed both by Professor Huxley and Lord Armstrong, that the present system is insufficient and does not adequately develop the faculties of the young. We think, further, that they have very wisely fixed upon drawing as a subject of study eminently fitted to train both eye and hand, and one to which, therefore, a much more important position might with great advantage be assigned than it at present occupies.

A CASE OF PHOSPHORUS POISONING.

AN inquest was held on July 4th at the St. Pancras Coroner's Court by Dr. Danford Thomas touching the death of Frances A. Cowley, aged twenty. The deceased, by her own admission, took some rat paste on Tuesday, June 19th. Death ensued eleven days later. The initial symptoms were not very marked; in fact, so slight were they that her husband did not believe her confession, and consequently took no active steps to enforce proper treatment. Nausea and vomiting continued with moderate severity for a few days, and then ceased. There ensued a feeling of depression. Towards the end, insensibility, icterus, and somewhat profuse metrorrhagia supervened. At the necropsy the skin and conjunctiva were observed of a bright yellow colour. There was no organic disease save of a recent nature, and entirely attributable to the action of the poison ingested. The stomach contained about three-quarters of a pint of dark claret-coloured fluid, consisting largely of blood derived from capillary hæmorrhage from the mucous membrane. There was no solution of continuity of the mucous membrane, which showed traces of recent irritation. The whole surface presented a yellow icteric tint, except the summits of some of the rugæ, which were of a bright pink colour. There was also faint wrinkling of the mucous membrane. The upper part of the small intestine was affected in much the same manner as the stomach. The large intestine contained a quantity of almost colourless fæces. The liver was shrunken, weighing only twenty-six ounces, and both on its outer and sectional surface exactly resembled the appearances produced by acute yellow atrophy, except that there were greater congestion and interstitial hæmorrhage in patches. The lobules of the liver were in many places unrecognisable; in others they stood in bold relief as brilliant canary-yellow patches, standing in strong contrast to the deep dark-red areas of congestion and extravasation. The gall-bladder contained about two drachms of thin greyish fluid, apparently all but devoid of bile. The urinary bladder was empty; the kidneys were enlarged; the cortex was very pale and bile-stained, of greater depth than natural, and of softer consistence. The spleen was not enlarged, nor was it in the least degree softened. In addition to the bleeding from the uterus noticed during life, there was capillary hæmorrhage into the right lung and pleura, into the pericardium, and, as already mentioned, into the stomach. The brain was healthy. The chief points of interest in this case are: (1) The profuse hæmorrhage—parenchymatous and surface—a well-known result of phosphorus poisoning, and constituting a section into which a certain number of the cases fall; (2) the almost identical changes in the liver with those incidental to the disease known as acute yellow atrophy; indeed, it seems possible that some of the instances of the latter

affection may really own phosphorus poisoning as a cause. It used to be said that the size of the liver in the two conditions afforded a guide for making a differential diagnosis; but, as will be seen from the above case, it may signally fail. We shall probably have occasion later on to refer to the microscopical changes of the liver.

THE HUNTERIAN MUSEUM.

FEW Fellows of the College would fail during their attendance at the recent election to visit and inspect the additions to this museum which have been made during the past year under the direction of Professor Charles Stewart. These are equal to those of previous years, and possess great interest. In the department of Comparative Anatomy the development of the bones is shown in three human skeletons, aged fourteen, sixteen, and eighteen years respectively. Professor Stewart has arranged an instructive series of preparations, which show the organs of aerial locomotion in vertebrates and lower forms of life. Numerous other additions have been made, amongst which are some fine dissections, illustrating the anatomy of the gorilla. Mr. Eve has prepared another appendix to the catalogue, containing descriptions of all the specimens added during the current year. Considerable efforts are being made to render the whole museum as perfect as possible, and deficiencies in any department have been notified to those in a position to supply the needed specimens.

"TOUTING" AT HOME AND ABROAD: BOMBAY.

A MAGISTRATE in a London Police-court the other day had his attention directed to the fact that a young solicitor came early to the court and waylaid possible litigants with offers of service. His worship very properly directed that if such practitioners were again found about his court he was to be informed. When and where shall we look for such action in respect of our profession? The evil is rampant. Every week brings us a pack of handbills, circulars, and advertisements that would discredit a second-rate greengrocer. And our Colleges take little or no notice. One bad specimen is before us from Bombay, in the shape of a circular addressed to the offices of steamship lines trading with Bombay, by a gentleman who signs himself James Monday, M.R.C.S., L.R.C.P., L.M. After disparaging the qualifications of other practitioners in the field, he descants with an air of complacency on his great achievements in the diploma line thus: "I passed my final examination in Bombay in 1875, proceeded home in 1880, obtained the diploma of the Royal College of Physicians, and also the Royal College of Surgeons of Edinburgh, coming third on the pass list of forty-seven successful candidates. Am married, aged thirty-five years, and a registered London practitioner!" Here are one or two more illustrations of his style: "I have just commenced practice in this Harbour in hopes you will kindly extend your patronage to me (*Englishman*). I am willing to attend professionally your vessels (captain and crew) for the following amounts. This, I know, will compare very favourably with what you have hitherto paid." The *Bombay Gazette* was asked to call attention to this discreditable document; but very naturally declined publishing such rubbish on the ground that there must be other ways of dealing with it. Our lay contemporary's remarks are worth quoting. Those aggrieved by the circular's disparaging remarks are referred to a magistrate, and, adds the *Bombay Gazette*, "the Royal College of Surgeons at home might be asked to express their opinion on the question whether toutting for practice is in accordance with the manners and customs of the profession." We beg the attention of the two Edinburgh Colleges to this natural and respectful remark

of our Indian contemporary. If the colleges "at home" allow their associates to publish such things and to violate all professional taste and decency without protest, the public will conclude that the diplomas can be of little value, and that the possession of them is no guarantee of either literary or scientific culture. We advise those "aggrieved" to send specimens of this circular to the colleges whose diplomas are dragged down to such uses.

TREATMENT OF THE UMBILICAL CORD.

DR. PH. PH. FAGONSKI publishes in the *Vratch* some observations on the different methods of dressing the umbilical cord after it has been tied. He employed four different methods in a hundred cases each: in the first series gypsum, in the second talc, in the third Runge's mixture (salicylic or boracic acid with potato-starch), and in the fourth hygroscopic cotton-wool. In the first series erythema and intertrigo occurred five times, ulceration around the umbilicus four times, slight hæmorrhage from the cord seven times, and slight suppuration twice, dry gangrene or mummification of the cord occurring in every case. In the second series ulceration occurred five times, slight hæmorrhage ten times, suppuration forty-eight times, moist gangrene thirty times, and dry gangrene seventy times. In the third series erythema and intertrigo were noted three times, ulceration twice, hæmorrhage eight times, suppuration fifty-one times, moist gangrene sixty-five times, and dry gangrene thirty-five times. In the fourth series erythema and intertrigo occurred twice, ulceration three times, hæmorrhage four times, omphalitis followed by death twice, suppuration twenty-nine times, moist gangrene twenty-eight times, and dry gangrene seventy-two times. With regard to the time of falling off of the cord: in the first series it was usually on the fifth day (never later), in nineteen cases on the fourth, and in four cases on the third day; in the second series separation occurred in the majority of cases later than the sixth day, in six cases only being on the sixth day, in four cases on the fifth, and in one case on the fourth; in the third series the cord fell in four cases on the fifth day, and in the remaining ninety-six cases after the sixth; in the fourth series it fell on the fourth day in one case, and after the sixth in the remaining ninety-nine. It will thus be seen that the safest and best of these dressings is gypsum, but it must not be applied too liberally, for it is quite possible for it to set up erythema. Dr. Fagonski recommends that all cases should be dressed simply with 10 grains of gypsum on cotton wool.

A JUDGE ON BABY-FARMING AND INSURANCE SOCIETIES.

MR. JUSTICE DAY is well and favourably known as a very outspoken judge. One of his most recent utterances was made whilst presiding in the Crown Court at Salisbury. Among the cases before him was that of George Heys and his wife Mary Heys, who lived at Swindon and had seven children under their charge, for some of whom they had received lump sums for their keep. They were convicted not long ago by the magistrates for not having kept the register required by Act of Parliament from all persons having children in charge under such circumstances. More recently an officer from the Society for the Prevention of Cruelty to Children visited the house. He found one girl aged two years in a very weak state, neglected and dirty, unable to walk, and only weighing 10 lb., the normal weight being 24 lb. A boy was also found, aged three years, in a similar condition, his weight being 22½ lb. instead of 27 lb. Four of the children were insured in a Friendly Society. The prisoners were found guilty, and in sentencing the female prisoner to two years and her husband to nine months' hard

labour, Mr. Justice Day remarked that the prisoners received money in gross sums, and then devoted themselves, not to taking care of the children, but to getting rid of them through the instrumentality of one of those pests of society—those deadly societies which insured children. The prisoners had put themselves in a position to make a profit by the death of these children. They insured the children in one of those societies, which seemed to be instituted for the destruction of children, for the perpetration of murder. That was the effect of these societies wherever they existed, and such societies should have been stamped out by the Legislature long ago. The prisoners had been guilty of a cruel and infamous crime, and he regretted that he could not pass a severer sentence upon them. These remarks will not appear one whit too severe when taken in conjunction with the revelations made at the trial of Mary Ann Cotton at Durham in 1874, and of the woman Flannigan and Higgins at Liverpool just four years ago. In the former case the prisoner was shown to have caused the deaths of twenty persons, mostly children, by poison, in order to obtain the club or insurance money. In the Liverpool case there were in all eleven victims, some of them being children; and nearly all had been insured by the prisoner Flannigan behind their backs, contrary to their own knowledge or that of their parents. Mr. Justice Day's remarks are most opportune, and should prevent the repetition of any such cruel treatment of children.

CREOLIN AND BACILLUS PYOCYANEUS.

DR. KLAMANN, writing in the *Allgemeine Medicinische Central Zeitung* on Creolin Dressings, gives some cases in which bacillus pyocyaneus was found in the dressings, and cultures of it obtained. This, however, did not appear to interfere with the healing of the wounds, but Dr. Klamann says that he never found this organism when gauze impregnated with corrosive sublimate or carbolic cotton-wool were used. He remarks that when a creolin lotion containing more than 2 per cent. is used for moistening the dressings they become unbearable from the pain produced. Latterly he has confined himself to dry creolin dressings, and is well satisfied with the results obtained. In case of burns he uses creolin oil of the strength of 1 per cent., and finds that this acts exceedingly well.

THE MEDICAL OFFICER OF HEALTH OF BRADFORD.

WE have received from the Town Clerk of Bradford a copy of a printed report of the Sanitary Committee respecting charges made by Dr. Hime as to administrative failure of the Town Council, and published in a medical contemporary on June 30th, 1888. This report deals *seriatim* with the statements made by Dr. Hime, and emphatically denies each. The Town Clerk writes that he leaves it to us to "determine as to the propriety of giving equal publicity to the statements of the committee as has been given to the other side of the question." We have, however, not published any such charges as those referred to. We have only expressed the sincere regret that we—and we are sure the profession—feel at the refusal of the Bradford Town Council to re-appoint Dr. Hime at the termination of his five years of office. This decision has been arrived at by the Sanitary Committee, notwithstanding the active steps taken by important sections of the ratepayers to testify to their appreciation of the value of Dr. Hime's services as medical officer of health to Bradford, and in spite of petitions to the Town Council for his re-election. At that time Dr. Hime had made no public charges against the health administration of the town, and the Town Council, therefore, could not have been influenced by any such statement. They have themselves

borne witness to his capabilities, and have given no other reason for their action than that the sanitary committee were unwilling to work with him. There is one point on which we must differ from the opinion which we gather from the report the Sanitary Committee hold as to the re-election of officers appointed for a given term of years. "The doctor," they state, "knew perfectly well the terms of his appointment when he sought it; your committee merely decline to renew it in the same way as he might have done had he so wished; and it must be borne in mind that, although he was secured in his office for five years, every other officer of the Corporation holds office during the pleasure of the Council." Evidently the committee have not thought that Dr. Hime had any claim upon them beyond the five years for which he was appointed. The admission is useful, for it serves to show in the strongest light the mischievous tendency of appointments of this kind. Medical men applying for the office, if there are any, will understand what sort of future is before them. They may sacrifice all other prospects in life, they may perform their duties thoroughly, and at the end be told their services are no longer required. In the letter which the Town Clerk sends us he states that we shall observe that the committee have refrained from entering into a general discussion as to the reasons for not renewing Dr. Hime's engagement. We desire to add that we have observed this omission, and we bear in mind the statements as to Dr. Hime's capacity which were made at the time when the Town Council received the report of their committee recommending that he should not be re-elected. Not a single word was said in his disparagement; on the contrary, he was spoken of in terms of commendation, and the omission of the Sanitary Committee on the present occasion admits of but one interpretation. Taken in connexion with their evident sense of freedom from any obligation to re-elect their officer, it will doubtless have its effect upon any aspirants for the office.

HOLIDAY UNREST.

WHEN Midsummer Day is past the busily engaged and too frequently over-worked of all classes and occupations begin to think of the annual autumnal holiday. It is to many a matter of great concern how means are to be provided for the necessary change and relief to the monotony of daily duties. This difficulty overcome, the new one crops up of where to go and how best to spend the time. To quote a phrase attributed to the "Dictes of the Philosophers," published four hundred years ago—

"Of thought cometh the wakyngs and unrestis."

The disquietude of over-thought and over-work appears to be no new experience, though it is now often attributed to the struggle of modern times. We have known instances of the heads of a household worried in the extreme over the perplexing question of where best to spend the autumnal holiday, so as to give the maximum of good and the minimum of evil to each individual; and at last, in a fit of desperation, this or that place is decided on from among the many holiday resorts to which numbers of our teeming population of city and town migrate. Too frequently the change is from one dense population to another scarcely less dense at the seaside or elsewhere, to which

"The people like a headlong torrent go,"¹

with often the disadvantage of lesser domestic convenience, inferior sanitation, and amusement neither edifying nor pleasing, and a change of one form of unrest for another. This comes in too many instances from following the fashion and "doing as my neighbour does." It would be far better if our town population recognised that there is ample space for them in our rural districts within

reach of populous centres by road or rail. Pretty rural retreats in scattered villages, apartments at comfortable farmhouses for those who can afford it, or a room or two in a cleanly cottage, with the quiet and soothing surroundings of country life, would tend to tranquillise the "unrest" of those who all through life cannot escape from it, except during their brief autumnal holiday. But it would be better, as Dryden wrote—

If the foolish race of men, who find
A weight of cares still pressing on their mind,
Could find as well the cause of this unrest,
Sure they would change their course.

THE INFECTION OF SCARLATINA.

IN recording his experiences for the past year, Mr. M. A. Adams, the medical officer of health of Maidstone, expresses his belief that even in the mildest form of scarlatina the duration of infection is at times very prolonged. Six weeks from the first appearance of the rash is a very common term during which to maintain the isolation of scarlatina patients; it is the minimum period commonly required in most infectious hospitals, and Mr. Adams was himself at one time inclined to adopt the belief that this might be regarded as a safe limit to the period of infectiveness, and this the more so because it generally includes a period which goes well beyond the cessation of all desquamation. But on several occasions Mr. Adams has known the disease to be communicated by a convalescent who retained no obvious signs of ill health or infection as late as the forty-third day; and, in his opinion, the infection has in such cases been communicated by the act of kissing. He would therefore make it a rule to maintain isolation for a minimum period of seven weeks, and even then to give a caution against the habit of kissing. The retention of infection about the fauces for prolonged periods is well known to take place in the case of diphtheria, and it is possibly at times the same in scarlatina, even when no obvious indications of any throat affection remain. There are, however, cases in which patients returning from hospital have been credited with conveying the infection, when it is much more likely that the mischief has been induced by the bringing out of clothing which the patient wore a few days before being isolated, and which escaped disinfection.

THE NIGHTINGALE FUND.

FROM the statement issued by the secretary of the Nightingale Fund Committee, in his report for the year 1887, it appears there were 47 probationer nurses admitted during the year, making, with those remaining from 1886, 78 who were under training. Of those admitted during the year, 15 resigned or were discharged as unsuitable for the work, and 31 completed their year's training, 29 of whom were entered as certified nurses. During the period which has elapsed since the institution of the Nightingale Home in 1860, 549 have become certified nurses, and as many as 379 failed in obtaining certificates; but no distinction is made between the number who voluntarily resigned and those who were discharged as unfit for the duties of a nurse. As the candidates are all specially selected after inquiry and personal inspection, this is a large number to place amongst the failures from either cause. (This receives further point from the fact that 1500 written and 173 personal applications for information were received during last year alone.) Since the issue of the last report, Miss A. L. Pringle has been appointed matron and superintendent of the Nursing School. The thanks of the committee are given to members of the staff of St. Thomas's Hospital for their instruction to the nurses. The only time mentioned for home instruction is from 11 to 12.30—that is, at a time when ward work is at its height, and when it might be supposed that the probationers would be of great assistance.

¹ Dryden.

At the branch at St. Marylebone Infirmary nine nurses had received certificates, and twelve were in training under the supervision of Miss Vincent. The abstract of accounts shows the following items of expenditure for training hospital nurses: at St. Thomas's Hospital, £1492 0s. 3d.; gratuities to certified nurses, £208; and contribution to expenses of the training school at St. Marylebone Infirmary, £152 15s.; with a balance in hand of £1462 3s. 10d.

ORIGIN OF SIMPLE ULCERS OF THE STOMACH.

AN evident correlation, M. Letulle asserts, may be observed between the evolution of an infectious malady and the development of ulcerating lesions in the stomach and intestine. At the necropsy of a case of puerperal septicæmia two recent hæmorrhagic ulcerations of the stomach were found. The subjacent venules were thrombosed; and the fibrinous clot contained a large number of streptococci, and the venous sinuses were stuffed with colonies of the same micro-organism. Experimental proof has been forthcoming, on the guinea-pig, of the production of mucous and submucous lesions, not only with pure cultivations from cases of dysentery, but also with the staphylococcus pyogenes aureus. The lesions have ranged from ecchymoses to vast rounded ulcerations threatening perforation of the experimentally dilated stomach. It is thought that some cases of simple ulceration of the stomach and duodenum may be ascribed to local growths of micro-organisms.

QUARANTINE IN THE WEST INDIES.

OWING to the difficulties met with under a system of quarantine, which varies in different parts of the British possessions in the West Indies, the Secretary of State for the Colonies has authorised the assembling of a conference, to discuss the desirability of inaugurating a uniform system for those possessions, and it is expected that the meeting will take place at Georgetown, British Guiana, in October next. Amongst the matters to be discussed are—firstly, the desirability of arriving at some understanding as to the meaning of such terms as epidemic prevalence, infected, &c.; secondly, the need for a uniform system of disinfection, and of dealing with persons and things which are placed in quarantine; and thirdly, the question of uniformity in the matters of coaling in quarantine, transshipping cargo in quarantine, and guarding vessels in quarantine. Apart from medical considerations, great interest is shown in the conference by the commercial elements of the population, who have had painful experiences of the varying, and at times useless, restrictions to which shipping and trade have been hitherto subjected in different parts of our West Indian possessions.

OPERATING WITHOUT PERMISSION.

OUR attention has been drawn to the account of an inquest recently held on a patient who had formerly been in the London Hospital, where amputation of the leg was performed. The verdict returned by the jury was "Death from shock" (*sic*). When we mention that this operation was performed four months previously, the usefulness of this inquest and the sapience of the jury may well be called in question. But there is another side to the question. The father made a complaint that the operation had been done without his consent; but until the inquest the hospital authorities had heard nothing of any resentment on his part with regard to this. It would appear that the patient was placed under an anæsthetic, as permission had been obtained to examine into the nature of an unusual swelling which had developed after a contusion of the thigh, and that this was found to be an extensive sarcomatous growth. There being no question as to the necessity for amputation,

and as the child would have run grave risk if the condition had been left as it then was, and operation postponed, amputation was performed at once. The consent of parents to any operation is obtained as a matter of course in all cases, but at times the surgeon has to act on his own responsibility, and stand *in loco parentis*. That the father was satisfied at the time is proved by the fact that he left the child in the hospital, sent her back again later for a further operation when recurrence took place, and went again for medicine for her after she left altogether. A jury is guilty of grave injustice to a hospital when no opportunity of replying to the charges brought against it is given to the authorities.

CHILDREN'S TEETH.

At a recent meeting of the Islington Board of Guardians a discussion took place as to the appointment of a surgeon-dentist for the workhouse schools, as recommended by the School Committee. There was considerable opposition, and the matter was referred back to the School Committee for further report. Our contemporary, the *St. James's Gazette*, very justly says: "Whatever the result, there cannot be a doubt that the preservation of their teeth is a matter of no slight importance to pauper children. The rate of mortality among the poorer classes would perhaps be much reduced if more attention were paid to the condition of their teeth when young." On the ground of expenditure alone it would in all probability be found a saving. Wherever it has been tried it has been found to bring about the most beneficial results. In his last report the resident medical officer at the Anerley schools (which was, we believe, the first charitable institution to appoint a dental surgeon) draws especial attention to this subject, as it came under his personal observation.

RICKETS AND SYPHILIS.

COMBY does not agree with Parrot's proposition that rickets only arises as the ultimate manifestation of syphilis. The "geographical" tongue, the scarred buttocks, crooked teeth, and natiform skull are signs of an extinguished syphilis, according to Parrot and others. Hereditary syphilis attested by these marks would cause osteophytes, gelatiniform atrophy, and spongoid tissue, which suggest rickets. Comby contrasts rickets with syphilis. In the former rarefaction of tissue occurs; in the latter, condensation and softening. Scars and dental lesions are common in syphilis; rare in rickets; corneal lesions are generally scrofulous; lingual desquamation is not peculiar to syphilis. If infants who have been impregnated with syphilis are provided due course with suitable food, they will not become rickety. In the etiology of rachitis, syphilis holds the same position as measles, variola, scarlatina, typhoid fever, and bronchopneumonia.

A MAGISTRATE'S VIEWS OF LUNACY.

THE *Cheltenham Free Press* of June 23rd contains an account of a magisterial inquiry relative to the sanity of a person alleged to be of unsound mind. The case is of interest to the medical profession, inasmuch as the presiding magistrate indirectly expressed an opinion as to the cause of lunacy when demurring to the statement of Mr. Walters, surgeon. Asked whether drink would of itself cause lunacy, Mr. Walters unhesitatingly affirmed that it would. This piece of evidence was apparently too strong and exclusive for a learned justice of the peace, who seems to have had in mind that phase of mental irregularity which an individual exemplifies when he is said to be "mad drunk." No one would wish to join issue with him as to the legal responsibility of a person so afflicted, or cavil at his question whether "a man when in a state of intoxication did not

stupid things, and then recover himself after being locked up for forty-eight hours." At the same time we would point out to him that Mr. Walters did no more than speak the opinion of the profession when he averred that drink was a sufficient cause of insanity. In the first place, excessive indulgence in alcohol may induce delirium tremens, a veritable form of mental unsoundness, and one which the law recognises. Then, too, chronic alcoholism not seldom causes sclerosis of the cerebral tissues, with impairment of function as its consequence. And lastly, acute alcoholic delirium may pass to virtual and abiding insanity.

THE TIME OF DEATH.

WHILE Dr. Munk's charming little book upon Euthanasia is still fresh in our memory, it is curious to note (*Revue Scientifique*) that M. Brouardel has been recently lecturing upon the precise moment of death, considered from a medico-legal point of view. It is with a feeling of some surprise that we learn that he wholly rejects as signs of death both cessation of respiration and arrest of cardiac pulsations. The most recent observations upon a decapitated body showed that cardiac movements persisted an hour after the head had been severed, and on these grounds, as well as on account of the temporary arrest in fainting, he holds that the cardiac movements afford no certain criterion for gauging the precise moment of death. That the spinal cord has comparatively little influence upon the heart's action was well shown by experiments upon two dogs; the one was completely decapitated, in the other only the soft parts of the neck were divided, and yet the time that elapsed before cessation of cardiac movements was practically the same under both conditions.

SALMON SUPPLY.

FROM a return contained in the twenty-seventh annual report of the Fishery Commissioners, which has just been published, we learn that the total amount of this most important of our fresh-water fish supplied to the Billingsgate Market showed last year some falling off as compared with the years 1883 and 1885. It reached, however, a figure considerably beyond the average of the past ten years, and the take in England and Wales was larger than any recorded within that period. The most remarkable growth displayed by this return is, however, to be found in the Scandinavian trade. The quantity received from Sweden and Norway has in ten years increased sevenfold. The Scottish consignments, on the other hand, though still affording the most important source of the supply, have shown in recent years a distinct decline.

UNDIGNIFIED BEGGING FOR HOSPITALS.

ONE unpleasant result of the impecuniosity of our hospitals is the tendency in officials to compile undignified statements of the unrivalled merits and claims of their institution and all its officers. A striking instance is before us in the form of an appeal on behalf of a certain West-end hospital. Perhaps this evil is more marked in the case of special hospitals from a consciousness of the necessity and difficulty of showing their *raison d'être*. After a prodigious list of patrons &c. comes the appeal marked with dark underline as special and urgent. One large paragraph is devoted to the laudation of the medical officers of the hospital, as though they were specially made for this institution, and as specially endowed with skill and kindness not to be met with elsewhere. As a consequence we are prepared for the next step: extracts from letters from grateful patients who have been previously under "several doctors without benefit," "have been ten months to other hospitals without being cured," &c. What can readers of such stuff do but inquire who the "kind doctors" are, and go

straightway and consult them? Such puffs read more like the advertisements of quack medicines than the dignified appeal of a rightly constituted hospital. We cannot believe that the medical staff of this hospital regards this system with complacency.

HYGIENIC EXHIBITION AT OSTEND.

THIS pleasant Belgian watering-place is shortly to enhance its autumnal attractions by an International Exhibition of Hygiene on a very comprehensive scale. Already four hundred members are announced as prepared to take part in it. The Leopold Park has been chosen as the site of the exhibition buildings, and it will be illuminated with the electric light every evening. The opening ceremony will take place under the auspices of King Leopold II., with whom will also be present Queen Marie Henriette and the Princess Clementine. The Royal family indeed will, from the first week in July, transfer the court to Ostend for the space of three months, and so the bathing season promises this year to be an exceptionally brilliant one.

COMPRESSED AIR IN PLEURISY.

DR. JOSEPH SZOHNER, of Visegrád, gives in a Hungarian journal an account of some cases of pleurisy with effusion, in which the compressed-air treatment appeared to exercise a most salutary effect. The patients were ordered two sittings daily. In one of the cases, where the pleura had been nearly full of fluid, which the patient refused to have taken away, it made an opening for itself, and, in spite of all that could be done, the man seemed to get worse and worse, a large cavity forming in the apex. The compressed-air treatment was then resorted to, the drainage and irrigation of the cavity being of course attended to; and after a couple of months convalescence was completely established.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Emil Grunmach has been granted the title of Professor.

Cracow.—Professor Adamkiewicz has been induced to reconsider his resignation by a very definite promise that his wishes as to the erection of more suitable clinical accommodation shall be responded to without delay.

Erlangen.—Dr. Kiesselbach has been raised to the rank of Extraordinary Professor, and has been given charge of the Otological department.

Marburg.—Dr. Ernest Frerichs has been authorised to assume the rank of Professor.

Munich.—A petition has been got up by the students of this and the two other Bavarian Universities, Würzburg and Erlangen, requesting that arrangements may be made for holding the final examinations in the summer as well as in the winter semester, in order that, as they enter in October, they may be able to become qualified after the requisite nine semesters (i.e., during their tenth), instead of, as at present, having to wait until the beginning of their eleventh semester in order to pass.

St. Petersburg.—Dr. J. Setshenoff, Professor of Physiology in the University (not in the Military Medical School), is about to retire, after thirty years' service.

Tomsk.—Arrangements are being made for providing this the new Siberian University with a complete Medical Faculty, which is expected to be ready to admit students in October.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Valerian Lashkevich, Professor of Clinical Therapeutics in the University of Kharkoff.—Dr. W. Lorenz, formerly superintendent of an important lunatic asylum near St. Petersburg.

THE death is announced of Mr. Henry Jones Domville, C.B., M.D., Inspector-General of Hospitals and Fleets and Honorary Physician to the Queen. The deceased, who was born in 1818, became Assistant Surgeon in the navy in 1839, and, after obtaining the diploma of Member of the Royal College of Surgeons of England in 1844, was promoted successively to be a Staff Surgeon in 1846, Deputy Inspector-General of Hospitals in 1864 (after taking the M.D. degree at St. Andrews in 1862), and Inspector-General in 1875. He retired from the service three years later. Dr. Domville served in the Syrian campaign in 1840, when he was on board the *Revenge* at the siege of St. Jean d'Acre, for which he received the medal with clasp and the Turkish medal; in the war with Russia he was present on board the *Tiger* at the bombardment of Odessa, in 1854; and in the following year he was Senior Staff Surgeon in the Baltic, and again earned the medal. He was a Justice of the Peace for the county of Kent, and was made a C.B. in 1867. He died on the 8th inst., at his residence at Paignton, Devon.

THE Central Sanitary Department of Japan has just published a report on the cholera epidemic of 1886, which was the most violent since 1879. There were in all 155,574 persons attacked, and of these 110,086 died. The gravity of the epidemic is attributed to the impurity of the water.

DR. HUNTER MACKENZIE has been elected a corresponding member of the Société de Médecine Pratique of Paris.

HENLEY REGATTA AND THE CONTAMINATION OF THE LONDON WATER SUPPLY.

IN July, 1886, we published a special report on the pollution of the Thames at the Henley Regatta. The cholera epidemic was still raging in Italy, and we pointed out that Englishmen arriving from India *via* Brindisi and the overland route might contract cholera, which might only declare itself when they were living in one of the house boats that to the number of more than a hundred were collected at Henley. We showed that these house boats had closets draining direct into the Thames and generally occupied positions above the intake of the London water supply. Apart from the risk of specific cholera infective material being thus introduced into the drinking water of the great metropolis, this water was also befouled by the domestic refuse of these house boats. The specimens of water we collected at the regatta showed on analysis that they contained more than a grain per gallon of ammonia. We described in terms sufficiently graphic and precise this state of contamination, and a great outcry was raised. The Thames Conservancy, yielding to public pressure, drew up some new bye-laws which would enable them to deal with the grievance. A hitch, however, occurred, not with regard to the clauses dealing with the sanitary improvements necessary, but objections were raised to the methods proposed for numbering and registering the boats. Delay therefore ensued. Nevertheless, Royal assent to the new bye-laws might have been obtained in the month of March preceding last year's regatta. This, however, was not done. The matter remained dormant till, just before the regatta we once more took up the question, and then, with surprising celerity, the Royal assent was secured. What is still more remarkable is the fact that the Royal signature was obtained during Jubilee week. Nevertheless, it was too late to apply the new law in time for the regatta of 1887, and most of the house boats we then visited were still draining into the Thames. On the other hand, the suggestion we had made to employ scavenger boats was carried out in time. Two scavenger boats were brought down by the Thames Conservators, and in the early morning and late in the evening they went round to collect all the domestic refuse. Thus the water was much cleaner last year.

Now, the Thames Conservators have had fully twelve months to apply the new bye-laws and prevent further contamination of this important source of our London drinking-water supply. We were naturally anxious to ascertain how far this had been done with energy and success. In answer to our inquiries, we were informed by the Thames Conservancy that shortly after the bye-laws of 1887 came into force they addressed circulars to the owners of the house boats and launches, drawing their attention to the provisions of these new regulations, and pointing out that a closet communicating with the river would be an infraction of the law. The Conservators are informed that in a very large majority of cases the owners of the vessels in question have done away with the waterclosets on their vessels and substituted earth-closets or some other contrivance, instead of draining into the river. Thus we have before us the somewhat startling fact that the authorities themselves admit that the law has not been fully applied. It is satisfactory to note that the improvement is very great, that the large majority of house boats have ceased to drain into the Thames, but we fail to see why there should be a single exception to the rule that is unanimously recognised as indispensable. On making inquiries, the most extraordinary explanation was forthcoming. The fact that a house boat has a closet on board, that its pipe goes direct into the water, that the water can even be seen by looking down the pipe; the further fact that witnesses can be produced to prove that in consequence of the soiled condition of the pan it was evident the closet had recently been used,—all these facts, we were assured, were not sufficient to enable the Thames Conservancy to take action. It seems as if witnesses were required to the actual act of contamination. Circumstantial evidence, however conclusive, is not considered sufficient. The owner of a house boat might escape by declaring that though he had a closet communicating directly with the river, and no other sort of accommodation on board, still that closet was not used, and therefore he was not guilty of contaminating the water. Even the assertion of inspectors that the pan was foul, and evidently had been used, would, it is thought, perhaps not suffice.

We must frankly confess that we do not attach any other significance to this astounding line of argument than that it is typical of the reluctance with which the Thames Conservancy has proceeded in this matter. We do not believe that under circumstances similar to those mentioned above any magistrate would refuse to convict. But, if it were so, the Thames Conservancy can well afford to lose a case or two. The public sympathy would be entirely on its side, and it would be easy to obtain such modification of the law or of the bye-laws necessary to secure the compulsory abolition of closets draining into the river, whether they were used or not used. The mere fact that such closets might be used, even if only accidentally, by some ignorant person visiting the boat, should be enough. It is evident that unless the door is locked, or the seat nailed down, these closets are used, particularly when, as is often the case, the pans are found in a dirty condition. The Thames Conservators, in answer to our questions, asserted that no efforts had been wanting on their part to enforce the provisions of the new bye-laws, and that their inspectors have strict injunctions to watch for any clear case of the pollution of the river by a discharge from the vessels in question, and on such being detected the Conservators propose to at once proceed against the offenders. Then why do they at the same time acknowledge that it is only in the majority of the cases that the closets draining into the water have been abolished? To obtain testimony as to an actual "discharge" from the house boats into the water would be extremely difficult. Surely the evidence, already given, that closets still exist, and that the pans are soiled, should more than suffice.

In dealing with the inhabitants on the banks of the river we do not believe that the Thames Conservancy have been so punctilious. To their credit, be it said, they have compelled the authorities at Henley to restrain the whole town, and thus brought about improvements, which we may take an early opportunity of describing. The Henley authorities now regularly supply the Thames Conservators with a large quantity of dry ash, which is distributed to the house boats, to be placed in the earth-closets. At midnight the Conservators' scavenging boats visit all the vessels and remove the ash that has been used and all other refuse.

This is taken to shore, where the Henley Corporation carts receive it and take it to a place close to their sewage farm, about a mile and a half from the town. Here it is handed over to the scavenger contractor and converted into manure. Thus a very great improvement has been realised, and, so far as the scavenging is concerned, the Thames Conservancy have earned the gratitude of London water drinkers. It is regrettable that there should still remain a few—we believe only a few—house boats that continue to drain into the river, and we earnestly urge the authorities to take action at once, without waiting to witness an actual discharge of sewage into the Thames.

LUNACY IN NEW SOUTH WALES.

IN accordance with Section 73 of the Lunacy Act of 1878, Dr. Manning, the Inspector-General of the Insane in New South Wales, has just forwarded to the Colonial Secretary his report on the hospitals and other institutions for the insane in that colony for the year 1887. The total number of insane on the register was 2821, 1735 being male and 1086 female patients. The number on December 31st, 1886, was 2717, so that the increase during the year was 104, and was made up of 91 males and 13 females. This increase, large as it is, is very little above the average for the last ten years, which is 99·2. As the population at the end of 1887 was, according to the estimate of the Government statistician, 1,042,919, the proportion of insane to population was 1 in 369. The proportion is higher than in 1886, the increase in the general population having been in 1887 much smaller than usual, whilst the number of the insane increased at about the usual rate. As the idea is still current that the proportion of insane to population in New South Wales is unduly large, and in excess of that in this country, we may remind our readers that whilst the proportion in the colony was, as above stated, 1 in 369, or 2·71 per 1000, the proportion in England on Jan. 1st, 1887, was 1 in 349, or 2·86 per 1000. It is probable that the misapprehension has partly arisen from the fact that there the insane are almost all maintained in public asylums, provided for by votes of the Legislature, while here such institutions are supported by county, city, or district rates, and the insane in the aggregate come but little under public notice. The number of patients received in the colony during 1887 was 532, of whom 481 were admitted for the first time and 51 had been at some former time under care. The number is less by 35 than that admitted during 1885 and 1886, but greater than during any earlier year.

During the year 214 patients (115 males and 99 females) were discharged as recovered, giving a percentage of 40·22 on the admissions and readmissions for the year. This percentage is somewhat less than the average rate for the last ten years, which was 41·25. The total number of patients under care was 3278 (1995 males and 1283 females), and the daily average number resident was 2722 (1670 males and 1052 females), or 83 more than in 1886. The receipts of the department from all sources amounted to £10,295, and the total expenditure to £89,213, the balance of course being made up by a vote of the Legislature.

THE FRENCH SPECIAL COMMISSIONER ON YELLOW FEVER.

DR. PAUL GIBIER, who was deputed by the French Government to investigate the whole question of yellow fever, has just delivered a lecture before the Academy of Sciences in Havana embodying the results at which he has at present arrived. Before leaving Paris, he felt so convinced of the truth of Dr. Freire's views that he got himself inoculated with some of the cultures which that distinguished Brazilian physician had brought. The first insertion—made with a lancet with great care—was followed by no result whatever. A week later some of the attenuated virus was injected subcutaneously, and this produced such violent effects that Dr. Gibier declares nothing in the world would induce him to submit to a repetition of it. Since his arrival in Cuba, he has made post-mortem exami-

nations of a number of persons who have died of yellow fever, some of the examinations taking place only two hours after death, and one of them within fifteen minutes from the moment life became extinct. The examination of the blood taken from the heart in these cases, as well as the inspection of the urine, the bile, the pericardial fluid, the liver, the spleen, and the mesenteric glands, convinced him that none of these organs contain any microbe. He, however, discovered in the black matter always found in the intestines a bacillus presenting many points of resemblance to the so-called comma bacillus of cholera, being sometimes curved, and occurring in some cultures in a spiral form, possessing also the property of liquefying gelatine. This bacillus, when cultivated in peptonised broth, blackened the sides of the tubes; and when a few drops of the culture were injected into the intestine of guinea-pigs it sometimes proved fatal, the intestinal contents then showing a great resemblance to those found in yellow-fever patients. In dogs, the injection of a few drops into the small intestine rapidly produced violent effects—vomiting, diarrhoea, and, the night following, pyrexia. Cultures of this bacillus had a smell resembling that of the black vomit. A moist heat of 60° C. destroyed the bacillus in a few minutes; desiccation also proved fatal to it in less than twenty-four hours. This last observation led Dr. Gibier to suggest that if this bacillus was really the cause of yellow fever the immunity of inland districts might thus be explained, the comparative dryness of the air destroying the virus. It developed extremely well in sea water charged with organic matter; living, too, for a long time side by side with the ordinary microbes of putrefaction, so long at least as the medium did not become acid, for even a very slight degree of acidity destroyed the organism in a few hours. In confirmation of observations made in the laboratory, Dr. Gibier mentions that he has several times had an opportunity of demonstrating the same circumstance in the dead-house, the contents of the intestines, when they have become acid some hours after death, ceasing to show the presence of the bacillus. Since writing on this subject previously Dr. Gibier has had opportunities of examining the bodies of foreign sailors who have died in the civil hospital of Havana, and he has been able to demonstrate the presence of the bacillus in those who had suffered from yellow fever, and its absence in those who had died from other diseases. His opinion is that yellow fever is due to the development of the microbe in the intestine, the affection being therefore essentially a local one. As to treatment, in addition to tonics and stimulants when required, and frictions for the renal complication, he advises that the main treatment should be directed to the intestine. Every morning a good purge should be given—the first day 1oz. to 1½oz. of sulphate of soda, the second day 1½oz. of castor oil, and the third day 15 grains of calomel, the same series being repeated during the rest of the first week. If the medical man is only consulted on the fourth, fifth, or sixth day, the stomach should be washed out previously to the administration of purgatives, the colon being subsequently irrigated with a special tube in order to get away as large a quantity as possible of the toxic matter. A case is mentioned which was apparently hopeless, the patient being semi-comatose, where an enema produced an extremely copious stool followed by rapid improvement and ultimate recovery. In fact, Dr. Gibier would treat yellow fever as an infecting ulcer “by washing and disinfection.” He recommends in addition to hydrochloric acid lemonade, which is taken as a drink, three different mixtures, all to be taken together. 1. Perchloride of mercury $\frac{1}{4}$ to 1 grain, brandy 2 oz., mucilage 2 oz., infusion of coffee 5 oz.; the whole to be taken in numerous divided doses during the twenty-four hours. 2. Naphthaline $7\frac{1}{2}$ grains, made up into a paste, from five to ten times this quantity to be taken in the twenty-four hours. 3. Tannic acid $7\frac{1}{2}$ grains, made into a paste, from six to ten of these to be taken in the twenty-four hours. A case is given in detail in which this treatment immediately changed the aspect of an apparently very grave case, the patient making a good recovery.

DERBYSHIRE GENERAL INFIRMARY.—An eye department is about to be opened at this infirmary, and Mr. E. Collier Green has been elected as the first ophthalmic surgeon. Mr. Green was formerly senior house surgeon at Derby, and has lately been a clinical assistant at the Royal London Ophthalmic Hospital, Moorfields.

BRITISH DENTAL ASSOCIATION.

Dental Education.

IN his address at the annual gathering of the Eastern Counties Branch of the British Dental Association held recently, Mr. F. HALL, the President, spoke of the great strides that Dental Surgery had made in the last forty years, and questioned whether even now the system of dental education was what it should be. He asked: "Is the L.D.S. a sufficient diploma? or is it the minimum one, obligatory on all, but not enough for those who in the near future aspire to be in the foremost rank of the dental world?" In taking the latter view, he rather inclined to an "honours degree," in which chemistry, physics, and metallurgy should have a prominent part, rather than taking a medical qualification. The subjects advocated were of great interest and importance to the dental surgeon, but surely not so closely related or of so much practical value as a knowledge of general surgery and medicine. The subject of higher qualification has been much discussed at recent meetings of the branches of the British Dental Association, and we believe that Mr. Hall's address will be welcomed by the majority of dental practitioners, in that he advocates a movement forwards, especially as at two meetings the gentlemen who had attained the honour of becoming presidents expressed themselves as being not only content to rest upon their laurels, but opposed to any further medical qualifications, as being not only undesirable, but absolutely disadvantageous.

Anæsthetics for Dental Operations.

Mr. F. H. WEEKES, F.R.C.S., read a paper on Anæsthesia at the last meeting of the Midland Branch of the British Dental Association, in which he takes a very fair and practical view of the drugs most suited for dental operations. Under the heading N_2O , which is the most important of all the narcotics from a dental point of view, he quotes largely from the papers of Dr. Dudley Buxton, Mr. Victor Horsley, and Dr. Fredk. Hewitt (digests of which have already appeared in our columns). There is one statement made with regard to the effect of nitrous oxide on the pulse which is not in accordance with general experience. He says: "The heart's action is quickened at first, especially in nervous people (this happens with all anæsthetics); but afterwards, as soon as unconsciousness begins, the heart's beats are unaffected by the gas." Dr. Fredk. Hewitt has recorded observations of a large number of cases of gas administration, in which he, without exception, found that there was an acceleration of the pulse, continued up till the time that consciousness returned, when a sudden drop to normal occurred. Next in order of practical utility he places N_2O with a whiff of ether—that is, nitrous oxide passed through ether, a very small quantity of the latter being absorbed, the mixed narcosis being by one-half to one minute longer than when gas is alone administered. For dental operations this extra half-minute is of the utmost value. "The advantages of chloroform," he says, "are its cheapness, its smallness of bulk, its rapidity of action, and absence of bronchial irritation. Its disadvantages are few, but enormous. It produces an intense nausea, and it often causes death without the slightest warning." The large number of recorded deaths under $CHCl_3$ for dental operations in the last few years should lead to its use only in exceptional circumstances. Ether is far safer than $CHCl_3$; and where long operations are required, which sometimes do occur for dental cases, it is to be preferred to chloroform. Mr. Weekes has found that atropine, given just before ether, diminishes the amount of saliva &c. secreted, and, if so, it would be of the greatest value in dental operations on the lower jaw. The expression of his opinion that anæsthetics should be administered by a medical man called forth a good deal of antagonistic discussion. The plan of a certain number of dentists, of giving gas and then operating themselves, is to be strongly condemned, for, as Mr. Weekes says, it is not to be expected that a dentist will attempt to treat dangers from the anæsthetic at a time when all his faculties are being devoted to the difficult task of extraction. But even where one dentist (we are speaking of those not possessing a medical qualification) gives gas and another operates, should an accident occur—and there are several cases of death on record,—the dentist would find himself in a by no means enviable position,

having all the terrors of a coroner's inquest before him. Mr. Weekes finishes his paper with a few remarks on cocaine injection for extractions, and he, in common with most dentists, has found it to have been rather disappointing.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5381 births and 2710 deaths were registered during the week ending July 7th. The annual rate of mortality in these towns, which had been so low as 16.2, 15.5, and 15.9 per 1000 in the preceding three weeks, further declined last week to 15.0—a lower rate than has prevailed in any week of which record exists. During the thirteen weeks of last quarter the death-rate in these towns averaged only 18.1 per 1000, and was 2.7 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 9.1 in Brighton, 9.9 in Nottingham, 11.4 in Leicester, and 11.5 in Birkenhead. The rates in the other towns ranged upwards to 19.0 in Derby, 20.3 in Newcastle-upon-Tyne, 21.0 in Manchester, and 22.2 in Preston. The deaths referred to the principal zymotic diseases, which had been 248 and 304 in the preceding two weeks, declined again last week to 276; they included 94 from diarrhoea, 63 from whooping-cough, 33 from diphtheria, 32 from measles, 25 from scarlet fever, 21 from "fever" (principally enteric), and only 8 from small-pox. No death from any of these zymotic diseases was registered during the week in Plymouth; whereas they caused the greatest mortality in Bolton, Manchester, and Preston. The highest death-rates from diarrhoea occurred in Sunderland, Blackburn, and Liverpool; from whooping-cough in Cardiff and Manchester; from measles in Wolverhampton; from scarlet fever in Newcastle-upon-Tyne, Oldham, and Bolton; and from "fever" in Derby. The 33 deaths from diphtheria included 29 in London. Small-pox caused 7 deaths in Preston, and 1 in Bradford, but not one in any of the twenty-five other large provincial towns or in London. The Metropolitan Asylum Hospitals contained only 3 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 897 at the end of last week, against 895 and 925 on the preceding two Saturdays; 81 cases were admitted during the week, against 81 and 98 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 213, 184, and 156 in the preceding three weeks, were 176 last week, and were 34 below the corrected average. The causes of 59, or 2.2 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Brighton, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Wolverhampton, Hull, Oldham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20.0, 18.4, and 18.2 per 1000 in the preceding three weeks, further declined to 16.2 in the week ending July 7th; this rate exceeded, however, by 1.2 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 9.5 and 11.2 in Greenock and Perth, to 16.8 and 18.9 in Edinburgh and Glasgow. The 41 deaths in the eight towns showed a further decline of 51 from the number in the previous two weeks, and included 10 which were referred to diarrhoea, 7 to diphtheria, 7 to measles, 5 to "fever," 5 to whooping-cough, 3 to scarlet fever, and not one to small-pox; in all, 37 deaths resulted from these principal zymotic diseases, against 46 and 49 in the preceding two weeks. These 37 deaths were equal to an annual rate of 1.5 per 1000, which corresponded with the mean rate from the same diseases in the twenty-eight English towns. The 10 fatal cases of diarrhoea showed a decline of 2 from the number returned in each of the preceding two weeks, and were 12 below the number in the corresponding week of last year. The 7 deaths from diphtheria, of which 3 occurred in Glasgow and 3 in Edinburgh, exceeded the numbers in recent weeks. The fatal cases of measles, on the other hand,

which had been 13 and 12 in the previous two weeks, declined last week to 7, of which 6 were returned in Glasgow. The deaths from "fever," from whooping-cough, and from scarlet fever also showed a decline; of the deaths from "fever," 2 occurred in Glasgow and 2 in Aberdeen, while 3 fatal cases of whooping-cough and 2 of scarlet fever were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 94, 75, and 89 in the preceding three weeks, declined again last week to 77, but exceeded by 1 the number returned in the corresponding week of last year. The causes of 60, or nearly 15 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 20.7 and 24.8 per 1000 in the preceding two weeks, declined to 20.2 in the week ending July 7th. During the thirteen weeks of last quarter the death-rate in the city averaged 24.6 per 1000, the mean rate during the same period being 16.9 in London and 19.0 in Edinburgh. The 137 deaths in Dublin showed a decline of 31 from the number in the previous week; they included 6 which were referred to "fever" (typhus, enteric, or ill-defined), 6 to whooping-cough, 3 to measles, 2 to scarlet fever, and not one either to small-pox, diphtheria, or diarrhoea; in all, 17 deaths resulted from these principal zymotic diseases, against 8 and 13 in the preceding two weeks. The annual death-rate from these diseases was equal to 2.5 per 1000, the rate from the same diseases being 1.9 in London and 1.6 in Edinburgh. The fatal cases of "fever," which had been but 1 and 3 in the preceding two weeks, further rose last week to 6, showing an excess upon any recent weekly number. The fatal cases of whooping-cough and measles also showed an increase. The deaths both of infants and of elderly persons showed a decline from recent weekly numbers. Only 1 inquest case, and no death from violence, was registered; and 37, or more a quarter, of the deaths occurred in public institutions. The causes of 21, or more than 15 per cent., of the deaths in the city were not certified.

Correspondence.

"Andi alteram partem."

ON ARTIFICIAL GLYCOSURIA.

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. Burton, in discussing the production of glycosuria from the internal administration of salicylates, seems to overlook the fact that the salicyluric acid occurring in the urine in such cases (with possibly other bodies, for Fleischer believed that pyrocatechin was also frequently to be found¹) reduces both the copper and bismuth tests for glucose. Since his letter appeared I have made a careful examination of the urine of a patient taking large doses of salicylate of soda. When this patient was taking from 20 to 40 grains daily, the urine gave a reaction corresponding to 5 grains to the ounce with picrate of potash, but when the drug was increased to 50 and 80 grains a day the amount of glucose indicated by the same test in the urine rose to 8½ grains, and the secretion, besides reducing Fehling's solution, threw down a copious black deposit when boiled with Lowe's bismuth test. I now set a sample of it to ferment with yeast alongside of three specimens of normal urine of equal quantity, to each of which had been added 8, 4, and 2 grains of glucose to the ounce respectively. These several specimens were put into little test tubes 6 inches deep, and the tubes were then inverted in little flasks, and kept at a temperature of 70° to 80° F., all four being treated exactly alike in every respect. At the end of about twenty-four hours the following was the result, as measured by the quantity of carbonic acid occupying the upper part of the tube:—

1. Normal urine + 8 gr. glucose to the oz. = $3\frac{1}{2}$ in.
2. Normal urine + 4 gr. glucose to the oz. = 2 in.
3. Normal urine + 2 gr. glucose to the oz. = $\frac{1}{2}$ in.
4. Urine of patient = $\frac{1}{2}$ to $\frac{1}{4}$ in.

Next day the patient's urine (which had been kept tightly corked and was quite fresh) was again tried, but only a bubble or two of gas formed. At the same time, to ascertain how far any salicylate compounds present might interfere with fermentation, a specimen was set to ferment, to which 4 gr. of glucose to the ounce had been added. In the latter one inch of gas formed in twenty-four hours, and this increased to nearly two inches during the next equal period of time. It thus appeared that fermentation was retarded to a certain extent, but even after making allowance for this, it was clear that a large deduction required to be made from the indication afforded by a reduction test. When a quantity of the urine was shaken up with ten times its volume of ether, the latter yielded on evaporation a small quantity of a crystalline deposit, acid in reaction, which reduced Fehling's test slightly. When the urine which had been thus treated was afterwards acidulated with hydrochloric acid and again extracted with the same quantity of ether, a large deposit, partly crystalline and partly of a yellow, syrupy nature, was obtained, which gave in water a yellow solution with an acid reaction, and this solution not only threw down the red suboxide from the copper test, but also gave a perfectly black precipitate when boiled with the bismuth solution. A second, and even a third, charge of ether still extracted a considerable quantity of this acid mixture from the original sample of urine. It appeared to me that the urine hardly contained more than two grains of glucose to the ounce, and this may perhaps be accounted for by an action on the blood-corpuscles without any reference to a diabetic centre.

July, 1888.

I am, Sirs, yours faithfully,

ROBERT KIRK, M.D.

THE DANGERS ATTENDING THE ACTUAL ANOMALOUS CONSTITUTION OF THE COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—As I was unable to attend the late meeting of the Fellows of the College of Surgeons, I shall be obliged if you will allow me to recall attention in your columns to a striking illustration of the dangers to which the profession and the public are exposed from the practically irresponsible oligarchy which rules the College.

In 1876, the Council of the College, having obtained—of course without consulting either Fellows or Members—a Charter, which empowered them to admit "persons" to the examination in midwifery, apart from any other test in medicine and surgery, and, passing which, such "persons" would be entitled to be placed on the Register, endeavoured to carry this scheme into effect. To avoid a tedious history of what took place, it will be sufficient to quote from a leading article in THE LANCET of April 22nd, 1876:—

"The Council of the College of Surgeons have been saved from the effects of the weak, wavering policy of their leaders by the prompt and praiseworthy conduct of Dr. Barnes, one of the examiners in obstetrics. When it was announced that the College was willing to admit 'women' to examination in midwifery, Dr. Barnes at once declined to examine 'persons' who were not properly and adequately educated, and he accordingly tendered his resignation. Later on, Dr. Farre and Dr. Priestley were induced to follow Dr. Barnes' lead." And, in THE LANCET for March 18th, the Editor had said: "They (the Council) must not be surprised if those who represent obstetric medicine decline to assist in the manufacture of fragmentary diplomas. The Council of the Obstetrical Society and a general meeting of the Metropolitan Branch of the British Medical Association have already expressed in unmistakable terms a judgment which will be universally endorsed by the profession."

Thus it is clear that, had not the medical press represented the body of the profession far more truly than did the Council of the College, a most flagrant wrong might have been inflicted. The danger still exists. The Council is applying for a new charter *proprio motu*, not solicitous about the opinion of those in whose interest it is supposed to act.—I am, Sirs, your faithfully,

ROBERT BARNES, M.D., F.R.C.S

Harley-street, W., July 7th, 1888.

¹ Berlin. Klin. Wochenschrift, Sept. 1875, Nos. 39 and 40.

"WHAT IS A HOSPITAL?"

To the Editors of THE LANCET.

SIRS,—I wish through your columns to invite an expression of opinion concerning the action of the committee of the Metropolitan Hospital (late the Metropolitan Free Hospital), in the Kingsland-road, in converting their institution into a Provident Dispensary. This hospital, in common with nearly all others, was established to relieve the medical wants of the poor, and in the earlier part of its existence great stress was laid upon the word "Free" and the principle therein involved. The governing body said: "We want no governor's letter nor any recommendation. If the patient is poor and ill we will try to relieve him." But now what a change! Under the present arrangement the poor man presents himself and receives advice and medicine once, but on his coming again is met with the statement: "We do not want you or your class; you must go to the workhouse! We want people who can pay and will subscribe to our provident fund. Now the question I would ask is, Was such a course as this ever contemplated by the generous and charitable people who supplied the money to start and maintain the institution? Of course, the committee would attempt to excuse their departure from the original design by a representation that a great deal of their money was made by very fortunate sales of their former sides. But does this alter the position? I should say not. From whom did the money come in the first place, for what purpose was it given, and did not the charitable aid lead to the fortunate investment? The same argument of misapplication of charitable help affects with even greater force the Hospital Sunday Fund contribution, for here the distributors of the fund are called upon to see that the money is applied in support of the purpose for which the hospital was intended. Surely it should not go to form a capital upon which the committee of the Metropolitan Hospital may trade. Again, was it ever contemplated by the founders of this hospital that the committee would enter into competition with the hard-worked medical practitioner, even to the extent of sending out circulars touting for business and generally underselling him? I would ask, Is this a right course to pursue, having the advantages and appliances of a large hospital at their command, and with money obtained for a distinctly different purpose?

Now to inquire as to the reason of all this change and departure from the old and honoured lines of professional etiquette and good feeling. Is it to help the poor? No. The poor man, unless he will join their provident fund, is told to go to the workhouse—to prevent which, in my humble opinion, is one of the chief functions of a hospital. No, the reason is altogether different. It was stated by the honorary secretary, at a meeting at which I was present, that it is to make money to cover a yearly deficit. Can this be called a legitimate object?

I feel that I have but inadequately stated the case; but I think I have shown that the committee are ignoring the proper purpose of the hospital, and acting very unfairly to the medical men in the neighbourhood.

I am, Sirs, yours obediently,
Southgate-road, N., July, 1888. A. H. SANDILAND.

DISADVANTAGES OF OPTIONAL NOTIFICATION.

To the Editors of THE LANCET.

SIRS,—There is one point bearing on the above which is worthy of consideration in the interest of the profession. In places where it is optional some of the doctors will notify and some will not. The public, who very much object to it, soon find out who do so, and in a doubtful case will go to the one who does not, and the man who does what he thinks his duty to the community will thus lose many patients. Even when it is made compulsory the same will occur in a less degree, as it is generally possible to "keep it quiet." The reason the public object is not only the trouble, but the expense entailed by, papering and white-washing &c., which should, not, I think, be thrown on the individual. I am, Sirs, yours truly,

South Tottenham, June, 1888. G. B. BEALE.

THE FELLOWS' DINNER.

To the Editors of THE LANCET.

SIRS,—I think the annual dinner of the Fellows of the College of Surgeons on election day should now be abandoned. Of the 180 Fellows who voted on Thursday not above a third dined; and as next year voting by paper will probably be legalised, the number of country Fellows will no doubt be diminished. I say nothing against the management of the dinner, though I should prefer shorter and more audible speeches and no music, with a better dinner!

I am, Sirs, yours obediently,
July 9th, 1888. F.R.C.S.

THE CHAIR OF SURGERY IN THE OWENS COLLEGE.

To the Editors of THE LANCET.

SIRS,—Would you kindly insert the enclosed in your next issue?

I am, Sirs, yours faithfully,
Bank House, Hatherlow, near Stockport, T. A. GOODFELLOW.
July 7th, 1888.

A very largely attended meeting of the Manchester medical students was held at the Infirmary on Thursday, the 5th inst., to consider what action should be taken to acquaint the Council of the Owens College with the view taken by them of the recent appointment to the chair of Surgery in the College. The following memorial was unanimously adopted, and it was further resolved to forward copies to the members of the Council.

"To the Council of the Owens College.

"GENTLEMEN,—We, the students of the Manchester School of Medicine, desire unanimously to express to you, the Council of the Owens College, our regret and disappointment that you have deemed it necessary to withdraw the teaching of surgery in the Owens College Medical School from the hands in which it has been placed for several years past.

"To the public medical careers of our teachers we must not here advert, for you have already reviewed the evidence relating thereto; but we respectfully represent to the Council our conviction that the present teachers have, in their past professional relations with us, acquitted themselves with much credit and honour, and that by their expulsion we are deprived of the extensive practical experience gained by many years of surgical practice in the Manchester Royal Infirmary, which, with the exception of the London Hospital in the East-end, holds the first position in Great Britain in regard to the material of its surgical practice."

SMALL-POX AT MILAN.

(From our own Correspondent.)

THE weather has been very showery, sometimes condensing into waterspouts, and the evenings have been cold beyond all precedent for more than a month. Coincidentally, small-pox has increased, and risen to proportions quite alarming. For some years, it is now officially and somewhat reluctantly admitted, the malady has never been altogether absent from Milan, and within the last few weeks the cases have so multiplied that, in round numbers, there are now 1000 small-pox patients known to the officers of health. The Rotonda, the establishment to which such cases are transported for isolation and treatment, has its two hundred beds constantly filled, but these form a very minor proportion of the sick from small-pox, the vast majority being attended to in their own dwellings. All, indeed, who can afford it prefer their homes, however humble, to the Rotonda, and not unnaturally shrink from going themselves or allowing their near and dear ones to go to a lazaretto, overcrowded, fetid, and unsightly beyond description. Even those public-spirited journals which have been preaching the duty, incumbent on every citizen, of personal cleanliness, of scrupulous observance of sanitary law, above all of vaccination or (if need be) revaccination, refrain from advising parents or householders to take their small-pox

stricken belongings to the Rotonda, but rather keep urging the municipality to prosecute with redoubled vigour the building of the new lazaretto, for which so large a call has been made on the civic purse, and which has so strangely lingered these two years on the road to completion. The Rotonda, indeed, so far from being a place to recommend, is eminently one to be warned against—standing as it does over the graveyard of an ancient church, where, according to a local observer, the corpses have, by special conditions of the soil in operation for centuries, contributed to form a substratum of adipocere, the attempted removal of which had lately to be abandoned owing to the poisonous effects of the disturbed *humus* on the labourers employed. Besides its fatal defects of site and structure, the Rotonda does not favour by its internal economy the requirements of rational and humane treatment. Its very existence, so far from being a safeguard, is a veritable danger to its densely populated neighbourhood. Pending the construction of the new lazaretto outside the city walls, but not inconveniently remote from these, the sanitary authorities are applying, wherever they can do so successfully, the most accredited of prophylactics in small-pox—vaccination; and earnestly appeal to all members of the civic brotherhood, from the clergy downwards, to assist in reducing to zero the number of the non-vaccinated. Milan is the wealthiest and the most enterprising of Italian cities; she attracts and entertains a larger number of temporary visitors within the twenty-four hours than any of her showier sisters; and it is scarcely in keeping with her character—certainly it is not conducive to her interests—that she should for years have been harbouring—nay, inviting—a visitor the most unlovely, the most unwelcome, and, be it added, the most easily held aloof of all by which our modern civilisation is beset.

As I write I am informed of the increased activity of the prophylactic measures set on foot by the Municipality. The owners or managers of large industrial establishments are having their operatives vaccinated *en masse*—the great dye-works outside the Porta Magenta, for instance, having just called in Drs. Grancini, Noli, and Mascetti of the Vaccination Commission, who vaccinated 700 of the hands on the spot. Working-men's clubs are joining the prophylactic movement, and, in concert with the Municipality, are having themselves, their members, their families, and all whom invitations can reach, vaccinated in special halls set apart for the purpose. Everything short of systematic vaccination, under imperial control and imperial penalties, is being done; and the medical and sanitary interests are countenancing the work only as a temporary substitute for what legislation is expected to accomplish.

Other parts of Italy are at present ravaged with small-pox. Along the Neapolitan Riviera the malady is never quite absent, but Salerno—the *civitas Hippocratica*!—is at this moment scourged by it in its most malignant form, the so-called *vaiuolo arabo* (Arabian small-pox). In an outlying village with 700 inhabitants the patients, since May 10th, have numbered 270, the deaths 143. The average of cases per diem is five. I am told that in the whole country side there is not one fairly equipped pharmacy, and that disinfectants, in a region teeming with lime and sulphur, are unknown. Meanwhile, so virulent is this *vaiuolo arabo*, that the same informant assures me that, within an hour after death from the disease, the corpses turn quite black, looking as if they had been charred (*carbonizzati*), and a little after become totally unrecognisable! With such deadly distempers ever threatening, when not actually present, what is the use of Italy vaunting her “sun-traps,” her genial winter resorts, and trying to lure the northern stranger to pitch his tent and spend his money amid such surroundings?

Milan, July 9th.

LIVERPOOL.

(From our own Correspondent.)

THE MORTALITY OF LIVERPOOL.

LIVERPOOL has often been described as the most unhealthy town in England. This unenviable notoriety has owed its origin to ignorance of several local circumstances which would go far to show how very incorrect such a description was and is. For if the area of the city included all the suburbs, as is the case with the metropolitan and

other areas, the result would have been a very much lower death-rate. Again, if there were at the mouth of the river Mersey some place analogous to Greenwich on the Clyde or Gravesend on the Thames, many who arrive in Liverpool dying or dead would be landed there, and the deaths would swell the mortality returns of that locality. When the late Dr. Parkes and Dr. Sanderson inquired into the mortality of Liverpool in 1871, they found that in a selected district the mortality was only 15 per 1000, while in another it was 45. Lately the mortality has been as low as 15 per 1000, a proof of the care with which the health authorities have performed their duties.

SINGULAR DISCOVERY OF A DEAD BODY.

On the 4th inst. the city coroner resumed the inquest opened a fortnight previously on the body of a married woman which had been found in a very decomposed state in a house in Kirkdale. The deceased was the wife of a sailor, and there were allegations that he had ill-used her. A post-mortem examination was made by Dr. James A. Hendry, and later on a second inspection was made by Mr. F. W. Lowndes, surgeon to the police, in Dr. Hendry's presence. No evidence was found of any serious injury, such as fractures or dislocation, and the decomposition was so advanced that no opinion could be expressed as to any marks of bruises. The lungs were collapsed, the heart somewhat fatty, and the liver enlarged. The stomach was removed for chemical examination by Mr. Edward Davies, who failed to detect any evidence of poison. The other organs were examined, but threw no light upon the mystery. The jury returned an open verdict. The death had most probably occurred six or seven weeks before the body was discovered, and, as the adjoining houses on each side were occupied, this was very remarkable.

DRUNK OR DYING: ANOTHER MYSTERIOUS CASE.

An inquest was held on the 4th inst. by the city coroner on the body of a man who was found in the street in a state of helpless intoxication by a constable. Deceased was about fifty years of age, and from the evidence of a witness it appeared that the deceased was taken to his house (which was a lodging-house) by two men, who wanted him to let the deceased remain, but he would not. A few minutes later he saw the deceased lying on the footway opposite his house, and the police were called. The deceased was removed to the Bridewell, which was near, and there was no appearance of any injury about him. He was visited several times during the night, and as he vomited after drinking some water medical assistance was obtained, and he was removed to the workhouse hospital, where he died the next day. On post-mortem examination by Dr. O'Connor, it was found that death resulted from a serious fracture of the vault of the skull, which was more likely to have been caused by a blow from some heavy instrument than a fall. An open verdict was returned.

THE LIVERPOOL HOSPITALS AND THE HOSPITAL SUNDAY AND SATURDAY DISTRIBUTION.

The following sums were awarded to the Liverpool medical charities as the proceeds of Hospital Sunday and Saturday this year. The total amount distributed was £9252, an increase of £500 over the amount distributed last year:—Royal Infirmary, £2312 10s.; Royal Southern Hospital, £1387 10s.; Northern Hospital, £1202 10s.; Dispensaries, £647 10s.; District Nursing Society, £647 10s.; Ladies' Charity, £370; Infirmary for Children, £555; Eye and Ear Infirmary, £462 10s.; Hahnemann Hospital, £185; Cancer Hospital, £92 10s.; Consumption Hospital, 277 10s.; Stanley Hospital, £462 10s.; Dental Hospital, £23 2s. 6d.; St. George's Hospital for Skin Diseases, £23 2s. 6d.; St. Paul's Hospital for Skin Diseases, £138 15s.; Woolton Convalescent Hospital, £185; Hospital for Women, £185; Hospital for Incurables, £92 10s.

SHOCKING END TO A “WAKE.”

In spite of all efforts on the part of the late and present Roman Catholic bishops of Liverpool and their clergy, the revolting practices called holding “wakes,” but which are really drunken revels by the side of the corpse, still continue in Liverpool, notwithstanding occasional tragical results. One of these occurred recently, and was the subject of an inquiry before the magistrate and coroner. The deceased was the widow of a shoemaker who died on the 3rd inst., and on whose body a “wake” was held the following night. A son of the deceased man quarrelled

with his mother for being under the influence of drink, and gave her a push which caused her to fall, when she immediately expired. At the inquest Mr. Permewan, resident surgeon at the Northern Hospital, deposed that the only mark of violence was a slight bruise at the back of the head; the internal organs were congested, the heart fatty and otherwise diseased; death was due to failure of the heart's action. The jury returned a verdict of manslaughter against the son, who was committed for trial.

LIBERAL REQUESTS TO LOCAL HOSPITALS.

By the will of the late Mrs. French the following legacies have been left to local hospitals:—Royal Infirmary, £1000; Northern Hospital, Royal Southern Hospital, Hospital for Cancer and Skin Diseases, £500 each. The deceased also left £1000 to the Margate Sea-bathing Infirmary.

FATAL RIFLE ACCIDENT.

Another terrible fatality arising from the incautions use of firearms has occurred in this city. A member of the 18th Lancashire Rifle Volunteers kept his rifle behind the parlour door of the house in which he lived. On Sunday last a younger brother, aged ten, went to his sister, saying, "I think I have shot Alfred"—a third brother, aged eight. His sister found him bleeding from a wound in the cheek. He was at once seen by Dr. Millington, the ambulance surgeon from the Northern Hospital, who found life extinct. The boys would appear to have been playing with the rifle. Liverpool, July 9th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

OUTBREAK OF SCARLET FEVER AT NEWCASTLE.

SINCE I last wrote a sudden and extensive outbreak of scarlatina has taken place in Newcastle. It is mostly confined to the Jesmond district. So far I have heard of between fifty and sixty cases. A large number of the cases have been supplied with milk from the same dairy. This dairy has been under observation, and, I believe, the supply has been stopped pending the result of a complete inquiry. I have heard that the dairy was found free from any disease in the workers, but that there had been some cases of sore throat previously in some of the dairy people. Whether this will account for the outbreak, or whether the cows had access to some impure water as drink, it is at present impossible to say definitely. It is fortunate that, so far, the character of the epidemic is non-malignant.

THE EPIDEMIC OF PNEUMONIA AT MIDDLESBROUGH.

The epidemic of pneumonia is disappearing rapidly. There is a considerable difference of opinion as to its contagious character, and on this point we must rest content until we have some authoritative statement from Dr. Ballard, the Local Government inspector, who is engaged in making an exhaustive inquiry into the matter. One thing is certain from the figures which I now send you, that although there is an abnormal amount of pneumonia, so to speak, this year, it is not a new thing in Middlesbrough to have a large fatality in spring from this cause; for instance, as to the deaths from pneumonia, they have been for the last two years (1887-88) as follows: Jan. 9th, 16; Feb. 10th, 31; March 19th, 58; April 23rd, 53; May 25th, 73; and June 20th, 65. Even allowing for the nature of employment of a large proportion of the working classes and their liability to vicissitudes of weather and temperature, these figures are very significant, and almost go to show an endemic proclivity to the disease at Middlesbrough. I shall anxiously look for Dr. Ballard's report on this and the moot point of contagion.

THE NEW USE FOR SLAG.

Your annotation on the new use for slag as a deodoriser and disinfectant, as invented by Mr. M'Arthur of Dundee, has been read with much interest in the north. Should the scheme prove practicable, it would be of especial interest to North Yorkshire, Cleveland, and Durham, where huge mountains of slag are accumulated only to become eyesores to the iron districts and sources of cost to the owners, who have to pay for its removal.

HOSPITAL SUNDAY AT WEST HARTLEPOOL.

In accordance with annual custom, the various public bodies and friendly societies have held their Hospital Sunday procession, the mayor and corporation, for the first time, heading the procession. The day being finer than usual, the proceedings passed off well, and caused much interest in the town, and doubtless will benefit the hospital funds considerably. It is stated that it was necessary to hold an overflow meeting in the Armoury grounds.—I hear that the contract for the extension of the Hartlepool Hospital has been signed, and that the work will be soon commenced.

LEEDS INFIRMARY.

Colonel J. T. North has given £5000 for the enlargement of the Leeds Infirmary. Colonel North, it may be stated, is a native of Leeds, and is particularly pleased with the way in which the working men have supported the extension, the total cost of which is estimated at about £20,000.

Newcastle-on-Tyne, July 9th.

PARIS.

(From our own Correspondent.)

SACCHARIN.

SOON after the communication made by Dr. Worms at the Academy of Medicine on the subject of saccharin, which was reported in THE LANCET of May 5th, 1888, the Prefect of Police requested the Council of Hygiene to give its opinion as to whether the use of this substance in alimentation would be productive of danger to the public health, as the analyst at the Municipal Laboratory of Paris had discovered the presence of saccharin in certain alimentary products, and even in a sample of champagne the sugar was found to be replaced by it. A Commission was charged to investigate the question, and the following are the conclusions arrived at, as communicated to the Academy of Medicine at its meeting of last week, by Dr. Dujardin-Beaumetz, the reporter: "In presence of digestive troubles which saccharin may produce, and basing myself on the fact that saccharin is not an aliment, as it is entirely eliminated from the economy without undergoing any modification, the Commission is unanimous in considering saccharin as a medicament and not an aliment. Moreover, convinced that saccharin would serve only to augment the adulterations, already so numerous, of alimentary substances, the Commission is of opinion that the employment of saccharin in alimentation should be prohibited as being dangerous for the public health." Notwithstanding the inconveniences attaching to saccharin, Dr. Dujardin-Beaumetz maintains that, from a therapeutic point of view, this substance renders great service to the small number of diabetic subjects who cannot do without something in the place of sugar, and it is from this point of view that the diet of diabetics is considerably ameliorated by the introduction of saccharin in the special alimentation of this class of patients. Dr. Worms, in responding to the above remarks, stated that, in support of what he had asserted in his communication already referred to, he had since observed that a certain number of diabetics who had used this product were affected with troubles in the alimentary canal. He, moreover, stated that on a recent visit to London he had a conversation with Dr. Pavy, who declared that the diabetics who had tried saccharin were almost all obliged to abandon this medicament because it produced in them troubles of the stomach, and caused loss of appetite after a few days. Commenting on the above conclusions of the Commission in the *Journal d'Hygiène*, Dr. de Pietra Santa pertinently asks: "How can a substance be declared dangerous to health which is eliminated in its natural state, which does not undergo any modification in the economy, and which is not toxic? How can one base himself on a judgment, which results in a prohibition, on four facts cited by Dr. Worms—facts which are in opposition to the serious clinical observations of Stutzer, Abalos, Pollatschek, Mercier, Adducco, Mosso, and so many others?" Dr. de Pietra Santa then makes the following citation from the *Bulletin Municipal Officiel*: From numerous experiments performed on the physiological and toxic action of saccharin (Salkowski, Adducco, Mosso, Worms,

Dujardin-Beaumetz, Mercier, and others) it results that it possesses incontestable antifermentative and antiseptic properties. In regard to its toxic properties, experiments performed on animals have shown that as much as six grammes per day of this substance can be administered without inconvenience. On the other hand, it appears certain that there are persons in whom the use of saccharin may be continued in small doses for a long time; there are others, on the contrary, in nearly equal number, who would experience serious inconvenience.

PHTHISIS AND INSANITY.

At a recent meeting of the Société Française d'Hygiène, Dr. Moreau de Tours read a communication that he had already made to the Congrès des Sociétés Savantes on the relations of pulmonary phthisis to mental alienation or insanity, from an etiological point of view, and he arrived at the conclusion that "phthisis in parents may, in virtue of the law of heredity transformed, disappear in their children, and be replaced by a mental or nervous affection."

M. CHEVREUL.

At the last meeting of the Academy of Sciences, the President, M. Janssen, informed his colleagues of the infirm state of health of M. Chevreul, the illustrious *savant* and centenarian. He is becoming gradually weaker, and is often obliged to lay up. He is still able to walk, but is obliged to make great efforts to get upstairs. He is, therefore, not so regular in his attendance at the Academy.

ERRATUM.—In the letter published last week the sentence commencing on the fourth line should read thus: "The cause of alcoholism resides as well in the quality of alcohol consumed as in the quantity."

Paris, July 10th, 1888.

EGYPT.

From our own Correspondent.)

TYPHUS FEVER NEAR DAMIETTA.

AT the end of March of this year a smouldering fever seems to have commenced in three hamlets, about three and a half miles to the north of Damietta. Owing to the death of the village barber and absence of satisfactory statistics, the disease was not reported until May, when the chief doctor notified the presence of a continued fever. On June 2nd Mr. Hooker was sent to the spot as sanitary inspector, together with a young native doctor, who had had a previous experience of epidemic fevers. They found a population of 1200 in the three hamlets, all miserably poor, and living on dried bread and preserved fish. During June the Nile is at its lowest; it is, moreover, exceptionally low this year, and the people were dependent for drinking supply upon wells dug in the sand, containing very brackish water. Nine patients were found being treated in a tent, but when a house-to-house visitation was made thirty other cases were discovered, and sixteen further admissions took place between June 3rd and June 20th. Of this total of fifty-five cases, fifty recovered and five died. The latter died about eight days after admission—i.e., at the end of the second week of the fever. They emitted a characteristic typhus odour, and died prostrate in the "typhoid state." No necropsy was performed, because this was a threat reserved for any cases dying in private houses, the friends being thus induced to notify the existence of new patients. The fifty surviving cases were mostly admitted about the fourth day of the disease, and in four days more they became seriously ill, with a temperature of 104° or 105°, dry and thickly coated brown tongue, foul cracked lips, sordes on teeth, congested conjunctivæ without jaundice, constipation, typhus odour, general flush of face, and an eruption consisting of very small plum-coloured petechiæ, not bigger than a large pin's head, and best seen on the anterior folds of the axillæ and on the pubes. About a week after admission the patients seemed almost hopelessly prostrate, and then gradually recovered without a bad symptom and without relapse. Two men suffered from parotid buboes. The patients all came from huts destitute of windows and other ventilation, and the huts themselves were crammed with rubbish, corn, and bedding, while the family bread was often baked in close proximity to the sick. In one cabin five people out

of eight were attacked; and in another, containing six persons, five were reported to have died during May, the only survivor being the head of the family. The new patients were at once removed from their dwellings, washed in carbolic water, dressed in hospital clothing, their own rags being burnt, and were placed in huts specially constructed on the spot. These ensured perfect ventilation and gave each man 550 cubic feet. They were built of a framework of wood, with hanging mats, and plentiful open spaces; the floor was of clover hay, and the beds of rice straw. The treatment consisted of milk diet, strong soup, unstinted brandy, and later in the case bread and meat. Improved aeration at once checked the typhus odour, brightened up the patients, and stopped the epidemic. As the financial question is always a very important one in this country, it may be worth mentioning that the energetic measures here taken on y cost the Government £52. This included £30 for hospital huts, besides patients' diet and thorough cleansing and scavenging of the town of Damietta. As on previous occasions, the epidemic showed no tendency to spread to the neighbourhood, and, unlike 1884 and 1886, it was not accompanied by relapsing fever.

AN EPIDEMIC OF MEASLES.

In comparison with England, measles is a rare endemic disease here, but there has been a smart outbreak of it in the native districts of Cairo during the last two months. The deaths have risen from seven to nineteen during the week, without counting cases returned as bronchitis, diarrhœa, or dysentery. Only isolated cases have been seen among the Europeans, and there have been none among more than 100 English children.

HOW SMALL-POX MAY BE SPREAD.

In April an Englishman walked into my consulting room and asked for a diagnosis of the rash from which he had lately been suffering. I found him covered all over with well-marked desquamation and pitting from modified small-pox. He apparently caught the disease in Delhi, and sailed from India in a vessel with no doctor on board, the day before the eruption first appeared. He consulted a medical book upon the voyage, and came to the conclusion it was not variola, because he had no backache or vomiting. Feeling perfectly well, he declined to go into a hospital, but agreed to sail up the Nile for three weeks in quarantine, his crew and servants being successfully protected by revaccination. I was interested in tracing the fate of the original vessel, and learned that she landed two cases of small-pox at Antwerp, where she was fumigated and then despatched to Cardiff, where three other cases broke out.

CAIRO NURSING FUND.

A nursing sister from St. Thomas's Hospital and a second from St. Bartholomew's have just arrived to try to infuse greater cleanliness, decency, and order into Kasr-el-Aini Hospital. They are controlled by a local committee, and their principal duty, besides learning colloquial Arabic, will be to direct the energies of three native midwives and fifteen attendants, who are responsible for ninety women and children distributed over six well-ventilated wards. They will not be required or allowed to nurse in the male wards.

JUBILEE SUBSCRIPTIONS.

The English colony in Alexandria has opened a "Victoria Home" for respectable women of all kinds in search of employment, and attached to it are two English nurses, who are already busily engaged with private cases in Alexandria and Cairo. The colony in Cairo is devoting its jubilee fund to the erection of six isolated rooms in connection with the German "Victoria Hospital," nursed by deaconesses from Kaiserwerth. The rooms are specially intended for infectious disease and for the temporary detention of lunatics.

MILITARY FEMALE HOSPITAL.

This has just been removed from the centre of the town to a much better building at the citadel, and all pains are being taken to make it attractive to the soldiers' wives and children of the army of occupation.

Cairo, July 2nd, 1888.

MEDICAL MAGISTRATE.—Mr. Charles Brook, M.R.C.S., surgeon of the Lincoln County Hospital, has been placed upon the Commission of the Peace for the Borough of Lincoln.

ROYAL COLLEGE OF SURGEONS.

ELECTION OF PRESIDENT.

MR. CADGE, Mr. BRYANT, and Mr. PICK were introduced by the President as the new members of the Council, and, after the usual declaration, took their seats.

After the confirmation of the minutes of the ordinary meeting of the Council on the 14th ult., a letter was read from Mr. Wilde announcing that he had received a letter from Mr. Knivett of the Home Office, informing him that Her Majesty had given the Royal consent to the Supplemental Charter.

The Report, dated the 27th of June, 1888, of the committee on the mode of election to the Court of Examiners was read, and the principle of electing the members of the Court of Examiners by a majority of the Council was agreed to.

The Tenth Report of the Committee on the Extension of the College Premises was read, approved, and adopted, and the Council authorised the pulling down of 38, Lincoln's-inn-fields, the proposed site of the Conservators' House, and of the back premises of No. 43, Lincoln's-inn-fields, the proposed site of the smaller museum.

The President reported that he and Mr. Bryant for the Royal College of Surgeons, and Sir A. Clark and Sir A. Pitman for the Royal College of Physicians, had given evidence before the University of London Royal Commission in favour of the grant by the combined Colleges of the degree of Doctor.

Mr. Heath was elected a member of the Court of Examiners in Dental Surgery in place of Mr. Wood. The vacancy caused by the resignation of Mr. J. S. Turner will be filled up in October, after a report by the Nomination Committee. Mr. Hutchinson was elected a member of the Committee of Management in the place of Sir Joseph Lister.

The following Professors and Lecturers were appointed for the ensuing year:—Professors of Surgery and Pathology: Messrs. Berkeley Hill and Frederick Howard Marsh. Professors of Comparative Anatomy and Physiology, &c.: Messrs. Arthur Edward James Barker, Mark Purcell Mayo Collier, Charles Barrett Lockwood, Charles Stewart, and John Bland Sutton. Lecturer on Anatomy and Physiology (Arris and Gale): Mr. William Hunter. Erasmus Wilson Lecturer: Mr. Joseph Priestley Smith.

The Council then proceeded to the election of President, and Mr. W. S. Savory was elected for the fourth time. Messrs. Hulke and Heath were elected as Vice-Presidents.

The next meeting of the Council will be held on Thursday, August 2nd.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major Robert William Troup, M.B., to be Brigade Surgeon (ranking as Lieutenant-Colonel), vice Jaa. Paxton, M.D., retired (dated June 27th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Geo. Danford Phillips Thoms, 18th Middlesex Rifle Volunteer Corps, to be Surgeon-Major, ranking as Major (dated July 11th, 1888); Acting Surgeon Henry Wright, 1st Volunteer Battalion, the Lincolnshire Regiment, to be Surgeon, ranking as Captain (dated July 11th, 1888).

BENGAL MEDICAL ESTABLISHMENT.—To be Brigade Surgeons: Surgeon-Major Edward Ambrose Fitzgerald (dated December 9th, 1887); Surgeon-Major Peter Cullen, M.D. (dated April 18th, 1888); and Surgeon-Major William Moir (dated April 20th, 1888).

ADMIRALTY.—The following appointments have been made:—Surgeon Johnston H. Acheson, M.B., to the *Duke of Wellington*; Surgeon John McElwee, M.D., to the *Asia*; Surgeon Paul W. Fraser, to the *Pembroke*; Surgeon D'Arcy Harvey, M.B., to the *Impregnable*; Surgeon Frederick W. Collingwood, to the *Indus*; Surgeon Reginald T. A. Levinge, to the *Duncan*; Surgeon John C. Ferguson, M.B., to the *Vernon*; and Surgeon Edward P. Mourilyn, M.B., to the *Excellent* (all dated July 6th, 1888); Mr. Alexander B. Payne, to be Surgeon and Agent at Deal, and Mr. John G. Marshall, to be Surgeon and Agent at St. Margaret's Bay and Cornhill.

Obituary.

JOHN MILNER FOTHERGILL, M.D.ED., M.R.C.P.

DR. MILNER FOTHERGILL, whose death, at the age of forty-seven, we regretted to announce last week, came of a medical family, and was by birth a Westmoreland man. He received the principal part of his medical education at the University of Edinburgh, taking the degree of M.D. there in 1865; and he subsequently prosecuted his studies in Vienna and Berlin. Dr. Fothergill's earlier years of medical practice were spent in the northern counties, at first in his native place and afterwards in Leeds. There can be no doubt that his future career was largely guided by the fact that his essay on "Digitalis, its Mode of Action and its Use," written while he was senior resident medical officer to the Leeds Dispensary, won the Hastings Prize of the British Medical Association. During the last sixteen years Dr. Fothergill had practised in London; and although he was not successful in attaching himself to a hospital connected with a medical school, he was soon appointed physician to the City of London Hospital for Diseases of the Chest, and assistant physician to the West London Hospital. In 1872 he took the membership of the Royal College of Physicians. For his essay on the "Antagonism of Therapeutic Agents and what it Teaches," founded upon many original investigations of his own, Dr. Fothergill received the Fothergillian Prize of the Medical Society of London in 1878. From this time his pen was always kept active, and the number of his published works and papers during the last fifteen years of his life is a rare proof of the enthusiasm and fertility of his mind. His health, which for many years had been insecure, was especially so of late. He had suffered from glycosuria for several years, and at times, particularly towards the end of last year, he suffered severely from gout. Although Dr. Fothergill was able to spend Christmas in Staffordshire his maladies increased shortly after his return, and gangrene of the foot supervened, ending ultimately in fatal coma on the 28th ult. He was married in 1880 to the daughter of the late Mr. Hammersley of Leek, but has left no children.

Dr. Fothergill was known to a large circle personally, but to a still wider circle by his writings. His physique and his powerfully marked mental characteristics would have made him a striking figure in any walk of life, and he certainly succeeded in realising what he used to say every man should do—viz., to leave behind a strong impression of distinct individuality. Gifted, in spite of his ponderous bulk, with an immense power of work and an indomitable energy, one can nevertheless admire the way in which he bravely struggled against difficulties, many of them connected with his own health. In his profession he exhibited great natural skill in interpreting the indication for treatment of disease, and in many cases of difficulty he would clear up the lines of treatment with a hand that was felt to be masterly. This may be well seen in his work on the "Heart and its Diseases," and in the "Practitioner's Handbook of Treatment," both of which have been extensively read. Dr. Fothergill did excellent service in frequently declaiming against the tendency to employ the stethoscope and other instruments of precision in the search after physical signs, to the neglect of the study of the rational symptoms of disease; and he constantly warned students and young practitioners against attending to pathological and histological minutiae to the exclusion of broader views. Throughout his writings there is to be found much shrewd and practical advice to students, to an extent that is noteworthy in the case of one who was not actually engaged in medical tuition. Physiology was a branch of study which Dr. Fothergill cultivated and employed in a way that he published, as will be seen particularly in his book entitled the "Physiological Factor in Diagnosis," which is full of racy reading. Nor did he ever tire of pointing out in a very forcible manner, how surely physiological inquiry guide us in the right direction in our therapeutics, and "light up areas never to be successfully illumined by empiricism." Some of his more recent labours were devoted to the application of physiology to the study of nutrition in disease, such as the foods suitable for the gastric disturbances of phthisis, the search after preparations suitable for those who lack fat and yet loathe cod-liver oil, and the

diabetic of gout. Gout was a subject to which Dr. Fothergill latterly devoted himself extensively, and on which he wrote largely. A complete list of the published works and papers of this voluminous writer would be a long one, but the last book he wrote was on "Vaso-renal Change versus Bright's Disease," completed in 1887. Shortly before his fatal illness he was preparing for publication in this journal a paper on kidney disease in phthisis, believing that old nephritis often casts the balance when phthisis puts in an appearance. There are many other subjects upon which he was engaged, but we have not space to refer to them. The announcement of Dr. Fothergill's death will be received with sorrow both in this country and also across the Atlantic, where his publications had brought him a wide reputation. Those who knew him personally will miss one who, with all his forcible, impetuous, and emphatic manner, could show himself a warm friend; while those who were only acquainted with him through his writings will sincerely regret that the pen which always wrote what was instructive in a vivacious and interesting, oftentimes original and pungent, style is for ever laid aside.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination at a meeting of the Examiners on the 2nd inst. :—

Anatomy and Physiology.—Basil Boake, Student of the School of Physic, Ireland; John Campbell, of Belfast; H. F. Hayes, of Melbourne; R. D. Hotchkiss, of St. Bartholomew's Hospital; G. G. Larcombe, of Bellevue Medical College; A. P. Morris, of Owens College; T. M. Tibbetts, of Birmingham.

Anatomy only.—M. J. Houghton and H. B. Rowbotham, of Birmingham; C. Wintle, of Bristol; G. M. Mellor, of Edinburgh; W. W. Exley and W. E. Pollitt, of Leeds; J. A. Evans, G. F. Knipe, and S. Melville, of Liverpool; A. W. Gilchrist, of Marseilles; R. Clegg, A. W. Senior, J. W. Smith, Reginald Smith, of Manchester; E. R. Bastardi, E. B. Cutting, T. J. Henning, of St. Bartholomew's Hospital; W. Wright, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy; R. T. Cassal, of University College.

Physiology only.—J. F. Atkins, H. S. Chavasse, T. Dixon, and C. B. Hillyard, of Birmingham; C. Bernard and Tom Pitt, of Bristol; F. W. Clark and G. H. Crofts, of Liverpool; J. Fearley, J. H. Spray, and W. A. Stott, of Leeds; J. S. Pickford, of Manchester; B. B. T. Thorne and J. Williamson, of St. Bartholomew's Hospital; G. Pernet, of University College; O. E. Keller, of Zurich and Leipzig.

The following gentlemen passed on the 3rd inst. :—

Anatomy and Physiology.—A. E. Atkinson, of Middlesex Hospital; Charles Coles, of St. Bartholomew's Hospital; J. Guinane, of Toronto; S. C. Hornsby, of Bombay; C. J. Weichert, of University College Hospital.

Anatomy only.—A. S. St. John, of Bristol; P. A. Longhurst, of Charing-cross Hospital; A. L. Allworth, C. B. Braithwaite, and H. Hodgson, of Guy's Hospital; James Cross, Henry Tempest, and L. F. West, of Leeds; G. R. Jones, of Liverpool; L. F. Houghton, of St. Mary's Hospital; R. Henry and W. T. Pauling, of St. Thomas's Hospital; A. G. Minshall, of University College.

Physiology only.—V. E. Barr, of Guy's Hospital; H. M. Cowen, of Toronto and Mr. Cooke's School of Anatomy; G. W. Holton, of Manchester; A. Jeffreys, of St. Thomas's Hospital; A. Kidd, of Middlesex Hospital; B. A. K. Lukmani, of Bombay; H. F. S. Nunes, of St. Mary's Hospital; S. H. Rentsch, of King's College; H. Williamson, of Cambridge; E. B. Wrench, of Cambridge and St. Thomas's Hospital; Hugh Clift and C. H. Graham, of St. Bartholomew's Hospital; A. G. Hebblethwaite and L. A. Johnson, of Leeds; P. A. Colmer, P. A. Green, C. H. Hemming, and H. L. Powys, of the London Hospital.

The following gentlemen passed on the 4th inst. :—

Anatomy only.—Henry G. D. Hallett, Frederick G. Lloyd, and Nicholas Marder, of St. Bartholomew's Hospital; William A. Hampton, of Middlesex Hospital; Thomas C. Hughes, of Westminster Hospital; Albert G. Parrott, of the London Hospital; Henry C. Perkins, of King's College; Charles E. Pollock, of Guy's Hospital; Alfred S. Jones and Alexander Morrison, of University College; James Mountford, of Charing-cross Hospital; Christopher Robson and Harry B. Williams, of St. Thomas's Hospital; George Yeoman, of Cambridge and St. Thomas's Hospital.

Physiology only.—Henry J. F. Badcock, of Charing-cross Hospital; Herman L. A. Keller, of St. Thomas's Hospital; Nicholas F. Kendall, of St. Bartholomew's Hospital; Herbert L. Morgan, of Westminster Hospital; Harold Vernon Prynce, of Middlesex Hospital; H. M. Weaver-Bridgman, George Y. C. Hunter, and Hubert W. Roberts, of St. George's Hospital; Arthur C. Fox, George E. Gillett, Charles T. W. Hirsch, Herbert Knivett, and Edward J. F. Moore, of the London Hospital; Bernard H. Gilpin and Alfred Hugh Minton, of King's College; Herbert M. D. Phillpotts and Alfred E. Shaw, of St. Mary's Hospital; Richard F. J. Gill and Ernest N. Smith, of University College; George W. B. Featherstone, of Guy's Hospital and Mr. Cooke's; Charles E. Salter, of Guy's Hospital.

The following gentlemen passed on the 5th inst. :—

Anatomy only.—Cecil G. Hoyt, of Charing-cross Hospital; Graham T. B. Bick, of St. Mary's Hospital; Cyril G. A. Le Mesurier, of St.

George's Hospital; Henry J. Curtis, of University College; Charles S. Pulmer and Woodley D. Symon, of St. Bartholomew's Hospital; John M. James and Frank Bryant Peak, of St. Thomas's Hospital; William H. Goodson and Charles S. Kirtou, of the London Hospital; Douglas L. Freeland and Arnold Lawson, of Middlesex Hospital.

The following gentlemen passed on the 6th inst. :—

Anatomy and Physiology.—George H. Knapp, of Guy's Hospital; Gervase E. Newby, Guy E. M. Wood, and Paul Guinand, of University College; Charles W. J. Chepnell, of St. George's, Edinburgh, and Mr. Cooke's School of Anatomy; Frank D. Harris and Jackson A. Atkinson, of St. Mary's Hospital; A. D. Cooper, of Grant Medical College, Bombay; John Kennedy, of the London Hospital; Wm. M. Thomas, of Charing-cross Hospital; O. V. Pisani, of King's College, and Henry Reeks, of St. Bartholomew's Hospital.

Anatomy only.—Reginald W. Prentice, of King's College Hospital; William R. Ashworth, of Westminster Hospital; Isaac Newton and Leslie Fletcher, of Charing-cross Hospital; Wm. Edward Sargent and John N. Martin, of St. Bartholomew's Hospital; Frank Bentley Shaw, of Middlesex Hospital.

Physiology only.—Edwin H. Howell, of the London Hospital; Waring Robinson, of Middlesex Hospital; H. L. Owen-Smith and Robert D. Muir, of Charing-cross Hospital; William Bligh, of Guy's Hospital; Gwyllyn C. Davies, of St. Bartholomew's Hospital; Chas. D. Cooper, Rupert James, and James C. Barton, of University College.

The following gentlemen passed on the 7th inst. :—

Anatomy and Physiology.—Sidney H. Snell, of University College.

Anatomy only.—Arthur D. Parr-Dudley, of University College; Arthur Plumb and Henry Watts, of the London Hospital; Howard W. Gwyn and H. J. R. Jones, of the London Hospital and Mr. Cooke's School of Anatomy; Archibald Graydon, William F. E. Milton, John H. Sims, and Hugh G. Williams, of St. Thomas's Hospital; Alex. Addie, James A. Mortimore, and John M. Rogers-Tillstone, of St. Bartholomew's Hospital; Louis A. Francis, of St. Mary's Hospital; Edw. Cornish and Edward Woodiwiss Wheatcroft, of Guy's Hospital; John E. M. Jenkins, of Charing-cross Hospital; Stuart C. M. Nourse and F. H. R. J. U. Walker, of St. George's Hospital.

Physiology only.—Alonzo G. Rider and William H. J. Huthwaite, of University College; W. S. Mercer, of Charing-cross Hospital; Harry de R. Morgan, Gordon Padmore, and Arthur W. Read, of St. George's Hospital; Alban D. Davies, of the London Hospital; David O. Jones and George Lombardi, of Middlesex Hospital; Ernest J. Finch, of St. Mary's Hospital; James Keigwin Kempthorne, of King's College; Arthur W. Tidbury and Charles H. Whiteford, of St. Bartholomew's Hospital.

The following gentlemen passed on the 9th inst. :—

Anatomy and Physiology.—Fredek J. Charlton and John G. Hewitson, of University College; Claude S. Hawkes, of the London Hospital; Charles A. Laphorn, of Middlesex Hospital, and William Richard O'Reilly, of Westminster Hospital.

Anatomy only.—John K. Birdseye and Jas. Cooper, of St. Bartholomew's Hospital; Arthur Haines, of St. Thomas's Hospital; Richard H. Collins, of Charing-cross Hospital; John M. Fry, of Westminster Hospital; Joseph B. Tindall, of King's College.

Physiology only.—Ernest C. Bridges, of St. Bartholomew's Hospital; Samuel Herbert Perry, of King's College; Sydney C. Smith, of Middlesex Hospital; Charles E. A. MacLeod, of Westminster Hospital, and John H. F. Way, of St. Thomas's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The following Member, having previously passed the necessary examination, and having since attained the legal age (twenty-five years), was admitted a Fellow of the College :—

Kidd, Hugh Cameron, L.R.C.P. Lond., Tavistock-rd., Westbourne-pk.

The following Member, having passed the necessary examination and having obtained a Medical qualification, was admitted a Member of the College :—

Mason, Hubert Dempster, L.K.Q.C.P.I., Yardley Fields, Yardley, Worcestershire.

The following gentlemen, having passed the necessary examination, were admitted Licentiates in Dental Surgery :—

Bates, Reginald Henry, Vincent-square, Westminster.

Constant, Thomas Edward, Harmer-street, Gravesend.

Digby, Everard, Ruskin-road, Tottenham.

Fisk, Edgar Charles, High-road, Kilburn.

Harris, Theodore William, Oak Lodge, Argyll-road, Ealing.

Hooton, William Arthur, Kersal Towers, Higher Broughton.

Horne, Albert Driver, Abbeville-road, North Clapham.

McDonald, William James, Egbert-street, St. George's-road.

Minett, Thomas Samuel, Chesterton-road.

Stack, Richard Theodore, Westland-road, Dublin.

Todd, Frederick, Clock House, Catford Bridge.

Washbourn, Henry Addison, The Bank House, Middlesborough.

TESTIMONIAL.—Mr. Jas. F. G. Pietersen, L.R.C.P.L., was, on June 27th, presented by the patients and staff of Camberwell House Asylum with a handsome walnut-wood writing case on the occasion of his resigning the post of senior assistant medical officer.

BURIAL REFORM.—The Chapter of the Rural Deanery of Kensington, on the 4th inst., passed a resolution condemning the present mode of burial, and urging the Home Secretary to institute an inquiry, with a view to legislation on the subject.

RECREATION GROUND.—A convenient and eligible site at Penge, comprising four acres, has just been adapted and appropriated, in perpetuity, for public use as a recreation ground.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the directors of this Fund, held on the 10th inst., T. Russel Pickthorn, Esq., Inspector-General, in the chair, the sum of £59 was distributed among the several applicants.

GREAT YARMOUTH HOSPITAL.—The fiftieth report of this institution was submitted to the governors and subscribers at the annual meeting held on the 28th ult. It appeared that the balance-sheet was satisfactory, notwithstanding a decrease in the collections at places of worship and the Saturday collection. It is expected the new building will be opened early in September.

THE NEW VICTORIA INFIRMARY, GLASGOW.—The cutting of the first turf of the site on which the infirmary is to be erected was performed by Mr. W. Rennie Watson, chairman of the executive committee, on the 4th inst. The part of the infirmary which is to be erected at present is the administrative block and one ward. The estimated cost of the whole completed building is £50,000.

FOOTBALL FATALITY.—As the result of the injuries received, whilst playing in a match against a Manchester team in April last, Mr. Percy Crompton Jackson, a member of the Bolton Football Team, died at Cheadle Asylum on Monday last. At an inquest held on the body on Wednesday, the medical evidence showed that the cause of death was the epileptic form of convulsions. A verdict of "Accidental death" was returned.

THE AFTER-CARE ASSOCIATION FOR POOR AND FRIENDLESS FEMALE CONVALESCENTS UPON LEAVING ASYLUMS FOR THE INSANE.—This Association held its annual meeting on July 4th at 83, Lancaster-gate, W., the Earl of Meath, President, in the chair. The report stated that good progress had been made during the past year. Full information can be obtained from the secretary, H. Thornhill Roxby, Emblewood, Osbaldestone-road, London, N.

THE ROYAL VETERINARY COLLEGE.—The thirteenth annual general meeting of the subscribers was held last week, the Duke of Cambridge (the President of the College) occupying the chair. The number of students on the books was 291, against 285 the previous year. Sixty-one students had obtained the diploma of the Royal College of Veterinary Surgeons, the number last year being forty-two. The total income amounted to £9827, and the expenditure to £9806. The report was adopted.

DEVONSHIRE HOSPITAL, BUXTON.—From the half-yearly statement of this hospital, issued on the 10th inst., it appears that during the period ending the 30th ult., 1029 in-patients have been admitted, 743 discharged as improved, 23 as no better, 4 died, and 238 remained on the books. Of out-patients 71 have been admitted, 40 were discharged improved, and 18 remained on the books at the end of the half year. Of the 1029 in-patients, 907 were of rheumatic or gouty character. The receipts from annual subscriptions were somewhat in advance of the amount received during the corresponding period of last year.

SOCIETY FOR THE STUDY OF INEBRIETY.—A general meeting was held on the 3rd inst. in the rooms of the Medical Society of London, the President, Dr. Norman Kerr, in the chair. Surg.-Maj. G. K. Poole, M.D., read a paper entitled "Is Inebriety Curable?" The position of inebriety as a diseased neurotic condition was laid down, the remedial treatment embracing medical and religious remedies. Statistics were quoted showing an average of 30 per cent. in the cure of cases, a percentage equal to that of most other diseased conditions. The necessity for the extension of the Habitual Drunkards Act was pointed out; also the advisability of the superintendents of all genuine homes for the treatment of inebriates keeping a record of cases treated, after the form sanctioned by the managing committee of the Dalrymple Home. The treatment must consist in (1) an earnest desire of the patient to be cured; (2) the use of religious, moral, and medical remedies; and (3) the adoption of means to assist these by affording the sufferer a ready way to place himself under the control of others in a home of refuge.

PROVINCIAL HOSPITAL SUNDAY AND SATURDAY COLLECTIONS.—The Wolverhampton Hospital Sunday total collection for the year has amounted to £600 17s. 4d. The Reading Hospital Saturday contributions on the 30th ult. realised £239 19s. 2d. A similar collection in Hull on the 7th inst. shows a total of £358 14s. 2d. The annual outdoor collection in aid of the Dewsbury and District Infirmary, on Saturday last, amounted to £53. The Warwick Hospital Saturday Fund for the year amounted to a total of £1081 0s. 2d. The Croydon Hospital Saturday collection on the 7th inst. shows a total of £31 19s. 10d. The Hospital Saturday collection, last week, at Maidenhead, on behalf of the Cottage Hospital, realised £53 3s. 6d., but additional contributions are expected. The Woolwich Hospital Saturday collection, made on Saturday last, amounted to £207 10s.

THE PUBLIC HEALTH SERVICE.—In reference to the decision of the Town Council of Bradford not to re-elect Dr. Hime as medical officer of health for the borough (noticed in a recent issue), the members of the North-Western Branch of the Association of Medical Officers of Health, at a special meeting held on the 28th ult., at the offices, King-street, Manchester, unanimously passed, *inter alia*, the following resolution: "The North-Western Branch of the Society of Medical Officers of Health learn with much regret that the Bradford Corporation have decided not to reappoint their medical officer of health, Dr. Hime, and that they have come to this determination whilst admitting that he is an officer of great ability and has discharged the duties of his post impartially and satisfactorily. The North-Western Branch of the Society of Medical Officers of Health take this opportunity of pointing out that it is desirable some security of tenure should be given to medical officers of health, so that they may no longer be liable to sudden removal without proof of incapacity or neglect of duty being substantiated to the satisfaction of a properly constituted authority, the accused medical officer of health being entitled to reply to the charges against him. Inasmuch as the guardians of the poor are not permitted to discharge district medical officers without the sanction of the Local Government Board, and due inquiry if demanded, it appears reasonable to ask that medical officers of health should enjoy a similar measure of security for the retention of office." It was resolved that a copy of the resolution should be forwarded to the Local Government Board. As to the condition of cemeteries, it was also resolved that a memorial be presented to the Home Secretary, praying that full inquiry be made into the state of all public burial grounds, especially those situated in urban districts.

THE CYPRUS SOCIETY.—H.R.H. Princess Christian has consented to become President of this Society, which has been formed for the advancement of hospital and educational work in Cyprus. The primary object of the Society is the establishment of a hospital at Kyrenia, where there is none at present, with the prospect of its subsequent development into a convalescent hospital, so very much needed for the island. Kyrenia, situated on the north coast, is admirably adapted for this purpose, being one of the healthiest parts of the island, and remarkable for its beautiful scenery. In accordance with the wish of the donors of the site it will be named the "Gordon Home," in commemoration of General Gordon. After the hospital has been built and equipped (which will be of the nature of an English cottage hospital), the Society hopes to supply a need which has been often deeply felt—the training of native nurses, and the establishment of movable dispensaries and of ambulances. Some of the influential Greeks of the island are anxious for technical, industrial, and agricultural schools, which the Society hopes to found, as well as assist generally the development of education. The names of the Secretary of State for the Colonies and of the High Commissioner of Cyprus appear on the list of subscribers; and the Society is being aided by many whose position will command the respect of such as may be interested in such work. The Society is in no way political, and by no means wishes to encroach upon the work which is being carried on by the Government, but to supply that which is beyond its province and its resources. Further information will be gladly given by the Hon. Secretaries, Miss S. Chapman Hand and Wm. White, Esq., F.S.A., 30A, Wimpole-street, London, W. Hon. Treasurer: Capt. G. A. K. Wisely, R.E., 11, Strathmore-gardens, Kensington, W. Bankers: London and County Bank, High-street, Kensington, W.

THE NEW DISPENSARY, BRISTOL.—The formal opening by the Mayor, Mr. Charles Wathen, of this new commodious building, erected in Castle-green, took place on Tuesday last.

DEATH UNDER CHLOROFORM.—At an inquest recently held at the Royal Berks Hospital on the body of a patient who had died while under the influence of chloroform, the jury exonerated the medical staff of the institution from all blame in the matter.

ROYAL OPHTHALMIC HOSPITAL.—On the 4th inst., a deputation waited on the Lord Mayor at the Mansion House, in order to present a petition on behalf of this institution for a grant of land as a gift for the purpose of enlarging and remodelling the hospital. The site desired belonged to the Bridge House Estates, and the Lord Mayor promised that he would give every assistance in his power.

DONATIONS.—The Cordwainers' Company last week granted donations of 25 guineas each to the London Hospital and the Metropolitan Convalescent Institution, Walton-on-Thames. An anonymous donor having just given £500 towards the amount due on the building fund of the Bristol Children's Hospital, there remains £700 only to be raised to claim the Mayor's promise of £200.

SANITARY INSPECTORS AT CROYDON.—The members of the Association of Public Sanitary Inspectors, on the invitation of Dr. Alfred Carpenter, visited Croydon on Monday last to inspect the sanitary works of the town. The chief interest of the visit was the inspection of the sewage farm of the Croydon Corporation at Beddington. The system in use is that of broad or surface irrigation, and as a rule the sewage passes over three separate fields. Financially the working of the farm is deemed very satisfactory. The outlay for the year shows a surplus of £1000, which is appropriated entirely to pay interest and purchase money for the land.

THE CANE-HILL ASYLUM, SURREY.—At the Surrey Quarter Sessions, held last week, an important discussion took place on the Local Government Bill and the proposed enlargement and alterations of this asylum. The committee of the institution recommended, in view of the introduction of the Local Government Bill, that further steps for the enlargement be postponed. During a prolonged discussion, a motion, proposed and seconded, "That the want of accommodation in the County Asylum, from the increased and increasing number of lunatics, makes it desirable that no further time should be lost in the completion of Cane-hill Asylum for the reception of 2000 patients, as ordered by the Court, and that the work be proceeded with under the direction of the Cane-hill Committee," was, on a division, lost by a narrow majority of two.

AMBULANCE DRILL.—The Ambulance Section of the Avonshire Yeomanry Cavalry, commanded by Surgeon W. J. Naismith, M.D., was at the recent inspection put through the following drill:—Dismounted by sections and formed up two deep; carriage of wounded by two-, three-, and four-handed seats; formed detachments for sword-stretcher drill. No. 1 formed sword-stretcher. No. 2 with carbines, to form escort; party advanced at the double to recover wounded under fire; wounded man (gunshot wound of thigh with hæmorrhage) dressed, placed on sword-stretcher and retired, escort opening fire to the front during application of first dressings by stretcher bearers, and retiring firing to cover retreat of the party. This portion of the drill bears special application (as, indeed, does almost the entire design of ambulance work as taught to reserve cavalry), to affairs of outposts, where with reconnoitring parties or outlying pickets, the services of the Army Medical Staff men are not available. No. 1 detachment showed the method of removal of a wounded man from his horse when unable to dismount, the method varying according to the particular side of the body (right or left) which is injured. The section was then mounted and formed three right, with a view of showing how a wounded man who is still able to remain mounted may be best removed. The centre files, being the wounded, had their right or left arms bandaged and slung, or sword cuts of the head dressed, the flank files dividing the bridoon rein of the wounded man between them, and leading his horse steadily between their own, supporting his body in the saddle the while by their disengaged arms. The three thus formed were marched and wheeled several times, then formed up and dismissed to their respective troops.

MEDICAL NOTES IN PARLIAMENT.

Victoria University Bill.

In the House of Lords on the 5th inst., the Victoria University Bill was read a second time.

Swine Fever.

On the 6th inst., Lord Cranbrook, in reply to Lord Egerton, said that every effort would be taken by the Agricultural Department of the Privy Council to check the spread of swine fever.

Habitual Drunkards Act (1879) Amendment (No. 2) Bill.

On the 9th inst., the report of amendments to this Bill was brought up and received, and on the 10th inst. it was read a third time.

Metropolitan Asylums' Board.

On the 9th inst., Mr. Smith, in reply to Mr. Pickersgill, said that the Government were not aware of any sufficient ground for appointing either a new Commission to investigate the proceedings of the Metropolitan Asylums Board, or to extend the powers of the Commissioners now sitting with regard to the Metropolitan Board of Works, so as to include an inquiry into the Asylums Board.

The Truck Acts and Hospital Collections.

In reply to Mr. Sexton, Mr. Matthews said that the inspector of factories in Belfast had not interfered to prevent the collection by employers of voluntary contributions by the men in aid of the local hospitals. He had explained to the employers that, if such collection were made by way of deduction from wages without the written assent of the workmen, it would appear to be contrary to the statute.

Lunacy Acts Amendment Bill.

On the 16th inst., Mr. Smith announced that the Government had decided to drop the Lunacy Acts Amendment Bill.

Contagious Diseases Acts in Madras.

In reply to Mr. W. M'Laren, Sir J. Forster stated that the orders of the Government of India for the suspension of the Contagious Diseases Acts in Madras, Bombay, and Bassein were issued on May 19th. The Secretary of State has been informed, in answer to an inquiry made by him, that in Bombay the suspension did not take place till June 30th, but that the Government of India is making inquiries into the reason for this delay.

Factory Labour in India.

Sir J. Forster, in reply to Mr. S. Smith and Mr. James M'Laren, said that the careful attention of successive Secretaries of State and Governments of India had been from time to time given to the subject of factory labour in India. A Commission was appointed ten years ago, and reported in favour of closing the mills on Sundays, and restricting the hours of labour on week days. Act No. 15 of 1881 regulated factory labour, and restricted the employment of children. A special report on Indian factories had recently been drawn up by Mr. Jones, formerly Inspector of Factories in Bombay, which is printed as an appendix to the report of the Chief Inspector of Factories (in this country) for the year ending Oct. 31st, 1887. On May 3rd a despatch was sent by the Secretary of State in Council to the Government of India, calling attention to this report, asking for an early report on the working of the Indian Factory Act, and inquiring whether it was proposed to modify the Act in the direction of additional stringency. To this despatch the Secretary of State is now awaiting a reply.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANDERSON, WM. A., M.B. Edin., Assistant Medical Officer, Kent County Asylum, Maidstone, has been appointed Medical Officer to the Bucks County Asylum, Aylesbury, vice H. L. Grant, resigned.

BRACKENBURY, H. B., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Obstetric Assistant to Westminster Hospital.

CAMPBELL, R. J., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to Guy's Hospital.

CAUDWELL, E., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Physician to Westminster Hospital.

CHASLEY, R. S., B.A. Oxon., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to Westminster Hospital.

CROOK, H. E., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to Guy's Hospital.

EARDLEY-WILMOT, ROBERT, M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Visiting Medical Officer to the Midland Counties Home for Chronic and Incurable Diseases, Leamington, vice J. J. W. R. Boyer, M.D., resigned.

EDWARDS, R. E. J., M.B. Edin. and C.M., has been appointed Medical Officer for the Rural and United Districts, Halifax.

GREEN, E. COLLIER, M.R.C.S., L.R.C.P. Lond., has been appointed Ophthalmic Surgeon to the Derbyshire General Infirmary.

GRIFFITHS, C. NIEL, M.R.C.S., L.R.C.P. and I.M. Ed., has been appointed House Surgeon to the London Throat Hospital, Great Portland-street.

LAMBERT, F. S., M.R.C.S., L.R.C.P. Lond., has been appointed Junior House Physician to Westminster Hospital.

LAWSON, T. C., M.R.C.S., L.S.A., has been appointed Medical Officer of the Chapel District, Sanford Union.

MACKENZIE, A. G., M.R.C.P. Edin., F.R.C.S. Edin., has been appointed Medical Officer for the Third District of the Church Stretton Union.

METZGAR, C., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to Gay's Hospital.
POOLMAN, A. E., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to Guy's Hospital.
RABY, JOHN, M.R.C.P., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health, Totnes District, Totnes Union.
RICHARDS, WILLIAM, M.B., C.M. Edin., Resident Surgeon, Birmingham General Dispensary, has been appointed Resident Surgeon to the Highgate Branch of the Birmingham General Dispensary, vice J. H. North, M.R.C.S., L.R.C.P., resigned.
ROBINSON, HENRY BETHAM, M.D. Lond., F.R.C.S., has been appointed Resident Assistant Surgeon to St. Thomas's Hospital.
ROBINSON, W., M.D. Durh., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Borough of Gateshead.
SOLLEY, ERNEST, F.R.C.S., has been appointed Surgical Registrar to St. Thomas's Hospital.
VINES, CHAS. STUART, M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Ramsgate and St. Lawrence Royal Dispensary, and the Seamen's Infirmary.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN, 70, Gloucester-street, S.W.—Surgeon to out-patients.
CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Board and rooms.
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.
GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary, but residence, board, and washing provided.
HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary 50 per annum, with residence, board, and washing.
LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Senior House Surgeon. Salary 50 guineas per annum, with board and residence.
MORPETH DISPENSARY.—House Surgeon. Salary £120 per annum, furnished house, gas, and coals free.
NORFOLK AND NORWICH HOSPITAL.—Assistant Surgeon on the Honorary Medical Staff.
QUEEN'S HOSPITAL, Birmingham.—Resident Physician, tenable for two years. Salary £50 per annum, with board, lodging, &c.

Births, Marriages, and Deaths.

BIRTHS.

DAVV.—On the 8th inst., at St. John's-road, Dover, the wife of Surgeon-Major F. Arthur Davv, M.D., Medical Staff, of a daughter.
LEWIS.—On the 6th inst., at 468, Brixton-road, S.W., the wife of T. Preston Lewis, M.D., of a daughter.
STIVENS.—On the 5th inst., at Kensington-gardens-square, the wife of B. Lyne Stevens, M.D., of a daughter.

MARRIAGES.

HARRIS—GOODWIN.—On the 5th inst., at St. Mary's, Stoke Newington, P. Traer Harris, M.R.C.S., L.S.A., L.D.S. Eng., of Alma House, Cheltenham, to Emily Maud, daughter of Benj. Goodwin, of 100, Amhurst-park, N.
HUBBARD—VIZARD.—On the 10th inst., at St. Paul's Church, Hemel Hempstead, by the Rev. Edward Gallop, Arthur John Hubbard, M.D., son of the late John Waddington Hubbard, M.R.C.S., L.S.A., formerly of Market Bosworth, to Charlotte Marian, youngest daughter of the late Edward Vizard, Esq., formerly of Dursley.
HUMPHREYS—POZARD URQUHART.—On the 5th inst., at St. Luke's, Chelsea, by the Lord Bishop of Perry and Raphoe, assisted by the Rev. Gerald Blunt, M.A., Rector of the Parish, Charles Style Humphreys, M.D., of 4, Vernon Chambers, Bloomsbury, son of J. J. Hamilton Humphreys, Esq., of Lincoln's-inn, to Octavia Harriet, daughter of the late William Pollard Urquhart, Esq., of Kinturk House, Castle Pollard, in the county of Westmeath.
JACKSON—BIRD.—On the 4th inst., at St. Matthew's, Ealing Common, John Lowthian Jackson, M.B., C.M., of Hedon, near Hull, to Ida Beatrice, only daughter of Henry Bird, St. Aubyns, Hamilton-road, Ealing.
RODMAN—HOVENDEN.—On the 4th inst., at St. Matthew's Church, Croydon, George Hook Rodman, M.D., of East Sheen, only son of George Hook Rodman, Esq., of South Norwood, to Margaret, eldest daughter of Robert Hovenden, Esq., F.S.A., of Croydon.

DEATHS.

DOMVILLE.—On the 8th inst., at South Hill, Putnam, Henry Jones Domville, C.B., M.D., Inspector-General of Hospitals and Fleets and Honorary Physician to the Queen, in his 70th year.
JOY.—On the 8th inst., at Bower-terrace, Maidstone, Henry W. Joy, F.R.C.S., J.P., aged 82.
WATSON.—On the 4th inst., at Heigham Hall, Norwich, the infant son of Charles John Watson.
WIGHT.—On the 1st inst., at Aberdeen, John Wight, M.D., aged 51.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 12th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Minimum Temp.	Rain-fall.	Remarks at 8.30 a.m.
July 6	29.64	S.	67	55	97	65	54	.22	Overcast
" 7	29.96	N.E.	54	52	97	63	52	.08	Overcast
" 8	30.06	E.	56	55	104	67	52	.03	Cloudy
" 9	30.05	W.	62	56	123	70	52	..	Bright
" 10	29.95	N.W.	56	51	107	67	51	.03	Cloudy
" 11	29.69	N.W.	46	44	101	56	44	.35	Overcast
" 12	30.00	N.W.	53	50	..	54	50	.04	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

"HANDLING" AMERICAN MEDICAL DEGREES.

A CORRESPONDENT favours us with the following letter received by him, and which he thinks is deserving of publication:—

"Dr. —, L.R.C.P., —."

"DEAR DOCTOR:—Having read your article in the *Journal of Medicine*, and thereby learned your address, I take the liberty to write you on a matter that may be of considerable importance to you and your colleagues. I desire to engage a responsible medical gentleman to handle American medical degrees and do business with physicians and surgeons only. I have been informed there is quite a large number of medical men in first-class standing in your country that do not have the degree of 'M.D.' that would like very much to obtain it if they could get it from a responsible institution. If you do not care to engage with me, perhaps you will know of some person you could recommend. I hope you will give this matter your immediate attention, and trust you will be as confidential with me as such business demands.

"I am, fraternally,

"H. B. FREELAND, A.M., M.D.

"55, Common-street, Lynn, Mass., U.S.A., June 27th, 1888."

Pour y Parvenir will find Mr. Power's paper on Transplantation of the Cornea in the Report of the Ophthalmological Congress held in London in 1872. Sallerbeck's memoir is contained in Graefes Archiv f. Ophthalmologie, 1878, vol. xxiv.; Neelsen and Angelucci's in the Klinische Monatsblätter für Augenheilkunde, 1880.

Anaxious (Llandilo).—It is hardly necessary to say that the statement is utterly and ridiculously untrue. We may refer our correspondent to a paragraph published in THE LANCET of Oct. 15th, 1887, p. 794.

EXAMINATION OF SPUTUM.

To the Editors of THE LANCET.

SIRS,—This evening, while examining some sputum with Dr. Gibbs' staining solution for bacterium tuberculosis, I found objects in the sputum which I was unable to distinguish from bacterium tuberculosis. Not feeling quite satisfied, however, I took some tragacanth mucilage, and subjected it to the same processes as the sputum had previously undergone. On microscopic examination, I was pleased to find my tragacanth specimen contain exactly the same bodies as I had previously been unable to distinguish from bacterium tuberculosis, and which must have been derived from the staining solution. I should be glad to know whether other observers have had similar experience; for as this point is of such vast importance in the diagnosis of phthisis, it is pleasant to learn how easily mistakes may arise when dealing with these bacteria. I am, Sirs, yours faithfully,

Putney, July 6th, 1888.

EDWARD F. GRUB.

THE LUCE FUND.

AMOUNT already subscribed, £39 18s. 6d.; Dr. Harris, £1; Mr. Bickerton, 10s. 6d. Further donations in aid of Mrs. Luce will be gratefully received by Dr. Caton, 31, Rodney-street, or by Dr. Sheppard, 64, Durning-road, Liverpool.

Protest.—1. Assuming the extract from the report of the Lock hospital to be correct, we agree with our correspondent that no viler official document was ever penned. In the article to which reference is made we expressed an opinion, to which we adhere, that the prevention of venereal diseases does not imply the encouragement of vice, and we hope that all other medical officers will take the same views as our correspondent has taken. The tone assumed by the military authorities is utterly unjustifiable. At the same time we regret that our correspondent did not, for his own sake as well as for that of the gentleman whose cause he so generously espoused, try the *suaviter in modo* before adopting the *fortiter in re*.—2. The case seems a very hard one, and our correspondent ought to have redress, which, we think, under the circumstances cannot be denied him, if he acts calmly, dispassionately, and under good legal advice.

Enquirer.—Such a person has no medical status. He cannot hold any office or discharge any duty proper to a registered practitioner. Provided he uses no title implying that he is recognised and registered as a medical man in the legal sense of the word, and that he does not practise as an apothecary, we do not see that he violates the law.

DEATH CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—I should be glad to call the attention of the profession and of yourselves to the need of some alteration of the custom of giving certificates of death to the relatives of deceased patients. This practice may, and I think does, at least occasionally, prevent the return of the true cause of death. Many persons have a dislike that cancer, scrofula, or even phthisis should appear on the death certificate of a relative, and especially is this feeling the case when the death has been caused by excessive indulgence in alcohol. It was only yesterday I was sent for expressly to see a lady on whose sister's certificate of death I had added in parentheses, "alcoholic," after giving disease of the liver as the cause of death. To cross out the objectionable word was not sufficient, and I was urgently requested to write a fresh certificate, and reluctantly I omitted the word that undoubtedly described best the true cause of the liver disease; and thus, with the considerable increase in the knowledge of disease by the public, we have to be cautious to avoid offence by the wording of death certificates, even at the expense of their statistical value.

In a pamphlet I published a short time ago on the wants of the general practitioner, at page 19 I suggested that "death certificates should be paid for by the State, for whose benefit they are given." Now, if this were the case (as it ought to be), we should no doubt be required to send the death certificate direct to the registrar; and this would prevent the odium that a conscientious medical man may not infrequently incur when he gives the true cause of death, and these certificates would become of greater public utility because of greater accuracy.

I trust you may be able to find room in the columns of THE LANCET for ventilating this question, and oblige,

Your obedient servant,

FREDK. H. ALDERSON, M.D.

July 10th, 1888.

THE MOTHERS' LYING-IN HOME, SHADWELL.

IN our short notice last week (p. 15) of the annual meeting of this Institution we inadvertently attributed the founding of the home to Mrs. Ashton Warner, who writes to say that the credit of that work is due to Lady Greville.

Mr. T. Lafan (Cashel).—Mr. Jessop's letter in THE LANCET of May 12th is probably the communication referred to by our correspondent.

HARVEST BUMPS.

To the Editors of THE LANCET.

SIRS,—In 1881 several letters appeared in the columns of THE LANCET during the autumn as to the prevention of the attacks of the insects that produce harvest bumps, which interfere so much with the happiness of children, and even of adults, who live in the country. I have carefully tried all of the practicable remedies suggested in those letters without success. It is a mistake to employ any greasy or oily application; for the use of such makes the skin hot and uncomfortable in summer weather. Is there no means of preventing the attacks of this insect?

I am, Sirs, your obedient servant,

July, 1888.

RUSTIC.

THE JEFFRIES AND HILLS CASE.

To the Editors of THE LANCET.

SIRS,—Will you permit me to once more call attention to this most deserving case? If only 5 per cent. of the medical men who are every day in peril of a similar misfortune to that which happened to Messrs. Jeffries and Hills would subscribe 5s. each, the balance required would be subscribed twice over.—I am, Sirs, yours obediently,

C. B. KENTLEY.

10, George-street, Hanover-square, W., July 12th, 1888.

THE APOTHECARIES ACT.

R. T. M. sends us a copy of a "bill of account" sent in by a herbalist to a man who is now a patient of our correspondent, and inquires if the herbalist, having threatened legal proceedings in order to enforce payment, can recover, and whether the Apothecaries Act has been infringed by the herbalist. The following is the reply of Mr. Upton, to whom we submitted the queries:—

"Society of Apothecaries, Blackfriars, London, E.C.,

"July 11th, 1888.

"SIRS,—My opinion on the letter and account which you submitted to me, and which I return herewith, is that the person referred to in the letter would be unable to recover in respect of his account, the fact of his not being registered under the Medical Act, 1858 or 1886, being a good defence thereto. If 'T. C. M.' had prescribed, in addition to supplying medicine, and if the case had been one of a disorder requiring purely medical (as distinguished from surgical) treatment, which from the bill it does not seem to have been, the provisions of the Apothecaries Act would have been infringed.

"I am, Gentlemen, your obedient servant,

"The Editors of THE LANCET."

"JAMES RICHARD UPTON.

Dr. W. Lillie (Kansas).—The facts stated by our correspondent are well known to those interested in vision and optics, and many interesting facts of a similar character may be found in the earlier volumes of the Guy's Hospital Reports by Mr. Towne. The conclusions drawn by our correspondent, except in regard to the superior oblique muscle, are those generally accepted.

An Old Subscriber (Manchester) is referred to our advertising columns.

"LINKED BEATS."

To the Editors of THE LANCET.

SIRS,—In connexion with the case of allorhythmia contributed to THE LANCET of July 1st, I think the following case, which I met with at the North-West London Hospital, and which struck me much at the time, might be interesting.

The patient was a healthy-looking girl of about twenty. She was evidently excessively excited, trembling all over. On feeling the pulse, to my surprise I found it rather below normal in rate—i.e., about sixty; but on listening to the heart I heard double the number of beats as I had felt pulses, a loud and low beat alternating. On again feeling the pulse I could detect very weak beats alternating with the strong ones formerly felt. I sent for the house surgeon, Dr. Willey, who in a few minutes brought me a quite ordinary pulse tracing. In fact, the excitement of the patient having subsided, her circulation had quieted down to a normal condition. I found nothing amiss with the patient, except this excessive excitability, and I soon lost sight of her.

This case seems interesting as showing that the linked beat may be produced by pure excitement. Dr. Henry Handford points out that excitement restored the normal rhythm in his case; but here we have a heart depressed by slight digitalis poisoning. It would thus appear that this peculiar rhythm may be produced by either condition—depression or excitement of the heart's action.

I am, Sirs, yours faithfully,

London, July 4th, 1888.

THOS. GLOVER LYON.

THE CATERPILLAR PEST.

A KENTISH farmer has, it appears, been making an investigation into the cause of the plague which has been devastating the fruit crops in the "garden of Eden," and, according to the *Kentish Observer*, has arrived at the conclusion that "the spawn which produced the caterpillars was deposited by the swarms of butterflies which swept our coasts last autumn, and which were supposed to have been driven over from the continental forests by the storms."

Juventus.—Taking the facts as our correspondent states them, we consider that he was treated with scant courtesy; but we doubt if he could make any legal claim. It is usual for the coroner to call in the doctor who first saw the deceased after the accident; but it is entirely a matter within his discretion.

Variola.—If our correspondent's services were obtained by the borough surveyor through a medical agent, he (the surveyor) was, we think, liable for the fee. If, however, the fee charged by the agent was for procuring the appointment, "Variola" could hardly expect the fee to be paid by the surveyor or auditor.

F. R.—We cannot identify the article referred to.

UTILISATION OF HOUSE-TOPS.

To the Editors of THE LANCET.

SIRS,—In reference to an article in your last issue (p. 32) on "A New Idea in Housebuilding," will you allow me to remind your readers that in 1863 I published in the *Builder* suggestions and designs for the conversion of the tops of houses into private airing grounds for the benefit of the health of the inhabitants, and exhibited models and plans of these designs at the National Club, Whitehall, and that before I left London I deposited these plans and models in the Parkes Museum.

I am, Sirs, yours faithfully,

Bournemouth, July 7th, 1888.

HORACE DOBELL.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir James Paget, London; Dr. W. S. Playfair, London; Sir W. Mac Cormac, London; Dr. Squire, London; Dr. Minis Hays, Philadelphia; Dr. G. Hay, Pittsburg; Dr. Cullimore, London; Dr. Griffiths, London; Mr. Ceely, Cambridge; Mr. W. Marston, Leeds; Messrs. Waterlow and Sons, London; Mr. Charpentier, Uxbridge; Messrs. Griffin and Co., London; Mr. Shirliff, Kingston-on-Thames; Messrs. Burroughs and Wellcome; Mr. Pullen, Bradford; Mr. Grün, Putney; Dr. Horace Dobell, Bournemouth; Dr. Greene, Peckham; Dr. Pearce, London; Dr. O. Sturges, London; Mr. C. J. Wright, Leeds; Mr. Sutton, Catford; Mr. Buss, Leominster; Dr. R. Barnes, London; Dr. Huggins, Toulouse; Surgeon-Major Boileau; Dr. Kirk, Partick; Mr. Murray, Liverpool; Mr. Holt, London; Mr. Hornibrook, London; Mr. Grier, Hirwain; Mrs. Turner, Bewdley; Mr. Hopwell, Notts; Mr. Boyce, Salop; Mrs. Coste, London; Mr. Balding, Herts; Messrs. Waller and Gatskell, Sydenham; Mr. W. H. Brown, Mapra, Vic.; Mr. Tom Bird, London; Mr. Goodfellow, Hatherlow; Mr. H. H. Thompson, London; Mr. N. W. Meadows, London; Mr. Schroff, Bombay; Mr. J. Place, Mansfield; Dr. Belliary, Paris; Mr. Okell; Mr. Leynd, Bournemouth; Dr. Biddle, Kingston; Mr. H. Cripps, London; Mr. Jerrett, Hayle; Mr. F. Lane; Mr. W. à Beckett; Mr. R. Harrison, Liverpool; Dr. Caton, Liverpool; Mr. C. Owen, Cheltenham; Mr. Boyce, Norfolk; Mr. Hallett, Bath; Dr. Mason, Whitwell; Messrs. Hilliard and Sons, Glasgow; Mr. Hetherington, Newcastle; Mr. Latham, Ann Arbor; Mr. McGowan, Bradford; Mr. Walker, Spondon; Dr. Page, Newcastle-on-Tyne; Mr. S. Hardwick, Bournemouth; Mrs. Ashton Warner, London; Mr. Heygate, Bath; Messrs. Wright, Layman, and Umney, London; Mr. Symes, Halifax; Mr. O'Brien, Mere; Mr. Lawson Tait, Birmingham; Dr. Cullingworth, London; Dr. F. H. Alderson, London; Capt. Hineks, London; Mr. Corkhill, Matlock; Mr. Holman, London; Mr. Coghill, Birmingham; Mr. Thompson, Ulverstone; Mr. Kectley, London; Juventus; X. Y., Leeds; M.D., Suffolk, Lady Superintendent, Sheffield; J., London; F.R.C.S.; Enquirer; Pour y Parvenir; J. A. E., Liverpool; Sanatorium, London; Medicus, London; Elkrad; Rustic; R. T. M.; M. N. R., London.

LETTERS, each with enclosure, are also acknowledged from—Dr. Barlow, Manchester; Dr. Somerville, Swanage; Dr. Harris; Mr. Groves, Dorchester; Miss Davys, Somerset; Mr. Le Good, Norwich; Dr. Pope, Eardisley; Mr. Diggins, Lancaster; Mr. Fuge, Taunton; Mr. Morgan, Belfast; Mr. Lewis, Kent; Mr. Smyth, Canada; Messrs. Maw, Son, and Co., London; Mr. Stilliard, Birmingham; Messrs. Weiss and Son, London; Mrs. Pratt, Hants; Major Pead, Dulwich; Mr. Frost, London; Mrs. Morice, Aberdeen; Mr. Hicks, Hendon; Mr. Taylor, Lincolnshire; Mr. Coleman, Neath; Mr. Lewis, London; Mr. Owen, Wrexham; Dr. Dowding, Haughey; Mr. Atkins, Luton; Mr. Wormald, Manchester; Mr. Heywood, Manchester; Mr. Boorman, Tenterden; Mr. Stenhouse, Glasgow; Mr. Bickerton, Fawley; Messrs. Oetling and Co., Manchester; Mr. Symond, Devon; Messrs. Oppenheimer Bros., London; Mr. Mainwaring, London; Dr. Fontia, Northumberland; Mr. Holloway, Somerset; Mr. Leggatt, Sandwich; B., London; M.D., London; Spes, London; Omega, London; Warwick County Lunatic Asylum; Francis, Erith; Tenens, London; Monsall Fever Hospital; Nemo, London; Doctor, Sheffield; A. P. Y., London; Lady Superintendent, London; E. W. P., Herts; Rotheln, London; Manx Practice, London; G. B., Liverpool; Dentist, Willesden; Ancoats Hospital; Andromache, London; Strathmore, London; Medicus, Middlesex; H., Farnboro'; Alfredus, London; M., London; M.D., King's-cross; Iota, London; Veritas, London.

Alliance News, The Speculum (Melbourne), Scottish Leader, Windsor and Eton Express, Royal Gazette (Georgetown, British Guiana), Bridgend and Neath Chronicle, Surrey Advertiser, Reading Mercury, Portobello Advertiser, City Press, Bristol Mercury, Hull Daily Mail, Herald and Weekly Free Press, Invergordon Times, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 17.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.
Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 18.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

Thursday, July 19.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, July 20.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 21.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Half a Page	2	15	0
An Entire Page	5	5	0

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CONDENSED REPORT OF

Lectures

ON

TUBERCULOSIS AND TABES MESENTERICA.

Delivered before the Hon. the Grocers' Company in the University of London,

By G. SIMS WOODHEAD, M.D., F.R.C.P. ED.,

SANITARY RESEARCH SCHOLAR; SUPERINTENDENT OF THE ROYAL COLLEGE OF PHYSICIANS LABORATORY, EDINBURGH.

LECTURE II.

PULMONARY TUBERCULOSIS.

"SIR JAMES PAGET AND GENTLEMEN,—As it will be impossible for me to give more than a mere sketch of the results at which I have arrived in connexion with pulmonary phthisis, and as the bulk of my observations up to the present have been made upon the lungs of children, I shall draw upon the cases already spoken of for most of my facts, but where necessary and possible I shall refer to phthisis as it occurs in older people. It is now generally accepted that all cases of rapid infective phthisis are the result of the action of the tubercle bacillus, although it cannot be denied that certain lesions may be produced as the result of the action of other and non-specific irritants. In these conditions, however, tubercle is very frequently associated with some other lesions, and it is often extremely difficult to say which changes are due to the one and which to the other. For instance, it has long been held that in stonemason's phthisis all the characteristic lesions met with in chronic tubercular phthisis are present, but my experience of stonemason's lung has been that along with the chronic interstitial and arterial changes, set up by the stone particles, there are structural alterations which can be accounted for only on the assumption that they are of tubercular origin, and in some few cases, in confirmation of this, the presence of tubercle bacilli has been demonstrated in certain of the new growths. It may be assumed for the present that in all the cases of phthisis the pulmonary lesions to be described are of specific infective origin."

The structures affected by the action of the tubercle bacillus were then briefly described, and it was pointed out that in the first instance we should expect under given conditions the mucous surface of the bronchus to be attacked. Such an assumption might most fairly be made after a consideration of Julius Arnold's observations on the course taken by dust when inhaled into the respiratory passages, Arnold pointing out the very important part played by the walls of the small bronchi and their terminal passages in the disposal of inhaled dust particles. Secondly, there is the alveolar epithelium, which under the influence of any irritant material undergoes proliferation more or less rapid, this in certain cases terminating in what we know as catarrhal pneumonia. Here, again, in proof of the statement, take what may be seen under the microscope, when particles of coloured dust have been inhaled into the lung. The cells lining the alveoli are seen to be in an active state of division; some are still adherent to the wall of the air vesicle, and in these small particles of the pigment may be seen embedded in the protoplasm. The epithelium in this position is a structure which may be attacked by tubercle bacilli, just as in it coal or other particles may be found. Passing still further, and following the course taken by the pigment granules, the lymph spaces around the air vesicles are reached, then the lymphatics in the interstitial and interlobular tissue, the peribronchial and perivascular lymphatics, and lastly the glands at the root of the lung, either directly or by the deep layer of the pleura, over the surface of the lung, and so to the root. As may be seen on reference to a section of coalminer's lung projected on to a screen, the pigment (in this instance a material which gives rise to little irritation) is carried to every part of the lymphatic system, and is seen to have accumulated in very considerable quantities along the lines of the septa, around the bronchi and bloodvessels, and in the deep layer of the

No. 3386.

pleura. On microscopic examination, the pigment acting as an irritant, and so giving rise to the formation of a slight excess of fibrous tissue in all these various positions, may also be seen. Lastly, the small points of lymphatic tissue which occur at intervals along the lymph channels, first described by Bardon Sanderson, then by Klein, Arnold, and others, are the seats of pigmentation. Tubercle formation also may be met with in any of these positions. It would seem at first sight to be an easy matter to determine at once in what tissue the tubercle has originated in any special case. In the lung, however, where the tissues are so delicate and so complicated, and where in consequence the changes are so rapid, this is not the case; and it is only in exceptionally favourable cases that the mode of origin and spread can be at all satisfactorily demonstrated. Further, the variety in the life histories of individual tubercular growths at one time rendered it a matter of considerable difficulty to arrive at any definite understanding of tuberculous processes, especially of those associated with pulmonary phthisis. The anatomical structure in the various forms being so absolutely defined in the earlier stages of the growth, it was difficult to bring into a common group forms which differed so widely from one another, not only in naked-eye but in microscopic appearances.

There is now, however, sufficient evidence to justify pathologists in stating that many of those forms which different clinical observers have from time to time described as tuberculous are undoubtedly tubercular in character, from the small grey, gelatinous, or fibroid nodule, to the large caseous masses, leading to cavity formation; and the presence of the specific bacillus has time after time been demonstrated in all these forms, both by staining and by inoculation. There can be little doubt that these forms are essentially the same, and that the differences observed are due firstly to the resisting power of the tissue attacked, and secondly to the numbers and activity of the attacking bacilli. If the behaviour of other tissues under the action of mechanical or micro-organismal irritants be borne in mind, there will be little cause for wonder that there should be these numerous varieties of manifestation of the action of the specific irritant in tuberculous lungs. In connexion with this statement, a matter was insisted upon which has certainly been mentioned, but to which, as a rule, far too little importance is assigned—viz., the intercurrent of suppurative changes, which are evidently set up by the activity of a different micro-organism.

The lecturer observed that Mr. Hare and he were much struck by the fact "that after one micro-organism has completed its task, another may step in and continue the process of breaking down. How frequently a pyæmic condition supervenes on a tubercular. How often has a patient suffering from a tubercular abscess of the kidney or of the lungs succumbed at last (if not carried off by acute tubercular disease) to pyæmia, and pyæmia in which the symptoms are extremely well defined." How frequently localised suppuration steps in to aid in the breaking-down process, more frequently in the lungs and on the intestines than in other positions, because of the greater ease with which organisms giving rise to the irritant material can arrive at and remain on the tubercular surfaces in these organs. Writing on this subject, Coats, in his *Lectures to Post-graduates*, points out that tubercle is essentially a disease of surfaces and channels, and this is so far true that bacilli can reach the tissues only by such surfaces and channels, and that in these channels there are irritant secretions often containing numerous micro-organisms and other products which assist in completing and hastening the breaking-down process commenced and partially continued by the tubercle bacilli. The actions and interactions in these cases are extremely complicated, and but for the occurrence of more simple cases now and again the observer would be completely lost amongst it all. These facts were mentioned simply to assist in following and accounting for the different changes which occur in the lung during the course of many cases of tubercular phthisis. Of the 100 cases spoken of in the last lecture in which there was tubercle of the mesenteric glands, the mediastinal glands, or the glands at the root of the lung, were also distinctly affected in 69 cases, whilst in 62 cases the lungs themselves were affected. Of these 62, 59 were included under the 69 in which the glands at the root were tubercular, the other three

having developed first simple catarrhal pneumonia, which had later become tubercular in character (in two of these bacilli were found). There were also, as the figures show, 7 cases in which, although the glands at the root were affected, there was no tuberculous process in the lungs. This is important, for when the lung cases as a whole are considered the figures are slightly different. Of 110 cases of tubercle of the lung, the glands at the root were not affected in every case; this was especially noticeable in cases of miliary tubercle and in several cases of catarrhal pneumonia. There were distinct tubercle nodules, and caseation in the glands, except in those cases where there had been adhesion of the lung at any point, or where there had been collapse of the lung. Where these conditions were present—i.e., adhesion, collapse, &c.—the tubercle in the glands at the root was, in a much larger proportion of cases, of more recent date. In the 110 cases there were cavities in 32, caseous masses but no large cavities in 39, racemose tubercle with a tendency to fibroid change in 25, and tubercular catarrhal pneumonia in 15, in each case the character of the predominant lesion only being recorded. The cavities and caseous masses were not, as in the adult, usually confined to the apex, but were, as in monkeys and other animals, scattered throughout the lung—a fact which might be explained on the supposition that in such cases the general predisposing causes of tuberculosis are acting quite apart from those of local origin. Where these local predisposing causes do come into play, the seat of election in children is not at the apex, but at the root of the lung, very frequently posteriorly, and at the base. (Large sections were exhibited.)

The general tuberculous affection of the lung in children appears almost invariably to have associated with it one of three antecedent conditions:—

(a) Simple capillary bronchitis and catarrhal pneumonia, such as very frequently follow or are associated with measles, diphtheria, scarlatina, whooping-cough, and other similar conditions, in which there is a weakened condition and impaired power of resistance of the epithelial cells lining the capillary bronchi, the alveolar passages, and the air vesicles; further, there are those interstitial changes in connexion with the lymphatic network mentioned in the former lecture; and, lastly, there is the irritable (speaking now of the proliferating tissues of the gland) and weakened condition of the glands, both the small collections of glandular tissue along the lines of the lymphatic channels and the larger glands at the root of the lung. Not only is the resisting power less in these conditions, but owing to the large amount of work they have been called upon to do in connexion with the absorption of the catarrhal products, the glands, though enlarged and swollen and evidently acting most vigorously, are unable to respond to any increased demand for work, either in taking up or destroying fresh *materies morbi*. A case of tubercular catarrhal pneumonia, following typhoid fever, was then exhibited, in which the greater part of the lung, especially the lower lobe and the lower part of the upper lobe, were consolidated; it was grey in colour throughout, was not firmly consolidated as in croupous pneumonia, but was slightly more spongy in texture. From the cut surface a large quantity of purulent fluid could be squeezed, in which were present very large numbers of tubercle bacilli. On section the air vesicles throughout, but especially around the terminal bronchi, were filled with large proliferating epithelial and catarrhal cells, some in an advanced stage of degeneration, but others containing well-marked bacilli in and around them. Although in this case the interstitial changes were not very prominent, there were nevertheless numerous bacilli in the lymphatics, some free, but many contained in the small round corpuscles found there; and, again, a few bacilli were to be distinguished in the lymph sinuses in the cortex of the glands. In the medullary portion of the gland there was evidently rapid cell proliferation, but little or no caseation. In several other cases of catarrhal pneumonia following diphtheria, scarlet fever, and measles, an earlier stage still could be observed. In these conditions the tubercular catarrhal pneumonia is frequently preceded by collapse in certain small areas, the result probably of closure of the bronchus with catarrhal products of the bronchus itself. In these plugs, and in such cases in these only, large numbers of tubercle bacilli were found; they were so numerous that the idea of their having all come originally from some other definite tubercular focus was put out of court entirely, and their presence in such large numbers could only be accounted for on the supposi-

tion that a few had first been introduced into the catarrhal mass, which had formed such an excellent cultivation medium that an almost pure culture of the bacilli in the small bronchi had resulted. In the air vesicles in the immediate neighbourhood, a few bacilli may also occasionally be seen, but in the larger proportion of these cases the bacilli are confined to the lumen of the bronchus. It may be readily understood how in such cases, had the patients lived long enough, the bacilli and their products would have made their way into the lymphatics, and so to the glands; but the process is here extremely rapid, and caseation very speedily supervenes, this apparently being in great measure due to the lowered vitality of the tissues.

(b) Another form of this general tuberculosis of the lung is where there is inhalation of the specific virus from some localised nodule or mass. In adults the most common termination of a case of apical phthisis is brought about by a form of acute tubercular pneumonia in the dependent parts of the lung. The extreme consolidation and rapid caseation in such cases are here also well-marked features of the process. In like manner it is found that in children the general dispersion of the virus often takes place from a small cavity which eventually opens into a bronchus. In three cases the lecturer had observed a second form of primary focus, one not very commonly recognised, but one of which a case is recorded by Dr. Coats in his *Lectures to Practitioners*, p. 170. In two of the cases under consideration the glands at the bifurcation of the trachea were enormously enlarged and distinctly caseous, and at one point they were much softened; just above this softening there had been ulceration into the left bronchus near the bifurcation, and the contents of the softened glands had been practically emptied into the bronchus. As a result of this there were well-marked recent tubercular catarrhal pneumonic patches, swarming with bacilli, throughout the lung, but accompanied by interstitial tubercular changes, although bacilli could be demonstrated as present in the lymphatics. In these cases the catarrhal condition is evidently tuberculous from the first, and the process goes on with extreme rapidity. In the third case, one of the smaller glands at the root of the lung was the infective focus, the ulceration having taken place in one of the larger branches of the left bronchus. In the specimens exhibited the tubercular pneumonia was pretty regularly distributed in connexion with the branches of the bronchus beyond the point of ulceration. A third form of ulceration met with and giving rise to a disseminated catarrhal tubercular process, is that where the wall of the bronchus itself is tubercular, and where in consequence there is ulceration and setting free of the infective material in smaller or larger quantities. This form is very frequently met with, and is a cause of tubercular catarrhal pneumonia in a very large number of cases.

(c) The third of the antecedent conditions of general catarrhal tubercular pneumonia is one which has already been touched on—i.e., that condition in which the lymphatic glands at the root of the lung and the mediastinal glands are practically inactive. This, of course, occurs specially when the tubercular glands are caseous, but it may also occur in other conditions, where the glands are either altered in structure or are choked (if such a term could be used) by the presence of foreign particles. In these cases, where the nutrition of the tissues is greatly impaired, general catarrhal tubercle is very frequently met with, but it is then almost invariably associated with chronic or more recent interstitial tubercle.

In localised tubercle the lymphatics seem to play a much more prominent part than they do in the general form, though here, again, the two forms, lymphatic and catarrhal, are so closely associated that it is difficult to say where the one ends and the other begins. The seat of election of tubercle in children is not at the apex, but near the root of the lung, posteriorly, at the free margins (in patches) or at the base. In those cases of tubercle at the root, the predisposing cause is, as has been pointed out, the tuberculous condition of the gland. The lymph stream in the lung cannot be looked upon as going constantly in any one direction, on account of the very free lymphatic anastomoses there are in the various parts of the lung, and through this free anastomosis an area may be drained by another set of lymphatic vessels, even though its own proper vessels are occluded. Thus when a gland at the root of the lung becomes functionally inactive from its conversion into caseous tubercle, the lymphatics going directly to it from

an area in the immediate neighbourhood are obstructed, and there are both impaired nutrition in and diminished excretion from this part. Although, however, the tissues in this area immediately around the gland have their lymph supply altered, the tissues outside the localised area are drained into the lymphatics (1) of the glands corresponding to these areas, and (2) into those which eventually find their way into the deep layer of the pleura, and so to the root of the lung; and it appears probable that in consequence of this "backward flow" the affected area may in certain cases give rise to a further extension outwards. Tubercle at the posterior part of the lung and at the free margins is to be associated with obstruction and collapse, conditions so frequently met with in children and so common a cause of simple catarrhal pneumonia. The essential conditions necessary for tubercular catarrh and impaired lymph discharge are present, and the bacilli, left at rest, develop very rapidly in the air vesicles, or more slowly in the lymph spaces in the interstitial tissue. Tubercle at the base of the lung is found especially in those cases where there is pleurisy, or in cases of peritonitis, tubercular or not. Of the cases analysed (127), the liver or spleen, or both, were adherent to the under surface of the diaphragm in 65 cases, most frequently as the result of old peritonitis, now without a trace of tuberculous structure remaining; but in 17 recent tubercular peritonitis was well marked. In a very considerable number of cases where old pleurisy was present, the base of the lung was markedly tubercular. In 4 instances the lower part of the lower lobe was transformed into a solid caseous mass, whilst in the fibrous tissue of which the adhesion was composed there were well-marked tubercular nodules, some quite young, but others in an advanced stage of caseation. In these cases the extension is, in the first instance, by the lymphatics, and then perhaps to the epithelium; but the predisposing cause appears to be the state of rest induced by the adhesions of the organs of the abdomen and thorax to the opposite surfaces of the diaphragm, leading to imperfect lymphatic circulation and exchange.

In the case of tubercular peritonitis, in which caseation occurs at an early stage, it might reasonably be expected that tubercular pleurisy and mediastinal tubercle would be rapidly developed. Professor Klein and Dr. Wm. Hunter have both laid great stress upon the fact that foreign materials which find their way into the abdomen are soon passed on to the under surface of the diaphragm; and Dr. Hunter, in his experiments on the absorption of injected blood from the abdomen, demonstrated most clearly the presence of blood-corpuscles, comparatively little altered, first between the liver and the diaphragm, and secondly in the lymphatics of the diaphragm. The bearing of this on the adhesions of the liver to the diaphragm are exceedingly important, as are also Klein's observations on the paths taken by foreign particles after passing from the abdomen. Bearing these facts in mind, it may be easily understood how it is that tuberculosis of the mediastinal glands and tubercular pleurisy of the costal pleura are both so frequently associated with tubercular peritonitis. The glands, too, at the root of the lung frequently (as seen in so many of the specimens) become caseous before the lung itself is affected; in some cases, no doubt, this is due to a process similar to that described as occurring in the mesenteric glands, where it is accompanied by no permanent lesion in the intestine; but in other cases it seems to be equally beyond question that the specific virus has passed (a) from the mesenteric and retro-peritoneal glands, and (b) from the peritoneal cavity through the central part of the diaphragm and the broad ligament of the lung, or (c) by a more or less circuitous route along the lymphatics of the parietal pleura to the root of the lung. It is worthy of note that until pleurisy is set up in these cases there is no transmission from pleura to pleura, but that as soon as the slightest adhesion takes place there may be continuation of the process on the two surfaces. It should be observed, however, that in addition to this affection of the costal pleura the visceral pleura may also be the seat of tubercular nodules, the virus in this case having come probably from the abdominal cavity by the diaphragm and the broad ligament. In all these forms there is abundant evidence of the transmission from point to point of the virus by way of the lymphatic channels, especially where the tissues generally are highly resistant, and where the epithelial cells, though they do not arrest the passage of the bacilli into the lymph spaces have

still sufficient vitality to continue to grow in a more or less regular manner. In such cases the connective tissue resistance is also great, and though the bacilli may still continue to grow and to attack the cells in their immediate neighbourhood, those cells outside the immediate sphere of action of the irritant are stimulated into proliferation and fibrous tissue formation, so that a fibroid capsule is formed around the cellular or caseating centre. When the epithelium itself is attacked caseation rapidly ensues, and absorption from this point may take place for some distance along the lymphatics. In consequence of this method of spreading by the lymphatics of the lung, nodules may be sought in those positions in which coal pigment is found to accumulate, the only difference observable being that in tubercle the nodules are usually somewhat limited in their area of distribution, the pigment, on the other hand, being disseminated over the whole lymphatic area. The changes around the vessels and in the bronchi are marked by no special features; the tubercles are formed in connexion with the peribronchial and peri-vascular lymphatics, and in some cases, as has been observed, they appear to be formed in the small lymphoid nodules which may be seen in the walls of the lymphatic vessels.

In the intima of the vessels, as Cornil and Ranvier, Hübner, Greenfield, Hamilton, and others have insisted, the changes are extremely well marked, and quite recently attention has been called to the fact that even some of the systemic arteries may be deeply affected with arteritis obliterans in cases of chronic phthisis. How far the changes in the intima are associated with those in the adventitia is as yet not fully decided, but there seems every reason to hold, with Arnold, that wherever the lymphatic circulation in the adventitia is disturbed—especially where there is irritation and proliferation of the endothelial cells of the lymph spaces—corresponding changes are met with in the intima, particularly where the process is chronic in character. In the specimens of lungs exhibited, this change in the intima is a very marked feature.

It was then mentioned that acute miliary tuberculosis must be looked upon as the result of spreading of the infective material directly by the blood channels. The demonstration of this fact was first accomplished by Weigert, who, in a series of several cases of acute miliary tuberculosis, was able to determine the presence of ulceration of the pulmonary vein. The process being similar to that in or near the wall of a bronchus in the cases mentioned, Ponfick had first supposed that the bacilli might pass from a tubercular thoracic duct into the venous trunks, and thus to the general circulation. It is probable that both observers were correct, and that both forms may occur. Coats further points out that a limited distribution of tubercle by the blood may be due to the passage of bacilli into the minute venous radicles in the glands in which tuberculous changes are occurring. That bacilli are found in the blood has been now frequently demonstrated, and quite recently several cases have been recorded in which general tuberculosis has come on after hemorrhages in patients suffering from apical phthisis. This is a matter of all the greater interest when it is borne in mind that all these cases of acute tuberculosis were developed in from seventeen to twenty-five days, just the period given by Koch as that required for the development of tuberculosis when produced experimentally. The importance of this can scarcely be over-estimated from a surgical point of view, indicating as it does the methods of procedure to be adopted in operating on any tuberculous part. The bacilli, though found in the blood in such cases, do not become active until they come to some part of the circulation at which they can make their way into the surrounding tissues. In some cases bacilli are present in the emboli, or they may be actually distributed in the embolic area, in many cases appearing to make their way from the capillary vessels into the lymph spaces, and only then giving rise to the characteristic series of changes.

It was long unfortunate (but natural), for the sake of prognosis, that only the worst cases were seen in the post-mortem room, but in the present day tubercle has come to be looked upon as a comparatively curable disease. After some experience in the post-mortem theatres of a large general hospital and a children's hospital, the lecturer felt convinced that the recent change which has come over medical opinion as regards the curability of phthisis in the early stage is thoroughly justified by facts. In proof of this

there are the numerous localised fibroid and deeply pigmented bands of tissue seen in the lungs of old people, or people who have died during middle life, sometimes without caseous or calcareous nodules in the centre, but perhaps more frequently with one or other of these marking the centre of the cicatrix, the puckered pleura near the apex of the lung also marking a considerable loss of substance at some period during life. In children this is not found in nearly such a large proportion of cases, but well-marked examples may be met with even in very early life, and pretty frequently before the eighth year.

This is so far encouraging, and entitles us to hope that, as more facts concerning the life history of the bacillus tuberculosis and the conditions under which it may flourish in the body are gathered, the death-rate from tuberculosis may be materially diminished. Milk, air, and food can one and all convey the bacillus from cattle or swine to patient, or from patient to patient; and if the bacillus or the disease can be successfully attacked in any one of these, a possible source of infection to others is done away with. From clinical experience it must now be concluded that the general health of the patient has in all cases much to do with the resisting powers of the tissues, so it is imperative on every medical man to try to improve the general health of those of his patients having a tendency to scrofula or a tubercular family history. Children of low vitality are scrofulous because the introduction of a comparatively small number of bacilli brings about complete degeneration of the lymphatic glands, and there are no giant cells and few bacilli found in a scrofulous gland, not because of any change in the nature of the bacilli, but because of the difference (non-resistance) of the tissues in which they grow. The number of bacilli attacking a healthy gland would be rapidly disposed of; but in the delicate child, with its weakly tissues and imperfect nutritive and excretory power, the gland tissue gives way on the slightest stimulation, and the cold abscess is the result. The lecturer was convinced from the experiments he had performed that this was the case. Bacilli differ in number, but not in character; and if once a cultivation can be obtained from a cold abscess (a somewhat difficult matter), well-marked tuberculosis may be produced by it by inoculation.

The question of the structure and importance of giant cells was then touched on. Each authority, it was pointed out, had his own theory about the nature of these structures. It was now becoming evident that each of many of these observers, though describing different conditions, might still claim right on his side. Those who advocated that the giant cell was a lymph space with proliferating endothelial cells around are apparently justified. Then, again, Weigert has proved that a giant cell is nothing more in some cases than a collection of cells in which bacilli are causing proliferation at the margin, fusion and degeneration in the centre, a mass of caseous material in the centre and proliferating cells with bacilli between them at the periphery resulting. Klein saw the giant cells being formed by the fusion of epithelial cells of the air vesicles. Small bloodvessels in transverse section have, like the lymphatics, been described as giving rise to giant cells. Dr. Barrett finds them in the seminiferous tubules in tubercle of the testicle, and the lecturer had seen them developed in connexion with minute bile ducts in the liver, and in the milk ducts and acini in the mammary gland of the cow. In all cases the process Weigert describes occurs, but at different rates and with slightly varying results. The presence of these giant cells affords evidence that the cells are making a determined resistance against the advances of the bacilli, are giving way slowly, and so limiting the area of caseation. In many cases where the giant cells with their rings of nuclei are best marked, very few bacilli are to be found, as they have been destroyed by the phagocytes at the margin—i.e., the active cells with deeply stained nuclei. In other cases, however, the bacilli have taken the place of the nuclei at the margin of the giant cell, the boundary line in such cases being determined for a time by the basement membrane of the tube in which the mass is formed.

PRESENTATION.—Dr. Philip Addis of Iver has been presented with a testimonial by his friends and others, as a token of respect and gratitude for his fourteen years' gratuitous services to the Iver, Langley, and Denham Cottage Hospital, with a handsome silver tea set, a silver salver, and the sum of £93, which was left after the purchase of the above articles.

ABSTRACT OF A Post-Graduate Lecture ON THE PATHOLOGY AND TREATMENT OF THE ENLARGED PROSTATE.

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GENTLEMEN,—In bringing this subject before you, I would ask you to observe that I purposely avoid speaking of the prostate as a gland, as I consider such a term inappropriate to a part where, so far as function is concerned, the secreting element is subservient to the muscular. As I have recently discussed this subject at considerable length in my Lettsomian Lectures, I shall confine myself as closely as possible to those points in pathology which it is necessary to make prominent for clinical purposes. If we sum up our experience as practitioners relative to enlargement of the prostate as observed in advancing years, I do not think we shall find much difficulty in recognising that this physical change exists under two conditions which are sufficiently well marked. Whatever may be the proportion of males over sixty years of age who experience some degree of enlargement of the prostate, the evidence appears tolerably conclusive that it is only the minority of this number who develop symptoms which can be regarded as evidence of disease. Hence we may divide persons who have large prostates into two classes: (1) those who do not suffer from them, and (2) those who do.

Taking the former first, I have for a number of years carefully watched persons who had large prostates, but were not aware of it themselves from any circumstances which might tend to suggest it. In many instances the discovery was made, as it were, quite accidentally. In addition to evidence of this kind, I have met with numerous instances where post-mortem examination revealed the presence of a considerable prostate, though no symptoms previously existed. Facts such as these seemed to suggest that the enlarged prostate had come in for much uncalled-for abuse, and that, like other hypertrophies in the body, it might be serving a useful but hitherto unrecognised purpose. Passing to the second class of cases, it was equally evident that there existed a considerable proportion of instances of prostatic enlargement which were attended with most distressing symptoms of vesical obstruction and irritation. The contrast between these two classes of cases, which did not appear to be necessarily transitional, was so marked as to almost suggest in itself some physical alteration in the part to account for the difference. Without going further into detail, my examinations during life and after death led me to the conclusion that so long as the prostate retained its natural structure, it did not seem to matter much, so far as its function was concerned, what size it attained. On the other hand, when it underwent degenerative changes which reduced it to little else than a mass of fibrous tissue in the form of lobulated, nipple-like, or interstitial tumours, it was pretty certain to excite varying degrees of irritation.

The next points that naturally arise are: First, how is it in some instances that the prostate, though increased in bulk, still remains throughout life histologically and functionally normal? And, secondly, under what circumstances does it pass into the condition of a fibroma, and produce symptoms of obstruction and cystitis?

In reference to the first point, I would remark that the human body furnishes us with undoubted instances of hypertrophies, proving themselves to be not only necessary, but precisely compensatory relative to what is required. If, as I have urged, the chief function of the prostate consists in providing a retentive as well as a supporting apparatus for the contents of the bladder, there is no reason, when the time comes for substituting quantity for quality, why the provision should not prove to be permanently compensatory. The conditions under which muscular hypertrophy exists, as

observed about the neck of the male bladder, seem to indicate that, should circumstances arise to render the necessity for such increase inoperative, the structural excess then undergoes degenerative changes, and assumes properties in accordance with that type of tissue with which it has thus become assimilated. And it appears to me that in the study of hypertrophies there yet remains some interesting work to be done in connexion with those transitional changes which depend upon the suspension of, or alteration in, the conditions which in the first instance rendered the overgrowth a necessity.

We have seen that the large prostate is able to perform its function just as perfectly as the smaller one of earlier life. Taking, however, those instances where such is not the case, and where the large prostate proves to be a serious detriment to the individual, it seems to me that in the greater proportion the development of symptoms are about coincident with that physical change in the shape of the bladder which we know by the name of "pouching," where a depression is formed above the prostate in which urine may lodge. It has been generally taught that this pouching of the bladder is a direct consequence of enlargement of the prostate, the supposition being that as the latter grows towards the bladder cavity, where there is the least resistance, a depression is left above the growth. Now, though this may in some degree be true, it does not represent what commonly occurs. My observations lead me to believe that this pouching, or space for residual urine, is caused by the sinking of the bladder wall itself away from the prostate as the result of urine pressure on the part, and not in the first instance by the encroachment of the prostate upon the interior of the viscus. It is quite easy to demonstrate this upon the dead subject. When this occurs with a large prostate which hitherto has been performing its functions in a natural manner, the immediate effect is to cause a prominence which previously had no existence. Following upon this we have the conversion of the prominent prostatic mass into a fibroma, with the gradual acquisition of those properties which such a structure possesses. In the bladder we see this taking the form of fibrous masses, which cause obstruction and excite mucous exudation and cystitis. To attribute the latter symptoms to the mere presence of a few ounces of urine in the bladder, which cannot be spontaneously voided, is certainly not warrantable. Passing to points in practice, it is evident that if a person has a large prostate, however well it may be working, it behoves him to be careful that the bladder is not submitted to such a kind of usage as either may gradually or suddenly alter its relations to the outlet. All those circumstances which by their degree or continuance throw an undue strain upon the bladder at a time of life when the tissues begin to lose somewhat their power of resistance should be studied with the view of avoiding them. In the next place, when these strains do come by the wear and tear and accidents of living, we should be prompt in recognising them and giving the necessary assistance, either mechanically or by medicines, as the case may be, to prevent permanent damage being done.

I would say a few words, in conclusion, as to the treatment of prostatic hypertrophy when the part has to a large extent assumed the structure and properties of a fibroma. The degree of vesical irritation and obstruction under these circumstances is sometimes very intense, and various means have been proposed to deal with this condition by operative procedures, having for their object either the section of the obstructing part with provision for the more perfect drainage of the bladder by artificial means, or the removal of more or less of the prostatic mass. In both of these directions considerable relief has been afforded. Having regard to the fibroid condition the part assumes, I have thought, if there is any truth in Apostoli's treatment, that it is possible it might under these circumstances prove serviceable. I have now this subject under consideration, but at present I have not sufficient material for our purpose of to-day. I am aware that electrolysis has been practised both in this country and in America, but I cannot say that as yet we have sufficient evidence to warrant its more general adoption. I would lay stress on the examination of the prostate from the rectum as determining our views in reference to the patient's future when retention of urine is due to this cause. When this happens in a person with a hard nodulated prostate, where there is evidence to the touch that fibrous tissue predominates largely over the muscular, the power of the bladder

seldom returns, and the use of the catheter is generally perpetual; and when, on the other hand, the prostate is found soft and yielding to the touch, indicating that muscle still prevails, we may as a rule anticipate complete restoration of function. I attach importance to this distinction, as in most cases of acute retention due to prostatic enlargement it enables us to form reliable opinions relative to the probable duration of catheterism.

SOME REMARKS ON THE USE OF ELECTRICITY IN GYNÆCOLOGY.

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THE use of electricity in gynæcology has of late been much discussed, perhaps more so than any recently suggested practice. Somehow or other Dr. Apostoli's enthusiastic advocacy of it has succeeded, as enthusiasm always does, in arousing the interest of the profession, and the somewhat heated controversies which the subject has given rise to have not lessened the attention which has been paid to it. A practice which has received the adhesion of men like Keith and Spencer Wells, and which has induced an operator of the almost phenomenal success of the former to declare publicly that he should consider it to be almost a criminal offence to remove the ovaries or perform hysterectomy for a bleeding fibroid before the hæmostatic effect of electricity had been fairly tried, can hardly be the senseless and certainly useless procedure which some of its opponents would have us believe. Within the past few weeks the matter has come up for discussion twice at public meetings—once at Brighton, and once at the Obstetrical Society. I have attended both these meetings, and I have been struck with the curious fact that while everyone who has fairly, patiently, and impartially tried this method of treatment has been able to say that he believes it has at least some power for good in it, and is well worthy of further study, not one single opponent—and its opponents are both numerous and influential—seems to have taken the trouble to put it to the test of clinical experience, but has founded his objections on mere theory, and on secondhand evidence as to its possible dangers. Now we all know what theoretical objections are worth in any advance in medicine or surgery. Is it not the fact, as I ventured to point out at the discussion at the Obstetrical Society, that if mere theory could prove anything it would have proved to demonstration long ago, and on grounds far stronger than any which have been adduced in opposition to this treatment, that every form of abdominal section was absolutely impracticable, and that those who ventured to perform it were as foolish and foolhardy as they would now have us believe are those who are endeavouring to test the merits of this method? Dogmatic assertion, however, impressive though it may be, is not argument. What we want are facts, not theories. If those who have fairly tried this method, with no preconceived intention to discredit it, can show that it is useless, the sooner they do so the better; but what I venture to insist on is the absolute necessity of carefully observed and impartially recorded cases.

My own position in this matter is that for the best part of a year I have been putting it to the test of clinical experience, both in hospital and private practice. I had no bias in favour of it, and, like others, I discounted Apostoli's assertions on account of his obvious enthusiasm; but I took a good deal of pains to learn the technique of a very troublesome practice, and to see what effects it was really capable of producing. I have been careful not to make the mistake of using it indiscriminately, but only in cases for which it seemed well suited. I have therefore not tried it in nearly as many cases as I might have done, but all in which I have were such as Apostoli specially claims as being well adapted for it, and proper for judging its value. I quite agree with what was said at the Obstetrical Society as to the time not having come for deciding this question. I have neither yet made up my mind as to its sphere of utility, nor satisfied myself why it sometimes succeeds so well as it certainly does, nor why it sometimes fails, nor how

far its effects are permanent. These and many other questions remain for elucidation, and much patient work will be required before they are settled. For my own part, I had no intention of publishing any of my cases, or of formulating any conclusions in the matter, until a much longer time had elapsed. But at the recent meeting of the Obstetrical Society, after I had brought forward some few cases in illustration of what I had observed, I was told that neither I nor anyone else had been able to bring forward a single clinical fact of the slightest value, and that our arguments in favour of a further trial of this plan were entirely without foundation. I can quite conceive, and am prepared to admit, that in the hurry of a *virtu-voce* discussion I described my cases so badly that they did not impress my audience, but how it can be said that they did not relate clinical facts I altogether fail to see. As they cannot appear in print until the next volume of Obstetrical Transactions is published, I now propose to relate very briefly what I have been doing, as it seems advisable that the profession should form some idea of the nature of the evidence on which the claims of this treatment are founded. I readily admit that the question cannot be settled by such limited experience as my own, but at least it may prove of some little service in forming an estimate.

1. What seems to me to be likely to prove one of the most useful and the safest applications of this remedy is the hæmostatic action of the positive pole in hæmorrhagic fibroids. That it has a decided influence of this kind cannot, I consider, be reasonably doubted. I think it very probably does act as a chemical cautery; but that does not lessen its value, for I know of no other caustic application which can be used in fibro-myomata for this purpose, nor, indeed, do I know of any remedy which has a marked influence in controlling the severe hæmorrhage of such cases on which reliance can be placed. The proof of this is the fact that in many of the worst cases the removal of the uterine appendages, or hysterectomy, has been found essential. If even in a few cases the resort to so grave a measure can be prevented, then undoubtedly a great advance in practice has been made. I believe, however, that the positive pole acts in some way that I cannot explain other than as a caustic or hæmostatic, for in one or two of my cases I have observed a decided shrinking of the tumour, which could not be explained on that hypothesis alone. I have used the positive intra-uterine electrode as a hæmostatic in eighteen cases. With one or two exceptions, these were bleeding fibroids. There are some few cases still under treatment and not ready to be reported on, and one or two in which for one reason or another the treatment was discontinued before any conclusion could be arrived at. In some of the cases the hæmorrhages were very severe, occasionally positively alarming, and in many the patient was quite incapacitated by them from following her ordinary avocations. In one only of these can I say that no good result followed. That was the case of a lady with a large hæmorrhagic fibroid reaching well above the umbilicus. She lived about seventy miles from town, and for several weeks came up once a week. The sound was introduced with great difficulty, and altogether the case and the surrounding circumstances were very unfavourable for treatment. Being satisfied that no good was being done, I advised that the treatment should not be continued. This is the only case in which I can say that the failure was absolute. In one or two others the hæmorrhages were lessened but not arrested, and the result was not very materially good. I append brief notes of four of the cases in which I should say that the result was absolutely good, and such as could be produced by no other treatment with which I am acquainted. Indeed, almost all these cases had already been treated by the ordinary methods, by myself or others, without avail. In none of them was the patient laid up. She simply rested for twenty-four hours after each application. Wherever I have been able, I have quoted the patient's own estimate of the result obtained, or that of her previous medical attendant, so as to give some opinion other than my own concerning it.

(a) Miss C—, aged thirty-two, a governess, sent to me by Mr. W. Cox of Warminster. He writes of her: "She has been suffering for many years from uterine pains and menorrhagia, and for the past few years she has been suffering more, the intervals have been getting shorter, and the flow more profuse. In the anterior wall of the uterus is a hard round swelling, which I have no doubt is a myomatous tumour. All ordinary treatment has

failed. I have been in despair, and I have a strong feeling that this is one of the cases likely to be improved, if not cured, by galvanic treatment." I found a fibroid in front of the cervix the size of a very large orange. The sound passed three inches and a half into a dilated cavity. The losses were very considerable. The average interval between the periods was from seven to ten days. The periods lasted ten to twelve days. From twenty-five to forty clots were used at each, and she always passed large clots. Fourteen applications of the positive intra-uterine electrode were made, generally of 200 milliamperes. The periods have been steadily lessening in amount, and the intervals increasing. The last interval was twenty days, and the period only lasted four days, being quite normal in quantity. The patient has returned home with the intention of resuming her avocation, which she had been obliged to give up.

(b) Mrs. M. G—, aged thirty-five, a lady whom I had attended for many years. I have watched her tumour growing from quite a small size, until it has reached its present dimensions. It now reaches above the umbilicus, and measures four inches and a half by the sound. The hæmorrhages are very considerable, sometimes amounting to what may fairly be called severe flooding. Two years ago they had become so excessive and rebellious to ordinary treatment that the question of hysterectomy, or the removal of the uterine appendages, was discussed, but she determined not to submit to it. The patient is blanched, anæmic, and a confirmed invalid. I was only able to make six applications, as she had to go abroad to the tropics, where, by the way, she was always much worse, and I looked upon the case as not likely to be bettered by so short a treatment. This was in October last, and this month I received a letter from her in which she says: "The periods have been gradually getting better, and do not last more than six days. I am now able to do anything that anyone else does, except to play tennis and dance."

(c) E. S—, aged thirty-four, has suffered for many years from severe hæmorrhages, which increased greatly after her marriage a year ago. They have been so bad that she has frequently been admitted as an in-door patient in several hospitals. She has often had to be plugged, and on one occasion the uterus was dilated, and an examination made under an anæsthetic. No improvement followed. The patient was sent to see me at my own house. I found a considerable mass of lobulated fibroid growing from the back and sides of the uterus, and pushing the cervix forwards behind the pubes. The sound passed three inches and a half. I suggested that she should go into King's College Hospital, but before she could be admitted the flooding recommenced, and it was reported that she was constantly fainting and unable to be moved. The resident accoucheur, Mr. Stephens, visited her in her own house, and after plugging the vagina had her conveyed to the hospital. She was blanched, and in a state of alarming prostration. On removing the plugs the hæmorrhage at once recommenced. An intra-uterine positive application of 80 milliamperes was made during the flow, and the hæmorrhage at once ceased. She remained in the hospital for some weeks, during which several applications of 200 milliamperes were made. During this time there was no recurrence of the hæmorrhage, and she then insisted on leaving, promising to return if the bleeding again came on. This was in April, and she has not since reported herself.

(d) Miss W—, aged fifty-four, had always been profusely unwell, but for a year or more her losses had increased very much, and previously to my seeing her, which was in March, she had been continuously losing, with only a day or two's occasional interval, since September. No examination had been made. I found a mass of lobulated fibroid reaching half-way to the umbilicus. Per vaginam several more nodular swellings of a like character could be felt. The sound passed four inches. Treatment was commenced in March, twelve applications of 200 milliamperes were made, and the hæmorrhage soon entirely ceased. On June 28th she writes as follows: "I think it is time to write and let you know how I am getting on. I am very much stronger and better, and have had no return of the bleeding."

I have selected the foregoing cases, and reported them as faithfully and briefly as I could, with the view of showing what this treatment, at its best, is capable of doing. Of course, it is open to anyone to say these are not clinical facts. To me they seem to be clinical facts of a very striking kind, and I may safely challenge anyone to produce

four cases of hemorrhagic fibroid treated for the same time in which anything like as good results followed any plan of treatment whatsoever, short of hysterectomy or the removal of the uterine appendages. Every gynecologist knows too well how rebellious such cases are, and the ordinary methods of dealing with the metrorrhagia, such as the curette, the use of caustics such as nitric acid, and the like, are obviously quite unsuited to cases of this type, while the uselessness of drugs needs no insisting on. I take it for proved, therefore, that in certain cases of hemorrhagic fibroid the hæmostatic influence of the positive intra-uterine electrode is striking and valuable. That it is not invariable in its effects, and that it should sometimes fail altogether, is only what might be predicated of any method of treatment, and is no argument against its use. In uterine hemorrhages due to other causes, such as vegetative endometritis and the like, I think we possess other plans of treatment quite as effectual, and much more rapidly so, and I do not consider them likely to be superseded by a method which is slow in its action and very tedious and troublesome to apply.

(To be concluded.)

ON THE TREATMENT BY EXCISION OF MASSES OF SCROFULOUS GLANDS.

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SCROFULOUS GLANDS do not, as a rule, attain a large size; generally they suppurate within reasonable limits as to dimensions, and discharge externally, either naturally or as the result of surgical interference. Occasionally, however, the glands continue to grow, become the seat of deposit, infect one another, and gradually increase in size till they form large masses of glands, weighing perhaps more than a pound in weight. When enlarged to this extent the mass interferes with the circulation, and sometimes, by pressure on the windpipe, with respiration also. Such cases terminate fatally if left to nature, and cannot, so far as I know, be dealt with satisfactorily or with benefit to the patient by any other mode than that of excision. For many years I left such cases alone, trying for months, and even years, every drug treatment that has ever been recommended, without in any instance witnessing a favourable result. In fact, anyone who has seen a number of these glands after they have been excised and cut open will readily appreciate the futility of drugs in such cases. A large proportion of, or perhaps all, the glands in a given case are found to contain masses of cheesy caseated material, which masses are extra-vascular, are thrown out from the tissues, and are no more likely to be affected by drugs than a loose sequestrum. I think it is time that the rank absurdity of treating scrofulous gland swellings with drugs to promote absorption should be exploded. Of course I am not referring to recent gland swellings, which may not contain scrofulous deposit, and which may be resolved. Subsequently I tried the process of incising such portions as were softening, and scooping out the contents. I found this plan no better than the expectant one; it entailed a number of openings and a number of suppurating cavities, which could not from their surroundings and condition readily contract and heal. Also, after the operation of scooping, other glands, which, although enlarged, had not previously softened, gradually broke down, the cellular tissue became inflamed and brawny, hectic continued, and the patient died worn out by the chronic blood-poisoning, or from complications in the lungs or elsewhere. I have found scooping with good drainage answer very well for enlargements of reasonable size, but not for such cases as are reported below. I have combined limited scooping with excision in some of the cases; for instance, after excising a mass, a broken-down gland may be found deeply and immovably fixed, and may be more advantageously scooped out. These large masses almost invariably extend into the deeper parts of the neck; they lie under the sterno-mastoid and on the deep vessels. Their removal is not exactly difficult, but requires care, time, and patience.

As regards the operation the following hints may be of use. The entire removal should be effected by dissection alone; no directors, handles of scalpels, or fingers should be used to separate the glands from the surrounding cellular tissue. Cut down on the surface of the mass, dissecting the cellular tissue as closely off the capsule as a nerve is cleaned in the dissecting room. Cut always on the capsule, and never allow the knife to stray from its surface. When sufficient of the anterior surface is exposed, pass a thick thread through the gland, draw it gently forward, and, continuing the dissection, get gradually to the back of the gland, removing thus portions of the mass at a time, each portion comprising perhaps one gland, perhaps several closely connected with each other. In this way the mass is gradually removed. If the plan of cutting on the capsule is strictly adhered to, it is not easy to divide any vessel of importance without doing so intentionally; whilst, if it is not followed, the jugular vein will probably be incised, as the deep glands lie along and are more or less adherent to its sheath. I have several times had to divide the external jugular vein and twice the sterno-mastoid muscle, but as a rule the glands can be pushed or pulled from underneath this muscle. In none of the cases has there been any serious hæmorrhage, and all the cases operated on have recovered. In one of the cases I accidentally opened the internal jugular vein; it was tied above, below, and at the point of incision, and no evil result followed.

As regards treatment of the wound, anything like retention of blood, serous oozing, or discharge is attended with such serious consequences that latterly I have not ventured to suture the skin flaps, except, perhaps, a single stitch to keep them in proper line. If the flaps are sewn together, hollows must be left underneath in the space the gland tumour has come from. I have also found irritation set up by drainage tubes. I have preferred, therefore, to let the flaps adapt themselves to the tissues underneath, supporting them by pads of antiseptic cotton. Strict antiseptic precautions are used in the dressings. The patient, when put to bed, has his head and neck fixed by sand-bags; he is not allowed to move or talk, and is fed entirely on liquid nourishment so as to avoid the movements of mastication. I have found, as might have been expected, that the tissues of the neck have great healing power, but are equally prone to inflammation from the irritation of tubes or from the slightest obstruction to the free exit of discharge. In fact, it is a part which is powerful alike for good or for evil. A drainage tube may safely and with advantage be passed into the hollow capsule of a gland after scooping, but it does not rest easily if laid among the deep cellular tissue of the neck.

One of the patients had been photographed at the instance of the friends before the operation, and, as it is one of the worst in degree, woodcuts of this case are given. For the notes of the cases I am indebted to Mr. Rees, the resident surgeon of the Margate Infirmary.

CASE 1. *Enlarged and indurated glands in parotid regions, largest on the right side; two or three indurated submaxillary glands felt; the gland masses freely movable; patient neuralgic and anæmic and neurotic; disease in progress six months.*—Johanna M—, aged twenty-two, nursemaid, was admitted into the infirmary on Sept. 1st, 1884. From the time the patient was admitted, the swellings in the right parotid region gave trouble, and on Sept. 12th one was incised and a little pus was let out; after this they suppurated and softened freely. On Dec. 9th the patient was given chloroform and the indurated submaxillary lymphatic glands removed through one incision, the edges of which were united with catgut sutures and the whole covered with flexile collodion; the crust of collodion came off a few days after, and revealed the incision of the operation wholly cured, healed by first intention, leaving no sinus. On the same occasion the suppurating glands in the right parotid region were incised and scraped. On Jan. 7th the patient had erysipelas of the face. On the 28th she was again given chloroform and more incisions were made, with scraping of the right side of the face. This patient left on May 28th, 1885, greatly benefited. Her submaxillary glands, being removed before they softened, never afterwards gave trouble. The parotid region glands softened, contracted adhesions, and gave much trouble.

CASE 2. *Mass of enlarged and indurated glandular contents on right side; right lobe of thyroid gland enlarged.*—Elizabeth B—, aged thirty-three, servant, was admitted on Nov. 3rd, 1884, after two years' illness. On Dec. 2nd

the patient was given chloroform, and the enlarged glands being freely movable, they were removed. An incision was made along the posterior border of the right sterno-mastoid for four inches and the glands dissected out; one gland that was beneath the mastoid process was incised and well scraped. The wound was united with silver sutures, and a drainage tube left in. The operation was done antiseptically, and the patient's head kept steady by a leather collar encircling the neck. The drainage tube was removed on the third day, and the sutures about the fourth or fifth. The opening left by the drainage tube was injected with carbolic solution. The day after the operation the temperature rose to 102° in the evening, the following evening to 101°, and the next evening to 100° only, and then became normal. The patient had no bad symptom, the wound healed by first intention, and she left cured on Feb. 16th, 1885, the cicatrix of operation being but a long thin white mark.

CASE 3. *Enlarged and indurated glands on both sides of neck; enlarged glands (freely movable) in left axilla; cicatrices in right axilla and on neck; five years in progress.*—Ada W—, aged twenty-two, servant, was admitted on Feb. 18th, 1885. After vigorous medication with mercury and iodide of potassium internally and externally, and the glands in the axilla not improving, on June 7th the patient was given chloroform, and an incision was made transversely in the right axilla, and a number of indurated glands weighing 8½ oz. dissected out *en masse*, the edges of the wound united with silver sutures, and a drainage tube put in. The wound did well, and was healed in fifteen days. The temperature never went below 100° in the evening, and just after the operation reached 102°; but the patient had changes in both apices, which would account for the nocturnal exacerbations of temperature. On July 2nd, though the wound had been healed some days, the patient had a rigor, and the temperature rose to 105°, and for three weeks she had rigors, sweats, high temperature, occasional diarrhoea, hæmoptysis, but no secondary abscesses. She left on Sept. 2nd, with her lung trouble in progress, but no glandular trouble.

CASE 4. *Much enlarged and indurated cervical glands (right side); movable; no sinuses or cicatrices; ill six months; mitral bruit and (?) aortic.*—Albert C—, aged eleven, was admitted on June 15th, 1885. The patient is a very fair, anæmic lad; he stutters, has urinary troubles, and is subject to dyspeptic symptoms, with high temperature; albuminuria is also present. On Aug. 19th chloroform was administered, and an incision five inches long was made parallel with the posterior border of the right sterno-mastoid, the glands dissected out, and the internal jugular laid bare for about three inches; an incision was also made about three inches long at the angle of the jaw, and glands removed. The wounds were well cleansed with carbolic solution, sutured with silver wire, and drainage tubes put in. The tubes were removed about the third day, and by the 26th all the stitches had been removed and the wounds had healed completely by first intention, the head being steadied by a leather collar. The patient's temperature rose at times to 101°. On the 30th he had a rigor, and the temperature rose to 103°; this was followed by a further rise to 105°. He was very ill for three weeks, his temperature becoming normal on Sept. 22nd, it having been up to 105° every night. There were no abscesses. The glands having enlarged over the right clavicle, they were removed under anaesthesia on Oct. 13th in a manner similar to those above; the operation wound healed in ten days without a bad symptom. The mass in the first operation weighed 9 oz.

CASE 5. *Indurated cervical and axillary (right) glands; eight years' duration; axillary glands forming a hard mass about the size of a large egg, and freely movable.*—G. E. B—, aged eleven, was admitted on Aug. 17th, 1885. On Sept. 8th the patient was given chloroform, and an incision made transversely in the axilla over the mass. The glands were turned out without any trouble, a drainage tube inserted, and silver sutures used to approximate the edges of the wound. The drainage tube was removed the next day, and the sutures in the course of the ensuing week; but the wound showing some tendency to gape, strapping was used, and the arm bandaged to the side; it ultimately healed quickly and well, and the dressings were discarded on Sept. 19th. The boy had no bad symptom. He suffered while under the anaesthetic, and the "battery" had to be used. On Oct. 27th a small abscess opened in the cicatrix; the sinus was nearly two inches deep, and there was slight discharge. He was doing well on the 31st, and the wound had nearly healed up.

CASE 6. *Enlarged cervical glands on right side of neck; right side measuring 8½ in., left side 5 in.; glands solid, and showing no tendency to suppurate; duration of disease two years.*—J. S—, a boy aged thirteen, was admitted on Oct. 11th, 1886. The boy was anæmic, quiet, and listless; lips bluish-white; fairly nourished; internal organs sound. On Nov. 5th the enlarged glands were excised under chloroform. The chief mass lay beneath the right sterno-mastoid, extending from the mastoid process to the clavicle, and directly on the deep vessels of the neck; a second mass of glands lay in the posterior triangle, and extended behind the clavicle. Two incisions were made, one extending from the mastoid process to the clavicle, and the second along the upper border of the outer half of the clavicle. The deep vessels of the neck were laid bare throughout their entire length. The two masses of glands after removal weighed together over 15 oz. The capsules of the glands were thickened, and the glands agglutinated together, but no distinct deposit was apparent on section. Wire sutures and a drainage tube were used. On Nov. 8th the temperature was 99° 8', and the anterior incision had almost healed. On the 12th the temperature was 104° 2', and the pulse 134. The patient was restless. There was some tension about the anterior incision. Wet salicylic dressing was applied. On the 17th the wound was reopened, some pus evacuated, and drained. The temperature afterwards became normal. On Dec. 18th the wound had soundly healed, with a good scar.

CASE 7. *Enlarged degenerating glands on both sides of neck and below jaw.*—S. E. B—, a girl aged thirteen, was



admitted on May 12th, 1887. Family history good. The patient was very anæmic and greatly emaciated; lips and cheeks blue. She was deaf, had laryngeal stridor, and the respiration



was much impeded. Slight dulness at left apex, with moist rales. Conjunctivitis in both eyes. On Aug. 19th it was noted that the temperature since admission had ranged

from normal in the morning to 103°·5° at night. The glands on this day were excised under chloroform from the right side. Considerable difficulty was experienced from the matted and adherent condition of the glands. Free incisions were made, and the sterno-mastoid was divided and turned up. Four ounces of glands were excised, and some few deep and fixed glands scraped. On the 20th and 25th the temperature was normal, and the wound was healing; by Sept. 9th it had quite healed. On Sept. 30th, under chloroform, the glands were excised from the left side of the neck; they were lying on vessels and beneath the angle of the jaw. Weight of glands excised 2½ oz. The gland capsules were thickened, adherent to surrounding structures, and much degenerated. Total weight removed 6½ oz. The temperature had become normal by Oct. 3rd, and the wounds were healing. On Jan. 4th the girl was fat and in good health, all the wounds having healed. (See annexed engravings illustrating this case.)

CASE 8. *Large masses of scrofulous glands on right side of neck of one year's duration; enlargement following acute tonsillitis.*—A. E—, a male aged twenty-one, was admitted on May 14th, 1887. The family history was good. On July 19th it was noted that since his admission other glands had enlarged—viz., on the left side of the neck and in the right axilla. The temperature had ranged from 100° in the morning to 103° at night. Under chloroform an incision five inches in length was made over the sterno-mastoid, the muscle turned on one side, and a large mass lying over the vessels dissected out; by a second incision, three inches long, parallel to the lower jaw, a second mass of glands was removed; a so, by a separate incision, a third mass from the posterior triangle of the neck. Total weight of glands from this side of the neck 8 oz.; 2 oz. of glands were also removed from the right axilla. Total weight removed 10 oz. On July 26th the temperature was normal, and the wounds were healing. A second operation was performed on Aug. 23rd, when 3 oz. of glands were removed from beneath the sterno-mastoid on the left side of the neck. On Oct. 18th a large gland, which had enlarged since the last operation, was removed from the left side of the neck; weight 1 oz. All the glands removed were degenerating, and contained caseous matter; total weight 14 oz. On Dec. 21st the patient was discharged in robust health, with all the wounds soundly healed.

CASE 9. *Indurated and suppurating cervical glands on right side of neck; numerous glands and sinuses on left side; duration seven years.*—M. H—, a girl aged thirteen, was admitted on Nov. 8th, 1887. The patient was pale and anæmic, with a waxy complexion, and subject to paroxysmal hæmaturia. On Jan. 17th, 1888, the glands were excised under chloroform. An incision of four inches and a half was made on the anterior border of the sterno-mastoid on the right side, and the old scar tissue excised. Glands of the weight of 4 oz. were removed from around the carotid sheath, and the internal jugular vein was pushed out of its place. In removal, the internal jugular vein was wounded opposite the level of the thyroid, and was tied above, below, and at the wounded point. During dissection, the anterior vertebral muscles and brachial plexus were exposed. The glands were adherent to the vessels and muscles around, and great difficulty was experienced in separating them. Most of the glands were degenerated, and many broken down, forming small abscess cavities. On Jan. 18th, the patient was doing well, the temperature being normal. She continued well up to Feb. 3rd, when the urine was found to contain a quantity of blood; the wound, however, was healing. On Feb. 17th it was noted that the temperature had continued normal, and that the urine was healthy. On the 25th the temperature was 102°, and there had been a return of blood in the urine. The wound was healing.

It may be noted, in looking over these cases, that some of them have been going on for six, seven, or eight years, and that they have only gradually and in the course of years attained considerable size. It would be better if glandular swellings were treated like any other tumour or morbid growth, and that if not amenable to treatment within a reasonable time they should be excised or scooped. The capsules of many of these glands are dense and tough; they lie deeply in the vessels, and to incise them for the purpose of scooping without previously exposing their surface by dissection is more dangerous than to remove them. These deep glands seldom approach the surface by suppuration. The best that can be hoped for, if they are left alone, is that their contents may undergo calcareous degeneration; mean-

time they keep the patient in bad health, and may extend and cause other and more serious complications. I think all diseased glands should be got rid of either by scooping or the knife, and that the latter has been too much neglected. I may add that I have excised glandular swellings for many years in the Margate Infirmary without in any instance meeting with a fatal result.

Margate.

DENGUE IN EGYPT.

By F. M. SANDWITH,

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Definition.—An infectious, eruptive fever, commencing suddenly with severe pain in the head, eyeballs, and muscles, flying pains and swellings in the knees and other joints, congested fauces and conjunctivæ, and a post-febrile period of pains, prostration, and loss of appetite, but almost never fatal.

Nomenclature.—"Abu rokab," the father of the knee joint (Gaberti, 1779). Rheumatism (Pruner, 1845). Date fever (Vauvray, 1868). Three days' fever, "abu el thalatta" (1880). Simple continued fever (1887).

History.—The earliest account of an epidemic of dengue is by the Arab historian Gaberti,¹ who says that in August, 1779, there appeared in Cairo and in Alexandria a fever known as the "knee trouble." The attack lasted for three days, and was accompanied by pain in the joints, knees, and extremities, as well as inability to move, and often with stiffness and swelling of the fingers. The after-pains lasted more than a month. The onset was sudden, the body being broken by it, and the head and knees taken hold of. The disease ended with sweating, and was relieved by hot baths. He describes it as one of the most remarkable events of the year. I have not been able to find any account of Dengue among the medical writings of the French expedition in Egypt at the beginning of this century. But the disease was next observed at Suez in December, 1824, by Ehrenberg, during a severe epidemic in India. In August, 1845, Pruner² saw an outbreak of dengue in Cairo, which increased until October and then declined, with the exception of a few cases of muscular rheumatism, which were present during the winter months. Among white patients he saw a spotted rash which sometimes lasted three days and sometimes only a few hours; there were papules slightly raised above the surface and of a light-red colour, and in some cases the eruption was only seen upon the arms. The rash was followed by pricking pains and very slight desquamation. The patients complained of aching pains in the head, eyes, and back, of great muscular fatigue, and of pains in the thighs, knees, and other joints. The fever was very slight in the mornings, but higher at night; bad cases were sleepless from one to five nights, and occasionally there was slight rambling at night. In very severe cases the patients also suffered from giddiness and fainting. The disease lasted from five to seven days, during which time the tongue was thickly coated, there was a taste in the mouth, loss of appetite, and constipation. Relapses were rare, but there were occasionally slight second attacks, and many suffered from chronic rheumatism as a sequela. It was noticed that in some of the houses attacked every individual suffered, while in other houses in the neighbourhood there were no victims. The treatment recommended by Pruner was bleeding, leeches, emetics, sinapisms, rest, and massage. In the autumn of 1868, and again in 1871, Dengue was seen at Port Said by Vauvray,³ shortly after it was seen at Aden, and just before it broke out in Bombay and Calcutta. The disease very probably existed in Egypt during other years than those above mentioned, and possibly Vauvray is right in divining that dengue, when occurring at the time of the date-gathering, is masked under the name of date fever, which is, however, more likely to be ordinary intermittent malaria. In 1877, from August to November, there was a very smart outbreak of dengue at Ismailia, on the Suez Canal, and apparently limited to that town. The epidemic was so universal that the tribunals and commercial offices had to be temporarily closed. In the autumns of 1878

¹ Marvellous Events in the History of Egypt.

² Die Krankheiten des Orient's, 1847.

³ Arch. de Méd. Nav., 1872.

and 1879 a mild form of the disease was again reported in Ismailia, while in 1880 there was a severe epidemic almost all over Egypt. For the account of this outbreak I am chiefly indebted to Dr. Mackie, of Alexandria, who wrote at the time a report for the English Government, which was reprinted by the authorities at Malta for use during an epidemic there. In Cairo the disease was first noticed in the month of July, but was not recognised till August, and it finally disappeared at the end of December, having attacked, it is said, nearly four-fifths of the population. It appeared in Alexandria in the beginning of October, shortly after the arrival of some infected Egyptian soldiers from Damanhour, and spread to many towns and villages on the Nile in Upper and Lower Egypt. Dr. Mackie found that most of his cases commenced suddenly with slight shivering, fever, pain all over the head and behind the eyes, slight redness and suffusion of eyes, and severe pain all over the body, but especially in the back, in the muscles, and in the joints. Sometimes there were also epigastric pain and vomiting. The temperature often rose to 104° F., and was associated with a quiet soft pulse of 84 or 90. The pain was described by some as a burning sensation, "as if a red-hot iron were being pushed into the joints." There were thickly coated tongues, constipation, nausea, and copious high-coloured urine, sometimes albuminous for a few days, and in rare cases containing a little blood. Some patients complained of pain in the throat, but on examination nothing but great dryness and redness could be seen. "The face is very red and flushed, giving it a swollen appearance. In cases of ordinary severity the fever declines about the third day, the temperature falling to 100° or 101°; and a rash sometimes resembling measles, but much more frequently resembling scarlatina, appears on the neck, upper part of chest, points of elbows, knees, and ankles, but often covering the whole body, especially in children. The rash sometimes appears from the commencement, but more often about the third or fourth day, and not unfrequently much later, after patients have considered themselves convalescent and resumed work. The duration of the rash is indefinite, generally disappearing in four or five days, but often lasting much longer. Generally there is no desquamation after the eruption fades, but in some cases, where the rash has been bright red and well developed, it is followed by a fine furfuraceous scaling, especially on the hands and arms." Convalescence from severe cases was very slow, and was sometimes attended by sleeplessness, giddiness, temporary impairment of memory, and even very mild delirium. But in addition to these severer cases, not one of which proved fatal during the epidemic, there were many of a milder type, consisting of slight pains in the head and back, giddiness, nausea, and malaise, and very little fever. Many of these patients with difficulty continued at their work, in spite of a red rash upon their hands and arms. Dr. Mackie believed "that the rash, to a greater or less degree is almost universally to be found if carefully looked for; it may not be on the face or trunk, but may exist merely as red patches on the points of the elbows, knees, neck, or upper part of sternum." His cases were of all ages, from six weeks to fifty-six years, and when once an individual was attacked the disease ran through his whole household. There were several instances of people suffering from the fever a second time. Salicylate of soda was the drug found most useful in relieving pain. After 1880 the next known appearance of the disease was in the autumn of 1883, when there was a distinct epidemic at Port Said, and a few sporadic cases seen by myself and others in Cairo. At Port Said about half the English colony was attacked, the joints most commonly swollen being the ankles, knees, wrists, and elbows; and several cases were noticed of an intermission on the fourth day, followed by another three days' fever. This epidemic was interesting because it included one case of "malignant dengue," being the only one of which I have heard in Egypt. The patient upon the seventh day became drowsy, with largely dilated pupils; the drowsiness gradually passed into coma and death. There was no necropsy. In March 1885, in Cairo, two of my English patients had mild attacks of dengue with typical rash, swollen and painful joints, and relapses. In the autumns of 1885 and 1886 there were few sporadic cases at Port Said, and in the latter autumn I came upon a case in Cairo in a young Egyptian doctor who had just passed untouched through an epidemic of typhus and relapsing fevers. About the middle of September, 1887,

sporadic cases occurred at Port Said, Suez, Zagazig, and other towns, until a regular epidemic broke out in Cairo, followed at the end of October by a milder outbreak at Alexandria. The disease in Cairo was at first unrecognised, and believed to be due to infiltration caused by an extra high tide. Doctors and patients found, however, that the fever bore a strange similarity to the epidemic of 1880: red rashes and desquamation, when carefully looked for, were reported on every side; and joint swellings and pains, though milder than in any previous epidemics, were not unknown; while everyone complained of muscle pain, headache, and prolonged prostration. The epidemic was then recognised by all civilian practitioners as very mild dengue, the only non-contents being some English army doctors, who preferred not to so name it because it differed remarkably in severity from the important epidemics of dengue which they had seen in India. This adverse opinion, though formed by some of my friends for whose medical knowledge I have the highest respect, was based upon an experience among the soldiers alone, and not among women and children. My analysis of symptoms will, I hope, be sufficient to prove that the disease usually called dengue existed in Cairo in 1887, though it may at once be conceded that the symptoms were milder than in previous epidemics in Egypt, and infinitely milder than most of the records of India and the United States. The absence of severe symptoms in this epidemic will not, however, astonish those who have watched similar mild epidemics of enteric or scarlatina.

Geographical range.—The area of distribution of the disease is known in other countries to have been almost limited to places on the coast. This is true of the West Indies, the Southern States of America, East and West Africa, Arabia, and Spain, where it has always been a few coast towns that have suffered, without transmitting the disease into the interior. In connexion with this it must be noted that dengue has always apparently entered Egypt by way of the Suez Canal, and has constantly been on that coast without entering the country. However, just as dengue has been known to spread along the Mississippi, Indus, and Ganges valleys, so it has at least four times followed the course of the Nile to Cairo and Upper Egypt, confining itself for the most part to towns, as has been noticed by Hirsch. Dengue is known to be a distinctly tropical disease confined to certain latitudes (33° north to 23° south), only just including Lower Egypt; and this may possibly to some measure account for the absence there of such severe symptoms as are met with in India, Burmah, and Central and South America.

Sex and age.—Dengue, as in other countries, attacks all persons without distinction, from the Khedive to his blackest slave. Newly born infants contract it from their mothers if at the breast, but not necessarily if only living in adjoining rooms. Children of all ages get it a little more lightly than adults, it would seem, and certainly suffer less afterwards from pains and prostration. Adults of all ages and sexes, strong and weak, rich and poor, white and coloured, none are exempt. The oldest case in 1887 was an Englishman, aged sixty-five. Those who had spent an exhausting summer in Cairo suffered in about the same proportion as their friends who returned full of vigour from Europe during the height of the epidemic.

Season of year.—I have already mentioned thirteen years, in which dengue is known to have been present in Egypt,

	TEMPERATURE AT CAIRO.		HUMIDITY AT CAIRO.	
	Average of		Average of	
	1884-5-6.	1887.	1884-5-6.	1887.
January	58.6	53.8	70.0	72.8
February	56.6	55.6	66.6	71.9
March	61.7	61.6	57.6	63.2
April	70.2	71.4	46.6	49.5
May	75.2	75.4	48.8	47.5
June	83.3	80.8	42.6	47.0
July	82.4	83.2	40.2	52.7
August	82.0	82.2	55.2	59.1
September	76.8	79.2	62.5	63.0
October	72.4	78.6	65.5	69.7
November	64.2	67.4	67.7	69.7
December	58.4	58.8	70.8	66.3
Average of year .. .	69.6	70.6	58.6	61.9

though upon nine of these occasions there have only been a few sporadic cases upon the sea coast. But in all of them

the disease has been first discovered in August or September, and has invariably disappeared about December, on the setting in of colder weather. It will be noticed that the December climate as judged only by the thermometer is not cold, but towards the end of that month in Cairo there are clouds, showers of rain, a keen south wind from a very cold desert, and a condition of weather which causes the susceptible inhabitants to wear extra clothing and warm themselves at night by fires. The minimum temperature falls from 50° F. in November to 41° F. in December. The foregoing table shows that during the epidemic (September to November) the temperature was above the average of the three preceding years, and also that the amount of moisture in the air was greater than usual in 1887.

(To be continued.)

A SUCCESSFUL CASE OF NEPHRORAPHY FOR FLOATING KIDNEY.

BY C. STONHAM, F.R.C.S.,
ASSISTANT SURGEON TO THE WESTMINSTER HOSPITAL.

MARTHA D—, aged thirty-four, a cook, came under my care in October, 1886. She was a nervous, hysterical woman, and had suffered for two years and a half from "cramp" in the abdomen, and could feel a lump which moved about, and caused her great pain on movement and in doing her work. She was a married woman, but had lived apart from her husband for some years. She had had one miscarriage, and states that she never quite recovered her former strength after this. Fifteen months later she was confined, the labour not being attended with any difficulty. She did not admit having worn tight stays. On her admission into the hospital it was found that the right kidney was freely movable, and caused the patient so much pain on movement that she preferred remaining in bed, and had been obliged to give up her situation temporarily. The woman was well nourished although not fat. Nephroraphy was proposed to her, and the nature and object of the operation being explained, she at once consented.

Operation.—On Oct. 2nd, 1886, the patient being under the influence of ether, an incision was made parallel with the last rib and a finger's breadth below it; the incision was about four inches long, with its centre opposite the middle of the iliac crest. After opening the fascia transversalis an assistant pushed the kidney up into the wound. It was found to be normal in size, and surrounded by a small quantity of fat. Silk sutures were then passed through the deeper structures (transversalis muscle and fascia, and quadratus lumborum), and then through the capsule of the kidney and peri-renal fat; the suture was then tied. Two such sutures were passed through the upper lip of the wound and upper end of the kidney, and two through the lower lip and lower part of the kidney. Then a thicker silk suture was passed through all the structure in the wound at the posterior angle, then through the capsule of the kidney and peri-renal fat, and out through the other side of the wound. This was not tied until the wound had been closed with silk sutures, after having been cleansed with corrosive sublimate solution (1 in 2000). A drainage tube was put in the posterior angle, and the wound dressed with iodoform wood-wool.

The dressings were changed on the first, third, and fifth days after the operation, and on the latter occasion the drainage tube was shortened to one inch and a half. On the twelfth day the dressings were again changed, and all the sutures uniting the wound were taken away, as was also the deep one passing through the kidney capsule. The drainage tube was removed. Five days later the wound had perfectly healed. The patient had not had a bad symptom from first to last, and there had not been any pain unless she had turned on the wounded side during sleep. I considered it advisable to keep her in bed for some time longer, in order that there might be firm adhesions between the kidney and the parietes. She was allowed to get up for the first time on Nov. 7th. The next day she complained of anæsthesia affecting the right leg, and on the right side below the incision; above this there was paræsthesia, and also anæsthesia along the course of the right intercosto-

humeral nerve. This was put down to hysteria and no treatment was adopted. In a fortnight she quite recovered.

I saw the patient in January, 1887, and she told me that she had been very much better since the operation, and that there had not been any return of the old pains, and she had been able to do her work in comfort. She now complained of pain in the cicatrix, quite localised to one spot. On examination I found that there was a small abscess, which I opened, and discovered that it had been caused by one of the deeper sutures, which I removed, and the abscess rapidly healed. In the following June, I again saw this patient. She had perfectly recovered from her old pains and cramp, and was just about to leave for a situation in Australia.

Remarks.—This case appears to me interesting as showing the great good that may be done by nephroraphy in suitable cases. In this case the pain caused by the floating kidney was such that the patient was totally unfit for work. The operation appears to me to be devoid of any great danger if antiseptics are used and due care be taken not to wound the peritoneum. It must, however, be borne in mind that in some cases of floating kidney the peritoneum forms a complete meso-nephron as in the original fetal condition.

Wellbeck-street, W.

ON THE PROBABLE EXISTENCE OF TÆNIA NANA AS A HUMAN PARASITE IN ENGLAND.¹

BY W. H. RANSOM, M.D. LOND., F.R.C.P.,
PHYSICIAN TO THE GENERAL HOSPITAL, NOTTINGHAM.

THIS tapeworm, first observed by Bilharz in Egypt, and described by him and von Siebold in 1853, had not been subsequently met with until it was recently found in Belgrade by Hellich, as mentioned by Leuckart in 1886. Professor Grassi of Catania in Sicily, in a paper published early in 1887,² calls attention to his discovery of the ova of what he thought to be *tænia nana* in the faeces of a girl in Milan in 1879. These ova are figured in Bizzozzero's "Handbuch der Klinischen Microscopie." Grassi, again, met with similar ova in the stools of two girls in Catania shortly before the publication of his paper, and succeeded by the use of male fern in expelling the worms in thousands. He has minutely described the worm, and found it to be *tænia nana*, which from subsequent observations he shows to be a very frequent human parasite in that part of Sicily, where it is said to produce various symptoms of intestinal irritation as well as reflex neuroses, although it may be present in numbers in persons who apparently are quite well. Grassi relies with confidence upon treatment by male fern. His earlier investigations into the life history of this parasite resulted in failure, but he was inclined to the opinion that the larval stage of *tænia nana* was passed in the larva of *tenebris molitor* ("meal worm").

Grassi's first paper came into my hands early last year, and I at once saw that he had found the *tænia* which I had vainly sought for in 1854-5, in a girl whose faeces contained similar ova. A full account of that case, with a figure of the ova, will be found in the *Medical Times and Gazette*, vol. i., 1856. An abstract of the same case appears in Reynolds's *System of Medicine*, 1871. Thus after thirty years my anticipation that "thus we may hope some day to see demonstrated what is here inferred" is justified by the event. For Grassi, in a later paper,³ also holds that the ova I described and figured are those of *tænia nana*. It ought, however, to be noted that I failed to discover any worms in the stools after active treatment with male fern, although Grassi found it a sure cure. I cannot doubt that other such cases will be discovered in this country if sought for, and they may be numerous. Although so small, these worms are so numerous that they may become very important factors in disease, and Grassi, whose experience is considerable, says that sometimes they produce grave symptoms.

I was led in 1856 to attempt to explain the failure of drugs to expel the worm by supposing it to inhabit a

¹ Abstract of a paper read at the Nottingham Medico-Chirurgical Society.

² *Centralblatt für Bacteriologie und Parasitenkunde*, Bd. i., p. 97.

³ *Ibid.*, Band ii., p. 286.

glandular duct connected with the intestine; but this not very probable hypothesis was apparently abandoned in 1871. Now, I suspect that in my case some of the *tænia nana* may have been expelled, and were not found on account of their small size. Although as the ova were still found in the faeces after fifteen months' treatment, it is evident that some of the worms remained.

The life history of this worm is still in obscurity; but Grassi and Calandruccio, after a most zealous and painstaking investigation, conclude that it is, sometimes at least, directly transmitted without any intermediary host. However this may be for *tænia nana* in man, these observers have made out a very strong case indeed in favour of direct infection for the *tænia murina* which infests the *mus decumanus*, and which is, in Grassi's opinion, at the most, only a variety of *tænia nana*.⁴ The specimen exhibited to the meeting was from Belgrade, and was a typical one.

Nottingham.

AN ATTEMPT TO DETERMINE THE FREQUENCY OF RHEUMATIC FAMILY HIS- TORIES AMONGST NON-RHEUMATIC PATIENTS.

By ARCHIBALD E. GARROD, M.A., M.D. OXON.,
AND
E. HUNT COOKE, M.A., M.B., B.C. CANTAB.

It is universally admitted that rheumatism is an extremely hereditary disease, and the frequent occurrence of certain morbid conditions, such as chorea and the erythemata, in members of rheumatic families, is rightly held to afford a powerful argument in favour of the close relationship of these diseases to rheumatism. However, the statistics bearing upon this point lose much of their value from the absence of any standard with which they may be compared; and until we can form an idea of the proportion of non-rheumatic cases in which such histories are met with, we can form no idea how far the average is exceeded in any particular instance. It was with a view to the construction of such a standard that the present investigation was undertaken. It must be borne in mind that the percentage obtained will be in direct proportion to the prevalence of rheumatism in the area from which the patients are drawn, and will also depend upon the circumstances of the patients, and therefore that our statistics, being based upon information supplied by casualty patients at St. Bartholomew's Hospital, will, at the most, only hold good for the lower orders of London. Moreover, since information derived from such sources is notoriously untrustworthy, the results obtained must necessarily be merely approximate, but they can at least pretend to an equal degree of accuracy with those to which they are intended to be compared. With a view to the removal, as far as possible, of the sources of error, we have confined our inquiries to the immediate families of the patients (parents, brothers, and sisters), and have rejected all except distinct histories of rheumatic fever—a disease which usually leaves a strong impression upon the minds of those who have suffered from it, since it involves confinement to bed or a more or less prolonged stay in hospital. The exclusion of the less severe forms of rheumatism must necessarily tend to lower the percentages, as also will the ignorance amongst the patients of the illnesses from which their parents suffered in their earlier years.

Of 500 patients who had not themselves suffered from rheumatic fever, and who came to the hospital on account of ailments having no recognised relation to rheumatism, 105, or 21 per cent., gave histories of rheumatic fever in immediate families. Of these, 40 who applied for treatment for tonsillitis should perhaps be excluded, since there is apparently some connexion between this condition and rheumatism. The exclusion of these reduces the percentage to 19.78. The examination of separate groups of cases tends to confirm the accuracy of this result, for of the 103 sufferers from dyspepsia, 23, or 22.3 per cent., gave family histories of rheumatic fever, and of those who came on account of coughs of various kinds, 106 in all, 22, or 20.7 per

cent., gave similar histories. Among the 40 cases of tonsillitis the percentage was much higher, reaching 35 per cent., and this fact seems to lend considerable support to the view which connects this condition with rheumatism. In addition to these 500, we obtained the family history of 100 other patients who had at some period of their lives suffered from rheumatic fever, and in 35 of these there was rheumatic heredity, a percentage identical with that obtained from the tonsillitis cases; whilst in 80 patients who came under treatment for chorea there was a definite family history of rheumatic fever in 32.5 per cent.

To sum up, these statistics indicate that, whereas about 20 per cent. of the patients who present themselves at London hospitals suffering from morbid conditions which stand in no recognised relation to rheumatism have family histories of rheumatic fever, amongst those who have themselves suffered from rheumatism or allied diseases, such histories are obtained in some 30 to 35 per cent.; in each instance, however, considerable allowance must be made for erroneous information.

Chandos-street, W.

ARRESTED APICAL PHTHISIS.

By FRANCIS TAYLOR SIMSON, L.R.C.P. LOND., &c.

PROBABLY every physician would have hesitation in subjecting a patient suffering from a dire disease to any but orthodox treatment. So, although for some time past I have had a new treatment of consumption in my mind, it is only recently I have carried it into effect. The extremely favourable result, exceeding all expectations, induces me to place this single case, for what it may be worth, before the profession.

F. H—, a man aged twenty-two, height 5ft. 10in., single, employed as an umbrella maker, and living near Leicester-square, first consulted me on Feb. 3rd last. He had been a Volunteer from the age of sixteen to twenty. Was well up to the beginning of last November, when he was ill for four days with what was diagnosed to be scarlet fever, but there was no rash and his skin did not peel. In fourteen days he resumed his work, which he continued until the day before he consulted me. After the November illness he vomited frequently, especially after breakfast and supper. He never drank to excess, being almost a teetotaler. On Christmas Eve he first noticed a cough, and found he could not sing. The cough became gradually worse, and was accompanied by increasing expectoration and occasional aphonia. From this time he wasted and became gradually weaker. His appetite failed and night sweats commenced. A short time before he consulted me his throat felt uncomfortable, and on Feb. 2nd he went to a throat hospital, but his larynx was too obstructed for examination. He stated that his father died at the age of forty-nine, of paralysis. His mother was alive and well, aged sixty-eight, and supposed to have been consumptive when a girl. He had seven brothers and sisters, one of whom died of scarlet fever at the age of eight. There was no history of phthisis or cancer in any of his relatives.

On examination I found the tongue furred, flabby, and indented by the teeth; sordes on lips; teeth bad; bowels constipated; skin very moist; great palpitation; epigastric pulsation; heart's sounds normal; urine normal excepting phosphates; weight, with thick overcoat on and fully dressed, 9st. Chest: right apex only abnormal; deficient movement; increased vocal fremitus; dull; increased vocal resonance; abundant subcrepant râles, anteriorly and posteriorly. Throat: aryteno-epiglottidean folds so oedematous that it was impossible to see down the larynx; posterior rhinitis. On microscopic examination of the sputum crowds of tubercle bacilli were visible. He was ordered to take two teaspoonfuls of cod-liver oil and one teaspoonful of syr. hypophosph. co. three times a day, to eat as much good food as possible, to drink stout, and to use the following inhalation every night: half a grain each of perchloride of mercury and chloride of ammonium, in four ounces of distilled water; one tablespoonful to be added to a tablespoonful of hot distilled water, and thoroughly inhaled in the form of spray every night. As he left me I watched him cross the road. It was with difficulty he crawled into a passing conveyance, so weak and tottering were his footsteps.

Feb. 11th: Says he feels about the same.—18th: Same

⁴ *Ibid.*, p. 306.

report. Spray causes no irritation. Ordered a grain and a half each of perchloride of mercury and chloride of ammonium in solution, for inhalation as before. To continue other treatment.—25th: Patient staying at Wandsworth. Feels better. Takes more interest in local and general news. Plays with the children of the house. Coughs less.—March 3rd: Still better. Has returned home, as he finds Wandsworth too cold. Bowels very constipated. Ordered to take three grains of extract of cascara sagrada every night if required.—10th: Still improving. Ordered the spray solution to be increased in strength to two grains of the perchloride to the four ounces.—17th: Improving.—24th: Much better. Coughs less, eats well, and has increased 4 lb. in weight.—April 1st: Better.—3rd: Looks and feels better. Weight 9 st. 6 lb. Pulse 120, weak. Says the sputum is stained with blood, especially after using the spray. Right apex less dull; vocal fremitus and resonance not so pronounced; "crepitations" not so abundant; aryteno-epiglottidean swelling gone, but larynx still swollen.—7th: Patient much improved. Weight 9 st. 8 lb.—14th: Very much better. Weight 9 st. 11 lb. His friends say he looks better than before his illness. No crepitations, but still increased vocal fremitus and resonance, and some dulness: "cog-wheel" respiration in right supra-scapular fossa. Slight laryngitis only. Sputum quite free from bacilli. Some sputum was sent to Dr. Hebb, the well-known pathologist, who also found it free from bacilli.—21st: Patient looks and feels quite well. Walks upright and firmly. Weight 9 st. 12 lb. Says his clothes are all too tight. Cough gone. Appetite good. Tongue still coated. Has flatulence. Bowels regular. Sleeps well. No night sweats. Still deficient movement at right apex; not so dull as last time; increased vocal fremitus and resonance; breath sounds weaker than at left apex, less air apparently entering; no moist sounds. Laryngitis gone. Vocal cords white, but right one shows slight signs of previous inflammation. Ordered to discontinue spray.—30th: Still more improvement. Weight 10 st. His friends do not recognise him at first. He goes occasionally to the theatre. Eats well. Has had to-day—at 7.15 A.M., two eggs and milk beaten up; 11 A.M., half a pint of cocoatina and two slices of bread-and-butter; 1.15 P.M., half a pound of steak, potatoes, and rice pudding; 4 P.M., cup of tea, two eggs, and two slices of bread-and-butter; 6 P.M., two eggs beaten up with brandy-and-water; and is going to have something more later on.

Remarks.—This appears to be a case of debility, induced probably by dyspepsia, where the tubercle bacilli obtained access to the lung, and there rested and multiplied. The germs being, as is well known, extremely strong (so tenacious of existence that they can literally rise again from the dust), nothing but the most powerful germicide could destroy them. This was administered in the form of spray, a quarter of a grain of the perchloride being inhaled every night. This, I believe, killed the germs and cured the patient. I believe the persalts of some other metals (e.g., gold) might be found to have as good a germicidal effect, if preferred to the mercuric salt.

Lavender-hill, S.W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

POISONING BY A GREEN WATER-COLOUR PAINT.

By A. OGIER WARD, M.D.

THE following case may be interesting. It might have had a medico-legal importance.

J. F.—, a little girl of nineteen months, while playing with some paints, swallowed nearly one-third of a cake of "green bice." This was at 2.30 P.M. She had dined at 1.30 P.M. Though detected by the nurse, the latter contented herself with wiping the child's mouth, and said nothing to the mother, "because she was afraid it would worry her." At 5 P.M., immediately after a light meal of bread-and-butter and milk-and-water, the child vomited, and again at 5.45 P.M., and then continued vomiting every

few minutes. At 6 P.M. the father reached my house, bringing with him the rest of the cake of paint, and as from his account the child was neither in great pain nor collapsed, and was vomiting freely, I spent a few minutes hurriedly testing for arsenic. I got no satisfactory result, however, as the earthy base of the paint obscured my tests, and for the garlic odour my sense of smell is unfortunately inadequate. At 6.20 P.M. I saw the child. She seemed to suffer little or no pain, was not collapsed, and when sick there was no straining. There was no purging. The vomit consisted chiefly of mucus, with here and there little pellets, some slightly blood-stained, in the centre of each being a fragment of the paint. These fragments, on close inspection, showed little or no rounding off. I argued, therefore, that while we evidently had to deal with a highly irritant poison, yet absorption had been, and would be, very slow, and the free vomiting promised to clear the stomach without my interference. I should mention here that, after the father started to fetch me, the mother, growing nervous, administered two teaspoonfuls of castor-oil, which was happily at once rejected by the stomach. Had the oil carried the poison into the intestine, it is probable that severe enteritis would have ensued, and very possibly absorption, with disastrous results. Under the circumstances, and the parents being thoroughly sensible, I decided to watch the course of events; but as a friend living not far off had a laboratory, I took there the remainder of the paint. More careful and leisurely testing now proved the presence of chromium and probably that of zinc. Of arsenic we found no trace. On returning to the patient, I found she had only vomited once since I left her at 6.45, and at 8.30 she fell quietly asleep. Next day she was perfectly well, the tongue being furred as in gastric catarrh.

Messrs. Reeves and Son, the wholesale vendors, inform me that this cheap "green bice" is of German manufacture, and probably of uncertain constituents, but is understood to be chromic acid with a zinc base, and made up with china clay, gum, treacle, glycerine, &c. Any given batch of paint might or might not contain arsenic. Aided by Dr. Neale's valuable Digest, I have referred to records of chronic poisoning. I find none parallel. In THE LANCET for 1879, vol. ii., p. 464, and for 1880, vol. i., p. 167, are two cases where bichromate of potash was taken, and in each urgent vomiting and purging came on speedily, the former in a few minutes, and the purging lasting twenty-four hours. The tardy development of symptoms in this case may have been due to the china clay &c. In fact, the paint seems to have acted purely as a local irritant, and to have been rejected by the stomach before absorption could occur. It is worth remembering that all is not arsenic that is green and causes the vomiting of mucus. And though the idea of what people might say might lead one to interfere for the mere sake of doing something, yet it is evident no treatment was the best.

Tottenham.

TETANUS SUCCESSFULLY TREATED WITH STROPHANTHUS.

By W. J. CLAPP, M.R.C.S. &c., F.S.Sc. LOND.

WILLIAM W.—, aged twenty-three, ballast man at the Penarth Docks, came under my care on Feb. 18th, 1888, suffering from severe burning pains between the shoulders, extending down the spine. Abdomen rigid; spasms of body, chest, arms, thighs, and legs; jaws locked; countenance anxious; face and mouth contracted; pulse quick; and wiry temperature (108°). He was in appearance a well-developed man; height 5 ft. 8 in. He stated that about three weeks previously he had the nail of the little finger of the left hand torn when at work, from which he suffered severe pain, and believes that it was frost-bitten while following his employment (the cause of his illness). Being constipated, I gave him a full dose of white mixture, which he had great difficulty in taking on account of the locked state of his jaw. I also prescribed a mixture containing large doses of bromide of potash and hyoscyamus, to be taken every hour for some days; and ordered liniments and poultices to be applied to the spine, abdomen, legs, and feet. The urine was dark and scanty, without any deposit. Beef-tea, mutton broth, milk-and-water, and lemonade were given often, as only very small quantities could be taken at a time. No improvement taking place, I was determined to give

strophanthus a trial, and for this purpose employed tabloids containing two minims in each; one was given every three hours, it being with difficulty placed in his mouth, and cold water was taken after each tabloid. About the second day after commencing the strophanthus I was pleased to find him decidedly improved. I could open his mouth sufficiently to introduce the mouth of a feeding cup. The spasms of the body, abdomen, and extremities became less frequent, the pulse quiet, and the temperature lower. I then continued the tabloids, gave another aperient, and ordered him, in addition to the beef-tea, broth, &c., corn-flour, custards, bread-and-milk, and bread-and-butter, which he commenced to take regularly, and which he had not been able to do for some considerable time previously. The urine was copious and clear. All the symptoms gradually became less. The strophanthus was now given only twice a day, and was soon discontinued. In a fortnight afterwards the man was able to walk and to take his usual food, the jaws being competent to perform their wonted work. He is at the present time quite restored to health, and is following his employment.

Cardiff.

FETAL ABNORMALITY.

By HOWARD D. BUSS, M.R.C.S., L.S.A.

MRS. J.—, multipara, sent for me on the evening of May 19th. On my arrival, half an hour after receiving the message, I found the pains strong and regular, the os dilated, but no presentation to be made out, the examining finger impinging against something that felt as if the finger were being pressed against a bladder full of a semi-solid substance. I found from inquiries that the patient was only in the seventh month of pregnancy. The os being nearly fully dilated, I ruptured the membranes, a large quantity of liquor amnii coming away. When I again made an examination, I found that the presentation was a breech, the two feet being easily within reach. All the parts that could be touched felt quite soft, and no bones could be made out. The child was born two hours after my arrival at the house, and was dead. After the placenta had come away I examined the child (a male), and found that it was quite soft to the touch all over, and curiously swollen in the limbs. No bones could be felt in the head, body, or limbs, and on holding the legs and arms up to the light they were found to be almost translucent, and not showing any sign of bones. I made an incision into the left arm, and found that it was composed of a sort of firm jelly, a quantity of colourless liquid coming away from the incision. On making the cut deeper, no trace of bone or anything at all approaching it could be found. No further examination was allowed. The child at birth weighed 6 lb. 3½ oz. The placenta was round, and measured 14 in. across, and was 3 in. deep. It weighed exactly 3 lb. The cord was 19½ in. long, and apparently quite normal to within an inch of the child's body, where it became of a jelly-like appearance and consistency. The patient stated that she had had five healthy living children and one miscarriage. The last four confinements, however, had all taken place at about the seventh month, and had all resembled the one described in malposition and appearance of the foetus. During the night two quarts of a colourless liquid, containing a large proportion of albumen, exuded from the child's skin, coming out in beads like perspiration. The body then had a shrivelled and shrunken appearance.

Leominster.

CIRCUMCISION IN ENURESIS.

By CHARLES O'FARRELL, L.R.C.P., L.R.C.S.

J. C.—, aged eleven years, a strong, healthy boy of active habits, but a very sound sleeper, suffered from incontinence of urine since he was an infant, and if on any night he did by chance escape wetting his bed, which was very rare, he was proportionally proud of his position; whilst in the daytime, whether at school or at home, he was constantly running to pass urine. He had been medicinally treated by four medical men on different occasions without any visible change in his condition, and the only hope held out was that "he would grow out of it." Nor were the usual amount of floggings and scoldings, alternated with

coaxings and bribes, left out; also his liquid food, especially at night time, was reduced to a minimum. Again, he was taken out of bed at regular intervals, but all to no purpose, for his mother states she has frequently found his bed saturated in an hour after he entered it, and the boy could never be allowed away from home for a single night. Whilst treating him for tonsillitis I was told this pitiable tale, and remembering that the other medical men had no doubt used every other remedy, I asked to examine his penis, and there found what I believed to be the cause of the mischief. The prepuce was very elongated, but passed freely over the corona, except where it was restricted by a short frenum. I suggested circumcision; but as this would not be agreed to, I tried various drugs, cold baths, exercise, &c., going over the same ground as my predecessors, with the same result, until at last, as a policy of despair, his parents consented to an operation. On the 27th of April I injected five minims of a 10 per cent. solution of hydrochlorate of cocaine, removed the prepuce, and cut through the frenum. The wound healed by first intention, and the boy has not wetted the bed once since. He sleeps soundly from the time he goes to bed until he rises in the morning, not being disturbed once, whilst he has perfect control over the bladder during the day.

I am induced to bring this happy result before the profession, as I am under the impression that it is a remedy not very often tried, and one that under ordinary circumstances can have no bad results, even supposing that it does not succeed. There is no mutilation or disfigurement, and other evils may be prevented, such as masturbation—one of the inducements for the operation I held out to the wavering parents.

Since writing the above I am sorry to say the patient has wetted the bed three or four times (within as many months), which his parents attribute to habit, and are satisfied that he is growing out of it.

Great Yarmouth.

ARRESTED DEVELOPMENT OF THE ABDOMINAL WALLS.

By JOHN BUCHANAN, M.D., M.R.C.S.

THE following unusual case occurred in my practice. On Jan. 22nd I was called to see a child that had just been born. The woman was attended by a midwife, and the labour had been easy and natural. The abdomen of the child presented a large elliptical opening, three inches long and two and a half inches broad, extending from the umbilicus downwards nearly to the pubis. Through this there protruded the whole of the small intestine, the large intestine (except the lower part), the stomach, and the right lobe of the liver. The loins were fallen in, and the abdominal cavity was exceedingly small. The child—a female—was large and well nourished. The viscera had been covered by a thin membrane, which had ruptured during parturition. This was attached along the cord for a distance of seven inches, and was either a distended outer coating of that structure or distended peritoneum. It was impossible to return more than a loop of intestine at once, and that would not remain. It was evident the viscera had never been inside the abdominal cavity. On the cord about the middle was a knot—not a very uncommon occurrence; but there is the query in this case as to whether the knot had anything to do with the arrest of development in the abdominal wall. The child cried and took milk well. It lived forty-two hours. Shortly after birth the intestines became inflamed, and before death were very much distended.

Liverpool.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The President, Sir James Paget, took the chair at the quarterly court of directors of the above Society on Wednesday, July 11th. Three new members were elected and the deaths of four reported, and two had ceased to be members. A sum of £1364 was voted for distribution among sixty-two widows and fifteen orphans. The death of one widow in receipt of £50 per annum was announced, and a fresh application for a grant was accepted from a widow. The expenses of the quarter amounted to £55 1s. It was decided that a *conversazione*, instead of a dinner, to celebrate the centenary of the Society, should be held the last week in October.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

THREE CASES OF ARTHRECTOMY OF THE KNEE; REMARKS.

(Under the care of Mr. EDMUND OWEN.)

THE following are contributions to the literature of arthrectomy of the knee joint, an operation which is finding more favour in strumous disease of joints as its advantages and the indications for its performance are recognised. We refer our readers to Mr. Owen's remarks on the cases. The subjoined account is taken from notes by Miss Gray, clinical clerk.

CASE 1.—G. F.—, a boy aged seven years and a half, was admitted on May 25th, 1888. Eighteen months ago he had hurt his left knee against the kerbstone, for which injury he was eventually taken into Highgate Infirmary for six or seven months, whence he was discharged six months back; since that time he had been limping about on crutches; he had lost his appetite and had grown thin. The joint was much enlarged, the tibia showing the threefold displacement. The case seemed to be hopeless for treatment on the expectant method. On June 6th, therefore, the patella was raised by a free crescentic incision which traversed its ligament, when the joint was found to be full of granulation tissue, which had sprung from the pulpy synovial membrane. All this mass was dissected or scraped away, the semilunar cartilages and crucial ligaments, which were scarcely recognisable in the mass, being also removed, and the lateral ligaments being divided so that the back of the condyles and the front of Winslow's ligament might be scraped clean. Before the leg could be properly adjusted the biceps tendon was divided, and a thin slice had to be removed from the condyles, especially the inner.

The cavity was then washed out with a warm zinc-chloride solution, and a drainage tube was passed through the posterior ligament and out by the wound made for the biceps tenotomy. A dressing of blue (mercuric) wool was applied, and the limb was fixed straight upon an outside bracketed splint, with a foot-piece. The temperature remained normal till the end of a week, when the tube was taken out. On the following day it ran up to 101° for some unexplained reason, but it at once came down again, and after this slight excitement it remained quite normal. Ever since the operation the boy has been improving in health and appearance, and he will leave shortly with a Thomas's knee-splint and a patten. His leg is straight. The crescentic wound healed by first intention, and though a small drain was left in for a week, there was actually no discharge of pus, though for some days there was serous oozing.

CASE 2.—R. R.—, aged ten, had been in the hospital for five months in 1885 for an abscess in the right knee, which had followed scarlet fever. This was freely opened, irrigated and drained, and the boy was sent out wearing a Thomas's knee-splint, the foot of the other side being raised on a patten. He wore the apparatus for a year, after which, the mother says, he was running about without any splint or restraint. For some months before his readmission in May last, his right knee had been again swelling and growing painful, and he had been failing in health; on his being readmitted into hospital the joint was large and painful, and the tibia was much displaced. In spite of five weeks' rest upon a splint the knee got steadily worse, an abscess formed in it, and the child was evidently failing in health. On June 27th, therefore, arthrectomy was performed. The interior of the joint was thoroughly scraped out, the tendon of origin of the popliteus was severed, and the neighbouring surface of the condyle was cleaned, but the leg could not be brought into position till the tendons of the biceps, semimembranosus, semi-tendinosus, and gracilis had been divided.

Their section was effected from the surface, the two openings made for this purpose being used for carrying drainage tubes through the posterior ligament and into the joint.

This boy began to improve directly after the operation; in fact, the removal of diseased tissue from his knee had a remarkably good effect on him generally. The operation was done on June 27th, and his temperature remained normal till July 9th, when it rose to 100°, and next day to 102.4°; there was then some slight suppuration from the anterior wound, and the boy did not look quite so well, but the temperature quickly came down, and all is promising.

CASE 3.—On the 2nd of last April Ruth E.—, aged nine, fell and hurt her right knee. On her admission seventeen days later, the joint was semi-flexed, swollen, and tender, the supra-patellar pouch being distended. The limb was treated by rest on a splint, and turbid synovia was withdrawn from the joint by aspiration. As there was a steady increase in the size of the knee, and the child's general health was evidently failing, it was deemed advisable to lay open the joint, search for pus, and clean out the pulpy membrane. This was done on May 30th, when, the crucial and lateral ligaments having been cut, and the lower end of the femur thrust out of the wound, an abscess was found running into the popliteal space along the synovial pouch around the popliteal tendon. This was thoroughly evacuated, and cleansed with zinc-chloride solution, and a drain was passed through the popliteal space. The child did badly after the operation, and on the supposition that this fact might be accounted for by further formation of abscess she was at the end of a fortnight again operated on, provision being made for further drainage through the back of the joint. No improvement followed, and on June 23rd, after consultation, amputation was resorted to in the lower third of the thigh. The discharge continued profuse, the temperature kept up, and union of the flaps was long delayed. Eventually, however, a marked change for the better took place, and the child is allowed out on the balcony as often as the weather permits.

Remarks by Mr. OWEN.—These three cases, which, as I write, are all in the same ward, constitute an interesting group. Two are doing perfectly well, whilst the third has gone wrong—about the only case out of a considerable number of a similar nature which has disappointed me. Though it may appear somewhat unfair to lay the blame for this failure upon the poor child, still I am inclined to do so. The operation was carried out in no hurry and with no want of care, but almost from the time of its performance she showed no sign of general improvement; indeed, she quickly began to go down hill; the tissues about the joint remained pale and sodden, with no inclination towards repair. Moreover, and this is a very interesting and suggestive feature in the case, after the eventual amputation of the thigh, instead of at once beginning to improve, the girl made no response, her temperature remained high for several days, and the indolent and pale flaps were unusually slow to unite. Experience shows that after a thorough arthrectomy, all the tubercular or diseased material having been taken away, the child usually begins to improve in health and appearance as vigorously as it would do if it had been freed of the disease by amputation. The two boys showed this improvement in the ordinary way, but in the girl it was wanting both after the arthrectomy and the amputation.

There are some cases of tubercular knee disease which are unfitted for treatment by arthrectomy, but they are proportionately few, and perhaps as experience increases the surgeon will be able promptly to recognise and eliminate them. Neither the general appearances nor the apparent condition of the joint can be regarded as an unfailing guide to treatment. I have met with cases most unpromising in both respects, which have, nevertheless, answered exceedingly well to arthrectomy. And certain am I of this, that I have seen several cases speedily yield to arthrectomy which not many years ago would have been dealt with by most surgeons by nothing short of amputation—joints which from one reason or another would have been uninviting to the most sanguine excisionist. Compared with the old, classical excision, arthrectomy has these manifest advantages—it aims at the removal of every particle of diseased tissue from the joint, whilst it interferes with the bones only to the extent of the removal of carious tissue. Thus the saw will probably not be needed during the operation, the smallest quantity of, or perhaps no osseous tissue being removed, and the risk of shortening reduced to the minimum. Per-

manent stiffness—synostosis—of the joint is, of course, inevitable after an arthrectomy for advanced disease, and it is only with advanced cases that these remarks are meant to deal. I refrain from referring here to those cases of slight articular disease in which, after a limited operation, the movements of the joint may be little, if at all, affected; my remarks concern the three cases which are lying at present in the Louise ward.

Mr. Robert Jones has in the current number of the *Liverpool Medico-Chirurgical Journal* a valuable protest against the routine excision of joints, and I suppose that he would include in it also routine arthrectomy. He has the advantage of being closely associated in work with Mr. Thomas, a surgeon who, I believe, from what I have known of his work and have seen of his practice, could show a little army of cases of knee disease, to which, as triumphs of patient, conservative surgery, the erased and resected joints of the southern metropolis could offer but a lame resistance. I also would object to routine practice of any sort; I think that I would even make a case against routine conservatism in chronic joint disease. I refer to the Liverpool patients, not with any idea of the apotheosis of Mr. Thomas, the principles of whose splendid work, however, are not yet, perhaps, sufficiently recognised, but rather by way of a caution that if arthrectomy is to become for a while the "fashionable" operation, it should not be lavishly or recklessly resorted to.

LEICESTER INFIRMARY.

A CASE OF DOUBLE EMPYEMA, TREATED BY RESECTION OF RIB ON THE RIGHT SIDE, AND DRAINAGE AND INSERTION OF TUBE IN THE LEFT SIDE WITHOUT RESECTION; RECOVERY.

(Under the care of Dr. BLUNT.)

FOR the following notes we are indebted to Mr. J. B. Okell, house surgeon, who also performed the operations.

F. G. W—, aged five years and nine months, was admitted on March 2nd, 1888, as a case of empyema. The following history was obtained from the friends: Father and mother both living, and very healthy. There are two children; the elder one has always been healthy, the younger being the patient. Had measles in January, 1887; has been more or less ailing since. Never had scarlet fever, but had been strong and healthy up to that date. The present illness began seven weeks before with cough and pain in the left side of the chest. This was soon succeeded by pain in the right side, and the patient became unable to lie on the left side. Fourteen days before admission a doctor inserted a hypodermic needle into the right chest, and drew off a few minims of pus.

State on admission.—There is great dyspnoea, and the patient complains of great pain in the right side, and lies only on this side. Chest: There is much bulging of the right side; both sides move badly, but on the right especially there is very little movement. Right lung: In front and behind there is dullness over the whole lung; breath sounds are absent, and the voice sounds very feebly. Left lung: In front there is slight dullness at the base; over the upper part the breath sounds are harsh and blowing, and the voice sounds somewhat agophonic. Behind there is dullness at the base as high as the angle of the scapula; over this area the breath and voice sounds are very feeble; over the upper part the breath sounds are harsh and accompanied by a few rhonchi. Urine alkaline; no albumen. Temperature 98° 6'.

March 3rd.—Pus having been found in the right side by means of a hypodermic needle, chloroform was carefully administered, and, under the carbolic spray, an incision about two inches in length was made obliquely on the right side in the posterior axillary line, and about one inch of the eighth rib resected, care being taken to leave the periosteum. On opening the pleura, thirty ounces of pus were evacuated and a drainage tube half an inch in diameter was inserted, and the wound dressed with pads of wood-wool; the chloroform, which was given in very small quantities, was with difficulty inhaled. At 7.30 P.M., as the dressing was saturated through, a fresh pad was applied. Temperature 98° 3'. Patient much easier.

4th.—Wound dressed. Slept all through the night on the right side. Breathing much better. Temperature 97° 6'.

On the 5th, 6th, and 7th the dressings were changed. The temperature had varied between 96° 2' and 98° 2'.

8th.—As air was entering into the right lung freely, it

was determined to explore the left side, so the hypodermic needle was put into this side, and with difficulty a few minims of very thick pus withdrawn; then an aspirator was inserted, but only a few drachms of pus could be got out, as the flakes of lymph blocked it up. So under chloroform, the child inhaling much more freely, and with the carbolic spray, an incision was made about two inches in length, an inch below the angle of the scapula. This time no rib was resected. On opening the pleura, eight or ten ounces of very thick pus were evacuated. A tube, one-third of an inch in diameter, was then inserted, and both sides dressed with the wood-wool pads.

9th.—Breathing very much easier. Child slept on his left side chiefly during the night. The left side only was dressed. Temperature 98°. Is taking his food well.

10th.—Both sides dressed; left side discharging freely. Temperature 98°.

18th.—Temperature 101° 4'. Both sides dressed. Nothing detected in the chest to account for the rise of temperature. After the administration of a purge the temperature fell.

20th.—Temperature 100° 4'. Both sides dressed, and the cavities washed out with warm boracic lotion.

26th.—The temperature has been subnormal since the previous date. The child was weighed, and scaled 2st. 5½lb. Lungs examined and found to be expanding, air entering freely.

28th.—Sat up to-day for tea in bed.

April 3rd.—Tube in the left side shortened; very little discharge from this side. Weight of child 2st. 6½lb.

8th.—Tube taken out of the left side, as there had been no discharge for several days.

10th.—Has been sleeping chiefly on the right side. Weighs 2st. 8lb.

11th.—Got up to-day for the first time.

14th.—Last night the temperature ran up to 102° 4', and gradually reached 104° on the evening of the 16th, when, on examining the lungs, the breathing at the right apex was harsh and somewhat tubular, suggestive of pneumonia.

17th.—Has been very sick after everything, but says he feels much better. Temperature 100° 3'.

18th.—Temperature 98° 6'. Seems very much better and brighter. Sickness stopped. The left side has healed up soundly.

19th.—Shorter tube put into the right side; very little discharge. Temperature subnormal, which continued so throughout from this date.

23rd.—Weighs 2st. 7lb. Has begun again to take his food well.

25th.—Got up and laid on the sofa.

27th.—Tube in the right side taken out, there having been no discharge for several days.

30th.—Wound on the right side nearly healed. Weighs 2st. 9lb. From this time he continued to improve with rapid strides, especially so when the weather permitted his getting out into the grounds. As his friends were emigrating to America, he was kept in the hospital until a few days before embarking.

May 12th.—Both lungs were finally examined, and nothing abnormal detected; there was the very slightest falling in of the right side. The patient runs about all day without any sense of fatigue. Weighs 3st.

On May 14th the patient was discharged, and a letter received from his father on July 3rd stated that the little fellow stood the sea voyage uncommonly well, and that he is in better health now than he has ever been before.

STATION HOSPITAL, PORTSMOUTH.

A CASE OF APEX PNEUMONIA; RECOVERY; REMARKS. (Under the care of Mr. G. T. TREWMAN, Surg. M.S.)

PRIVATE R. B—, South Lancashire Regiment, aged nineteen (service three months), was admitted on May 22nd, 1888. He stated that he had been ill for five days, suffering from cough and shortness of breath.

On admission the following was his condition: Face very much flushed, but not markedly cyanosed; respiration 30 to the minute; dyspnoea not a marked symptom; temperature in the axilla 103° F. Expectoration blood-stained and very offensive. On examining the chest, it was found to be fairly well formed, vocal fremitus much increased at the right apex and down as far as the nipple on that side in front, slightly increased in the corresponding part of the lung behind. Very marked dullness of the upper part of

the lung in front, but very slight behind. On auscultation, there was tubular breathing and pectoriloquy, both vocal and whispering, in the upper part of the right lung in front. There were a few rhonchi to be heard, but no other abnormal sounds, except a little puerile breathing on the left side, in any other part but the upper lobe of the right lung, and the signs were most marked at and near the apex down to about three fingers' breadth below the clavicle. He was ordered twenty grains of salicylate of soda in water three times a day, and an inhalation of carbolic acid. In the evening the temperature was 103.4°. Diet: milk, four ounces of brandy, eggs, and beef-tea.

May 23rd.—Temperature 103°. Expectoration more profuse, but not quite so offensive.

24th.—Temperature in the morning 103°; evening 102°. Tongue inclined to be dry and glazed.

26th.—Is delirious at night, and attempts to get out of bed.

28th.—Temperature fell last night to 98.6°, but rose this morning to 103°.

30th.—Temperature normal, and expectoration much less offensive. From this date he rapidly improved, and on June 10th the lung sounds were normal and he was convalescent.

Remarks by Mr. TREWMAN.—I venture to think this case may be of interest, as, although I have seen a large number of cases of pneumonia, I can only find a record of one case in my note-book in which the apex was affected primarily. Dr. T. Henry Green, in Quain's Dictionary of Medicine, says that the upper lobe is only affected in about 25 per cent. of cases of this disease. From my experience, I should have said that the percentage was much lower than this. The temperature followed an unusual course in this case, being on several days much higher in the morning than the evening.

Medical Societies.

CAMBRIDGE MEDICAL SOCIETY.

At a meeting of this Society on May 4th, Mr. Stear, President, in the chair, the following communications were made.

On some Lessons supplied by a Fatal Case of Puerperal Mania within ten days of inducing Premature Labour.—Dr. INGLE related this case. A woman aged twenty-six had a difficult confinement from protracted pelvis. More than a year ago he attended her in a protracted labour; forceps were tried by himself and Mr. Wherry without avail, and finally craniotomy had to be performed. On becoming again pregnant she consulted Dr. Gervis, who recommended the induction of premature labour at the seventh month, the conjugate being under three inches and a quarter. On Nov. 20th, 1887, being the seventh month, the catheter was introduced into the uterus on the Friday morning, and labour commenced on the following Tuesday. The first stage was very protracted, the presentation doubtful. With the assistance of Mr. Wherry, a stillborn child was delivered with the forceps. On the third morning there were rigors, with high temperature and frequent pulse and some delirium. On Friday evening she seemed better, but on Saturday morning she became violent and maniacal, continuing all Sunday in this condition, to such a degree that chloroform had to be administered for four hours. On Monday afternoon she was removed to an asylum and died the same night. Dr. Ingle said that the surroundings in this case were very unfavourable. The room in which the patient was confined was extremely small, and the nurse not competent. The patient's strength was much worn out by the protracted first stage.—A discussion followed, in which Messrs. Lucas, Cribb, Street, and others took part. The probability of the existence of puerperal peritonitis or some septicæmic infection causing the violent delirium was suggested.

Case of Multiple Sarcoma.—Mr. CARVER related the case of a man aged sixty-eight, who consulted him in August, 1887, for a painful tumour on the front of the right leg, midway between the knee and ankle. There was not any hereditary tendency, and no history of syphilis. While still a youth he suffered from a "white swelling" of the left knee, for which the leg was amputated at the age of twenty. Since

this time his occupation enabled him to pass a good deal of his time in the open air, and he enjoyed fairly good health up to within twelve months of his death. Three years before his decease he exchanged an active out-door life for one which confined him a good deal to the house. In the spring of 1887 his health began to fail and he grew thinner, and in April of that year he first complained of a painful lump in the skin of his right leg, over the outer edge of the tibialis anticus muscle, and about half way between the knee and the ankle. He was first seen professionally in the August following, and on the above-mentioned spot a fungating tumour the size of a Tangerine orange was met with, the whole surface discharging fetid pus. There was no infiltration of the tissues around. In the right groin there was an enlarged lymphatic gland of the size of a pigeon's egg, movable on the tissues beneath; the superincumbent skin was neither adherent nor in any way altered in appearance; no other glandular enlargement was observed. The weak state of his health did not allow of any treatment beyond the application of something to counteract the fetor. For this purpose a deodorising wash and an ointment of iodoform and eucalyptus oil were prescribed, and for his general health a tonic containing dilute hydrochloric acid with tincture of nux vomica. By the end of August he had improved. He was not seen again until the end of September; the tumour was then somewhat larger, and at times very painful, especially at night, depriving him of sleep. A few small subcutaneous tumours above the knee, a large one below the umbilicus, and another near the left nipple were now discovered; these were all very hard to the touch, freely movable on the deeper structures, and the skin over them was unaltered in appearance and not adherent. These were very painful at times. The tumour of the leg became so exceedingly painful, especially at night, that it was determined to remove it by an elastic ligature, as being a less severe operation than excision. The tumour sloughed off in due course, the resulting ulcer granulated and cicatrised as rapidly as an ordinary ulcer of the same size would have done, and no induration was noticed in the cicatrix. He suffered no pain in the leg after the tumour was strangulated. Very shortly after the healing of the ulcer many more tumours were observed beneath the skin of the abdomen, chest, forehead, and scalp, presenting the same characters as those previously noticed. The skin over the latter had now become adherent, depressed, and presented a purplish mottling, giving the surface a melanotic appearance; and shortly before death the skin over one of the tumours broke down, leaving a foul, sloughy surface. The patient gradually got thinner and weaker, and sank ten months after he first complained of the "lump" in his leg. During his illness he suffered occasionally from indigestion and vomiting, which were relieved by bismuth and pepsine. There was never any great difficulty with his bowels; now and then it was found necessary to give an aperient. There was at no time any urinary trouble. Throughout his illness there was no evidence of any internal organ being affected. The tumours were all subcutaneous, they assumed the same rounded form, and none were larger than a medium-sized horse-chestnut. There seemed to be three stages during their course: in the first the tumours were movable on the subjacent structures, and the superincumbent skin was non-adherent and unaltered in appearance; in the second stage the skin became adherent, diffused with purple mottling; in the third there was necrosis of the skin with a sloughy condition of the tumour. Each of these stages occupied different periods of time: the first may be represented by months, the second by weeks, and the third by days. A post-mortem examination made by Mr. Griffiths revealed widely distributed sarcomatous deposits in the thorax and abdomen.

FIRST AID.—At a meeting of the Liverpool Centre of the St. John Ambulance Association, held in that city on the 5th inst., certificates were presented to the successful candidates of the Exchange Ambulance class by Dr. Hamilton, F.R.C.S., in the presence of many members of the profession. In the course of the proceedings allusion was made to the great loss the class had sustained by the death of Dr. Rich, who had devoted much of his time to this work. On the same day similar certificates were distributed to thirty-seven out of forty members of the Widnes Police Force by Mr. F. H. Gossage. The members of the force availed themselves of the occasion to present Dr. MacLennan with a set of gold studs for his lectures and instruction on "first aid."

Reviews and Notices of Books.

In Memoriam. Physiological and Pathological Researches. Being a reprint of the principal scientific writings of the late T. R. LEWIS, M.B. Arranged and edited by Sir WILLIAM AITKEN, M.D., F.R.S.; G. E. DOBSON, M.B., F.R.S.; and A. E. BROWN, B.Sc. Published by the Lewis Memorial Committee. 1888.

THIS volume owes its publication to the sympathy of the friends and admirers of one of our keenest scientific students, one who, from his discoveries and writings in pathological science, had, at the time of his lamented and early death, already attained a world-wide reputation. Much of his labour was wrought in India, and no history of cholera is complete without mention of his inquiries into the subject, whilst in that of the hæmatozoön he was a pioneer. No more fitting memorial could have been raised to him than the collection into one volume of his scattered writings, which bear on every page the impress of an acute observer, honest and outspoken in statement, calm and judicial in inference. Timothy Lewis proved how an enthusiastic pursuit of science can be carried on side by side with the duties of an army medical officer; and from the time when, in 1869, he was deputed, with his fellow-student, Dr. D. D. Cunningham, at the close of their probation at Netley, to study the subject of the fungoid origin of cholera—until his death in 1886—he was occupied zealously and indefatigably in such pursuits. His reports were always looked forward to with interest and perused with eagerness, for in the young army surgeon were combined qualities which gained the attention of the pathological world for all he wrote. Although he excelled in microscopical investigation, his writings are by no means confined to such subjects as are dealt with by this method of research. Some of the papers on Cholera, those on Leprosy, and a memorandum on the Diets of Labouring Prisoners in Indian Gaols, serve to show that his was no narrow or one-sided intellect, but capable of being applied to the solution of profound etiological and physiological problems, and to the impartial discussion of statistical facts.

Naturally, however, we turn to the pages of his monographs upon the Microscopic Organisms in the Blood of Man and Animals and their relations to Disease (1878), which was preceded by that even better known (it might almost without undue exaggeration be termed "epoch-making") essay upon a Hæmatozoön in Human Blood, its relation to Chyluria and other Diseases; for here Lewis opened up a quite new field of inquiry, and collated in a masterly way his own observations with all that was then known concerning the parasitic organisms—vegetable and animal—of the blood. The discovery of the "*filaria sanguinis hominis*," which we owe to him, is thus stated in the last-mentioned paper:—

"Towards the beginning of July, 1872, whilst examining the blood of a native suffering from diarrhoea, a patient at the Medical College Hospital under Dr. Chuckerbutty's care, I observed nine minute hæmatoid worms in a state of great activity on a single slide. On drawing the attention of my colleague, Dr. Douglas Cunningham, to the preparation, he fully coincided in my opinion that they were precisely the same kind as observed by me more than two years previously (in March, 1870) as being constantly present in chylous urine." (P. 504.)

Thanks to the subsequent labours of Manson, Bancroft, and many others, the life history of this remarkable parasite has been fully made out, and the equally remarkable periodicity of its occurrence in the blood explained. But to Lewis must attach the credit of having initiated researches which have thrown full light on what were till then among the most obscure subjects in nosology, quite apart from the

impetus such a discovery gave to careful microscopical investigation of the blood in disease. In his earlier writings, in conjunction with Dr. D. D. Cunningham, Lewis had already established a reputation as a microscopist; for although in these modern days of bacteriological investigation we may disregard many of the results he obtained in his microscopical examinations of the dejecta and of the blood in cholera, yet his descriptions are so thorough and so faithful that they cannot but command respect.

We commend the decision to perpetuate the name of so earnest a seeker after truth in the only manner that could satisfactorily call to mind his character and his work; and to describe these no words are more fitting than those which occur at the close of the "biographical sketch" that introduces this collection of his memoirs:—

"His sound common sense, his habit of going to the very root of every question, his accurate and clear judgment, eminently fitted him for the investigation and exposition, so far as he could find the light, of the intricate and mysterious diseases it was his lot in life to study. He devoted himself to his work with untiring and resistless energy, never resting, never satisfied, and, like a true student in the fields of science, always making one revelation the point, from which to search for greater light, from which to start upon more extended inquiries."

OUR LIBRARY TABLE.

Manual of Materia Medica and Therapeutics. By WILLIAM CRAIG, M.D., C.M. Ed. Fifth Edition. Edinburgh: E. and S. Livingstone. 1887.—This, being a fifth edition, calls for very little remark. The amount of condensation of material is truly surprising; useful facts are stated so briefly that, *a priori*, it would give the impression of a peculiarly dry and uninteresting introduction to a very difficult subject. The author's hope that the book would be of service to students preparing for their professional examinations can surely only be realised when a concise epitome is required in the few weeks immediately preceding examination, and when the student is already familiar with the subject. The space devoted to a consideration of the remedial employment of drugs is so very meagre that it may be questioned whether "many practitioners who may not have time to consult the larger works on therapeutics" would derive much benefit from a casual reference to this book. Still the fact remains that it is a fifth edition, and beyond all doubt concise handbooks are useful, provided that they are judiciously employed to focus the materials which have been more agreeably accumulated in the lecture-room, or from perusal of works in which limitations of space have been less irksomely enforced. For future editions it may be worth pointing out that the description of the mode of preparation of the solution of dialysed iron is incomplete. The result of mixing together a "strong solution of perchloride of iron with solution of ammonia," is to cause a precipitate of ferric hydrate. The separation and solution of this precipitate are entirely overlooked. The definition of chrysarobin is given in the original words of the British Pharmacopœia before it was subjected to criticism, the correction—"as purified by solvents" is omitted. The misprint on p. 190, "conarium commune," should also be corrected in the next edition. All that is possible has been done to render the book attractive by judicious spacing and alterations of the size of the type employed.

The Creator, and what we may know of the Method of Creation. The Fernley Lecture of 1887. By W. H. DALLINGER, LL.D., F.R.S. Pp. 83. London: T. Woolmer.—Dr. Dallinger is well known as a most industrious and careful microscopist, an observer who has spent many hours continuously in the examination of the lower and minute

forms of animal and vegetable life. In this pamphlet he expresses himself in the strongest language at his command on the distinction, the essential difference, between living and not-living matter; and this difference he conceives must have been the work of a Creator's mind. In advance of this he appears to adopt the views of Darwin and of the gradual evolution of the higher forms from the lower. He fortifies his own opinions by those of Huxley and Tyndall.

The Story of Creation: a Plain Account of Evolution. By EDWARD CLODD. Pp. 242. London: Longmans, Green, and Co. 1888.—In this work the evolutionary doctrine of Darwin and others is treated in a simple manner, and it may be read with advantage with the foregoing lecture of Mr. Dallinger, giving as it does a more materialistic view of the creation than is contained in that lecture, as may be concluded from the remark in the first chapter, that "thought and emotion have their antecedents in molecular changes in the matter of the brain, and are as completely within the range of causation and as capable of mechanical explanation as material phenomena," though he certainly qualifies this by adding that "of them no material qualities as to weight and occupancy of space can be predicated"; and in a subsequent chapter he observes: "The gulf between consciousness and the movements of the molecules of nerve matter, measurable as these are, is impassable; we can follow the steps of the mechanical processes of nerve changes till we reach the threshold which limits the known, and beyond that barrier we cannot go. We can neither affirm nor deny; we can only confess ignorance." Mr. Clodd starts with the assumption that the universe is made up of matter and power, and proceeds to discuss the nature of atoms and of molecules and their relations to power. From this he passes to the consideration of the sun and planets, then to the past life history of the earth, and then to the present life forms, which he swiftly traces up from the lowest to the most complex. There are good chapters on the derivation of species and on the evolution of morals.

A Manual of Practical Pharmacy and Pharmaceutical Methods. By G. HERBERT RUTTER, F.C.S. London: Adlard and Son. 1888.—This book consists of notes of the Course of Practical Pharmacy given at St. Bartholomew's Hospital, and it is intended for the use of candidates for the Oxford M.B. Examination. Its directions are clear, and the arrangement is satisfactory, leading up to the more complex pharmaceutical methods by easy stages. The explanatory notes and equations are helpful, but the utility of the book would be increased by the addition of an index or a table of contents. It is interleaved to allow room for additional notes.

Medical Publications, Harvard Medical School, 1887.—This little volume contains several distinct essays, which have been bound together "to show the character of the original work done by the instructors of the school, and under their personal supervision, during the year." The papers discuss various topics, anatomical, physiological, pathological, and clinical. One of the most interesting is by Dr. Collins Warren on the Process of Repair after Resection of the Intestine, the outcome of which is to show how speedily and soundly wounds of the intestine heal if placed under favourable circumstances. All the papers are good, and they show that the Harvard Medical School has many able original investigators on its staff who are well fitted to sustain the high reputation this school has won in the past.

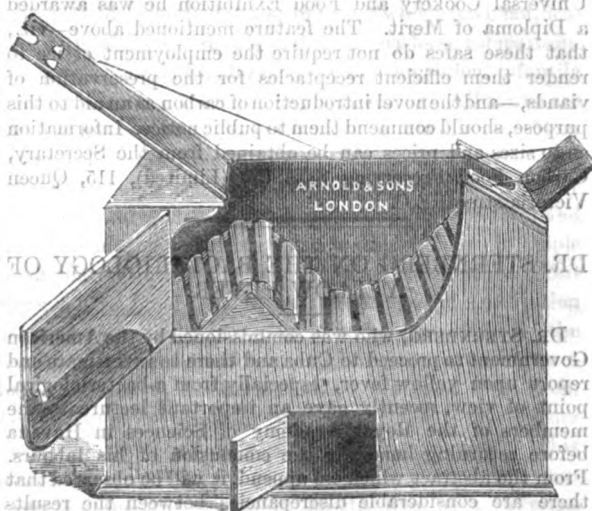
Income Tax, and how to get it refunded. By ALFRED CHAPMAN.—Under this title Mr. Chapman has produced an exceedingly useful little book, dealing with a comparatively obscure subject in a simple, clear, and highly practical

way. It is probably true, and certainly strange, that the great majority of income-tax payers do not even know the extent of the abatements which they are entitled to claim; and that, of the minority who know or suppose their payments to be in excess of their liability, comparatively few are sufficiently acquainted with the machinery of appeal to turn it to account. All this is very perspicuously stated in Mr. Chapman's little work, which can be warmly recommended to the perusal of those whom it concerns.

New Inventions.

THE DIVAN CABINET TURKISH AND VAPOUR BATH.

THE cabinet is 4 ft. 6 in. long, 3 ft. 7 in. high, and 2 ft. 2 in. broad, furnished with doors at the top and side for easy access, and is so arranged that the bather reclines on a Z-shaped couch made of half-rounded 2 in. by 1 in. laths 1 in. apart. The upper right-hand corner is cut off so that the top at that part slants down at an angle of about 45°, through which a hole is cut for the neck, the head being supported by a hinged lid, which can be adjusted at any angle to suit the comfort of the bather; and this lid serves as a cover for the neck-hole when not in use. A small door is placed at the floor level in front, by which the heating apparatus or vaporiser can be applied or adjusted. The top door is furnished with two small hinged openings through which the hands and arms can be put, and a thermometer inserted, by which the bather can note the temperature without opening the door. The cabinet is



open at the bottom, and raised by castors 2 in. from the floor, to admit a plentiful supply of fresh air. The heat can be generated either by gas, methylated spirit, or paraffin. In the former case the pipe supplying it is furnished with a tap within reach of the bather, while a sheet of metal is placed over the heating apparatus to prevent scorching. By inserting a tray or false bottom the couch can be adjusted for the use of a person under the average height, who might otherwise find it too large. By the use of this bath conditions nearly approaching those of the ordinary Turkish bath are obtained. Uniformity of temperature and vapour is secured by the shape of the bath and the position of the body and limbs of the bather. The heater or vaporiser can be adjusted without loss of heat or vapour, and without exposure of the person. The absence of the bottom prevents the offensive accumulation of dust and perspiration. Though larger than other cabinet baths:

it is light and portable, and the top being level, it can be used as a side table or stand. Messrs. Arnold and Sons, West Smithfield, London, are the sole agents for the patentee.

THE BAR-LOCK TYPE WRITER.

WE have had an opportunity of examining and testing the Bar-Lock Type Writer, with the result that we consider it in some respects an improvement upon any that we have hitherto tried. The improvement is chiefly in three points: in the more perfect alignment of the writing, the lightness of the touch required in working the machine, and the writing being always visible at once. It is open to the objection, which applies to most of the type writers, that only the same space is allowed for wide and narrow letters, and the consequent apparent crowding of the letters in some words. But the greatest objection is the price. To those, however, who can afford and feel disposed to spend twenty guineas upon a machine of the kind, the Bar-Lock would be very useful, and especially in the preparation of works for the press. In many instances it would prove a blessing to editors and compositors, and might also, from this point of view, be advantageous to a somewhat numerous class of authors.

PATENT CARBON SAFE.

THIS safe has been constructed for the purpose of preserving meat and all sorts of perishable food for days in the hottest weather without the use of ice or any preparation whatever. Several letters eulogising the apparatus have been received by the inventor from those who have put the safes to a protracted and searching trial, and at the recent Universal Cookery and Food Exhibition he was awarded a Diploma of Merit. The feature mentioned above—viz., that these safes do not require the employment of ice to render them efficient receptacles for the preservation of viands,—and the novel introduction of carbon as an aid to this purpose, should commend them to public notice. Information as to sizes and prices can be obtained from the Secretary, Carbon Food Preserving Safe Co. (Limited), 115, Queen Victoria-street, E.C.

DR. STERNBERG ON THE BACTERIOLOGY OF YELLOW FEVER.

DR. STERNBERG, who was commissioned by the American Government to proceed to Cuba and there to investigate and report upon yellow fever, especially from a bacteriological point of view, recently gave an important lecture to the members of the Royal Academy of Sciences in Havana before returning home at the conclusion of his labours. From the abstract which we append, it will be observed that there are considerable discrepancies between the results arrived at by Dr. Sternberg and those obtained by the commissioner of the French Government, Dr. Gibier, which were published in our issue of last week. The whole subject appears to be fraught with considerable difficulty, and evidently requires a good deal more investigation for its proper elucidation.

In all the ten necropsies made by Dr. Sternberg he reserved for examination parts of the stomach and intestines, of the interior of the liver and kidneys, and also specimens of urine from the bladder and of blood from the heart. With these materials he reared cultures in meat-peptone jelly or agar-agar, and in some cases in solidified serum or in peptonised broth.

Blood.—In eight out of ten cases the cultures from blood taken from the heart remained sterile. In one case some colonies of a bacillus, from one and a half to three times as long as its breadth, with rounded ends, and occurring singly or in pairs, were obtained. This bacillus Dr. Sternberg denominates *bacillus a*. In its morphological aspects it appears to bear considerable resemblance to some common

bacilli of putrefaction, but it differs from these in the appearance of its colonies in jelly. The deep colonies are lobulated and have a pale-brown colour, and those which grow near the surface present a lobulated margin, which gives them the aspect of a rosette or of a flower with its petals open, like a daisy.

Urine.—Seven of the cultures were sterile; in the other three there were micro-organisms; in one the bacillus *a* was found associated with at least two other bacilli; in the second there was a bacillus which liquefied jelly and developed a green pigment, probably the bacillus of green pus; in the third there was a common bacillus, *B. termo*.

Kidney.—In six cases micro-organisms were found, in four of which the bacillus *a* was present associated with one or more different bacilli; in one case the bacillus of green pus was seen, and in one *B. termo*.

Liver.—Colonies were obtained in three cases only; in one of these cases the colonies were formed by *B. termo* and in the other two by the *a* bacillus.

Stomach and intestine.—As might have been expected, a great variety of micro-organisms were met with in these cultures, some of them common forms which may be found in the alimentary canal of healthy persons or in that of those who have died of other diseases. In addition to those, the *a* bacillus was met with in eight cases. This bacillus Dr. Sternberg has not succeeded in obtaining from the digestive tract of other bodies, but he is not able to assert at present that it only occurs in yellow fever, much further investigation being needed to determine the question of its etiological relation to that disease.

Dr. Sternberg's experiments on animals having up to the present time yielded only contradictory results, he will have to repeat them before drawing any conclusions.

In the cultures from the kidney and the urine in the first case the *a* bacillus was associated with another bacillus resembling it. After a good deal of trouble he succeeded in separating this out and studying it in pure cultures. This second or β bacillus is shorter, and possesses the property of end-staining in a more constant and marked manner, than the *a* bacillus. Dr. Sternberg does not now think *a* is like the bacillus of Babes, as he was at first disposed to believe; it is more probable that β may be so. This forms pale-brown colonies in jelly, which have no lobulated margins like those which characterise the *a* colonies. The β colonies, too, grow more slowly, and in mixed cultures in jelly in Esmarch's tubes the β colonies do not begin to appear until those of *a* have acquired a considerable size. The characters of β will have to be gone into more thoroughly at some future time. A third bacillus, which forms flat colonies of a glassy appearance with irregular borders and wrinkled in the interior, is also mentioned as requiring further study.

In the cultures of the stomach and intestine a bacillus which liquefied jelly was obtained in three cases. This appeared to be identical with Dr. Gibier's bacillus. Dr. Sternberg thinks he might probably have met with this bacillus more frequently if he had used jelly instead of agar-agar in his earlier cases. This bacillus, which he designates as γ , is large and oval, with rounded extremities, and, like many other micro-organisms, shows in highly coloured preparations the property of end-staining. This, indeed, is common enough in old cultures of bacilli. There does not appear to be any reason for looking upon this as a spirillum, as Dr. Gibier is disposed to do. In Dr. Sternberg's cultures it has not presented the character which, the French commissioner believes, points it out as the probable cause of the disease, no deposit of black pigment having been observed in any of the tubes—neither in cultures sown directly from those supplied by Dr. Gibier himself nor in those obtained by Dr. Sternberg from the intestinal contents.

In three cases portions of liver and kidney were preserved in the laboratory, wrapped in muslin or blotting-paper soaked in a 1 per cent. solution of perchloride of mercury. The examination of the interior of these fragments at the end of forty-eight hours demonstrated the existence of numerous and various micro-organisms. In one case there was found in a specimen from the kidney a large micrococcus in tetrads, associated with a streptococcus and a staphylococcus which liquefied jelly. With this exception, Dr. Sternberg has met with no micro-organisms in any of the cultures from the interior of the body. On the other hand, in cultures from the surface he always found micrococci of various kinds.

THE LANCET.

LONDON: SATURDAY, JULY 21, 1888.

THE subject of notification has had a very full and exhaustive discussion in our columns, and the various combatants may now rest from further controversy. They have been very eager on their respective sides, and their letters have made no slight demand on our space. But we do not regret this. The question is in the very front rank of sanitary subjects. If the State is to concern itself at all with the health of the public, or the curtailment of those diseases which play such havoc with life, it must insist on some sort of notification, voluntary or compulsory, by the householder or by the medical attendant, or by both. We have already remarked that the most precious opportunities of studying the rise and source of epidemics are constantly being lost for want of a system of notification. The early cases can be noted and counted; they may usually be traced back to their source. But let them multiply in a large town, or in a great community like London, and the task of tracing an epidemic to its source becomes overwhelming, and perhaps impossible. We have known an outbreak of scarlet fever with an incidence and distribution that threw the gravest suspicions on the cows giving the milk supply, but having time to grow to great proportions before the sanitary authorities thought of examining the cows—time enough to allow the dairy authorities, in fact, to change them. We have known a great epidemic of small-pox in the metropolis begin in the most traceable and deliberate way, and yet be untraced, partly for want of early notification, and partly for want of that sense of responsibility which is aroused, or should be aroused, in officials by early intimation of the fresh occurrence of a case of preventable or communicable disease. It would be as reasonable to expect the fires of London to be kept under without a system of prompt summons as to expect to make much progress in public health without full information of infectious cases. Notification is, indeed, only a means to an end. It is nothing by itself, but nothing effective can be done without it. It is gratifying to note that all our correspondents are practically agreed in favour of notification. The only question is, How is it to be done? This is a somewhat burning question, but it need not excite any personalities.

Dr. TOMKINS of Leicester and Dr. MUMBY of Portsmouth, who have both written with equal force and moderation on this subject, have pointed out the simple means of preventing all friction between medical officers of health and general practitioners in regard to notification and all the operations of the sanitary authority—viz., making it a rule that a medical officer of health shall not be in general practice. His area of duty should be large, for the double reason that the larger it is, within certain limits, the more perfect will be his purview of the situation and the more independent and important will be his position. It is a lamentable thing that a medical officer of health should have but a mere pittance for his onerous services, and that in

discharging the most elementary duties of his office he often incurs the displeasure of those who constitute what is called his "authority," and who, in their little parochial way, can make things very unpleasant. It is devoutly to be hoped that Mr. RITCHIE, in his present great measure, will be careful not to lessen the importance of the Local Government Board as regards its function as a Court of Appeal to medical officers of health from the judgment of the local authority. There is another reason for medical officers of health being independent of private practice. They can, by this arrangement, co-operate much more easily with their medical brethren without fear of jealousy or competition. The notification of disease will constantly throw medical men into positions of great difficulty and responsibility, in which they will be even glad of the advice and assistance of their brethren the medical officers of health. But this can scarcely be the case when the medical officer of health is himself a rival practitioner, and we earnestly urge on all those interested in sanitary legislation the wisdom of making medical officers of health independent of medical practice.

We have left out of sight, so far, the most burning question of all—the mode of notification. Until the system of notification becomes much more extensive and complete than it is, and has had a much longer trial, mere statistics cannot help us much in this question. Dr. MUMBY and others have pointed out that only a few zymotic diseases are included in the schedules of notifiable diseases. So that in comparing the mortality of zymotic diseases in towns which have notification with others we are only making a very loose comparison. The great zymotic which kills more than any other, infantile diarrhoea, is not included in any notification. All towns are alike in not requiring the notification of this disease. Most towns still do not trouble to take cognisance of measles and whooping-cough, though whooping-cough has been lately the most fatal epidemic, and measles can be both fatal and inconvenient. As far as statistics do go, there is ample proof that notification is better than no notification. But there is little proof that all the advantages of notification cannot be secured by requiring it to be done solely by the householder, the medical man supplying the certificate as a basis of action to the householder. We must differ from Dr. MUMBY in thinking that the general practitioner has more time to notify than the householder. This is a most questionable proposition, and one that suggests that medical officers of health live in a different atmosphere from that of their brethren in practice. We are not quite convinced of the force of the objection that the dual system will hinder medical men being sent for. It can surely matter little, for this objection, whether the medical man is to certify or to notify. In either case the medical man is associated with the law which involves the authority knowing of the existence of infectious disease, and if the householder objects to call in the medical man because he will notify, he will equally object to call him in because he will certify, and leave him (the householder) without excuse for the neglect of notification. But we advocate the single system because it puts the saddle on the right horse, and does not put an onerous and unnecessary duty on medical men. Moreover, as Mr. BIDDLE says, it leaves the householder free to call in another medical man and to take

another opinion on the nature of a disease—a question often surrounded by difficulty. No doubt for some time to come notification in any form will lead to evasion, but a sounder public opinion and effective sanitary helps will gradually overcome this evil, and lead men to see that communicable disease is a public affair, before which considerations of personal freedom must succumb. Finally, it is high time that this question was dealt with by the State, and taken out of the hands of vestries, gas companies, and even town councils. Even county councils are too small to deal absolutely with such a question, over which the central government must retain supreme control.

THE selection of Dr. MACALISTER to be the first lecturer under the new and extended conditions of the Croonian Trust has been more than justified by the interesting and important course of lectures which he has delivered. It may be remembered that last year Dr. MACALISTER, in his Gulstonian lectures, confined himself to an exposition of a theory of fever which in some degree was a new departure. By a rigid application of physiological facts and reasonings he enunciated a theory of which it is not too much to say that it affords a far more comprehensive and satisfactory explanation of the pyrexial process than any theory hitherto advanced. He demonstrated conclusively that in fever we have to deal with the three great factors which are concerned in the production and regulated maintenance of the normal temperature of the body, to which he applied the appropriate terms thermogenesis, thermolysis, and thermotaxis. Fever was, he showed, not a mere disturbance of one or other of these factors, but a concurrent derangement of each part of the mechanism subserving each of these several functions, or, as he has recently put it, “a dissolution beginning with thermotaxis and extending to the inhibitory mechanism of thermogenesis,” whilst “hyperpyrexia was a still deeper dissolution, and extended to thermolysis.” Having thus fully enunciated a satisfactory theory of fever, he has availed himself of the opportunity of these Croonian lectures to extend the subject still further, and to show the practical bearings of such doctrine upon the rational treatment of the condition. He truly says that from the study of a successful line of treatment we may learn much of the nature of fever, whilst, conversely, a right understanding of fever may lead to its appropriate treatment. It would be interesting, historically at least, to trace in the rise and progress of doctrines concerning fever the close interrelation that has existed in the minds of physicians between their theories and their practice. The time is not yet ripe for such a survey, for there is still much difference of opinion regarding the significance of fever and its effect upon the body. The subject is, however, attracting more attention than ever in many quarters, and such contributions as those made by Professor WELCH in his recent Cartwright lectures, and those of Dr. MACALISTER, promise to base it upon sound principles, and to lead to a more general unanimity concerning it than has hitherto obtained. One remarkable point of divergence of opinion among pathologists was dwelt on by Dr. MACALISTER. It is the teleological aspect of the question. Some—as COHNHEIM—have suggested that fever is not wholly or in

itself injurious, but that it may act by destroying the virus, or at any rate by hampering the conditions essential to the development and spread of the specific microphyte, so as to be in itself an expression of the *vis medicatrix nature*. Such a standpoint would justify the most rigid adoption of the euphemistically styled “expectant” treatment. On the other hand, there are those who regard the symptom of fever as the root and essence of all the concomitant symptoms in pyrexial diseases, and who consider that if the pyrexia were actively and energetically combated, these ill effects would be prevented from arising. But, as in all instances of extreme views, the truth lies between, and the safest course for the clinical physician, as well as for his patient, is that *via media*, in practice as in theory, which an impartial and judicious study of the question cannot fail to suggest. The grounds for rejecting each of these extremist doctrines were well stated by Dr. MACALISTER in his second and third lectures. They amount to the demonstration of the fact that intensity of fever is not invariably a sign of intensity of infection, and that the subjection of pyrexia does not necessarily curtail the natural self-limited course of a specific disease.

Turning from these speculative regions, the lecturer brought his audience down to the more stable ground of fact and practice by his discussion of the mode of action and utility of antipyretic treatment. Naturally that method of treatment would be the most rational which would strike at the cause of the pyrexial disturbance, either by destroying the specific germ directly or through the heightening of the natural powers of resistance, or by completely neutralising or annulling the toxic agencies which are produced by it. Of such “specific” means, we may possess in quinine, and less certainly in the salicyl compounds, drugs that cure malarial and rheumatic fevers by virtue of direct action upon the morbid virus. Apart from these remedies we are at present absolutely without a means of allaying fever by removing its cause. We have to deal with it symptomatically, and by so doing enable the organism to withstand the operation of the specific poison, or, what is more obvious, to at least provide against the ill effects which must be wrought by a long-continued derangement of the nutritional processes such as the febrile state determines. Even here our means at present are much restricted. We do not, says Dr. MACALISTER, possess any febrifuge in the real sense—that is, a drug which would “allay fever by restoring to healthy action the disordered thermotaxic mechanism, thrown out of gear by the action of the morbid poison.” What we do possess, however, are remedies and measures which, either by checking thermogenesis or by increasing thermolysis, can, as it were, restore the balance which has been deranged by the loss of thermotaxic control. In illustration of this he discussed in detail all that has become known by observation and experiment of the *modus operandi* of antipyrin, which may be taken as the type of the lengthening series of antipyretic drugs which of late years have become so widely prescribed. He showed that antipyrin increases the property of radiation from the skin; that it diminishes the difference between peripheral and central temperature; that it lowers temperature as a whole, diminishing thermo-

genesis; that it diminishes metabolism, and sometimes increases perspiration; and that it generally slows the heart, and raises slightly the tension in the radial artery. By an interesting comparison with the striking action of antipyrin in allaying pain, Dr. MACALISTER obtained perhaps one of the most convincing arguments in support of his doctrine of the nerve-mechanism of fever; for from these nerve properties it seems highly probable that antipyrin can stimulate the inhibitory centres of neuromuscular functions, which would precisely explain its action as an antipyretic. Still, it will remain merely a symptomatic remedy, not influencing the course of the specific fever, only interrupting its outward and visible manifestation, by producing whenever it is administered a crisis comparable to that which nature in many pyrexia determines. Lastly, he compared these effects with those producible by cold bathing, the efficacy of which was, he maintained, fully proved. One main difference lies in the indisputable fact that cold increases, whereas the antipyretic drug diminishes, nitrogenous elimination, the latter probably actually restricting metabolism. That cold does not act as a mere refrigerant, but, like the drug, through its influence upon the nervous-mechanism, will be generally accepted; and so will the cautions which were urged regarding the application in individual cases of this, to our thinking, most valuable and rational antipyretic measure.

IN the course of the numerous reports we have recently published on sweating in the provinces, various suggestions were made which, if adopted, would, in any case, mitigate the evils denounced. Some of these measures are simple, others more complex, but all are scattered over a wide area. It is therefore necessary, for practical purposes, to group together these different and disjointed proposals, add new suggestions, and, in fact, bring forward a programme of constructive policy on which it will be possible to base future political and social action. First and foremost, as we have so often urged before, we demand the abrogation of the 89th clause of the Factory Act, and consequently the extension of the Factory Act to all private rooms and dwellings where work is done. In other words, all work undertaken for the public must be under public control and supervision, whether it be done in a private bedroom or in a splendid model factory. To facilitate the task of the inspectors who under Factory and Sanitary Acts are appointed to protect public interests and public health, there should be a compulsory registration of all places, whether workshops, factories, or private rooms, where anything sold to the public is made. Employers who allow their workpeople to take part or all the work to their own homes should be compelled to keep an open registry with the addresses of such workpeople, so that the inspectors may have no difficulty in finding out the abode of home workers. All this will naturally greatly augment the duties of the inspectors, and their number, even now insufficient, will have to be largely increased.

Of course, on the character, energy, and ability of the future inspectors will depend to a great extent the success of such reform. During the course of the inquiries we have undertaken, complaints were made to us that certain inspectors under the Factory Act belonged to the employer

class, had no knowledge or sympathy with the needs of the workpeople, and were easily imposed upon by unscrupulous employers seeking to avoid compliance with the law. Such complaints, whether well founded or not, would be best met by the appointment as inspectors of some from among those who had actually been the victims of the abuses it is sought to abolish. They are best acquainted with the tricks of trade by which inspectors drawn from other classes of the community have so often been deceived. The workmen, where sufficiently organised for the purpose, could themselves indicate who among their own class they could trust to watch over their interests. Already there are some working-men inspectors; but unfortunately, as their appointment depends solely on the Government, the giving away of such inspectorships may easily become a means of political bribery and corruption, and thus introduce issues foreign to the purpose in view. It would be safer if the working men themselves could make the appointments. But while working men would best be able to detect infractions of the law relating to the hours of labour, child labour &c., and tricks of trade generally, a large staff of medical inspectors is also necessary to deal with medical questions, with the prophylaxis of infectious disease, &c. Finally, there should be a third class of inspectors, who would be technically qualified to decide all points relating to ventilation, drainage, and kindred subjects. The staff of inspectors should, in a word, consist of working men, of medical men, and of sanitary engineers. Their power, further, must be greatly extended. They must have the right of inspection at all times of the night, and should be able to employ detectives. At the present moment, in the East-end of London especially, the inspectors under the Factory Act are personally too well known to be able to discover many abuses. Their presence is at once perceived and signalled throughout the district.

When the power and means of inspection are thus greatly extended, so many unsuitable workshops will be discovered and closed that, as we have already pointed out, a great demand will arise for better accommodation. The proposals we made when dealing with this subject will meet the difficulty. When private slaughter-houses are abolished the municipality provides a public slaughter-house; in the same way, and to preserve public health, public markets are built. In the tailoring trade, especially, it is almost impossible to have a properly ventilated work-room without mechanical appliances. Power applied to the sewing machines would also prevent injury resulting from excessive use of the treadle by women. We therefore proposed that the municipalities should build great blocks of model workshops, to be let out to tailors and others. The cost of one engine to provide power and mechanical ventilation, when divided among many workshops, would only slightly increase the rent of each; and the public would then have a sure guarantee that clothes were made up under the best sanitary conditions that science can provide.

The workshops thus rendered perfect, there would still remain a danger of infection. Disease might break out in the homes of the workers. When, for instance, the children are ill with scarlet fever, the infection might be carried from their bed to the model workshop by the father, the mother,

or other relatives. This danger can only be met by rigorous prosecution on the one hand and ample compensation on the other. A person who stops away from his work to avoid endangering the public health should receive from the public at least as much as he loses in wages. Unless this principle is recognised and applied, the concealment of infectious disease will continue as in the past. Incidentally our reports have shown to what a large and dangerous extent such concealment is actually practised.

All these suggestions, if strictly carried out, would greatly improve the sanitary condition of the trades involved, but this would not abolish sweating. The worst phases of the sweating system might not prosper under the broad daylight of such thorough sanitary supervision; but the system of sub-contracting, which leads to the sweating of profits out of learners, unskilled and unorganised labour, might still continue. To abolish sweating it has been proposed to impose a poll tax on foreign paupers, or even to altogether prohibit their landing; but this will not in any way put an end to the sweating system. Firstly, we make this emphatic assertion, because by far the greatest number of victims are not Jews, but Scotch, Irish, and even English workers; and secondly, because the Jew victim would not come over to England as a pauper. The master "sweater" would be at the docks to receive him, to answer that he had means of existence, and, if necessary, to pay the poll tax. But the greater the difficulties in introducing the Jew worker from abroad, the more desperate will be his state of slavery, the more exacting the treaty he will be made to sign to secure the protection of his employer. Nor should we allow the abnormal and extraordinary condition of one single district and one or two trades to be made the basis of legislation affecting the entire country. According to the statistics of the Registrar-General's office, 83 per cent. of the tailors in St. George's-in-the-East are foreigners; but in London, out of its population of over four millions, there are only 60,222 foreigners, and in all England there are not more than 118,000 foreigners, 10,523 of whom are sailors!

More effective far in abolishing the sweating system will be the action of the Government and of the municipalities. A very large proportion of the sweating tailors are engaged in making uniforms for the army, the volunteers, the police, the tramway, the railway, and other large companies. All this can at once be stopped by refusing contracts to those who sub-contract, who do not possess wholesome workshops, and who pay an inhumane rate of wages. The workmen, who in many instances are voters, can help to bring this about by introducing the question at all elections, and obtaining pledges from the candidates that they will consent to no contract that gives rise to the sweating system or countenance the grinding of the faces of the poor. Simultaneously with such public political action, the conscience of the community at large must be stirred to a sense of the social responsibility involved in every purchase made. Cheapness based on a rate of wages that drives the workers to starvation and vice is the most cruel of extravagances, and it will as surely as any other sin bring about its own retribution. From all sides we see symptoms that these truths are burning their way into the hearts and consciences of thoughtful men and women. This awakening to a

higher sense of duty will be more powerful for good than a law striking the miserable wretches who, flying from barbaric political and religious persecution, claim on our shores the protection of our civilisation. Let us rather concentrate our energy to secure the abolition of Clause 69 of the Factory Act, the inspection and registration of all places where work is done, the liberal compensation of all who abstain from work when there is danger of spreading infectious disease, and the creation of a great army of inspectors, consisting of medical men, sanitary engineers, and working men elected by their own class, with power to employ detectives. Then let the municipalities build model workshops with every sanitary and scientific appliance; and let municipal and State contracts be models in the matter of the wages paid and the conditions under which the work is done. To bring about such reform, the political power of each elector must be exercised, and candidates, irrespectively of party politics, be made to accept this or some similar programme. Finally, we repeat, it is the public conscience which, above all things, must be quickened into a higher conception of duty; and when this is done sweating will die a natural death.

THE most cynical person will hardly deny that the present age is characterised by a large development of philanthropy. The need of to-day is manifestly less to stimulate the philanthropic spirit than to give it wise direction, and thus prevent that mischief which, as the proverb reminds us, so often results from the unguided efforts of well-intentioned people. Charity is, indeed, double-edged — powerful for good, potent for mischief. Practised with discernment and an enlightened regard for its peculiar dangers, it is worthy of all praise; but when indiscriminately lavished it is a prolific source of widespread demoralisation. Our hospital charities afford a crucial case in point. It is hard to imagine the world without hospitals, or to estimate the untold relief to suffering which they are the means of effecting. Of the many glories of our modern civilisation, few are more worthy of record than the fact that in all the great centres of industry the suffering poor can command the highest medical and surgical skill without fee or reward. But our own columns and those of our medical contemporaries bear constant witness to the clear fact that our hospital charities are constantly and grievously abused. Men and women who would scorn to accept any other form of eleemosynary aid grow accustomed to the idea that medical relief may be accepted gratuitously without disgrace, and the result is grave injury, not only to the profession, but to the general public *morale*. We trust existing abuses will not be extended and magnified in connexion with a class of institution still comparatively novel, and on many grounds deserving of hearty sympathy and support. We refer to the "Houses of Rest" springing up throughout the kingdom. These institutions may usefully fill a niche hitherto unoccupied. They are intended for that large class in all our great cities who, although free from grave organic disease, are yet debilitated by overwork, prolonged confinement in vitiated air, and perhaps improper dietary, and whose means do not admit of personal effort on their own behalf. That this is a very numerous class all practitioners in large centres of population will

readily admit. They are meeting every day with cases which present a baffling problem in treatment—patients whose condition is summed up in some of those vague phrases, “want of tone,” “impaired vitality,” “general debility,” and the like. Such patients generally have a languid appetite, feeble digestive power, a lack of energy, physical or mental, and sometimes disordered sleep. When such cases occur among the wealthier classes, we recognise the inadequacy of drugs alone to meet the indications, and we advise a yachting cruise or a tour among the Alps. But if the patient is an underpaid clerk or seamstress, we refrain from advice which would be a mockery, and, should no friend’s house be available, we find ourselves not uncommonly in a very real difficulty. We know what is needed; the expense is not necessarily great, but often the requisite machinery is lacking. It is to meet this very genuine need that “Houses of Rest” and “Convalescent Homes” are being established, and we shall heartily wish them godspeed provided they are not managed so as to swell the already prodigious tide of medical mendicancy.

It is not difficult to indicate the general lines on which such institutions should be conducted so as to reap from them the maximum of advantage. The site should be chosen with care, due regard being had to accessibility, hygiene, space for recreative purposes, and agreeable surroundings. The “cottage plan” will probably be found preferable to the erection of large institutions, and the seaside will in many cases suggest itself as the most suitable locality. Pleasure grounds of some description should, when possible, be a *sine quâ non*, and facilities should be afforded for out-door sport and amusement. Medical supervision should be provided for the regulation of the dietary and for the treatment of such cases of definite disease as may be from time to time admitted. An experienced matron—preferably a hospital nurse or “sister”—should have charge of the domestic comfort of the inmates. Payment should be enforced in all cases, but no doubt some form of sliding scale adapted to the needs of different classes would be found necessary.

We think it hardly doubtful that such institutions would be as useful as they would be popular. Especially to over-worked and over-anxious women would they be an immense boon. Our large workshops and factories contain great numbers of women, still young but prematurely aged, on whom the unceasing grind of work and the interminable struggle for bread tell all too soon. They are too ill for work, not ill enough for a hospital. They need rest, fresh air, and good food rather than active medical treatment, and these they are often powerless to obtain unless help and direction be given.

Many of our hospitals possess “Convalescent Homes” at the seaside or elsewhere, and these, when once fairly tried, are soon found to be an indispensable adjunct to a complete system of treatment. But usually their accommodation is very limited, and their benefits are confined to those who have been in-patients at the parent institution. If such homes could be multiplied and extended, it would not seem unreasonable that cases might be from time to time selected from the out-patient department also. The class of patient of which we have specially referred is a frequent visitor at

this department. We must end, however, as we began, by insisting that no new development of charity shall be allowed to pauperise further classes already more than sufficiently demoralised. Self-help is at the basis of all sound character, and we must see that a physical boon is not made the occasion of inflicting a moral injury.

Annotations.

“Ne quid nimis.”

THE ROYAL COLLEGE OF SURGEONS.

AT a Council meeting, held on July 14th (the record of which appeared in our last issue), the three recently elected councillors were admitted, and the Fellows have exchanged valedictions with all three. This anomalous disunion of the Fellows from their representatives will be one of the subjects to be immediately dealt with by the Association of Fellows. The Council have authorised further demolitions of collegiate property, situate at Nos. 38 and 43, Lincoln’s-inn-fields. Their reason for so doing may or may not be a good one; but we do, and shall continue to, protest against such property rearrangements without the acquired consent of the Fellows and Members. We contend that this property is not the private holding of the Council, but that it is the legitimate public owning of the Fellows and Members; and that all such interference with real interests should be first sanctioned by the corporate body. We pass on to record that the utterly incomplete Supplementary Charter has received Her Majesty’s Royal Assent. Lord Rosebery’s humorous hit on the Prime Minister’s Life Peerage Bill applies to the Council with their fractional Charter. “It is as if,” Lord Rosebery said, “when one wanted to go to America, the noble Marquis offered you a hansom cab. It would take you to Euston Station, but there would still be very many miles to go.” A worthy scheme of collegiate reform must be based on longer and broader foundations than the present temporary plan admits of. We anticipate that enlightenment of some of the components of the Council, pressure on the part of the Associations of Fellows and Members, and discussions in the House of Commons may yet provide a passage for reform; for the more earnest and resolute men in our midst will not be content to let the question rest where it is. So unimportant has the matter of the election of the President of the College become, that really but few Fellows outside the Council knew much about it; in consequence of Sir Joseph Lister’s retirement the Council were somewhat in a difficulty. They were unable, even had they so wished, to elect the Fellow whose antiseptic system has made his name almost representative of English surgery; conflicting arguments (for and against) enshrouded some of the seniors; so the majority of the members of Council, thinking that Mr. W. S. Savory had upheld the traditions of the elders, adopted the best course open to them, and re-elected him.

BRITISH NURSES’ ASSOCIATION.

THE letter from H. R. H. Princess Christian on this subject, which appeared in a recent issue of *The Times*, has served to give a wide publicity to the newly-formed institution and its objects. The natural, and indeed assured, outcome of publicity in such a case is sympathy; for the interests which the Association is formed to advance, though nominally and in the first instance those of the nurse, are really and in the event those of the public, which employs the nurse. This is admirably put in the letter, in which the Princess

says: "The British Nurses' Association, having succeeded in the first place in constituting itself by the enrolment as members of thoroughly trained and competent nurses, and no others, is now seeking to establish, it is hoped on the secure basis of a Royal Charter, a system of registration which will enable every trained nurse to produce documentary evidence of her education and attainments, and thus to show that she is entitled to confidence in her calling. When such a system is brought into operation, people who employ unqualified nurses will have only themselves to blame for any ill consequences which may ensue." Such is the object—that is to say, the main object—of the Association in its more public aspect. But it may also be described from a strictly professional point of view; and in that case the most apt, and at the same time the most comprehensive, terms that can be used define its objects to be "to unite all British nurses for their mutual help and protection, and for the advancement in every way of their professional work." These two statements are in no way repugnant to one another; indeed, they are, strictly speaking, hardly distinct. For the interests of the nurse and of the public are for the most part identical. What the nursing community chiefly needs is an organisation enabling efficient nurses to secure recognition for their qualifications and making it impossible for unqualified persons to trade upon the ignorance of the public by unfounded pretensions. In a less, but still in an important, degree, the education of nurses needs to be organised and rendered somewhat more uniform than at present. These, if they may fitly be described as professional objects falling within the above definition, are certainly no less objects of public interest. To the patients whom they tend it is a matter of the utmost importance that nurses should receive the best possible training, and that their fitness for the duties which they undertake should be ascertained by the most careful tests. Thus, in the main at least, the objects of the British Nurses' Association are directly, and in the highest degree, objects of public importance. It is, however, natural and most legitimate that a whole brood of subsidiary objects should gather about this main project. British nurses have formed an aggregate, but never a body until now. When once they learn the secret of organisation, they will find that many advantages hitherto unattainable are brought within their reach; and if their organisation in its inception and working is entrusted to wise hands, the benefit thence accruing to themselves will be secured, not only without detriment to the general public, but even with incidental advantage to all. For instance, nothing could be more promotive of the material well-being of women following the profession of the nurse than the establishment of homes—convalescent homes and the like—where they can always command what rest and repose may be necessary for recuperation after periods of exhausting toil. This is obvious, and it is only less obvious that to those who employ the nurse it is no small advantage that her capabilities of work and of sympathy should be maintained at high-tide level by such means. To set an invalid to nurse an invalid is not sound policy, but it is what only too often happens as the result of the arduous conditions of life under which many a more or less friendless nurse has to prosecute her duties. There is, then, a vast field open to the British Nurses' Association, and the work which it proposes to undertake is such as gives it a special claim upon public sympathy and support. In pleading this cause with the generously disposed, Princess Christian asks no alms and seeks no benefit for which she does not offer an ample equivalent. We trust that the response to her appeal will be such as will enable her, and those with whom she has associated herself in this good work, to bring to a successful issue an undertaking which has been most nobly and, we may add, most auspiciously begun.

THE WATER COMPANIES' AND CONSTANT SUPPLY.

A CASE of some interest to water consumers was heard last week before Mr. Commissioner Kerr in the City of London Court. The New River Company had given notice, in compliance with a demand made some years ago by the vestry of St. Pancras, that they would give constant water service to the inhabitants of Highgate, and a number of householders were required to alter their water fittings. Later, the Company found that they were unable to give this supply above the lower parts of the houses; the householders had therefore made the required changes to no purpose. One of them consequently sued the Company for the sum of £5 10s., the expense which he had incurred. Mr. Commissioner Kerr decided against the Company, and refused to give leave for appeal. He stated that, as notice had been given to make the alterations, and the officials had looked over them, these acts constituted a contract. A curious point in the case, which did not come before the learned judge, is that the Water Company have no power to demand an alteration in fittings in connexion with a constant water service; such powers as they possess for the purpose of preventing waste of water could have been exercised at any time. The Company, however, have chosen to proceed only when constant supply was demanded, and have thus, by associating in the minds of water consumers constant service with the expense of altered fittings, contrived to make this demand very unpopular. There is a substantial justice in recognising the Company's proceedings as of the nature of a contract, and in permitting householders who have been put to expense to recover from the Company the sum which they have unnecessarily paid.

THE POSITION OF MEDICAL OFFICERS OF HEALTH.

A SPEEDY reply has been made by Dr. Hime to the statements of members of the Sanitary Committee of the Bradford Town Council. We can come to no other conclusion than that the Sanitary Committee, having determined to terminate Dr. Hime's appointment, have sought in vain for some reasonable pretext for their action. Their proceedings are not calculated to enhance the dignity of the committee. We might leave the subject with a word of regret at their behaviour, were it not that the *Bradford Observer* of July 12th contains an article on the position of the medical officer of health which deserves the widest publicity, for it puts pointedly before the public the loss which they sustain when the medical officer of health is forced into a position of subservience to a sanitary authority, and only acts in accordance with the views they themselves hold. The *Bradford Observer* bases its article on a letter written by a Bradford alderman, who objected to the criticism of outsiders and the demand for information, on the ground that employers have a perfect right to dismiss servants on the termination of a contract; a contention which, the *Observer* shows, is fallacious, for the burgesses are the real employers, the Corporation merely standing in the position of managers. It then pertinently asks—What is the use of medical officers of health? Are they corporate servants who are only to see and think what the majority of members on a sanitary committee wish, or are they experts employed just because they can see and think independently? It holds that the Legislature intended that the health officer was to be something between a Government inspector and a local official, with a share of the criticising authority of the former and the local dependence of the latter; but the position in which he is placed tempts him strongly to make things smooth in the first place, and to do his duty only in the second. The result is, in the majority of instances, that the medical

officer of health is a sort of figure-head, who does not make expensive discoveries until they have been forced on his attention by outsiders, or until he is quite sure that he will be thoroughly backed up. Our contemporary sees no effectual remedy save in turning the medical officers of health into Government inspectors. Minor local bodies, it says, where one or two men rule, will be incurable otherwise. It points out that corporations can easily obtain strict subservience, if that is their purpose, by making an example of over-zealous officials; but then hundreds per annum are wasted, and if medical officers have to be paid, the public may as well get value for their money. We note with pleasure these comments. If the services which the medical officer of health is appointed and paid to perform are prevented from being available through the action of a town council, public money is squandered. It is pure extravagance to appoint an expert to do only what an alderman thinks necessary; but the loss, we would beg to remind the Bradford burgesses, is not merely loss of money, but may be loss of life and health to themselves.

THE ROYAL COMMISSION ON HIGHER EDUCATION.

THE Registrar of the University of London, Sir Philip Magnus, Mr. Anstie, Q.C., and Dr. W. J. Collins gave evidence before the Commission on Saturday last. The representatives of the medical schools (other than University and King's Colleges) will be heard to-day (Saturday). Dr. Frederick Taylor, has been nominated to give evidence on behalf of Guy's Hospital Medical School. Before the Commission closes, some eminent legal authorities will probably be called to express their views as to the advisability of including the representative legal institutions as a Faculty of Laws in any proposed university.

THE VALUE OF VACCINATION.

ZURICH, according to a daily contemporary, is beginning to suffer from the effects of neglect of vaccination. Until 1883 a compulsory vaccination law was in force, but in that year it was repealed, the success of the anti-vaccinationists depending, we are told, upon the fact that not a single case of small-pox occurred in 1882. But in 1883, in every 1000 deaths, 2 were caused by small-pox; in 1884 there were 3 in every 1000; in 1885, 17; and in the first quarter of 1886 there were 85 deaths. While Europe is exhibiting folly by showing in some localities opposition to vaccination, Japan is deriving benefits from the recognition of its value. Nagasaki, we learn from another contemporary, possesses a governor, named Kusaka, who is bent upon ridding the town of the diseases which formerly infested it. By means of a system of compulsory vaccination, vigorously enforced by the governor, small-pox, long a familiar scourge in the old town, has been practically stamped out. In England we may expect soon to have the opportunity of considering the effects of small-pox on vaccinated and unvaccinated communities respectively, for certainly some of our towns are slowly returning to the condition of being unprotected against small-pox. The result of this change will be first shown in the difference in the ages of persons dying from small-pox: in the unvaccinated communities it is the younger members who would chiefly suffer; in the vaccinated, the older. Germany, on the other hand, is showing the effects of revaccination, and hitherto the freedom of German towns from small-pox has contrasted in a marked degree with a larger prevalence of this disease in other European towns where revaccination is not enforced. Probably the outcome of the experience of the present generation will be the enforcement of revaccination in the majority of European countries.

REPUTED CENTENARIANS.

NOTWITHSTANDING the still constant recurrence of notices of the deaths of centenarians, there can be no question that, owing in great measure to the persevering researches of Mr. Thoms and others, the number of reputed centenarians is steadily declining, and not only in England. The first English census at which the ages of the population were returned with any approach to completeness was that in 1841, when 249 persons (male and female) were returned as aged 100 years and upwards. At the four subsequent enumerations the reported number of reputed centenarians declined successively to 215, 201, and 170, and in 1881 to 141. It is scarcely necessary to point out that this steady decline of reputed centenarians has occurred concurrently with continuously increasing populations. Thus, in 1841, 13 in each million of the enumerated population were returned as centenarians, whereas in 1881 the proportion had declined to 5 in each million. It is beyond question that this marked decline of centenarianism in England is more apparent than real; but there is some reason to believe that, while the mean duration of life in England has undoubtedly increased in recent years, this extension of life has not taken place at the advanced ages, but is almost exclusively due to the survival of a larger proportion of infants to childhood and adult life. No systematic attempts have been made in England to verify the enumerated ages of reputed centenarians, but their steady decline at successive censuses may be taken as a part of abundant evidence of greater accuracy in the stated ages of the enumerated population; at the same time, we may be well assured that very few of the reduced number of 141 returned at the last census would stand the test of rigid investigation. In a recent communication to the French Academy, M. Levasseur stated that of 180 reputed centenarians enumerated in France in 1886, only 16 could be authenticated by documentary evidence; and that of 37 reputed centenarians enumerated at the Bavarian census in 1871, only one case stood the test of critical examination. Similar has been the result of the investigation of cases of reputed centenarianism in all countries. The decline in the numbers of registered deaths of reputed centenarians in England has been almost as well marked as the decline of their numbers at successive census enumerations. Twenty years ago, when attention to this subject was in great part due to the investigations of Mr. Thoms, the average number of reputed centenarians registered annually in England and Wales was about 90, while the mean number in the last three years for which we have records is 64, although the total annual number of deaths has in that period increased as well as the population. The untrustworthiness of the statement of ages, both in the census schedules and in the death register, is not, however, confined to that of reputed centenarians, thus throwing considerable difficulty in the way of a satisfactory answer to the question whether persons live to such great ages as formerly. It is certain that the evidence of the death register appears to prove that relatively fewer people live to advanced ages than formerly. For instance, in the first five complete years of civil registration (1838-42) the proportion of deaths of persons whose ages were stated to be upwards of eighty-five years, was 27 per 1000 persons of all ages; whereas, in the most recent five years for which the information has been published (1882-86), the proportion of deaths at these advanced ages to total deaths declined to 22 per 1000. This somewhat unsatisfactory method of calculation really understates the decline in the proportion of persons who, reaching middle life, survive to the advanced age of eighty-five years; for we know that a far larger proportion of children

born now reach middle life than was formerly the case. The Registrar-General's calculated death-rates at different age-periods, moreover, bring out clearly, after full allowance for the untrustworthiness of the rates at the more extreme ages, that, whereas the death-rates in infancy, childhood, and early manhood have recently showed a marked decline, the death-rates of elderly adults have not only not declined, but had until the last few years actually increased. Thus, while the larger part of the recent decline in the numbers and proportions of deaths of persons in extreme old age is probably due to a decline in the registration of fictitious ages, some portion is probably due to a real decline in the proportion of persons living to extreme old age.

POISONS AND POISONING.

IN a lecture recently delivered by Mr. C. Meymott Tidy before the Royal Institution the difficulty of arriving at an accurate definition of a poison was touched upon. The absence of a legal definition and the vague character of the popular definition were criticised by the lecturer, who proposed the following solution: "Any substance which otherwise than by the agency of heat or electricity is capable of destroying life either by chemical action on the tissues of the living body, or by physiological action after absorption into the living system." This definition would necessarily exclude the destruction of life by physical influences, by any purely mechanical act, and by the mere "blocking out" of that which is necessary to maintain life; on the other hand, it limits attention purely to the chemical and physiological actions. Mr. Tidy adduced several instances in support of this definition, which appears satisfactory, so far as it goes. Its weakest point would appear to be in the absence of any limitation differentiating the toxic, chemical, and physiological action from the remedial employment, since it is obviously mainly a question of dosage or mode of use. Very many poisons or substances capable of destroying life are to be numbered amongst our most valued therapeutic agents, the dose, the degree of dilution, and the mode of administration being almost the sole factors which form the boundary line. In short, if the doses are to be disregarded, two paradoxes might be formulated and proved by argument: the first a simple negation of the existence of poisons, relying solely upon the possibility of arriving at some small dose which shall produce desirable results; the second an assertion of the poisonous influence of almost all substances possessing any active chemical or physiological properties. Until these contradictions are met, every definition must fail to be convincing and final.

PTOMAINES OF PUTREFIED FIBRIN.

It was found from the researches of Brieger that by treating alkaline liquids containing ammoniacal combinations with chloroform carbylamines could be produced. Some doubt, therefore, exists as to whether the ptomaines extracted from putrefied liquids were really products of putrefaction. Guareschi allowed fibrin of beef to putrefy until it was formed into a red transparent liquid, holding but little matter in suspension. The whole liquid (about thirty litres) was agitated in the cold with baryta solution. The filtered liquid was dark red; one-half of this was agitated with chloroform and the other with ether, and the alkaloids were extracted from each. Guareschi concluded that definite ptomaines (not named) do pre-exist in the products of putrefaction, and did not result from artificial treatment of the fluid. He also found in the chloroform extract a body which may be identical with tyro-leucine, obtained by Schützenberger from albumen after treatment with baryta. In the *Journal de Pharmacie et de Chimie*, No. 28, Guareschi also gives a list of the various ptomaines discovered and analysed in the seven years now ended.

THE PRINCE OF WALES AND THE GREAT NORTHERN CENTRAL HOSPITAL.

THE opening of the Great Northern Central Hospital was a right Royal affair, in spite of the deluge in which the proceedings closed. The reception of the Prince and Princess through the long vista of the Upper-street and Holloway of "Merrie Islington" was most hearty and loyal, the display of bunting being very gay and the mottoes greeting their Royal Highnesses very hearty, if in some instances homely too. The speech of the Prince was in his very best form—short, sensible, sympathetic—in a word, thoroughly human. It is an open secret that his Royal Highness scarcely felt able to undertake the ordeal, which had all been arranged before the lamented death of the Emperor Frederick. But he overcame his own fears in consideration of the benevolent nature of the occasion. The touching allusions in the addresses of Mr. Murdoch and Mr. Dewey to his kindness and his great sorrow, and the responsive remarks which they called forth, were evidently just as much as his Royal Highness could get through. Never did prince speak apter words, or ones more charged with that "touch of nature" which makes kings and subjects feel how much they have in common, and how much need there is for them to pull together, and bear one another's burdens. The inspection of the wards was very complete, including a word of sympathy and a flower from the bouquets of the Princesses to each patient. Had this part of the Prince's work been done in a more perfunctory manner, it is possible that the Royal party, the company, and the gathered thousands might have got home before the rain and thunderstorm began. But what their Royal Highnesses undertake they do well, and well-nigh an hour was spent in examining the building before they returned to declare their satisfaction with it and the hospital opened. We hope on an early occasion to give our readers some account of the hospital. Meantime its promoters and its staff may fairly be congratulated on this historical consummation of their wishes. The old hospital with only one-fourth the accommodation of the present building, though this is not complete, received 326 in-patients in 1887. The parish of Islington is the largest in point of population in the United Kingdom, having increased in fifty years from 48,000 to 320,000. It would be monstrous for such a population not to have a good hospital, and discreditable were it ill supported. Let there be no abuse of its charity. Let the poor in their calamitous sicknesses find a temporary home in it, and all classes will combine to support it.

SLEEP AFTER DINNER.

THE custom of napping after dinner is so familiar to many by occasional indulgence, and appears to be so natural, that it does not readily occur to us to question what may be its influence on the simultaneous process of digestion. That it does in a varying degree modify that process for the time being is very likely. There is also reason to believe that its influence in this respect is not entirely advantageous, but rather the reverse. A certain drowsiness or languor is doubtless natural to the work of digestion, and may be taken as a fair indication of its activity. It represents the diversion of a portion of the blood from outlying tissues, including the brain, to the alimentary mucous membrane. It is therefore simply a consequence of changes which are essential to digestion. Under ordinary circumstances the soporific influence thus brought about is not a powerful one. It is easily overcome by attention to any matter of interest sufficient to occupy without exciting the mind, though it may also, under the favouring action of rest, leisure, and recumbency, as readily result in sleep. When, however, the tendency to sleep regularly follows a meal, and is well marked, we must look for its explanation in other

than strictly natural causes. Perhaps there has been some excess in the amount of the food consumed. Perhaps the fluid taken, if a stimulant, is acting as a gentle intoxicant. The prevalence of after-dinner sleep among the elderly again has probably something to do with the fact that the diversion of blood already referred to is more strongly felt when the cerebral bloodvessels have lost something of their elasticity, and with it of their nutritive value. The effect of actual sleep upon digestion cannot be immediately helpful. During sleep the activity, not only of the nervous system, but of every organ and tissue more or less, is lessened. The heart beats with a more languid stroke, the thinking brain pauses for a time in its work of observation and decision, and the stomach in like manner lingers over its allotted task. So that whatever benefit, if any, results from the redoubled energy of the latter organ after the short period of inaction, and from the chemical action of digestive juices on the food during its continuance, the period of sleep is mainly one of passive and sluggish changes. No theory is complete unless it imply some plan of application. Among the practical issues deducible from these observations we may note that persons who sleep after eating must allow for this interval of rest in fixing the hour of the next meal, and that no considerable amount of food should be taken for at least three or four hours before retiring to rest.

SMALL-POX IN MILAN.

AN extraordinary meeting of the Milanese Town Council has just been held to consider the hygienic conditions of the city. The outbreak of typhoid, which was at its worst in the suburbs, was traced, of course, to defective or impure water supply and to insufficient means of carrying off the sewage. Badly-constructed drains were noted, and the consequent infiltration of the soil with faecal matters was proved. Sinking wells seem still the chief resource for improving the water supply of Milan, though why such a populous and wealthy city, so near the Alps, should not bring its drinking water by pipes, or even an aqueduct, from an upland reservoir was not made apparent. The neglect to which a primary requisite of public health was allowed to run may be inferred from the fact that the sanitary spokesman of the Town Council actually congratulated that body on the analysis of the wells, now yielding only—we repeat “only”—422 specimens of undrinkable water, as against 1038 such specimens in 1884! And this in a population of 380,000 inhabitants! Touching the small-pox epidemic, the abuses pointed out in THE LANCET of last week were more than confirmed, especially the scandalous insufficiency of means of transporting patients to the public lazaretto, and the want of proper isolation and treatment of the cases deposited there. The facility with which relatives and friends of the patients were admitted was also shown to be effective in diffusing the disease. It seems that, not Milan only, but the native province of Lombardy is now visited by small-pox, the cases in the city alone having risen from 930 in the first half of 1887 to 1139 in the first half of the present year. The Town Council, comprising its medical as well as lay members, was unanimous in holding vaccination to be the supreme remedy against the spread of the malady, as evidenced by the fact that all the children and adults infected with small-pox had never been vaccinated, while those of the adults who had undergone that prophylactic operation had demonstrably been subjected to it so perfunctorily as not to have been really secured against attack. Remarking on the apathy of the public to avail themselves of the protection of so splendid a discovery of science (*un si splendido trovato scientifico*), the Town Council recognised the fact that only compulsory vaccination could extinguish the disease, but objected that the imposition of

such a measure would offend the citizens' sense of freedom. The vigilant prevention of treating small-pox cases in their own homes was insisted on, and numberless instances were adduced of the inconvenience—nay, the impossibility—of safeguarding domestic cases from the risks inherent in such a system of attendance and cure. Far too little was said of the new lazaretto so tardily rising to completion outside the gates, and a great deal too much of rehabilitating the Rotonda, of which the inveterate vices of situation, structure, and management have already been shown. Fumigation and disinfection, on which the Town Council seemed to rely so much, as remedying the defects of that institution, are but poor substitutes for the amplitude of space, the healthy site and surroundings, and the proper medical and sanitary organisation promised by the half-completed building. The Mayor, in summing up the results of the deliberations, while admitting the necessity of compulsory vaccination of the citizens and compulsory isolation (*sequestro coattivo*) of patients, could only promise a vigilant carrying out of the secondary precautions hitherto practised. Milan, indeed, like every centre of population in Italy, is waiting for the introduction of legislative measures for the prevention of small-pox—measures which seem to hang fire unaccountably, even to the Italian mind. Nothing but the diminution of her tourist custom, on which so much of her annual revenue depends, will, it appears, awaken Italy to the sanitary duties she owes primarily to her own children.

OPHTHALMIA IN SCHOOLS.

No class of diseases illustrates the effect of medical treatment and of sanitary measures in a more striking manner than do the various forms of ophthalmia. Some interesting details relating to the prevention of this troublesome disease are included in a report recently published by the managers of the Central London District School at Hanwell. This body of evidence has been accumulating since 1880, and contains observations on ophthalmia as witnessed among the children of more than twenty large district schools. These inquiries have resulted in a series of useful practical suggestions. Some of these relate solely to matters of general hygiene, while others refer more particularly to the management of the ocular malady. With the former, important though they doubtless are, we need not now concern ourselves; they are part and parcel of the general stock of medical knowledge, and are familiar to our readers. Among the latter two may be particularly noticed. Both have evidently been framed in recognition of the infectious nature of the disease, and are as preventive measures well worthy of general adoption. The first implies a degree of isolation, and recommends that an ophthalmic ward should not contain more than twenty beds, and that they should be under the supervision of one trained nurse. The second provides a simple and effective substitute for the scrubbing-brush in the shape of beeswax, the use of which on the floors of the wards is at once a guarantee for cleanliness and for dryness of atmosphere, which is in some ways more suitable than a moist air for cases of the kind in question. Both of these suggestions are of considerable practical value in view of the markedly contagious nature of some kinds of ophthalmia. Their efficiency is said to have been attested by a distinct reduction of the number of cases of this disease in Hanwell school, and we await with interest the report of the results attained by the same means in other similar establishments. The question of the degree of contagion resident in different cases of ophthalmia is by no means a simple one. It is almost certain, however, that the whole history of septic influences in their relation to inflammation might be read, as if in so many

chapters, in the several forms of this disorder of the conjunctiva. Simple catarrh stands at the beginning of the series, and represents the real though nearly harmless infectiveness of a common cold. Between this form and the violent disease of tropical climates there are other intermediate affections of allied character, in which probably the infective property varies in degree with the varying purity of atmosphere and the health and constitution of the person affected. There is, therefore, an evident need of such preventive measures as those above described. They are further commendable by their simplicity, and if carried out in future on a larger scale than hitherto will probably reduce in a material degree the dangers arising from ocular contagion.

FOUNDERS' DAY AT EPSOM COLLEGE.

FOUNDERS' DAY at Epsom College was celebrated on the 13th inst., when the head master, the Rev. Cecil W. Wood, took the chair to distribute the prizes. The English oration was delivered by T. A. Bowes, in the course of which reference was made to the death of Mr. Francis Hird, one of the truest friends of the College, who retired last year from the office of treasurer, which he had filled for many years with energy and devotion. The oration closed with some expressions of farewell on the part of those who were about to leave. The head master then spoke of the steady progress of the College during the year, and mentioned that seven entrance scholarships for boarders were open, but for these there were no entries, owing, he thought, to the fact that they were not sufficiently known. He also announced that Mr. Croft, an old Epsomian, had offered a challenge cup for class-singing, and Mr. Malcolm Morris a prize for carpenter's work. The Wakley prize of £20 and a certificate were presented to W. F. Lucas, who also gained several other honours.

LUNACY IN SCOTLAND.

THE report made by the Commissioners of Lunacy in Scotland contains this year—as usually—a great amount of highly interesting and suggestive matter. The tendency of the figures to grow with disproportionate rapidity, which has been exhibited alike in Scotland and elsewhere for many years past, is still observable. Thus, during a period of thirty years past the number of persons coming under the jurisdiction of the Commissioners has increased by 99 per cent. In the same period the increase of population has been no more than 33 per cent., and it must be admitted that at first sight this is a very disquieting feature of modern experience. But the Scottish Commissioners are able this year to reinforce the comment which has repeatedly been made—namely, that the increase in the numbers under treatment is not wholly attributable to a growth of mental disease, but, in part at least, to the greater readiness shown by the patients and of those who act for them to take advantage of the facilities afforded by asylum treatment. To that extent the observed fact is matter of congratulation, not ground of dismay. And the circumstance that the increase is traced chiefly in the pauper department is strong evidence that this is its real character. Thus the increase in the proportion of private lunatics to population has been only 5 per cent., whereas the analogous increase in the proportion of pauper lunatics has been 89 per cent. But these figures do not contain the whole evidence upon this point. They are strongly confirmed and remarkably illustrated by the recent history of the district asylum for the counties of Roxburgh, Berwick, and Selkirk. Opened in 1872, there was a rapid and growing increase in the number of patients during the first ten years, the maintenance of which would have resulted in such an accumulation of cases as would have demanded the erection of

additional buildings in the immediate future. The attention of the managers was, however, drawn to the circumstance that the rate of discharge was low in their establishment; and, acting on the hint, they made careful inquiries as to the fitness for discharge of the inmates. The result was that the high rate of increase was not only checked; the numbers were actually diminished; and it is interesting to learn that the majority of such as were discharged were recovered ceased to be pauper lunatics. "Some," say the Commissioners, "recovered and became self-supporting after their liberation, and others were removed from the poor roll by their relatives." It is evident, therefore, that there is an easily intelligible tendency in the operation of our asylum system to bring an increasing number of individuals under supervision, quite apart from any corresponding increase in the aggregate of mental disease. It is curious to remark that even Lunacy Commissioners have an Irish question. The Scottish Commissioners say: "We again call attention to the circumstance that pauper lunatics who are sent to Ireland are frequently, on arriving there, placed in the ordinary wards of workhouses, from which they soon discharge themselves and return to this country. In sending such patients repeatedly to and from a needless expenditure of money and trouble is caused."

LINEÆ ALBICANTES IN TYPHOID FEVER.

SOMETIMES atrophic lines so common after any distension of the skin appear without any obvious cause of stretching. Manouvriez and Bouchard have recorded such cases occurring in the course of convalescence from typhoid fever. Troisier has given an interesting account of this condition in the *Bulletin de la Société Médicale des Hôpitaux*, No. 12. These lines have been noticed, especially in children and young adults. Bouchard considered that they were due to stretching resulting from rapid growth after the subsidence of the fever. Troisier and Monetrier have noted that the elastic tissues of the skin are less thick at the level of the "atrophic" area, but they failed to find any real evidence of wasting of tissue; the elastic fibres were simply torn through and curled up at their broken ends. M. Bulochev said that in boys the whitish lines have no special distribution; but in girls the breasts and the iliac crests appear to be chosen sites. M. Barié referred to a case in a girl aged seventeen, in whom the lines were situated over the tibio-tarsal articulation on each side.

SANITARY ADMINISTRATION IN NEW YORK.

IF a town contains any localities in which the dwelling-houses are constructed in a manner that offends every hygienic principle, it is there that poor foreigners are sure to congregate. New York appears to be no exception to this rule, for the *New York Herald* gives a graphic account of Mulberry-street, in that city, where the houses are five storeys high, each floor being divided into four tenements, of which each contains one light and one dark room. In these tenements there are never less than two families, and sometimes "as many as forty persons packed together like so many smoked herrings." One house in this street, described as a Neapolitan hotel, is specially referred to on account of the large number of persons who dwell there, as many as thirty-five men living, eating, and sleeping in two rooms; some slept on mattresses and bundles of rags, for which they paid seven cents per night, while for permission to sleep on the floor a charge of five cents per night was made; a meal could be had in this house for eight cents, the food consisting of macaroni, beans, and meat, hooked out of garbage boxes and barrels. The size of the rooms is not mentioned; but they are evidently small, for a special arrangement has to be made to

enable accommodation to be provided for so large a number of people. This is accomplished by dividing the lodgers into three groups, who do not occupy the rooms at the same time: thus, from 8 P.M. till 3 A.M. the rooms are used by scavengers, who are followed by the pea-nut and banana men, who sleep till about 10 A.M. while their wives or daughters attend to the business; and these men are followed by those whose duties do not limit them to any particular hour. The filth which accumulates within these houses must be indescribable: in every corner of the halls and on the stairs were mounds of filth and decayed garbage of all sorts, the stench of which, our American contemporary states, "would knock out the Obelisk at forty paces." Another journal of the same city has described the condition of Mott-street, occupied by Chinamen; and here, again, the conditions were abominable. Evidently New York is in need of an active sanitary administration, for the state of the city, as told in American journals, is a disgrace to any civilised community.

THE LANGENBECK MEMORIAL.

A COMMITTEE has been formed with the object of founding in Berlin a permanent memorial of the lamented and illustrious surgeon, Professor von Langenbeck. The memorial is to take the form of a central institution which should serve as the home of the various medical societies of that city. This "Langenbeck Haus" has been initiated by the Medical Society of Berlin and the German Society of Surgery; Professors Virchow and von Bergmann, the respective Presidents, being members of the committee, which comprises several of the leading Berlin physicians and surgeons. The scheme has the support of H.M. the Emperor and of their Majesties the Empresses Augusta and Victoria. It is hoped that an English committee will also be formed in furtherance of this object, which we commend to the notice of our readers. The fame of von Langenbeck is world-wide, and we trust that the English profession will join in this tribute to the memory of a great surgeon. We are authorised to state that subscriptions for this object will be received and duly acknowledged by Sir James Paget or Sir W. MacCormac.

ANOTHER DEATH FROM HYDROPHOBIA.

ANOTHER death from hydrophobia has occurred near Liverpool. The deceased was a clerk, twenty-two years of age. On the 3rd ult. he was showing his sister how to hold a dog which was ill, and to which they were about to give some medicine, when it bit him on the thumb. He went to a chemist to get it cauterised, and the thumb was afterwards poulticed. The wound healed up. Dr. Barr saw him on the day following the bite, and was told by the deceased that he did not think the dog was mad. Dr. Barr prescribed for him, and did not see him again till the 2nd inst., when the deceased and his mother called on him. The former complained of pains in the arm, he was also feverish, and his pulse was rapid. Taking a grave view of the case, Dr. Barr again prescribed for him, and ordered him to bed. On the following day he saw him several times; the deceased had passed a bad night, and had difficulty in swallowing. The case was a very pronounced one of hydrophobia, the symptoms were well marked, and the deceased expired at 3 o'clock on the afternoon of the 5th inst. from exhaustion. We have given this as well as other cases of hydrophobia at some length, it being most important that every case should be fully investigated, and that all the light obtainable should be brought to bear upon this most insidious disease. In this case it appeared that the dog, though said to be ill when it bit the deceased, did not appear to be rabid, and took water almost immediately afterwards. It was destroyed the same day, a circumstance much to be regretted,

since, if it had been kept secure and carefully watched, what is now a doubtful point would have been cleared up. Again, it does not appear that any post-mortem examination of the deceased was made. The coroner for the West Derby division of Lancashire has now held inquests in several cases of death from hydrophobia, including the above; but he appears to dispense with post-mortem examination, another circumstance which is to be regretted. It is only by a most careful comparative inquiry into the symptoms, and a most minute examination of all the pathological appearances in each case, that we can hope to elucidate the mystery which at present surrounds hydrophobia.

THE CORONERS BILL.

THE Bill brought in by the Government for dealing with the election of coroners and other matters touching the coroner's office has received a signal improvement in Committee of the House of Lords. As originally drafted, the Bill provided for the removal of the power of election from the freeholders and the substitution of a power of appointment by the Lord Chancellor. Upon the merits of this proposal we have already expressed an opinion, and we are glad to see that what seems to us a much better course has commended itself to the Committee of the House of Peers. As amended, the Bill provides that the power of choice taken from the freeholders shall be confided to the local authority in the county. This, in the case of a local authority sufficiently amenable to popular sentiment, would perfectly meet the view for which we have contended; and as it seems to be admitted on all hands that something must be done, and done at once, to popularise county government, we may hope for the best. But, it is of course impossible to feel quite sure that in getting rid of election by the freeholders we shall not lose some of the guarantees which at present secure that the coroner, whose duties are often so delicate and always so important to the community at large, shall at least have the qualities which enable a man to make a good impression on his neighbours. A good local authority would make a very good electoral body; but for complete satisfaction on this head we must wait to learn how they are to be constituted, and how they will discharge their functions. Upon the whole, we should have been better content to wait for this change until the new County Boards had proved themselves worthy of the trust.

"THE RADICAL CURE OF RUPTURE."

ON October 15th, 1887, in reply to numerous correspondents, we published the following:—

"An American is at present making the most benevolent attempt to convince the British public that he is in possession of a radical cure for hernia, and he is circulating advertisements and a book which are meant to convince the most doubting. The book certainly does tell some wonderful stories. Amongst other feats a testimonial to this great genius, 'Dr. Sherman,' is produced, purporting to be from *The Lancet*, 1874. We need not say that we never published such a thing. If all the other testimonials are equally incorrect the public is to be pitied. Mr. Sherman may say it is some other journal of the same name from which he quotes. That will not avail him with honest people in this country, who, reading in a book which he puts into their hands a quotation from *The Lancet*, will certainly construe it to mean *THE LANCET* of England. A word to the wise is enough."

Notwithstanding the above paragraph, we constantly receive some such communication as the following:—

"SIRS,—I have seen in the *Court Circular* of June 4th, 1887, an article commenting favourably upon a method for cure of hernia discovered or practised by Dr. Sherman of America, and 64, Chancery-lane, and in this article it is

said, 'and the number of testimonials received by him [Dr. Sherman] during the last thirty years from private individuals, from the press (including a lengthy and laudatory notice in *The Lancet*), &c.' May I ask if any such notice in 1887 was given in *THE LANCET* as stated by the *Court Circular*? I looked but could not see it."

We need hardly say that *THE LANCET* has published no such notice, and that any statement to that effect is utterly unwarranted. We trust that those of our contemporaries who publish advertisements of this person will take note of our statements.

THE STORAGE OF LIFE.

DR. B. W. RICHARDSON has often given evidence of his power of clothing familiar facts in attractive and novel garb, and of arresting attention while forcing home some well-worn truths. This faculty he drew upon largely in his interesting address at the anniversary meeting of the Sanitary Institute of Great Britain, when he chose as his subject the "Storage of Life as a Sanitary Study." The conditions favouring the storage of life he dealt with under the headings of hereditary qualification, the virtue of continence, maintenance of balance of bodily functions, perfect temperance, and purity from implanted or acquired diseases. While urging the importance of maintaining the balance of the working organs of the body as a means of keeping up the storage of life, the lecturer spoke yet more emphatically upon what he termed "all-round temperance"—temperance in speech, action, thought, as well as in eating and drinking. Everything that quickened the action of the heart he regarded as a stimulant, taxing and reducing the storage of life. Necessarily the work of the sanitarian called for appreciative remark towards the close of the lecture, the prevention of "damaging diseases" promoting the storage of life. After all, in spite of the interest of the lecture, the moral is somewhat trite. The advantages of a favourable family history, the disadvantages of acquired diseases, the influence of personal habits of restraint—all these have long been granted. The individual may toil and strive, but he is still largely at the mercy of his neighbour, whose erratic proceedings may greatly upset all the foresight of storage. While all admit the value of personal attention to sanitary and physiological laws, most people will wish for greater powers of sanitary control over the actions of their neighbours.

THE HOSPITAL SATURDAY FUND.

THE street collection of the Hospital Saturday Fund seems to have been carried on with unusual vigour. The result of this part of the work seems far in excess of the results last year. The most important part, as we have always maintained, of the Hospital Saturday collection is that of systematic weekly contributions in the workshops. This will be continued until December 1st.

HEADACHES DURING GROWTH.

THE physiological process of growth is liable to be attended sometimes by pathological symptoms seemingly attributable to a too great rapidity of the process. The evidence in favour of this belief would appear to be the so-called fevers, headaches, and pains attending growth. Hack in Germany and Ruault in France have mentioned cases of headache (during adolescence) which depended on swelling of the nasal mucous membrane, and curable by removal of a portion of the overgrown membrane. The headache is often accompanied by anorexia (inability to fix the attention) and by a general feeling of weakness and irritability, chiefly manifested as nervous symptoms—giddiness, nightmare, sensory illusions, and night terrors. Sometimes the symptoms are

aggravated at the menstrual periods. Mackenzie of Baltimore has recognised a close physiological relationship between the erectile tissue of the nose, and the generative apparatus.

PATHOGENY OF PARALYSIS AGITANS.

MANY arguments in favour of the view that paralysis agitans is really an organic disease of the spinal cord are adduced by M. Teissier in the *Lyon Medical*, No. 28. Jaccoud maintained that the muscular tone derived from the nervous energy of the spinal cord was lost, whilst Grasset held a hypothesis, not easily understood, based on the assumption of a want of power of sustaining a fixed position. A diffuse sclerosis of the lateral columns has been found, in some cases extending up to the vesicular column of Clarke and into the intermedio-lateral tract. One case of spinal pachymeningitis during life showed characteristic tremors, retropulsion, and psychic troubles. In this instance, fibrous invasions from the thickened meninges were detected here and there in the white columns of the spinal cord. The main conclusion to be drawn, if M. Teissier's observations are exact, seems to be that paralysis agitans is, like chorea, a symptom, and not a disease in itself.

SEA-WATER IN LONDON.

WE learn with satisfaction that the London Sea-water Supply Bill has passed both Houses of Parliament. An extension of time is granted for completing before July of the year 1890 the works which were authorised in 1881 for bringing a sea-water supply to London from the county of Sussex. The reservoirs in the metropolis will be near Clapham Junction and Hammersmith. Sea-water will supply many useful purposes; it will doubtless be largely employed for baths in private houses, and will, we hope, be utilised in public bathing establishments. In time it may probably replace fresh water which is now used for street watering, and save the former, which is becoming scarcer as London grows.

DEAFNESS TREATED BY PILOCARPINE.

PILOCARPINE would appear, according to Corrado Corradi, to be very serviceable in the treatment of deafness due to labyrinthine derangements, whether associated or not with disease of the middle ear. Large doses may be required. In one case two centigrammes of pilocarpine were injected twenty-four times. Moos has injected from five to eight drops of a 2 per cent. solution in cases of deafness resulting from diphtheria. Considerable improvement of hearing resulted even in cases in which deafness had existed for three weeks. Care is required lest the pilocarpine should increase the debility of post-diphtheritic cases.

SUMMER RISKS.

IT is difficult not to believe that before the summer has finally passed the sun will have some opportunity of exercising an influence upon health. While we look forward to sunshine as a boon, we cannot be unmindful that it is capable of giving origin to causes of ill-health in those localities where, through negligence, animal and vegetable matters are allowed to pass into a state of decomposition. The more recent observations concerning summer diarrhoea tend to show that the organisms which result from such changes are responsible for high mortality among infants; it behoves, therefore, every householder to protect his family against the risks of injury from decomposing matter. The dustbin cannot be exempted from suspicion of playing an active part in the production of disease. The storage of large quantities of animal and vegetable refuse in close proximity to inhabited rooms is only permitted in default of

a reasonable sanitary administration; but householders can do much to diminish risk by the use of properly constructed receptacles, by limiting the material which is placed within them, and by insisting on the frequent removal of their contents. Dustbins should not be larger than is necessary, should be impervious to moisture, and the contents should not be exposed to the sun; movable galvanised-iron receptacles with covers are best for the purpose, and these should not receive any other material than ashes or dust. Bones and animal and vegetable matter generally should be burnt; this can be done without inconvenience and without nuisance if dried by heat before being actually placed on the fire; in this way it is possible to ensure that the dustbin shall not become offensive, while at the same time the amount of matter which it has to receive is greatly reduced in bulk.

INTERESTING EXTENSION OF UNIVERSITY WORK.

OXFORD is showing signs of vitality and a disposition to extend her influence in the culture of the nation. The last proposal is a novel one—viz., to invite those students attending Oxford University Extension Classes in the various parts of the country to repair to Oxford for ten days to attend a short course of lectures on one or more of various subjects, and to be entertained pleasantly with conversaziones, conferences, concerts, church services, excursions, &c. Amongst the lecturers who are to give intellectual entertainment is Professor Burdon Sanderson, whose discourses on the human body will doubtless be highly suggestive and instructive. The issue of tickets is to be limited to 900, price 10s. each, and it is estimated that £5 will or may cover the whole expenses of the ten days. Information may be obtained from Mr. W. A. S. Hewins, University Extension Office, Oxford; or Mr. Joseph King, 44, Well-walk, Hampstead.

RIVER POLLUTION.

THE Conservators of the river Thames have again gone through the formality of summoning the Chertsey Rural Sanitary Authority for permitting sewage to enter the Thames. The offence was clearly proved, but the sanitary authority pleaded that they had endeavoured to abate the nuisance by deodorising the sewage with sulphate of iron, and that they had cut off the drains of twenty-nine sets of premises from their own drain with the same object. Finally, the sanitary authority were fined £50 and costs. A similar summons was then heard with reference to pollution at Addlestone, and a fine of £5 and costs inflicted. We do not know how many times the sanitary authority have been fined for these offences, but we presume that it is less costly to submit to a monetary penalty than to adopt a proper mode of sewage disposal that does not lead to the contamination of the Thames. The persistence in this course should entail more severe punishment upon the offenders.

THE WANTON SPREAD OF DIPHTHERIA.

WE referred a short time since to the "pernicious practice" of taking children to see and even kiss their playmates when dying or dead of infectious diseases. Dr. Fussell, in his report to the Eastbourne Local Board of Health, adverts to this subject, and refers to two instances of the sort which occurred some time since in the Hailsham and Battle rural sanitary districts. In one case the corpse of a person dead of diphtheria was taken to another village, which had for some time past been free from that disease. The coffin was opened for the inspection of friends, and within a few days there was a severe outbreak of diphtheria amongst the inmates of the dwelling to which the coffin had been removed. In another instance the children of a national school visited

the corpse of a schoolfellow who had died of diphtheritic croup, and the result was that several cases of diphtheria, some fatal, occurred amongst the children in question. We trust that efforts will be made by sanitary authorities and their officers to secure the conviction, under Section 126 of the Public Health Act, 1875, of persons responsible for such practices. Such exposure under Clause 3 of that section need not, as in Clause 1, be effected "wilfully," but it will materially aid in obtaining a sufficient punishment if it could be proved that warning had been given as to the infectious nature of the malady and of the body of the dead person.

EFFECTS OF WET AND DRY PACKING.

DR. GRITSAI of St. Petersburg has prosecuted a series of observations on the effects of wet and dry packs followed by vigorous rubbing on a number of healthy hospital attendants. The number of cardiac contractions fell slightly after both kinds of packs—generally speaking, to the extent of six beats per minute after the wet and three beats per minute after the dry packs. The blood pressure, taken by Basch's sphygmomanometer, rose on the average eight millimetres after the wet packs, and fell five millimetres after the dry ones. The inspiratory and expiratory force, taken by Waldenburg's pneumatometer, increased nearly twice as much with the wet as with the dry packs. The muscular force increased after the wet packs, and very slightly decreased after the dry ones. The temperature in the rectum and in the axilla diminished; the rectal temperature was the more affected by the dry pack, falling 0.15° C. after the wet pack, and after the dry 0.27° C. The temperature in the axilla, on the other hand, was the more affected by the wet pack, which caused it to fall 0.18° C., while the dry pack only caused a fall of 0.07° C. The surface temperature, taken by Immisch's thermometer, fell in both classes of experiment; e.g., that of the chest fell 0.48° and that of the thigh 0.6° C. after wet packing, the dry pack producing a smaller fall in both cases—viz., 0.24° on the chest and 0.2° on the thigh.

HOSPITAL SUNDAY FUND.

Up to Thursday evening last the collections in aid of this Fund reached the sum of £39,300. The Secretary informs us that there appears to be every reason to believe that the result of this year's appeal will be equal to that of 1887.

THE PROTECTION OF LONDON FROM RABIES.

AT the present moment the health of the canine population of London occasions no concern, but it should be known that this happy result is attributable to natural causes rather than to the prudence and energy of the authorities. The report just issued by the Metropolitan Board of Works contains an explanation of what might be, but has not been, done to secure the metropolis against a recurrence of the epidemic of 1885 and 1886. By virtue of the division of authority in the government of London, the Metropolitan Board has power to make regulations for the control of dogs and the prevention of rabies, which the police only have power to enforce. So long ago as April, 1887, the Board had drafted a scheme which was submitted to the police authorities with a request for information whether they would undertake to enforce them. Correspondence has ensued, but the question, as we gather, is still under consideration. In the meantime, a period of freedom from alarm is being wasted, and the settlement of a most important matter is being driven off until a panic comes. We do not pretend to say who is to blame, but we do say that it is scandalous that public interest should be thus the toy of triflers, and of triflers, too, whose trifling has not even the poor merit of being amusing.

FOREIGN UNIVERSITY INTELLIGENCE.

Bonn.—A new building is about to be erected for the clinical wards of the Charité Hospital.

Copenhagen.—Dr. Edmund Hanson Grut, who for some years has taught Ophthalmology, has now been raised to the rank of Professor, an entirely new chair having been established for him.

Ghent.—Dr. E. von Ermengem has been appointed Professor of Hygiene and Bacteriology.

Innsbruck.—Dr. J. Möller, Professor of Pharmacology and Pharmacognosia, has been appointed Dean for the coming year.

Jena.—A second chair of Anatomy is to be established, to which it is expected that Dr. C. Bardleben, Prosector and Professor Extraordinary, will be appointed.

Leyden.—Dr. A. Nijkamp has been recognised as *privat docent* in Laryngology.

Lille.—Dr. Debierre, formerly *agréé* in Anatomy in Lyons, has been appointed to the vacant chair of Anatomy.

Montpellier.—The chair of Anatomy, formerly held by M. Benoit, has been vacant since he resigned some years ago. During this time M. Binar has been doing the duties of Professor, and now that the chair has been at last officially declared vacant, it was supposed that he would be appointed. This, however, is said not to be likely to be the case, the Faculty having, as it is reported, decided on recommending the appointment of a military surgeon, who is about to retire, and who was some years ago Professor at another provincial Faculty.

Pavia.—Dr. Brunetti, Professor of Pathological Anatomy, has retired. Dr. O. Bassini, Professor of Surgical Pathology, is appointed Professor of Clinical Surgery.

Poitiers.—M. Roland has been appointed Professor of Physiology.

Prague (German University).—Dr. F. Hoffmeister, Professor of Pharmacology, has been appointed Dean for the ensuing year.

Utrecht.—Dr. Koster, Professor of Anatomy, having retired, Dr. E. Rosenberg, Professor of Comparative Anatomy, Embryology, and Histology, has been appointed in his place.

Valencia.—Señor Don Enrique Sloker has been appointed to the vacant chair of Descriptive Anatomy.

Würzburg.—Dr. H. Fritsch, Professor of Midwifery and Gynaecology in Breslau, has been invited to fill the chair of *Seanzoni*.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Rühle, Professor of special Pathology and Therapeutics and Director of the Medical Clinic in Bonn.—Dr. Mandelbaum, a practitioner of great repute in Odessa.—Dr. Pablo Emilio Molina Uribe, Professor of Clinical Medicine in the University of Bogota, Columbia, of fever contracted from the patients in the wards of the hospital.

THE passage through the Houses of Parliament, on Tuesday last, of permanent legislation in the interests of the inebriate, under the title of "The Inebriates Act," will be celebrated by a reception to be given to the Habitual Drunkards Legislative Committee of the British Medical Association by the President and Council of the Society for the Study of Inebriety, on Friday afternoon, the 27th inst., in the rooms of the Medical Society of London. Members of both Houses are expected to be present.

THE Secretary of State has given notice to the clerk of the Rotherhithe vestry that it is his intention to appoint officers to inquire into the sanitary condition of the parish.

THE publication of the "Sanitäts-Bericht" of the German Army during the campaign of 1870-71 is announced (E. S. Mittler und Sohn, Berlin). It comprises eight volumes, and includes:—1. Administrative part. 2. Statistical part: Disease and Mortality in the German Army and among the French Prisoners in Germany. 3. Surgical part: (a) Wounds; (b) The Physical Effects of Gunshot; (c) Tables of the major surgical operations. 4. Medical part: (a) Epidemics in the German Troops, with reference to corresponding casualties in the French Army, the French prisoners, and the civil population of the two States; (b) Traumatic, Idiopathic, and Post-febrile Diseases of the Nervous System observed in the German Troops. 5. Literature, Index, and Appendices. The cost of the entire work is 340 marks.

IN connexion with the sixty-first annual meeting of the Association of German Naturalists and Physicians to be held at Cologne in September next, arrangements have been made for an exhibition of scientific apparatus &c., and for demonstrations relating thereto. Applications are to be made to the office of the exhibition, Untersachsenshausen 9, Cologne, up to July 25th.

A CORRESPONDENT, writing from Calcutta on June 21st, says:—"The heat is so terrific at Calcutta just now that many cases of sunstroke and heat apoplexy are occurring. It is the hottest season remembered, and we are all praying for the rains to come upon us."

THE University of Bologna has granted the degree of Doctor in the Faculty of Medicine and Surgery to Dr. Hughlings Jackson, F.R.S., on the occasion of the eighth centenary of the University.

DEATHS FROM ALCOHOLIC EXCESS IN LONDON.

By W. WYNN WESTCOTT, M.B. LOND.,
DEPUTY CORONER, CENTRAL MIDDLESEX.

PROMPTED by my friend, Dr. Norman Kerr, I have made an analysis of 1220 consecutive inquests held by me in London, and I cannot refrain from making the results public. I am not, and never have been, a total abstainer, or an advocate of that cause, so there need be no fear that the figures are exaggerated. Of 1220 cases of death, including deaths from violence, sudden deaths, persons found dead, and deaths with regard to which no medical certificate is forthcoming, 470 were infants, children, and persons below the age of sixteen years. These may be presumably removed from the list of deaths from alcoholic excess. Of the remaining 750 deaths, no less than 143 are recorded as being the result of chronic alcoholic disease, acute alcoholism, delirium tremens, suicide caused by drink, or of accidental death while drunk, or of accidents arising because of incapability when intoxicated; that is, one death in every 5.24. Of these 143 cases, 86 were men and 57 women. Of these 143 cases, 21 were suicidal, 23 accidental, and 99 the result, more or less sudden, of syncope, apoplexy, &c., due to disease of the heart, liver, and kidneys, stated in sworn evidence as due to alcoholic excess. Of the 143 cases, 9 were suffocated during the stupor of alcohol, 3 died in the act of sexual intercourse from syncope due to degenerative cardiac muscular tissue, and 3 were run over by vehicles in the streets. Only 9 of the cases were of persons under thirty years of age, but 21 cases were of persons over sixty years old. The results of this investigation show that there is still a wide field for useful exertion in the cause of temperance.

MEDICAL MAGISTRATE.—Mr. Lewis Mackenzie, F.R.C.S. Eng., L.R.C.P. Lond., coroner for the borough of Tiverton, has been appointed a magistrate for the borough.

Pharmacology and Therapeutics.

RICIN, A TOXIC FERMENT CONTAINED IN CASTOR-OIL SEEDS.

It has long been known that the seeds of the castor-oil plant were poisonous, but the nature and properties of the toxic principle were very imperfectly known. A good deal of light has now been thrown on the question by the publication of a Dorpat graduation thesis by Dr. H. Stillmark, who has been working at the subject in Professor Kobert's laboratory. He finds that the only toxic principle contained in ricinus seeds is an albuminoid body, which he names "ricin," and classes amongst the so-called "unformed ferments." It is unaffected by dry heat of 100° C., but is destroyed by boiling. It acts, when administered by the mouth or by hypodermic or intravenous injection, by producing hemorrhagic inflammation of the gastro-intestinal tract, especially and primarily affecting the small intestine, and secondarily the stomach and large intestine. It usually also causes extreme fulness of the gall-bladder, probably by setting up some obstruction of the bile-duct; frequently also the bladder is found greatly distended with urine, the vesical mucous membrane being inflamed. In connexion with these experimental results obtained by observations on animals, it is interesting to note that jaundice and anuria have been observed in some cases of accidental poisoning by castor-oil seeds in the human subject. Diarrhoea is by no means constant, constipation having been frequently noticed both in experimental and clinical cases. Dr. Stillmark has never observed the cholera stools in animals which have been described as occurring in cases of accidental poisoning. The drowsiness and convulsions which occurred in some of his experimental observations he is disposed to attribute to thrombosis of the cerebral vessels. As to the lethal dose, he finds that for animals it is 0.1 milligramme per kilogramme of body weight when the drug is injected into the veins, so that for a man weighing 60 kilogrammes it would be 6.0 milligrammes. As drugs administered in this way are perhaps ten times as active as when taken into the stomach, the ordinary lethal dose of ricin may probably be set down as about 60 milligrammes, a quantity contained in ten ordinary seeds. It must be observed, however, that Christison once had a fatal case where only "two or three" seeds had been swallowed. This seems to have been a very exceptional instance, as there are many cases on record where a much larger quantity has been taken without a fatal issue: e.g., Rapp reported a case where an Italian non-commissioned officer took seventeen ricinus seeds, and recovered; Bouchardat, on the other hand, had one where a girl of eighteen ate twenty seeds, and died in five days. Experiments on the physiological action of ricin showed that it possesses a peculiar effect upon blood. When this is defibrinated, ricin produces a conglomeration of the red corpuscles, together with the formation of a fibrin-like substance. When blood is freshly drawn from a vein ricin causes it rapidly to coagulate. Again, defibrinated blood is rendered capable of passing through a filter by ricin—that is to say, the serum passes through, leaving the red corpuscles behind; an extremely dilute solution is sufficient for this—1 of ricin to 60,000. No effect was produced by ricin on isolated nerves or on the blood pressure, and little or none on isolated muscles or on a frog's heart prepared according to Williams's method. Other euphorbiaceæ were examined, especially the croton-oil plant, and an identical, or at all events a similar, poisonous principle was found in them. It was plainly proved by Dr. Stillmark's experiments that the action of castor-oil has nothing at all to do with ricin; also that croton-oil acid, which has been shown by Buchheim, Krich, Hirschhevd, and Kobert to exist in croton-oil seeds, is an entirely distinct body from ricin. These seeds therefore contain two virulent but distinct poisonous principles—ricin and croton-oil acid.

HYDRASTIS CANADENSIS.

Dr. Schatz of Rostock recommended five years ago, at the meeting of German naturalists at Freiburg, *hydrastis canadensis* as a remedy for hyperæmia and chronic inflammation of the internal genital organs. Since then this remedy has been very frequently employed, and private as well as public reports testify to the certainty of its action within reasonable limits. The want of success which has been observed by some medical men is according

to Schatz, partly due to the fact that the drug was extracted in Germany, and consequently not from the fresh plant. He has repeatedly obtained remarkably good results when the preparation used was the one recommended, which is made from the fresh American plant. In cases of uterine myoma the menses became not only less in quantity and more regular, but he has even seen a case where the tumour, which had previously extended up to the umbilicus, had, after the constant use of the fluid extract for about two years, almost disappeared in the pelvic cavity. Schatz also confirms his former communications as to the fact that *hydrastis* causes no pains, but produces only dilatation of the vessels. He does not, however, wish to say that the drug makes all, or even most, operations for myoma unnecessary. The drug is also recommended in the too frequent or excessive menstruation of young girls. The *hydrastis canadensis* has, however, generally to be taken for a long time and with great regularity. Another remedy which has also come from America is, according to Schatz, most valuable in some cases, because we have no substitute for it, although it cannot be nearly so often employed as *hydrastis*. It is *viburnum prunifolium*, which was obtained from the United States. This arrests the pains that some women, who have previously aborted, are apt to have during pregnancy, and which only too often lead to the premature expulsion of the ovum. This drug also has to be taken very regularly and for a long time, in doses of from 40 to 60 grains of the inspissated extract. Under these circumstances, however, it cannot be replaced by opiates or by bromide of potassium. True, the opiates cannot be entirely replaced by *viburnum*, especially in all cases where strong labour has actually commenced and requires to be arrested as promptly as possible. It will be impossible in such cases to do without rest and the recumbent position, at least for some time; and success is of course only possible if the ovum is still living, and further interference with it warded off. But Schatz has seen some cases in which at the first consultation the death of the ovum could not be assumed, and where it was retained for months in the uterus by means of *viburnum*, while it actually had been dead all the time, as was shown by its appearance when abortion subsequently took place. The *viburnum* does not act quickly or powerfully enough to be applicable to cases of normal birth or labour coming on suddenly. Schatz cannot as yet tell how the drug acts—whether by stimulating the inhibitory nervous centre of the uterus or by paralysing its motor nerves. He thinks the former the more probable.

METHODS AND OBJECTS OF PREVENTIVE MEDICINE.

THE following is an abridged report of the Presidential address delivered by Dr. John C. McVail, at the fourteenth annual meeting of the Sanitary Association of Scotland on the 4th inst. :—

The means for disease prevention which lie at the disposal of the modern sanitarian are both numerous and varied, and the value itself of the whole object of preventive medicine is but seldom called in question. Broadly speaking, we may take it that there are three great lines of defence, three groups of measures belonging to preventive medicine. These are sanitation, inoculation, and isolation. Sanitation is the first line. The word is often used to cover both inoculation and isolation, but I wish to apply it here in a more restricted sense. Assuming the theory to be correct that zymotic diseases are due to specific organisms, we may say that the object of sanitation in this narrowed meaning is to produce such conditions of air, soil, and water as shall not be consonant with the existence of these organisms. Such environment as is most suited to a human being is least suited to his microscopic foes. The first line of defence, in fact, is simply cleanliness—cleanliness in breathing, eating, and drinking; cleanliness, personal, domestic, and national. It includes many measures. It means that the soil on which we construct streets and houses shall be unpolluted, that the houses themselves shall be roomy and well ventilated, and that the air which ventilation provides shall itself be pure. It means that the water we drink shall contain no germs of cholera or enteric fever, and that our food shall be clean and wholesome. It means

many Acts of Parliament—Acts relating to pollution of rivers, to adulteration of food, to water supply, to bake-houses, to smoke abatement, to cattle diseases, to dairies and cowsheds, to factories and workshops, to open spaces, and to public health matters of many other kinds. This, then, is our first line of defence, and the question arises, Is it not in itself sufficient? Are all these laws and is all this cleanliness not enough, in our own country at least, to exterminate zymotic diseases? Unfortunately experience answers No, for there are germs and germs. A few feet of pure air are enough to destroy the poison of typhus fever, while, if Dr. Hubert Airy be right, that of diphtheria may retain its vitality for several miles. Typhus fever, enteric fever, and cholera may be taken as the best examples of enemies which are unable to pass our first line of defence. The question as to whether this line will ever be rendered capable of eradicating such a disease as small-pox is hardly a practical one. I do not say that cleanliness has no power over it. The germs of small-pox will thrive better in a dirty house than in a clean one. But in the case of a disease whose living cause appears to retain its vitality through a mile or more of London air, it is clear that in this country, with its enormous population, such air space as can be given in the best of model dwellings will be of little avail against this scourge. Whether a man's head, or his heart, or his liver be his weak part, he is strengthened and benefited by those sanitary measures which constitute our first line of defence. And be it noted that, valuable as are the second and third lines of which I am about to speak, it cannot be said of them that they directly protect against attack by any other than those diseases in special view of which they are undertaken.

The second line I have named inoculation, and I have done so advisedly, as indicating a theory rather than an actuality. If we describe the group of measures classed under the first line as consisting of means for preventing disease germs from spreading and multiplying, we may describe the second group as a protection against germs which have succeeded in breaking through the first line. The second line is even less complete than the first. We have no inoculation to protect against scarlatina, measles, or whooping-cough. Against hydrophobia the line is in active formation. Against cholera it was tried with very doubtful effect in Spain two or three years ago. In fact, it is against only one disease that in past years this method of protection has been found capable of being made efficient. Fortunately, the disease in question—small-pox—is one against which there is very special need for protection, for there is none over which the first group of measures has less power.

The third and last line of defence is isolation, the separation of the sick from the healthy. It has been said that the use of the knife is the opprobrium of surgery. In the same way isolation is the opprobrium of preventive medicine. Our first aim, as we have seen, is to prevent the existence of disease germs. Our second aim, which assumes that the first has been unsuccessful, consists in efforts to make the human body proof against the germs, to provide a coat of mail against an enemy that has broken through our defences. Our third aim assumes that the enemy has got some of us by the throat, that part of our forces is in his grasp. I say, therefore, that isolation is the opprobrium of preventive medicine, and in all our work it is necessary to keep this in mind, that our main object should be to make isolation unnecessary by preventing any section of the population from being seized by disease, just as the main object of the surgeon should be to make operation unnecessary by the use of other and better means. But while it is true that the knife is the opprobrium of surgery, it is also true, paradoxical as it may appear, that some of the greatest triumphs of surgery are due to the use of operative measures. So also with us, some of the greatest triumphs of preventive medicine are due to timely isolation, isolation, that is to say, of the disease poison. For it is to be remembered that the isolation of the patient is simply a means towards the isolation of the poison. All methods of disinfection belong to this third line of defence—the burning of bedding, the fumigation of rooms, and so on, have for their object the destruction of a living germ whose existence we have failed to prevent.

These, then, are the methods of preventive medicine. We come next to its aims, and to the objections that have been urged against these aims. For in regard to our whole procedure, the question of "*Cui bono?*"

frequently arises. To what end, it is asked, are our measures for disease prevention? Are we not fighting against the great law of the survival of the fittest? In olden times, it is said, the weakly went to the wall, and only the strong lived, and became the progenitors of a healthy race, while now the weakly are nursed and coddled and protected against every wind that blows. The life, too, that these feeble ones live, is it worth living? Is it not simply one prolonged sickness, without either pleasure or usefulness? Nor do the consequences end with the sufferers. They marry and bring forth a degenerate race, the member of which also marry, and so by degrees the whole life blood of the nation is being poisoned. Thus it would appear that our title of health officers is a misnomer, and that our efforts after health only end in disease. In reply, it would be sufficient for the sanitarian to take up the high ground of the physician; to say that human life is a holy thing, and that it is his duty to preserve it wherever found. The physician may believe that the patient whose life hangs in the balance, will, if he survive, be a curse to himself and to the world. Yet it is "his not to reason why," but to do his utmost to turn the trembling scale towards recovery. So it is not necessary for the sanitarian to discuss whether it is well or ill that the general environment of life be made such as to cause many a consumptive or scrofulous child to live that otherwise would die. It is his work to do all he can to make life easy of retention by the very weakest. If the question be asked, Where is the proof that our preventive measures—our sanitation, vaccination, and isolation—have had the results we speak of, the answer is at hand. It is given by the Registrar-General in the language of figures. He points out that, according to the newest English life table, the children born in England in any one year have now divided amongst them "nearly two million years of life" more than would have been the case thirty-five years ago. In England and Wales the annual mortality per 1,000,000 of population has been as follows: In 1861-5, 22,595; in 1866-70, 22,436; in 1871-5, 21,975; in 1876-80, 20,817; and in 1881-5, 19,810. Comparing the first period and the last, the difference is 3285 per 1,000,000, and, taking the population at 30,000,000, the total annual saving is about 100,000 lives. And if for every death there are twenty cases of sickness, then we have 2,000,000 less cases of sickness than in the first period. Interesting calculations have been often made on this subject, and especially by that father of sanitation, Mr. Edwin Chadwick, who, happily, is still with us, a witness of the greatness of the success that has attended his life's work. You can count the cost of each case of sickness, of lost work, of doctors' bills, and so on, and also the monetary value of each of the 100,000 lives saved. And you can put all this as income against the interest on the money spent in sanitary improvements—in water works, sewerage works, vaccination grants, officials' salaries, &c. And even on this lowest ground—on this merely commercial basis—we find that cleanliness, which is next to godliness, resembles godliness itself in being "great gain." But we can take a vastly higher standpoint. We also are labourers in the great field of moral reform. In this field there are many groups employed, each pursuing its own line, and each—ay, even the sanitarian—possibly apt to attach too much importance to his own particular department. The teetotaler holds that if intemperance were driven out of the land, then would follow education, cleanliness, and religion. And doubtless he is right. The educationist holds that if man's intellect were duly trained it would lead him to avoid alcohol, to avoid dirt, and to avoid immorality! Doubtless he too is right. The religionist holds that if man can be taught his duty to his God, he will do it also to himself and to his fellow-man, and that education, cleanliness, and temperance will be the fruits of his religion. Again I say, doubtless he is right. And the sanitarian holds that if a man is provided with pure air, good food, and healthy exercise, he will then be in a bodily condition which will produce no craving for the stimulus of alcohol, which will open his intellect to all the influences of education, and which will make him better able to receive and to appreciate the truths of religion. For, throughout our life, all good things are woven together, and thus it comes that the prosaic and oft-times unattractive work of the sanitarian has in it an abounding helpfulness that overflows into every corner of man's being, and makes for his intellectual and his moral as well as for his physical welfare.]

THE DRAINAGE OF HENLEY-ON-THAMES.

IN dealing with the question of the house boats and the contamination of the Thames during the Henley Regatta, we mentioned that the Thames Conservancy had compelled the town of Henley to adopt a general system of drainage. Some houses used to drain into the river, while the cesspools of others had overflows into the sewers, the contents of which in their turn went to the river. Thus the Thames was contaminated by at least a portion of the sewage from the 4000 or so inhabitants of Henley. On the other hand, it was no easy matter to drain a town which, by reason of the small number of inhabitants, had but slender financial resources; also the topographical position is altogether unfavourable. Built on the banks of the Thames, there is no natural fall for the sewers, and pumping or lifting stations are indispensable. Nor is this the only difficulty. There is an abundance of spring water in the subsoil, and after wet weather the spring water rises to within a few feet of the surface. In one place this even renders the road soft. It would therefore be difficult to dig deeply into such ground, and yet, to obtain any approach to a suitable fall, it would be necessary to lay at least 1000 ft. of the main sewer at a depth of 22 ft. to 27 ft. below the surface, and something like 15 ft. to 20 ft. below the subsoil water level. These are difficulties infinitely greater than the substitution of earth-closets for water-closets on board house boats; but the Thames Conservancy insisted that the Corporation of Henley must perform its duty, whatever the cost. This has now been accomplished, and at a special meeting of the Town Council, held a few days ago, it was agreed on all sides that the result was very satisfactory.

The special obstacles to which we have just briefly alluded have been overcome by the application of the Shone system, and nowhere has this system been more thoroughly carried out. At Eastbourne, for instance, it is only in part applied. To meet the want of level, four ejector stations have been constructed under the roadway at the lowest points of each of the four districts. These are the lifting stations. Each has two ejectors, one in use, the other in reserve in case of accident. When one of these ejectors is full (and it contains 150 gallons) a discharge of compressed air automatically takes place, and the sewage is lifted into an hermetically closed iron pipe, in which it flows to the sewer outfall. The ejectors are fed by ordinary earthenware pipes; but as the sewers travelling to these ejectors are comparatively short they can be laid at a good fall—1 in 200 at least. The longest sewer is not 1000 yards, and the average depth in the lower part of the town is 7 feet. These sewers are all perfectly straight. The changes of direction are made in manholes and open channels, where there are all facilities for inspection and flushing. Each ejector station practically isolates the district from which it is fed from all other districts. The whole problem of drainage is simplified to the necessity of reaching the nearest ejector, and their number can be increased according to the topographical difficulties that present themselves; for once the ejector is attained, the question of fall is no longer important—the sewage can be, and actually is, propelled up-hill.

The first ejector is on the Reading-road, a little beyond the railway station. Here the sewage is lifted into a four-inch cast-iron pipe called the "sealed main." The second ejector is at the bottom of Friday-street and close to the river, the third in New-street, and the fourth at the end of Bell-street. The sealed main, at first but four inches in diameter, and increasing an inch in diameter as it receives the contents of the different ejectors, now continues its course to the sewer outfall and sewer farm, a mile beyond the town in the Lambidge Wood. Altogether the sewage is raised 140 feet, and this is accomplished by an air pressure equal to 40 lb. per square inch. The compressing engine has Lancashire boilers of thirty-horse power, which supply steam at 60 lb. pressure to the engines, and consume coal to the extent of 3 lb. per horse power per hour. The cost for the working expenses amounted to £245 for the first half-year, and there has been no accident or miscalculation. Already about 600 out of something like 900 houses have been connected with this new sewer and the cesspools abolished. Active measures are now being taken to connect the

remaining houses, and this will probably be completed before the next regatta. Mr. Frederick Bell, formerly mayor of Henley-on-Thames, in an able little pamphlet describing what has been done, claims that the adoption of the Shone system at Henley has resulted in the following advantages:—"1. Small sewer pipes, laid with good inclinations at no great depth, watertight, and mostly above the subsoil water level, discharging the sewage into an ejector, where it becomes effectually trapped. 2. The rapid transit of the sewage into an ejector before decomposition sets in. 3. Reduced cost for flushing, when that operation becomes necessary, the small sewers necessarily being more effectually flushed with less water than larger ones would be. 4. Freedom from bad smells emanating from manholes; for, the cubic capacity of the sewers being small, the volume of air in contact with the sewage is proportionately small also, and, being constantly changed through the rapid flow of the sewage the latter cannot become stagnant and dangerous. 5. Less risk of the spreading of contagious diseases; the noxious matter entering the sewers of the district not being in any way communicated to another district. 6. The facility afforded of extending the system to new districts, irrespective of levels in either. 7. The reduction in the cost, both in the initial outlay and in the working expenses, which thus enabled the engineer to take the outfall a mile from the outskirts of the town, with 140 ft. lift; to purchase land for £200 an acre, without the slightest opposition, in a position where it is unseen and is no nuisance to the public; and to complete the whole of the works, including purchase of ground, subsoil drains laid in low parts of the town, and legal expenses, for £19,000."

Such briefly are the results achieved at Henley. It only remains to add that the rain water drains by natural gravitation into the Thames, but all domestic waters, stable drainage, and sewage proper are disposed of by the Shone system. The works will at present deal with thirty gallons per day per head for a population of 6000, while the census of 1881 showed that the population amounted to 4601, and had only increased to the extent of 80 in ten years. The sewage at the outfall is delivered in settling-tanks. The clear water is used to irrigate the land, while the sludge is taken out, mixed with ashes and dry refuse, and converted into portable manure. Thus the vexed problem of draining the little town of Henley appears to have been satisfactorily solved, and the Thames saved from a very serious source of contamination. The local authorities are to be congratulated on the initiative they have taken, and on the very practical and interesting experiment they have made of a promising method of drainage.

THE CHAIR OF SURGERY IN THE OWENS COLLEGE.

ON Tuesday, July 17th, a large and enthusiastic meeting of past and present students of the Owens College Medical School was held in the Free Trade Hall, Manchester, J. Sheldon Withers, Esq., M.R.C.S., L.R.C.P., in the chair. There was a good attendance of practitioners, and letters from others were read expressing regret at their inability to be present and sympathising with the object of the meeting.

The Chairman, after explaining the method of procedure followed in the election to professorial appointments, went on to say that the meeting did not in the least impugn the motives of the Council, which was composed of men for whom they had the deepest regard; but it was quite open to them to conclude that the Council had made a mistake, and quoted instances where such mistakes had been made elsewhere, and had since been acknowledged.

The following resolution, to be forwarded to the Council of the Owens College, was proposed and passed unanimously:—"That this meeting of past and present students of the Owens College Medical School desires to approach the Council of the College with the greatest respect, and to express to the Council its regret that the claims of its own candidates for the Chair of Surgery should have been, as it thinks, so slightly regarded—a neglect for which it has failed to find any sufficient justification, and one which it believes will be injurious to the best interests of the students."

In the discussion on the resolution, the speakers were

unanimously of opinion that in the election substantial attainments had been passed over, and that the decision had been determined by claims of a more uncertain and speculative nature. It was pointed out that among the Manchester candidates there were men of distinctly greater merit in regard to university career, qualifications, experience in the practice and teaching of surgery, contributions to purely surgical literature, and present clinical opportunities, arising from the fact that they are all hospital surgeons; whereas the new professor has no beds at his disposal. It was maintained that the action of an institution in rejecting the claims of its *alumni* to fill its appointments practically amounts to a confession of weakness in its past teaching. It was, moreover, regarded as a wholly undeserved slight on English qualifications that in recent years they should have been so lightly esteemed in the matter of appointments at the Owens College, the Manchester Royal Infirmary, and other hospitals of the town, and as being wholly discouraging to students of medicine in the Owens College.

The following resolution, to be presented to the Medical Board of the Manchester Royal Infirmary, was also passed unanimously: "That this meeting of past and present students of the Owens College Medical School desires to express to the Medical Board of the Manchester Royal Infirmary its regret at the result of the recent election to the Chair of Surgery in the College. It is of opinion, from past experience of you as teachers, that the interests of the students and of the institutions concerned would have been best promoted by a recognition of the fitness of those of your number who were candidates for the post."

* * We publish the above report as we have received it from the secretaries, Messrs. Iddon and Dunlop, but have no desire to join in the controversy which has been raised over the appointment in question. One thing, however, is certain—that, on the ground of eminent fitness for the post of Professor of Surgery of the Owens College, no possible objection can be raised to the selection which has been made.—ED. L.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Worksop Rural District.—A death-rate of 15·8 per 1000 for 1887 gave the **lowest rate for the past eighteen years**, and this although, on account of measles and enteric fever, the zymotic rate was somewhat above the average of recent years. As to measles, it is stated that the school authorities declined to close the schools early in the progress of the disease. Assuming the schools in question to be such as would come within the control of the Education Department, it is difficult to understand such refusal, for school authorities refusing to comply with an order of the sanitary authority in this matter would be deprived of the Government grant. They have, it is true, power of appeal; but it has been decided that pending such appeal to the Education Department the order must be complied with, and unless it can be distinctly shown that the order was unnecessary, or that the alternative of excluding from school children living in special houses or localities should have been resorted to, the action of the sanitary authorities would certainly be upheld. Enteric fever was prevalent at Kiveton Colliery village, and its prevalence was connected with the use of water from a well the contents of which had been analysed, without detecting any source of contamination. When opened, however, it was seen to receive overflow from a disused sewer. Some diphtheria also occurred, and it was believed to have been due to the defective sanitary arrangements of the school-house at Letwell. The conditions referred to, as also many others, were remedied, and some substantial work, such as the construction of a main sewer at Clowne, has also been carried out during the past year. In view of extensions of small-pox from Sheffield, Mr. C. Wills advised the provision of some means of isolation for first cases of infectious diseases; and in its absence the colliery author-

ities, who are not restricted by the provisions of the Public Health Act, barricaded the doorways of families affected with the disease, and set a watchman on duty, who supplied them with food and other requisites.

Brighton Urban District.—The fact that Dr. A. Newsholme has so recently succeeded to the office of medical officer of health for Brighton easily explains the circumstance that his report deals with the district solely from a statistical point of view. The general death-rate for 1887 was 16·9 per 1000—that is to say, it was the **smallest on record for a series of at least ten years**. The so-called zymotic rate was 2·2 per 1000, which cannot be regarded as particularly low; but at the same time it was largely made up of measles and whooping-cough—diseases which are not ascertained to be materially influenced by ordinary sanitary measures. It is, indeed, this mingling together under one heading of diseases so entirely dissimilar in point of causation as small-pox, whooping-cough, and enteric fever, that makes the heading "Principal Zymotic Diseases" so very misleading.

York City.—In his last quarterly report Mr. North explains that increased attention has been paid to the condition of dairies and milk-shops. But in endeavouring to secure satisfactory results, it is stated that the existing regulations sanctioned by the Local Government Board have been found to be most inadequate. These regulations profess, we believe, to be limited in their scope, mainly owing to restrictions imposed by the law. Mr. North would require everyone who desired to sell milk within the city to obtain a licence from the sanitary authority; he would extend the right of inspection to all places whence the milk was obtained; and he would grant to the authority the power of withdrawing the licence, either directly or by an order of justices, on sufficient evidence being given.

Liverpool Urban District.—According to Dr. Stopford Taylor's last annual report, Liverpool had a death-rate of 23·7 and of 23·6 respectively in 1886 and 1887, the latter rate being the lowest ever recorded, and being 2·6 per 1000 less than the average for the last ten years. And this result is the more satisfactory because the diminution has gone hand in hand with a reduction of "fever" mortality; the continued fevers having caused 198 deaths in 1887, as opposed to an average of 327 for the ten preceding years. During 1887 there were 52 typhus deaths, but this disease is disappearing in connexion with the demolition of insanitary property that is going on, and although there is still some of the inflammable material in existence, yet it is hoped that before long the danger will be removed. Pending the new hospital provision, scarlatina has been isolated in the small-pox hospital; and even when all the provision is made that has as yet been decided on, the city of Liverpool will by no means be fully prepared to meet the risk of every-day emergencies in this matter. A large amount of sanitary work is described in various portions of the report, and whilst it is evident that attention is being given to the question of the housing of people in common lodging-houses and in sub-let houses, yet the conditions still met with are such as call for the continued maintenance of a stringent supervision. Appended to the report is a map in which the so-called "fever" deaths are marked according to the localities in which they occurred; but the value of such a chart, as indeed of some of the statistical records, is almost entirely lost by the failure in it to discriminate between deaths from enteric fever and typhus, diseases which in point of causation, and hence, as a rule, of localisation, have so little in common.

Birmingham Urban District.—In 1874 the death-rate for Birmingham was 26·8 per 1000. Since then there has been a fairly uniform decrease in the annual number of deaths; and from 1885 to 1887 inclusive the rate was 19·35, which is the exact figure for last year, and this with an increase of over 40,000 in population since 1881. The percentage of infant deaths on births is as high as 17·8; and it must be but poor comfort, when Birmingham contrasts itself with the twenty large towns and cities of England in this respect, to be able to announce that it still manages to compare favourably with three out of the twenty—namely, Liverpool, Manchester, and Salford. Coming next to the infectious diseases, Dr. Alfred Hill, whilst calling attention to a high mortality from diphtheria, enters at some length into the history of scarlatina since 1873, and shows that, whilst that period there have been three developmental waves, there has, on the whole, been a progressive diminution in the mortality from that disease, the reduction having been

most remarkable during the last three years; and it is suggested that such diminution, taking place as it has done in spite of the greater congregation of children in schools than has ever before been known, is due to the early isolation carried out in so many cases. In 1876 the scarlatina deaths were 204, and the cases removed to hospital 36; in 1887 the deaths were 34, and the cases removed to the improved borough hospital no less than 438. The cases are stated, notwithstanding this aggregation in hospital, to have been distributed pretty evenly over the borough, a point worth noting in connexion with Dr. Tripe's recent suggestions as to hospital influence in scarlatina. As to the distribution of small-pox in Birmingham, nothing can be stated; for, whilst a disease chart is prepared, no indications as to the localisation of that disease are afforded. In other respects Dr. Hill's annual report is, like its predecessors, an excellent and admirably compiled history of the health and sanitary circumstances of the borough during the year dealt with.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5586 births and 2835 deaths were registered during the week ending July 14th. The annual rate of mortality in these towns, which had been 15.9 and 15.0 per 1000 in the preceding two weeks, rose again last week to 15.7. During the thirteen weeks of last quarter the death-rate in these towns averaged but 13.1 per 1000, and was 2.7 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 10.6 in Bristol, 11.4 in Huddersfield and in Blackburn, and 11.7 in Brighton. The rates in the other towns ranged upwards to 18.2 in Halifax, 19.0 in Sunderland, 23.7 in Manchester, and 28.5 in Bolton. The deaths referred to the principal zymotic diseases, which had been 304 and 276 in the preceding two weeks, rose during last week to 354; they included 130 from diarrhoea, 68 from whooping-cough, 45 from measles, 36 from diphtheria, 34 from scarlet fever, 30 from "fever" (principally enteric), and 11 from small-pox. No death from any of these zymotic diseases was registered during the week in Portsmouth or in Oldham; whereas they caused the greatest mortality in Leicester, Preston, and Bolton. Diarrhoea caused the highest death-rates in Bradford, Preston, Leicester, and Bolton; whooping-cough in Leicester and Derby; measles in Bristol, Leicester, and Bradford; scarlet fever in Bolton and Blackburn; and "fever" in Blackburn and Manchester. The 36 deaths from diphtheria included 24 in London and 2 in Manchester. Small-pox caused 6 deaths in Preston, 2 in Sheffield, 1 in Bolton, 1 in Leeds, and 1 in London, but not one in any of the twenty-three other large towns. The Metropolitan Asylum Hospitals contained only 2 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 890 at the end of last week, against 925 and 897 on the preceding two Saturdays; 103 cases were admitted during the week, against 98 and 81 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 156 and 176 in the preceding two weeks, declined again last week to 164, and were 43 below the corrected average. The causes of 68, or 2.4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Brighton, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Hull, Sheffield, and Bristol.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding four weeks from 20.0 to 16.2 per 1000, further fell to 16.1 in the week ending July 14th; this rate exceeded, however, by 0.4 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 9.6 and 11.5 in Perth and Greenock, to 16.8 in Leith and 19.2 in Aberdeen. The 406 deaths in the eight towns showed a further decline of 4 from the numbers in recent weeks, and included 8 which were referred to whooping-cough, 8 to diarrhoea, 5 to diphtheria, 3 to "fever," 3 to measles,

1 to scarlet fever, and not one to small-pox; in all, 28 deaths resulted from these principal zymotic diseases, against 48 and 37 in the preceding two weeks. These 28 deaths were equal to an annual rate of 1.2 per 1000, which corresponded with the mean rate from the same diseases in the twenty-eight English towns. The 8 deaths attributed to diarrhoea showed a decline of 2 from the number in the previous week, and were fewer by 22 than those returned in the corresponding week of last year. The fatal cases of whooping-cough, which had been 10 and 5 in the preceding two weeks, were last week 8, of which 6 occurred in Glasgow. The 5 deaths from diphtheria, included 2 in Glasgow, and were 2 below the number in the previous week. The 3 fatal cases of "fever" and the 3 of measles (all recorded in Glasgow) showed a decline from the numbers in the previous week. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 89 and 77 in the preceding two weeks, further declined last week to 68, but exceeded by 3 the number returned in the corresponding week of last year. The causes of 62, or more than 15 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 24.8 and 20.2 per 1000 in the preceding two weeks, rose again to 22.6 in the week ending July 14th. During the thirteen weeks of last quarter the death-rate in the city averaged 24.6 per 1000, the mean rate during the same period being 16.9 in London and 19.0 in Edinburgh. The 153 deaths in Dublin showed an increase of 16 upon the number in the previous week; they included 8 which were referred to whooping-cough, 6 to diarrhoea, 4 to scarlet fever, 3 to "fever" (typhus, enteric, or ill-defined), and not one either to small-pox, measles, or diphtheria; in all, 21 deaths resulted from these principal zymotic diseases, against 8, 13, and 17 in the preceding three weeks. They were equal to an annual rate of 3.1 per 1000, the rate from the same diseases being 2.3 in London and 0.8 in Edinburgh. The deaths from "fever," which had been 4 and 6 in the previous two weeks, further rose last week to 8; and the fatal cases both of diarrhoea and scarlet fever also exceeded the numbers returned in recent weeks. The fatal cases of whooping-cough, however, showed a decline. The deaths of infants were fewer, while those of elderly persons exceeded those returned in the previous week. Six inquest cases and 6 deaths from violence were registered; and 45, or nearly a third, of the deaths occurred in public institutions. The causes of 17, or more than 11 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

OVARIOTOMY.

To the Editors of THE LANCET.

SIRS,—I trust you will permit me to make a few brief comments on one or two points in Mr. Christopher Heath's lecture on Ovariectomy.

The first point to allude to is the history of the operation—not a matter now of much importance; but still Mr. Heath's authority upon any subject is so great that anything he may say deserves correction if not quite accurate. He says: "The late Mr. Baker Brown, I think, did the most at one time to bring ovariectomy into note, but he had no very great success." This is not at all the case, because we know now perfectly well that after he adopted the cautery in 1864 his mortality at once dropped to 10 per cent., over a large series of cases. Again, Mr. Heath fails to do justice to the establishment of the operation of ovariectomy by Dr. Charles Clay, about whom we also know that in 1857 he published the results of fifty-one operations, afterwards extended to 395. In his first series there was a mortality of 40 per cent.; in the second 30 per cent.; whilst in the last it fell to 25 per cent., and that mortality was maintained by Sir Spencer Wells for twenty years after publication of the pamphlet from which I am now quoting. The other matter of some importance is a quotation of Mr. Christopher Heath's,

with apparent approval, from Mr. Watson Cheyne's lecture, as follows: "The peritoneum has marvellous powers of absorbing fluids, and thus effusions into it are very rapidly removed, and in this way micro-organisms are deprived of the necessary nutrient material, while they are also in all probability absorbed along with the fluid and destroyed in the blood or excreted." This is precisely the contention for which those who, like myself, have been sceptical all along both as to the theory and practice of the so-called aseptic surgery have been arguing. For my own part, I have always held that it is the *pabulum* upon which germs may feed that we have to deal with, and not the germs.

The conclusion, therefore, that I arrive at is that the improvements in modern surgery are due in the first place to the introduction of the drainage tube by Chassaignac and the absorbent cotton-wool by Gamgee, and that the theory and practice introduced by Lister were alike mistaken and misleading. This has been proved completely by the results of peritoneal operations; and though Mr. Watson Cheyne indulges in an inconsistency by attempting an explanation which would lead us to believe that the peritoneum and its contents differ in their processes from other tissues of the body, those of us who are concerned in dealing with them every day know that this is not so. If proof were needed further, it can be afforded in the case of removal of the breast, an operation which I perform very frequently, and in which I have obtained results by means of the drainage tube and hydrophile cotton infinitely superior to anything which can be shown by the most elaborate aseptic process. That there is anything better in general surgery to be obtained by the numerous and constantly differing details introduced and advocated by Lister and his followers no real proof has ever been attempted. If it could be shown that out of a thousand amputations below the knee, performed with strict so-called aseptic details, there was a very much less mortality than without the adoption of such details, we might be inclined to accept something of what Mr. Christopher Heath and Mr. Watson Cheyne seem to argue for. But no one has attempted in the most elementary degree to tabulate the statistics of such common operations, far less to report them on the strict principles adopted by us for our abdominal sections; and the hospital of all others from which we might expect some kind of statistical argument in favour of Listerism—King's College Hospital—is the one from which no kind of human effort seems capable of extracting information.

I am, Sirs, yours faithfully,

Birmingham, July 11th, 1888.

LAWSON TAIT.

WHAT IS THE PRESENT POPULATION OF OUR LARGE TOWNS?

To the Editors of THE LANCET.

SIRS,—This question, to which you called attention in your last issue, is one of especial importance to medical officers of health, and I would urge the desirability of those gentlemen supporting the recent memorial of the Royal Statistical Society to the Local Government Board in favour of a quinquennial census. That the present official estimates of populations are in many cases quite untrustworthy is admitted on all hands, but similar estimates, if checked by an enumeration every five years, would be sufficiently close for all practical purposes. I submit that not only is the population of individual towns a matter of uncertainty at the present moment, but even the population of the whole country.¹ The increase of emigration and the great fall both in the birth-rate and the death-rate cannot but have had a notable effect not only on the number but also on the age-constitution of the population, so that to-day we cannot be said to have any solid basis upon which to found vital statistics; moreover, we shall be yearly in a worse and worse condition until the figures of the next census see the light. I would remind your readers that a quinquennial census is taken in the following countries—Germany, France, New Zealand, Queensland, Manitoba, the North-West Territory of Canada, and several of the United States (twelve States and three territories). Why should England, the richest country in the world, that in which the population question is most urgent, and the generally admitted leader in all matters related to preventive medicine, lag behind in this one respect?—I am, Sirs, your obedient servant,

Wandsworth, July 14th, 1888.

G. B. LONGSTAFF.

¹ See Journal of Statistical Society, 1886, pp. 760-3.

OSTEO-PLASTIC RESECTION OF THE FOOT.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow a few remarks in criticism of Mikulicz's operation, as described by Sir Wm. Mac Cormac in your issue of May 5th, which has but just reached me. I do not of course impugn Sir W. Mac Cormac's selection of an operation for the very successful case he describes and figures, but refer simply to the indications for such an operation, which it appears to me are few and rarely met with. The doubtful points in the Mikulicz method seem to be—(1) the sacrifice of the heel as a means of locomotion; (2) the extensive removal of soft parts; (3) the ankylosis with the metatarsus in the line of the limb.

In 1885 I performed the following operation, of which a brief account was published in the Kashmir Mission Hospital report for that year. I quote *verbatim*:—"The patient, a lad, had disease of the tibia, ankle joint, and tarsus. At first amputation seemed inevitable. But his constitution was good. I therefore began by resecting the diseased tibia, a portion five inches long. Within two months the wound was healed. By a second operation I removed the tarsal disease, fortunately limited to the astragalus and os calcis. Within six weeks the patient was able to walk about, and the deformity from flatness of the heel was slight." In this brief digest, which I trust some day to supplement by a full one, several salient facts were omitted. The tibia was perfectly replaced by its periosteum. The epiphyseal cartilage was left untouched by either operation, the second of which was an excision of the ankle joint and a partly subperiosteal removal of the two bones mentioned. I had expected to remove the rest of the tarsus, but found it healthy. During the after-treatment the foot was fixed in a line with the leg on a straight splint. Thus at first there was hardly any cavity left. I expected a sort of ankylosis in this position. But the growth of new tissue began soon to fill out the heel, and I therefore allowed the foot gradually to resume its natural position. The result, as a sketch taken at the time shows, was a mobile, useful, and almost undeformed foot. I have no doubt many somewhat similar cases have been recorded, in addition to that of Dr. Swann in your issue of May 19th, and I do not write to claim priority or special originality, but to elicit the opinions of those who have practised extensive resections as to the sphere of the so-called "osteo-plastic resection of the foot." There may be cases in which it is impossible or undesirable to retain the heel, and possible to retain the anterior part of the foot. These, and these only, appear to me to indicate Mikulicz's operation; such cases, for example, as gunshot wound of the heel and ankle, or disease of the tarsus with extensive implication of the skin of the heel. Apart from such disease or injury of the *soft parts* of the heel, indications for removal of the posterior and most important arm of the foot-lever must be rare. The operation is indeed an *amputation of the heel*, and its result is a *stump ending in toes*. It is even open to question whether the result is as useful as or more slightly than a Syme's amputation. It is certainly far inferior to the eventual results of a successful resection of the tarsus and ankle joint both in appearance and utility; but if it be reserved for such cases as I have indicated above, neither the ordinary methods of resection nor a Syme's amputation come into competition with it.

I am, Sirs, yours obediently,

ARTHUR NEVE, F.R.C.S. ED.

Kashmir Mission Hospital, June, 1888.

MAJOR AMPUTATIONS TREATED ANTISEPTICALLY.

To the Editors of THE LANCET.

SIRS,—Mr. Frederick Page, in THE LANCET of last week, records the fact that in the Newcastle-on-Tyne Royal Infirmary during the last year sixty patients were submitted to sixty-two major amputations (upper and lower extremities), and that the mortality was two persons, being a death-rate of 3·3 per cent. I freely admit the excellence of such an unusual result, but, as one of those who are much interested in statistics of the above kind, I feel that the interest, value, and importance of such would be increased and made more complete if Mr. Page would mention the age of the

patients operated on, and would also be good enough precisely to define what is implied by the word "antiseptically."—I am, Sirs, yours faithfully,
Wolverhampton, July 15th, 1888. T. VINCENT-JACKSON.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE SICK CHILDREN'S HOSPITAL: PROPOSED ROYAL VISIT TO NEWCASTLE.

At a meeting of the Sick Children's Hospital Committee, held on Friday last, the Mayor presiding, Mr. John Fleming reported his interview with Lord Armstrong relative to the proposed visit of his Royal Highness Prince Albert Victor to Newcastle on the opening of the new hospital so handsomely erected and furnished by Mr. Fleming. It was understood from a communication made that the Prince of Wales favoured the idea, and promised to carry out the arrangement if possible. Lord Armstrong will entertain the Prince at his seat (Craigside, Rothbury), and it is anticipated that the hospital will be opened about the first week in September next. If the Prince could be induced to open the new College of Medicine here, should it be so far advanced by the time, it would be an advantage. I have already mentioned that a portion of the College is to be ready for use in October, but I fear the present weather is not favourable to the progress of building operations.

TYNEMOUTH POLICE AMBULANCE CORPS.

The borough of Tynemouth Police Ambulance Corps have been lately examined by Mr. Frederick Page and Mr. G. E. Williamson, lecturers at the College of Medicine, and surgeons to the Newcastle Royal Infirmary. Dr. W. P. Mears was the instructor of the class. The men, thirty in number, were put through a variety of manoeuvres well contrived to show their skill and knowledge of first aid to the injured. The men were commended for their knowledge by the examiners, and Dr. W. P. Mears was complimented by them for his successful instruction, and the whole of the men would be recommended for certificates to the University of Durham. It is right to mention that there has been some correspondence on this subject in our local papers, the writers contending that the University of Durham is trenching on the work of the St. John Ambulance Association; but surely there is work enough for both in this department, and the University of Durham has at least a right to instruct and certify in its own district. The letters I refer to were all anonymous, and are therefore deficient in the weight which they perhaps might have had if the writers had given their names.

STOCKTON AND MIDDLESBROUGH.

Dr. Malcolmson, medical officer of health at Middlesbrough, has published a report in which he says that up to the present time only five deaths have occurred in the borough from pneumonia during the present month, being at the rate of fifteen per month, whereas during the preceding two months the numbers were between sixty and seventy. The Stockton sanitary authority has decided to purchase the property belonging to the late Dr. Oliver in order to erect a temporary hospital. It was stated that there was a farmhouse which could be utilised for the accommodation of the staff, and three acres of land on which concrete foundations could at once be put in, so that a temporary hospital could be erected in two or three days if required.

SCARLATINA IN NEWCASTLE.

The scarlatina epidemic in the West Jesmond district of Newcastle is, I have reasons for thinking, not increasing in extent, but cases are nevertheless occurring in other parts of the city; in this, I believe, it follows its usual course—that is, it breaks out, as it were, with fury in a district, wears itself out there, but gradually gets disseminated to other districts before it finally disappears. The National Veterinary Association is to meet here to-day, and our active medical officer of health is to read a paper on Comparative Pathology. It is to be hoped that our veterinary and sanitary authorities, acting together, may attack and clear up some of the moot points in connection with animal and human disease—for instance, as regards the present scarlatina epidemic in Newcastle.
Newcastle-on-Tyne, July 17th.

ABERDEEN.

(From our own Correspondent.)

THE ABERDEEN UNIVERSITY.

THE summer session was brought to a close on Friday, the 13th inst., and the professional examinations began on Saturday. A large number of candidates have come forward at this term—viz., eighty-two for the first division of the first examination, and over forty for the second division; forty or more for the second examination, and between thirty and forty for the final.

RESIGNATION OF PROFESSOR BRAZIER.

Professor Brazier is about to resign, or has already resigned, the Chair of Chemistry, to which he was appointed in 1862. While lecturing to his class last session, he was seized with an illness which has incapacitated him from active duties since; and when it became known that he had resolved to resign, the students held a mass meeting, at which it was unanimously resolved to express their regret that Professor Brazier should find such a step necessary, and their sympathy for him in his illness. The chairman of the meeting said that by the resignation of Professor Brazier they lost not only the oldest and a most respected member of the Senatus, but a thorough student's friend.

THE HEALTH OF THE CITY.

At a meeting of the Public Health Committee, held on the 11th inst., the monthly reports of the medical officer of health and the sanitary inspector were submitted. They showed that during the month of June there was a decrease in the number of zymotic diseases from 93 to 41. At the date of the meeting there were 9 patients in the City Hospital, compared with 59 at the same date last year. During the month there were 180 deaths, equal to a death-rate of 18.40 per 1000. During the six months ending June 30th, 550 cases of zymotic diseases were reported, and £50 17s. were paid to medical practitioners for the reporting of those cases. For the same period last year, the sum paid to medical men was £340.

Aberdeen, July 17th.

DUBLIN.

(From our own Correspondent.)

AMALGAMATION OF THE DUBLIN MEDICAL SCHOOLS.

I AM not so sanguine as some appear to be of the successful way in which this scheme is progressing. The report of the committee appointed by the Council will come under discussion this evening; but, knowing the details of the proposed scheme as I do, I believe that unless it is modified in some respects there will be considerable uncertainty as regards its ultimate adoption. There are some individual cases of hardship which a scheme which it was declared would be carried out on equitable terms should not countenance; and if the promoters of the amalgamation scheme wish the schools to act harmoniously they must alter in some respects their present arrangements, and render it more equitable and just to all concerned.

SOUTH DUBLIN WORKHOUSE.

Mr. Robinson, Local Government Board Inspector, in his half-yearly report as to the condition of this institution, states that the Garden Infirmary is quite unsuitable for the large number of inmates it is made to accommodate at present. It has no day-room accommodation whatever, the meals are taken in the passage between the beds, and in the winter the dormitories have to be occupied by day to a considerable extent, an arrangement which is not conducive to health or comfort. The amount of cubic space for each bed in this building is also very small. The nursery sheds and the separation wards are stated to be quite unfit for occupation, and either new sheds on the site of the present ones should be built, or these two classes should be transferred elsewhere.

SANITARY CONDITION OF CORK.

At a recent meeting of the Corporation a resolution was moved that the domestic scavenging of the city should

be undertaken by that body, in accordance with the report of the medical superintendent officer of health, city engineer, and executive sanitary officer, at a cost of £250 a year in addition to the present expense. Dr. Donovan, medical officer of health, in a recent report, states that domestic scavenging was the most important question in connexion with the health of the city. He attributed such diseases as cholera, typhoid fever, and diarrhoea to uncleanness, and considered the long continuance of the epidemic of typhoid fever with the diarrhoea to be due to the filth surrounding the city. The scheme, as proposed, will be adopted, the details being referred to the Public Health Committee.

Dublin, July 17th.

BELFAST.

(From our own Correspondent.)

BELFAST SKIN HOSPITAL.

FROM the report read by Dr. H. S. Purdon at the annual meeting of the friends of this hospital, held on July 9th, I find that the income during the past year was £276 11s. 7d., whilst the expenditure was £282 1s. 11d. The total number of persons treated was 1110, this being a larger number of persons treated than in any preceding year. On the other hand, there is a slight falling off in the number of in-patients, due to the fact that for several months past none but pay patients have been admitted. It is a matter for regret that this charity receives no support whatever from the country districts, whilst every week someone is applying for treatment at the hospital from the surrounding districts and towns.

THE BELFAST DISTRICT LUNATIC ASYLUM.

IN the fifty-eighth annual report of this institution, which has just been published, Dr. Merrick, the efficient superintendent, states that on Dec. 31st, 1886, the numbers in the asylum were 601. During 1887 the admissions have been 210, making the total number of those under treatment 811. There have been 149 discharges and 35 deaths, leaving in residence on Dec. 31st, 1887, 627. No cases of infectious or contagious diseases occurred during the year, and the general sanitary condition of the institution was satisfactory. The asylum has at present accommodation for 550 inmates. According to the opinion of the Lunacy Commissioners, an addition for at least 300 inmates should be provided to meet contingencies, and, it would appear, the question to be decided is, should this additional accommodation be provided within the present asylum grounds, or in a country place, to act as a receptacle for the chronic patients and serve to classify the patients under treatment, and also to relieve the congested condition of the present overcrowded asylum. The Lunacy Commissioners advise the latter view, which will probably be carried out.

NORTH OF IRELAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

The tenth annual meeting of this Branch, which was very largely attended, was held in the Belfast Royal Hospital on July 11th. The President (Dr. J. M. Palmer of Armagh) delivered an able address on the present position and prospects of the medical profession. Professor Dill was elected President for the ensuing year, with Dr. A. George (Lisburn) and Dr. Whitla as Vice-Presidents. Dr. Gray (Castellwellan) was re-elected Treasurer, and Dr. Byers Secretary. In the evening the members dined together in the Royal Avenue Hotel. Dr. Palmer presided, while Professor Dill acted as vice-chairman.

NORTH OF IRELAND BRANCH OF THE BRITISH TEMPERANCE ASSOCIATION.

On Wednesday, July 11th, the President, Brigade Surgeon McFarland, entertained the members of this Association to breakfast in the Lombard Hall, Belfast. A good many were present, and, from what was reported, it is apparent that the Association is gaining many adherents amongst the younger members of the medical profession here.

APPOINTMENT OF DISPENSARY MEDICAL OFFICER.

Owing to Dr. Clements' appointment as Local Government Board medical inspector, a vacancy occurred in one of the Belfast dispensaries, and to this Dr. Barron was trans-

ferred. For Dr. Barron's post there has been a stiff canvass, but at the election on Monday last Dr. Ferguson, who has for some time been senior resident surgeon in the Union Hospital, was elected by a large majority. I understand that Dr. Clements is about to be presented with a silver salver and tea and coffee service by his colleagues in the Poor-law service and Ulster Hospital.

Belfast, July 17th.

PARIS.

(From our own Correspondent.)

GENERAL BOULANGER'S WOUND.

THE duel between M. Floquet and General Boulanger, which took place at 10 A.M. on Friday last, has created some sensation in and out of France. As the newspaper reports are somewhat confusing and contradictory, I called on Dr. Labbé, the well-known surgeon, who is in attendance on General Boulanger, in order to obtain some authentic information, the substance of which I now forward to you. The weapons used on the occasion were small swords, and at the word of command by one of the seconds to commence the attack General Boulanger assaulted his adversary in a most furious manner, when the contest between the two combatants became so fierce that the seconds had to interfere. It was then discovered that M. Floquet had received a slight wound in the left thigh, and General Boulanger a scratch at the back of the right hand, and also a wound penetrating the skin just above the right knee and slightly grazing the joint. In the second bout the General attacked his adversary with the same fury, and delivered a thrust straight at his chest, when the latter, after parrying the stroke, wounded the General in the neck, the point of the sword having penetrated on the right side, about the level of the hyoid bone. At this moment, the General having bent down, the point of the sword was directed downwards, wounding the anterior and superficial jugular vein, which caused profuse hæmorrhage, which, however, was soon arrested, and the wound was dressed antiseptically. There was also some effusion of blood about the wound. It is probable that the phrenic nerve was also wounded, as immediately afterwards serious trouble of the respiration, accompanied with violent pains about the level of the insertion of the diaphragm, occurred. These were followed by several attacks of oppression. During the night following the day of the duel the patient suffered so intensely from pain in the chest, and was so agitated, that recourse was had to a subcutaneous injection of morphia, which relieved the pain and quieted him. Thirty-six hours afterwards emphysema made its appearance on the right side of the neck, which would prove that the point of the sword had penetrated into the larynx or trachea. Till now the general reaction has been moderate, and the wound has healed up; but, fearing a lung complication, Dr. Potain yesterday called in consultation, and this gentleman detected a slight congestion at the base of the right lung. The bulletin of this morning states that the patient is doing as well as can be expected under the circumstances, but the four doctors who are in attendance are reserved as to the issue of the case, as it is impossible to foresee what complications may arise.

SACCHARIN.

In continuation of the debate at the Academy of Medicine on Saccharin, which was reported in THE LANCET of last week, Dr. Constantin Paul made a communication at its last meeting, in which he lauded saccharin as an antiseptic. He considers it of great value in affections of the alimentary canal, as it is not toxic, and presents an odour and a savour rather agreeable than otherwise. Moreover, he added that saccharin is not only not toxic, but in the usual doses, not exceeding twenty centigrammes, it causes no trouble whatever of nutrition. Urea, phosphoric acid, and the salts undergo no change in their quantity. He has had diabetic patients who have been taking saccharin for the last five months and more without any inconvenience, and who could not do without it. To determine the action of saccharin on digestive fermentations, the author performed certain experiments, from which it results that, added in the proportion of 2 per cent., this substance impedes, in an appreciable manner, the action of pepsin on the fibrin of

the pig and on the white of egg, and the action of diastasis on starch, without arresting them altogether. He found, however, that, if saccharin arrested or retarded certain fermentations, it favoured others, that of milk in particular. This action of the digestive fermentations explains why certain diabetics are obliged to give up the saccharin, as in some of them it caused pain in the stomach and in others diarrhoea. But if it cause trouble in a few, this was no reason for depriving others of it who could bear it well, and who would regret to have at their disposal only insipid drinks. Saccharin is also anti-putrescent: in the proportion of $\frac{1}{300}$ it is susceptible of preventing the ammoniacal fermentation of urine; in short, it is antiseptic. Possessing these properties, Dr. Constantin Paul recommends saccharin as a good mouth wash. He prepares alkaline solutions of saccharin at 6 per cent., of which it is sufficient to put a teaspoonful in half a tumblerful or about four ounces of water to have an antiseptic wash for the mouth. This solution may be easily coloured and aromatised. The same solution answers for washing out the stomach; and it will be found useful in putrid dyspepsia, in dilatations of the stomach, and in cancers of that organ. Antiseptic drinks may also be administered with saccharin wherever sugar is contra-indicated. Dr. Constantin Paul, however, found that the antiseptic power of this substance is rather limited; for instance, it has no action whatever on the microbe of typhoid fever. Its elimination by the kidneys and its action, on the ferment of urea indicate its utility in diseases of the kidneys and in purulent affections of the bladder. It may be used as a substitute for boric acid for washing out this organ.

The inspectors at Boulogne discovered, on July 4th, the presence of the "cysticercus bovis" in a cow of the Bernois breed, which was seized with indigestion accompanied with meteorism at the slaughter-house. This case is interesting, as it is the first that has ever been met with in France.

The Council of Hygiene have advised that the regulations concerning cow-houses should be strictly enforced, and that phthisis should be included in the nomenclature of the diseases of animals reported to be contagious.

Paris, July 17th.

INDIA.

(From a Correspondent.)

THE SANITATION OF INDIA.

THE lecture at the Parkes Museum in London by Mr. Justice Cunningham, and the comments thereon in THE LANCET of May 12th, are, I am pleased to note, attracting no inconsiderable attention in this country. Many of the leading dailies have either reproduced them *in extenso*, or have made them texts for editorial articles. Mr. Justice Cunningham deserves well of India for thus spending his furlough.

TYPHUS FEVER IN 1886.

In the last report of the Sanitary Commissioner with the Government of India, under the head of "Pneumonia" we are told that this prevailed in an epidemic—I had almost written endemic—form in the prisons of the Punjab and Sind. It would appear from information given in tabular form that in 1886 the admission-rate per 1000 was 36.2, and the death-rate 10.71, in these two provinces. As compared with figures contributed by other provinces, these latter were 12.2 and 4.22 respectively; as compared with those of 1885, these respectively were 33.0, 11.51, 11.7, and 4.01. The Inspector-General of Prisons of Bombay, in remarking upon the high mortality in the prison at Hyderabad in Sind, says that it was chiefly from "lung diseases, due to extreme cold." It seems that this was a form of "fever" or pyrexia, with pneumonia as the most prominent symptom or characteristic, and that with the advent of cold weather it made its appearance and attacked prisoner after prisoner, as though, it would appear from the description, it were an infective disorder. Precautions, we are told, were taken in the way of warm clothing, shortening of labour, keeping convicts in warm barracks till the sun had well risen in the morning, and the addition of clarified butter to the diet. No mention, however, is made as to isolation of the sick. Being one of the points which received attention, also whether overcrowding was avoided. The Inspector-General of Prisons of Bombay writes that the precautions mentioned

above "were not attended with much success." Some important remarks upon the same form of epidemic pneumonia which prevailed in the Punjab find a place in the report, and they are from the pen of Dr. Gray, the Inspector-General of Prisons in that province. The disease was in reality typhus fever, the pneumonia not being the "original disease," but merely a complication. Whether or not pneumonia is ever infectious, as Dr. Dickson, the superintendent of the Lahore Central Gaol, thinks, there is no doubt that it is a very frequent complication of other diseases which are undoubtedly infectious. As the primary disease is not always distinguishable from the complication, Dr. Gray has come to the conclusion that in the treatment of these cases of "pneumonia" (whatever it may be called) it would be advisable to take precautions similar to those taken in treating an infectious fever. Typhus is most prevalent in the cold weather, and pneumonia is also most common in times of low temperature.

"SCIENTIFIC MEMOIRS": BLOOD CHANGES IN MALARIAL FEVERS.

These "Scientific Memoirs," which have already been alluded to in your columns, contain some valuable papers. A few of them may now be noticed briefly. Mr. D. D. Cunningham, M.B., contributes "Notes from the Biological Laboratory," which paper is devoted to the results of his investigations on points connected with the etiology of Asiatic cholera. He criticises Professor Koch's view that the comma bacilli are concomitant factors of the disease. Outside the human body, his experiments, though small in number, go to indicate that these organisms (cholera commas) are not capable of holding their own in the struggle for existence along with other bacteria, and they soon die and disappear. When fluids containing them were injected subcutaneously in guinea-pigs, it was found that the bacilli multiplied with great rapidity in the peritoneal cavity. This led Mr. Cunningham to make careful examinations of this part of the body in human subjects dying of cholera, but with a negative result. Dr. G. Bomford's contribution, "Observations on Bacteria in Cholera," is also of interest. He examined microscopically various tissues in nine fatal cases of cholera which occurred at the General Hospital in Calcutta. Out of the seven cases in which he appears to have examined the intestines, in only one could curved bacteria be demonstrated in the mucous membrane, and in this instance they had penetrated below it. There are three interesting papers by Dr. Vandyke Carter. One is on "A Minute Blood Spirillum in an Indian Rat." This is noteworthy on account of its rarity and non-pathogenic character. Experimental research went to show that it was non-communicable. Dr. Carter's second paper, I notice, is devoted to the equine malady called "Surra," which rages endemically in certain parts of India and Burmah. In this infective disease the author finds a peculiar hamatozoon common to both horse and rat, thus going to confirm the previous researches of the late Dr. Timothy Lewis. The third paper is the most important of all. It is on "Some Aspects and Relations of Blood-organisms in Ague."

THE CHOLERA.

The attacks from cholera during the last seven days, of which a report is published, have numbered 982, and of this number 360 terminated fatally, showing a daily average of 140 and 51 respectively. The attacks, I understand, have not increased and the daily number of deaths has decreased. The disease has extended its ravages to the surrounding villages in Cashmere, attacking some with considerable virulence. In one village, containing a population of 200, in eight days twenty-seven persons of divers ages were attacked, and eighteen died. The season's returns indicate the continued presence of cholera in many districts of the Bombay Presidency. Of these, Ahmedabad has suffered severely. The question is by no means simply one of local concern, for by means of railway communications the ravages rapidly spread in all directions, including that of Europe. Apart from this, in Bombay itself ten deaths were registered during the last week, and how many occurred without registration must be a matter of conjecture. Cholera has been bad in Thannah and Surat. Indian newspapers are constantly pointing out the inactivity and unconcern displayed by the majority of municipalities which is, indeed, very reprehensible.

Bombay, June 26th.

THE SERVICES.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon and Honorary Surgeon-Major John Lewis Wm. Ward, 3rd Volunteer Battalion, the Welsh Regiment, to be Surgeon-Major, ranking as Major (dated July 18th, 1888); Acting Surgeon Edward Williams, 1st Lancashire Engineer Volunteer Corps, to be Surgeon, ranking as Captain (dated July 18th, 1888).

ENGINEER VOLUNTEERS.—1st West Riding of Yorkshire (Sheffield): Charles Henry Willey, M.D., to be Acting Surgeon (dated July 14th, 1888).

RIFLE VOLUNTEERS.—4th Volunteer Battalion, the Essex Regiment: Llewellyn Thelwall, Gent., to be Surgeon (dated July 14th, 1888).—1st (Ross Highland) Volunteer Battalion, Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): Colin Mackenzie, M.B., to be Acting Surgeon (dated July 14th, 1888).

Obituary.

GARNETT GEORGE TATHAM, M.D., L.R.C.S., &c.

It is with regret we have to announce the death of Dr. Tatham, which took place at Denver, Colorado, U.S., from phthisis, where he had gone for his health. He was a most thorough physician and surgeon, not only in one but in all branches of his profession, though most particularly in pathology and diseases of the eye and throat. He was of a retiring disposition, kindly, and ever willing to help any members of his profession by his advice and skill. Dr. Tatham was educated at the Tiverton Grammar School and Mansion House School, Exeter, where he obtained distinction. In 1871 he entered the Manchester School of Medicine, gaining numerous prizes and special certificates, and obtaining the L.R.C.S. and L.M.Ed. in 1875. Then at Queen's College, Galway, he graduated M.D. in 1877, with distinction. He was medical officer to the Wilton Fever Hospital, Salford, and acted as deputy for his brother, Dr. John Tatham, medical officer of health for Salford. Wishing to further his studies, he entered the Wurzburg University in 1875, under Kölliker, and amongst his teachers were Billroth, Virchow, Rindfleisch, Cornil, Ranvier, Frey, Landolt, Gerhardt, Exner, Borky (Ireland), and Annandale. Returning to England, he married a daughter of the late Dr. John Tatham of Wigan, and entered into private practice in St. Helens, which he shortly after gave up for the appointment of district medical officer and public vaccinator to the Wigan Union in 1879-88, which he held till a few months before his death. He obtained the Sanitary Science certificate of Cambridge, and held the appointments of medical officer of the West Lancashire Masonic Educational Institute and surgeon to the 17th Lancashire Rifle Volunteers (3rd Fusiliers). Dr. Tatham had travelled, and tried the climate of Switzerland and Germany, and also a voyage in the Mediterranean. Finally, by the advice of his physicians and friends, he decided on Colorado, leaving England in January, and carrying with him many tokens of goodwill. It was feared the journey would try his strength, but he landed safely, and slowly improved until the morning of May 14th, when he succumbed very suddenly, at the early age of thirty-four years. His funeral was attended by members of the Medical Societies in Denver, who sent wreaths. Dr. Tatham leaves a widow and one son, and will be greatly regretted by all who knew him, not only as a kind and skilful physician, but as a true friend. He was a member of the Manchester and Wigan Medical Societies, and of the British Medical Association.

DR. LUDWIG KOCH.

THE British-American colony in Munich have scarcely less cause than the native society of the Bavarian capital to lament the decease of this eminent Court physician, which took place on the morning of the 13th inst.

Dr. Koch was born on March 4th, 1806, at Munich, and while still young in the medical profession was chosen to accompany the Bavarian Crown Prince (afterwards King Maximilian II.) on his travels in Italy and the East. On his return he settled as a general practitioner in his native

city, and soon gained the confidence of a large *clientèle* by his shrewdness in diagnosis, his skill as an operator, and his success in treatment. He rapidly conciliated the favour of the higher circles of society, in which his charm of manner and conversation eminently fitted him to shine, and he became the body physician of H.R.H. Duke Maximilian, at whose table he was a constant guest. His winning address and his cultivated tastes, however, were not more attractive to the Duke than his frank, upright, independent character—qualities which had endeared him to his royal patron in the youthful studies they had pursued in common. Dr. Koch possessed considerable poetical faculty, which, in the lyrical dramas which formed so prominent a part of the "Alt-England" festivities of the Bavarian Court, found congenial scope in a gay, satiric, never unkindly vein; while several of his songs and verses *de circonstance*—the "Hymne au Hertha" may be specified—gained additional vogue by the music to which they were set by the composers Franz Lachner and Konrad Max Kunz. All throughout his career he was still the steady, duty-doing, successful practitioner, and the public esteem he so honourably earned was amply attested in 1876 on the occasion of his fifty years' jubilee as a physician, and again, even more emphatically, in 1886, on his attaining his eightieth birthday. "His rare merits," says one who knew him well, "his undeviating fidelity to all his friends in the multifarious vicissitudes of life, are sure of cherished remembrance with those who enjoyed his intimacy, or who even came into contact with him occasionally." At the Bavarian Court, and in the *salons* of the *corps diplomatique*, it will be long before his genial presence, his shrewd, animated conversation, and his sound advice cease to be missed.

Dr. Koch had felt unwell for some days, but no immediate danger was suspected, till sudden failure of the heart carried him off.

Medical News.

THE workpeople of Leeds have subscribed £179 odd to the General Hospital of the town.

THE foundation-stone of the new French hospital in Shaftesbury-avenue is to be laid to-day (Saturday).

AT an inquest held on the 18th inst. at the Middlesex Hospital, it was stated that five deaths had occurred in that institution during the present year through drinking poison by mistake from unlabelled bottles.

CONVERSION OF BURIAL-GROUNDS.—The vestry and churchwardens of St. George's, Hanover-square, have applied for a faculty to convert the disused burial-ground of the parish, situate near the Bayswater-road, into a garden.

THE YORK SEWERAGE SCHEME.—At a special meeting of the Town Council on Tuesday last, it was resolved to carry out a plan of sewerage and public improvement for the city, at an expenditure of £93,000.

THE MARY WARDELL SCARLET FEVER CONVALESCENT HOME.—The annual meeting of the friends of this useful institution was held on the 14th inst. at Stanmore. The chair was occupied by Sir Risdon Bennett, who remarked that there were still some structural alterations to be carried out, and a small debt remained to be paid off.

PROVINCIAL HOSPITAL SUNDAY AND SATURDAY COLLECTIONS.—The second annual Sunday parade of members of the friendly societies of Wokingham on Sunday, the 8th inst., produced £21 6s. 2d., which will be given to the Royal Berkshire Hospital. On Sunday, the 15th inst., the Musical Festival promoted by friendly societies of Normanton realised about £20, which sum is to be sent to the Leeds and Wakefield Infirmaries.

A NEW CEMETERY FOR LONDON.—On Tuesday Dr. Hoffman, of the Home Office, inspected some land comprising thirty-four acres at Golder's-green, Child's-hill, Hampstead, which it is proposed to purchase for a proprietary cemetery. An inquiry was subsequently held at Hampstead, and the scheme was strongly opposed by the Ecclesiastical Commissioners, the Hendon Local Board, and many residents. Dr. Hoffman will draw up his report, which will be laid before the Home Secretary.

SOCIETY OF MEDICAL OFFICERS OF HEALTH (NORTH-EASTERN BRANCH).—Dr. Kenyon (Chester) presided at the monthly meeting of this branch of the Society, held at King-street, Manchester, on the 12th inst. Dr. Vacher (Birkenhead) read an interesting paper with regard to the one of rural districts surrounding large towns, where typhoid fever and diphtheria seemed to be endemic, and explained the apparent cause of local outbreaks of typhoid fever. A draft memorial to the Home Secretary was proved on the dangers to the public health of insanitary practices at interments and the insanitary state of many burial grounds, requesting, with a view to legislation, an inquiry by Royal Commission on the subject.

PROPOSED NEW HOSPITAL AND DISPENSARY, CARBOROUGH.—At the last annual meeting of the Hospital Committee and supporters Lieut.-Colonel Steble was elected president, and has taken great interest in the working of the institution. The present hospital is badly situated and inadequate to the requirements of the town. Lieut.-Colonel Steble has proposed a scheme for removing the hospital to a more suitable locality. By his invitation a consultation with the vice-presidents of the hospital and others has recently been held to consider the proposal, which resulted in a resolution to remove the hospital to a more open and eligible situation. The chairman will give £1000 and Mrs. Steble £100 towards the object. Other subscriptions have been announced, and a meeting at an early date will be called for further promoting the project.

BEQUESTS AND DONATIONS.—Mr. Henry Brace, late of Mayfield, Walsall, has bequeathed £500 to the Nalsall Cottage Hospital.—The late Mr. F. Fellow Wilson, of Portman-square, London, has left by his will £2000 to St. Mary's Hospital, Paddington.—Mrs. R. M. Morley, late of Hall-place, Kent (widow of the late Mr. Samuel Morley), has bequeathed £500 to the Training Hospital, Tottenham.—The Town Council of Bury received last week a further donation of £5000 from Mr. T. O. Openshaw, to be devoted for the maintenance of the park he had previously given at a cost of £10,000.—The Chelsea Hospital for Women has received a grant of ten guineas from the Prudential Assurance Company.—A donation of £370, being part of the proceeds of the recent Universal Cookery and Food Exhibition, has been received by the treasurer of the Charing-cross Hospital.

MEDICAL NOTES IN PARLIAMENT.

Victoria University Bill.

In the House of Lords on the 17th inst., the Victoria University Bill passed through committee.

Habitual Drunkards Act.

On the 17th inst. this Bill passed its final stage.

Local Government Bill.

On the 18th inst., the House of Commons went into committee on the Local Government Bill, the new clauses proposed to be added being under consideration. On the motion of Mr. Ritchie, clauses concerning the transfer of certain powers under local Acts, the power of the county council as to the report of the medical officer of health, the appointment of commissioners, arbitration by the Local Government Bill, and other matters, were read a second time without discussion, and added to the Bill. A new clause, proposed by Mr. Hobhouse, vesting the appointment of coroners in the county council, was assented to by Mr. Ritchie, read a second time, and added to the Bill. Mr. Stansfeld moved a new clause providing that county councils might, if they saw fit, employ and pay a medical officer or medical officers of health, and that the county council or any district council might make arrangements for rendering the services of such officer or officers available in the district of the district council upon such terms as to the contribution by the district council to the expense as might be agreed, thus relieving the latter from the necessity of appointing a separate medical officer under the Public Health Act.—Mr. Ritchie said that as the clause did not take away from the district councils the power of appointing their own medical officers if they chose, he would assent to it. The clause was, after some discussion, read a second time, and added to the Bill.—Sir L. Playfair, on behalf of Sir W. Foster, moved a new clause, as follows: "Except where the Local Government Board, for reasons brought to its notice, may see fit in particular cases specially to allow, no person shall hereafter be appointed the medical officer of health of any district, or the deputy of any such officer, unless he be legally qualified for the practice of medicine, surgery, and midwifery; nor shall any person after Jan. 1st, 1892, be appointed the medical officer of health of any district or districts containing a population of 50,000 or more inhabitants, unless he be registered in the Medical Register as the holder of a diploma in sanitary science, public health, or State medicine, under Section 21 of the Medical Act, 1886." The discussion on the clause had not concluded at half-past five, when, by the rules of the House, progress was reported.

Medical Officers under the New County Councils.

In the course of Thursday's debate on the Local Government Bill, Sir Lyon Playfair moved the second reading of a new clause providing that, except where the Local Government Board, for reasons brought to its notice, may see fit in particular cases specially to allow, no person shall

hereafter be appointed the medical officer of health of any district, or the deputy of any such officer, unless he be legally qualified for the practice of medicine, surgery, and midwifery; nor shall any person after the 1st day of January, 1892, be appointed the medical officer of health of any district or districts containing a population of 50,000 or more inhabitants, unless he be registered in the Medical Register as the holder of a diploma in Sanitary Science, Public Health, or State Medicine, under Section 21 of the Medical Act, 1886.—Mr. Ritchie said he should have no objection to accept the clause proposed by the right honourable gentleman; but he thought it should be accompanied by a proviso that the exemption from its operation should extend to medical men who had been, during the three years preceding the operation of the Act, medical officers of health under a sanitary authority with a population of not less than 20,000.—Mr. Stephens spoken against the clause, and Mr. Picton in its favour, Sir Guyer Hunter denied that the amendment would interfere with the freedom of choice of the local authorities. No person should, he thought, be appointed medical officer of health unless the public had some guarantee of his efficiency, such as his right hon. friend proposed. He would like, however, to see the new clause accepted in its entirety, so that no man should be appointed as medical officer unless he had secured these diplomas.—Mr. Ritchie said the amendment he had suggested proposed that gentlemen who, having commenced their service before the passing of the Act, had served three years prior to this provision going into force in a district or combined district with a population of 20,000, should not be required to take out a licence.—Sir Guyer Hunter begged the right hon. gentleman's pardon. He had not gathered that this was so. He would like to ask, further, whether officers who held any appointments in perpetuity would come under such conditions.—Mr. Ritchie: They would not hold their office in perpetuity. A great many of these officers were appointed from year to year. The clause as amended would say that a local authority shall not be prevented from appointing men who had complied with the provisions named.—Dr. Farquharson commented the line taken by the President of the Local Government Board, and hoped the committee would accept the amended clause. The Bill would then, he thought, start the formation of a great scientific sanitary service throughout the country, improving the status of these men, and, he hoped, paying them well for their services.—Mr. Lawson asked if the clause would apply to London.—Mr. Ritchie said the hon. member for Dundee (Mr. Firth) had a new clause on the paper by which the Act would be applied to London, and the Government proposed to assent to the clause.—Mr. F. S. Powell wished to point out, as a member of the Royal Sanitary Commission, that though the report did not state it in so many words, the Commission never dreamt for a moment that any medical officer should not be a duly qualified medical man.—Dr. Clark regretted that Sir Lyon Playfair had accepted the amendment. What he should like to know, did they want a medical officer of health to be proficient in midwifery? Medical officers of health should be limited to men who had studied and gone through Universities of the licensing bodies, and had been licensed in State medicine. The amendment really meant that they were going to keep inefficient men in the position.—Sir Lyon Playfair pointed out that these diplomas were quite modern articles, and that some of the very best of medical officers who were now in the charge of large districts, and had reduced the mortality from zymotic diseases to one-half, had no such diplomas, because they did not exist when they were educated.—Sir Tindal Robertson would have supported the original clause, but considered the amendment eminently satisfactory.—At the suggestion of Mr. Brunner, Mr. Ritchie consented to make the three years of service continuous so as to ensure the full efficiency of the officer, and the clause was read a second time.—Mr. F. S. Powell moved to omit from the clause the words "legally qualified for the practice of medicine, surgery, and midwifery," and insert "for the time being registered under the Medical Act of 1858 or any Act amending the same," but this amendment was withdrawn.—Mr. Ritchie's amendment, to add, as an exemption "or has been during the three preceding years a medical officer of the district, or combination of districts, of a population of not less than 20,000," was accepted, and the clause added to the Bill.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 2 o'clock on the Thursday morning of each week for publication in the next number.

BEALE, E. CLIFFORD, M.B. Cantab., M.R.C.P., has been appointed a Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, vice J. Milner Fothergill, M.D., deceased.
BRADFORD, R. D., L.R.C.P. Edin., L.R.C.S. Edin., and L.S.M., has been appointed Medical Officer for the Billington District, Malton Union.
DANIELS, C., B.A., M.B. Cantab., M.R.C.S., has been appointed House Physician to the London Hospital, E.
ELKINS, FRANK ASHLEY, has been appointed Assistant Medical Officer to the Greenock Parochial Asylum and Poorhouse, vice Arnold E. Thorpe, L.R.C.P. and S., resigned.
FEGERTY, WM. A., M.A., M.D., M.Ch. Royal University, has been appointed Visiting Physician to Barrington's Hospital, Limerick.
GARDNER, J., M.D. Edin., M.B. and C.M., L.R.C.S. Edin., has been appointed Parochial Medical Officer of the Crief Parochial Board.
HORN, R. J., L.R.C.P.E. and L.F.P.S. Glas., has been appointed Medical Officer to the Norwich and St. Faith's Districts of the St. Faith's Union, vice J. Fielding, M.D., resigned.
KERSHAW, A., L.K.Q.C.P. Irel. and L.M., M.R.C.S., has been appointed Medical Officer for the Farnworth District, Bolton, vice Clarke, deceased.
LLOYD, J., M.B. Dur. and M.S., F.R.C.S. Eng., L.S.A., has been appointed Medical Officer of the Workhouse for the Parish of Birmingham.
MACLINTOCK, JAMES, M.D. Edin., M.B. and C.M., has been appointed Medical Officer and Analyst in the Colne Valley District, Bradford.
M'DONALD, BOUVIERE, M.D., C.M., L.R.C.P. and S. Edin., has been appointed Honorary Surgeon to the Wallasey Dispensary, Birkenhead.
MINNS, ALLAN G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Thetford Union House for the Thetford District, vice Archer, resigned.

MORGAN, A. L., L.R.C.P. Edin. and L.M., M.R.C.S., has been appointed Medical Officer for the Second District of the Holsworthy Union.
 NICHOLSON, W. T., M.B., C.M. Glas., has been appointed Assistant Medical Officer to the Barnhill Hospital, Glasgow.
 PARKER, H., M.R.C.S., has been appointed Medical Officer at the District School, Forest-gate School District.
 PLESSE, C. H., M.R.C.S. and L.S.A., F.C.S., F.L.C., has been appointed Public Analyst, Fulham.
 RAW, NATHAN, M.B., B.S. Dur., has been appointed Assistant Medical Officer to the Kent County Asylum, Barning Heath, Maidstone.
 SELBY, PRIDEAUX, M.R.C.S., L.R.C.P., has been appointed Assistant Medical Superintendent to the Croydon Infirmary.
 SIDBAT, R. S., M.B. Edin. and C.M., has been appointed Medical Officer for the Whalton District, Castle Ward Union.
 SMITH, R. PERCY, M.D., B.S. Lond., M.R.C.P. Lond., has been appointed Resident Physician and Medical Superintendent to Bethlehem Royal Hospital, vice G. H. Savage, M.D. Lond., F.R.C.P. Lond., resigned.
 TODD, H. B., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health to the Charlton King's Union, vice Gabb, resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.
 GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary, but residence, board, and washing provided.
 HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary £50 per annum, with residence, board, and washing.
 ITALIAN HOSPITAL, Queen-square, Bloomsbury.—Assistant Medical Officer.
 LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Senior House Surgeon.—Salary 50 guineas per annum, with board and residence.
 MORPETH DISPENSARY.—House Surgeon. Salary £120 per annum, furnished house, gas, and coals free.
 NORFOLK AND NORWICH HOSPITAL.—Resident Secretary and House Steward. Salary £100 per annum, with board and furnished apartments.
 POPULAR HOSPITAL FOR ACCIDENTS.—Honorary Surgeon for out-patients.
 STAFFORDSHIRE GENERAL INFIRMARY.—Assistant to the House Surgeon.
 SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon. No salary, but board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

HILL.—On the 13th inst., at Earl's-court-road, the wife of Thomas Wood Hill, L.R.C.P., M.R.C.S., and L.S.A., of a son.
 KENYON.—On the 9th inst., at Hooton Pagnell, near Doncaster, the wife of G. Herbert Kenyon, M.D., of a son.
 PIGGOTT.—On the 11th inst., at Orchard-gardens, Teignmouth, S. Devon, the wife of F. Cecil H. Piggott, M.B., B.C. Cantab., of a son.
 WARD.—On the 15th inst., at Brook-place, Tottenham, the wife of A. Ogier Ward, M.D., of a daughter.

MARRIAGES.

BOND—LUXON.—On the 10th inst., at St. Sepulchre's, City, Barnabas Mayston Bond, M.R.C.S., L.R.C.P., only surviving son of the late Barnabas Bond, of Alburgh, Norfolk, to Eliza Josephine, only surviving child of the late George Luxon, of Padstow, Cornwall.
 ELLIS—SMITH.—On the 11th inst., at St. Thomas's, Salisbury, by the Rev. John Pickering, brother-in-law to the bridegroom, assisted by the Vicar, the Rev. H. G. Rogers, and the Rev. T. J. Woodall, Sidney Ellis, M.R.C.S. Eng., L.S.A., of Culmstock, Devon, son of the late Edward Ellis, of Binsted, Sussex, to Bessie, second daughter of George Smith, Solicitor, of Westbourne, Salisbury.
 HILLSTEAD—CLOUD.—On the 17th inst., at St. Mary's Church, Wimbledon, by the Rev. Canon Haygarth, Herbert John Hillstead, M.B., third son of the late Mr. George James Hillstead, of St. John's, to Annie Cloud, younger daughter of Mr. T. F. Cloud, of Langar Lodge, Spencer-hill, Wimbledon.
 ROOCROFT—HEALD.—On the 17th inst., at the Parish Church, Wroughton, by the Rev. J. Wilson, Vicar, William Mitchell Roocroft, M.R.C.S. Eng., L.R.C.P. Edin., of Wigan, only son of William Roocroft, J.P., M.R.C.S. Eng., L.S.A., of Wigan, to Helen Edith, elder daughter of Thomas Heald, Greenfield House, Billinge, and Dwerly House, Harrock, Lancashire.

DEATHS.

BENNETT.—On the 15th inst., at Green Heys, Woodford, Essex, Samuel Barker Bennett, M.D., aged 66.
 CHAPMAN.—On the 10th inst., at Snowdoncot, Hollington, St. Leonard's-on-Sea, Walter Chapman, F.R.C.S. Eng., aged 69.
 CRISP.—On the 17th inst., suddenly, at Keynsham, Nathaniel Crisp, M.R.C.S., L.S.A.
 HEMMING.—On the 10th inst., at Norland-terrace, W., Wm. Benjamin Hemming, M.R.C.S., L.S.A., in his 77th year.
 NORTON.—On the 17th inst., at Nailsworth, Robert Norton, M.R.C.S., L.S.A., aged 74.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 10th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
July 13	30.13	N.W.	57	52	118	74	49	.04	Bright
" 14	30.03	W.	54	50	103	72	56	..	Overcast
" 15	29.85	N.E.	58	56	76	63	55	.04	Raining
" 16	29.53	S.W.	62	59	92	66	56	.43	Cloudy
" 17	29.47	S.W.	60	57	98	69	53	..	Hazy
" 18	29.59	S.W.	63	60	85	67	57	.46	Overcast
" 19	29.83	N.E.	60	57	107	70	57	.40	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

GOUT AT THE AGE OF FIFTEEN.

AN apparently typical attack of gout in the left great toe occurring in the person of a boy aged fifteen, under the care of M. Gaucher, is reported. There were the classical signs, unaccompanied by disease in any other joint or tissue. There was ascertained to be no history of gout in any member of the family. No mention is made of lead poisoning. There were no symptoms of rheumatism, and the attack subsided in a few days.

G. W.—The question was discussed by Mr. William Crookes, F.R.S. recently in his presidential address at the London Chemical Society and formed the subject of some editorial remarks in THE LANCET on April 14th last, in commenting on that address.

Mr. Robertson (Portsmouth) is referred to a general notice at the head of this column.

THE ALKALINE TREATMENT OF ECZEMA.

To the Editors of THE LANCET.

SIRS,—There is no new thing under the sun. The treatment of eczema by lotions or continuous applications of alkalies, mentioned in the communication of Dr. T. F. Pearce, is the one advocated so far back as 1849 (*Monthly Journal of Medical Science*, August, 1849) by the late Dr. J. Hughes Bennett of Edinburgh. His local application was half a drachm of the common carbonate of soda dissolved in a pint of water.

I am, Sirs, yours truly,

Darlington, July 14th, 1888. R. TAYLOR MANSON, M.R.C.S., &c.

GHASTLY GUN PRACTICE.

EXPERIMENTS have been conducted in France to test the efficacy upon human bodies of the Lebel projectiles. In default of a war, the virtues of the new arm have been tried on defunct civilians—unclaimed bodies from the public mortuaries and hospitals—which were set up as far as possible in a life-like attitude and shot at. Drs. Chauvel and Nimier have, it appears, reported on the effect of the ghastly practice, and testify that the use of the "Lebel" will relieve army surgeons of much of their duty on the field, as the projectiles, even when fired from a distance of from 1850 to 2000 yards pass through the body, bones, and all. We can see no reason why such experiments on carcasses of the lower animals should not suffice.

Forecast.—No rule can be applied to such an exceptional case. The only thing to be done is for the parties to come to a friendly understanding, which will leave each in mutual esteem.

EXACTING CHARITY.

THE Charity Voting Reform Association is directing attention again to the mode of relieving the poor needing surgical appliances, adopted by the various surgical appliance societies. It condemns especially one society for its rule of requiring a number of letters proportioned to the cost of appliances. This rule often involves the trouble to lame and suffering people of going on pilgrimage for numerous letters, and ought to be abolished without delay.

Mr. Chas. Ward.—The address of the firm is, 199, Great Portland-street, London, W.

Mr. H. Walmsley.—Undoubtedly an M.B.C.S. Eng., registered, can give evidence on the question mentioned.

THE MEDICAL PROFESSION AND INCOME-TAX.

To the Editors of THE LANCET.

SIRS,—Allow us through your columns to call the attention of all medical practitioners holding appointments or assessed under Schedule F to a point we have just carried against a surveyor of taxes, as it forms a very valuable precedent.

A district medical officer had never claimed any deductions from his assessment on account of expenses incurred in the performance of his duties, not knowing he could do so. The surveyor of taxes, faithful to his instructions, carefully refrained from telling him of it. This year, however, acting on our advice, Dr. B—— claimed repayment of tax for the past three years. The surveyor of taxes returned the form, saying it did not apply to his case, but only to clergymen's expenses, and that he could not now claim the deductions, as they ought to have been claimed at the time of the assessment. We did not accept this flat of the surveyor, and applied to Somerset House, insisting on the case being decided by the District Commissioners, and not by the surveyor. The result was that although the deductions claimed were not allowed to the full amount, they were admitted to a considerable extent, and an important refund was obtained. The strangest part of the case is that the Inland Revenue enclosed with the post-office order the very same form to claim deductions next year as the surveyor of taxes said was not applicable to the case.

Kindly let us mention that we have made some important improvements in our forms for balance-sheets and three years' returns for the profession, to present statement of accounts to the Commissioners, either to obtain a fair assessment, to appeal against an unjust one, or to obtain a refund at the end of the year, if the profits have not amounted to the sum upon which income-tax was paid.

We are, Sirs, your obedient servants,

Colville-terrace, W. THE INCOME-TAX REPAYMENT AGENCY.

NEWSPAPER PUFFS OF MEDICAL OPERATIONS.

AN objectionable specimen of this kind lately appeared in the *Bridgend and Neath Chronicle*, describing an operation for stone by Mr. Thomas of Maesteg. In response to a remonstrance by Mr. Thomas, we are glad to say that we have received from him a letter, enclosing a statement from the writer of the paragraph, expressing his regret for having written it, and entirely exonerating Mr. Thomas and apologising to him. A similar incident occurred two or three years ago. It is of great importance that there should be no recurrence of such an event, and the editor of the paper in question only did his duty in inserting the apology of his reporter and will, we trust, in future take more care that the privacy of private practice and the modesty of professional feeling are duly respected. It will be a bad day for the profession, and not a good one for the public, when members of the profession allow themselves to be puffed by indiscreet friends.

Inquires (Lewisham).—Electrolysis is regarded as the most effectual method. See article in THE LANCET of Nov. 20th, 1886.

Subscriber.—There can be no objection to the use of the descriptive terms mentioned.

Mr. A. Gresswell (Louth).—The paper will appear very shortly.

INDIAN MEDICAL QUALIFICATIONS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers supply me with answers to the following questions? 1. Is there a Lahore Punjab College? 2. If so, does this college confer any qualification to practise medicine, surgery, or as an oculist in India or any other locality? 3. Is there a medical school connected with this said Lahore Punjab College? 4. If the replies to the foregoing questions are in the affirmative, to whom can I apply for references to enable me to obtain a list of legally qualified practitioners?

I am, Sirs, yours faithfully,

L. L. U. H.

July 16th, 1888.

BACK-TO-BACK HOUSES.

Sanitarian.—Yes, the report on this subject has just been issued by the Local Government Board, and is of considerable importance. We shall notice it in some detail in an early issue.

Inquires.—1. Lawson or Nettleship. 2. Macnaughton Jones. 3. Prosser James. 4. Galabin, or Hart and Barbour.

RIVER POLLUTION.

THE following passage, which we extract from Mr. Berrington's report upon the fresh-water fisheries of the United Kingdom, merits attention at the hands of many whose interest in salmon and river fishing is only indirect. The importance of attending to the condition of our rivers cannot indeed be exaggerated. A policy of *laissez-faire* has already deprived us and our posterity of many a delicious stream, and it cannot be too soon or too forcibly brought home to the conscience of the manufacturing community that the rule of good citizenship is *sic utere tuo ut alienum non laedas*.

"There is, however, one most serious impediment to the production of fish—viz., the pollution of the rivers, which has never yet been effectually dealt with by the Legislature. A season like the last brings the state of our inland waters more clearly home to the public than all that has been written or said upon the subject. The fact that few of our streams are in such a condition as to be available for human use has been in a great measure disguised, as regards the great towns, by the provision of reservoirs at the head waters, constructed at enormous expense. But when these reservoirs fail, it is found that there is no other wholesome supply to fall back upon. In the case of cattle, the water which was formerly merely injurious becomes deadly. I could give instances of animals raging with thirst and breaking out of fields through which a river might be running, because the water of that river was such as they could not touch, and this even in ordinary seasons. If such is the effect upon land animals, what must its results be to the fish? The manufacturing pollutions of the Yorkshire Ouse destroyed hundreds of salmon near Goole during the last summer. The disinfectants introduced into the sewage of Newcastle, and conveyed with it into the tideway, produced a similar result on the Tyne. An occasional discharge from a lead mine poisons the fish of the Greta and the Cumberland Derwent for seven miles down to Bassenthwaite. The slime from a tin mine escapes into a Devonshire brook, and the salmon die in the Plym. The coal washing on the Ognore has denuded that river of fish of all kinds. Even coarse fish are rarely found in the Derbyshire Derwent for some miles below the point of discharge of the sewage of Derby. The salmon fisheries of the Ribble are yearly decreasing in value from the impurity of the stream. The waters of the Avon Llwyl, when the tinplate trade is good, receive, in one form or another, some twenty tons of vitriol per week; and, although they discharge into the tideway, their pungency frequently turns back the salmon ascending the Usk. If it were merely a question between the existence of manufactures or the economical drainage of towns on the one side and the existence of fish on the other, the fish would reasonably be sacrificed. But this is not so; and now that it has become a question of public health and life, it is to be hoped that some efficient steps may be taken to prevent the contamination of the entire fresh-waters of the country. These steps would not involve any real injury to the manufacturers. It may be inconvenient to them, and certainly there is a disinclination on their part, to introduce additional processes at their works; but in nearly every case a purifying process is available, in many its adoption may be made a source of profit, and in very few need the expense be serious."

Mr. R. B. Swinton.—The question has been put to us repeatedly. The statement is wholly untrue. (See an annotation in our present issue.)

THE DURHAM UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—It will ever stand as an enduring monument of honour to the University of Durham that it alone amongst English universities has thrown open its portals to those qualified practitioners of over fifteen years' standing who desire the distinction of an M.D. degree by examination. Much good has this enlightened policy effected, and much injustice has it remedied. There is still, however, yet another injustice existing, which it is in a position to remove. It is the fact that there are many surgical appointments in this kingdom which cannot be held except by those in possession of a degree in surgery. Bearing this in mind, I venture to address the University of Durham through your medium, with the view of asking them to consider the proposal of admitting practitioners of over fifteen years' standing who have already obtained their M.D. degree to the examinations for the B.S. and M.S. degrees. This privilege would confer a great boon on those who might desire to compete for these appointments, with the additional advantage of making more proficient surgeons of them.

I am, Sirs, yours truly,

M.D. (DURHAM).

July, 1888.

MEDICAL PRACTICE IN AUSTRALIA.

A CORRESPONDENT, who possesses a double qualification, is desirous of information as to the chance of a medical man's success in Australia with a capital of from £750 to £1000. Any suggestions as to climate, fees, and general expenses will be gratefully received.

Mare would be glad of references to books or pamphlets relating to (1) duties, &c., of ship surgeons at sea and in port; (2) shipping sanitation.

N F W.—Undoubtedly

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bruce Clarke, London; Sir J. Crichton-Browne, London; Messrs. Iddon and Dunlop, Manchester; Mr. R. W. Walsh, Manchester; Mr. F. H. Weekes; Mr. Hale, Tiverton; Mr. A. H. Robinson, London; Mr. A. Gresswell, Louth; Mr. Goldie, Leeds; Dr. Cera, Naples; Dr. J. Braithwaite, Leeds; Mr. J. F. Marsh, Ormskirk; Mr. C. Wells, Bristol; Mr. V. Richards, Goalunda; Dr. J. M. MacCormac, Belfast; Dr. Bronner, Bradford; Mr. P. Belcher, Burton; Mr. Philipps, Egham; Mr. R. T. Manson, Darlington; Mr. Robinson, Newcastle; Mr. G. B. Longstaff, Wandsworth; Mr. Bouchier, Brighton; Mr. Turner, London; Mr. J. Higson, Blackburn; Mr. Walmsley, Preston; Messrs. Burroughs and Wellcome, London; Mr. V. Jackson, Wolverhampton; Dr. Horatio R. Bigelow, Berlin; Mr. Blackett, London; Dr. W. G. Scott, Newton Abbot; Mr. W. Curran, London; Dr. F. Taylor, London; Dr. Wynn Westcott, London; Mr. H. Thompson, Pendlebury; Messrs. Foster and Co., London; Mr. J. R. Seymour, London; Messrs. Hopkinson and Co., Notts; Mr. Clapp, Cardiff; M. Sorel, London; Dr. Norman Kerr, London; Mr. F. Ewens, London; Dr. Skrimshire; Dr. Ogier Ward, Tottenham; Mr. D'Orsey, London; M. Acton; Inqurens; L. L. W. H.; A. B., Brighton; Mare; Forceps; M. D. Durham; S., London; H. S. C., London; J. H., London; Doctor, Suffolk; Staffs. General Infirmary; Mus.

LETTERS, each with enclosure, are also acknowledged from—Dr. Adams, Maidstone; Mr. Charlton, Jarow; Mr. Fryer, London; Mr. Kelvie, Manchester; Dr. Emmerson, Biggleswade; Mr. Simpkin, Sierra Leone; Mr. Derry, Leeds; Mr. Hyslop, Stretton; Mr. Hall, South Shields; Mr. Graham, Winchester; Mr. Read; Mr. Harrison, Cape Colony; Mr. Johnson, Sheffield; Mr. Wall, Wigan; Messrs. Kilner Bros., London; Mr. Lee, Leeds; Dr. Wonkes, London; Mr. Smyth, Limerick; Mr. Everett, Philadelphia; Messrs. Whitlocks, London; Mr. Davies, London; Mr. Brockelbank, London; Messrs. Black, Edinburgh; Mr. White, Walsall; Mr. Walker, Derby; Mr. Culleton, London; Mr. Darke, London; Mr. Lacy, Woolwich; Mr. Eminson, Rotherham; Mr. Heywood, Manchester; Messrs. MacLachlan and Co., Edinburgh; Mr. Casella, London; Mr. Hatch, London; Mr. Hale, Chesterfield; Dr. Bailey, Grantham; Dr. More, Kettering; Mr. Wormald, Manchester; Medicus, Hatcham; S. B., London; J. G. B., London; Alpha, Yorks; M. D., Harris; Massage, London; Whittington Life Assurance Co., London; Q. Z., London; D. N. A., London; Lady Superintendent, Bath; G. S. T., London; J. S. R. London; Medical, Lockwood; R., London; W. E., London; B. C., London; Agricola, London; Lady Superintendent, Finsbury-park; Lady Superintendent, Canterbury; L. D. F., London; Surgeon, Devon; Greenbank, Bradford; Ready, London; L. J., London; Matron, Bedford; N. B. R., London; E. S., Clapham; Lady Superintendent, Sheffield; L. D., Hackney; Beta, Tamworth; Matron, Ipswich; M. D., Bristol; Spes, London; T. W. O., London; Doctor, Suffolk; L. M., London; M. D., Crewe; Surgeon, West Riding.

Fife News, Maryport Advertiser, Manchester Examiner, Windsor and Eton Express, Hertfordshire Mercury, City Press, Herald and Weekly Free Press, Reading Mercury, Worcestershire Chronicle, Brighouse and Radrick Gazette, Surrey Advertiser, Accrington Gazette, St. Andrew's Citizen (Cupar), Bradford Observer, Scottish Leader, The Industries, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 24.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, July 25.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

Thursday, July 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, July 27.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 28.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an additional advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

A Lecture

ON

RESPONSIBILITY AND DISEASE.

*Delivered to the College of State Medicine,
on July 11th, 1888,*

By SIR JAMES CRICHTON-BROWNE, M.D. &c.

GENTLEMEN,—I am to speak to you this afternoon about "Responsibility and Disease," and in adopting that very comprehensive title for my lecture I had in view the liberty which I should possess under it to draw my illustrations from any part of a wide field of research, while restricting my argument to but one section of it. For it is my purpose to discuss, not all the various ways in which deviations from health may affect a man in his ethical, social, statutory, or common law obligations, but only to ventilate once more in the ever clearing and freshening atmosphere of medical science the somewhat stale question as to the relation between mental distempers and legal obliquities. And even this question I shall not exhaustively examine; for I shall have nothing to say to-day as to the effects of mental derangements and failures on the validity of contracts and wills, but shall confine my attention to diseases of the brain and nervous system in connexion with amenability to punishment for breaches of the law, or, in other words, to insanity and crime. And in thus confining my attention to insanity and crime I do not for one moment suppose that I can in the hour at my disposal deal adequately with that, although circumscribed, still voluminous subject, about which so much has been written and said during the last forty years. Dr. Backnill, our highest medical authority regarding it, tells us that he has been engaged in the discussion of it for the whole of that period, and that it has in recent years been under the special consideration of the Select Committee on the Homicide Bill and of the Royal Commission on the Criminal Code Bill, besides exercising the judgment and taxing the ingenuity of a number of eminent judges and a host of medical and legal writers. I cannot pretend to summarise for you what has been written or said about insanity and crime during the last forty years, or a fourth of that time; to present you with a complete digest of the law on the subject; to criticise the most remarkable cases which have brought the law prominently under popular and professional notice; or to trace out the historical growth of medical and legal opinion on the subject. All that I propose is to submit to you a few observations, I fear somewhat desultory, which have occurred to me on the following points: (1) on the insufficiency of the definition or test of insanity at present accepted and acted on in courts of law in this country, and on an amended test which would commend itself to medical experience; (2) on the value of expert testimony in establishing the existence and nature of insanity in courts of law; and (3) on a practical step towards the reconciliation of medical and legal differences of opinion on questions of insanity and crime.

But before entering on the consideration of these questions I may perhaps say a few words on the spirit and style in which it appears to me they should be discussed, and deprecate the warmth and bitterness which some medical men have imported into the controversies which have taken place regarding them. It cannot be denied that language of a very disrespectful and intemperate description has occasionally been applied by members of our profession to those who administer the law in connexion with their directions and decisions in cases in which a defence of insanity has been set up on behalf of persons accused of crime. Now, I am not going to say that such language has been altogether inexcusable. Indignation is not a wholly superfluous and vicious element thrown into the human constitution. Like the stings of insects and the spurs of birds, it has a useful function to perform, and we must not be surprised to see it stirred into activity in the presence of what is believed to be injustice. Lord Bramwell, one of our most distinguished judges, has told us, when discussing this very subject of

insanity and crime, that hatred and detestation are naturally awakened in the mind by certain offences; and we can understand, therefore, why medical men should feel somewhat incensed when they see what they have persuaded themselves is a grievous disease punished as if it were a heinous crime. They are scarcely to be blamed for feeling angry under such circumstances; we all feel angry and experience a little involuntary clenching of the fist when we read of Squeers caning poor little Bolder because he had warts on his work-worn and attenuated fingers; but they are to be condemned because they put no measure to their anger, and hurl at individuals censures which ought properly to be directed against a system. To call our judges who have ever been conspicuous amongst men of their time for learning, independence, and humanity "judicial murderers," to describe them as "obstinate and prejudiced," meet objects of "contempt and disgust," is to betray the weakness of passion and to fall into gross error. For individual judges, it is to be borne in mind, do not make the law, but administer it, and have no option but to apply those principles which they find established, without reference to their own estimate of their goodness or badness. Some judges approve the principles of law which now regulate the courts in dealing with cases of insanity and crime, while others think them of questionable authority and unsatisfactory; but whether they accept them as sound or dissent from them as imperfect, they are equally bound to adhere to them until the law is altered, and can only modify the application of them within very narrow limits; and so long as they construe them in a reasonable manner, they should be exempt from charges of harshness and stupidity.

"Till thou canst rail the seal from off my bond
Thou but offend'st thy lungs to speak so loud."

And till medical psychologists can procure an Act of Parliament, or a judgment from the Court for Crown Cases Reserved modifying the law, they but squander their energy in slandering the judges. Nay, they do more than that, for they injure the cause they have at heart, postpone the reforms they advocate, and perhaps entail on themselves and the rest of their craft some unpleasantness when summoned to appear as witnesses in courts of law. It is certain that no change in the law will take place without the concurrence of the Bench, and the Bench is not likely to be propitiated and won over to a calm and favourable judgment on the modern discoveries of medical science by copious torrents of abuse from medical quarters. As Mr. Justice Stephen has pointed out, "it is hard for anyone not to resent attacks on a small body of which he is himself a member, such attacks being often harsh and rude, and almost always connected with, if not founded on, misconceptions." It may well be, therefore, that the judges—a small body—do to a certain degree resent the attacks made on some of their number by medical men, conclude that "sound and fury" in this case, as in so many others, signify nothing, and treat with some impatience medical men who appear before them as witnesses. Mr. Justice Stephen admits that medical men are sometimes treated by judges in a manner that cannot be defended. "Sarcasm and ridicule are out of place on the Bench," he observes, "in almost all conceivable cases, but particularly when they are directed against a gentleman and a man of science who, under circumstances which in themselves are trying to the coolest nerves, is attempting to state unfamiliar and in many cases unwelcome doctrines." True, medical men sometimes do themselves scant justice in courts of law, particularly in cases in which insanity is in question. With the tremor of the witness-box upon them, and the fear of metaphysics before their eyes, they commit themselves occasionally to extraordinary propositions. A medical man, who in private consultation has given a perfectly lucid and consistent account of a case, may so confuse and complicate his statement of it under cross examination as to create the impression that he is himself weak-minded or is wilfully prevaricating. Apart, however, from the shortcomings of medical men as witnesses, it is indisputable that they do sometimes in courts bear the brunt of an *odium judicium*, engendered, not by the painful and, it must be admitted, discreditable conflicts of testimony which now and then arise between them, nor by the fact that a few of their number have from time to time heedlessly lent their support to a plea of insanity when it was only the law's "last shift" in an otherwise defenceless case, but by the bitter antagonism to the Bench openly exhibited.

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by some medical authors of ability and repute. Lord Bramwell says the lawyers smile at the abuse so lavishly bestowed on them by doctors in relation to questions of insanity and crime; but I agree with Mr. Justice Stephen that they more often frown at it, and from their "coign of vantage" on the Bench, themselves the *élite* of their profession, they can frown with withering effect on medical witnesses, who are not always picked men, and who almost invariably labour under some embarrassment. On all grounds therefore, alike with a view to comfort in court, to the retention of public confidence, and to the early recognition of the just claims of medical science, it is desirable that the relations of responsibility and disease should be debated by medical men with coolness and good temper; and I feel sure that the influence of the College of State Medicine will be used to ensure a truly scientific and statesman-like attitude in all who engage in such debate. A flash of wit, or even a merry jibe, now and again may not be altogether out of place in illuminating what must necessarily be a tedious discussion, but all unworthy aspersions thrown on men whose positions and services entitle them to public esteem should be studiously avoided.

From these preliminary remarks I turn now to inquire what is the law of England with reference to insanity as an excuse for crime, and how far is that law reasonable and in accord with the conclusions of medical science? As to what the law is there cannot be much doubt, for every judgment delivered in cases in which the plea of insanity has been set up since 1843 has been founded on the answers then returned by the judges to the questions put to them by the House of Lords during the ground-swell of the *McNaughten* case. The very words of these answers have been almost invariably used by judges charging juries in such cases, and they have been used, too, by judges in whose private opinions they do not, at least as ordinarily interpreted, admit of satisfactory application in many difficult cases. The answers of the judges are of considerable length, but the real gist of them for our purpose lies in a paragraph of the answer which was returned to Questions II. and III., taken conjointly, and which runs as follows: "That to establish a defence on the ground of insanity, it must be clearly proved that at the time of committing the act the accused was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or if he did know it that he did not know he was doing what was wrong." Now, it is obvious that under this ruling, if I may call it so, are included a large number of cases of insanity. Under it would stand excused the raving maniac who does not apprehend the nature or quality of any act, the idiot who is in the same predicament, the fatuous person who cannot foresee the consequences of his acts, and the victim of delusions, when these are of such a character as would justify homicide were they beliefs entertained by a sane man. But it is, and always has been, equally obvious to medical men that this ruling excludes a considerable proportion of cases of insanity in which moral as distinguished from legal irresponsibility exists, and that it is faulty in founding the test of insanity on knowledge or an intellectual state while it ignores states of the emotions and will, which are always more influential on conduct than intellectual states, and bulk far more largely in insanity. Attempts have been made to show that the statement of the law in the paragraph quoted was not meant to be exhaustive, but that it was so must, I think, be deduced from a study of authorities, and one of the highest of these, who has written quite lately on the subject, Lord Bramwell, has put the matter tersely thus: "The question therefore should be, not whether the person accused of a crime is mad, but whether he understood the law's threat." "Whom ought the law to punish?" Lord Bramwell asks. "All whom it threatens on conviction. Whom ought it to threaten on conviction? All who would be influenced by the threat; all whom it would or might deter or help to deter." The law as it stands is, according to him, "right to demonstration," and he would unhesitatingly punish, with enhanced severity if need be, all insane persons committing crime and capable of understanding the law's threat. The woman labouring under melancholia, believing herself doomed to die and killing her child at the command of a supernatural voice or in order that it may not be left friendless in this troublesome world, and the monomaniac who, imagining that he has been robbed of his reputation and assailed by electricity and mesmerism,

kills one of his supposed persecutors, ought both, according to Lord Bramwell, to be executed.

It will be worth while to examine Lord Bramwell's position with some minuteness, for it lies at the very core of our subject, and in doing so I would, in the first place, submit to you that he assumes the very point at issue between doctors and lawyers when he takes for granted that in the morbid mind will-power is coextensive with knowledge. All who do not understand the law's threat he would exempt from punishment; all who do understand it he would punish, because in his view all who thus understand have the power of refraining from the act for which punishment is threatened. Now it will become apparent as we go on that this is not so, and that there are lunatics who are as powerless to refrain from acts which they well know will be followed by punishment as epileptics are to refrain from fits which they well know will place them in great jeopardy; but in the meantime I wish to make a more general observation, and say that Lord Bramwell's whole theory of punishment—which is, indeed, that of Bentham—is, it appears to me, too narrow. What is the true theory of punishment? Why do we inflict pains and penalties upon those who do wrong? Simply, he would reply, to deter others from falling into similar evil courses. The power of deterrence is, in his estimation, the sole motive underlying punishment. The reformation of the criminal he would, perhaps, regard as a secondary motive; but this, strictly considered, must be classed under deterrence, for to reform a criminal is simply to deter him by punishment from repeating his offences. But this deterrent theory of punishment has never satisfied mankind. Legitimately carried out, it would lead to punishments of impressive severity, perhaps to torture; or to the conclusion of the stoics as realised in the laws of *Draco*, which made death the punishment of every crime; or, on the other hand, to the abandonment of punishment altogether whenever it failed in arresting crime; or, still again, to the punishment of persons known to be innocent for the sake of example, when a great crime had been perpetrated, or when crime was prevalent. The fact is that it is impossible to eliminate from our penal institutions an element of moral reprobation. There is in us an organic cohesion between the idea of transgression and the idea of penalty, an intuitive belief in a *vis judicatrix nature*, which metes out punishment to law-breakers, redresses grievances, readjusts a balance that has been disturbed, and subsumes the criminal under that law of force which he has himself asserted. When a child burns its finger by placing it in the flame of a candle, the sharp pain experienced deters from a repetition of the experiment; but it would be a very special teleology that would maintain that the whole object of combustion was deterrence from burning, and so I think it is but a narrow philosophy that recognises in punishment nothing deeper and wider than a practical significance.

"There is a fundamental principle in human nature," as Lord Justice Fry has cogently argued, which recognises that there is "a fitness of suffering to sin; that the two things—justice and pain—ought to go together, so that we naturally desire to bring about an association of the two where it does not already exist." "Punishment is, in short," says Lord Justice Fry, "an effort of man to find a more exact relation between sin and suffering than the world affords us. But we may go a step further, and say that to the mind of man this principle is true, not only absolutely, but also *secundum majus et minus*, and that we feel that great suffering is fitted to great sin, and small suffering to small sin. In fact, men have always, as soon as the idea of punishment arises at all, sought for some relation between the punishment and the particular offence; they have not been content to look merely to the effect of the punishment in preventing other like crimes, but they have had regard to the moral nature of the crime, and have tried to assign pain and suffering as nearly as possible in proportion to the enormity of the sin." "Free will," says Hegel, "is exercised in a necessarily varied externality, and the infringements of it are subjected to a correspondent variety, both as regards quality and quantity. Analogous variety of punishment is then but justice." And the growth of this radical principle in our nature, recognising the relation between sin and suffering in the gross and in proportion, might be traced out historically from its bud in a blow for a blow, through the *lex talionis* of the Mahomedan law and the sustained retaliation of the vendetta and tribal feuds, up to its full development in a representative or judicial system under which all private rights of retribution

are gathered into the hands of the State, which exercises them and redresses wrongs unbiassed by personal feelings and with an eye to the public good. This is perhaps the terminal form of justice, but within its boundaries various phases of progressive improvement are possible, and it is gratifying to observe that there is a decided tendency throughout all civilised communities—allowing for occasional sudden and short retrogressions due to panic—gradually to mitigate punishment. And this is all the more gratifying because it does not result from a laxer but from a stricter appreciation of law and punishment. "It is because the many so correctly regard the law that we can afford to punish less the few who break it." In this way we discover that the character and amount of penalty do not depend altogether on notions of abstract justice, but also on the social condition of a particular people, and that with rising culture and refinement comes a gradual mitigation of punishment and increasing exactitude in inquiring into the moral nature of punishable acts and into the legitimate range of punishment. We cannot now tolerate haphazard justice or wholesale executions, nor can we rest satisfied with mere legal guilt and an assurance that the law must punish all whom its threats would or might deter, but we insist on a nice measurement of the moral quality of the act in question in each particular case, and on the adjustment of the sentence to the condition and opportunities of the criminal, to his education, training, environment, and intentions, and to the nature of the temptations by which he was beset. Rigid legal maxims will not now suffice. They must be softened and moulded in the minds of a humane judge and jury, and adapted in some degree to the public sentiment of the period, which will not, I think, in these days sanction a technical adherence in practice to that deterrent theory of punishment which Lord Bramwell upholds. All, he maintains, whom the law threatens and who understand its threats should when they commit crime be punished; and he has the courage of his convictions, for he argues that all madmen who understand the law's threat and fall into crime should be punished, even although it is shown that by reason of their unhappy state they have not the same control over their actions that sane people have. And he goes further than this, and admits, theoretically at any rate, that madmen, by reason of their requiring a more powerful incentive to self-restraint, should be punished more severely than sane people, which brings us to the level of Chinese jurisprudence, which regards insanity not as an extenuating but as an aggravating circumstance in connexion with crime.

Now, children of tender years are, I take it, for the purposes of the present argument, in a position analogous to madmen. They are certainly quite as amenable to discipline and the deterring influences of punishment within the family circle and the school as madmen are in lunatic asylums, and they ought therefore to be liable to punishment for any crimes they may commit, notwithstanding the fact that their power of self-control is less than that of adults; nay, they ought to be punished more severely than adults, because they require, by reason of their weakness, stronger inducements to control themselves. But the law says that children under seven years of age are absolutely exempt from punishment, and that from seven to fourteen there is a presumption that they are not possessed of the degree of knowledge essential to criminality, though this presumption may be rebutted by proof to the contrary, and if the law said otherwise public sentiment would speedily revolt against the execution of a child for murder, even though it could be shown that it knew the nature and quality of its act and knew that it was doing wrong, for the general experience of mankind attests that the moral character of a homicidal act committed by a child must be very different from that of a similar act committed by an adult, and that in the former there is an immature and feeble condition of the will. And so I venture to suggest that public sentiment would revolt against the execution of lunatics—say brought out of asylums—were they dealt with as Lord Bramwell recommends, for the general experience of mankind attests that lunatics are lunatics, even when they know the nature and quality of their acts and can distinguish glibly between right and wrong, and that their power of guiding themselves is less than that of other men. It is very what Lord Bramwell stigmatises as the "unwise mercy of judges and juries," together with the clemency of the Crown, that has made the present state of the law relating to insanity and crime endurable. This has been

felt by judges not less than by medical men. The law relating to insanity and crime would, if strictly enforced, says Mr. Justice Stephen, "have monstrous consequences." "I concur most strongly," said the late Lord Chief Justice Cockburn, "in the proposed alteration of the law, having been always strongly of opinion that, as the pathology of insanity abundantly establishes, there are forms of mental disease in which, though the patient is quite aware that he is about to do a wrong thing, the will becomes overpowered by an irresistible impulse." "I remember a case," says Lord Blackburn, "in which I felt it quite impossible to say that the prisoner should be punished, although on the definition you would be obliged to say she was guilty."

It is clear that the judges do in practice impart some elasticity to the legal rule, and it is fortunate that they do so, for the execution of persons known to be lunatics and guilty of murder because they retain a knowledge of the nature and quality of their acts and of the wrongness of them could scarcely fail to have pernicious effects. Insanity is recognised as a terrible and deplorable disease, one of the direst afflictions that flesh is heir to; and to hang those who are thus afflicted, even when they have imbrued their masterless hands in blood, would surely draw public pity towards them, and the deterrent effects of punishment must be reduced to a minimum when detestation of the crime is swallowed up in sympathy for the criminal. The most depraved and vicious of our species become the objects of compassion and tender ministrations when prostrated by painful bodily illness, even when that illness is the direct offspring of their own folly or wickedness; and while that illness lasts a new and indulgent standard of judgment is applied to the faults of temper and character which they display. Are we, then, to be extreme to mark what is done amiss by those who are overwhelmed by mental illness—an illness that may assail the purest and noblest and best, that lays a rough hand on the finest and most sentient fibres of our being, that eclipses the brightness of life and leaves a trail of darkness after it, and are we to seize upon those thus afflicted, and, because they can mumble a formula and know a hawk from a hand-saw, inflict on them the full penalties of any offences into which they may be betrayed? We may talk as we like about legal tests and deterrence from crime, but depend upon it, gentlemen, we have not the heart to do this thing.

But I must dwell for still another moment on Lord Bramwell's deterrent theory of punishment, and submit to you that, even granting for the sake of argument that that theory is correct, he makes several assumptions in his application of it to lunatics that cannot, I think, be fully justified. Punish, he says, all whom the threat of punishment might or would deter. And punish madmen, he goes on, because "they are deterred by the threat of punishment, not perhaps as often as sane people, but still sufficiently often to make it worth while to punish them." And the answer to this is that by punishing madmen you will not in any appreciable degree increase the deterrent influences which already operate upon them. Not one lunatic in twenty realises that he is insane, and thus the vast majority of lunatics are already deterred from crime by the fear of punishment as much as it is possible for them to be. I recollect an undoubted lunatic, a medical man, who died in an asylum raving mad, and who told me that in the early stage of his mental trouble he had several times taken up his gun and walked along the road towards the house of his father-in-law, against whom he had an insane grudge; but "every time," he added, "as I came near the house a vision of Jack Ketch and the Newgate new drop rose before my mind's eye, so I always went home and put away the gun." This lunatic, as a certain number of lunatics are, was deterred up to a certain point by the dread of punishment, but he would not have been one whit more deterred had a dozen unmistakable lunatics been hanged the previous month, for he never for one moment admitted that he was a lunatic, and would not, indeed, have hesitated to shoot anyone who made such an imputation against him. But a larger number of lunatics are altogether beyond the reach of threats, and are not deterred even by the taste of punishment. I can recall the case of a man named John Henry Price—a case which was graphically reported by Dr. Maudsley—in which I was concerned as a witness, and which illustrates the truth that it is a mere waste of time to punish lunatics. This man was in an early stage of general paralysis, and had been certified for removal to Bethlehem Hospital, when he

escaped from his friends and made his way to King's-cross Station, where he caught the Great Northern night express. When near Retford he robbed a fellow-passenger, who had fallen asleep, of his watch, and, passing along the foot-board of the carriage while the train was going at full speed, made his way into another compartment, where he was found at the next station, sleeping placidly, with the watch beneath the seat. He was tried at the Doncaster Sessions, and, in spite of strong medical evidence that he was insane, was sentenced to a term of imprisonment. When liberated and handed over to his friends, he was taken back to London, where he again effected his escape, again made his way to King's-cross, and again caught the Great Northern night express. Again, when near Retford, he committed a robbery, relieving this time two sleeping fellow-passengers of their watches. He again attempted to make his way to another compartment while the train was going at full speed; but, being now unsteady from the advance of his disease, he missed his hold and fell on the embankment, where he was afterwards picked up, only slightly injured, and with the two watches in his possession. He was sent to the Nottingham Asylum, and there died in due course of general paralysis. Now, no threats or severities short of death could have deterred this man from repeating his crime with mechanical regularity whenever the opportunity occurred to him. And there are many lunatics like him. But, on the other hand, there are lunatics on whom the threat of punishment acts as a provocative of crime. The late Dr. Guy tried to show statistically that the execution of a lunatic was always followed by a crop of lunatic murders. I do not think he succeeded in his attempt, but it is incontestable that the existence of capital punishment does occasionally lead lunatics to commit murder with the same morbid desire of martyrdom which leads others to mutilate themselves in the most horrible way, or with the purpose of committing suicide indirectly. Hadfield's crime was committed under the belief that, while he was called upon, like our Saviour, to sacrifice his life for the people, it was not lawful for him to lay violent hands on himself. He had therefore, he thought, no option but to take measures which would ensure the co-operation of the public executioner.

Then, Lord Bramwell has perhaps exaggerated notions as to the utility of threats in asylum management, and is misinformed as to the methods by which discipline is maintained in such institutions. "How are mad people in asylums managed?" he asks. "Surely by the hope of some good and fear of some harm, according to their conduct." But the great advance in lunatic asylum polity in modern times has consisted in the abolition of the penal code under which they were formerly administered. Scourges, shower baths, solitary confinement, and strait-waistcoats are now no longer known in them; and the awful threats under which they are so quietly and successfully governed are—being sent to bed, deprived of tobacco, or kept away from the weekly dance. And even these petty penalties—just such as are applied to weak and wayward children—are of doubtful efficacy. In large asylums, assaults and larcenies are undoubtedly committed daily, but it has never been proposed that a stipendiary magistrate should be attached to each of them to dispense justice amongst the inmates, and their medical officers know well to what a limited extent threats or promises avail to control those who are in the grip of a brain-compelling disease. Their constant efforts are directed, not towards the enforcement of punishment or the breathing forth of threats, but towards the removal of temptation and opportunity, towards the assertion of that law of kindness which is the most potent weapon in their hands, and towards the restoration of bodily health. There are, it must be admitted, a few lunatics who, as Lord Bramwell asserts, calculate on immunity from punishment on the ground that they are reputed lunatics. I have had patients in asylums under my care who have said to me, "If you do not liberate me I shall kill you; and being on your own showing a lunatic, I shall merely be removed to Broadmoor and be no worse off than I am." But it is on the very rarest occasions that lunatics who thus speculate on their chances of escaping punishment perpetrate any punishable act. Their speculations include doubts as to their complete safety under the circumstances which they suggest, and of course they are prescient enough to know that their confinement in Broadmoor would be life-long. I have never in my own experience encountered a case of homicide by a cunning lunatic,

who had deliberately counted on not being punished; and as an asylum officer I should have felt that my personal safety was not in any degree enhanced, but rather endangered, by the execution of murderers acknowledged to be insane.

After the criticisms which I have ventured to offer on Lord Bramwell's thesis that all lunatics who would or might be deterred by the threat of punishment should be punished, it may sound paradoxical to say that I am disposed to assent to it. And yet that statement would be correct, for where I, and I believe I may add the medical profession, differ from Lord Bramwell is not as to the principle he lays down, but as to his application of it. We are prepared to admit that amenability to threats is in a sense the true test of responsibility, but we cannot allow that the understanding of the threat is any criterion of the amenability to it, or that the boundaries of responsibility which he has drawn correspond with those which our professional experience delineates. The lunatic who can respect a threat has a free will, while the lunatic upon whom a threat has no influence is under the thrall of disease; and the test of insanity which commends itself to medical men was never more clearly and succinctly expressed than by Lord Bramwell himself when in the Dove case he asked, "Could he help it?" Could he or she help it? That is the real practical question at issue in every case in which the defence of insanity is set up. Was the lunatic free to choose, or under the duress of disease? Was his will capable or inept? But Lord Bramwell and those who think with him argue that it is sufficiently proved that the lunatic could help it if he knew the nature of his act—viz., that it was killing; the quality of his act—viz., that it was a crime; and also that it was wrong in the sense of being forbidden by law. Whereas, medical men, almost without exception, maintain that a lunatic may be able to know and express the nature and quality of an act and its wrongness, and yet be as unable to resist doing it as he is to abstain from jumping under a smart electric shock; and that knowledge of the nature and quality of an act and its wrongness is not in the regions of pathology any measure of will power. And not only medical men, but judges, have perceived this. The late Lord Chief Justice Cockburn said: "The power of self-control, when destroyed or suspended by mental disease, becomes, I think, an essential element in the question of responsibility." And Mr. Justice Stephen has said: "It ought to be the law of England that no act is a crime if the person who does it is at the time when it is done prevented by defective mental power, or by any disease affecting his mind from controlling his own conduct, unless the absence of the power of self-control has been produced by his own default." This statement of the law, which has been verbally amended by Dr. Bucknill, really covers all that medical men have ever contended for, and, having received it from so high an authority, it is their duty to do their best to secure its acceptance, and provide trustworthy tests of loss of self-control.

Now, impairment of will, or loss of self-control, more or less pronounced, is, according to medical men, the first, last, and universal element in insanity, and ranges from a trifling reduction in the check action which we exercise on the ordinary currents of thought and feeling down to paralysis of the sphincters. Dissolution—and insanity is dissolution—implies a reversal of evolution, and in insanity we have, as Dr. Hughlings Jackson (the great brain-seer of the century) has taught us, a process of undevelopment, or taking to pieces, in the highest centres, which are the crown or climax of nervous evolution. In it we have "a descent from the least organised, most complex, and most voluntary, towards the most organised, most simple, and least voluntary." The lunatic is reduced to a lower level of evolution, is less of a man and more of an animal, or a machine, and according as the reduction takes place, uniformly or locally, we have general or partial insanity, the different varieties of the latter being dependent on the different degrees in which the nerve centres are morbidly affected. But in every case of insanity, whether general or partial, the highest centres are involved, and involved in a negative direction—that is to say, towards enfeeblement of their functions. There is in every case of insanity impairment of voluntary control, and as a consequence of this there is more or less licence given to those lower mental functions which are during sanity under voluntary control, and which become then over-active, their over-activity being expressed in delusions, hallucinations, wild and whirling words, and extravagant actions.

"When the Government of a country is destroyed," says Hughlings Jackson, "we have two causes of lamentation—the loss of the services of eminent men and the anarchy of the uncontrolled masses"; and when the government of the brain is overthrown by insanity we have to deplore the loss of the regulating will and the turbulence of subordinate mental powers.

The dominion of the will in initiating and inhibiting action varies greatly at different ages, and in the same person under different conditions, and even within the sphere of health we see that the will may be overpowered by the urgency of sense impressions, when actions ordinarily under voluntary control are performed as inevitably as the pulsations of the heart or the contraction of the pupil of the eye under the stimulus of light. A slight tickling of the sole of the foot may be endured without movement by a person of resolution; but a severe tickling unavoidably in a person of sensitive organisation results in wriggling and laughter. Extraordinary instances are on record of power in suppressing the natural manifestations of suffering under sensory impressions of an excruciating kind. Thus the North American Indians, when subjected to the most cruel and malignant tortures, tied naked to a stake, having their bodies mangled with knives, their limbs burnt with red-hot irons and their nails plucked out by the roots, used to continue to chant their death-song with a firm voice, boast of their exploits, and insult their tormentors; and it is told of Almanzor, the great Kalif of Cordova, that he sat calmly at a council of Vizirs, debating affairs of State, while his leg was being cauterised by a red-hot iron, until the chamber was filled with the smell of burnt flesh. But such fortitude or insensibility is all but unknown in these days; and although great differences in the character and intensity of the reactions to painful impressions, as is seen in the deportment of men and boys under the lash, sensations of a certain poignancy will, in ninety-nine persons out of a hundred, cause writhings and exclamations. Not the staunchest determination or the most pressing motives can prevent these. Those of us who have witnessed operations without anaesthetics are aware that the patient struggles under the knife even when fully alive to the fact that by so doing he but aggravates his sufferings and the risks of his situation. The certainty of instant death could not hinder his struggles under such circumstances, and the law would assuredly not declare him responsible for assaults committed at such a time on those who were holding him down. The law does, under certain circumstances, recognise the fact that there may be not only sensations, but passions so violent and impetuous as to sweep away at once any barriers which it is possible for the will to erect and constitute legal compulsion. And whenever the confines of health are overstepped, the incompetency of the will to restrain the reactions of centres in a state of hyper-activity, owing either to the withdrawal of the inhibitory action of higher centres upon them, or to this withdrawal plus inherent instability, becomes very apparent. When the motor centres of the spinal cord are saturated with strychnia, they display a reflex excitability so enormously increased that a breath of air impinging on the skin, or a loud sound invading the ear, or a bright light falling on the retina, is sufficient to originate severe muscular spasms in spite of a strong resolve to keep still, fortified by an intense dread of the pain which accompanies the spasms. Here the irritability of the cord is so increased and the resistance to radiation so greatly diminished, that a degree of irritation that normally would excite limited action is sufficient to induce widespread contraction. And here we have evidence that the reaction in a nerve centre varies not only according to the intensity of stimulation, but according to its vital condition for the time being; and of all vital conditions in a centre, none more certainly increases its reflex excitability than the withdrawal from it of the influence of higher and inhibitory centres. The removal of the cerebral centres notably increases the reflex excitability of the spinal cord. Schiff has shown that reflex movements in the tail of a decapitated lizard increase in vigour as segments of the cord are successively removed from above downwards. And within the cerebral hemispheres themselves the same thing holds good, and lower centres become more excitable just in proportion as higher centres are enfeebled or defunctionalised. Whenever the centres of volitional inhibition are weakened, or whenever their influence is temporarily in abeyance, the centres beneath them respond excessively to peripheral impressions. When our attention is withdrawn—as, for instance, when we have dropped into

a reverie or are just falling asleep,—a sound that might have made us turn our heads, if on the alert, will cause us to start violently; and when in insanity volition is impaired, sensations that would have been almost unnoticed in health stir up morbid feelings. Did time permit, I think I could establish that affinitive sights, sounds, smells, tastes, and surface impressions, as well as organic sensations, play a larger part than is generally supposed in the induction of morbid impulses when the regulating brain centres are weakened. Many sane persons have experienced horrid promptings when standing looking over a precipice, or gazing at a passing train, and amongst the insane the glitter of a knife or the crackling of a fire will sometimes evoke suicidal or homicidal impulses which but for it might have remained dormant. Of course the inhibitory centres are not equally developed or educated in all, nor are they all equally developed in the same individual in respect to particular tendencies to action, and hence the great variety of insane impulses that are encountered. Every man has his besetting sin—his thorn in the flesh, and this it is that is apt to rise into prominence during inhibitory paresis, being agitated either by affinitive peripheral impressions or ideal revivals. Left to themselves, ideas have a divergent tendency. Unless some strong, continuous, or frequently repeated outward impression gives persistence to one idea, the tendency is for another allied but slightly different idea to grow out of it, and another out of that, and so on along the lines of association, until a point is reached altogether remote from the original starting point. But with the morbid ideas out of which criminal impulses arise the case is otherwise. These seem to move in a circle. Consciousness revolves round and round through a few closely allied representations; while the narrower the circle is, the more likely is the ideational condition to pass over into action. The larger the sweep of the circle, the more numerous are the points upon which inhibition may impinge; the smaller the sweep of the circle, the less purchase has inhibition. The lunatic who can only shout "Blood! blood! Kill! kill!" is in a highly dangerous condition.

Will is the link between feeling and action, and when it is impaired it ceases to be available to prevent the transmutation of the energy of feeling into the energy of motion. And here we have an explanation of the utter inadequacy of the motives that constantly lead to insane crimes. There is no check action; there is an abbreviation of that pause that gives time for foresight and reflection. "Must give us pause!" says Hamlet when on the brink of suicide—time to summon up the forces of rational resistance. Man is a hesitating animal. The whole system of Zoroaster hinges on the fact that everything noxious and evil in creation is the work of Arhimian, an independent power, whose wickedness depends on the fact that he acts before he thinks; whereas Ormuzd, the good spirit, thinks before he acts. And madmen may in many instances be distinguished from sane men in the same way. The impulsive madman acts before he thinks; feeling is translated into action with reflex precipitancy, with an abbreviation of that time interval between stimulus and response which can now be subjected to experimental measurement, in the absence, therefore, of all restraining considerations, and in a violent and disproportionate manner. I have known an epileptic kill his attendant, beating his head into jelly, because he had prevented him from taking his daily walk. I have known another epileptic hang himself because a smaller portion of bread-and-butter had been served out to him than to his companions; and, in the recent case at Weston-super-Mare, the lad Hichins shot his sister because of some trifling slight which she had put upon him. In all such cases a momentary irritation, a natural feeling of chagrin, such as we all feel when thwarted or disparaged, instead of being inhibited in its nascent state when inhibition is most powerful, so that the reaction to it may be reduced by deliberation to rational proportions, is, by the diminished resistance of the will and the consequent over-action of the lower centres, permitted to become fixed or to express itself in a grossly exaggerated manner. And such a morbid state of mind once very nearly deprived the world of all the wholesome delight that it has derived and will long continue to derive from the Waverley Novels. When Sir Walter Scott was an infant eighteen months old and out of health, he was sent to the farmhouse of Sandy Knowe in charge of a maidservant. "The damsel," says Sir Walter, in his Autobiographical Notes, "had left her heart behind her in the

keeping of some wild fellow who, it is likely, had done and said more to her than he was like to make good. She became extremely desirous to return to Edinburgh, and as my mother made a point of her remaining where she was, she contracted a sort of hatred of poor me as the cause of her being detained at Sandy Knowe. This rose, I suppose, to a sort of delirium, for she confessed to Alison Wilson, the housekeeper, that she had carried me up to the Craigs, meaning, under a strong temptation, to cut my throat with her scissors and bury me in the moss. She was dismissed, and afterwards became a lunatic."

(To be concluded.)

Address

ON

ANÆSTHETICS.

*Delivered before the Bath Pathological and Clinical Society,
Feb. 14th, 1888,*

By W. M. BEAUMONT, M.R.C.S.

MR. PRESIDENT AND GENTLEMEN,—I think I am stating a commonplace when I say that in many operations the most responsible and onerous duty falls on the anæsthetist. In minor surgery the question which weighs most on the mind of the patient, and the one which he inquires most anxiously about, is whether he is or is not a good subject for an anæsthetic. Will his sleep be temporary, or is anæsthesia merely another name for euthanasia? Small as his danger is, it is ever present; we can never say there is no risk; we are incapable of prognosticating; we can only rely on the doctrine of chances. What a fearful confession of our impotence is this—what a humiliating one! The patient, it may be in the flower of his strength, apparently sound in heart and lung, the very picture of robust and manly vigour, trusts implicitly in the skill of the surgeon. For some trifling operation he inhales the pain-killing vapour, and in a few minutes lies a corpse upon the table. The administration of anæsthetics is one, then, of supreme importance to us as medical men, whilst it is one of those duties which we are constantly called upon to perform.

Our responsibility to a patient is perhaps more personal and more obvious when he is anæsthetised than at any other time. The very rareness of a death intensifies this responsibility, and although to the professional expert the cause of death may be doubtful and inexplicable, yet to the British public no difficulties occur. The patient has been anæsthetised; he has died; *ergo* the surgeon, from want of skill, has killed him. It is as simple as the rule of three, and as evident as a syllogism. In my student days no systematic instruction in the administration of anæsthetics was attempted. It had to be picked up haphazard, and was included in no course of lectures or demonstrations. Whilst the senior hospital surgeon does not consider it beneath his dignity to perform some petty operation in minor surgery, the infinitely more responsible post of anæsthetist is entrusted to the senior student. But although the danger connected with the inhalation may be infinitesimal, yet our ignorance of any means of foreknowing who will take the anæsthetic well or who badly should remind us that we ought to be always prepared for any emergency. A watchful eye on heart and lung is probably the most important characteristic of a good administrator. He should take absolutely no interest in the details of the operation, or he will miss the few storm signals that nature gives of coming dangers. How, then, can he minimise those dangers?

Let us consider what would render an anæsthetic perfect. First, it should be pleasant to take; secondly, it should produce perfect analgesia; thirdly, it should have no paralyzing action on respiration or pulsation; fourthly, it should be followed by quick return to consciousness after the administration is withheld; and fifthly, it should be characterised by an absence of sickness, depression, and objectionable sequela. From the enumeration of these five points it is clear that we have no perfect anæsthetic. We have not one that fulfils all these requirements. Which

anæsthetic shall be used in a given case depends on the fancy, the prejudice, or the opinion—call it which you will—of the administrator. And here I would say that the choice should be left to him, and not to the operating surgeon. Let the surgeon be responsible for the surgery, the anæsthetist for the anæsthesia. We have, as far as I know, no authoritative rule to guide us in the selection of an anæsthetic. It is remarkable that the Collective Investigation Committee of the British Medical Association has not taken up the subject, and collected statistics of their comparative safety, of the relative frequency of vomiting and struggling, and of other points with regard to sex, age, &c. Cards might be issued to the various hospitals of the country, and in twelve months a mass of valuable details might be collected, from which fixed laws could be deduced. It is impossible for single individuals to do much. "Another death from chloroform," as the newspapers express it, occurs but once in many thousand inhalations. How, then, can one administrator judge of the comparative safety of any anæsthetic? Personally, I prefer ether for general use; but I do not believe in having one anæsthetic, and administering it in season and out, any more than I believe in one purgative, one expectorant, or one anything else. In midwifery I use chloroform, because it is convenient to administer, and because, for some unexplained reason, it appears to be almost absolutely safe in lying-in cases. Whether any other anæsthetic may not be as reliable I cannot say. I should not give ether in bronchitis or to children; neither should I give chloroform in endocarditis. Bichloride of methylene I have an unscientific prejudice against, and I seldom administer it from choice. It appears to be a favourite in ophthalmic surgery, possibly from the supposition that it seldom causes sickness. My experience of it, which is not great, does not bear out this supposition. I find that during the last two years and a half I have administered ether seventy-five times, chloroform twenty-two times, and bichloride of methylene thirty-one times; in all, 128 administrations, omitting other anæsthetics. Vomiting occurred thirteen times after ether, five times after chloroform, and eight times after methylene; or a percentage of 17.33 for ether, 22.72 for chloroform, and 25.80 for methylene. Of course, one ought to compare thousands of cases before dogmatizing, but the figures, as far as they go, seem to show that methylene is oftener followed by sickness than either chloroform or ether. I invariably use Robbins's ether, which appears to me to be less often accompanied by struggling than that of other makers; and I administer it in a Clover's apparatus. The chloroform I prefer is Duncan and Flockhart's, and the methylene Robbins's. Struggling only occurred four times in the seventy-five administrations of ether—i.e., 5.33 per cent. Of other anæsthetics I can say but little from personal experience. The A.C.E. mixture I seldom employ, but I cannot help thinking that nitrous oxide is not sufficiently used in general surgery. Hospitals, as a rule, I believe, have no apparatus for its administration, and yet what a vast amount of real suffering, though of short duration, might be saved by its help. The opening of abscesses and removal of surgical dressings are instances in point. The local application of ether is too often as painful as the surgical procedure it is intended to relieve.

In conclusion, gentlemen, I cannot help thinking that the selection of an anæsthetic is too empirical. We wander aimlessly along without having any firm ground on which to walk. Were a collective investigation made throughout the hospitals of the country, we should then be able to get rid of the "personal equation" altogether and avoid the quicksands of mere opinion. And what a terrible word that word "opinion" is! A "professional opinion" may have satisfied a bygone generation of our brethren; it may console the general public of to-day; but it behoves us not to rest content until we can give a scientific reason.

ESSEX AND HERTS BENEVOLENT MEDICAL SOCIETY.—Last week the annual court of audit of this Society was held at the Great Eastern Hotel, Liverpool-street. Mr. C. F. Hodson of Bishop Stortford, one of the trustees, presided. There was a good attendance, and several new members were elected. Petitions were received from fifteen widows, orphans, and members, and grants made amounting to £380. It was resolved to establish a new district court in the west of Hertfordshire. After the conclusion of the business the members dined at the hotel, Dr. Robert Barnes presiding.

SOME REMARKS ON THE USE OF ELECTRICITY IN GYNÆCOLOGY.

By W. S. PLAYFAIR, M.D., LL.D., F.R.C.P.,
PROFESSOR OF OBSTETRIC MEDICINE IN KING'S COLLEGE, AND PHYSICIAN
FOR THE DISEASES OF WOMEN AND CHILDREN TO KING'S
COLLEGE HOSPITAL.

(Concluded from page 108.)

2. THE electrical method has been much talked of as a means of promoting the absorption of large non-hæmorrhagic fibroids. For this purpose the negative current is introduced into the substance of the tumour by puncture. It has always seemed to me that this is the least promising application of electricity, and presumably the most dangerous. It is one thing to apply the electrical current to an unbroken surface, as is done when the hæmostatic influence of the positive pole is used, and quite another thing to introduce it into the tissues by puncture. Moreover, there are very few non-hæmorrhagic fibroids which call for interference at all. The great majority of them produce no symptoms, and had much better be left alone. I have therefore only felt justified in trying this plan in two cases, in both of which there were serious symptoms arising from the pressure of a large fibroid incarcerated in the pelvic cavity. In one of these the result has been so far altogether satisfactory; in the other, although the tumour has practically disappeared, there has been so much constitutional disturbance and local mischief, that I look upon the case as being very much the reverse of satisfactory; and, although it may be accidental and exceptional, I should be sorry to have to deal with a second case of the kind.

(a) Miss E—, aged thirty-two, was sent to me by Dr. Stephens, of Brighton. For more than a year she had not been able to pass urine, and the catheter had always been used. She had also severe pelvic pains, and tenesmus. I found a hard nodulated fibroid, which reached about three inches above the pelvic brim, and which per vaginam was found almost to block up the pelvis, pressing much on the rectum and urethra. The cervix was high up to the left, and was reached with difficulty. This seemed to me a good case for trying the absorptive influence of the negative current, and on Feb. 22nd I punctured the tumour to the depth of about a quarter of an inch, and passed a current of 50 milliamperes. Between that date and May 11th I made five electro-punctures, not exceeding 100 milliamperes. There was no constitutional disturbance, nor pain of any kind. The result was very striking, for in May the intra-pelvic mass had so much lessened in size that all pressure symptoms had ceased. She could micturate with perfect ease, and had no longer any complaint to make of pain and bearing down. On June 9th she writes: "I am now feeling quite well, and hope I shall continue so." On July 5th Dr. Stephens reports: "The patient now suffers hardly any pain. There is no retention of urine, the periods are more normal, and the health is generally improved. The tumour itself appears as when you last saw her, possibly slightly smaller."

(b) Mrs. W—, aged thirty-nine; has been married seventeen years; three children, the youngest eight years of age. Previous to the birth of the last child I detected a fibroid outgrowth on the posterior uterine wall, about the size of a large orange. It had no effect on labour, which was easy. Since that time it had been growing steadily, and the discomfort and inconvenience caused by it had got much worse. She had constant bearing-down pain of a severe character, and pressure on the bowel rendered defecation painful and difficult. Latterly the tumour reached to within nine centimetres of the umbilicus, with a large separate lobe to the left. Between the anterior superior spines of the ilia it measured thirty-seven centimetres. In the pelvis there was a large smooth mass about the size of a melon. The cervix was displaced forwards, and was reached with difficulty. Five electro-negative punctures were made at intervals of a week, varying from 50 to 150 milliamperes. The first four were followed by no unpleasant effect. After the fifth the patient had an offensive watery discharge from the uterus, so abundant as to saturate the bedclothes constantly. The temperature ranged from 101° to 102°. There was no pain, no fixing of the uterus, no cellulitis. The only marked symptom was the peculiar bad-smelling discharge,

which was expelled from the uterus in gushes several times daily. It was quite watery and transparent, and scarcely stained the linen. Coincident with this was observed a rapid diminution in the size of the tumour, which at last could not be felt above the brim of the pelvis, and per vaginam was not above the size of an orange. This state of things continued for many weeks, and I sent the patient down to Brighton, when she began slowly to gain strength and flesh, although the discharge continued as highly offensive as before, but was gradually becoming purulent in character. So far as could be made out, it always came from the uterus. Eventually Mr. Arthur Nicholson, under whose care she was, reported to me that he thought the discharge was now coming from a point in the vagina. I went down and found that there was a minute opening in the posterior vaginal wall, from which a drop of pus was seen to be oozing. This I dilated freely, and gained access to a cavity from which a quantity of fetid pus escaped. This was only a few days ago, and Mr. Nicholson since reports: "The tumour, to feel bimanually, is not bigger than a small orange. Mrs. W— is much better generally since the opening up of the sinus."

The first of these cases shows that the contention that negative electro-puncture is capable of promoting absorption of a fibroid is true, so far as that case is concerned. The second equally proves that it may be attended with serious consequences. I am not disposed to conclude from one unfavourable case that the use of this application of electricity should be abandoned, any more than I should conclude from a fatal ovariectomy that that operation is illegitimate; but I think it should teach us that it is not without risk, and that it should not be lightly resorted to, nor unless there is some good reason for interfering with the tumour. It is fair to add that I took Dr. Apostoli to see this case when he was at Brighton, and that he assured me he had not seen anything of the kind before, and attributed it to septic absorption at the seat of puncture.

3. The use of the negative intra-uterine electrode has been recommended in cases of dysmenorrhœa dependent on stenosis of the os or cervical canal, in membranous dysmenorrhœa, and in severe chronic uterine catarrh, with much glairy tenacious discharge. It seems in these to act as destructive caustic, enlarging the cervical canal in stenosis, and in the others probably acting as a form of intra-uterine medication. It has, however, this great advantage over other kinds of intra-uterine medication, that the introduction of the sound is not only easier and less painful than that of a probe covered with cotton-wool or any similar contrivance, but that the precise degree of effect can be graduated to a nicety by the galvanometer. I have used it in three cases of dysmenorrhœa depending on pin-hole os and conical cervix, in one case of membranous dysmenorrhœa, and eight cases of chronic uterine catarrh, several of them associated with dysmenorrhœa. Every one of these has been greatly bettered, if not altogether cured; and I am satisfied that this constitutes not only the neatest and least distressing, but also the most effectual, method of intra-uterine medication at our disposal, and that which requires by far the fewest applications. One example of each of these classes of case will suffice by way of illustration.

(a) Mrs. B—, the wife of a dentist, aged twenty-four; married two years and a half; no family. The menstruation is always acutely painful, and has been so since it began. She is quite well in the interval. There is a distinctly conical cervix, with a minute pin-hole os. On Nov. 1st and 22nd I made two applications of the intra-uterine negative electrode of 50 and 100 milliamperes. On Dec. 4th she wrote: "I am pleased to be able to tell you that your treatment of galvanism has so far proved successful that my last period was entirely free from pain." Again on March 3rd she wrote: "I am glad to say that my periods are now entirely without pain." So far as one can judge, therefore, here is a case of bad dysmenorrhœa, which had persisted since the establishment of puberty, cured by two applications only.

(b) Mrs. —, aged thirty-six. This lady is the wife of a distinguished member of the profession, whose careful observation and report of the case makes it particularly reliable. On the whole it is the most marked and persistent case of membranous dysmenorrhœa I have ever met with. This patient has been under my care, with intervals, since 1885. She had much and severe pain, and regularly shed large membranes at each period, forming complete casts of the endometrium. I had treated her by intra-uterine

medication with carbolic acid, with some improvement as to her general and local symptoms, but none, I think, as to the prominent point—the severe dysmenorrhœa and the expulsion of membrane. In February I determined to try the effect of the negative intra-uterine current. Between February and June I made ten applications of from 10 to 50 milliamperes. Her husband reports at intervals as follows:—Feb. 21st: “On the first three days of the period there was a marked improvement. On the fourth day the usual membrane came away in three pieces, without pain. The chief difference between this and the former periods is that the membrane came away in shreds instead of in a single piece as formerly.”—April 4th: “The period lasted three days without any sign of membrane, except the smallest shred on Sunday. On that evening the discharge ceased, and we thought you had made a wonderful cure, as the membrane had hitherto come with perfect regularity on the third day. On Monday, however, her period recurred, and there was a discharge of membrane smaller and thinner than before. I think that, on the whole, she is decidedly better.”—June 27th: “I have a good report to give. There was no sign of malaise or pain before the commencement of the period, and until this morning we quite thought that no membrane was going to appear. This morning a clot had passed, in the centre of which I found a thin, elongated, membranous shred; the thing was so thin and small that it would have escaped notice but for careful examination.”—July 7th: “I believe you have accomplished what I must confess I thought an utter impossibility—viz., the removal of the formation of a membranous cast, which had appeared, with the most absolute regularity for just upon twenty years. My wife looks better and feels better than she has done for many years.” I have given this report in the words of her husband, whose name, could I mention it, would at once be recognised as a guarantee for scientific and accurate observation. There can be no doubt that the improvement here was absolutely due to the electrical treatment, since every known means of bettering this very obstinate and severe case had already been unsuccessfully tried.

(c) Mrs. S. G.—aged twenty-seven; married three years. Never well since marriage. The chief troubles were severe bearing-down pain, prolonged and painful menstruation, and very profuse muco-purulent discharge oozing from the cervix. This patient was a curious illustration of what this type of case often goes through. She had been in the hands of several physicians, and had undergone much treatment, amongst other things division of the cervix. I first saw her in October, 1887. Antecedent to that date she had been confined to her bed or sofa for six months, for many weeks she had had leeches applied twice a week to the cervix, and she had been regularly visited three times a week by a prominent gynaecologist, and yet her state was worse at the end of that six months than it was at the beginning. I made four applications of the electro-negative current in November of from 50 to 100 milliamperes. On Dec. 15th she wrote: “I am truly grateful for having been cured so quickly. I had given up all hope of ever being well again, and now I am glad to say the discharge has quite stopped.” I have not seen this patient since; but on June 10th she wrote, in answer to my inquiries, “I am glad to say that I have been quite well for the past five months, not having any of my old troubles.”

Now these three cases are illustrations of types of disease the intractableness of which to treatment every gynaecologist will admit. For the first class a surgical operation, not altogether free of risk, is often performed; the second and third exhaust the patience and the resources of the medical attendant. In a former contribution to this journal on the treatment of the last class of case, in which I advocated intra-uterine medication, I quoted the dictum of no less high an authority than Scanzoni, to the effect that he considered them incurable. If, then, some of them—my experience does not justify me in saying how many—can be cured by a few applications of a method involving nothing more painful than the passage of a sound, I venture to insist that a decided advance in gynaecological therapeutics has been made.

4. There are some minor applications of electricity, such as in chronic inflammatory exudations, of which I have no experience, and also the use of the faradaic current for the relief of pain and in amenorrhœa. The latter I have tried three times. I may say I believe very few cases of

amenorrhœa call for or justify any treatment whatever, except constitutional. Most of those I see are associated with chronic neurotic conditions and depressed general health, and when these are righted menstruation will generally right itself also. I believe, however, that intra-uterine faradisation has a powerful influence in promoting the re-establishment of menstruation in the exceptional cases in which there is some indication for using it. In one of my cases the patient had not menstruated for five years. After three or four intra-uterine faradisations the period recurred, and has since done so regularly. In this case I was tempted to try it because of pelvic pain and malaise, coincident with improving general health, which recurred at monthly intervals, as if the discharge was endeavouring to come on. In another case the patient had been for four years an almost bedridden neurotic, quite unable to walk except a few steps on crutches. As is almost invariably the case in such illnesses, menstruation was entirely arrested. She quite recovered under systematic treatment, but menstruation did not reappear. As often happens with women suffering from amenorrhœa, she attached exaggerated importance to this, and I felt certain that nothing would tend to maintain her cure so much as the recurrence of menstruation. I therefore tried intra-uterine faradisation, and after three applications it was completely successful. In the third case it entirely failed. The two in which it succeeded, however, are sufficient to prove that it has a powerful influence, although it is a use of electricity of very secondary importance to those previously described.

In thus detailing my experience of electricity in gynaecological work, limited although it necessarily is, I have no pretension to settle a question that requires much study before it can be placed on a satisfactory footing. There are many points in connexion with it on which I have not even touched—such as the methods of application, its difficulties, and its possible dangers. I have endeavoured only to state facts, and have given chapter and verse for my statements. I venture to think that the cases I have related are sufficient to prove that in electricity as applied to uterine disease we have a therapeutic agent of considerable power, which may do much good, even if in rash and inexperienced hands it may do much harm. That is a peculiarity it shares with every treatment which is powerful at all. That it may be thoroughly and impartially investigated without favour, but also without unreasonable prejudice against it, is all that anyone can desire.

George-street, Hanover-square, W.

DENGUE IN EGYPT.

By F. M. SANDWITH,

LATE VICE-DIRECTOR OF THE SANITARY DEPARTMENT OF EGYPT.

(Concluded from p. 109.)

Height of the Nile.—Since time immemorial there has been a tendency in Egypt to attribute misfortune to the maximum height of the Nile, and this idea to a modified extent still exists. When therefore, in 1887, a fever appeared in Cairo about the same date as a high Nile which would undoubtedly have overflowed its banks if it had not been for the skill and watchfulness of the English officers of irrigation, it was at once accepted that the fever had been caused by excessive infiltration of the soil. The Nile at Cairo rose in September to a height of 25 pica, and was described as a regular but excessively high rise. The average height at Cairo is 22½ pica. Returning for a moment to 1779, the year in which dengue was first known in Egypt, I find that there was a high Nile of 24 pica, and Gaberti wrote of that year that “there was an exceptionally high Nile, which even flowed over the dam in the Khalig, thus preventing the usual cutting of this dam, which is an annual ceremony of great antiquity.” Though this only proves that the dam was of insufficient height, it looks at first sight as if it were a confirmation of the theory. Unfortunately the record of other years does not corroborate it. In 1845 there was dengue in Cairo, associated with a low Nile of 20½ pica; and again in 1880 Cairo was revisited by the fever, along with a low Nile, which varied in height from 19 to 21½ pica. Turning to other years when dengue has been completely absent from Cairo, we find that in 1874

¹ Lectures on the Treatment of Chronic Uterine Catarrh, THE LANCET, 1874.

and 1878 there were excessively high Nile of 26½ pica, and again in 1876 and 1879 very high rises of 24½ pica. A maximum height of the river at Cairo is not therefore enough in itself to induce dengue to transfer itself to the capital from coast towns such as Ismailia. Moreover, it must be remembered that Cairo has only been visited four times by the fever, while it has been present in the country which is uninfluenced by the rise of the Nile no less than thirteen times. The conclusion would seem to be that dengue, with its unexplained affection for coasts, rainy seasons, and large rivers, only appears in Egypt when the Nile is in its annual flood, but that an extra high rise cannot in any way be regarded as the exciting cause of its appearance. In both the recent epidemics Alexandria has suffered, though not in any way dependent for atmospheric conditions upon the Nile.

Contagion.—I know of no reasons for supposing that dengue can be generated *de novo*. It is a disease apparently not endemic to Egypt, and it would appear that its presence in the interior of the country is always associated with cases upon the banks of the Suez Canal, while upon several occasions sporadic, and even epidemic, cases have existed upon the canal, and have not spread to Alexandria or to the interior. There is at present no means of deciding whether dengue enters Egypt by the Suez Canal from abroad, or whether the poison has the power of lying latent upon the coast, and occasionally spreading into the country. During an epidemic, if not at other times, there would certainly seem to be a poison in dengue which is communicable from the sick to the healthy. I have already spoken of the great numbers of people (four-fifths) attacked during the epidemics, but this is not likely to influence anti-contagionists, who say that masses are attacked because they are all subject to the same conditions. (a) When dengue commences in a house it spares few of the inmates, as the following examples will show: In house No. 1 there were eighteen Greeks, Italians, and Egyptians, of whom twelve had dengue during September and October. In house No. 2 there were twenty-four people—English, French, Italian, Greek, Egyptians, and Hindus, of whom eighteen suffered from dengue between Oct. 6th and Nov. 22nd. One of the six who escaped had had the disease in India. Three of the men employed in the house were married and slept in their own homes, and in each case the wives contracted the disease within ten days of their husbands. Six of the patients returned to the house direct from Europe, and contracted the disease in periods varying from nine to twenty days after arrival. In this case, as in all others, a new patient was affected every few days, no great number of sick in any one house being all down at the same time. In house No. 3 there were twenty-three—Turks, Tunisians, and Egyptians; of these, eighteen had dengue, some very severely, with delirium. In house No. 4 there were twenty-eight, English and Egyptians, of whom fourteen had the disease. In house No. 5, a hotel, forty employees out of forty-five were attacked, and eight visitors out of twelve. The cases all occurred within five weeks, between Sept. 20th and Oct. 25th. The hotel porter became ill only two days after arrival from Europe, and the manager was attacked four days after leaving Alexandria, where dengue was then unknown. This man suffered from the disease in Cairo in 1880, when nine people in his house out of a total of ten were laid low by dengue. In house No. 6 there were twelve English and Egyptians, of whom seven succumbed. The first case was that of a native, who slept in the pantry; the second was the butler, who worked by day in the pantry; the third was a maid, who nursed the butler; the fourth was the mistress, who nursed the maid; and the fifth was the husband of the mistress. In house No. 7, a Turkish harem, there were twenty people, including slaves, every one of whom caught the fever. Thus in these seven houses there were 192 persons, of whom 137, or 75·3 per cent., suffered from the epidemic. I have purposely only chosen large houses for these figures, taken from different districts of Cairo. The smaller houses of my patients, each containing less than a dozen occupants, suffered in much the same proportion, many not being able to boast of a single case of immunity. (b) On the other hand, many houses in infected quarters of the town, standing within their own grounds, escaped the disease entirely. As an instance of this there were thirty Turks and Egyptians living in one harem who escaped absolutely. At Kasr-el-Aini Hospital, to which dengue patients did not think it worth while to come, there were about 400 patients,

practically none of whom suffered. There were, moreover, almost no cases among the nurses, though a few of the students contracted the disease in the town. The English troops quartered at the citadel and in the suburb of Abbassiyeh, suffered decidedly less than the civilian population in the town, while the Egyptian soldiers also at Abbassiyeh enjoyed a still greater immunity. The fever, moreover, did not spread to the outlying suburbs of Helwan and the Pyramids, in spite of daily communication with Cairo. (c) Do attendants on the sick contract dengue? Of fourteen cases of married English people, in nine instances both husband and wife were affected, but not synchronously, and in the remaining five cases the wives alone suffered. Of eleven European civilian doctors who attended patients during the epidemic, ten caught the fever, and in the cases of two who were married the wives also suffered; the wife of the eleventh contracted the disease. The army doctors and hospital orderlies enjoyed a great immunity, which may have been due to their patients being seen in a very airy and spacious hospital. Of three nursing sisters, only one was attacked. In the German Hospital there were fifteen cases of dengue; all the nurses escaped infection, but one kitchen maid took the disease. (d) Dengue may be imported by infected persons into towns before exempt. A good instance of this occurred in Alexandria in 1887. Dengue began to be noticed in Cairo about the middle of September, but Alexandria had perfect immunity for six weeks till the very end of October, when it broke out in a mild form among the English residents and others. This was a few days after several people had reached Alexandria from Cairo while actually suffering from the fever. Some were incubating; others, feeling feverish, hoped to shake it off by change of air; and a few strong men, disdainful of the disease, took the journey in pursuance of their own work. In 1880, cases of dengue occurred in Malta after the disease had run its course in Cairo and Alexandria. Eight hundred boarders among the children of the Government schools in Cairo afford statistics which are probably typical as regards time of the native population. From Oct. 8th to 13th there were twenty-nine new cases; 14th to 20th, fifty-five; 21st to 27th, sixty-one; 28th to Nov. 3rd, thirty-two; Nov. 4th to 10th, twenty-six; 11th to 17th, thirteen; 18th to 24th, four; 25th to Dec. 2nd, none: a total of 220. The mode of communication of the poison is presumably through the air, and actual contact is not necessary. It is those who have been in close communication with the sick who are likely to suffer, and with free ventilation the disease almost ceases to be infectious. I know of no evidence to show that the poison can be communicated by clothes. The epidemic having taken place in Cairo during the months when many residents and visitors were absent, it seldom happened that any large institution was obliged to close its doors on account of the disease, though for a few weeks a gloom was cast over many hospitable private houses. One public place of entertainment, boasting of fourteen artists, was obliged to close for four days because seven of the performers were ill at one time. All the fourteen suffered from dengue, besides ten musicians, out of a total of twenty-two, and six waiters out of thirteen. None of these individuals lived upon the premises.

Incubation period.—This is said to be four days by most writers. In those of my patients who were attacked immediately after arrival in Cairo from Europe, it varied from two to eight days.

Immunity from subsequent attacks.—At the end of November, 1887, I saw two black patients with dengue pains in their knees, ankles, hips, and muscles, and a temperature above 108° F.; both these men stated that two months before they had suffered from a similar fever, with much worse joint pains, and that all their friends had undergone the same illness at that time. In addition to these two cases, I heard of many others of second attacks during the year. Very many who experienced dengue in 1880 had the disease again in 1887. Of twelve Anglo-Indians who were exposed to an epidemic in India in 1874 and in Cairo in 1887, three suffered in India but not in Egypt, one escaped in India and caught the fever in Egypt, and the remaining eight were unattacked by both epidemics.

Dengue in lower animals.—Dogs, cats, sheep, and cows are said to have been attacked at Cadix, in India, and in Algiers.¹ In the recent epidemic in Egypt, my veterinary

¹ Nielly: *Pathologie Exotique*, p. 154. Paris, 1881. Hirsch: *Geographical and Historical Pathology*, vol. I, p. 78. London, 1883.

friends assure me that no animals were known to suffer from anything like dengue.

Symptoms.—The patient is seized rather suddenly with pain in the head and eyes, muscular stiffness and general fatigue, with nausea and epigastric trouble. The temperature at once rises, with a feeling of chilliness, and remains between 100° and 104° for about four days. The individual is obliged to take to his bed on the second or third day on account of muscle and joint pains, and giddiness and syncope. He complains of acute pain in the head and back, and especially in the muscles of the eyeball. There is a complete loss of appetite, with nausea, slightly coated tongue, and constipation. Either about the third day or after the temperature has become normal, a rash like scarlatina or measles appears upon the face, chest, and arms. This rash may last six days, and be followed by very slight or by very complete desquamation, or the eruption may be present for only a few hours, and may be easily overlooked. Slight soreness of the lymphatic glands and pricking, tingling sensation in the skin are often present. After the sixth day the patient begins to crawl about, but for at least a week longer he suffers from a degree of prostration which seems out of all proportion to the slight fever he has undergone, fleeting pains increased by exertion, loss of appetite, giddiness, and the risk of a relapse. The following is a typical case:—

A young English lady, on Nov. 16th, 1887, was quite well at 1 P.M., and ate luncheon as usual. At 3 P.M. she began to suffer from muscular stiffness in the hips, headache, and great sense of fatigue, with aching of the eyes, which prevented her continuing to read. Temperature 100·8°; pulse 102. At 8 P.M. temperature 101·6°. Nausea and vomiting. Second day: Temperature in the morning 100·4°, evening 102·4°; pulse 90. General pains. Third day: Temperature in the morning 100·4°, evening 101·2°; pulse 76. Sleepless night from pain in knees, elbows, and ankles. Throat not sore or red. Aching of eyes. Slight measly eruption on face, arms, and neck. Fourth day: Temperature in the morning 100·2°, evening 99·2°; pulse 72. Pains now in legs, back, knees, fingers, and all joints. Very marked erythema of face, which is hot and swollen. Has been sweating well after medicine. Fifth day: Temperature in the morning 99·6°, evening 98·6°; pulse 68. Pain chiefly in lower extremities and in finger joints, which are slightly swollen, so that large gloves become too small. Eyes ache; tongue coated white; nausea continues; measly rash all over face. Sixth day: Temperature in the morning 99·6°; pulse 63. Temperature in the evening 100°; pulse 72. Can sleep now without draught, but has nightmare dreams. Ribs and back painful. Face still slightly swollen, and measly rash present; complains of the skin itching and pricking. No desquamation. Smarting pain at the back of the eyeballs. Tongue coated. Seventh day: Temperature in the morning 98°, evening 98·4°. Rash still on face, but not elsewhere. Cervical, submaxillary, and inguinal glands slightly swollen and tender to the touch. Throat looks red, and was sore during two nights, but is not sore now. Backache. Eighth day: Fleeting neuralgic pains in chest, hands, and feet. Face still patchy with erythema. Slight desquamation of hands. Ninth day: Slight urticaria on arms and ankles. Pain in fingers, feet, and ribs. Nausea; tongue coated; no appetite. Tenth day: Kept awake at night by great pain again in back and legs. Eruption quite gone, and branny peeling of face and arms has begun. The patient says the tingling in the skin reminds her of the feeling of scarlatina, which she had seven years ago. Eleventh day: Fleeting pain in legs, feet, and back. Tongue almost clean. No appetite. Thirteenth day: Knees painful. Desquamation finished. Feels very weak, and becomes giddy if she walks about the bedroom. The catamenia appeared at the usual time, but were profuse, and lasted eight days instead of five. Fifteenth day: Pain in the back, but getting stronger. Twentieth day (Dec. 5th): Still weak, and pain in ribs. Carriage exercise daily. No remission later.

ANALYSIS OF SYMPTOMS.

Physiognomy.—The countenance is flushed so that it gives a man a sunburnt appearance, and it might be thought at first that a woman or child were vividly blushing. But some traces of the flush can be generally discovered on the neck, arms, and upper chest, the whole disappearing before the fever subsides, and often only present on the first day. The conjunctivæ are injected as in mild cases of measles.

Eruption.—In a considerable number of white patients, perhaps one-half, no eruption is seen; this is partly due to its evanescent character and to the very localised extent to which it is sometimes present. A redness at the elbows for only a few hours may easily not be seen at the doctor's visit. There is no fixed time for the appearance or duration of the rash. It may be seen upon the first day, as in the case of a lady who noticed it upon her neck and arms at a dinner party after a rigor, upon the second, third, or fourth day during the fever, or upon the sixth or seventh day, as in my own case, more than twenty-four hours after the temperature has become normal. The character of the eruption is either a general redness like scarlatina upon the face, neck, arms, chest, and perhaps legs and back, disappearing on pressure, and seldom lasting more than one day, or there is a spotted rash like measles, which lasts from two to seven days. This rash, which occurs in perhaps less than one-fourth of the whole cases, is of a dusky pink colour, and consists of small slightly elevated papules, fading for the moment by pressure. Discrete spots coalesce, and the face becomes swollen and uniformly red, until a period of itching and smarting arrives, previous to its complete disappearance. I have not been able to satisfy myself as to the existence of an initial and a terminal rash as described by some authors. Possibly this was a peculiar feature in one epidemic, as suggested by Maclean.¹ In some of my patients the measly rash was followed by a little urticaria, and in others, without any interval, by circular rings like very early psoriasis, but without separation of the epidermis. It is hardly necessary to say that in brown and black patients no eruption can be seen. Petechiæ and purpuric spots I never saw.

Desquamation is a symptom of doubtful presence. There is in general a branny furfuraceous peeling of the parts where the eruption has been, but even this may require careful looking for. In other cases, and not necessarily those in which the eruption has been well marked, there is an amount of peeling which is seldom seen except after scarlatina. Great flakes are shed from the hands and feet, and desquamation, with itching of the skin, may continue for a month. This itching, smarting, tingling, as the epidermis changes, is a minor characteristic symptom experienced by nearly all. Women patients complain that during convalescence their hair falls off.

The temperature does not rise so high as in most other fevers, and seldom remains above normal for more than six days, sometimes falling as early as the third or fourth day. I have morning and evening records of seventeen English patients during eight days, the thermometer having been placed under the tongue. On the first day the temperature was 101° or 102°, excepting once when it rose to 104°; on the second day 101° to 103·6° in the morning, and 101° to 103·5° in the evening. On the third day it varied from 99° to 102·3° in the morning, and 100·6° to 101·6° in the evening; on the fourth day from 98° to 101° in the morning, and 99·2° to 102·4° in the evening. On the fifth morning four temperatures were below 99°, and only two reached 100·8°; while in the evening they varied from normal to 103·4°. On the sixth morning the highest temperature was 102·4°, and nine were below 99°; while at night there were only two abnormal rises, 100° and 102°. On the seventh day the temperatures varied from 97° to 99°; and lastly, on the eighth day, from 97° to 99·2°. On twenty-four occasions the evening temperature of a patient was lower than his morning record; this was nearly always due to the decline of the fever having commenced upon that day. The temperature after the decline is not markedly subnormal. In rare cases the fever lasts ten or more days, but is then generally complicated by past or present malaria. Slight perspiration often accompanies defervescence.

The pulse during the febrile period is almost always under 100, and I have never seen it higher than 102 in the morning and 108 in the evening. Under ordinary circumstances it varies from 63 to 90, and becomes even slower when the temperature first falls. The fact of the pulse not rising with the fever helps to distinguish the disease at the outset.

The blood has never been systematically examined in Egypt. An American physician from Texas stated at the International Medical Congress (1887) that he had discovered a dengue bacillus.

Digestive symptoms.—The tongue is, after the first day,

¹ Diseases of Tropical Climates, p. 114. London, 1886.

slightly coated with a white or yellow fur, and usually remains moist throughout the attack. It does not become clean until about a week after the temperature has become normal. The appetite fails suddenly at the onset of the fever, and marks distinctly the beginning of the disease; during the febrile period and for at least a week afterwards there is loathing for food, and it is often a month before the appetite is completely restored. During the period of convalescence smokers have no relish for tobacco, and women complain that they do not like tea and other favourite articles of diet. It is the inability to take solid food, together with a few days of mild fever, which cause the loss of flesh present in all severe cases. During my own attack I lost 7lb. weight in five days, though my temperature was never higher than 102.4° , and I had no vomiting or other bad symptoms. Thin people all emerged from their sick beds looking like ghosts, and fat men for the first time became proud of their figures. Thirst is never excessive. Vomiting occurs very often on the first day, and is occasionally seen during convalescence, when the patient has returned to solid food and the erect posture too early. Pain and tenderness in the epigastrium often accompany vomiting, and may occur without it. The liver may be slightly enlarged in a few cases, but is seldom felt below the ribs. I have examined the spleen carefully in 100 cases, and have never found any real enlargement due to dengue. In two cases of fever I found enlargement, but these proved afterwards to be enteric and hepatic abscess. The bowels are almost invariably constipated during the disease. Jaundice is not present.

The urine is increased in quantity on the first day of the fever. In my own cases I only once found temporary albumen, and I believe that this symptom was not very frequent during this epidemic. During the epidemic of 1880 in Alexandria Vernoni² found albumen eleven times in fifty-three analyses.

Headache is almost invariably complained of, and is one of the first symptoms, the pain being mostly frontal, but sometimes general. Many patients refer pain to the back of the eyeballs, and are quite unable to read or to bear daylight.

Giddiness often attacks those who strive to remain at their work after the fever has declared itself, or those who try to shorten the period of convalescence.

Muscle and bone pains are always present from the first day to the second week, and compel the patient to take to his bed. Joint pains were often complained of during this epidemic, but were much less universal than in former outbreaks. When joints became painful and swollen, it was generally the hips, knees, ankles, and fingers which were affected, and it seemed that the coloured natives suffered from this more than European patients. Several English ladies I found were unable to wear their ordinary gloves in consequence of the swelling of the finger joints. The muscles of the whole body are at first affected by a general sense of fatigue, after that certain muscles such as those of the back, neck, and lower extremities, are attacked by excruciating pains, increased by pressure or movement, and not at all unlike acute rheumatism. The pain becomes the prominent feature of the disease, and is remembered longest by the patient after recovery. When the pain settles down locally into any muscles, it resembles a perpetual cramp, so that the sufferer is afraid to move in his bed by day, and cannot sleep without sedatives at night. The pain does not disappear with the fever, and often lasts in a neuralgic form for three or four weeks.

Delirium is an occasional symptom, limited to the intense and hysterical, but many patients complain of troubled sleep and frightful nightmare. Sleeplessness is generally due to muscular pain. Convulsions are only seen early in the fever in children, who suffer much less than adults from pain and other symptoms, and remain feverish for only about three days.

Epistaxis occurred often among the natives early in the epidemic, and in 5 per cent. of my patients. It appeared during the first five days, and seemed to relieve the headache.

The throat during this epidemic was complained of by less than one-fourth of the patients, and when examined was found to be red and erythematous, without great swelling or ulceration of the tonsils. Many other patients'

throats were found to be red and angry-looking, though they suffered no inconvenience from them. In two cases the throat symptoms seemed more important to the patient than the pains or rash; but as a rule the throat was casually mentioned upon the first day and remained only a little sore for three or four days. I saw no enlargement of the submaxillary glands or indurated swelling of the neck and connective tissue such as occurs in some cases of scarlatina.

Menstruation occurred during the febrile period in most of my women patients, and was always profuse. The period arrived one or two weeks earlier than usual in women invariably regular in their epochs. I saw no case of dengue in a pregnant woman.

Swelling of lymphatic glands, such as cervical, submaxillary and inguinal, was a minor symptom only noticed in delicate patients from the fifth to the seventh day of the disease. This observation is in marked contrast to at least one epidemic in India, where patients' faces become distorted as in mumps.

Orchitis occurred in very few cases in Cairo, and was reported in only one case from Port Said.

Diagnosis.—The diseases with which dengue is liable to be confounded are rheumatism, scarlatina, malaria, and simple continued fever. Rheumatism is, of course, suggested by swollen painful joints in a febrile patient; but in dengue it will be found that the muscles and bones are also affected, and the rash, if carefully looked for, will confirm the diagnosis. The history of the invasion and the absence of acid sweats will be noted. Acute rheumatism is very rare in Egypt. Scarlatina³ can only be excluded from the diagnosis with some difficulty, though the presence of one disease in an epidemic form is generally an aid. In both there are fever, sore-throat, rash, desquamation, and possible albuminuria. Vomiting may occur at the onset of either disease. The early appearance of severe pains in head, eyeballs, and muscles occurs in dengue and not in scarlatina, while it is rare in the former disease to hear the throat especially complained of. The dengue temperature is very like that of scarlatina, except that its decline is more sudden, and it is commonly associated throughout with a slower rate of pulse. The throat eruption and peeling of the skin are like very mild cases of scarlatina, and never resemble severe cases. Malarial fevers are unattended by rash, and are neither contagious nor epidemic. Though malarial poison is quite capable of producing a similar continued fever, dengue is not apparently influenced by anti-malarial remedies, and is not accompanied by pain or enlargement in the spleen. Intermittent fever, though not common in Cairo, is, however, generally present in the autumn to a slight degree. Simple continued fever, unlike the other diseases, is common in Egypt, and is never absent from the army hospitals. The apparent contagiousness and the eruption of dengue will distinguish it, though in other respects the two diseases are often perfectly similar. The percentages of admissions of simple continued fever

³ During the epidemic of dengue in Cairo in 1887 some sixty cases of scarlatina were admitted into the English Military Hospital, all suffering from fever, sore-throat, and erythematous rash. About a dozen of these cases were followed by extensive desquamation lasting between three and six weeks, and appeared to be as typical cases of scarlatina as could be seen in London. When I was first permitted to see them by my courteous military colleagues, I unhesitatingly believed in the diagnosis, and was followed in this respect a few days later by a hospital physician from London accustomed to deal constantly with scarlatina patients. The army medical officers are of course perfectly competent to decide upon the question of scarlatina, and are, moreover, great authorities upon dengue, for some of them had served more than one dengue epidemic in India. They invariably stated that this disease was not to be compared in severity or in joint pains with dengue as seen by them in India. In the face of this it seems presumptuous to criticise the diagnosis, but the following points are deserving of mention: The scarlatina admissions were synchronous with the dengue epidemic in Cairo. Scarlatina is a very rare disease in Egypt, and no cases were reported at the time either among the native population or among the English women and children, including those of the soldiers. None of the patients had oedematous ulcerated throats, brawny swelling of lymphatic glands, or any serious symptoms. The case which seemed to be most typical of scarlatina was that of a young man, who is known to have had that disease a year previously. In at least two of the cases where desquamation was thought to be over, a further peeling of what seemed healthy cuticle occurred, and in these every symptom of mild scarlatina had been observed. It should be stated also that none of the scarlatina cases had swellings or definite pains in their joints, though some had had transient pains in muscles and joints not at all incompatible with the invasion period of scarlatina. Of the sixty admissions, only two had albumen in the urine, in each case for a very short time, while a third patient had abscesses in both axillae during convalescence. Lastly, there have been no cases of scarlatina either among the British troops or in the rest of Egypt during the five months which have elapsed since the dengue epidemic.

² Paper read before the Royal Academy of Medicine and Surgery at Naples in 1881.

from the British troops in Cairo were not dissimilar during the months of 1886 and 1887 until October, when they rose from 1·7 to 7 per cent. In November, 1886, the percentage was 1 per cent., and 6·4 in 1887; while in December, when the dengue epidemic was over, they were respectively 0·3 and 1 per cent. Possibly some of these cases in October and November were mild examples of dengue, in which the rash was absent or undiscovered. In Alexandria, where the epidemic was milder and of shorter duration, there was no perceptible difference between the simple continued fever admissions from the British troops in 1886 and 1887.

Varieties.—Dengue would seem to present varieties according to its degree of severity and the presence of certain symptoms or complications, such as persistent pain in particular joints, swelling of submaxillary glands, epistaxis, relapses, and the initial and terminal eruptions as seen in Calcutta in 1872. The chief features of the 1887 epidemic were the mildness and short duration of the symptoms, and the comparative absence of pain and swelling in the joints.

Sequelæ.—There are in Egypt no complications of dengue, but the convalescence is curiously protracted, so that it may be weeks before the patient is able to resume all his ordinary occupations in consequence of his anæmia, debility, loss of flesh, and muscular pains. Vernoni in 1881 suggested that after the epidemic of 1880 there were an unusual number of cases of inflammation and abscess of the liver, but this is not the experience of the present year. I have met with three cases of enteric fever, contracted while still feeble from an attack of dengue.

Prognosis and mortality.—With the exception of one case of malignant dengue at Port Said in 1883, I know of no fatal results in Egypt. One patient died of angina pectoris at the end of his convalescent period; but at Aden in 1871 a mortality of 5 out of 450 cases is reported by Nidly.

Treatment.—Quinine is apparently of no prophylactic value, and, as already stated, those who returned from Europe in perfect health were affected as easily as those who were exhausted by the damp heat of an unusually trying summer. There is no need for drug treatment in most cases. An emetic early in the attack seems to lower the temperature and benefit the malaise, and the bowels generally require to be gently purged. Quinine is of no avail to shorten the disease, but is useful as a general tonic when the tongue has cleaned during convalescence. Arsenic and other antimalarial drugs are also useless. Antipyrin and antifebrin in large doses will lower the temperature and the patient, but will not assuage pain or cut short the disease. Belladonna, recommended by one author for pain, I never found of any use. Salicylate of soda in doses of twenty grains seemed more useful for pain than other drugs. Chloral and bromide of potassium were used as sleeping draughts in bad cases. Tonics for the appetite and iron for anæmia are necessary for about a month during convalescence. Muscular rheumatism, when it persists, is benefited by antipyrin. During the febrile period, and for at least a fortnight afterwards, the patient will be unable to take solid food in any quantity, and will of course require nourishing liquids and a little wine.

Cairo.

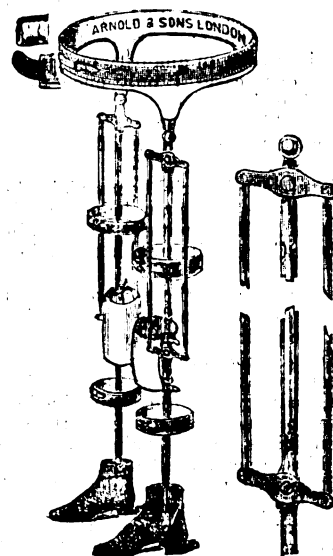
A NEW FORM OF INSTRUMENT FOR THE TREATMENT OF INFANTILE PARALYSIS INVOLVING THE EXTENSOR MUSCLES OF THE KNEE.

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THERE is a class of cases, well known to those interested in orthopædic surgery, in which, in connexion with infantile paralysis of some or all of the muscles of the leg and foot, there is also paralysis of the quadriceps extensor muscle of the thigh, and hence, in consequence of want of power to extend the knee and hold it rigid during progression, inability to stand or walk on the affected limb. Where the paralysis of the muscles below the knee is at all extensive, there may be no distortion of the foot, the lower part of the limb being flail-like and useless;

where the paralysis is less extensive, the foot may be drawn into some abnormal position by the shortening of the muscles antagonistic to those paralysed. In either case the patient may be quite unable to stand or walk without some form of artificial support. Or the want of power in the muscle to extend the knee has, in some cases, I have seen, been compensated for by the patient placing his hand upon the lower part of the thigh, and thus forcing the knee more or less into the extended position. This manœuvre, however, necessitates a bending forward and lateral deflection of the body and the consequent assumption of a very unsightly gait, and at times of serious curvature of the spine. The usual way of dealing with these cases is to carry double leg-irons to a calf circlet below the knee, and to continue the outer iron above the knee to a pelvic girdle, leaving a free joint at the hip, and providing the joint at the knee with a ring catch or flute-key catch. When the anterior muscles of the leg are paralysed, a toe-raising spring of some kind is also frequently employed to act on the ankle joint. By the use of the ring or flute-key catch the joint at the knee can be fixed with the limb in the extended position, thus allowing the patient, other things being equal, to stand and walk on the paralysed limb. When it is desired to flex the knee, as in sitting down or ascending or descending stairs, the ring or flute-key catch is loosened, and the joint at the knee being no longer fixed, the leg falls into a flexed position by its own weight. Before



resuming the upright attitude, it is of course necessary to fix the knee joint again, with the leg in full extension, in order that the affected limb may form a rigid support to transmit the weight to the ground. Now, as the extensor muscles of the leg are paralysed, this is done either by pressing the knee back with the hand on the lower third of the thigh, whilst the heel resting on the ground forms a fixed point; or by lifting the leg with the opposite foot placed behind the ankle into a line with the thigh. Then as soon as the leg is in the extended position the joint at the knee is fixed by the ring or flute-key catch. These catches, which are worked beneath the trousers or dress, are a little difficult to manage, as the leg must be fully extended before the catch can be made to fix the joint at the knee, and are consequently especially awkward to manipulate when they have been loosened for the purpose of allowing the leg to be flexed while ascending or descending the stairs. Further, as soon as the ring catch is loosened, all voluntary control over the leg is of course lost.

Whilst considering whether something more might not be done for the relief of these cases, it occurred to me that the muscles moving the hip joint might, by a simple arrangement of levers, be made to supply the place of the paralysed extensors of the leg, and that the movements of the hip might thus be made to control, to some extent, the movements of the knee. On sitting down, the thigh is normally flexed to more or less of a right angle; whilst, in ascending or descending stairs, flexion of the hip and

knee, but of course to a less extent (unless the stop measures in depth the length of the leg when both are also flexed at a right angle), also takes place. The instrument figured in the annexed woodcut was made by Messrs. Arnold from a rough model I supplied them for the purpose. It is so contrived that when the hip is either flexed or extended by means of its flexor or extensor muscles, the knee, by means of the side levers (shown enlarged on the right of the figure), is also flexed or extended to a like degree. Hence, when the patient sits down, and consequently flexes his hip, the knee, by means of the levers, also becomes flexed to the same angle as the hip; and, again, in rising from the sitting posture, as the hip is straightened, so, by the same means, is the knee. As long as the hip is kept extended the joint at the knee is rendered fixed, and a rigid limb is thus provided for supporting the body. In walking, however, during the pendulum-like movement of the limb as it swings forward, while the opposite limb is on the ground, the knee should not entirely follow the movement of the hip. To allow for this a double stop-joint is further provided at the hip, permitting flexion and extension of the hip to take place to several degrees before the levers which act upon the knee are brought into action. At first it may be necessary, whilst the hip muscles are gaining power, to fix the knees completely by means of a screw nut. The instrument shown in the woodcut sufficiently explains itself, and any minute account of the mechanism seems hardly necessary. It was made for a little girl who was sent to me in the orthopaedic department with complete paralysis of the extensors and flexors of the knee on both sides, and with more or less paralysis of the left arm. She had never been able to stand on her feet, but managed to get about by walking on her flexed knees. At the present time she can walk on her feet when aided by someone taking hold of her unparalysed hand. (July 23rd: Since this was written, she can now walk alone with only one knee fixed by the screw nut.)

Weymouth-street, W.

SOME FURTHER NOTES ON THE ETIOLOGY OF ULCERATIVE STOMATITIS OR CANCER ORIS.

BY ALFRED LINGARD, M.R.C.S.,
DIPLOMA IN PUBLIC HEALTH, CAMBRIDGE.

IN a previous communication I have described the occurrence of what appeared to me to be the same disease in the human subject, monkeys, and calves. The disease which I described previously affects the tongue and cheek, and secondarily the lungs, both in human subjects and in animals. A form of gangrenous pneumonia, apparently produced by similar micro-organisms, has also been observed by me in the lungs of five horses. Portions of the affected tissues inoculated in calves produced a disease resembling noma in all respects. The essential characters of the micro-organisms in all cases were similar. They consisted of long thread-like growths, the individual threads being made up of small bacilli varying in length from 0.004 mm. or less, to 0.008 mm. or more, and about 0.001 mm. in thickness. These organisms were found in great numbers at the line of extension of the necrotic patch. Cultivations have been made from five cases in the human being, in one case in a monkey, in two cases in young pigs, in numerous cases in calves, and in the lungs of horses. It was then demonstrated that the inoculated disease is characterised by appearances precisely similar to those seen in the original disease. I wish here simply to enumerate the lesions found in the heart at death in the human subject, and in animals inoculated from other animals of different species, suffering from ulcerative stomatitis or noma. The most serious conditions are those presented by rabbits after inoculation in the ear with the affected tissues from the young pig and calf. These animals die on the tenth or eleventh day after inoculation. The ear is found to be very much increased in size from the inflammatory process, and has been found to weigh fifty-one grammes when the healthy ear only weighed twelve. As in the two cases some differences were observed at the necropsy, I will give a short account of the condition of the pericardium and heart in each.

CASE 1. Rabbit inoculated from the affected tissue of the pig.—On slitting up the pericardium the heart was found to be enveloped by a thick, pale-coloured false membrane one-eighth of an inch in thickness, which on microscopical examination was discovered to be composed of long bacillar threads matted together. Under this membrane in the muscular substance of the heart were found yellow necrotic patches, the largest was seven-eighths of an inch in length by three-quarters of an inch in breadth, forming the apex of the heart. On section this necrosis was proved to involve the whole thickness of the left ventricular wall. The left coronary artery was distended, and gave the impression to the touch of a thick and hard piece of cord. The lungs and liver were similarly affected.

CASE 2. Rabbit inoculated from the affected tissues of the calf.—The pericardium contained little or no fluid, but a membrane covered the surface of the heart about one-twelfth of an inch in thickness, which on microscopical examination was proved to be formed of fibrin, while numerous cells were entangled in its meshes containing large numbers of granules, also very numerous ammonio-magnesian phosphates and oxalate crystals. On removal of the membrane from the surface of the heart, several masses of yellow necrotic tissue became visible, involving the muscular structure of the apex of the left ventricle; and others were found, smaller in extent, over the upper portion of the left ventricle anteriorly and posteriorly. On section, as in the previous case, the necrosis was found to involve the whole thickness of the muscular wall, and so extend into the interior of the left ventricle. After hardening these tissues in Müller's fluid, different portions were submitted to microscopical examination. It was then found that, as in the case of the mouth, so in the heart substance, the necrotic process was coextensive with the advance of a mass of bacilli.

On section of the muscular wall of the heart some small necrotic foci were observed, but there were many that could not be recognised macroscopically. These small foci, when examined with a power of 200 diameters, are found to be circular in shape. In the centre of the patch are a large number of thread-like organisms, which have rapidly increased, probably, from one or two deposited there in the first instance. Neither structure nor nuclei were to be observed in this area, owing to the nourishment having been abstracted at the expense of the cells as the bacilli gradually invaded the healthy tissue. Just outside the principal zone of bacilli there were stray or single ones between the muscle fibres, and in this situation were a few leucocytes dotted about, while still more externally was seen an extensive zone of leucocytes surrounding the patch, which was evidently due to the inflammatory process which had started there. In many places I found these organisms in varying numbers infiltrating the intermuscular tissue and surrounding the capillaries and lymphatics. In these cases they appear like long bundles or leashes of circular contour passing along the lumen of the vessel. I also found various collections of leucocytes in the intermuscular spaces, in groups varying in size according as they contained only a number which could be counted, or as they contained so many as to make it impossible to number them. I always found one or more elements of the threads, either well-formed bacilli or round dots, which were obviously spores. In the coronary arteries and their smaller branches supplying the cardiac structures I came across vessels of different calibre, the walls of which were more or less infiltrated by bacilli. In the larger the lumen of the vessel was occupied by a granular substance which did not stain, evidently the remains of a blood-clot. In the centre of this clot were seen knotted skeins of threads, which readily absorbed the aniline dye. There were also seen solitary bacilli, as well as groups of the specific bacilli, in different parts of the clot in immediate contact with the intima of the vessel. The intima and elastic lamina were not invaded by these organisms; but all the rest of the arterial coat was destroyed, and consequently all definite structure lost, its place being entirely occupied by myriads of wavy threads.

In the human heart, in consequence of the early death of the patient, such serious lesions are not met with. In the five necropsies I have made on children dying of noma I have only once found heart lesion, and that was characterised by the presence of petechial spots, about from ten to twelve in number, of a dark-red colour, dotted over the surface of

THE LANCET, May, 1883; and Micro-organisms and Disease, by E. Klein M.D., F.R.S.

the heart immediately beneath the exocardium. On closer examination these spots were found to be slightly elevated above the surrounding tissue. Microscopically, these petechial elevations presented a small hæmorrhage raising up the exocardium, whilst the apposed portion of the muscular bundles of the heart was surrounded by a varying number of blood-corpuscles. On very careful examination I was able to verify the presence of organisms—always micrococci or diplococci,—which had gained entrance to the circulatory system from the grumous material always found in the cavity of the mouth &c. in such cases. In no instance was I able to discover the thread-like growth or bacillus *nomie*.

Although I have not yet completed my investigations of cancerum oris in the human subject and the above-mentioned animals, the facts I have detailed justify me in publishing them as far as they go. We should hardly expect an animal to live with necrotic areas of tissue in the substance of the heart; that it can do so is a new and startling fact in the history of pathology. We should have been prepared to find the necrosed portion give way, and death ensuing rapidly.

This is the only organism yet described that appears to be purely and simply a tissue destroyer, invading and reproducing itself in its course over healthy areas, and leaving nothing in its wake but a mere skeleton of what previously existed. The tissue thus invaded is sucked dry as it were, the organisms in contact with the necrotic parts in like manner undergoing similar changes, their centrifugal advance depending upon fresh formation at their periphery. As in the case of a fly sucked by a spider, the fly is dead, but its outward visible form is present, and capable of easy recognition, though the protoplasmic elements entering into its composition have been deprived of their vitality by the process. The fly is present, but at the expense of its attributes. So in the case of the tissue changes observed in animals. We are able to distinguish muscle fibres, but *minus* their striæ, areolar tissue, fibrous tissue, and the several coats of vessels, though the outline of the special elements entering into their composition is wanting, the elastic lamina, however, remaining intact. All are present in a more or less perfect condition, yet sapped to their vitals by the devastating horde invading their territory. That the small veins and capillaries are seriously affected by the immediate presence of these organisms is evidenced by the inflammatory changes noted—changes induced to stem the tide and offer a barrier to impending invasion, but all in vain. The occurrence of ammonio-magnesian phosphate and oxalate crystals in the pericardial false membrane is unique, and possibly accounted for by the fact that these crystals are always found when pure cultivations of these organisms are made in fluid media.

I hope, in a future communication, to illustrate all the morbid conditions described above by drawings which I have had carefully prepared at intervals during the past five years, as well as to show cultivations illustrating the *materies morbi* in each animal.

Lambeth-palace-road, S.E.

A CASE OF

FATAL HÆMORRHAGE ASSOCIATED WITH JAUNDICE IN A CHILD SEVEN DAYS OLD;

WITH REMARKS ON THE PROBABLE CAUSES OF ICTERUS NEONATORUM AND HÆMOPHILIA IN THE NEWLY BORN.

By G. STEEL SCOTT, M.B., C.M. GLAS.

IN the early part of last March I attended Mrs. C—, wife of a millowner near Halifax, during her second confinement. On making an examination I found that the breech presented. Labour was very rapid and easy, and no complication of any kind occurred, the mother making a rapid recovery. The infant, a male, seemed healthy, and was well developed. The first child, a female, is still living, and has never been under a doctor's care. However, on the evening of the fourth day I received an urgent message requesting me to see the newly-born child as soon as possible, as the stump of the cord had just separated, and the blood, which was oozing profusely from the umbilicus, could not be stopped by the nurse. I hastily put some lint, plaster, tincture of perchloride of iron, &c., into my pocket, and

accompanied the messenger on his way back. At first sight the child looked as if nothing ailed it, but on the nurse removing the clothes &c. in which it was enveloped, it was apparent that considerable hæmorrhage had taken place. On questioning the nurse, I could not discover that there had been any premonitory symptoms, excepting the fact that up till that morning the child was one of the quietest she had ever nursed. During the day it became restless and cried a good deal, but readily took milk from the spoon, and dark motions had been passed regularly from birth. The child so far presented no symptoms of jaundice beyond the usual icterus after birth. When it was completely stripped of clothing, it became evident that the umbilicus was not the only source of hæmorrhage. A large, dark, roundish, slightly elevated ecchymosis, about two inches in diameter covered the prominence of each shoulder. They seemed quite tense to the touch, as if the effusion of blood into the subcutaneous tissue had been considerable. Smaller patches appeared over each of the spinous processes and the ilium, while broad stripes of discolouration were spread over the ribs as if the simple pressure of the binder or nurse's fingers had been quite sufficient to cause rupture of the brittle capillaries. I applied some lint soaked in the perchloride of iron to the umbilicus, which of course was somewhat open, strapping it firmly over with adhesive plaster, and at the same time ordered the child to be placed in a cool room and the bony prominences and ecchymoses to be protected by pads of wool. On the following day the infant seemed considerably worse; it looked more shrunk and pinched, and was decidedly jaundiced. The yellowness of the conjunctivæ was well marked, though not severe. During the night the child passed a dark motion; the dark colour might have been due to internal hæmorrhage or meconium, or the very small but frequently repeated doses of the perchloride of iron tincture which I had ordered to be given during the night. The loss of blood from the umbilicus had ceased for a while, but at the time of my visit (about 10 A.M.) it was oozing freely. I removed all the dressings, dried blood, &c., and to the bleeding floor of the umbilicus I applied the tip of a piece of caustic. This application had the effect of checking the flow for a few hours, but it came on again, as I learned on the following day. Then the infant looked very pinched and shrivelled indeed. The jaundice was more intense than on the previous day, and a very small quantity of urine passed in the morning had stained the linen. The child seemed rapidly dying from sheer exhaustion, and the feeble wail it gave forth from time to time plainly indicated that the end was not far distant. On the following morning death took place.

I consider this case interesting, not only on account of the rarity of the disease, but also, after the most careful inquiries, because of the absence of all the usual recognised causes. Neither of the grandparents had ever heard of any of their relatives being affected with a similar disease. Both parents are healthy, stout, plethoric persons, and their first child has always enjoyed excellent health. There is no history of syphilis or previous miscarriage; careful examination of the husband verifies this fact. His father, however, has suffered for many years from an intractable form of skin disease, for which he has consulted many eminent specialists, living and dead, among them Erasmus Wilson, who called it chronic eczema. This is the only suspicious point in the family history. The infant did not suffer at any time during its short existence from any affection of the umbilicus of an inflammatory nature, though cases of such have been described, associated with phlebitis, pyæmia, peritonitis, &c. Besides, from the fact that the child passed abundance of meconium, even during labour (being a breech presentation), I may safely conclude that the common bile duct was intact; though cases of fatal jaundice have been reported to have occurred in children in whom a congenital defect of this structure has been discovered, arising probably from syphilitic perihepatitis (Dr. Finlayson). Seeing there is no discoverable external cause for the disease, our attention is naturally turned towards the child itself. Such cases are said to arise *de novo*; but as this explanation throws no light on the causes &c. of the affection, we are still confronted with the query—What is the pathology of hæmophilia of newly-born infants arising *de novo*? So far as I am aware, this has never been satisfactorily described; and, in consideration of the above facts, I venture to advance a theory in the following very brief remarks which will perhaps explain the nature of the affection, and a closely allied though harmless and evanescent one—icterus neonatorum.

In utero the umbilical veins carry the blood from the placenta through the umbilicus of the fœtus, part of which joining that in the portal veins enters the liver, the remainder entering the vena cava ascendens. When the placenta is separated from the womb during labour, or when the cord is suddenly tied soon afterwards, this circulation must stop. This condition must lead to the production of a certain amount of passive congestion in the liver, which will also be reflected backwards towards the portal vein. But the outward flow of blood from the child towards the placenta being interrupted as well, a temporary, and of necessity very slight, slowing in the general circulation may be expected. But only a few seconds previous to the tying of the cord other and more important changes begin to take place in the infant's circulation, simultaneous with its first inspiration. In utero the plan of circulation is that of the higher reptiles; now there is going on a change towards that of the mammalia. This transformation is never instantaneously complete, but must of necessity be gradual, and may probably extend in duration from moments to months in different individuals. So we may safely conclude that in every case for the first few minutes there is a double kind of circulation in the heart, partly through the four chambers, as in the adult, and partly through the foramen ovale, ductus arteriosus, &c., the Eustachian valve also likely acting imperfectly. The effect of this "setting-to-right" process in the heart on the general circulation will be evident. A feeble circulation must occur, which will be more marked in parts removed from the heart. This is how I account for the blue, cold extremities observable in infants during the first few hours, and very different from the bright rosy hue seen on the subsequent visits. The coldness of the hands and feet may be accounted for by exposure at the time and evaporation of moisture from the body, but I have noticed it in rooms heated up to an almost unbearable extent, and can only attribute the extremely low temperature to enfeebled circulation. Considering the tortuous course of the blood supply to the liver, and the innumerable ramifications and subdivisions of the bloodvessels in its substance, there also must a passive congestion take place, and which will in no way be diminished by the separation of the placenta or tying of the cord already noticed. In proportion to the strength of the child, the capacity of the inspirations, &c., the passive congestion of the liver will be mild or severe, long or short in duration; but in the majority of cases, though unattended with danger, it is severe enough to lead to an excess of biliary colouring matter in the blood and its appearance on the skin and sclerotic. This phenomenon we term "icterus neonatorum." In the natural course of things the hears recovers from its confusion of currents, and a healthy circulation is speedily established. The passive congestion disappears, and so also the icterus which resulted from it. In a weakly infant the congestion in the liver will be more marked and prolonged—a fact which corresponds to the observations of every midwife, that icterus is deeper in puny children than in the robust. Thus we see the same symptoms arise here that we would expect in an adult suffering from congestion of the hepatic organ, and the fretfulness and irritability often noticed for the first few days in the child may be due to this cause.

If my theory be correct, then icterus neonatorum is the result of a pathological process, and not merely a spurious jaundice, or a mere discolouration of the skin, or due to the activity of the skin to get rid of the surplus of bile in the blood &c., as various writers have held. The older authors, who maintained that it indicated a serious pathological condition, though exaggerating the dangers, came much nearer the true state of matters. But even they were not very far wrong in attributing dangers to the usually evanescent and simple phenomenon; for, to my mind, those cases in which an apparently healthy child, without any other known cause, will within a few days of birth be seized with a fatal hæmorrhage associated with jaundice, are merely instances of exaggerated and hopeless forms of the same pathological process. It is easy to understand how, in such a case, when the passive congestion has once developed, if the heart fails from any cause to respond to the demand, complete stasis of the blood will occur, followed by paralysis of function and more or less complete disorganisation of the liver substance. Bile and waste products will accumulate in the blood, the delicate walls of the capillaries throughout the body will be impaired, and effusions of blood take place under the skin, mucous membrane, &c., till the child sooner

or later dies of exhaustion. This appears to me to be the morbid history of the case I have described, but being a general practitioner, and having to consult the feelings of my patients, I was unable to verify my statements by a post-mortem examination. To my mind, also, it seems possible for the liver to be the primary seat of affection in those cases of hæmophilia in which no trace of jaundice occurs.

Bury, Lancashire.

A CASE OF PAROXYSMAL HÆMATINURIA, WITH FUNCTIONAL ALBUMINURIA.

By AMBROSE E. L. CHARPENTIER, M.B.

A. B—, aged thirty-five, married, sent for me to see him on Feb. 15th, 1887. He was said to be suffering from the effects of a cold. I saw him, and elicited the following particulars. His father died of apoplexy, and his mother of kidney disease. Two of his sisters died of phthisis. One brother and one sister are alive and well. The patient has had the usual infectious diseases of childhood, but up to the present has not had any serious illness, though never having very good health. For the first twelve years of his life he lived in a damp and low-lying part of Oxfordshire; since then he has lived in London near the Thames until four years ago. He has never had ague or any intermittent fever. Four years ago he became very thin, and suffered from cough and dyspepsia; he was consequently advised to leave the neighbourhood of London. He now (1887) resides in a damp and cold part of Middlesex. Within a quarter of a mile of his house are three streams and some acres of marsh land, which latter are in winter quite submerged. He has taken a great deal of out-door exercise, playing cricket and lawn tennis, and frequently taking long walks. He has always been moderate in the use of stimulants, but has generally eaten heartily. Two years and a half ago the patient went out, when he got wet and was chilled. On reaching home he had some hot drink and went to bed. On the following morning he suffered from much pain in the loins and thighs, and passed thick porter-coloured urine. He had a day's rest, and on the symptoms abating resumed his employment as usual. Since then he has had a similar attack whenever he has had a chill. A few months ago he was anxious to assure his life (he having been refused once before), and was examined by the local referee for the company, who was inclined to accept his life; he was, however, rejected on the ground that the former examiner had reported the presence of albuminuria. This led to a more thorough examination, which showed that albumen was present only after meals.

On the evening of Feb. 14th the man received a chill. I saw him on the 15th and found him very thin and anæmic, with a yellowish colour of skin. He complained of great pain in the loins and of feeling very cold. He had passed urine of a dark-brown colour and very thick. The loins were tender on pressure. The lungs and heart were apparently healthy. Pulse 100, compressible. The urine, on standing, separated into two layers, the upper being clear and brown in colour, the lower being thick and almost black; specific gravity 1030; acid; about one-tenth albumen; large quantity of urates and phosphates; loaded with urea. Nitric acid in excess produced a solid mass of crystals in the test tube. The guaiacum test gave the blue reaction. Under the microscope, mucus, granular debris, epithelial cells, crystals of phosphates, and a few blood-corpuscles were seen. The patient was ordered light non-nitrogenous diet, with warm drinks and a stimulant once a day; a mixture of quinine and digitalis every four hours; cream or glycerine after each meal; and one of the digestive ferments with all food to aid the digestion.

Feb. 18th.—Patient has no pain. Urine in the morning contains blood; cloudy; not high coloured; sp. gr. 1024; no excess of phosphates; no albumen. After dinner: Urine contains albumen as before; nitrate of urea (by HNO_3) one-third volume of urine. Ordered iron, quinine, and arsenic three times a day; diet to be non-nitrogenous; to clothe warmly and to remove to a warmer part of the country. Neither lying in bed, exercise, nor cold bathing made any difference to the albuminuria.

In the month of May the patient removed to the south coast. The urine after meals still showed about one-twelfth

volume of albumen, but it was not high-coloured or cloudy. In August, after light dinner with digestive ferment, the urine contained no albumen, but after a similar meal without the ferment albumen was found to be present as usual. This was repeated, and showed only a trace of albumen with the ferment; usual amount (one-twelfth volume) without. The urine was pale, and there was no excess of urea. The man was gaining in weight, and was taking cod-liver oil. In May of the present year the patient was still increasing in weight, and the albumen had been gradually lessening. He had no constitutional sign of kidney disease. The urine after dinner, without artificial ferment, was clear and light-coloured; it required careful testing to show any trace of albumen. The man was advised to continue taking tonics, and to carefully diet himself.

Remarks.—This case shows several points of great interest bearing on the important subject of albuminuria. Firstly, as to nomenclature: Although the foregoing is a typical case of functional albuminuria, as described by Dr. S. Mackenzie, Dr. Pavy, Dr. Ralfe, Dr. Johnson, and others, yet, taken in connexion with the hæmatinuria and general bad health, it most certainly cannot be termed "physiological." In this instance, indeed, "post-cibal albuminuria" would be a more appropriate term. Dr. Ralfe could hardly have found a case more suited to illustrate his theory as to this disease, with the important exception that between the paroxysms the urine has not contained an excess of urinary pigment. As to the cause: In this instance we have an *embarras de richesses*. The family history was found to be bad; the previous history of the patient was unsatisfactory from a gastric and renal point of view; and lastly, in accordance with Dr. Dickinson's theory as to the etiology of the hæmatinuria, the patient had for many years lived in cold, damp, and low-lying districts. The course of the paroxysms and the state of the urine are typical, but the progress of the case has been most satisfactory, though it is uncertain whether the credit should be given to the warmer climate, the diet, or the drugs. Another interesting point is the apparent influence of the artificial ferment on the albuminuria. One case affords but small data for generalisations, but this seems to open up a field, at all events, for further experiments. It is known that an excessive meal of eggs will produce albuminuria, as the ingestion of a large quantity of sugar will produce glycosuria. Similarly, some chemical substances will cause glycosuria, and others albuminuria. The two conditions bear a close analogy, which, however, requires further working out. They both are in some degree equally connected with the vaso-motor system, and each is connected with a separate function of the liver. So, as there are cases of functional albuminuria, there are also cases of glycosuria without any perceptible organic change. In the former case the hæmolytic action is excessive, while in the latter the glycogenic function is increased. With regard to the albuminuria: Can it be that, by the combined action of cold and a possible malarial factor, a poison is produced in the blood, which may either aid in disintegrating the corpuscles, as other malarial poisons do, or irritate the vaso-motor centre, or do both, and thus produce a paroxysm of hæmatinuria? Does this act in a similar manner, but to a lesser degree, during the intervals producing the albuminuria, or is a more diffusible form of albumen formed by the dyspepsia, of which almost all these patients complain? As to treatment, that suggested by Dr. Ralfe appears effective; but, in addition, I would suggest the use of one or other of the concentrated digestive ferments.

Uxbridge.

ARBROATH INFIRMARY.—The forty-fourth report was submitted to a meeting of the subscribers held on the 16th inst., the president of the institution (Mr. James Muir) in the chair. It appears the infirmary has been kept in a high state of efficiency, and the financial condition was satisfactory. One hundred and sixty-one patients were treated during the year, with only eleven deaths. Including the balance from last year, the ordinary increase amounted to £1007 14s. 10d., and the expenditure to £819 16s. 6d., leaving in hand £187 18s. 4d. A legacy of £100 had been added to the endowment, which now amounted to £9836 9s. 10d., exclusive of the Pannure annuity of £50. At the commencement of the year a change in the medical department had been introduced; four attending surgeons were appointed instead of two, each serving for six months.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF STRANGULATED ENTERO-EPILOCELE.

BY OWEN BOWEN, M.R.C.S.

JOHN S—, aged fifty, had always enjoyed good health, but for the last six years he had had a lump, measuring 3 in. by 2 in., in his right groin, of which he took no notice—that is to say, he never sought medical advice about it, or wore a truss. Occasionally he had been troubled during this period with slight attacks of biliousness and epigastric pain, and had observed that at these times the lump would get somewhat larger and harder. He did not think it had anything to do with the bilious attacks, but attributed them to "wind," and treated himself invariably with a largely advertised nostrum, in which he has, or had, great faith. On the evening of Dec. 12th, 1887, he was suddenly seized with pain of a gripping character in the epigastric region, soon followed by vomiting. Both symptoms he again attributed to wind, and consequently swallowed five of the pills, but they were soon rejected. During the night he was able to keep nothing down. The following morning he took two more of the pills, and subsequently some Epsom salts, but, as he said, failed to effect a passage. Being headstrong, he would not consent to seeing a medical man, and so he went on till the evening of the 16th, when his brother insisted upon my friend, Dr. J. F. Gordon of Maghull, being called to see him. The patient by this time was worn and visibly emaciated, and complained of the constant sickness and of paroxysmal pain in the epigastrium and round the umbilicus. His pulse was not much quicker than normal—about 80. Dr. Gordon examined the usual hernial sites, and discovered the lump in the right groin, but upon being told that it had existed for six years, his first impression was that this was the sole cause of the man's illness was to some extent shaken, and he resorted to stomachic sedatives and morphia, with outward applications over the abdomen of a soothing character, there being no impulse on coughing or pain on manipulation. On the 17th the patient's condition was much the same, the vomiting still persisting, though a little weak brandy-and-water was not so quickly rejected. The pulse was no quicker and the pains were not so frequent. On the morning of the 18th, the pulse being feebler and having gone up to 100, and the other symptoms persisting, the vomited matter being now decidedly stercoraceous in character, Dr. Gordon impressed upon the brother the necessity of having a second opinion, as he felt convinced that strangulation existed and that operation was imperative; so, having obtained his consent, he sent for me. It was 6 P.M. when we saw the patient together. We found the pulse had risen to 110, the nose and ears cold, and the expression anxious. On examining the tumour, we came to the conclusion that immediate exploration was essential, and, having had the patient's permission to operate, we proceeded to do so without further delay. Dr. Gordon administered chloroform, and I, failing by gentle taxis to produce any diminution in the size of the hernia, found, after opening the sac, which I thought necessary considering the length of time since the first symptom was noticed (six days), a mass of omentum, and behind it and to its inner side a knuckle of deeply congested intestine. There was a good deal of blood-stained serum in the sac. Having divided the constricting part I was able to reduce the intestine, but reduction of the omentum was not so easily effected, the cause being probably adhesions. I therefore ligatured it close to its neck in two halves with strong silk, removed it, and left the stump at the bottom of the wound, hoping, thus, if the patient survived, to enable him to wear a truss with comfort. The intestinal hernia was apparently a direct inguinal, and the omental portion indirect. The edges of the incision, about an inch and a half long, were brought together by three silver sutures, and a little bit of drainage tube was left in, to be removed next morning; iodoform dusted over, lint squeezed out of perchloride of

mercury solution laid on and strapped, a pad of cotton wool, and a spica completed the dressing. He had a morphia injection immediately, and nothing by the mouth for the following twenty-four hours. With the exception of a troublesome hiccup (which commenced on the 20th and lasted for eight or ten days, and which was greatly relieved by morphia subcutaneously), and of a slight oozing of pus from the upper and outer part of the wound, nothing unfavourable happened subsequently. The bowels acted copiously on the twelfth, and again on the thirteenth day after the operation. Having been fitted with a truss, he resumed his ordinary occupation, which is not of a laborious character, in less than a month after the operation.

Remarks.—It will be noticed that there was entire absence of impulse on coughing (which, of course, is usual in acute strangulation), and of pain on manipulation of the hernia whenever sought. Both symptoms were easily explained by the conditions found. The sensitive small knuckle of intestine was protected from one's fingers by a good thick covering of omentum.

Liverpool.

IDIOSYNCRASY WITH REGARD TO ANTIPYRIN.

By J. TAYLOR ROBE, M.D.

HAVING lately had a patient suffering from migraine in the Isle of Thanet, I prescribed fifteen-grain powders of antipyrin to be used as a preventive against the attack. She had only taken one of the powders when she experienced the following symptoms, told in her own words: "They were as follows: 'On June 5th I awoke with a slight headache and took a powder about half an hour after a light breakfast. About eight minutes after taking the powder I felt great nausea; then I had a most violent attack of sneezing, which lasted for some time, with temporary catarrh from eyes and nose. I also suffered from queer sensations at the back of my neck and up my head, extreme tightness of the chest and throat, with loss of voice and great difficulty of breathing. The headache had gone, and my head felt the best part of me. Gradually I got my breath back, and my chest and throat got relieved, but my voice was hoarse for the rest of the morning.' There was no itching of the body, nor was there any rash as far as the patient knows. There was no coppery taste in the mouth, nor were there noises in the ears. The sickness from the migraine disappeared, and the headache did not return. Not having seen the patient under the influence of the antipyrin, I was unable to elicit any other symptom from her. There was no gastro-enteritis. The patient before she communicated with me again had a second headache, and took half a powder. This produced no ill effects; it only partially relieved the headache and made her feel sleepy. According to Professor Sée, the use of antipyrin is not followed by sleep or nervous stimulation. Professor Lepine considers that it is both an anodyne and nerve stimulant, so that its action is opposed to morphine in that it relieves pain without depressing the higher brain centres. Whether the sleep is the result of the relief from pain in these cases it is impossible to say. I have never seen a patient complain of sleep after a large dose of antipyrin—only after a small one, such as five grains. Although in large doses it acts as a nerve stimulant, in smaller ones it may have some soporific effect."

Elizabeth-street, Eaton-square, S.W.

A CASE OF TROPICAL LIVER ABSCESS; ANTISEPTIC INCISION AND DRAINAGE; RECOVERY.

By FRED. W. ALLWRIGHT, M.D., L.R.C.S.I., &c.

The following case may be of interest as an addition to those reported by Surgeon-Major Stevenson in THE LANCET of June 9th.

Richard H—, late Royal Artillery, aged twenty-seven, had been in India for a period of four years. He had had dysentery, but never syphilis, and was of temperate habits. He consulted me for a swelling over the region of the liver, stating that he had previously been treated for enlargement of that organ and dyspepsia. I made a full examination. The tongue was furred and the bowels constipated. The

liver was very much enlarged, and the dulness extended from the level of the nipple to about two inches and a half below the ribs. A little to the right of the ensiform cartilage there was a distinct swelling raised above the surrounding skin about a quarter of an inch, which was tender to the touch; he also complained of pain under the right shoulder. There was considerable bulging over the whole of the hepatic region. I diagnosed hepatic abscess. A mixture was prescribed, containing chloride of ammonium, a solution of potash, and nitro-muriatic acid. I saw him a week afterwards, on Sept. 14th, when the tumour was slightly increased in size, and fluctuation well marked. I passed the needle of a hypodermic syringe into the tumour, and withdrew a syringe of flaky pus, intermixed with a chocolate-coloured material. This was examined microscopically, but no "hooklets" were visible. I thought it might be hydatid disease. I determined upon using the aspirator, and accordingly did so on Sept. 18th, when twenty ounces of the same kind of material were withdrawn, which relieved the patient. After the operation there was no elevation of temperature, and no ill effects followed. There was no diminution in the dulness after the evacuation of the abscess; at least it was not perceptible. The mixture was continued, and the patient was fed on light, nutritious diet, and a pill containing a quarter of a grain of podophyllin administered every alternate night to regulate the bowels. No further treatment was adopted until the following November, when the bulging over the liver was found to be increased in size. The patient, making no progress towards recovery, was anxious to have something further done. An operation was decided upon. On Nov. 21st chloroform was administered, and an incision made, with antiseptic precautions, about two inches in length from the ensiform cartilage, parallel to the last rib; this gave exit to about five ounces of pus, mixed with the same chocolate-coloured material. A full-sized drainage tube was inserted, and the cavity of the abscess measured about six inches in depth. The wound was dressed with carbolic tow. The temperature was normal the evening after the operation, and never rose above 100.3° subsequently. The only complication that followed was a rather troublesome cough, but this gradually subsided. The discharge continued for two months after the operation, and from time to time there were several pieces of what appeared to be liver substance discharged through the drainage tube. The cavity of the abscess was washed out with warm iodised water (1 dr. of iodine to 8 oz. of water), and afterwards with a weak solution of iodised phenol. The cavity gradually contracted, and the greater part of the dulness disappeared. The subsequent progress was in every way satisfactory, and the recovery complete. At the present time the patient is in perfect health.

The case is interesting from the large size of the abscess, and the comparatively slight constitutional disturbance which it caused.

Claytons, Bourne End, Bucks.

A CASE OF CYSTIC MYOMA OF THE UTERUS; HYSTERECTOMY; RECOVERY.

By H. G. PLIMMER, M.R.C.S. ENG. &c.

E. N—, aged thirty-seven, a lady's maid, was sent by her mistress to me on Jan. 21st as a case of "ovarian tumour." She was on that day admitted into the Norwood Cottage Hospital under my care. Her family history is unimportant. She had scarlatina when a child, but otherwise no illness until four years ago, when she had a good deal of irregular pain in the abdomen. As this lasted some weeks, she went to a surgeon, who examined her, and told her she had a tumour. The pain got better, and she thought nothing more of the tumour until four months before admission, when the pain recurred. She was up to this time always quite regular, and had no leucorrhœa. From this time the pain grew worse, and the discharge at her periods became profuse and exhausting. Two months later she first felt the tumour in her abdomen herself. She had no vomiting and no metrorrhagia. She gradually got weaker, had more pain, and finally became unable to do her work. On admission to the hospital, I found her to be a tall, spare woman; complexion sallow, very dusky, almost pigmented about her eyes and forehead; she looked old for her years, and was somewhat

grey. On examining the abdomen, a pear-shaped tumour could be felt, which was symmetrical and quite central. It extended to just above the umbilicus, and was movable. It was soft, and gave distinctly the feeling of fluctuation. The aortic impulse could be seen and felt. On examination per vaginam, the os could be felt very high up, pointing almost backwards; a large soft mass could be felt posteriorly to the uterus, which was movable only with the tumour. The uterine arteries could be felt in the vagina. The sound could not be got into the uterus, and a small catheter would only pass for about an inch. On Jan. 24th I punctured the tumour midway between the umbilicus and pubes in the middle line with the smallest aspirating needle. Nothing but a few drops of blood came, which confirmed the diagnosis of the tumour being uterine. Believing it to be a fibroid, it was decided to remove the uterine appendages. Accordingly, on Jan. 28th, with the assistance of Drs. Sydney Turner, J. H. Galton, Miller, and Deyns, I began this operation. Chloroform was administered. An incision three inches long was made in the middle line, and the peritoneum opened in the usual way. The ovaries could not be reached on account of the size of the tumour, which was reddish in colour, and so soft and fluctuating that we felt certain it must contain fluid. We tapped it with an ordinary trocar; nothing came but blood, and this was stopped, with much difficulty, with the cautery. It still felt to us so certain that there was fluid within it that I punctured it with Spencer Wells's ovarian trocar, and still nothing came. We then unanimously decided to perform hysterectomy. I enlarged the incision up to the umbilicus, and down to the pubes, and, with a great deal of difficulty even then, drew the tumour, which was nowhere adherent, out of the wound. The ovaries and tubes could then be seen and felt, and both were found to be diseased. We decided to remove them with the tumour and uterus, which were indistinguishable one from the other. Koebler's *serre-nœud* was applied so as to include the tumour, ovaries, and tubes, and was screwed up. The whole was then amputated. A large quantity of blood from the tumour escaped into the pelvis, which was then irrigated with plain water at 110° until the blood was washed out. The stump was secured in the lower angle of the wound, and two hare-lip pins passed through it just above the wire. Five deep and four superficial sutures of carbolic silk were put in, and the wound dressed with sublimate wool-wool. The urine was drawn off for eight days after the operation, and the bowels acted on the eighth days by means of enemata. She had some cystitis, and the bladder remained irritable until sixteen days after the operation. The hare-lip pins (used because the right pins were not available) caused great irritation, and were removed on the eighth day. The sutures were removed on the ninth and tenth days. The *serre-nœud* with the stump came away on the eighteenth day. The temperature was 103° before the bowels acted, and on two days during the attack of cystitis it was 101°, otherwise it never exceeded 99°. She left the hospital on March 10th, and is now quite well. The tumour weighed 5lb. 8oz. It was a so-called cystic myoma, the myomatous fibres being opened up by spaces, having no proper lining, and containing a mucoid substance.

Norwood.

WESTERN OPHTHALMIC HOSPITAL.—In aid of the funds of this institution a meeting was held on the 18th inst. in the Portman Rooms, Baker-street, Sir Michael Hicks-Beach presiding. During an existence of thirty-two years the hospital has relieved 54,000 poor sufferers, and there had been 300,000 separate attendances. The annual expenditure was only about £700, and last year 54 in-patients were admitted, while the out-patients numbered 1926. The annual subscriptions now were not more than one-fifth of the outlay, small as it was. An additional yearly subscription of £150 was required in order to utilise properly all the ten beds. The chairman earnestly appealed for public financial support; following which several resolutions were proposed, and the meeting terminated.

ROYAL EDINBURGH ASYLUM.—The following candidates passed the examination for the certificate in Psychological Medicine on the 18th and 19th inst., by the examiner of the Medico-Psychological Association of Great Britain and Ireland:—E. F. Armour, M.A., M.B., C.M. Edin.; John Bruce; H. C. Chapman, M.B. Lond.; P. C. Evans; J. H. W. Laing, M.A., B. Sc.; P. J. Rice, M.D.; W. A. Turner, M.B.; G. R. Wilson.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

VARICOSE ANEURYSM AT BEND OF ELBOW; LIGATURE OF RADIAL, ULNAR, AND BRACHIAL ARTERIES AFTER FAILURE OF COMPRESSION; CURE; REMARKS.

(Under the care of Mr. WILLIAM ANDERSON.)

VARICOSE ANEURYSM at the bend of the elbow is so rarely met with in the surgical practice of the present day that the following account of a case, with the remarks appended by Mr. Anderson, will be perused with interest. For the notes we are indebted to Mr. T. H. Dickson, dresser.

T. P.—, a carpenter, aged thirty-nine, was admitted on Sept. 1st, 1887. He stated that he had pierced his left arm at the bend of the elbow with the blade of a pocket-knife three days previously while cutting a piece of wood. The hæmorrhage, which was profuse, was arrested by the application of a tourniquet upon the brachial artery, but on removal of the instrument a pulsating swelling showed itself over the seat of injury.

On admission, a small puncture, incompletely healed, was seen nearly opposite the insertion of the biceps. A little above this point was a soft, throbbing, circumscribed tumour of about the size of a chestnut, and the neighbouring superficial veins were somewhat distended. A well-marked thrill was perceptible over the tumour and along the median, median basilic, and median cephalic veins, and could be traced in the course of the radial artery as far as the wrist. On auscultation a low rumbling sound as of a train passing through a tunnel could be heard over the bend of the elbow, and followed as a "whisking" murmur along the arterial, radial, and upper part of the ulnar arteries. The radial pulse at the wrist was less forcible than on the uninjured side. Compression of the main artery caused the venous distension to subside, but the tumour, although softer and smaller, did not disappear until emptied by direct pressure.

On the following day an Esmarch bandage was applied from the hand upwards to a short distance above the elbow, and the patient was kept under the influence of morphia. Two hours later the bandage, which caused great suffering despite the narcotic, was replaced by digital compression of the brachial artery. The vessel was commanded for six hours, but at the end of this time, no sensible impression having been made upon the aneurysm, the treatment was discontinued, and the arm was enveloped in cotton wool and placed in a flexed position upon a pillow.

An operation was performed by Mr. Anderson on Sept. 10th. The limb having been rendered bloodless by an Esmarch bandage, the integuments over the tumour were divided, and the median, median basilic, and median cephalic veins were ligatured. The deeper tissues were, however, so much infiltrated with reddish serum that it was impossible to distinguish the structures from one another, and it was necessary to replace the elastic ligature by digital compression in order that the course of the arteries might be traced by pulsation. The aneurysmal sac, the walls of which were extremely thin, was then seen to be connected with the deep median vein on the one hand, and the radial side of the bifurcation of the brachial artery on the other. It was laid open freely, and the brachial, radial, and ulnar arteries were secured with carbolic silk close to the point of division of the main trunk, the wound in the brachial lying between the three ligatures. Care was taken to avoid any unnecessary disturbance of the venæ comites. Some bleeding occurred during the early part of this stage of the operation, owing to the accidental failure of the compression of the brachial trunk, and this, together with the matting together of the parts by old extravasation and inflammatory products, rendered the process of isolation of the radial and ulnar arteries somewhat tedious and difficult.

A drainage tube was inserted, the wound dressed antiseptically, and the limb, enveloped in cotton wool,

maintained in a flexed position. All went on well, the temperature and general nutrition of the arm remained good, and, although no pulsation at the wrist could be felt, the circulation appeared to be perfect. The wound healed somewhat slowly, but without complication, and the patient was discharged on Oct. 6th. When seen three months later, he had resumed work, and the strength and utility of the arm were fully restored, but the radial pulse still remained imperceptible.

Remarks by Mr. ANDERSON.—Varicose aneurysm at the bend of the elbow, a rather frequent accident in the days of periodical venesection, is almost a curiosity for the present generation of surgeons. In most of the older text-books, a very careful distinction is made between the two lesions which may follow a punctured wound implicating an artery and a vein: varicose aneurysm, where an intermediate sac, communicating with the adjacent apertures in the two vessels, is formed at the expense of the surrounding tissues; and aneurysmal varix, in which the communication is direct, and the vein undergoes dilatation as a result of the ingress of the arterial blood stream. It has been shown that in the latter case little danger or even inconvenience may arise, and the active interference of the surgeon is not necessarily called for; while in the former the tendency is towards progressive enlargement of the tumour and all the danger of true aneurysm, and consequently, failing the rare success of compression, an operation of some kind is almost inevitable. In both conditions, if, as must usually be the case, the vein has been transfixed by the penetrating instrument, an aperture must be present on the side of the vessel not in communication with the artery, and we are left to infer that this opening quickly becomes sealed by natural processes, since no complications are said to arise in connexion with its existence. It is not easy, however, to understand why this should be so. The treatment recommended in a case of varicose aneurysm is—firstly, to expose and open the sac; secondly, to find the apertures of communication with the vein and artery; and, lastly, to tie both vessels above and below the point of injury. Nothing could be clearer than these written directions, but to carry them out will often prove a far less simple matter than might be expected. The enlarged and tortuous veins, the extremely tenuous and perhaps ill-defined wall of the false aneurysm, and the infiltration of all the tissues with extravasated blood and inflammatory products consecutive to the original injury, must often interfere with the recognition of anatomical landmarks; and, as the thin-walled sac collapses upon incision, the discovery of the two apertures with a probe may involve much delay and interfere with the wound. Moreover, although the exact position of the arterial lesion must of course be ascertained, the detection of the opening in the vein is not essential, for, after the sac is laid freely open and the arterial communication cut off, a simple compress over the wound is enough to prevent any trouble from this source. If, as may be expected, the arterial wound is found near the bifurcation of the main vessel, whether in radial, ulnar, or brachial, the treatment adopted in the present case would appear to be the safest, as the ligature of the trunk and its two branches (with the radial recurrent if necessary) blocks every channel by which the blood can gain access to the injured point, leaving open the large recurrent branches of the ulnar and posterior interosseous arteries, the stream through which is quite sufficient to establish a free collateral circulation and to ensure the nutrition of the forearm.

LEEDS GENERAL INFIRMARY.

PERICARDIUM OF RHEUMATIC ORIGIN;
HEMORRHAGE INTO PERITONEAL
CAVITY; DEATH.

(Under the care of Dr. BARRS.)

The patient had been seen by Dr. Barrs eight weeks before he was admitted (by the courtesy of Dr. Eddison) into the infirmary. He was then suffering from pericarditis and pneumonia, the remainders of an attack of acute rheumatism of some six weeks' duration. The following notes were taken from the clinical report of Mr. H. A. Smith, his home physician.

On July 17, 1888, a boiler maker, was admitted at Leeds General Infirmary. He had never, previous to the present illness, suffered from acute rheumatism or chorea. Seven-

teen weeks before admission he began to have pain in the right foot, then in the right hip, soon followed by general articular and muscular pains. At the end of a month he had sufficiently recovered to be allowed to get up and go about the house. Fourteen days later the legs began to swell, and he became short of breath on moving about. The abdomen began to enlarge, and he was compelled to return to bed. Eight weeks before admission (at which time he was seen in consultation by Dr. Barrs) the left chest was tapped, and he was found to be suffering from acute pericarditis. He afterwards remained in a stationary condition for six weeks, at the end of which time he began to vomit, and vomited daily until admission. This relieved the dyspnoea to some extent. There had been no hæmatemesis.

Present condition.—The patient is a pale-faced lad, sitting propped up in bed, and breathing with very great difficulty, 46 in the minute. Pulse 128, regular. There is now no pain in the joints; the limbs are wasted and the hands tremulous. Chest: Expansion poor, but equal on the two sides; apparently some slight rounding of the lower part of the left chest; epigastric pulsation marked; vocal fremitus is equal on the two sides in front above the level of the third rib, below this on the left side it cannot be felt; no rub or thrill felt. On percussion in front, there is a clear note on the left side down to the level of the third rib, then dullness begins and extends to the costal margin, and is continuous through the lateral aspect with the dullness in the posterior part of the left chest, which reaches as high as the angle of the scapula. On the right side the area of cardiac dullness extends to half an inch beyond the margin of the sternum. In the fifth space in front on the left side, about two inches from the midsternum, a sharp pain is caused by percussion. In the back of the chest the vocal fremitus is lost completely on the left side below the inferior angle of the scapula, and on the right side it is absent below the level of the tenth rib. The percussion note is dull over the same areas, and the breath and voice sounds are very much impaired or lost. Heart: There is marked epigastric pulsation; no præcordial bulging; apex beat cannot be defined; no thrill felt; area of dullness is greatly increased, beginning above at the level of the third rib; below and to the left is lost in general dullness of chest, and on the right extends to half an inch beyond the margin of the sternum. On auscultation, a systolic bruit is audible at the apex, in the axilla, and also in the back. The aortic and pulmonary sounds are feeble, but apparently clear. The liver is, in all probability, enlarged, but owing to the rigidity and tenderness in the epigastric region its limits cannot be defined by touch. The spleen cannot be felt. The patient was ordered a digitalis mixture every six hours.

March 20th.—Pulse 135; respiration 48; evening temperature 102°. Left chest tapped, and thirty-four ounces of fluid withdrawn.

21st.—The breathing has been much easier since tapping yesterday. Seven ounces of urine were passed in twenty-four hours; not albuminous.

24th.—On the whole, since the tapping he has been easier. He is complaining of pain in the left side. Vomited yesterday. Pulse 102; respiration 40; temperature 99°.

26th.—Has not vomited since the 24th. Eighteen ounces of urine passed during last twenty-four hours. He is not so short of breath. Dullness behind not increased.

28th.—Vomited again yesterday morning. The heart sounds are unaltered from the description on admission.

April 2nd.—Has not vomited since March 30th. He is sleeping better, and the cough which has previously distressed him is less. Seven ounces of urine passed in twenty-four hours; sp. gr. 1028; no albumen.

5th.—Vomiting has been persistent and uncontrollable since last note. Nourishing food was ordered on the 3rd inst., but this only made things worse; he vomited steadily after every mouthful. The chest behind is distinctly clearer, the breath sounds more audible, and the dullness does not extend so high as it did.

7th.—The patient vomited almost continuously since last note.

12th.—The medicine ordered on the 7th (arsenic and resorcin) caused much diarrhoea, but he did not vomit again. The abdomen is now very painful. The feet were a little cedematous on the 9th. On the 10th all medicines were stopped, and six leeches applied to the epigastrium. The bites bled freely afterwards, and the bleeding had to be arrested by sutures. The pain was not relieved, and morphia

was given hypodermically. Pulse 128; respiration 46; temperature 102°. On the 11th one-sixtieth of a grain of digitalin in granules was ordered every four hours. The patient had a very bad night, coughing incessantly. The abdomen was very painful, and morphia had to be given again. This morning (April 12th), at 9 A.M., the patient had a sudden attack of dyspnoea, became very pale, and complained of intense pain in the abdomen. The dyspnoea and pallor became extreme, the abdominal pain persisting, and he died apparently from syncope.

Necropsy.—Both pleural cavities, practically obliterated by recent soft adhesions, specially thick on the upper surface of the diaphragm. Lungs tough and semi-solid in parts. Pericardial cavity completely obliterated at every point. Separation of pericardium impossible without laceration of muscle. No unusual adhesions to mediastinal tissues, the inner surfaces of lungs being only softly adherent. The heart with attached pericardium weighed twenty-five ounces, and was clearly much enlarged, the right and left sides maintaining their normal proportions to each other. The cavities were all dilated, especially the ventricles. The muscle looked pale, and its line of demarcation from the pericardium was indistinct. A large papillary muscle in the left ventricle showed distinct "pheasant-wing" markings. No hæmorrhage into the muscle. The aortic valves looked a little opaque and sodden, but were practically healthy. The mitral orifice admitted four fingers (obvious dilatation), but the valve itself was quite normal. The right valves were healthy and the aorta normal. The peritoneal cavity was practically filled with fluid blood and clots; over forty ounces of fluid were measured, and there would be a considerable quantity left after that in the recesses of the cavity. This fluid blood presented the ordinary characters of blood under such circumstances. Lying over the right lobe of the liver was a large clot the size and thickness of a full-time placenta. (The appearances were precisely such as one has seen in cases of laceration of the liver, for instance; and Dr. Barrs at once suspected rupture of that organ or of the spleen, but after a most prolonged search and injecting the abdominal vessels, and resorting to all the plans he could think of he was quite unable to find the source of the bleeding.) On the convex surface of the left lobe of the liver, and in contact with the abdominal wall, was a large patch of toughish-looking lymph. Between the lobulus quadratus and the left lobe there were also some soft recent adhesions, with hæmorrhage into them. The liver itself showed the ordinary "nutmeg change." Dr. Barrs carefully examined all the trunk branches of the abdominal aorta for aneurysm, but could find none. All the organs not referred to were healthy.

Remarks by Dr. BARRS.—The case narrated affords in its essential conditions, though not in its mode of death, a striking example of one of the more immediately fatal cardiac complications to which acute rheumatism gives origin. In THE LANCET for 1881, I published a small series of cases of adherent pericardium of rheumatic origin terminating in death by cardiac dilatation, and expressed the opinion that this lesion ought in all probability to be regarded as an almost certainly fatal complication of rheumatic fever. The present case is one of unusual interest because the march of events can be fixed with greater exactitude than usually happens in hospital practice. When I saw the man eight weeks before he came into the hospital, he presented all the usual evidences of acute and recent pericarditis. When admitted the signs of pericarditis were not evident, and at the end of four weeks longer he is dead, with complete and firm obliteration of the pericardial cavity. So that it is shown, by this case at least, that in the course of three months an attack of acute rheumatic pericarditis, with its attendant myocarditis, is able to bring about a fatal condition, characterised mainly by extreme but anomalous manifestations of cardiac dilatation and alternate failure. The immediate cause of death was the intra-peritoneal hæmorrhage, for which, as I have said in the body of the report, I was unable at the necropsy to find any cause whatever. But apart from this, which I cannot but regard as an accident, the case was pursuing a rapidly downward course, the grave disturbance of the circulatory apparatus progressing steadily towards a fatal termination, in spite of an energetic and varied treatment. I am not acquainted with any recorded case of intra-peritoneal hæmorrhage ending fatally, for which no obvious cause could be found; neither am I aware that it has been observed to occur

in cases of cardiac disease, either as a result of venous stasis or any of the other conditions which give rise to hæmorrhages in other localities.

THE SAMARITAN HOSPITAL FOR WOMEN, BELFAST.

THREE CASES OF RARE OCCURRENCE.

(Under the care of Dr. McMORDIE.)

CASE 1. Congenital deficiency of the recto-vaginal septum; operation; cure.—M. H—, aged twenty-five, single, appeared in the out-patient department on April 15th. She gave the following history. The catamenia appeared at the age of sixteen, and since then she has only menstruated seven times at irregular intervals. She had not "seen anything" for three years. She complained of being nervous, of heats and colds, and of pain in the vagina and lower back. Owing to her irritable condition it was impossible to make a vaginal examination without an anæsthetic. The following day, having been put under the influence of chloroform, an examination was made. The vagina was found to be very small and the hymen intact. A finger of one hand being passed into the vagina, lumps of hardened faeces were found in the upper part, close to the cervix uteri. A finger of the other hand being introduced into the rectum, it passed through an opening in the vaginal septum and met the other finger in the vagina. The opening was about the size of a sixpence, and situated about one inch from the anus. The edges were pared freely towards the vagina and brought together by silver wire. The union was perfect, and she was discharged cured three weeks from her admission.

There are two points of interest in this case: (1) The long time the opening had existed without being detected. (2) The menstrual fluid may have passed unnoticed by this opening instead of by the aperture in the hymen.

CASE 2. Foreign body in the rectum; removal; recovery.—K. H—, aged forty-four, married; twelve children and two miscarriages, the last one a miscarriage at three months, two months before her admission to the Samaritan Hospital on March 15th. For three weeks previously she had vomited after every meal. She complained of severe pain in the hypogastric region. There was a movable abdominal tumour about the size of an adult head. An examination by the finger per rectum discovered a hard body lodged in the anterior wall, on a level with the promontory of the sacrum. There was a considerable amount of swelling and tenderness at this point, so that with some difficulty the finger could be passed beyond it. A speculum forceps was passed up, and the body seized and removed. It proved to be a thin, flat piece of bone, triangular in shape, one-third of an inch at the base, and the sides of the triangle measuring half an inch. It appeared to be a portion of the skull of some animal. The bowel was cleared out by copious enemata, and the patient recovered.

CASE 3. Rapid development of a thyroid cyst.—E. K—, single, aged twenty, was admitted to the wards on March 1st. The right lobe of the thyroid gland was swollen and tense, with an elastic feel, and about the size of a small orange. It had developed very rapidly, the girl stating that she first noticed it about seven days before her admission. The cellular tissue surrounding it was inflamed and oedematous; it was difficult to be certain of the nature of the contents, so an exploring trocar was passed and some clear serous fluid drawn off. There was now no doubt that the swelling was an acute bronchocele, confined to the right lobe. The isthmus and the left lobe were not affected. The swelling was tapped, and two ounces of clear fluid drawn off. Nothing was injected. The girl was a native of Portrush, and had been at service in Belfast for eighteen months. When admitted she was in a very anæmic condition. She left the hospital on March 16th much improved in health, and there was no appearance of any returning enlargement of the thyroid.

THE BRITISH ASSOCIATION.—At a meeting held in the Mayor's room at the Town Hall, Leeds, on the 20th inst., it was resolved to renew the invitation sent last year to the British Association, to hold their meeting in that town in 1890, and to raise, for expenses, a guaranteed fund of £5000.

Notices of Books.

The Localisation of the Lesions of Phthisis; its Relation to Diagnosis and Prognosis. By J. KINGSTON FOWLER, M.A., M.D. Cantab. London: J. & A. Churchill. 1888.—Any contribution to medicine that enables us to attain greater precision and security in diagnosis, or in forecasting the progress of disease, must always be welcomed. The soundest method of obtaining such result is by careful and exact comparison of clinical and pathological facts. This has been the aim of the author of this brochure, who, in pursuit of a line of inquiry analogous to that taken up by Dr. Ewart in his Gulstonian lectures six years ago, has succeeded in demonstrating, in a manner that carries conviction with it, the not unimportant fact, that in chronic phthisis the extension of disease in the lungs follows a definite and regular course, and that any anomaly in this regular "line of march" must be attributed to some disturbing factor special to the case. His conclusions are based upon an extensive experience as pathologist to the Middlesex Hospital, and the adoption of a systematic method of examination of phthisical lungs, whereby the relations and grouping of the lesions were readily displayed. He has thus arrived at results which, whilst in general agreement with accepted facts, go beyond these in many important particulars. Without attempting any detailed exposition of his facts, it must suffice here to say that Dr. Fowler clearly proves that the primary seat of disease is not the extreme apex of the lung, but a point some inch and a half below this, and nearer the posterior than the anterior surface; or else (less often) at the outer part of the upper lobe corresponding to the first and second interspaces below the outer third of the clavicle. Of more importance is the proof of the fact that the apex of the lower lobe is liable to very early infiltration, as a rule, before the opposite lung is affected; at a time, that is, when physical signs first reveal the existence of disease in the lung. On the chest wall this point corresponds to a spot opposite the fifth dorsal spine in the inter-scapular region. From these points there is gradual extension downwards towards the base; and basic lesions, apart from such extension, are almost invariably non-tuberculous. The monograph contains further details of the distribution of such lesions, of the transference from one lung to the opposite, &c.; and the explanation is given that the regularity of arrangement and sequence depends upon the tubercular disease spreading by inhalation, but that where the virus is disseminated through the blood and lymphatic system no such regularity obtains. The bearing of such conclusions upon diagnosis and prognosis is therefore obvious.

An Introduction to the Study of the British Pharmacopœia. By RAWDON MACNAMARA, Professor of Materia Medica, R.C.S.I., &c. Pp. 121. London: H. K. Lewis. 1888.—In his preface Professor Rawdon Macnamara says that the observations in this little book "are of the most elementary character; were they otherwise, they would be unsuited to the class of students for whom they are intended—beginners." It is from the "beginner's" standpoint, therefore, that the book must be judged. It is very slight in structure, consisting of little more than the first lecture probably given at the commencement of any systematic course upon Materia Medica, introducing the student to the general characters of such substances as gums, resins, volatile and fixed oils, and the like. Then follow the pharmacopœial preparations, treated in some detail, with an occasional light remark to help to fix a fact. The characters and tests form a large portion of the book, no less than forty pages being devoted to them. We cannot but think that a beginner is rather hardly dealt by in being presented with thirty-two pages upon the

volumetric tests of the Pharmacopœia. A few remarks upon modes of administering medicines and a therapeutic classification of the articles contained in the Pharmacopœia draw this unpretentious little book to a close.

Untersuchungen über Heterogenese. By Dr. A. S. FOKKER. Pp. 66. Groningen: Noordhoff.—This is a pamphlet constituting the third part of a series, the other numbers of which have not fallen into our hands. The author, however, in the introduction, states that in them he demonstrated that protoplasm taken aseptically from a living animal has the power of exciting changes which effect the conversion of starch into sugar, and can develop acid from sugar. Since they were written Reinkes has shown that leaves of plants and germinating oats and barley, after six minutes' exposure to steam at a temperature of 212° F., can still eliminate carbonic acid gas. Fokker was therefore induced to institute experiments to determine the temperature at which protoplasm lost its vital properties, and he has found that it requires a much higher temperature than is ordinarily supposed, approximating in this respect the spores of fungi. The same pamphlet contains a notice on the nature of Hæmatocytes, which he regards as mere fragments, having no great importance; also a notice of *Sphinx gobicus*, and another on the comma bacillus.

Aids to Dental Surgery. By ARTHUR S. UNDERWOOD, M.R.C.S., L.D.S. London: Baillière, Tindall, and Cox.—This is a digest of the various dental manuals, and, considering the small space—only 100 pages,—contains a large amount of information. There is no attempt to deal with the practical part of dental surgery, which the author truly says can only be learnt "at the chair." The different theories as the pathology of cavities are clearly stated, and no undue prominence is given to the author's own views (Messrs. Underwood and Miles were the first to point out the invariable presence of micrococci in the tubules of carious dentine). Pyorrhœa alveolaris is regarded as a disease of constitutional origin, and its principal causes struma and syphilis, but no mention is made of Professor Victor Horsley's observations with regard to its relative frequency in cases of locomotor ataxy. The book is brought fairly up to date, and should be of value to the student or the practitioner who wishes to refresh his memory.

La Chirurgie Journalière. Leçons de Clinique Chirurgicale. Par ARMAND DESPRÉS, Chirurgien de l'Hôpital de la Charité, &c. Troisième Édition. Avec 46 Figures intercalées dans le texte. Paris: J. B. Baillière et Fils. 1888.—These clinical lectures on every-day surgery form a volume of 850 large octavo pages, and they deal at some length and with considerable minuteness of detail with a great variety of subjects. The one noticeable defect in the work in an English reader's eyes is the absence of an index; this greatly lessens its value for ready reference. The subjects dealt with lend themselves very readily to illustration, and an allowance of only 46 rather inferior woodcuts spread over 850 pages might very well be greatly increased. The lectures themselves are very good, and will be read with interest and advantage, although in places there appears to us to be a tendency to draw too fine distinctions.

The Quarterly Journal of Microscopical Science. Edited by Professors RAY LANKESTER, THISELTON DYER, KLEIN, MOSELEY, and SEDGWICK. No. CXII. April, 1888. London: J. & A. Churchill.—This part is in great measure occupied with an admirable monograph on the singular genus of Arthropods, named *Peripatus*, and especially of the "Capensis" species, by Adam Sedgwick, to which are appended some notes on *Peripatus Capensis* and *P. Nova-Zelandiæ*, by Lillian Sheldon. Dr. Nicholas

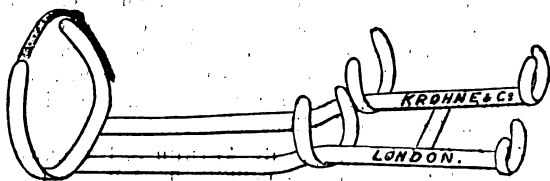
Zograff communicates a paper on the so-called Labyrinthine apparatus of the Labyrinthine Fishes. Arthur Dendy, in a memoir, sends studies on the comparative anatomy of sponges, including *Ridleya* and *Quassilina*. Lastly, there is a memoir by Klimenberg on the development of *Lopadorhynchus*.

New Inventions.

KROHNE'S MODIFICATION OF THOMAS'S DOUBLE HIP SPLINT FOR THE TREATMENT OF DISEASES AND INJURIES OF THE SPINE.

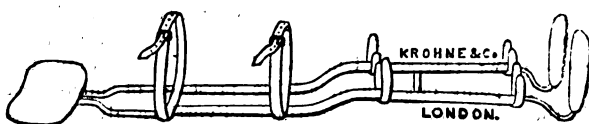
THE well-known Thomas's double splint for disease of one or both hip joints (Fig. 1) is rendering great service in the treatment of that affection. Mr. Krohne has added

FIG. 1.



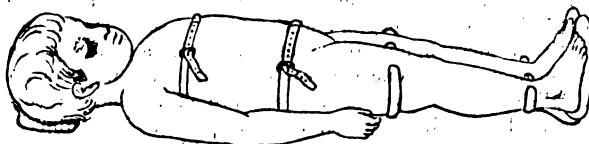
to this splint a pelvic band, a support for the shoulders, neck, and head, and two sliding foot-pieces, as shown in Fig. 2. The two upright bars are made after the shape of a

FIG. 2.



healthy, normally formed child when in the recumbent position. They give posterior support to both sides of the spine. The two cross-bars, the pelvic band, and the band reaching to below the axillæ, support the pelvis and body laterally. The lower extremities are kept in position by cross-bars supporting the thigh and lower third of leg. The rest of the splint consists of the support for the shoulders, neck, head, and both feet, so that the entire body is supported, as shown in Fig. 3. The first object in the treatment of spinal

FIG. 3.



caries, weak or injured spine, is to devise means whereby the weight of the head and upper extremities is taken off the spine. This is obtained by placing the child and retaining it during the whole time of treatment in the uninterrupted recumbent position. By the aid of this splint the surgeon is enabled to carry out this treatment, and, the splint being applied next to the skin, the child can perform its natural functions without the removal of the apparatus. The second object is to fix the spine, which is effectually done by placing a wide bandage around the body and the splint; further, to prevent the child from raising its knees and using the legs as levers, and thus jerking the spine, both legs are bandaged to the splint. Both feet and ankles are also supported by a bandage, to protect the feet from the pressure of the bedclothes, and to prevent

them from dropping forward or to either side. The bandages are not shown in the engraving. With slight modifications, the splint can be adapted to cases of disease or injury of the lumbar, dorsal, or cervical part of the spine. Most cases of advanced spinal disease are accompanied with contraction of one or both hip joints. No special notice need be taken of such contractions. The child is placed with its back on the splint, care being taken that the fold of the buttock corresponds with the angle of the splint, and the bandage is then applied. The child is next made to straighten its legs as much as possible. Any existing angle under the knee is filled up with soft padding, and the legs are thus bandaged to the apparatus. The contractions will be gradually corrected by the limb dropping, by its own weight and without pain, to the straight line of the splint, which will be noticed by the bandage getting loose. Some of the padding must then be removed and the leg re-bandaged. This has to be repeated until the limb has dropped to the straight line of the splint. The same straightening process goes on simultaneously in the spine, correcting lordosis or any other abnormal curvature. The pelvis forms the fulcrum, and the body above and the limbs below it are the levers, dropping by their own weight to the line of the splint without the slightest pressure being required. Throughout the whole time of treatment care must be taken not to cause pressure on any part. It is therefore absolutely necessary that the child be placed, after the adjustment of the splint, on a soft and loosely stuffed feather bed, when the bars of the splint sink into the bed, and the feathers rise and support the whole body. Some absorbent cotton-wool should also be placed on and above the heel. When supporting it by a bandage to the sliding foot-pieces, fresh cotton-wool should be employed whenever the bandage is replaced. Attention must also be given to all the cross-bars, which must be bent away from the body if undue pressure be caused by them.

MAJOR AMPUTATIONS TREATED ANTISEPTICALLY.

To the Editors of THE LANCET.

SIRS,—In reply to the questions contained in Mr. Vincent Jackson's letter of July 15th, I have arranged the sixty patients upon whom major amputations were performed in the Royal Infirmary, Newcastle-on-Tyne, during the year 1887, into four classes: 31 were under twenty; 14 between twenty and forty; 10 between forty and sixty; and 5 were over sixty years of age.

About fourteen years ago the antiseptic method of treating amputations was introduced into the Newcastle-on-Tyne Infirmary by Dr. G. T. Beatson (now practising in Glasgow), who came direct from Professor Lister's wards to fill the post of senior house surgeon here. The practice has in no essential particular altered since then. We cleanse the limb with carbolic lotion, operate under the spray, use gauze and cotton-wool dressings, catgut ligatures and sutures, and are careful always to provide for free drainage by means of indiarubber tubing. Our results before 1874 were very unsatisfactory, and I think our present good results are due mainly to the altered method of making and of treating wounds; but other factors have undoubtedly contributed. Among them I am of opinion that the appointment of a pathologist has been very important. The pathological staff is not now brought in contact with the surgical wards. Dissecting students, too, are not allowed to dress patients in the hospital. Opinions, I dare say, will continue to vary as to the relative value of a particular method of treating wounds and such other precautions as I have indicated. I think, however, it must be admitted that the exclusion from surgical wards of every recognised cause of infection so rigidly insisted upon to-day is due more to a belief in the truth of the theory upon which the antiseptic system is based than to any other cause.—I am, Sirs, yours truly,

Newcastle-on-Tyne, July 23rd, 1888.

FREDERICK PAGE.

THE LANCET.

LONDON: SATURDAY, JULY 28, 1888.

THE Public Health Service will be affected in two important respects if the Local Government Bill is adopted as it now stands. An amendment, for which this service is indebted to Sir WALTER FOSTER, but proposed in his absence by Sir LYON PLAYFAIR, requires every medical officer of health appointed after January 1st, 1892, to be registered as the holder of a diploma in public health. Mr. RITCHIE very properly added the proviso that previous tenure of office in respect of a population of 20,000 during three years should exempt a candidate from the necessity of holding this diploma. Unfortunately, the clause as it now stands requires that these three years shall be those immediately preceding the date mentioned. There are many medical men who have in the past held far more important health officerships than those specified, but who will not be actually medical officers of health during that period, and who will therefore be disqualified by the Bill for further service unless they subject themselves to examination. This is obviously not intended, and we anticipate that the clause will be still further amended to make these services available under the new order of things. The health service has been an ever-changing one, and it would be unfortunate if the many who happen not to be in office in the three years mentioned were compelled, after prolonged service in large and thickly populated districts, either to devote valuable time to the preparation for an examination which has only very recently come into existence, or to abandon all intention of placing their experience at the disposal of local sanitary authorities. The Society of Medical Officers of Health has, we understand, taken steps to direct attention to this mistake.

The second point of importance to which we refer is the requirement that every medical officer of health shall send to the County Council a copy of every periodical report which is for the time being required by the regulations of the Local Government Board to be sent to that Board. The County Council are empowered to make a representation to the Local Government Board if it appears to them from such report that the Public Health Act of 1875 has not been properly put in force within the district to which the report relates, or that any other matter affecting the public health of the district requires to be remedied. This of course will have no application in districts of scheduled boroughs, but in other urban and rural districts it will, we hope, lead to the improvement of the sanitary condition of the locality. If the County Councils and the Local Government Board take definite action on the reports of medical officers of health, the effects will be seen in the still further lessening of mortality. We note with pleasure this additional recognition of the value of the health officer's services. The Legislature obviously intends that he shall occupy a position of independence in reporting truthfully upon conditions inimical to health which come under his notice. It is undoubtedly

to the interest of the public that his services should be thus utilised; it is, on the other hand, but proper to point out that in performing these duties he should be protected against the loss which has too often been experienced by officers who have endeavoured, against the will of a negligent or obstructive authority, to improve the sanitary condition of their district. Nothing less than such protection will ensure the clause having in all parts of the country the results that are intended. Friction must inevitably occur between a health officer and a local authority whose negligence is thus criticised, and it has been but too plainly shown in the past what the results will be if the officer be left entirely under the control of the authority.

The change which we indicate evidently cannot be effected in the present Bill; it is foreshadowed by Mr. STANSFELD'S amendment, by which County Councils are empowered to appoint medical officers of health whose services can be made available in sanitary districts by an arrangement of the District with the County Council. We do not anticipate any immediate change will be brought about by this amendment, for District Councils will probably desire to retain the appointment in their own hands if they can only obtain the county officer's services on condition of contributing to his expenses. Sir LYON PLAYFAIR'S proposal in this and other respects was preferable. But Mr. STANSFELD'S amendment is nevertheless useful as indicating the acceptance by the Legislature of the principle that an advising officer such as the medical officer of health need not necessarily be absolutely under the control of those whom he advises. Mr. RITCHIE deserves thanks for his acceptance of this clause. It may be hoped that he will not fail to take the earliest opportunity of improving still further the position of the health officer. The success which has attended his conduct of the Local Government Bill through the House of Commons marks him especially as a statesman whose influence in the future might render still more valuable aid to the Public Health Service.

AMONGST all the subjects of pathology there are four to which attention is at the present day being much directed; they are, fever, inflammation, cancer, and tubercle. Each of these contains problems as yet in great measure unsolved, but upon the solution of which much depends for the advancement of medicine in its practical as well as its scientific aspect. To arrive at a right conclusion concerning the nature of fever is to explain the processes underlying the most common and constant of symptoms produced by the derangement of normal activities which we term disease. To correctly appreciate the causes and the process of inflammation is to secure the key to almost every morbid change that may arise in the body; whilst, could we arrive at the truth concerning the nature of cancer and tubercle, we should open up avenues for the adoption of more rational and hopeful measures of treatment in diseases that are the despair of medical and surgical art. It is true that there are not wanting those who affirm that, in spite of the knowledge that has been gained so far concerning these topics, there has been little if any commensurate advance in the way of successful treatment. To such objectors it can only be replied that we are still far from having arrived at a complete knowledge of all the factors,

etiological, physiological, and pathological, concerned in the production of disease, and that we do not despair of one day attaining the much-desired end. Much harm is done, and much baseless opprobrium has been cast on the labours of the scientist, by the indiscriminate and hasty adoption of therapeutic measures based on imperfect knowledge. Better far to follow the old empirical practices and the indications afforded by symptoms, than to adopt so-called radical or specific measures which have no real justification in fact. Nevertheless, we would not ignore the appropriateness of tentative therapeutics, since through their means it is conceivable that fresh light might be gained upon the nature of the morbid process against which they are directed. We may admit this freely, but nevertheless still maintain that it is to the pathologist we must look for the full solution of the problems of disease, provided that he embraces in his view not merely the lesions discovered after death, but all the circumstances of the origin and the progress of the disease he is investigating.

The two lectures on tuberculosis which Dr. WOODHEAD has given, in his capacity as Research Scholar of the Grocers' Company, illustrate well the value and importance of pathological inquiry. His exposition was clear and precise, and although by no means exhaustive of the subject, nor, indeed, pretending to much novelty, formed a strong argument in support of the bacillary doctrine, which has practically become the belief of the whole profession. At the same time he advanced a number of facts concerning the acquirement of tubercle by children which support a long-lasting contention of the influence of diet in its production. "Tuberculosis," he said, "has come to be regarded as the result of a specific morbid irritant, acting on tissues which rare so far devitalised that they are not able to cope with this irritant." This succinct definition embraces, it will be seen, the doctrine of the struggle between the tissues and the invading bacilli, which has been so remarkably shown to be something more than a theory by METSCHNIKOFF (who, be it noted, in the current number of VIRCHOW'S *Archiv*, demonstrates the phagocyte property of the giant cells of tubercle). Of course in one form or another this doctrine has always been held—even in times when disease was regarded as an entity, an invader which had to be cast out of the body. It has the merit of simplicity, and offers, moreover, an explanation of the varying susceptibility to "specific morbid irritants" shown by different individuals. The "irritant"—in this case the tubercle bacillus—must gain entrance into the body. There must be some condition, then, which enables it to penetrate the barrier afforded by the epithelial layer. Hence the bacillary doctrine requires for its support two hypothetical conditions—namely, a weak point in the epithelial covering, and a low vitality of the tissues. These hypotheses are not without substantial support in fact, for are we not accustomed to trace in many cases the origin of tubercular disease to previous catarrh of a mucous membrane, and in subjects whose vital resistance is lowered by insanitary surroundings or by inherited weakness? It would seem, then, as if modern pathology were advancing even beyond the "germ" and "soil" theories of a few years back, and taking its stand upon the normal resistance offered by the living cells to interference from without. Precisely the same

idea may be applied to inflammation, to specific fevers, to syphilis, and all infective diseases, and may even be offered as an explanation of the disorderly cell growth in cancer; but when all is said there remains the more difficult task of demonstration of facts in support of such a hypothesis.

Of considerable interest were the facts quoted by Dr. WOODHEAD respecting the greater proclivity to tubercular disease of certain tissues at certain periods of life, and his figures brought out clearly the age-incidence of tubercular meningitis and mesenteric disease. He concurs with Dr. GAIRDNER in the opinion, which is undoubtedly well founded, of the comparatively great prevalence of abdominal, and especially of mesenteric gland, tuberculosis in children. He showed also that most cases of "tabes mesenterica" occur after the first year of life, and proceeded to discuss the very important subject, to which in all parts of the world great attention has of late been directed, of the influence of infected milk in accounting for this predominance. We take it as proved that tuberculosis is transmissible from diseased cows to the human subject through the medium of milk. The extent to which this transmission prevails is another question; and we gather from Dr. WOODHEAD that he regards it as essential to the infection of the child that its intestines should have been already in some way altered, and the vitality of the mesenteric glands lowered, before such infection is possible. The proneness to slight intestinal catarrh in early life, with the probability of associated lymphadenitis, practically offers no limit to the extent of liability to tubercular infection at this period. The conclusion suggested by the researches which Dr. WOODHEAD has carried on with Dr. MACFADYEAN, upon milk and tuberculosis in cattle, is obvious: it enforces the demand for the most rigid systematic inspection of dairies, as well as the homely precept of boiling milk before consumption.

The second lecture dealt with pulmonary tuberculosis, especially in children, and showed how the root principles adopted in the definition applied here also. It contained many suggestive and interesting facts, and we may hope that Dr. WOODHEAD will at no distant date think fit to publish his views in detail, since they constitute some of the strongest arguments in support of the bacillary doctrine of tuberculosis as applied to the human subject which have hitherto been enunciated.

WE have at various times discussed the attitude most befitting the profession regarding the strife of political parties, and we have endeavoured to point out and emphasise the weighty reasons which exist for dissuading the practitioner from ever assuming the rôle of the mere party politician. To these opinions we adhere, and as the subject is always one of practical moment, we may perhaps recur to it with advantage at the present juncture. Politics seem unhappily to become daily more envenomed, and the public arena threatens at times to be monopolised by a strife in which great principles are lost amid the din of party and of faction. If ever there was a time when an attitude of dignified reserve towards politics were desirable on the part of the medical profession as a body, surely that time is now.

It may fairly be asked at the outset why should not

medical men engage in politics? Is not an intelligent interest in public affairs incumbent upon every thinking man? Would not indifference to contemporary struggles, which do much to mould national destiny and influence national happiness, justly bear the aspect of criminal apathy? To these questions one answer only can be given, but it is one of which the absolute sufficiency will, we are confident, commend itself more and more to the most observant and reflective members of our fraternity. That answer is—that the practitioner of medicine has voluntarily assumed a function as important and as responsible as can fall to the lot of man, that this function is of itself sufficient to absorb his best energies, that its due discharge involves certain sacrifices—some of them great, all of them obligatory,—and that of these sacrifices one is the renunciation of active participation in the ordinary struggles of political parties. We are quite aware that all our brethren do not recognise or practise this renunciation, but we are profoundly convinced that the more the question is carefully contemplated, the more apparent becomes its wisdom—nay, its imperative necessity. The medical man cannot safely become a party advocate without compromising his position as a trusted adviser on whose absolute honesty and *bona fides* no one should be able to cast the faintest breath of suspicion. Our profession rests for its position upon the confidence of the public—a confidence which is justified by the records of the past, but which would be irretrievably shattered by the dissemination of the idea that medical men could under any pressure be so forgetful of their high responsibilities as to use any knowledge entrusted to them, or any power derived from that knowledge, for the furtherance of mere party tactics. We need not mince words, or ignore the fact so universally and so sorrowfully admitted, that partisan conflicts are conducted on the principle of asking and giving no quarter. It used to be said that “all is fair in love and war”; now we are accustomed to witness the practice, if not the avowed inculcation, of the principle that anything is justifiable in politics. Responsible leaders deplore their inability to control the zeal of the rank and file. Any weapon is supposed to be good enough for fighting the battle of the political champion, and the orator who appeals most to the lowest instincts of the mob is surest of an enthusiastic reception. The medical man may enter the political arena with the purest of motives, and may scorn as the basest of suggestions the idea that he should ever use his professional privileges for party purposes; but when he is in the thick of the conflict, with the smoke and the din of battle around him, when the issue hangs in the balance, he would be more than human if he did not sometimes snatch at any weapon which promised him a good hope of victory. Here, as elsewhere, the only safe rule is to keep out of the way of temptation. The man who breaks the seal of professional secrecy does not, it is true, violate any oath, but he is not on that account the less deeply perjured. He wrongs his patient, betrays his brethren, and indelibly soils his own conscience.

Even if medical men were wholly incapable of ever debasing their peculiar privileges to party ends, the possibility of a suspicion that they might conceivably do so would be an ample justification for an attitude of reserve

towards politics. DARWIN, in his autobiography, attributes the great success of his father in medical practice mainly to his capacity for inspiring confidence, and we feel sure that nothing is more essential to the medical man than the reputation of being worthy of trust. An ardent politician may be worthy of trust, but the trust is usually limited to his own party. The medical man who consorts with eager partisans will be likely to share sooner or later in the distrust which such individuals invariably excite.

Not only is the trust of the public in medical men likely to be shaken by their adoption of the rôle of party politicians; respect will also suffer. Keen observers of affairs will, we think, confirm our belief that while party leaders will employ any instruments likely to be useful, they are not, without a certain tinge of secret contempt for such privileged men as doctors or clergymen who condescend to adopt their shibboleths and imitate their tactics. This we have repeatedly observed, and its significance is great. Probably the public, whose instinctive judgments are often right, in despising the medical politician are unconsciously influenced by the following considerations: first, that the medical man in busy practice can devote much time and labour to politics only at the expense of the interests of his patients; secondly, that the man of truly scientific tastes and training can hardly feel himself much at home in the atmosphere of political turmoil; thirdly, that party service being the necessary condition to many kinds of preferment, the medical man who enters that service may possibly be only a place-hunter in disguise. We pause for a moment to say a few words on the second of these considerations.

The man of science seeks truth, and truth only. He observes, reflects, and reasons always with the sole view of detecting and explaining the order of nature. In so far as he is true to his profession, he seeks the fact, whether the fact be to his advantage or his hurt; whether it fits in with his favourite theories, or is subversive of them; whether it promotes his chief end in life, or is a fatal hindrance to it. Can any attitude be more diametrically opposed to that of the average politician? Further, the man of science knows that many of the hopes and fears of the party leader are alike vain. The politician cries, “Lo, here,” or “Lo, there”—in the ballot, in religious equality, in free education, in a revision of land tenure—is national salvation. The man of science, by no means ignores the importance of these or kindred reforms, but he knows that no single reform, however far-reaching, can regenerate his fellow-men, or be more than one little step onward. The political partisan, with his pet recipe for the ills of the commonwealth in his pocket, may masquerade upon the stage of parliamentary life, but there is no place for him in the domain of science. Hence, we conclude that the scientific spirit and the partisan spirit are incompatible, and that no individual can cultivate one without damage to the other.

There is still a further reason—and that, perhaps, the most weighty of all—for recommending the position we are maintaining. There is a large and vitally important class of questions comprised under the title of public health regarding which medical men should occupy the position of an impartial jury of experts. These questions are connected more or less closely with party politics, and if our medical brethren become partisans their opinions upon such

problems are *ipso facto* incurably tainted with suspicion. It is, in fact, only on condition of withdrawing from the ordinary conflicts of party that medical men will be permitted without demur to exercise the influence which their special training and experience should enable them to exercise in a field that is certainly not less fruitful than that of partisan warfare. This may or may not be just, but few will deny that such is the prevailing feeling on the part of the public.

We need hardly say that we are no advocates of medical men shutting their eyes to passing events, and declining to form any opinions upon the problems of the day. By all means let them form and retain their opinions, and give expression to them at the ballot-box. We deprecate only participation in party strife, and thick-and-thin adhesion to party leaders and party war-cries. While we regard this rôle of dignified reserve towards politics as incumbent upon the practitioner for his own sake, for the sake of the credit and influence of his profession, and, above all, for the public weal, we do not deny that certain contingencies may arise demanding from us a more energetic attitude. We feel sure, however, that it will be best to reserve such interpositions for occasions in which either the physical or moral well-being of the community is in serious jeopardy, and in which, therefore, the influence of the profession can be exerted with full and beneficial effect.

If we are to believe some people, or to yield to our own occasional despondency over acts of members of the profession which jar with the sense of what is called for by professional usage, we might think that the age of medical ethics was gone. Even in the higher regions of practice we sometimes see methods and aims and assumptions of superiority which bring the profession into discredit. And in the lower spheres of practice it cannot be denied that a fierce competition exists, arising from an undue rush of members into the profession, many of whom cannot wait to achieve success by slow and ordinary means, but make their merits known by handbills and other forms of advertisement. Some of the great corporations of the profession have allowed their ethical functions almost to fall from disuse. They have come to act as if their only duty to the profession was to give diplomas, and, after receiving the fees of the young diplomate, they dismiss him into space as if they had no more interest in him or in his conduct. We are grateful for anything that reminds us that we are members of a profession under peculiar obligations to act on "determinate principles." We have before us an address to the Manchester Medico-Ethical Association, delivered by its President, Dr. HENRY SIMPSON, which shows that the ethical sense is still alive in Manchester at least. Dr. SIMPSON traces the origin of this Association, which has done so much to formulate a sound code of ethics, which has been so approved, almost word for word, by a certain branch of another association as to be bodily adopted by it with very scanty recognition of its source. At least so Dr. SIMPSON complains. It seems natural that Manchester should speak with some responsibility in medical ethics, for was it not from Manchester that Dr. PERCIVAL wrote his classical book on this great subject, in the dedication of which, to his son, he said that the

relations in which a physician stands to his patients, to his brethren, and to the public were complicated and multifarious, involving much knowledge of human nature and extensive moral duties. It is no slight credit to Manchester that it has sustained its authority on this subject, and that so many of the profession of this city are imbued with the spirit which Dr. PERCIVAL breathed in every line of his book. Dr. SIMPSON amply justifies the origin and uses of the Society. He shows that the Association has for upwards of forty years discussed nearly all the nice questions that arise between medical men and their patients, or between medical men and their brethren, or between medical men and the State, and various local authorities, and he declares that there is an immunity from professional feuds and quarrels which some more pretentious places do not enjoy. The example of Manchester might be imitated. Very much good would be done by the multiplication of such associations, where medical men might amicably discuss delicate questions of behaviour or of practice, and where the mere exchange of sentiments and explanations would often dispel suspicions and other feelings inimical to mutual respect and neighbourliness.

No change in the conditions of society, or in the circumstances of the profession, can make the consideration of ethical questions superfluous. There are many subtle influences in modern society that tend to demoralise medical men, and to render them less amenable to the judgment of their brethren, which is, after all, the ultimate court of appeal. Prosperity may overtake them as a flood from a mere accident of practice or the favour of men who command newspapers or who lead society. Possibly, they may be quite innocent and free from responsibility for such accidents. They may have done nothing to provoke or invite such doubtful praise. One member of our profession has lately been the victim of such cruel laudation very thickly laid on. We will not pain him by giving his name, for we are sure that he derives no pleasure from such notices. Let us imagine the torture that a man like Sir THOMAS WATSON or Dr. ALISON would have felt had they seen in a fashionable print such lines as this applied to themselves: "It can scarcely be regarded as in any sense a disparagement of Dr. — to say that he is *par excellence* the physician of society. It is among the socially eminent—those distinguished by rank, or fortune, or ability, or by two or all three of these attributes—that his practice lies. His patients are peers and peeresses, millionaires and millionairesses, the pillars of the State, the fathers of the Church, the sages of the law, the ornaments of the Army and Navy, the celebrities of literature and art, the votaries of pleasure and fashion." We can only offer our condolence to the subject of such flunkeyism as this, and be thankful that it is so rare. No medical ethical association and no medical corporation can call the editor of a paper to account. But regard for his friend might have restrained his facile pen. And it is to be hoped that the friend himself will be his censor, and will make him clearly understand that the true praise of a medical man is that of his peers. London is not the only place where medical men are exposed to this deleterious influence; but it is a veritable evil, against which every man who respects himself and his

profession will set himself, and invoke all the modest sentiment of himself and his profession.

THE total abstainers have been thrown into commotion by the publication of certain statistics—published, under the direction of Dr. ISAMBARD OWEN, by the Collective Investigation Committee of the British Medical Association—purporting to show that abstainers, after all, do not live so long as other people. This is a terrible reversal of statements enforced with much show of truth by the teetotallers, and based on the experience of insurance offices, which divide their lives into abstaining and non-abstaining classes, and find this as the rough result—that the actual claims in the *abstaining* section are, on the average, only 75 of those expected; whereas in the general section (including all classes of drinkers) the actual claims are an average of 98 per cent., or a difference of 23 per cent. in favour of the teetotal section. The Investigation Committee asked the members of the Association to give certain returns as to the connexion of disease and intemperance, based on a study of the counterfoils of the death certificates for the preceding three years. It is unsatisfactory to find that only 178 returns were made; these gave the returns of 4234 deaths. The classification of drinkers was highly complicated, especially considering that those who supplied the information had only to depend for the facts of each case on memory and the counterfoils of the death certificate for three years past. The classification and the age at death are given below. We should premise that only males dying above twenty-five years of age are included. Of these, less than 3 per cent. were abstainers, 42 per cent. habitually moderate, 25 per cent. were careless, and 30 per cent. more or less distinctly intemperate (one-half of these latter being decidedly so). Here is the alleged achievement of these classes in the attainment of longevity. The figures give the average age at death:—

	Years.
Abstainers	51.22
Habitually temperate	62.13
Careless drinkers	59.07
Free drinkers	57.59
Decidedly intemperate	52.03

No wonder that the teetotallers refuse to accept such statistics. It may still be believed that really temperate people, who take their alcohol with extreme moderation, fare better and live longer than those who absolutely abstain. Many men of great authority and judgment think so. But it can scarcely be credited that the decidedly intemperate live longer than teetotallers, and that free drinkers and careless drinkers live much longer. Such conclusions raise the strongest suspicion of the value of the statistics. We are sure Dr. ISAMBARD OWEN would handle his materials with impartiality, but we cannot accept them as a serious contribution to a very interesting social and medical question. To expect medical men to say of a patient who died three years ago to which of five classes of drinker she belonged is to expect too much. "Careless drinkers" are thus defined: "They are neither intemperate nor free, yet do not confine themselves within a rigid rule, do not object to spirits occasionally as a beverage, at times drinking between meals, or even getting drunk occasionally, but not making either practice a habit,

and on the average not materially exceeding the 'physiological amount' of one ounce and a half of pure alcohol daily." We decline to recognise such habits as fairly within the definition of temperance as sanctioned now by medical authorities, and we gravely suspect the figures which credit such men with a longevity of 8.45 years greater than that of abstainers, who have their faults and even their diseases, and who do die in spite of abstinence, but who certainly escape or "keep under" many diseases and degenerations which shorten and impair life. We are not sorry that these statistics have been published. But we shall be sorry indeed if they lead men who drink "carelessly"—and they are to be numbered by millions—into thinking that they may do so with impunity. Unless medical experience and pathology are altogether unworthy of trust, that is an illusion.

Annotations.

"Ne quid nimis."

UNSEASONABLE WEATHER AND THE PUBLIC HEALTH.

THE popular conviction that seasonable weather—that is, the prevalence of arctic cold in winter and of tropical heat in summer—is conducive to health will probably long survive the most convincing statistical evidence of the fallacy on which it is based. It may be useful, however, to call attention to the apparent effect of the recent long-continued spell of unseasonable summer weather upon the public health, judged by the death-rate. During the six weeks ending last Saturday, the mean temperature at the Royal Observatory, Greenwich, was almost continuously below the average. If we except five days in June (the 11th, 12th, 24th, 25th, and 26th), a deficiency in the mean temperature was recorded on each of the forty-two days in this period. The average daily deficiency on these thirty-seven days of low temperature was no less than 5.2° F., the coldest days being the 11th and 12th of July, when the deficiency was no less than 14.0° and 13.4°. The frequency and amount of rainfall during this period were almost as remarkable as the low temperature. Rain was measured on twenty-seven of the forty-two days in this period of six weeks to the aggregate amount of 6.13 inches, being almost identical with the amount measured this year previously to the six weeks under notice. Let us now consider what has been the death-rate in our largest English towns reported by the Registrar-General during this unseasonably, and probably unprecedentedly, cold and wet period. In the twenty-eight large English towns dealt with in the Registrar-General's weekly return the annual death-rate in the six weeks now under notice was equal to 15.7 per 1000 of the estimated population, a rate very far below any previously recorded during this period; the mean rate in the corresponding period of the six preceding years 1882-87 was 19.3, and exceeded by 3.6 the rate in the six weeks ending last Saturday. A very considerable proportion of this marked reduction in the recent death-rate of our largest towns was naturally due to the small recorded mortality from diarrhoea; the deaths from this cause in the twenty-eight towns in the three weeks ending last Saturday were but 330, against 860, 1188, and 1563 in the corresponding three weeks of the three years 1885-6-7. Summer diarrhoea, however, is almost exclusively an infantile disease, and we find that the reduction in the death-rate has by no means been confined to the deaths of infants. The deaths of persons aged between one and

sixty years has also showed a marked decline, due in great measure to the low death-rate of zymotic diseases among children; and even the deaths of elderly persons have been considerably below the corrected average. From the above-mentioned facts it is, at any rate, patent that the recent cold, wet, and sunless weather cannot have unfavourably affected the public health, even if we hesitate to affirm that the low death-rate has been due to the prevalence of such exceptionally unseasonable weather.

DEATHS OF CHILDREN AND LIFE INSURANCE.

BEFORE the Lords Committee on Poor-law Relief Mr. Waugh, the honorary secretary of the Society for the Prevention of Cruelty to Children, expressed his belief that as many as 1000 children are annually murdered in England for the sake of the money for which their lives have been insured. As the an evening contemporary remarks, it would be more proper to state that their deaths rather than their lives have been insured. The same paper suggests that while the estimate is, it is to be hoped, an exaggerated one, the Society named has but too good reason to know that there is a good deal of truth in it. We have also too much reason to believe that the statement is not exaggerated in the least. Murder may be, and is, caused by omission, quite as much and as wilfully as by commission. Those who know the persistent way in which many children are from their birth upwards systematically neglected and allowed to shift for themselves, will realise the old saying that "there is a Providence over babies and drunken men." But for this Providence and the tenacity of child life, the mortality among children would be much greater. Many children are wilfully allowed to die from want of proper care, from improper food, and other perfectly preventable causes. It would be interesting to know whether the insurances of infants' lives are profitable or the reverse to the insurance societies, and it is to be hoped that the inquiry now being made into friendly societies may throw some light upon this.

PELVIC CELLULITIS IN THE MALE SUBJECT.

DR. SKJELDRUP describes in the *Tidsskrift for Praktisk Medicin*, the organ of the Norwegian Medical Association, a case, in a gentleman fifty years of age, which he diagnosed as pelvic cellulitis. The symptoms at first were vomiting, flatulence, constipation, abdominal tenderness, and tympanites, with pain over the cæcum, where there was some resistance on palpation and dulness on percussion. Rectal examination disclosed a tolerably hard tumour, which could be felt on bimanual examination to be situated in the left hypogastrium. An aperient powder was given, and quinine and iodide of potassium ordered five times a day, wet compresses being applied over the abdomen for some days. The patient's condition did not improve, the distension of the abdomen and the pain becoming greater, and the difficulty of passing flatus or feces increasing; besides this, the patient was becoming more and more emaciated. With considerable difficulty an œsophagus tube was passed up to the sigmoid flexure, and was much bent by the tumour, which displaced the gut backwards; through this a warm injection was given, producing a scanty stool. Two days later the injection was repeated, a copious evacuation of very foul feces resulting. After this the patient began to improve, and after a few more injections he was able to pass his stools naturally. At the end of a month there was only a slight amount of what felt like infiltration on the anterior aspect of the rectum to be detected. The diagnosis was one of considerable difficulty. The consistence of the tumour could not be satisfactorily made out, but sometimes it appeared to be firm, elastic, and somewhat tender. It

was of an irregular shape, with no clearly defined limits. It was at first diagnosed by two medical men as a neoplasm of rapid growth; but the favourable termination shows that this was incorrect; so that, notwithstanding the rarity of pelvic cellulitis in a man, this seems to Dr. Skjeldrup the most probable explanation of the case. A case reported by Dr. Muir of Selkirk in 1885 is quoted by Dr. Skjeldrup as showing that cellulitis does sometimes occur in the pelvis of the male subject.

POLICE CELLS.

FROM time to time complaints are made regarding the accommodation made for prisoners who are to be brought before the magistrates or who are brought into court during the progress of their trial. It is important, however, in these cases to distinguish between those in which the accused is merely detained by the police and those in which the prisoner is brought for trial, also to keep in view the arrangements that subsist in different towns throughout the kingdom. As far as the police cells of the metropolis are concerned, we have reason to assume that no substantial objection can be urged against them generally. As far back as 1873, at a time when a considerable outcry was made against the management and arrangement of the police cells in the metropolis, we appointed a special commission to investigate into the alleged deficiencies. The result proved on the whole satisfactory. The report issued by THE LANCET on that occasion showed that the statements then made with respect to the bad condition of the London police cells were without substantial foundation. Nevertheless we have had occasion to point out that, however satisfactory the metropolitan arrangements may be for prisoners casually detained, they do not obtain in all towns, and that the accommodation afforded to prisoners when brought to the court both in the metropolis and in provincial towns is often disgracefully deficient. We have shown that, in some instances, when prisoners are awaiting their trial they are brought up day after day, and are incarcerated for long hours in the foulest dens and closets in the purlieus of the court, or else herded together in rooms in which the most ordinary sanitary requirements are neglected, and, even if provided, are of the most primitive kind, and often have to be used in view of the other prisoners. The whole question of the accommodation of prisoners brought up for trial requires reconsideration and reformation. It is anomalous that the drunken ruffian should be lodged in a well-aired, convenient police cell, whilst an innocent prisoner has, perhaps, to spend days in some miserable closet, in foul air and amid filthy surroundings, till his turn for trial comes on.

A REMEDY FOR SLEEPLESSNESS.

IT would be remarkable in the highest degree if an ailment so general as sleeplessness had not long ago found its duly authenticated panacea. Friendly hints to fellow-sufferers will never be wanting on the part of a happy minority who have, by means of one or other method of relief, triumphed over this formidable evil. We cannot wish it were otherwise. The suggestions of experience are always worth noting, and are usually instructive. When they come to deliver us from the unrest of an anxious or excited brain, they can only be greeted with grateful respect. It is in such a spirit that we now proceed to discuss the remedy which is explained below. The latest proposition which comes to compete with older formulæ in this beneficent work is founded on the theory that the two cerebral hemispheres have different functions, the left being employed in intelligent thinking, the right in "unconscious cerebration," including the composition of dreams. Proceeding on this assumption (for it still is at

best a physiological suggestion, the author of the new method no longer uses the well-worn practices of calculation, repetition, and the like, which he formerly adhered to. Now he merely sets himself to think over the details of a dream, the more recent the better, and he finds that in the process his drowsy right intellect overshadows (if the phrase is permissible) his waking left, and sleep is the result. We will not vouch for the correctness of this reasoning, however striking it may appear in its ideality and suggestiveness. A logical opponent might as truly argue that so marked a division of the cerebral functions is unsupported by any adequate proof. He might also say that, even if it were demonstrable, the dream-thinking process implies a brotherly concern of the waking hemisphere in the sleepy business of its fellow. We should rather put it thus: that the very effort to revive a dream implies a concentration of the mental function within the dreamer's mind, and a withdrawal from all outward and inward realities. This withdrawal is the one great essential to sleep. It is on this ground that the author of the method in question must found its efficacy, if he would measure his theory by his proof. However this may be, it is worth noting that the results claimed for his plan are confirmed by the independent testimony of another sufferer.

RETENTION OF THE PLACENTA FOR SEVEN WEEKS.

DR. VARNEK, writing in the *Frach* on the question of the management of retained placenta, mentions a case which occurred under his charge in the Basman department of the Moscow Artisan Hospital, which he thinks shows that, even where the placenta is found tightly locked up in the uterus several days or weeks after labour, there need be no necessity for recourse to such serious measures as were adopted by Schultze, who in a similar case performed abdominal section and extirpated the uterus. Dr. Varnek's patient was a married woman, and had been attended by a midwife, who, after a great deal of very painful intra-uterine manipulation, had assured her that she had got the whole of the after-birth away. The patient attempted, after the sixth day, to attend to her household duties. She was, however, very weak, and, as she grew worse and began to suffer from pain in the abdomen and back, she sought admission a fortnight after the confinement under Dr. Varnek. She was found to be in a low, weak, anæmic state. The abdominal walls were lax. The uterus could be felt as a dense hard mass, extending up to the umbilicus. The external os admitted the finger, but the internal os was much too contracted to permit the cavity to be entered. There was but little discharge, and this was inoffensive. The patient was treated by warm vaginal injections of carbolic water (1 in 50), iodoform suppositories, and the internal administration of ergot and ergotine. The condition improved slightly for a time, but in about a month from the time of confinement hæmorrhage occurred; the temperature (which had been normal) rose, and shortly afterwards the discharge became very offensive. Attempts were then made to examine and clear the uterine cavity. The internal os having somewhat dilated, a partial exploration was made, which revealed the presence of the placenta in a very hard dense condition, firmly attached to the uterine walls. Persistent efforts both with the fingers and with a sharp curette failing to remove it, and the patient being much exhausted by the manipulation for which she had been placed on the operating table, she was put back to bed, and prolonged irrigation with a 1 per cent. solution of carbolic acid ordered, a mixture of iodoform and glycerine having been first applied to the interior of the uterus. For the next few days irrigation was practised for from four to ten hours daily, the general condition improving.

In a little more than a week a portion of the after-birth came away, which was entirely inoffensive, and the next day the whole of the remainder was got rid of. After this the patient made a rapid and complete recovery. Here the placenta had remained in the uterus fifty days after the confinement, and its ultimate removal is attributed by Dr. Varnek mainly, if not entirely, to persistent and prolonged irrigation.

BURIAL REFORM AND THE PROPOSED GOVERNMENT INQUIRY INTO CEMETERIES.

RESOLUTIONS have been carried at several recent meetings urging the Government to institute an inquiry into the present condition of our cemeteries. In the interests of the public health we trust that such an inquiry will be held by a Royal Commission. Forty years ago the public were scandalised by the description of our churchyards, more particularly those of London and the larger towns. Since then intra-mural churchyards have been closed, and most towns and cities possess suburban cemeteries of ample extent, more or less efficiently managed. Unfortunately, our cemeteries have been formed under various Acts of Parliament, the provisions of which are not uniform. We all know that history repeats itself, and that human nature is the same in all ages. It would be contrary to all experience to expect Acts of Parliament and Orders in Council to be always scrupulously regarded by the class of men whence gravediggers and other cemetery officials come; and from what has lately been published in *THE LANCET*, it is quite clear that "pit burial," the most objectionable of all forms of burial, has been revived of late in Scotland and elsewhere. It is of the greatest importance to the public health that the dead should be buried in such a manner as to render noxious exhalations from them absolutely impossible. This can only be ensured by burial in a sufficient depth of suitable soil, and by the most strict observance of all necessary regulations as to the closing and reopening of graves. We trust, therefore, that an inquiry will soon be held, and that the commissioners will comprise a due proportion of members of the medical profession. There are medical practitioners, both retired and acting, who, having in past years been induced from their experience to pay great attention to the subject of burial, would be able to give valuable assistance.

A MOSCOW LYING-IN HOSPITAL.

DR. INOEVRS, whose report on the work done in the Golitsinski Lying-in Hospital in Moscow in 1886 was mentioned in *THE LANCET* of May 7th, 1887, under the heading of "Antiseptic Midwifery," has now published a report of the work of the institution for the year 1887, from which we learn that the same excellent results continue to be obtained. Two new rooms have been added to the hospital, thus increasing its accommodation. The number of labours taking place in the hospital during the year was 756, including twelve abortions. There were twelve cases of twins and one triple birth. Of the 758 children, 388 were boys and 370 girls, the numbers of the two sexes being much more nearly equal than usual; the ratio being that of 100 to 102. There were three maternal deaths, due respectively to rupture of the uterus in a patient suffering from relapsing fever, eclampsia, and tuberculosis. The forceps were applied twenty-two times—i.e., about one case in thirty-four. Craniotomy was performed three times; premature labour was induced twice; episiotomy (perineal incisions) four times. The perineum was sutured fifty-six times; in forty-four of these cases complete union was obtained. By the employment of Credé's prophylactic measures not a single case of purulent ophthalmia occurred, and simple conjunctivitis was only present in four cases. Detailed notes are given of

interesting cases and elaborate tables of statistics. The whole report has a statistical completeness which is very usual in Russian official documents, but which is not to be found in any report of lying-in institutions in this country, most of which, indeed, are managed on such different principles from the large foreign hospitals that reports of the same character could hardly be constructed from the materials in the possession of the medical officers.

THE VAGARIES OF FASHION.

WOMEN of the present day have reason to congratulate themselves that the high and pointed French heel, with its obviously deforming tendency, has not now that assured predominance in fashion which once belonged to it. For a change so beneficial we may probably thank more than one reforming influence which has been applied in this direction. The slowly acting force of instructed opinion has doubtless done its part. An increased knowledge of essential anatomical facts has also possibly had a certain effect. The most potent of all the operative agencies, however, would seem to have been a conversion, albeit not by any means disinterested or purely conscientious, of female taste and character to conformity with a more wholesome standard. This result has come about at the bidding of that powerful ally of health, rational amusement. It is to a widespread movement in favour of healthy athletic exercise, to the love of lawn-tennis, and the like, that we may trace the introduction of a fashion which admits that boots and shoes must fit the foot, and that the manufactured heel should occupy its natural position under that of its wearer. Still the old custom dies very slowly, and it would almost seem as if there had been of late a tendency towards its restoration. For it and for that other undesirable illusion—a tight fit—we can only wish a speedy, or at all events a sure, extinction. The manifest effect of both is of course inevitable distortion of the foot; and it is somewhat difficult to say to which form of mischief we must allow the "bad pre-eminence" in this respect. We need hardly now do more than mention the ruinous effect of a peg-like heel so placed as to force up the bones of the instep, while the weight of the body falls forward on the toes, the calf is strained, the spine abnormally curved, and the pelvic viscera tend to undergo a corresponding and injurious flexion. Yet these are but the mere consequences of this pernicious custom. While it prevails, exercise in its proper sense is hopeless and physical development a fallacy. We therefore hail the advent of the athletic era; and we would again strongly urge every woman and girl of taste and judgment to abandon a habit in dress which must cripple her movements and cannot possibly add to her attractiveness. Then again the inventor of the ladies' hat of the period seems to have done his best to produce a covering for the head which should expose the nape of the neck as much as possible to the rays of the sun. It is true there has not been much sunshine this year, but we may have it yet, and then perhaps the inconvenience of the present fashion may become more apparent. A well-known authority has told us how sunstroke is often attributed to the wearing of the forage cap in the army; and possibly some minor troubles, such as occipital headache, may be traceable to the cause we have hinted at. We are quite aware that it is hopeless to attempt to overcome the dictates of the milliner, and that tight lacing, high-heeled boots, and dragging up the back hair will hold their own as long as they are "in the fashion"; but at this season of the year, when so many resort to the seaside for health, surely it is reasonable to suggest that women as well as men should endeavour to get as much good and as little harm as possible from their holiday trip.

COMMUNICABILITY OF ACTINOMYCOSIS.

SINCE Dr. Israel first described actinomycosis in 1878, there have been, according to Dr. Baracz of Lemberg, 103 cases published. Dr. Baracz himself has met with two cases which apparently show that there is a possibility of the affection being communicated from one person to another. The first to be affected was a livery-stable keeper. His horses were all, however, in good health, and he had not had charge of any strange horses. When seen by Dr. Baracz on Jan. 9th, 1887, a tumour was found on the external surface of the left ramus of the lower jaw; it was about the size of a walnut, fluctuating, easily movable over the bone, and presented an indurated border; the skin over it was inflamed; the teeth were much decayed and very black. Two incisions were made into the tumour, and it was proposed to scrape it thoroughly out. To this, however, the patient refused his consent. The contents on microscopical examination proved to be, as was suspected from the first, of an actinomycotic nature. The wounds were dressed with iodoform, and had quite healed on March 3rd. On July 15th the *fiancée* of the former patient presented herself with an abscess of the alveolar process of the left jaw. Behind the abscess was a somewhat tender, hard tumour, the size of a hen's egg, but flattened, intimately connected with the inferior maxilla. Many of the teeth were gone, and those that remained were very defective. On opening the abscess, half a tea-spoonful of pus was obtained, from the examination of which a diagnosis of actinomycosis was established. The wound healed readily. Two months later, a second abscess, the size of a hazel-nut, was found in the gum over the first molar, which was carious. This, as the patient refused to allow it to be opened, broke and ultimately healed without trouble. As there was no microscopical examination of the contents of the second abscess in the case of the young woman, it cannot be regarded as certain that this was of a parasitic nature.

NATIONAL VETERINARY ASSOCIATION.

THE first of the annual scientific gatherings, which have now become so marked a feature of modern life, has been the sixth meeting of the National Veterinary Association, which took place at Newcastle on the 17th inst. and following days. The President, Professor W. Williams, gave an address, in which, after alluding to the deaths of Professor Robertson and Mr. Hartley, he proceeded to make some wise comments upon the evil of competition among members of the veterinary profession in large cities, and the no less serious evil of the growing practice of communications on veterinary subjects to the public press by members of the profession, who thus "overstepped the line of professional propriety, possibly inflicting serious damage upon those who were guided by them, and undoubtedly committing a serious offence against those members of the profession who, by its legitimate exercise, had to maintain themselves in a position of respectability." He next addressed himself to the progress in knowledge of recent years, and amongst other matters expressed his regret that the Government had not instituted further inquiry into the utility of preventing pleuro-pneumonia by protective inoculation before determining upon wholesale slaughter as the only remedy. As to tuberculosis, he considered that before all so-called tuberculous animals were condemned as unfit for human food a better understanding should be arrived at as to the nature of true tuberculosis. In conclusion, he contrasted the different standpoints of the medical man and the veterinarian, for whereas the former was concerned with the relief of suffering and the prolongation of life, the latter had to restore their patients to a condition in which they could be again fitted for work. A paper was read by Mr. Armstrong, medical

officer of health for the city of Newcastle, on the "Importance of the Study of Comparative Pathology," in which he related particulars of a limited but fatal epidemic of scarlet fever in 1879, undoubtedly due to milk, which could not be proved to have been contaminated after it had left the cow. In the present year he investigated another but milder outbreak of this disease, in which again there was strong suspicion of its being directly derived from the cow. He also referred to other ways in which milk might be contaminated and rendered unfit for consumption. The discussion was opened by Dr. Fleming, and in the course of it Mr. Clement Stephenson said that it had been too much the fashion for medical men, particularly medical officers, when there had been an outbreak of scarlet fever, to run directly to the cow, instead of, in the first place, making quite sure that there was no other source of infection. Prof. Walley said he had never seen anything in a cow identical with scarlet fever in man. Prof. McFadyean stated, as the result of his experiments, that he had always failed to excite in animals after inoculation a single symptom like scarlet fever.

THE CONTROL OF INFECTION IN BOLTON.

WE learn that great dissatisfaction has been caused among the workpeople in Bolton by the action of the sanitary inspectors in prohibiting persons from following their occupations when they have infectious diseases prevalent in their homes, and that the local United Trades' Council has decided to take the matter up by instituting a prosecution with a view of testing this right, and also to secure compensation for those who have experienced loss in consequence. It is, of course, well known that there is absolutely no such right under the provisions of the Public Health Act, it having been arranged under that and previous statutes that only persons and things actually infected can be dealt with; the former by isolation in hospital, and the latter by disinfection, or by destruction if compensation is awarded for the articles destroyed. But, under certain local Acts, powers in excess of this have been granted to sanitary authorities, and the system of procuring special powers for special places has more than once led to very awkward results. If such powers exist in Bolton they ought certainly to be supplemented by a provision to grant compensation to those who are affected; for if the public health is to be protected by the imposition of disabilities on the people, the public purse should pay the cost of it. We are, however, inclined to believe that such powers are, as a rule, unnecessary. Where a sanitary authority receives infected persons into a properly constructed isolation hospital at the public cost, there is rarely any necessity to interfere with the relatives of the sick. Where a sanitary authority, who have erected such a hospital out of the public funds, and maintain it in the same way, and yet endeavour to make the same public who provided it pay for the use of it, its principal object is very commonly defeated; discontent becomes general, and the public are disinclined to resort to it. We do not profess to know the circumstances that prevail in Bolton in this respect, but it is significant that amongst the complaints made is one to the effect that persons not chargeable to the poor-rates are compelled to enter the workhouse infectious hospital. There are cases where the general hospital provided out of the public rates is kept for paying patients only, and an attempt is made to thrust others into the workhouse. This proceeding is illegal, and it also defeats its object, for people at last refuse to be pauperised merely to protect their fellows from infection. Bolton has long taken a lead in attempting to control infectious diseases, and we trust that no measures are now being adopted in the borough which will tend to injure the cause which the Corporation have at heart.

A SPANISH PHYSICIAN ON POSTURE IN LABOUR.

DR. FRANCISCO ALONSO RUBIO, in a paper read before the recent Spanish Gynæcological Congress, laid great stress upon the important part that the posture of the patient plays during labour, both physiological and abnormal. During the first stage, he merely keeps the patient from going from one room to another, to avoid catching cold. During the expulsive stage, though he prefers the supine, or at least a horizontal, position as a rule, he changes it to a sitting posture where there is asthma or cardiac weakness, also where the pains have become inert through uterine fatigue. Where there is any version of the uterus, it is necessary to pay due regard to its direction. Thus, if there is anteversion, the patient should be placed on her back; if there is lateral version, she should lie on the side opposite that to which the fundus uteri is inclined, so as to bring the fetal axis to coincide as nearly as possible with that of the pelvis. It is of course a recognised fact that a change of posture will frequently facilitate the descent of the head even when there is no abnormality either in the position of the child or of the direction of the uterine axis. When the fetal position is transverse, the patient should be laid on the side opposite to that occupied by the head, with a pillow under the abdomen. The adoption of the genu-pectoral position has frequently been found of service by Dr. Rubio. When there is prolapse of the cord, and it is being dragged upon in a dangerous manner, he raises it above the head and keeps it there during several pains, the woman being placed in the genu-pectoral position. Again, in complicated presentations, he has found this the best posture for their reduction, and in arm and shoulder presentations, where the amniotic liquid has escaped, and the practitioner in attendance has been unable to insert his hand and turn, Dr. Rubio, by the adoption of this position, has found it possible to execute the necessary manœuvre.

ARSENICAL DYES IN DRAPERY.

IN spite of many warnings impressed by precept and experience, arsenical pigments continue to be used in house decoration and to injure health as heretofore. A typical example of poisoning due to this cause is reported to have occurred quite lately in the Civil Engineering College at Cooper's Hill. The facts related are the following. Some of the students, with an eye for the beautiful, had, it appears, adorned their apartments with cretonnes and Indian muslins of great brilliancy. About the same time a singular epidemic became prevalent in the establishment, and was attended with the irritable condition of the alimentary tract and other symptoms characteristic of the action of an irritant poison suspended in the atmosphere. The presence of arsenic was naturally suspected, but the wall-papers did not contain it. The cretonne and muslin decorations, however, were found on examination to be highly arsenical, and one piece, it is said, contained rather more than nineteen grains of this poison in the square yard. Here then was the source of an otherwise inexplicable state of general ill-health which had been observed among the students for a year past. Happily the cause at work was detected before any fatal consequences had occurred, and probably a liberal allowance of exercise in the open air had much to do with this result. The lesson taught by this occurrence is not a new one. It merely rehearses the characters of a once familiar danger, and shows that it still exists. The public must therefore now decide whether it will, in the face of such practical instruction as this, continue to choose articles of dress or household wear with regard to custom or to their cheap attractiveness alone, and without a ques-

tion as to quality. Nor would we warn purchasers to be chary only of the more gaudy hues, for even such colours as black and dark blue are frequently unsafe. Arsenic is no doubt the ingredient most to be avoided, but it should be remembered also that aniline dyes have often proved injurious. It appears likely, indeed, that this is to some extent a consequence of the fact that arsenic is freely used in their manufacture.

PHYSIOLOGICAL EFFECTS OF RUSSIAN BATHS.

DR. NIKOLAI MAKOVETSKI, of Professor Manassein's clinic in St. Petersburg, has published as a graduation thesis an elaborate investigation made by him on the effect of the so-called Russian bath on nitrogenous metabolism, and on the assimilation of fat and the nitrogenous principles of food. His researches were carried out on four student friends in a condition of perfect health. The baths were given daily for five days; perspiration in a hot chamber was induced, with the usual amount of shampooing, no steam being used. Accurate analyses of the urine &c. were made for five days before the baths, for the five days during which they lasted, and for two days subsequently. It was found that the assimilation of the nitrogenous parts of the food was diminished, the nitrogenous metabolism being increased. The loss by the lungs and skin was markedly increased, but the urine was diminished; the uric acid, too, was diminished during the days when the baths were given. The baths have the effect of strengthening the muscular and nervous systems, and of increasing secretion when there is much muscular work, especially where the food is deficient in nitrogen, when there is a large amount of nervous and mental activity, and also when there is deficient action of the secretory organs in consequence of preceding hypersecretion; or morbid conditions, such as chronic catarrh of the bronchi, stomach, intestines, or genito-urinary tract; chronic hepatic, renal, or splenic affections. In these cases, together with the baths, fat and hydrocarbons are required in the food. As contra-indications, theory would lead us to include all conditions where the nitrogenous metabolism is diminished, and also those where artificially induced diminution of it appears to act prejudicially.

OFFICIAL REPORT ON BACK-TO-BACK HOUSES.

AN important and voluminous report has just been issued by the Local Government Board on the subject of back-to-back houses. We have long contended against the principle of allowing dwelling-houses to be erected without a sufficiency of open space both to the rear and in front of them, and we are glad to note that the general tenour of the report is strongly adverse to a system of building which has been carried on a good deal in the north and in the midlands, and which, if persevered in, cannot fail to make urban life even more injurious than it already is. The report is by Dr. Barry and Mr. Gordon Smith, F.R.I.B.A., and we shall shortly review it somewhat in detail.

RECOVERY OF VISION BY LIGHTNING.

A REMARKABLE case of recovery of sight from exposure to a stroke of lightning has recently been published in the northern papers. The statement made is to the effect that a young collier named Adam Bate lost his vision in December last from the explosion of a charge of gunpowder, which utterly destroyed the right eye and caused a fracture of the frontal bone. The vision of the left eye was lost, apparently from shock to the retina, without other serious damage to the eye. On returning from Ettingshall in the midst of a severe thunderstorm, on the 16th inst., he remarked to his brother that he saw light through his spectacles, and immediately afterwards he experienced a

piercing sensation which passed from the eye to the back of his head. The pain was brief, and he then found he was able to see indistinctly the objects near him. On the following day his sight had so far returned to him as to enable him to walk about the town without a guide. The improvement may be due to one of two circumstances. It is possible the original injury may have caused the lens to become opaque, and the shock of a sudden peal of thunder close to him may have displaced it into the vitreous; and, on the other hand, the paralysed retina and optic nerve may have been stimulated into renewed activity by a very vivid light, which would act like a strong electrical current on a partially paralysed motor nerve. It would be interesting to know whether the improvement in the vision is maintained.

PATHOLOGICAL SOCIETY OF LONDON.

IT has been decided by the Council to set aside two or more evenings before Christmas for the discussion of the Morbid Anatomy and Pathology of Chronic Alcoholism, and for the exhibition of specimens illustrating the subject. Dr. Payne has consented to open the debate. It is proposed that the subject should be discussed and specimens exhibited under the heads—(1) Effects of Alcohol on the Digestive System; (2) Effects of Alcohol on the Urinary System; (3) Effects of Alcohol on the Nervous System; (4) Effects of Alcohol on the Respiratory Organs; (5) Effects of Alcohol on the Skin or any other Organs.

GUY'S HOSPITAL.

THE medical staff of this hospital, with the consent and full assistance of the governors, have decided to build a residential college for the students. This will be erected on premises within the hospital precincts, on ground on which the first Nonconformist place of worship in London was situated. It is intended for the reception of sixty men, amongst which number will be included the resident staff of the hospital, the house surgeons, house physicians, and others, who will be in telephonic communication with the hospital buildings. Every convenience will be provided, and amongst other things a gymnasium will be included, for the use of the residents; this is as it should be. The building is calculated to cost £20,000, the whole of which has been already subscribed.

THE PREVENTION OF WOOLSORTERS' DISEASE.

THE Sanitary Committee of the Bradford Corporation have taken an important step in the direction of the regulation of woolcombers' premises with a view to prevent the occurrence of anthrax. Besides circulating amongst those concerned a copy of a presentment by a coroner's jury which recently inquired into a fatal case, together with precautionary regulations, the committee intends, if possible, to get the breach of the regulations made a penal offence. To limit such legislation to Bradford alone would obviously place the traders of that city at a disadvantage, so that, instead of proceeding by making a special bye-law, a draft letter has been prepared asking the Local Government Board to adopt regulations dealing with the matter which shall be applicable to the whole country, either by the powers conferred upon them by Section 134 of the Public Health Act or in any other way they may think fit. The breach of regulations made under this section renders the offender liable to a fine not exceeding £5; whereas the precautionary regulations supplied by the Corporation at the present time have no direct force in law, and, where they have not been observed, can only be called into play in case of a coroner's inquest as proof of neglect of reasonable precautions in the carrying on of a dangerous trade. Prevention

of the disease is, however, the aim desired; and it is noteworthy that in all the mills in Bradford where the precautionary regulations have been observed there has been an absence of woolsorters disease.

MALIGNANT PUSTULE.

At an inquest held on the 20th inst. at Guy's Hospital, a carman, aged forty-seven years, was said to have died from blood-poisoning due to a vegetable parasite in the neck. This appears to have been a case in which no connexion could be found between the disease, charbon, or malignant pustule and the occupation of the patient, as in his work he does not appear to have had the handling of hides. The suggestion that the disease resulted from the man's drawing his hand across the back of his neck whilst in a condition of perspiration is a feasible one, or it may have resulted from his scratching a pimple in that situation. But the origin of the germ remains a mystery.

SCARLET FEVER AT POLLOKSHIELDS.

A SOMEWHAT extensive outbreak of scarlet fever, which by the middle of the month had already attacked seventy-four persons, has been traced in Pollokshields to the use of milk from a dairy where a milkmaid had been suffering from the disease. Drs. McMillan and Carmichael were satisfied as to the source of the infection, and, as the result of the measures of prevention adopted, it is hoped that the disease has been stayed.

HYSTERIA IN PAVIA.

A KIND of epidemic hysteria seems to have developed itself in Pavia. Some twenty women and girls were found in a small room, lying on straw, and affected from time to time with hysterical convulsions. They first begin to get excited; then turn themselves round, stand up, speak, laugh, and eat; they then are again overcome with distress, turn up the whites of their eyes, gnash their teeth, and become semi-cataleptic. The municipal authorities are endeavouring to trace the origin of this strange epidemic.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Bramann has been recognised as *privat docent* in Surgery.

Giessen.—Dr. K. B. Lehman, Extraordinary Professor in Würzburg, has been offered the Professorship of Hygiene.

Greifswald.—Dr. Friederich Löffler, *privat docent*, and up to the present time Staff Surgeon in charge of the Chemico-Hygienic Department of the Military Hospital in Berlin, has been appointed Professor of Hygiene.

Halle.—Dr. Kretschman has been recognised as *privat docent* in Otolaryngology, and Dr. Riesel as *privat docent* in Hygiene.

Vienna.—Dr. Mracek has been appointed to the charge of the Department for Syphilis and Skin Diseases. Professor Krafft Ebing of Graz has been nominated as successor to Professor Leidesdorf, who has retired.

Würzburg.—Professor Fritsch of Breslau has declined the invitation to migrate. Professor Kunkel has been appointed Extraordinary Professor of Pharmacology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Ludwig Julius Budge, Professor of Anatomy and Physiology in the University of Greifswald, in his seventy-seventh year. He was formerly professor in Bonn, but has been in Greifswald since 1856. His chief researches have been on the nervous system, one of his most important discoveries being the origin of the sympa-

thetic from the spinal cord itself. For the paper in which he demonstrated this he was awarded the Monthyon prize by the Academy of Sciences in Paris. In Histology he demonstrated the origin of the bile capillaries in the liver. Amongst his works the best known perhaps is his manual of Physiology.—Dr. S. P. Golubtseff, chief medical officer of the Odessa Educational District.

MILAN, through her Communal Council, has been engaged in considering twenty-two several projects for providing her with pure drinking-water. All of these have been rejected, including some which undertook to bring the water from the uncontaminated mountain reservoirs, and, much to the mortification of her soundest sanitarians, she is now favourably entertaining a scheme of deriving her drinking-water from the subsoil of the flat Milanese provinces.

AN International Medical Congress on Tuberculosis commenced its sittings at the Sorbonne on the 25th inst. More than two hundred medical men, from different parts of the world, have, we are informed, promised to read papers.

WE understand that the Royal Commission on Higher Education will sit for a fortnight longer and will then adjourn over the vacation. It is probable that their report will be issued early in October.

AFTER a long absence, small-pox made its appearance last week in Wandsworth. The disease appears to have been contracted during rag-picking, and the attacks were only two in number.

THE Bradshaw Lecture at the Royal College of Physicians will be delivered by Dr. William Carter on Saturday, Aug. 13th, at 4 P.M. Subject: "Uranium."

THE ANNUAL REPORT OF THE METROPOLITAN BOARD OF WORKS.

SURVEYING as it does the public works of so vast an aggregate as London, the annual report of the Metropolitan Board of Works might reasonably be expected to be a document of special and peculiar interest, but proves upon perusal to be singularly disappointing. It is disappointing for two reasons: first, because the information conveyed is strangely meagre; and, in the second place, because what there is, is chiefly a record of failure and shortcoming. The great work of the Board is the management of the sewers, and it is hardly creditable either to the members or their constituents that this work should still be very largely in an experimental stage. Of the methods of disposal adopted we have spoken repeatedly, and to that subject we do not now recur, but whatever difference of opinion may exist as to the proper method of getting rid of the refuse of London, it is surely impossible on any theory whatever to find an excuse for the following:—

"In the years 1885 and 1886 the Board had, with a view to checking the development in the sewers themselves of the injurious compounds which are generally known as sewer gas, introduced during the summer months deodorising materials into the sewers at the intermediate pumping stations at Pimlico, Deptford, Battersea and Vauxhall, and at other places in different parts of London. The cost of thus treating the sewage in the sewers was very large, and the question was raised whether the results were worth the expenditure, and whether equally good results could not be obtained by some less expensive method. Upon this point also Sir Henry Roscoe was consulted, and, under his advice, the Board discontinued putting manganate of soda and sulphuric acid into the sewers, and reverted to a

process which had been tried in the years 1870 and 1871, and had since fallen into disuse, the process being to neutralise the offensive gases as they rose through the ventilating shafts, by an application of sulphurous acid. The Board accordingly, early in July last, gave directions that whenever complaints were received of offensive odours being emitted from any of the ventilating shafts of the sewers under the Board's control, sulphurous acid should be applied. Under these instructions 146 ventilators to the sewers on the north side and 48 to those on the south side of the river Thames were so dealt with at a cost of about £600. So far as can be judged, the result has not been unsatisfactory."

It is, indeed, self-government with a vengeance, if an unfortunate public must lodge a complaint before getting disinfectants applied to a foul sewer! If the disinfecting department has to be kept up to its work in this way, a simpler, because more direct, plan would be for the public to take the work into its own hands and dispense altogether with the costly machinery of a public department. We wonder how many complaints have emanated from poor neighbourhoods. Rich people may sometimes take a pleasure in assuming the quasi-public position of a complainant in these circumstances. But the very poor, who stand in no less need of the functions of the ædiles, have neither time nor address for such enterprises. By what tests the result has been ascertained to be "not unsatisfactory" does not appear. We much suspect that so favourable a judgment is not the award of an unbiased authority, and means only that the long-suffering Londoner has borne without a murmur much unnecessary poisoning with sewer air. It is shocking to find, even in the Metropolitan Board, not only such an extraordinary faculty of neglecting duty, but also such a complete self-satisfaction at the same time.

PLEURO-PNEUMONIA AND TUBERCULOSIS.

THE Departmental Committee which has been investigating the problems connected with these diseases among animals has produced a highly interesting and valuable report. Of the general soundness of the views which they put forward hardly any doubt can be entertained, but still it may be doubted if the most valuable part of the matter which they have produced is not to be found in some of their incidental statements. Thus, for example, the stimulus necessary to stir up the Legislature to the adoption of such measures with reference to tuberculosis as have been proved effectual in connexion with other diseases is precisely such as is afforded by the authentic and authoritative statement that "there is actually a regular trade in stock infected with tuberculosis"; that animals so diseased go by the name of "wasters" and "mincers," and are "frequently slaughtered in the neighbourhood of the larger towns, to which such portions of the meat as are likely to escape the observation of the inspector of nuisances are sent for the purposes of sale among the poorer inhabitants, and especially for the making of sausages." The imperative necessity of suppressing such malpractices by effective regulations is perfectly obvious, for not only do they amount to a cruel fraud upon the unwary purchaser, but they tend directly to the dissemination of the disease which is of all diseases the most destructive in these latitudes of adult human life. We cordially support the recommendation of the Committee, that tuberculosis should be included in the Contagious Diseases (Animals) Acts, so far as may be necessary to provide for the seizure and slaughter, under proper conditions as to compensation of the owners, of all animals found to be so diseased. We are even disposed to think with Mr. Horsley that the act of knowingly breeding from cattle affected with this disease should be made a penal offence, and that failure to notify an outbreak of the disease to the sanitary authority should equally expose the defaulters to punishment.

The branch of the report which deals with pleuro-pneumonia contains a highly interesting discussion of the efficacy of inoculation. The commissioners come to a conclusion unmistakably adverse to the operation, but their opinion is so largely based upon considerations of mere convenience—as, for example, the difficulty of carrying it out on a sufficiently comprehensive scale—that it can hardly be said to

advance the scientific discussion. As a measure of practical hygiene, the process of slaughtering animals that have come within the sphere of infection is no doubt entitled to the preference which the committee extend to it. But we are persuaded that it is very good practical common sense to set much store by the investigation of such pathological problems. Thus when the committee say, "We consider that, if it should be deemed necessary or desirable that further experiments should be conducted, they should be commenced on the clear understanding that the investigation is undertaken entirely in the interests of science, and without any reference to the measures proper to be adopted for the extinction of the disease," they seem to us to be taking a false point. The conditions under which alone in ordinary practice inoculation can be performed are such as to preclude the drawing of a conclusive or in any way satisfactory inference. The animals are under observation for so short a time, and their antecedents are so little known, that statistical results are wholly out of the question, and in such a matter an inference not based on reliable statistics is but a poor conclusion. If, then, any satisfactory determination of an eminently practical question is to be reached, it must be by the method of experiments carefully planned and carried out. But why should this be said to be in the interests of science? The interests of the science of medicine, whether preventive or curative, are, as we understand them, the interests of men; or, as in this case, the interests alike of man and beast. The incautious and somewhat foolish figure of speech which represents science as an entity, having interests of her own which she pursues with remorseless disregard of suffering incurred or treasure expended in her service, is responsible for no small proportion of the senseless prejudice which every now and again breaks out in wholesale denunciation of pathologist and pathological investigation. We are satisfied that nothing was further from the commissioners' thoughts than to give any sort of countenance to this foolish misconception. But, nevertheless, we must protest against what seems to us to be their very infelicitous use of language.

THE GLASGOW EXHIBITION.

(From our Special Correspondent.)

Glasgow, June.

UNDOUBTEDLY the Glasgow Exhibition has proved an unexpected and unparalleled success. It is the first exhibition on record that was absolutely complete and ready on the opening day. This contributed to bring about the success which is now the subject of surprise and self-congratulation. We are not, however, prepared to say that this success is altogether an unmixed blessing. It may imply a reproach which doubtless the inhabitants of Glasgow will take to heart. The Exhibition is well worth seeing, but there have been many exhibitions quite as good, and many very much better. If, nevertheless, the number of admittances has exceeded anything before recorded, we take it that this is due to the paucity of diversions from which the inhabitants of Glasgow and its neighbourhood have suffered. Without wholesome physical and mental relaxation, it is not possible to maintain the health of the population; and the means of amusement in such towns as Glasgow are lamentably scarce. Hence the rush to the present Exhibition—a popularity pointing clearly the moral that other though somewhat similar methods of instruction and amusement must be provided. This will be one of the best means of combating the intemperance which is the besetting sin of Glasgow, and which undoubtedly powerfully contributes to bring about the present high death-rate. When people assemble together in a large but enclosed space, such as an exhibition building, when the poor and the rich, the rough and the refined elements of society, intermingle, the manners of each and all are improved. The sobriety and good behaviour of the majority prevent the minority from committing excesses; thus a holiday is enjoyed away from the public-house, and without the degradation that otherwise too often results when no attractive entertainments are within easy reach of the people. Such diversions as the Glasgow Exhibition will, we maintain, help to improve the behaviour, the morals, and the health of the great industrial population that lives on the borders of the Clyde.

With respect to the exhibits themselves, there are a fair quantity that will prove of interest to the medical profession or the sanitary reformer. There is, to begin with, a plentiful supply of ambulances with every necessary appliance provided by the St. Andrews Ambulance Association. This Association has since 1882, when it was first established, imparted instruction to over 18,000 persons. Further, the waggons supplied by the Association have been of service 4160 times for the conveyance of the sick and wounded. Apart from the ambulances proper, Class VII. is devoted to carriages, bicycles, &c. In this there are a good many exhibitors, the majority being from Glasgow, and these latter satisfactorily show that they are able to produce whatever means of conveyance local practitioners may desire. Like the carriages, taking up a large amount of space, there is an important collection of furniture. Comfort and more or less artistic excellence are the principal attributes of these exhibits; but some, however, affect health, and notably school furniture. The School Board desk and seat of the Bennet Furnishing Company are well suited to growing children, and the question of preventing malformation while young persons are studying at school is a subject with wide-reaching consequences. The domestic problem of washing is treated in the same part of the Exhibition, and we particularly noted Frater's washing machine. This is a tank that is placed over a spirit, oil, or gas burner. The clothes are contained in a drum, which is turned in the boiling water by means of a handle. The kitcheners and fireplaces that adjoined this exhibit did not present any new feature so far as public health is concerned, and no prominence is given to the vexed question of smoke abatement. There is, however, a fair display of ventilators. The rivalry of different cones again perplexes the critic. We have, for instance, Walker's patent double exhaust hardware cowl, and Boyle's well-known air extractor. The former firm has a new inlet ventilator, which consists of a great number of oblique and radial perforations in a board, so that the air is thrown upwards and split up into a number of currents, which, intermingling and colliding one with another, prevent draughts. Messrs. Harding and Co., of Leeds, have applied, in a somewhat different manner, the same principle, and with marked success. In Glasgow, the exhibits of Messrs. Boyle and Sons, in so far as they deal with the ventilation of ships, are of special interest, for it is needless to remark that an exhibition held on the banks of the Clyde must of necessity excel in all that relates to shipping. In this respect, however, we think more prominence might have been given to the problems of sanitation at sea. In spite of the pressure brought to bear, ship-builders are still too apt to consider ships as mere means of transport, rather than as dwellings where thousands of persons must live, and should live under healthy conditions. There is still great room for improvement in the ventilation of ships. In respect to mechanical ventilation, Aland's and Blackman's power ventilators are side by side disputing for public favour. Aland's air propeller is now applied at the Sardinia-street Public School, Glasgow, where a two-horse power Otto gas engine is used. This costs 4s. 9d. a week, and, working a 48-inch propeller, can move 13,000 cubic feet of air per minute. From what we were able to observe, it seems a very powerful ventilator, requiring only slight motive force. The Blackman air propeller is well known, being largely employed for buildings and blast furnaces.

In a section devoted to sanitation we found many excellent and well-known appliances—H. Twyford's sanitary earthenware, for instance. Then, of course, Messrs. Doulton and Co. hold a very prominent position. Not only have they provided the lavatories in use at the Exhibition, but they have a very large stall, where a great variety of closets, drain pipes, &c. may be examined. Doulton's self-adjusting joint for drain pipes is a very useful adaptation of the Stamford joint, which prevents leakage even when the earth sinks and causes the pipe to twist out of line. They have also a good street urinal made with glazed stoneware. This is impregnable, and is therefore well suited for the purpose. We were then shown a closet with a special pipe to separately but simultaneously flush the siphon of the overflow pipe. Further, the valve of the pan opens with its back against the overflow aperture. Thus the soil cannot be thrown or splashed into the siphon of the overflow, an accident which sometimes occurs in closets built in the usual way, and when the valve opens towards the overflow. Messrs. Bourtreehill and Co. have some intercepting chambers, where the glazed channels are armed with ledges which rise on the

opposite side to the influx of water; thus the water is kept within the channel and does not splash over the borders. This is a decided improvement. The enamel also seemed of very good quality. Among the familiar exhibits of Messrs. Shanks and Co. we found the same principle applied to hand-basins for washing on board ships. A slut or inside ledge is provided, which prevents the water spilling during rough weather. Further, the plug or valve is made of indiarubber, so that when it sways about during a heavy roll at sea it does not break the basin. For closets this firm uses nickel-plated brass down pipes that provide the flush, and these are certainly more ornamental. In their efforts to fit up washing-basins and baths in such a way as to be open underneath so as to be easily cleaned and ventilated, Messrs. Shanks are following a true principle of hygiene.

The silicated carbon filter, Barstow's patent combination filters, Slack and Brownlow's filters, and Doulton's filters were all exhibited, each possessing features that have recommended these indispensable domestic safeguards to a large class of purchasers. There are also several medical waters, notably the waters of the Homburg Baths, one of the rare exhibits coming from the Continent. The English colonies are, however, better represented. There is a large Canadian and Indian section, and we were pleased to meet with the exhibits of the Australian Wine Importers Company and the popular wines of Messrs. P. B. Burgoyne and Co.

The food section is a large one, and notably that dealing with oatmeal. The Red Star oat flour of Messrs. White and Co., the preparations for invalids' and children's food of Messrs. James Marshall, the corn flours of Brown and Polson, the Scotch biscuits, specialties, &c., of Messrs. Macfarlane and Co., and Scott's Midlothian oat cakes, together with other similar wholesome, nutritive, and simple but excellent articles, held a prominent position in the Exhibition, and are extensively patronised. Then we have Spratt's cod-liver oil, and Fry's chocolate bonbons, the Swiss milk, and Nestlé's milk food. Felton and Sons, Evans, Sons, and Co., and L. Rose and Co. all provide lime-juice, which is at once wholesome, refreshing, and useful.

The chemical section is poor and somewhat mixed, for here we find Colman's mustard and Price's patent candles, both excellent exhibits. The pharmaceutical and general chemicals of Messrs. May and Baker, and the perfumery of the Glasgow Apothecaries' Company were interesting. Finally, as a reminder of the inconveniences of the Scotch climate, we came across a large assortment of waterproof coats. Most notable among these were the exhibits of Messrs. Charles Macintosh and Co., of the North British Rubber Company and the Indiarubber and Telegraph Works.

The gardens of the Exhibition are pleasant, and there are some interesting things to see. But the Bishop's Palace, always overcrowded, is sadly in want of ventilation. Here is a good opportunity lost of testing the practical virtues of the ventilators exhibited in the main building. More pleasant is Van Houten's artistic Dutch house, where his cocoa is served in elegant cups and in comfortable rooms. It will be seen, therefore, that the Glasgow Exhibition contains much to instruct and to amuse. But if, nevertheless, the visitor is not yet satisfied, then the illustrated and comic pamphlet written by one of the wittiest journalists of Scotland, and entitled "The Groceries," will supply so amusing a skit of the entire show that all sense of disappointment will disappear drowned in a flood of merriment.

OPEN SPACES.—The Marquis of Tavistock formally opened at Bedford, on the 11th inst., a people's park, comprising sixty acres.—The Islington Vestry, after considerable discussion, has decided to contribute £2500 towards the purchase of Clissold Park for the use of the public.—Prince Albert Victor, on Saturday last, opened the new Jubilee Recreation Grounds at Bury, which have been presented to the town.—The Metropolitan Board of Works has decided to carry out the Hampstead Heath Enlargement Act, relying on the contribution of £50,000 from the Charity Commissioners, the Board having to provide £149,500.—A public park at Longton, North Staffordshire, was opened on Wednesday by the Duke of Sutherland, for which his Grace had given forty acres of land, and which has since been laid out, at a cost of £5000, by public subscriptions. The park, in commemoration of the Queen's Jubilee, is named the Queen's Park.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wandsworth District.—The six medical officers of health of this metropolitan district give the general death-rate for the whole area during 1887 as 15·7 per 1000, the zymotic rate being 2·72; and they express their satisfaction that, together with an increasing density of population, there has, on the whole, been a steady diminution in mortality—a result which they, in the main, ascribe to the complete system of drainage in operation, the purer drinking water which is supplied, and the generally improved conditions under which the people are living. The separate summaries which follow are largely statistical, but some general points of interest are also adverted to. Dr. Kempster reports that in East Battersea the method of ventilating sewers by upcast shafts reaching above the highest points of houses has been considerably extended, and he would like to see even a wider application of it; he also states that under the system of sulphur fumigation as adopted by him for rooms after the occurrence of infection he has never known a recurrence of disease. In the West Battersea district complaints of offensive water were received, the condition being brought about by dead-ends in the pipes. All the bakehouses, cow-houses, and slaughterhouses are, according to Mr. Oakman, in a satisfactory condition, and the district has been much improved by such measures as draining and paving. In Clapham some fatal diphtheria occurred, but whilst certain local defects were discovered, the disease could not be set down to them by Dr. Newsholme with any certainty. According to Dr. Orr, the Putney and Roehampton district was remarkably exempt from infectious diseases, the so-called zymotic rate being only 0·44 per 1000 living. In Streatham no special prevalence of such disease occurred, but the difficulty in securing proper isolation on the occurrence of some diphtheria cases leads Dr. Sutton to call attention to the exclusion of that disease from the Asylums Board hospitals. If that board is to become the isolation authority for the metropolis time will doubtless bring about a change in this respect. Wandsworth exhibits a decided diminution in the amount of infant mortality—a result which Dr. Nicholas ascribes, in the main, to the lessening fatality of infectious diseases. Owners and occupiers of houses are also found to be much more willing than formerly to comply with the sanitary instructions issued to them.

Towyn Urban District.—The general death-rate, which has been much the same for some few years past, stood at 17·3 per 1000 last year, and the percentage of deaths under one year to births was 14. Thia, Dr. Grosholz very properly regards as needlessly high, and, whilst he cannot set it down to any want of care in bringing up infants, he does consider that it may very likely be in part due to the great number of intermarriages which have been going on for some generations past in the district. The needs of Towyn as regards water supply and drainage remain much what they were, and public opinion is stated to be ripe for some progress in these matters.

Ramford Rural District.—Dr. Alfred Wright follows his usual practice of setting out in a useful tabular form the various occurrences of infectious disease, together with a statement of the action taken. As regards scarlet fever and diphtheria, the opinion is expressed that there is a special connexion between them, and Dr. Wright states that several cases of diphtheria have been noticed by him which appeared to have their origin in cases of scarlet fever, and vice versa. A detailed account is given of the sanitary circumstances of the different parts of the district and of their varying wants, and it is evident that there is still much room for improvement in such matters as water supply, drainage, and the disposal of sordid and refuse. At Hford and Chadwell a new system of sewerage has been provided, and in a number of instances house-owners have been required to do away with their cesspools and connect with the public sewers. The general death-rate for the year was 16·5 per 1000.

Stratford-on-Avon Combined Districts.—Taking these two urban and four rural districts as a whole, their death-rate during 1887 was 17·7 per 1000 living, the rates varying from

12·7 in the Stratford rural to 17·9 in the Evesham urban district. There are now three isolation hospitals in this combined area. Alcester and Evesham have provided excellent buildings, and one of these did good service in preventing extension of disease last year; Stratford, too, provided a temporary one, but it came too late to properly check the scarlatina which especially called for it. At Alcester no less than 764 patients have been isolated since 1875, 694 being scarlatina cases. At Evesham, where such work is comparatively new, 22 patients were received last year. Considerable care is evidently devoted to the proper control of dairies and milk-shops, and the results obtained from inspections made in each district are carefully set out. Attention is, in the main, devoted to secure the storage of milk in places to which foul air has no access, to guard against possible pollution of water supplies, and to prevent persons capable of transmitting infection from having access to either milk or cows. Mr. Fosbrooke's report is, like those formerly issued by him, an excellent type of the sort of record that is needed from a medical officer of health who seeks to indicate to his sanitary authorities the value of the work they have already done and the lines on which future sanitary progress is needed.

Berkshire Combined Districts.—No general report on the sanitary circumstances or progress of these districts is included in the pamphlet embodying the separate account of each of its component parts, except in so far as statistics are concerned. The general mortality of the twelve districts was 15·8 per 1000 in 1887, the lowest rate being 12·1 for East Hampstead rural, and the highest 25·3 in the Wallingford urban district; the high rate in the latter district not being due to any special prevalence of preventable disease. Very generally the account given of sanitary work consists of a statement of routine measures taken upon the occurrence of disease or of some complaint, proceedings before the magistrates being at times requisite in order to ensure compliance with the instructions issued, as in such matters as water supply. But there is little or nothing as to the needs of the district in the future, nor does the report contain advice to the various sanitary authorities as to such matters as still call for remedy with a view to the prevention either of nuisance or disease, the record being almost strictly one dealing with occurrences during the year that is past.

Isle of Wight Rural District.—It is difficult in such a district to make a correct estimate of population with a view to a comparison for the purposes of death-rate; but assuming the estimate for 1887 to be a correct one, the death-rate was 15·9 per 1000. This is slightly in excess of the mean for the past five years, and whether compared with the corresponding rate for the whole of England and Wales, or with that for rural districts generally, the Isle of Wight rural district is somewhat losing ground. The gradually increasing death-rate is very properly regarded by Dr. Groves as admonitory, and it may be viewed as mainly due to diphtheria, which, in its passage across the island, has settled down in a number of localities, where it has found conditions favourable to its development and maintained vitality. The prevalence of phthisis in this district admits of more than one explanation, especially in view of the number of sick visitors who frequent the island; but one of its main causes prevails in the defective character of the houses, both old and new, which are ill ventilated and damp, and are built upon sites but little adapted to their purpose. Phthisical patients should have their attention drawn to these obvious drawbacks which attach to the rural areas of the Isle of Wight. The district is still without an isolation hospital, some of its populous places are without proper bye-laws, and, although certain works of improvement have been effected, we cannot but regret to read of insanitary conditions which have for a great number of years been brought under notice, and this without a remedy being applied. Individual nuisances are often dealt with, but a sanitary authority has duties beyond this. The future health of the district can only be properly maintained by the adoption of comprehensive measures in advance, and the sanitary authority seem lacking in individuals who are determined to make progress, and hence the island abounds in badly built houses, in cesspits soaking no one knows whither, and in wells liable to pollution. Dr. Groves is evidently discouraged with this state of things, but he has the credit of setting forth the needs of the district &c., and of telling its past sanitary history, in a way that leaves nothing to be desired.

Harwich Urban District.—In Harwich the death-rate for 1887 was 14·4 per 1000—a rate that has been fairly steady for some years; and there has been no special prevalence of infectious disease, apart from an epidemic of whooping-cough. A new water supply was acquired last year, overcrowding has been diminished, but the district stands in need of a modern code of bye-laws. The ventilation of the sewers is also referred to by Dr. Hardwicke as both imperfect and insufficient.

Teignmouth Urban District.—Deducting deaths in visitors, the annual rate for 1887 is given as 16·64 per 1000; Dr. Piggott adding that an excess in the deaths from infectious diseases was due to an increase in whooping-cough and enteric fever. Of the latter disease, 33 cases came under notice, in addition to 15 from so-called “other or doubtful” fever; and the sanitary conditions with which they were associated are referred to in the report. Insufficient flushing of closets followed on an insufficient water supply; a number of houses remain disconnected with the new sewers; and other conditions as regards sewerage need attention. Bye-laws as to the control of dairies and milk-shops are being prepared.

Gloucestershire Combined Districts.—In this important combination, which includes eight rural and five urban sanitary districts, covering in all some 620 square miles, the death-rate during 1887 was 15·6 per 1000, varying from 12·1 in the Chepstow rural to 19·5 in the Avon urban district. Dr. Bond, in dealing with the infectious diseases, has for some time past grouped under the heading “Scarlatinoid” scarlet fever, diphtheria, and croup. Scarlatina, he finds, has since 1887, when it reached its zero point, exhibited a tendency to increase, whilst diphtheria, “its cousin-german,” has continued to fall, thus following the lead of the former affection, though not at an absolutely corresponding rate. The continued fevers have fortunately diminished, and this improvement cannot be separated from the corresponding change for the better that has been steadily in progress as to the local sanitary circumstances. No change has taken place as to hospital provision, Cirencester still standing alone in having provided such accommodation; and no works of sewerage or drainage of any importance have been undertaken during the past year. At the time when Dr. Bond’s report was written, much more than can now be looked for in the immediate future was expected from the Local Government Bill; but the circumstance that nearly all the important sanitary provisions affecting County Councils have been expunged, temporarily at least, from the Bill, materially defers the hope, in which many joined with Dr. Bond, that it would form a basis for a reconstruction of the administrative machinery in matters of public health.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5459 births and 2884 deaths were registered during the week ending July 21st. The annual rate of mortality in these towns, which had been 15·9, 15·0, and 15·7 per 1000 in the preceding three weeks, further rose last week to 16·0. During the first three weeks of the current quarter the death-rate in these towns averaged but 15·5 per 1000, and was 4·9 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12·2 in Brighton, 12·7 in Nottingham, 12·9 in Hull, and 13·0 in Derby. The rates in the other towns ranged upwards to 19·4 in Salford, 19·8 in Wolverhampton, 20·2 in Preston, and 21·1 in Manchester. The deaths referred to the principal zymotic diseases, which had been 276 and 354 in the preceding two weeks, declined again last week to 311; they included 106 from diarrhoea, 68 from whooping-cough, 50 from measles, 31 from scarlet fever, 27 from “fever” (principally enteric), 23 from diphtheria, and only 6 from small-pox. No death from any of these zymotic diseases was registered during the week in Plymouth, whereas they caused the highest death-rates in Wolverhampton, Cardiff, and Halifax. The greatest mortality from diarrhoea occurred in Newcastle-upon-Tyne and Portsmouth; from whooping-cough in Derby, Wolverhampton, and Halifax; from measles in Bradford; from scarlet fever in Blackburn; and from “fever” in Cardiff. The 23 deaths from diphtheria included 15 in London and 3 in Manchester. Small-pox caused 2 deaths

in Sheffield, 1 in London, 1 in Bristol, 1 in Preston, and 1 in Hull, but not one in any of the twenty-three other large towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 2 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 889 at the end of the week, against 924, 897, and 890 on the preceding three Saturdays; 105 cases were admitted during the week, against 81 and 103 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 176 and 164 in the preceding two weeks, were last week 166, and were 25 below the corrected average. The causes of 50, or 1·7 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Sunderland, Newcastle-upon-Tyne, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Sheffield, Brighton, and Manchester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the preceding five weeks from 20·0 to 16·1 per 1000, rose again to 18·4 in the week ending July 21st; this rate exceeded by 2·4 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 11·3 and 12·8 in Dundee and Perth to 18·5 in Paisley and 23·0 in Glasgow. The 466 deaths in the eight towns showed an increase of 60 upon the number in the previous week, and included 12 which were referred to diarrhoea, 9 to measles, 5 to whooping-cough, 4 to diphtheria, 3 to “fever” (typhus, enteric, or simple), 2 to scarlet fever, and not one to small-pox; in all, 35 deaths resulted from these principal zymotic diseases, against 49, 37, and 28 in the preceding three weeks. These 35 deaths were equal to an annual rate of 1·4 per 1000, which was 0·3 below the mean rate from the same diseases in the twenty-eight English towns. The 12 deaths attributed to diarrhoea showed an increase of 4 upon the number in the previous week, and included 6 in Glasgow; they were, however, 27 below the number returned in the corresponding week of last year. The fatal cases of measles, which had been 13, 7, and 3 in the preceding three weeks, rose again last week to 9, of which 7 occurred in Glasgow. The 5 deaths from whooping-cough (including 4 in Glasgow) and the 4 from diphtheria showed a decline from those returned in the previous week. Two of the three deaths referred to “fever” occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 86, 77, and 68 in the preceding three weeks, rose again last week to 84, and exceeded the number returned in the corresponding week of last year by 7. The causes of 73, or nearly 16 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 24·8, 20·2, and 22·6 per 1000 in the preceding three weeks, further declined to 19·4 in the week ending July 21st. During the first three weeks of the current quarter the death-rate in the city averaged 20·7 per 1000, the mean rate during the same period being 15·4 in London and 16·5 in Edinburgh. The 131 deaths in Dublin showed a decline of 22 from the number in the previous week; they included 5 which were referred to “fever” (typhus, enteric, or ill-defined), 5 to whooping-cough, 3 to scarlet fever, 2 to diarrhoea, 1 to measles, and not one either to small-pox or diphtheria. Thus 16 deaths resulted from these principal zymotic diseases, against 17 and 21 in the preceding two weeks; these were equal to an annual rate of 2·4 per 1000, the rate from the same diseases being 1·9 in London and 0·8 in Edinburgh. The deaths from “fever” showed an increase of 2, while those from whooping-cough, diarrhoea, and scarlet fever were fewer than those returned in the previous week. The deaths of infants showed a further decline from recent weekly numbers, and those of elderly persons were fewer than in the previous week. Five inquest cases and 3 deaths from violence were registered; and 37, or more than a quarter, of the deaths occurred in public institutions. The causes of 17, or 13 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

"THE INFLUENCE OF SCARLATINA HOSPITALS."

To the Editors of THE LANCET.

SIRS,—With reference to the influence of scarlatina hospitals, which is dealt with in your leaderette of July 14th, may I be allowed to refer to the evidence given before the Royal Commission on Infectious Hospitals? I examined nearly all the witnesses capable of giving evidence on this point, and no case was forthcoming in which there was the faintest charge proved that scarlatina was disseminated in the open air, or was in any way propagated by aerial diffusion beyond a few feet, and that usually in a confined and impure atmosphere. Dr. Tripe's conclusions seem to bear out that evidence, and, although not advocating rashness on the part of sanitarians, I think it is important to get rid of that morbid dread of scarlatina which is engendered by many at the present day, and which leads to much unnecessary expense and tends to cause senseless panic when a case of scarlatina does find admission into an otherwise healthy place. If those in charge of the case will prevent the carriage of foci of disease in articles of clothing or otherwise, and isolate the case, so that the feverish breath of the patient is not immediately inhaled by those susceptible, there need be no extension of the disease; and if the patient be properly disinfected, there need be no long-continued isolation after the fever has departed, unless there are sequelæ.—I am, Sirs, your obedient servant,
Croydon, July 23rd, 1888. ALFRED CARPENTER.

A MODIFICATION IN THE TREATMENT OF BOW-LEGS.

To the Editors of THE LANCET.

SIRS,—Allow me briefly to advocate through your columns a mode of applying plaster-of-Paris for the cure of bow-legs in children, and to point out some of the advantages that may be obtained from its use.

The method is as follows. First, an examination is made of the deformed limb, to gain an accurate knowledge of the exact directions of the abnormal curves. Then a preparatory manipulation to estimate the facility with which the bones will bend. This they will do easily if, as is generally the case, the child be rickety, since they are deficient in earthy salts; moreover, they will not, for the same reason, easily break. Cut out the splints and apply them as if for simple fractures; and, whilst the plaster is still soft, endeavour to remove the deformities by a gradually increasing pressure, taking care that this is not intermittent, and that the shaft of the bone and not the epiphyses is grasped. The gain from the first application is often considerable. In about a week, the time depending much on how the application is borne and how the splint wears, it is removed. A little friction is then applied to the muscles, and another application made. When the bow-legs are cured, the splint is worn until all fear of re-deformity is at an end.

Plaster-of-Paris is of universal application, and can be modified to suit cases of the most varied kind. The length, shape, and weight of the splints rest with the surgeon. Locomotion can be accurately regulated. In the worst cases of rickets, when the disease is in an acute stage, no extensive manipulation can be made (*ça va sans dire*), but the deformity can be arrested. In cases less severe, but where it is necessary to take in the knee, the parents can be assured that this will only be for a short time, for it is soon possible to cut down the splint and use an elastic knee cap, thus allowing movement. The plaster can then be rounded over the sole of the foot and made of such a shape as to render standing impossible. Finally, as the child gets better, the plaster can be pressed into the arch of the foot. The child can then walk a little, without a recurrence of the deformity.

Rickets is acknowledged to depend largely on bad hygienic conditions, and therefore is frequently found among the poor. In manufacturing towns the houses are often converted into workshops; obviously, then, a light,

non-cumbersome apparatus that easily allows the patient to obtain fresh air is of enormous constitutional advantage. The application can be quickly made, often without making the patient cry; it is a perfect mould of the limb, and therefore does not produce sores. The splints and irons in common use appear to act as an ogre—at all events to the uneducated mind; and but few prejudices exist of widespread acceptance that are altogether without some reason. I have used this method with various modifications from time to time for between two and three years, and have here endeavoured to point out the more prominent advantages. To the practitioner conversant with the peculiarities of the poor many more will, I think, occur.

I am, Sirs, faithfully yours,
Luton, July, 1888. W. BOLTON TOMSON, M.D.

JUDICIAL EXECUTIONS BY HANGING.

To the Editors of THE LANCET.

SIRS,—A considerable amount of public attention has been attracted to the above subject by the recent revolting mishap which occurred at Oxford on the 17th inst., when a man named Upton was executed, and his head almost torn from his body in the process.

This and several similar accidents which have taken place previously at executions, under what is known as the "long-drop method," indicate, I think, that some improvement is needed in the mode of carrying out capital punishment. Without going into the question of what is the best means of inflicting the death penalty, I would suggest that, so long as hanging is the legal method, it should be carried out with more scientific care and judgment. Under the existing system the hangman appears to be the sole authority for deciding upon the length of drop required for causing death with despatch and decency, and he in this case formed his opinion in a most hurried and inaccurate manner, not discovering until the culprit was upon the scaffold that the drop was too long, and that the neck was not sufficiently muscular to bear the strain it was about to be subjected to without severe laceration and bloodshed. I have had some experience of judicial executions by hanging both in this country and abroad, and believe that timely attention to a few material points would obviate such an indecent spectacle as the head of a criminal being nearly torn off his body as in this instance. The hangman's explanation, that "the injury was owing to the thinness and shrivelled character of the neck," was probably correct; but surely this condition should have been noticed and taken into consideration by some competent authority before the wretched man arrived upon the scaffold, and the length of drop regulated accordingly. The prison surgeon is doubtless the most competent authority to determine what length of drop is necessary to cause speedy death by hanging after a due examination of the criminal, and taking into consideration the weight, height, and age, together with the muscular development and character of the skin, especially of the neck. The quality and thickness of the rope used ought also to be authoritatively determined. The surgeon's report upon the criminal's physique &c. would be a valuable aid and guide to the executioner (whose personal opportunity of forming an opinion is very limited, only two minutes elapsing, according to the account in *The Times* of the Oxford case, from the time the executioner entered the cell to the falling of the drop), and would, I think, come properly within the range of the former's duties in the cause of humanity, and greatly tend to lessen the chances of a repetition of these mishaps.

I am, Sirs, your obedient servant,
J. HIGHAM HILL, M.D., F.R.C.S.E.
Bedford-square, W.C., July 24th, 1888.

To the Editors of THE LANCET.

SIRS,—The Home Secretary seems, by his reply in the House last night to Mr. Brookfield, to be very imperfectly informed of the results from "time to time" of the present haphazard system of executing criminals. So late as April and August of last year the murderers Currell and Lipski (whose executions I attended) had quite narrow escapes from decapitation, the former getting a drop of seven and the latter eight feet, though Berry informed the Governor of Newgate that the drops had been arranged at five feet six inches and six feet respectively. In Currell's

case all the veins leading from the brain, together with the œsophagus and many muscles, were ruptured, large quantities of venous blood escaping through the mouth into the white cap, the lower border of which being included in the constricting noose, pent up the fluid, so that it only filtered through in a small stream to the bottom of the pit, where the prison surgeons and myself were taking the pulse. In Lipski's case the damage done to the integuments, muscles, and spine was extensive, but there was only superficial bleeding to a small extent. I may add that Lipski's pulse beat for thirteen minutes (stopping once after five minutes) at the rate of 160, which rate would prove (according to Professor Haughton) complete insensibility. All others whose executions I have witnessed had good normal pulses (80) for about ten minutes, strangulation being the cause of death.

I am, Sirs, yours truly,

J. J. DE ZOUCHE MARSHALL, L.R.C.S.I., &c.

Hastings, July 24th, 1888.

CHIAN TURPENTINE IN THE TREATMENT OF CANCER.

To the Editors of THE LANCET.

SIRS,—On Nov. 19th, 1887, the case of Mrs. B— was reported in THE LANCET, by Dr. John Clay of Birmingham. By referring to that it will be seen that Dr. Clay speaks of it as a case of "Epithelioma of the Uterus and Vagina," in which the disease had "disappeared under the use of Chian turpentine." Mrs. B— died on March 18th, 1888, of epithelial cancer of the uterus, with secondary deposits in the glands of the neck and abdominal glands.

I am, Sirs, yours truly,

Newton Abbot, July 18th, 1888.

W. G. SCOTT, M.B.

LIVERPOOL.

(From our own Correspondent.)

PARAFFIN LAMP FATALITIES.

In previous letters allusion has been made to the dangers of paraffin lamps. The city coroner held two inquests on the 24th inst., which showed the fatal results of these dangers to three persons. One of these cases was that of a woman with a baby in her arms; she was carrying a lamp, which fell from her hands, was smashed, and set her clothes alight. When the neighbours, hearing the screams of the woman, burst into the house, they found that the paraffin had done its work too well, and both mother and child died from the injuries. The other victim was a woman aged seventy, who, to use her husband's words, was "covered with burning oil from the shoulders downwards." He tried to smother the fire with her clothes, but unsuccessfully.

DRUNKEN MEN IN RAILWAY CARRIAGES.

The recent occurrence in a railway carriage, in a train coming from London to Liverpool, again brings to the front a very serious danger in connexion with railway travelling. The trains from this city to London and *vice versa* perform the journey in four hours and a half, in some instances even in less time. This means very rapid speed and very few stoppages. No reliance can be placed upon the cord of communication, nor can it always be reached. Hence passengers may be for about two hours at the mercy of a drunken maniac. There could be nothing unreasonable in a bye-law forbidding persons in a state of intoxication from travelling on any railway.

ANOTHER DEATH FROM HYDROPHOBIA.

The city coroner held an inquest to-day on the body of a girl aged seven, who died on Monday. Dr. Jarvis, one of the resident surgeons of the North Dispensary, said that the cause of death was hydrophobia. It appeared that a few weeks ago the child was bitten in the neck by a large brown dog. The same dog bit a boy, who is now apparently well. The dog was destroyed.

Liverpool, July 25th.

LAMBETH POLYTECHNIC INSTITUTION.—On the 25th inst. the Princess Louise, accompanied by the Marquis of Lorne, inaugurated the above institution, the origin of which is due, we believe, to the Rev. Freeman Wills, of Shoreditch.

BIRMINGHAM.

(From our own Correspondent.)

THE JAFFRAY SUBURBAN HOSPITAL.

ON Tuesday, the 24th inst., an additional wing to this valuable institution was opened by his Grace the Duke of Norfolk in the presence of a company of distinguished visitors. The founder, Mr. Jaffray, in an appropriate speech, gave details of the progress made in the original designs for which the hospital was established, and said that these purposes had been amply fulfilled. Already the endowment had reached £36,000, and the annual subscriptions £800 a year—a matter for much congratulation to himself and those friends who had so admirably aided him in the organisation of this undertaking.

THE INGLEBY LECTURES.

These annual lectures, two in number, were given this year by Mr. W. Thomas, one of the surgeons to the Children's Hospital, and dealt with the treatment of some of the surgical diseases of children. Carefully prepared and full of practical interest, they were duly appreciated by an audience which, though it cannot be said to have been numerous, was fully sensible of the merits of the work placed before them, which they recognised by the warm tribute of thanks accorded to the lecturer at the close.

THE MUSICAL FESTIVAL.

This triennial source of income to the General Hospital gives promise of not being behind its predecessors in the spirit in which the arrangements are being carried out for this occasion. A new oratorio, "Judith," by Dr. Parry, will form one of the principal features of the festival. Sir Arthur Sullivan's "Golden Legend," with Herr Richter as conductor, and a number of other well-known compositions, have been distributed over the four days the festival will occupy. Arrangements are in forward progress for providing for the variety of details which help to ensure success, and it is confidently expected that a brilliant and numerous gathering will respond to the efforts made for their approbation.

AN ILLICIT STILL.

The Inland Revenue authorities have recently found in this town an illicit still for distilling whisky, of unusual proportions, capable of producing 200 gallons per week. In a damp and humid cellar the detectives patiently waited for four nights in the hope of taking red-handed the owners or workers in this nefarious transaction, but, failing to pounce upon them in this manner, had to fall back upon the landlord of the premises, who protested his innocence of the undertaking. With facilities of such magnitude it might be inferred that whisky would be cheaply made and distributed; the transaction, however, may prove to have been an expensive one in the long run, and the risk of seeking to evade the law to have been dearly purchased.

Birmingham, July 25th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE SCARLET FEVER EPIDEMIC IN JESMOND, NEWCASTLE.

I HAVE reasons for saying that the present epidemic of scarlet fever in the Jesmond district of Newcastle is now fast subsiding; altogether there has been close on 200 cases. Although the Jesmond district is considered the best residential part of the city as regards the streets and houses, its sanitary condition is not above suspicion. It is for the most part the flattest district in the city, and built on a deep clay soil. There have been many complaints in our daily papers as to the drains and the ventilation of the main sewers, but it is to be hoped that these defects may be speedily remedied, and that this beautiful district may be restored to its former place in the estimation of the citizens. Our active medical officer, Mr. H. E. Armstrong, has taken every pains to trace out the origin of this epidemic, and he believes very strongly that it is to be found in the contamination of the milk supply with scarlet fever infection from the family of one of the milkmen, who do not, however, reside near the cows. But it must be admitted that his chain of evidence is weak at this point; even his own committee do not altogether agree with him, for there is no

medical evidence of any kind to show that the family in question have suffered of late from the disease. Many here want more light than we have in the excellent and painstaking report of Mr. H. E. Armstrong before his conclusions carry conviction to the mind. It is fortunate, however, that, whatever may have been the source of the disease, in one respect—namely, that of mildness—it resembles a notable outbreak we had at the Newcastle workhouse a few months ago, where 200 cases occurred, with only two or three deaths.

SOUTH SHIELDS.

On Friday last, a gathering of past and present pupils connected with the local branch of the St. John Ambulance Association took place in the Town Hall, South Shields, for the purpose of presenting to Dr. Legat, their instructor in first aid to the injured, a magnificent silver epergne. Dr. Legat's ability and services as a teacher in ambulance work were referred to in the highest terms.

SCARBOROUGH.

Dr. Middleton, the hero of the Cordova tragedy, in which he was compelled to take the life of a Spanish gipsy to save his own, the gipsy having made a desperate attack upon him in the tower of Cordova Cathedral, has returned home to Scarborough.

COTTAGE HOSPITAL FOR THE BORDERS.

The Earl of Home last week laid the foundation stone of this edifice on rising ground a little way out of Coldstream, known as the Hill House, on the Hirsell estate. The site is the gift of the Earl of Home, who, together with the Countess, has taken an active part in promoting the scheme, in aid of which a bazaar realising over £700 was held last autumn. Subscriptions to the amount of £600 were also raised, and promises of annual subscriptions have been made. The hospital is used for patients from both sides of the border.

GATESHEAD CHILDREN'S HOSPITAL.

At a meeting of the Committee of the Gateshead Children's Hospital, held in the Town Hall on Friday last, the Town Clerk, in the absence of the Mayor, presiding, it was resolved to invite the Princess Louise, on her visit to present prizes at the Girl's High School, Gateshead, to also open the hospital. It was announced that Sir George Elliott, Bart., had intimated his intention of subscribing 100 guineas to the building fund.

STANHOPE.

Dr. Wm. Robinson of Stanhope has written a sensible letter, pointing out the great need of additional convalescent homes on the north-western coast, such as Silloth or Grange. The north-eastern coast, he considers, is unsuitable in winter for most pulmonary cases, while even in summer it is only safe for a short and uncertain time. The great need of such homes is for the members of friendly societies, and he points out that this class has the power by combination of erecting homes for themselves, and so do away with the "letter" system, and also relieve the convalescent homes from their pressure.

Newcastle-on-Tyne, July 26th.

EDINBURGH.

(From our own Correspondent.)

THE UNIVERSITY BUILDINGS.

THE fine buildings of the University Medical School are about to receive the finishing touches which will give them completeness for academic and administrative purposes and fulfil all the details of the original design. For this purpose a row of old houses contiguous to the University has been recently demolished to make way for the lofty tower and the large ceremonial hall that will complete the group of buildings on the east side. It is probable that the next twelve months will witness the completion of the plans, as the funds for the purpose have been for some time in hand, and now that the old houses that blocked the site have vanished, the work of construction will commence and proceed with no further delay. The old University has likewise recently seen the completion of its original design, now some eighty years old, by the erection of a handsome and lofty dome, that towers high above the quadrangle and adds much to the dignity of the edifice and to the adornment of

the city. On the summit of the dome is to stand a colossal figure of "Youth," bearing forward the torch of knowledge. This statue, cast in bronze, is now standing complete in the studio of Mr. Hutchison, R.S.A. His conception is a very fine one, and the work has been carried out with admirable accuracy in the modelling and with the greatest delicacy of finish. The figure, in which anatomical truth has been strictly adhered to, conveys a vivid impression of the buoyancy and indomitable energy of youth, whose rugged vehemence is tempered by the classic grace and dignity of the pose. During next week the figure will occupy a temporary position in the quadrangle, and will well deserve the attention of those *alumni* who may be in Edinburgh at the graduation ceremonial, after which it will be raised to its permanent lofty station on the dome. In addition to these undertakings, it is satisfactory to note that the Students' Union is now in an advanced state of construction, the building itself being complete and some of the internal arrangements already in progress.

THE PATHOLOGICAL CLUB.

One of the most useful and flourishing of the medical institutions in Edinburgh is the Pathological Club. As a medical association it is somewhat unique in its constitution, in having a strictly limited membership of thirty. Last week it inaugurated the third year of its existence by a dinner, at which Dr. Batty Tuke, the founder of the club, was entertained by the members. The proceedings were characterised by the enthusiasm which has accompanied all its previous meetings, and which, along with the untrammelled camaraderie of its constitution, has done so much to make its labours alike thorough and agreeable.

THE UNIVERSITY COURT.

At the last meeting of the Court an important enactment in regard to graduation in medicine received the final assent of the official governing body. It is now permitted "that students who profess themselves ready to submit to an examination in the first division of these subjects may be admitted to examination therein at the first period of examination after they have completed their attendance on the necessary classes." The clause proceeds to state the conditions on which this shall be allowed—viz., that not less than two of the three subjects in question (Botany, Zoology, and Chemistry, including Practical Chemistry) be taken at one time, any selection of two that may suit the student being permitted. This is a great boon to junior medical students, whether they enter the University in a winter or a summer session, for at the end of their first session those capable of doing so are permitted to pass in the subjects just studied, instead of being obliged to prepare the whole work afresh for an examination at a distance of several months from the time when the preparatory courses of lectures were attended by them. The courses of Mr. W. Ivison Macadam in Chemistry, and of Mr. J. A. Thomson in Natural History, were formally recognised by the Court as qualifying courses for the University medical curriculum.

Edinburgh, July 24th.

DUBLIN.

(From our own Correspondent.)

THE MEATH HOSPITAL, DUBLIN.

LAST week the Medical Board of Governors elected Sir William Stokes, M.D., ex-President and Professor of Surgery, Royal College of Surgeons in Ireland, to the vacant surgeoncy of the hospital, occasioned by the resignation of Mr. Wharton. Several weeks since I mentioned Sir William Stokes as Mr. Wharton's probable successor, and his old colleagues at the Meath may be congratulated on the accession to their staff of one of the leading surgeons of this city. Although there were three other candidates, Sir William Stokes' election was a foregone conclusion.

DEATH OF MR. RIDLEY, OF TULLAMORE.

Mr. Ridley, surgeon to Tullamore Gaol, committed suicide last week at the Royal Hotel, Fermoy, by cutting his throat with a razor. He committed the fatal act, it is believed, while standing before the looking-glass, and afterwards lay down on the bed, where he bled to death. The deceased, who was greatly respected, was about forty years of age, and leaves a wife and three children to lament his untimely death. It is stated that since the imprisonment

of Mr. Mandeville Mr. Ridley had been in a state of mental depression, and there can be little doubt that he committed the fatal deed while temporarily insane.

MEDICAL SCHOOLS AMALGAMATION SCHEME.

The meetings of the committee appointed by the Council and delegates from the three schools are still being held, and a considerable amount of progress has been made in the proposed scheme. A good deal, however, yet remains to be accomplished, and finally, if adopted by the Council, it must receive the approval of the Fellows at a meeting specially convened for that purpose.

PHARMACY ACT PROSECUTION.

At Ballybay Petty Sessions recently the Pharmaceutical Society of Ireland summoned two druggists in Ballybay for compounding prescriptions in contravention of Section 30 of the Pharmacy Act. The schedule of duly qualified pharmaceutical chemists in Ireland having been produced, the Court held that it was necessary to prove the signature of the registrar to the certificate attached to the schedule, as also of the president or two members of the Council, and adjourned the case for a fortnight for the necessary evidence.

HEALTH OF DUBLIN DURING JUNE.

As compared with the previous month, there were fewer admissions of scarlatina cases, but it is to be regretted that two cases of small-pox occurred. Every effort, however, is being made to prevent this disease from obtaining a footing in the city.

ILL-TREATING A LUNATIC.

At a recent meeting of the governors of the Cork District Lunatic Asylum an attendant named Ruby was called before the Board, and gave evidence to the effect that another attendant named Aitkens had ill-treated one of the patients by striking him with a stick in a severe manner. After a due inquiry had been held, Aitkens was punished by being confined to the house for one month and fined £1. Had not his previous character been good, he would have been prosecuted for the assault.

DEATH OF A CENTENARIAN.

An inmate of Oldcastle Workhouse died in the hospital last week at the advanced age of 112 years. For the past year he had been confined to his bed, and the case is an interesting one, as corroborative testimony can be given that the age stated is accurate.

Dublin, July 24th.

BELFAST.

(From our own Correspondent.)

THE ULSTER MEDICAL SOCIETY.

THE annual meeting of this Society was held in the Belfast Museum on July 18th, Dr. Esler in the chair. The report of the Council, read by the secretary, Dr. Macaw, showed that the Society, judged alike by the amount of work done at the meetings and by the numbers attending, had been during the past session in a most vigorous condition. The treasurer's statement indicated a substantial balance in hand. From the report of the librarian, we learn that a considerable sum of money has been spent in purchasing the most modern standard works on medicine. The following office-bearers were elected for the ensuing year:—President: Dr. Burden. Vice-Presidents: Dr. John W. Byers and Dr. J. A. Lindsay. Secretary: Dr. Macaw. Treasurer: Dr. O'Neill. Librarian: Dr. S. Smith. Council: Dr. O'Connell, Professor Dill, Dr. Dempsey, Dr. Higgin, Dr. Mackenzie, and Dr. Caldwell. The President, Dr. Esler, who has been instrumental in procuring the portraits of those who have in former times occupied the chair of the Ulster Medical Society, then gave an interesting biographical sketch of Professor Gordon, who in 1856 had been president of this Society, and said he hoped to present his portrait at the next meeting of the members.

THE ROYAL HOSPITAL.

A large meeting of working men was held last week in the hospital to hear the recent correspondence with the city members in reference to the Truck Act. Mr. Sexton, M.P., telegraphed: "The Attorney-General replied, 'Not illegal to collect for the hospital without written consent.'" Another

letter had also been received from the same member of Parliament, in which he stated: "The answer of the Attorney-General was plainly to the effect that voluntary contributions may be legally made without written consent, provided that the payment of the contribution is not made a condition to obtain employment." The meeting then proceeded to consider how they might take steps to increase the contributions of the working classes to the funds of the hospital, and, after considerable discussion, it was agreed that each of the firms whose employees already contribute to the Royal Hospital should be requested to appoint one of their contributing employees as a representative on the committee to be formed for increasing the support to the hospital. The first meeting is to be held early next month. It was also agreed that this new committee and the Board of Management should meet together.

Belfast, July 25th.

PARIS.

(From our own Correspondent.)

POISONING BY ARSENIOUS ACID.

AT a recent meeting of the Academy of Medicine, Dr. Vidal of Hyères related the case of a patient who came under his observation with the symptoms corresponding to those of the malady known by the name of "acrodynia." Dr. Vidal attributed the malady to a slow intoxication of the system by arsenious acid contained in the wine sold to the public by a wine merchant at Hyères, who was lately convicted and condemned by the Tribunal Court to a heavy fine and the expenses of the trial. The whole of the wine was seized, and was found to contain from one to five milligrammes of arsenic per litre. A regular epidemic had been prevailing among the inhabitants of Hyères, but the doctors were puzzled as to the real nature of the malady, as the symptoms were very obscure, resembling nothing within their experience. In the patient under notice Dr. Vidal observed four distinct stages of the disease: (1) gastric troubles; (2) diarrhoea; (3) an eruption on the skin and on the mucous membranes; (4) acrodynia—that is to say, troubles of sensibility and of motility in the limbs, accompanied with swelling &c.; in a word, a morbid condition analogous to that described in the classical work of Valles, and more recently by Dr. Emile Vidal, the well-known dermatologist, in the "Dictionnaire Encyclopédique des Sciences Médicales." According to these authors, acrodynia is a general epidemic affection, rarely observed in a sporadic form, and is characterised by pains and numbness in the limbs, particularly in the lower ones; by digestive troubles, erythematous spots, and more rarely by a blackish tint of the epidermis. Extensive epidemics of this condition have been observed in Paris, but the pathological anatomy and the etiology of the affection have never been properly elucidated. It has been attributed to the influence of the nervous system, but Dr. Vidal of Hyères denies the existence of acrodynia as a special malady, and sees in the epidemics described only the manifestations of arsenic poisoning by the presence of this substance in food and drink. The physician of Hyères asks whether the affection in question may not be compared to the intoxication by metallic salts in general, so well described by Dr. Théophile Roussel in his treatise on Pellagra.

PARADOXICAL DEAFNESS.

Professor Bouchard presented, at a recent meeting of the Academy of Sciences, in the name of its author, Dr. Boucheron, a very curious note on paradoxical deafness ("surdité paradoxale"), or paracousis Willisii. The author stated that in this deafness the patient is deaf for speech, in an isolated room, in silence; nevertheless, he hears the same speech in the midst of noise, in a carriage, on a railway, in the street, and generally in places which are traversed by multiplied sounds. Paradoxical deafness, which is grave, progressive, and sometimes hereditary, is caused by compression of the labyrinth; it is one of the forms of otitis, and is a semi-deafness for the harmonies of speech. If decompression of the labyrinth can be effected by the operation of the moving of the stirrup, the patient recommences to hear in silent places as much as in noisy ones. Ordinary and less powerful means of labyrinthine decompression are, on the contrary, inefficacious, and they

even sometimes augment the compression and the deafness, because they are powerless for moving the stirrup already fixed in the position of compression. Of fifty-two operations for moving the stirrup for the different forms of deafness by otitis, Dr. Boucheron practised the operation nine times for paradoxical deafness, with good results in the nine cases, which theoretically were to be foreseen.

GENERAL BOULANGER.

The last bulletin issued two days ago respecting General Boulanger, whose case was reported in THE LANCET of last week, states that, complications having disappeared, all danger appears to be removed and recovery is ensured. The General, having been authorised by his medical attendants to quit Count Dillon's house at Neuilly, in whose park the duel took place, has removed to his own apartments in Paris, to which he was driven in his carriage without experiencing any inconvenience.

Paris, July 24th.

INDIA.

(From a Correspondent.)

REPORT OF THE CHEMICAL ANALYST, BOMBAY.

THE report for 1887, though devoid of any special interest, contains 'an exhaustive notice of the chemical operations effected during the year. There were 1548 cases of a medico-legal nature reported upon. There was an unusually large number of samples of water sent for analysis and report, and the Tariff Act imposed on Mr. Lyon additional work in view to ascertaining the real alcoholic strength of all imported potable spirits. The medico-legal cases consisted of suspected poisoning of human beings and suspected cattle poisoning. Arsenic and arsenical substances were, as usual, the poisons most extensively used—in fact, half the number of cases were due to arsenic. Opium comes next and was fatal in all the cases, and, with one exception, it was self-administered. Two cases only of poisoning by strychnine are recorded, and, strange to say, in these two cases "the poison was used by the children of police constables, who extracted it from their fathers' bags." It would appear that this poison is given to policemen to destroy dogs with, and it was due to carelessness on their part that mishaps occurred. A large quantity of commissariat stores was analysed, and these consisted of beer, porter, tea, sugar, &c. In one of the concluding paragraphs Mr. Lyon gives the result of some experiments made for the purpose of obtaining a highly concentrated fortified lime-juice. Besides the above, there were a large number of analyses made for the Customs and Excise departments of imported alcoholic liquors, petroleum, indigenous spirits, opium, &c. It would appear that some specimens of country liquors contained copper.

IMPORTING CHOLERA INTO BOMBAY.

The native captain of the steamship *Bhowanaghar* was recently fined 200 rupees for having had cases of cholera on board during the voyage from Bhowanaghar to Bombay, and failing to report them in due course, which a section of Act 10 of 1887 bound him to do. It would appear that about 200 passengers embarked at the former port, but some of them were sent back on shore, as they were actually suffering from cholera. During the voyage three persons died, and their bodies were consigned to the sea. Of the passengers landed in Bombay, some five or six are said to have died of cholera. The accused failed to report the deaths that had taken place, as also to inform the medical officer of health for the port that there were passengers on board who were suffering from an infectious disease. It was a case calling for condign punishment.

RECENT APPOINTMENTS.

Mr. C. H. Joubert, M.B., F.R.C.S., has been appointed to officiate as professor of midwifery and obstetric physician to the Eden Hospital, Calcutta, vice Dr. R. Harvey, proceeded on furlough. Mr. J. B. Lyon, M.R.C.S., L.S.A., F.C.S., F.I.E., has been appointed to officiate as principal of the Grant Medical College, Bombay, vice Dr. Vandyke Carter, proceeded on leave. Mr. G. Waters, L.R.C.S. and L.R.C.P., to act as Professor of Medicine, Clinical Medicine, and Hygiene, and first Physician to the Jamsjee

Hospital, Bombay, vice Dr. Carter; Mr. R. Manser, M.R.C.S., L.S.A., to act as Professor of Physiology, and second physician to Jamsjee Hospital, vice Mr. Waters; and Mr. H. P. Dimmock, M.R.C.S., L.R.C.P., to act as Professor of Pathology and third physician to Jamsjee Hospital, vice Mr. Manser. Mr. F. F. Perry, M.R.C.S., L.R.C.P., has been appointed to officiate as Professor of Ophthalmic Surgery, vice Dr. R. C. Sanders, proceeded on furlough.

Bombay, July 3rd.

THE SERVICES.

Surgeon-Major Hayes, attached to the Egyptian Army, has passed the examination, with honours of the highest standard, in Arabic, and thus becomes entitled to the sum of £100.

The death of Surgeon E. Tully, Bombay Medical Service, from fever, is announced from Barmah.

Sir Frederick Abel, C.B., F.R.S., who has held the office of chemist of the War Department since its creation in 1854, has been relieved of the routine duties connected with the department, and has been appointed President of a Special Committee on Explosives just established by the Government, which includes Professor Jas. Dewar, F.R.S., and Dr. A. Dupré, F.R.S., chemical adviser to the Explosives Department of the Home Office, with Captain Thompson, R.A., as secretary. The senior assistant chemist of the War Department, Dr. W. Kellner, succeeds to the charge of the chemical establishment in the Woolwich Arsenal.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major William Riddell Brunton, 1st Surrey Rifle Volunteer Corps, to be Surgeon-Major, ranking as Lieutenant-Colonel (dated July 25th, 1888).

ADMIRALTY.—Surgeon John G. Harries, to be Surgeon and Agent at St. David's Head (dated July 21st, 1888).

ARTILLERY VOLUNTEER CORPS.—1st Cheshire and Carnarvonshire: William Griffith Owen, M.B., to be Acting Surgeon (dated July 21st, 1888).—3rd Volunteer (Duke of Cornwall's) Brigade, Western Division, Royal Artillery: Acting Surgeon A. Hodge resigns his appointment (dated July 21st, 1888).

ENGINEER VOLUNTEER CORPS.—2nd Gloucestershire (the Bristol): Surgeon J. Knill is granted the honorary rank of Surgeon-Major (dated July 21st, 1888).

ROYAL COLLEGE OF PHYSICIANS.

THE Quarterly Comitia of the College of Physicians took place on the 26th inst., Sir Andrew Clark, Bart., President, in the chair.

The President announced that, in compliance with the request of the Conjoint Committee, the Registrar and himself had duly appeared before the Royal Commission for the University of London. He alluded to two important facts which were stated by the Registrar in his evidence—viz., that in 1834, before a Select Committee of the House of Commons, several eminent physicians had recommended that the College should have the power of granting degrees in medicine; and that, in 1858, the College voluntarily gave up its powers to confer the right to practise in London or its vicinity, whilst, at the same time, the Universities acquired the power of granting licences to practise.

Dr. Arlidge was nominated Milroy lecturer.

Dr. Longstaff was admitted a Fellow of the College. Drs. Sinclair Coghill, Leith Napier, and F. R. Walters were admitted to the Membership.

The annual reports of the Library Committee and the Curators of the Museum were read.

The quarterly report of the Finance Committee was read and adopted.

Communications were read from the General Medical Council, the Board of Trade, and the College of State Medicine.

In accordance with the recommendation of the Committee of Management, the Alfred Hospital, Melbourne, was

included in the list of colonial hospitals recognised by the Examining Board in England.

The following gentlemen were elected to the offices named:—*Censors*: Drs. Wilks, P. W. Latham, Hughlings Jackson, and Broadbent. *Treasurer*: Sir Dyce Duckworth. *Registrar*: Sir Henry Pitman. *Harveian Librarian*: Dr. Munk. *Assistant Registrar*: Dr. Edward Liveing. *Curators of the Museum*: Drs. Wegg, Dickinson, Cayley, and Norman Moore. *Finance Committee*: Sir Edward Sieveking, Dr. Fincham, and Dr. Robert Martin. *Examiners*: Chemistry and Chemical Physics: Dr. Ralfe, Mr. William Foster, Dr. W. J. Russell, Dr. August Dupré, and J. M. Thomson, F.C.S. *Materia Medica, Medical Botany, and Pharmacy*: Drs. F. Taylor, Tirard, D. B. Lees, Murrell, and Isambard Owen. *Elementary Physiology*: Drs. V. D. Harris and C. S. Sherrington. *Physiology*: Drs. Allchin, Wooldridge, and Arthur Gamgee. *Osteology and Anatomy*: Dr. Herringham and Mr. Henry Morris. *Medical Anatomy and Principles and Practice of Medicine*: Drs. W. H. Stone, O. Sturges, H. G. Sutton, Cheadle, Pye-Smith, Sir Dyce Duckworth, Bastian, Whipham, T. H. Green, and Sidney Coupland. *Midwifery and Diseases peculiar to Women*: Drs. Priestley, Gervis, Galabin, and Champneys. *Surgical Anatomy and Principles and Practice of Surgery*: Mr. G. Pollock, Sir William MacCormac, Mr. Morrant Baker, and Professor Humphry. *Public Health*: Drs. Thomas Stevenson, Edward Ballard, Thorne Thorne, and W. H. Corfield.

It was moved by the Treasurer, seconded by Dr. Dickinson, and resolved, that on the occasion of the Harveian Oration on St. Luke's Day (Oct. 18th) in each year the Fellows be invited to attend in their academic robes and afterwards dine in the College. It was pointed out that both these formalities used to be observed, but that they had died out, the last Harveian dinner being in 1825.

On the motion of the Registrar, it was resolved that a committee be appointed (seven nominated by the College of Physicians and seven by the College of Surgeons) to report as to the application, maintenance, and management of the new building now in course of erection on the Embankment. Sir Dyce Duckworth, Drs. Burdon Sanderson, Pye-Smith, N. Moore, Stevenson, Brunton, and Stone were nominated to serve on this committee.

On the motion of Dr. Farquharson, seconded by Dr. B. Yeo, it was resolved to appoint a committee to consider the Library accommodation and arrangements.

Obituary.

GEORGE THOMPSON, GREAM, M.D.

ON July 20th died, at the age of seventy-six, one who for a long time was a most prominent member of the profession at the West-end of London. Dr. Gream was the son of a Sussex clergyman; his eldest brother commenced practice at Tunbridge Wells in 1830 and died some years ago, and in 1836 Dr. Gream started on his successful career as an accoucheur. They came of a very handsome family; Mr. Arthur Stone, the nephew of Dr. John Clarke and Sir Charles Clarke, married Dr. Gream's sister. Until Dr. John Clarke began to practise, in 1846, Dr. (then Mr.) Gream assisted Mr. Stone. After this, Dr. Gream depended on his own merits, and rapidly obtained a very considerable midwifery practice, which he pursued until about ten or fifteen years ago, when he retired from professional work. Dr. Gream became a Member of the College of Surgeons of England in 1836. In 1850 he received the degree of M.D. from the University of Aberdeen. In 1859 he became a Member, and in 1867 a Fellow, of the College of Physicians of London.

On Sir Charles Locock's retirement Dr. Gream took a leading part in the West-end midwifery practice, which he pursued with great professional success. With his patients he was very popular. He attended the Empress Victoria, Princess Royal of England, on the occasion of the birth of her third child, Sir Charles Locock being in attendance at the birth of the second. Dr. Gream was for many years physician-accoucheur to Queen Charlotte's Hospital, and for some time after he had retired from that office he gave much attention to the affairs of the

hospital. He was physician to H.R.H. the Princess of Wales. He received his medical education at St. George's Hospital, and for a short time lectured at the Grosvenor-place Medical School. On the retirement of Mr. Stone as a lecturer, he presented his museum, which his uncle, Dr. John Clarke and Sir Charles Clarke, had helped to make, to St. George's Hospital. Dr. Gream was an Honorary Fellow of the King and Queen's College of Physicians in Ireland, and a Fellow of the Royal Medical and Chirurgical Society, as well as of other societies. His publications were: "Remarks on the Diet of Children and the Distinction between the Digestive Powers of Infants and Adults," "On the Employment of Chloroform in Midwifery," "On Sterility in the Female," "On the Use of Nux Vomica in Hay Fever," and "Cases of Vascular Tumours of the Female Urethra cured by Nitric Acid."

Many of the deceased gentleman's old professional friends will miss his cheerful and kindly greetings, and his patients will lament the loss of a most liberal and valued attendant. On Tuesday in last week he was seized with hemiplegia, and died, as stated above, on Friday, the 20th. He married twice: his first wife was Miss Oddie; his second, whom he married in 1873, and who survives him, was Lady Gooch, the widow of Sir Edward Gooch, the seventh baronet of Benacre Hall, Suffolk. He leaves no children.

SALVATORE TOMMASI.

ITALIAN MEDICINE has lost one of its leading representatives in this eminent Neapolitan physician, who died at Naples on the 13th inst., in his seventy-fifth year.

Salvatore Tommasi was a native of Roccaraso in the province of Aquila, and after a brilliant course of general and medical study at the University of Naples, he gave himself with ardour and perseverance first to physiology and then to clinical observation. Like nearly every one of his contemporaries, whether in the legal, the medical, or the political sphere, he shared the patriotic aspirations aroused by the great upheaval of 1848, and became a prominent member of more than one revolutionary club organised for the dethronement of the Bourbons. He had by this time become Professor of the Practice of Physic in the University of Naples, and had been twice in succession elected a deputy to the Neapolitan Legislative Chamber; but in 1849 he was politically so compromised as to be obliged to flee the country. He found an asylum, like so many other patriots, in the subalpine capital, and in the congenial Turinese atmosphere he prosecuted his scientific studies till, ten years later, Italy achieved her unity and independence. On the annexation of the two Sicilies to the Italian kingdom he was elected member of Parliament for the constituency of Cittaducale, and nearly four years later, on March 13th, 1854, he was nominated Senator. From 1860 he had filled the post of lecturer on the principles and practice of medicine in the University of Pavia till 1865, when he was transferred to the post of clinical physician-in-chief to the Neapolitan School, a chair which he held with yearly enhanced honour till within a short time before his death.

Professor Tommasi was an unwearied worker, and laboured, through every channel by which he could make his influence felt, to heighten the standard of professional efficiency among his compatriots. His writings were always eagerly awaited, not only in Italy, but on the Continent generally, and one of them, entitled "Rinnovamento della Medicina in Italia" (Renewal of Medicine in Italy), went through many editions. Among his other publications may be mentioned his "Prolegomena di Clinica Medica," his "Sommario della Clinica Medica di Pavia," and, above all, his "Lezioni Cliniche" (Naples, 1881), embodying the results of those observations and prelections at the bedside which made his clinique so attractive to young students, not only of Italy, but of many other nationalities. He was too deeply absorbed in scientific and professorial work to attend the Senate frequently; but when he did contribute to its discussions—as, for example, on the first "Codice d'Igiene" presented by the Prime Minister Lanza (himself a medical man) and summarised for the House by Professor Burci, the eminent Florentine surgeon—it was with authority, independence, and effect. A grave domestic loss, however, so told upon his bodily and mental energies that he with-

drew into strict privacy in Naples, finding his chief solace in the steady prosecution of medical study.

He was President of the Royal Medico-Chirurgical Academy of Naples, Fellow of the Pontonian Academy, and Corresponding Member of the Royal Academy of Sciences of Bologna and of numerous learned societies abroad. His funeral was largely attended and singularly impressive. The Senatus of the Neapolitan University, the representatives of the various scientific, literary, and artistic bodies of the city, the municipality, the delegates from the other Italian schools, the students, and a long train of fellow-citizens, attested the honour and affection in which the deceased physiologist and physician was held. Over his grave *oraisons funèbres* were pronounced by the Rector of the University, Professor Cantani (the representative of the syndic), and several of his students, among whom those from his native mountains in the Abruzzi bore an academic standard inscribed with the words that formed the scientific faith of their master—"O Evoluzione o Miracolo" (either evolution or miracle). The coffin was lowered into the grave by students of the sixth medical year, and thereafter a telegram from the Prime Minister, Signor Crispi, was read, giving expression to the great loss Italy and Italian science had sustained by the death of Salvatore Tommasi.

PROFESSOR RÜHLE.

More than a passing notice is due to this able and learned clinician of the University of Bonn, whose death on the 11th inst. has been announced.

Hugo Rühle was born on Sept. 12th, 1829, at Liegnitz, graduated in 1846 at Berlin University, and in 1853 settled in that school as *privat docent*. In 1857, his great scientific accomplishments and tutorial success led to his appointment as Extraordinary Professor and Director of the Medical Clinique at Breslau. Transferred in 1860 to Griefswald, he worked there as Ordinary Professor till 1864, when he was called to Bonn, where he gave the highest proofs of his skill and acumen in investigation and in teaching. He rose to be Director of the Medical Clinique of the school, as well as *Geheim-Medicinal-Rath*; while his papers read at scientific congresses or contributed to the professional journals made him honourably appreciated far beyond Rhenish Prussia. Of his special publications, the best known are those on the diseases of the thyroid gland and on pulmonary phthisis, subjects on which he spoke and wrote with the authority of an original and cautious investigator.

Medical News.

COLLEGE OF PHYSICIANS IN IRELAND.—At the July examinations the following obtained the Licences in Medicine and Midwifery of the College:—

Medicine.—Patrick Carney, Robert George Christy, W. H. Gimblett, Cornel Hoey, H. Hutchinson, Arthur McGauran, Henry Monsarrat Rainsford, Benjamin Poynta Young.
Midwifery.—W. H. Gimblett, D. McKee, H. Monsarrat Rainsford, J. Moriarty Tidmarsh.

The undernamed was admitted a Member:—

Henry Michael O'Hara.

CONJOINT SCHEME BETWEEN THE COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—The following have passed the Second Professional Examination:—

T. J. Conolly, Nathaniel G. Cookman, E. Cosgrane, R. Dalton, G. W. Dawson, N. W. Davlin, T. G. Dillon, E. G. Elliott, E. G. Fenton, A. N. Herron, G. W. Joyce, A. E. Keeble, S. Keogh, T. L. Lynch, G. Moorhead, T. K. Mulcahy, A. J. M'Munn, E. W. M'Quaid, W. M. Meekie, W. E. More, C. M. O'Brien, G. N. B. Oakes, J. P. Quinn, J. O. Ryan, L. T. Whelan, G. F. Woodroffe, R. B. Wright, and H. S. Young.

MEDICAL MAGISTRATE.—H. J. Strong, M.D. St. And., M.R.C.S., has been placed on the Commission of the Peace for the borough of Croydon.

VACCINATION GRANT.—Mr. Horace Lowther of Ventnor has been awarded the Government grant for efficient vaccination in his district (third time).

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The Library of this Society will be closed during the month of August.

VICTORIA HOSPITAL FOR CHILDREN.—The Silver Fête at South Kensington has added nearly £5000 to the funds of this hospital.

A HANDSOME GIFT.—An anonymous friend has handed to the founder of the Mission to Deep-sea Fishermen a check for £3500, to defray the cost of building and equipping another hospital mission ship.

DUNDEE ROYAL INFIRMARY.—Miss Symers, of St. Helens, has contributed £1000 to the endowment fund of the Convalescent Home, Barnhill, in connexion with the above hospital.

CENTENARIAN.—At Birtley, co. Durham, Mary Long has just died at the age of 110 years. She leaves a sister aged 104 years, and a brother died a few months ago aged 100 years. The two who have died were blind; as is also the surviving sister.

INFECTIOUS DISEASE HOSPITAL FOR GALGATE.—Mr. G. T. R. Preston, of Ellet Grange, has offered to provide, at his own expense, an infectious disease hospital for Galgate. The building is to have a strong wooden framework, covered on the outside with galvanised corrugated iron.

DIPHTHERIA AT CHELMSFORD.—Diphtheria, almost in an epidemic form, but of a mild type, is reported to have broken out in this town. The disease has appeared in as many as thirteen families. A searching investigation of the causes of the outbreak is being made. It appears that the district affected is almost confined to Moulsham.

NEW FRENCH HOSPITAL.—On Saturday last, M. Waddington, the French Ambassador, laid the foundation stone of the new building to be erected in Shaftesbury-avenue. The total cost of erecting and fitting up the hospital is estimated at about £20,000, of which £14,000 have been subscribed. The building, when completed, will provide room for fifty-five beds, and is expected to be ready for occupation some time during next year.

WATER SUPPLY OF EDINBURGH AND DISTRICT.—The members of the Water Trust, in consequence of the enormously increased demand, and in anticipation of the necessity at no distant date for a large augmentation of the existing water supply of Edinburgh and district, are making inquiries into the probable sources from which such additional supply may be obtained in order to fulfil their obligation to maintain a constant service.

CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, MANCHESTER.—A new wing which has been recently added to the above institution was formally opened on the 16th inst. by Mr. Herbert Philips. The new building provides excellent accommodation for the nursing staff. In consequence of the additional space gained, the number of beds available for the reception of patients has also been increased.

BETHLEM ROYAL HOSPITAL.—The following candidates passed the examination in Psychological Medicine held on July 23rd and 24th:—Jane Elizabeth Waterston, M.D. Brux., L.K.Q.C.P.I., L.M., L.R.C.S. Ed., of the Cape; Henry John Macevoy, M.R.C.S., L.R.C.P., B.Sc. Lond., of Bethlem Royal Hospital; William Dobree Calvert, L.R.C.P., M.R.C.S. Ed., of St. Luke's Hospital; and Edwin Goodall, M.B. and B.S. Lond., M.R.C.S., L.R.C.P., of Bethlem Royal Hospital.

EXTENSION OF THE GENERAL INFIRMARY, LEEDS.—At the weekly meeting of the governors, held on the 20th inst., the chairman announced several generous donations to the fund towards the extension of the institution, which, with Colonel North's gift of £5000, brought up the total subscriptions to £15,000. It was resolved to make arrangements to commence the erection of an additional wing on the vacant ground to the east of the infirmary, to be called the Isolation Ward.

KENT MEDICAL BENEVOLENT SOCIETY.—Established in the year 1787 for the relief of disabled members or widows or orphans of deceased members, this Society has now a funded capital of between £8000 and £9000. The 102nd annual meeting was held in the library of the Kent and Canterbury Hospital on Wednesday, the 11th inst., under the presidency of Dr. Lochee, consulting physician to the Hospital, and grants varying from £20 to £50 were made to eight widows and one daughter of deceased members.

QUADRUPLETS.—Mrs. Norman, the wife of a painter living at Fratton, near Portsmouth, gave birth on Sunday last to four children, of whom only one is alive. Mrs. Norman, who is forty years old, is the mother, in all, of twenty-one children. She had previously had twins and a triplet. On the latter event she received the Queen's bounty.

QUACK DOCTORS AND THEIR PAMPHLETS.—At the Liverpool City Police Court, on Monday, the stipendiary magistrate sent a man to prison for fourteen days with hard labour—intimating that in any future similar case he would inflict a sentence of one month—for distributing in the streets objectionable pamphlets of a firm of quack doctors carrying on business at Pembroke-place. The prosecuting solicitor stated that in these cases the maximum fine had proved nugatory. At the same hearing a man was fined 20s. and costs, or fourteen days, for affixing in urinals bills advertising the same business.

KIOSKS IN LONDON.—Under the auspices of the International Hygienic Society, two kiosks for ladies were opened in London on Monday—namely, at 81, Park-street, Grosvenor-square, and 4, Grosvenor-street. They are provided with writing and reading-rooms, and parcels may be left. The Society contemplate establishing altogether in various parts of the metropolis fifty similar places for ladies exclusively; about 100 in the City and other business centres for men; and swimming and shower baths in the east of London, where also substantial refreshments will be obtained. It is an experiment which has been successful in several continental cities, and the Society propose to supply a want long felt in the metropolis.

THE PURIFICATION OF THE THAMES.—On the 24th inst., the Society of Engineers and a large company of experts visited the new precipitation works at the Barking outfall sewer, now erecting under the authority of the Metropolitan Board of Works for the deodorisation of the sewage which falls into the Thames from the northern parts of London. The new works will cost for the general work upwards of £400,000, and the engines and machinery are to cost more than £42,000, so that the first cost will be little less than half a million sterling. The enormous character of the works may be estimated by the fact that there are to be four engines at work, each lifting at a stroke 200 gallons. The "sludge" tanks are in three classes, one series being in reserve for stormy weather, when the fleet of vessels cannot go out with their cargoes. The works extend over some fifty acres. The sewage to be dealt with here amounts to 90,000,000 gallons a day, and the precipitation mineral-lime is named—will be 23 tons a day.

MEDICAL NOTES IN PARLIAMENT.

Victoria University Bill.

In the House of Lords on the 19th inst., the report of an amendment in the shape of a new clause was received, and the Bill ordered for third reading.

Factory and Workshops Act (1878) Amendment (Scotland) Bill.

On the motion of the Earl of Aberdeen, this Bill was read a third time and passed.

New Cemetery at East Ham.

In the House of Commons on the 19th inst., in reply to Mr. Theobald, Mr. Matthews said that he had sanctioned the opening of Woodgrange-park cemetery at East Ham. After a full inquiry he had come to the conclusion that there were no sanitary objections to justify the withholding of his sanction, which he had only given under specially stringent regulations amply sufficient to protect the public health.

The Death of a Patient at Colney Hatch.

Mr. W. Redmond asked the Secretary of State for the Home Department what was the result of the inquiry by the Lunacy Commissioners into the death of the man Stickley at Colney Hatch Asylum.—Mr. Matthews said that the Committee of Visitors had made a searching inquiry, which had been reviewed by the Commissioners. The result was that Stickley's injuries were believed to have occurred after he had been received into the asylum; but there was nothing to suggest any suspicion of violence or rough usage on the part of any officer or attendant. The Commissioners had censured the medical superintendent severely for laxity in his examination of the patient, and for omissions in the notice of death to the coroner. They had also blamed the assistant medical officer, and had recommended the dismissal of two attendants in the bath-room, who left the patient before he was completely dressed. The Commissioners were of opinion that further inquiry would not lead to any good result.—In reply to Mr. Childers, Mr. Matthews promised to consider the question of transferring to some other institution the principal medical officer, who had been so severely censured; and also whether the report of the Commissioners should be laid upon the table of the House.

English University Colleges.

On the 20th inst., in reply to Sir John Lubbock, Sir W. Hart-Dyke stated that the Government were prepared to give some assistance to the English University Colleges, but the mode and principles of distribution raised very difficult questions, which would necessarily take some time to arrange.

The Execution of Criminals.

On the 23rd inst., Mr. Brookfield asked the Secretary for the Home Department whether his attention had been drawn to the occurrence from time to time of unfortunate and lamentable blunders in the execution of criminals; whether he was aware that in the case of Robert Upton, executed at Oxford on the 17th inst., the responsible medical officer stated that the head of the culprit was nearly torn off owing to the length of the drop; whether his attention had been called to Dr. Marshall's contumaciousness for producing instantaneous death with a drop of only three feet; and whether he could now state how soon the report of the Committee on Capital Punishment would be printed and issued.—Mr. Matthews, in reply, said that he was informed by the Prison Commissioners that, though these deplorable accidents do occur from time to time, they are by no means common, two only having occurred since 1878. Dr. Marshall's suggestion was known to the authorities, but it was not thought that its adoption would lead to the expected result. The report of the Committee had been made, and he should be happy to communicate it to his hon. friend.—In answer to a further question put by Mr. Brookfield, Mr. Matthews said that the Departmental Committee appointed to inquire into the matter had gone deeply into the subject, but he did not think they had extended the scope of their inquiries so far as to consider the merits of the electrical method of executing criminals.—In answer to Mr. Childers, Mr. Matthews said there would be no objection to lay the report of the Departmental Committee upon the table if hon. members desired its production.

Colour Blindness in Seamen.

In reply to Mr G. Baden-Powell, Sir M. Hicks-Beach said that arrangements were already in existence under which certain persons in the mercantile marine might be examined for colour blindness. The railway companies had also taken steps to examine their servants in reference to colour blindness.

The Indian Medical Service.

In the House of Commons on Thursday, Dr. Tanner asked the Under Secretary of State for India if it is the case that the course of special instruction and ultimate examination hitherto required and passed by officers of the Indian Army Medical Service is to be abolished; whether the statement of the *officer at the head of the Medical Service* concerning the proposed change in the Bengal Presidency, quoted by the *British Medical Journal*, July 21st, 1888, is correct—viz, that it is no longer necessary; what reasons are given for such change by the Indian Government; and whether it is intended to substitute any other course for that it is proposed to abolish.—Sir John Gorst said: In reply to paragraphs 1 and 2, no such decision has been arrived at. The matter is still under the consideration of the Secretary of State and the Government of India. The reason given in favour of the change is that the special instruction can be given better and at less expense in India. If the present course were abolished, a course of special instruction would be given in India.—Dr. Tanner: Is it not a fact that in the schools in the three Presidencies there were neither laboratories nor other arrangements which are absolutely necessary for medical education? Would not considerable expense have to be incurred in making the proposed change? Also is it not a fact that the gentleman at the head of the medical service there is better known for his homeopathic efficiency than for his medical services?—Sir John Gorst said, he had given all the information in his possession.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

AVARNE, A. B., L.S.A., F.C.S., has been appointed Medical Officer and Public Vaccinator to the Blaenavon District, Monm.
BARCLAY, W. M., L.R.C.P.Lond., M.B.C.S., has been appointed Assistant Surgeon to the Bristol General Hospital, vice Penny, resigned.
BEALES, T. W. L., M.B.C.S., L.R.C.P.Lond., has been appointed Honorary Medical Officer to the Great Yarmouth Hospital, vice D. Meadows, M.B.C.S., L.S.A., retired.
FEENEY, J. A., M.R.C.S., L.R.C.P.Lond., has been appointed Resident Surgeon to the Convalescent Home, Mablethorpe, and Medical Officer to the Court Book in Mand Foresters.
GILL, JOHN, L.R.C.P.Lond., M.B.C.S., has been reappointed Medical Officer of the Guisfield District, Llanfyllin Union.
HUGHES, H. G., L.R.C.P., L.R.C.S. Edin. and L.M., has been appointed Medical Officer to the Carnarvonshire No. 3 District of the Bangor and Beaumaris Union.
HUNTER, E. J., L.R.C.P. Edin. and L.M., L.F.P.S. Glasg. and L.M., has been appointed Medical Officer for the Town (Gosport) District.
LLOYD, J. M.B.Durh. and M.S., F.R.C.S. Eng., L.S.A., has been appointed Visiting Surgeon to the Birmingham Workhouse Infirmary.
ODRILL, THOMAS, M.B.C.S., L.S.A., has been appointed Medical Officer to the Third District of the Hertford Union.
PRICE, E. C., M.B. Edin. and C.M., has been appointed Medical Officer for the Carnarvonshire No. 1 District, and for the Workhouse, Bangor and Beaumaris Union.
PRICHARD, R., M.D. Glasg., M.B. and C.M., has been reappointed Medical Officer of Health for the Cardiff Rural District.
SANDERS, JOHN WM., M.D., F.R.C.S. Eng., Dip. Pub. Health, Lond., has been appointed Medical Superintendent of the St. George's in the East Infirmary.

SMITH, C. E., M.D. St. And., M.R.C.S., L.S.A., has been appointed a Medical Officer of the Worthing Infirmary and Dispensary, vice J. Edward Grinfield-Coxwell, resigned.

SMITH, W. J., L.R.C.P., L.R.C.S. Edin. and L.M., has been reappointed Medical Officer to the Rawmarsh District of the Rotherham Union.

THOMAS, J. T., L.R.C.S., L.M. Ed., L.K.Q.C.P.I., has been appointed Honorary Surgeon to the Newport and County Infirmary, Newport, Mon.

WARD, G. S., L.R.C.P. Edin. and L.M., L.R.C.S. Edin. and L.M., has been appointed Medical Officer to the Fifth District, Hertford Union.

WEBB, J. B., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Brecon Infirmary, vice J. R. Raywood, resigned.

WILTON, J. P., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Gloucester Urban and Port Districts.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BELGRAVE HOSPITAL FOR CHILDREN.—Resident House Surgeon, for six months, or longer by re-election. Salary at the rate of £80 per annum, with board and residence.

BRISTOL GENERAL HOSPITAL.—Physician's Assistant. Board, lodging, and washing in the house. Salary £50 per annum.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Assistant House Surgeon. Salary £20 per annum.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer. Salary £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing.

ROYAL FREE HOSPITAL, Gray's-inn-road.—Senior Resident Medical Officer. Salary £104 per annum, with board and residence in the hospital.

ST. ALBANS HOSPITAL AND DISPENSARY.—A Dispenser. Salary £65 a year.

WEST BROMWICH HOSPITAL.—Locum Tenens for the House Surgeon, during the month of August. £5 allowed for the month.

Births, Marriages, and Deaths.

BIRTHS.

CLARK.—On the 18th inst., at Wisbech, the wife of Arthur W. Clark, M.R.C.S., L.R.C.P. Lond., of a son.

FAUGHT.—On the 15th ult., at Wheatfield, Mowbray, Cape Town, the wife of Deputy Surgeon-General Faught, of a daughter.

MACKAY.—On the 24th inst., at Hornby, Lancaster, the wife of Ian D. Mackay, M.B. and C.M., of a daughter.

SANDBERG.—On the 20th inst., at Liverpool Lodge, Brixton-hill, S.W., the wife of Arthur Sandberg, M.D., of a son.

TUKE.—On the 18th inst., at Chiswick, the wife of Charles Molesworth Tuke, M.R.C.S., of a daughter.

MARRIAGES.

BRUCE—LEEMAN.—On the 18th inst., at St. Mary's Church, Carden-place, Aberdeen, James Bruce, M.B., of Puckeridge, Herta, younger son of the late James Bryce, of Westbank, Advocate, in Aberdeen, to Millicent, only daughter of Commander Joseph Leeman, R.N.R., of The Holt, Aberdeen.

CALVERT—SMITHERS.—On the 24th inst., at Holy Trinity, Eltham, James Calvert, B.A., B.Sc., M.D. Lond., of Queen Anne-street, to Thérèse Jane, elder daughter of John Smithers, Lemonwell, Eltham, Kent.

CARSON—BOUSTEAD.—On the 6th ult., at Christ's Church, Ahmednagar, by the Rev. E. J. Bowen, Chaplain, assisted by the Rev. J. Taylor, M.A., Surgeon W. P. Carson, M.B., 1st Bn. Grenadier Regiment, to Frances, second daughter of Surgeon-Major R. Boustead, M.D., F.R.C.S., H.M.'s Indian Army.

CLARKE—HECTOR.—On the 19th inst., at St. Paul's Church, Edinburgh, John Chaundy Clarke, M.R.C.S., of Morley, Yorkshire, to Mary, third daughter of the late Alexander Hector, of Montrose, Forfarshire, N.B.

HORDER—DESPARD.—On the 18th inst., at the Parish Church, Hampstead, Thomas Garrett Horder, M.R.C.S., M.D. Edin., of Cardiff, to Anna Maria, daughter of Major W. F. Despard, 3rd V. B. the Royal West Kent Regiment, of Hampstead-hill-gardens, and of Lucca, Queen's County, Ireland.

O'HARA—OSBORNE.—On the 11th inst., at St. Mary Abbots, Kensington, W., Henry O'Hara, F.R.C.S.I., of Melbourne, to Nina, eldest daughter of George Osborne, of Foxlow, N.S. Wales.

DEATHS.

GREAM.—On the 20th inst., at his residence, The Drive, Hove, Brighton, George Thompson Gream, M.D.

HARCOURT.—On the 18th inst., at Holland-park, Kensington, George Harcourt, M.D. St. And., F.R.C.S. Eng.

ROWE.—On the 17th inst., at Haverfordwest, George Rowe, M.R.C.S., J.P., of Great Hooten, Pembrokeshire, aged 87.

N.B.—A fee of 6s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 26th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
July 20	29.92	S.W.	62	60	89	66	57	.17	Raining
" 21	29.91	S.W.	61	57	100	69	57	.06	Cloudy
" 22	29.92	S.W.	65	60	109	73	58	..	Cloudy
" 23	29.95	S.W.	68	60	120	71	59	.36	Cloudy
" 24	29.78	S.W.	63	58	113	71	56	..	Cloudy
" 25	29.76	S.W.	61	59	76	63	58	..	Raining
" 26	29.67	S.W.	62	57	117	69	56	.27	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

CHILDREN'S COUNTRY HOLIDAYS FUND.

THE Central Council of the Children's Country Holidays Fund, in presenting their fourth annual report, have the satisfaction of stating that notwithstanding the various claims of a jubilee year their work has continued to steadily increase. During the year, 14,048 ailing London children were sent away at a cost of £9178, of which the parents contributed £2819. The original plan of sending children as guests to cottages (under responsible supervision), where they share the ordinary home life was strictly adhered to, and experience shows it to have been indeed a happy thought, that the London child should see what is the difference between his cramped brick-and-mortar home and the freer simpler life of country children of his own class. The Central Council of the fund appeal for renewed and increased assistance, and we cordially second the appeal to the kindly sympathy of our readers. Contributions should be sent as early as possible to the office, 10, Buckingham-street, Strand, W.C.

Dr. C. Hammond.—A State examination must be passed before permission is given to practise in Switzerland.

ARRESTED DEVELOPMENT OF THE ABDOMINAL WALLS, &c.

To the Editors of THE LANCET.

SIRS,—A case somewhat similar to that reported by Dr. John Buchanan in your issue of the 21st inst. occurred in my practice in 1866, the notes of which, taken at the time, are as follows:—"The fetus was supposed to be about eight months. The mother is a pluripara; nothing especial occurred in the gestation. The birth was fairly easy, and the fetus breathed for a few seconds. The length of its entire body was about twenty inches. The head and upper extremities and thorax were well formed and offered no peculiarities for remark. The membrane pupillares were absorbed. Finger and toe-nails well formed. The lower extremities were less shapely and were the subjects of talipes equinovarus. The anterior abdominal wall was entirely deficient from the ensiform cartilage to less than an inch above the pubes. This was due to the complete absence of the recti muscles and the common integuments. Through this space, covered only by peritoneum, the liver, stomach, spleen, and large and small intestines were visible, and protruded very considerably. The transparent omentum occupied its usual position. The funis and placenta were nearly normal, but the omphalo-mesenteric vessels were unusually distinct.

I am, Sirs, yours faithfully,

Haverstock Hill, N.W., July 25th, 1888.

W. GAYTON, M.D., &c.

MORAL LEGISLATION IN FINLAND.

THE Parliament of Finland appears to have attempted some heroic legislation, with the laudable object of solving the social evil and contagious disease questions. Any illicit connexion is to be punished, both parties being fined, the man to the extent of £2, the woman £1. Letting out any place for the purpose of prostitution is to be punished by imprisonment for three years and with loss of civil privileges. The seduction of a woman is also to be punished with three years' imprisonment and the loss of civil privileges. All attempts at seduction, even though unsuccessful, are also punishable. Lastly, a woman who gives herself up to prostitution is made liable to two years' imprisonment. It will be instructive to learn how far this attempt to "make people moral by Act of Parliament" succeeds in effecting its object. One effect of such severe legislation will probably be to induce persons who have contracted venereal disease to conceal it until it is far too late to treat it at all effectually.

Prison Surgeon.—It is certainly to be regretted that the zeal of proseytisers is not more frequently associated with discretion and good taste. But the remedy for the annoyance of which our correspondent complains is not easy to point out.

Mr. J. J. Harding is referred to THE LANCET of July 7th, p. 48.

A FAMILY POISONED BY EATING TINNED SALMON.

To the Editors of THE LANCET.

SIRS,—The following may be deemed of sufficient interest for insertion in THE LANCET.

On Saturday, the 14th inst., about two o'clock, a family named D—, including father (aged forty), mother (forty), Mary Jane (fourteen), Frank (eleven), partook freely of tinned salmon for dinner. During the meal they complained that it tasted nasty, and on turning the bottom part over it was found to be offensive, the tin and its contents being thrown into the ashpit. In two hours and a half after they were all ill with pains in abdomen, vomiting, and purging. They continued in this condition all night, and on Sunday morning at 9 o'clock I first saw them. They were then ill with the same symptoms, collapsed, vomiting incessantly, purged every few minutes with pea-green, bilious stools. No pain on pressure, but abdomen retracted; tongue beefy red, except the girl's, which was furred; pulses thin and rapid; extremities cold; great thirst. Towards night they became even worse; reactionary fever set in, temperature rose to 103° and 104°; girl's pulse up to 140, and boy's scarcely to be counted. During the night the boy became delirious and restless, tossing his arms and body about the bed, and so ill that I thought he would die before the morning. On Monday he continued in much the same condition. By this time the father was getting much worse, lying in a state of extreme prostration; voice gone to a whisper; extremities cold; pulse thin; pinched face; in fact, they reminded one of people suffering from cholera; the mother, whose case was the mildest, showing to-day signs of improvement; less pain, vomiting less, and purging also less. Gradually day by day the symptoms subsided in mother and daughter, pulse fell in number and gained in power, and they expressed a slight desire for food. The father and the boy continued very ill all the week, but on the Friday the father's case improved, and he took a little beef-tea and iced milk, and on Sunday the boy showed signs that the mischief was abating, but the restlessness continued, and during the night in tossing about he fell out of bed, but his delirium was leaving him, and he answered when spoken to in a loud voice, complaining of pain across his stomach. The further history so far has been favourable, with little to record, and to-day (Tuesday) the father has been up and dressed. Boy conscious, but very weak. Mother and daughter dressed, and moving about a little. The only one who escaped was a boy, aged seventeen, who did not touch any of the fish. So ill were they at one time that it was deemed advisable to call in Drs. Gibb and Angus in consultation. The tin, with some salmon in it, was recovered by the authorities, and the contents found to be offensive.

The treatment consisted in opium and bismuth internally, ice to suck, hot bottles to feet and legs, and sinapisms over the stomach and bowels. The father at the worst had four ounces of brandy and iced water, the boy two ounces, in the twenty-four hours. They vomited any milk they took, but towards the end of the week beef, mutton, and chicken-tea were retained. They complained of feeling hungry, but dare not eat.

I am, Sirs, yours obediently,

July 24th, 1888. ARTHUR T. WEAR, M.R.C.S., L.R.C.P. LOND.

SNAKE POISONING IN INDIA.

THE returns for 1886 show that 22,134 human beings perished from snake-bite in India. The number of cattle killed by snakes is returned at 2514. It is stated that 417,596 snakes were destroyed, and that 25,360 rupees were paid by Government as rewards for their destruction. The mortality from snake-bite in Bengal is much larger among women than among men. They are usually bitten in the early morning when they go out before daylight, either to fetch wood from the faggot-stack or for some other domestic purpose.

Quætor.—We do not understand the question in the form in which it is put.

DEAF-MUTES IN THE UNITED STATES.

PROFESSOR GRAHAM BELL, the well-known electrician, has been directing his attention to the way in which the deaf-mutes are cared for in the United States. He finds that the ratio of increase of deaf-mutes in America is out of all proportion to the increase in the rest of the population, this result being due to the fact that the way the deaf and dumb are cared for is absolutely wrong. They are taken, in the majority of instances, from their families very young and are placed in asylums, where they become acquainted with each other to the exclusion of the rest of the world. The consequence is that 96 per cent. of the deaf-mutes intermarry, and that already 84 per cent. of their offspring are born deaf and dumb, and the ratio will go on increasing until, Professor Bell says, an alarming state of things is reached. He suggests that instead of sending them to special institutions where they are shut out from the rest of the world, special teachers should be sent to the mutes in every public school. The cost, he estimates, would not be greater than under the present system, and much advantage would be reaped.

F. G. W.'s question is one which should be addressed to his usual medical attendant.

Anti-quack has not enclosed his card.

THE SWITCHBACK RAILWAY, TOBOGGANING, AND SWINGING.

To the Editors of THE LANCET.

SIRS,—Looking at the great amount of biliousness which the variable weather and the pleasures of the season have thrown upon us during the last few months, and remembering that though thousands may lie to health-resorts and watering-places the toiling millions of London remain, it occurred to me that some good would result could we but supply the languid, melancholy, bilious, and appetiteless among them with some compensation for the benefits enjoyed by the favoured ones who wander afar. Such facilities in the shape of exercise as I, a martyr to biliousness, know from experience are either already at our doors, or could easily be set up and made available for use. I refer to the practice of swinging, and the switchback railway and tobogganing, now in full working order at our three exhibitions. The swing I have found most useful. It increases the respiratory activity, directs to the surface, thus stimulating the liver and dissipating collateral internal congestions. Such faith have I in swings that I would not only advise the promoters of exhibitions to set them up in their grounds, but I go further, and urge every *paterfamilias* in London who has a bit of a garden to do likewise, and use them himself, as well as his children. The effect of the switchback is similar, but more exhilarating, a box seat being particularly lively. On mounting, there is a sense of suppressed nervous excitement, followed by prolonged inspirations, great exhilaration, and a glow to the skin, thus bringing a force of horse, foot, and artillery, as represented by the roused nervous, cutaneous, and local muscular systems, to bear on the liver, stimulating its secretions, and helping the onward flow of the clogged and viscid bile. After trying it, I returned home cheered, refreshed, and with an appetite quite satisfactory. A threepenny return course is, however, of little use, half a dozen or a dozen being necessary.

If you will publish this letter, I think you will confer a benefit on many, and at the same time perhaps do no harm to the exhibitions, so harassed by prolonged bad weather, and so deserving of support and encouragement.

I am, Sirs, yours faithfully,

D. H. CULLIMORE, M.D., M.R.C.P. Lond., F.R.C.S.I.,
Late Senior Physician, N.W. London Hospital.

Welbeck-street, W., July 18th, 1888.

J. A. H.—The most convenient edition of Aretæus the Cappadocian for the English student is that published by the Sydenham Society in 1856. Its editor was that admirable Greek scholar and accomplished physician, Dr. Francis Adams of Banchory, N.B. It gives a carefully constituted text and a faithful rendering from the Ionic dialect of the original into readable English. The Dutch edition by Ermerins, with Latin translation, may also be recommended. For those who have a working knowledge of Italian, Puccinotti's classical version in that language will prove a great treat.

Mr. W. Walsham.—Effingham Wilson, Royal Exchange, London.

Damon.—We will make inquiry.

PLAGUE OF CATERPILLARS.

To the Editors of THE LANCET.

SIRS,—Our neighbours are infested by caterpillars whilst we have hardly any. Our fruit and flowers are good, and our trees not blighted. We attribute this result to the preservation of our wild birds. We will not allow them to be shot or in any way destroyed, and they eat up the caterpillars.

I am, Sirs, yours faithfully,

July, 1888.

S. L. M.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Wilks, London; Mr. W. Anderson, London; Dr. Macewen, Glasgow; Mr. C. Hawkins, London; Dr. W. B. Tompson, Luton; Dr. A. Carpenter, Croydon; Mr. Marshall, Hastings; Messrs. Whitehead, Morris, and Lowe, London; Mr. W. H. Simmonds, Edinburgh; Dr. Higham Hill, London; Mr. A. T. Wear; Mr. Swinton, Blackheath; Mr. Talbot, London; Dr. McCall, Morecambe; Professor Wallace, Liverpool; Mr. Lake, Barnes; Dr. Pearce, London; Mr. Stamford, Tunbridge Wells; Dr. C. Taylor, Windermere; Mr. A. C. Dixey; Messrs. Acton and Co., Notts; Mr. J. C. Richardson, Wandsworth; Messrs. Wood and Co., New York; Mr. F. Page, Newcastle-on-Tyne; Mr. Lawson Tate, Birmingham; Mr. C. Hancock, London; Messrs. Woodhouse and Ranson, London; Dr. Magregor, Wellington, N.Z.; Mr. Mayo Robson, Leeds; Dr. Nuttall, Göttingen; Mr. Chowdhury, Burdwan; Dr. Urquhart, Perth; Mr. J. R. White, Brentwood; Mr. J. Lowe, Southport; Dr. Malins, Birmingham; Dr. Holman, Reigate; Dr. W. Sharp, Rugby; Dr. Ransom, Nottingham; Mr. Harding, Ballincolling; Mr. Ewart, London; Mr. Knutz, Wiesbaden; Dr. Tomkins, Leicester; Mr. Maw, Bradford; Mr. Mayhew, Ipswich; Mr. Ryan, London; Miss Chreiman, London; Mr. Thwaites, Bristol; Medicus, Mon.; Damon; A. B., London; Questor; Coleman M.; Subscriber.

LETTERS, each with enclosure, are also acknowledged from—Dr. White, Dorset; Mr. Hart, Glasgow; Mr. Eschwege, London; Messrs. Paige and Co., Redruth; Mr. Spencer, H.M.S. *Ajax*; Messrs. Butterfield and Son, Northampton; Mr. Davenport, London; Messrs. Macfarlane and Co., London; Dr. Hardcastle, Newcastle; Messrs. Wright and Co., Bristol; Dr. Pavy, London; Mr. Lane, London; Messrs. Gale and Co., London; Mr. Dunning, Shrewsbury; Messrs. Maclellan and Son, Glasgow; Mr. Trestrail, Aldershot; Messrs. Crossley and Co., London; Mr. Apperly, Hampstead; Messrs. Caldwell and Son, Dublin; Mr. Sympton, Lincoln; Dr. B. Taylor; Messrs. Robbins and Co., London; Messrs. Warren, Bristol; Dr. Gibbon, South Shields; Mr. Spanton, Hanley; Dr. Dixon; Mr. Armstrong, South Shields; Dr. R. Living, London; Mr. Mackay, Lancs; Mr. Sampson, York; Mr. Wormald, Manchester; Mr. Argo, Warrington; Mr. Boyle, Guernsey; Mr. Hornbrook, London; Mr. Hicks, London; Mr. James, Haverfordwest; Mr. Heywood, Manchester; Mr. Nicholls, Martest; Dr. Harney, Derbyshire; Mr. Crowther, Staffs; Mr. Hale, Chesterfield; Mr. Roberts, London; Mr. Leggett, Basing; Mr. Elliott, Cardale; Dr. Powell, London; Messrs. Hems, London; H. Office, Aberdeen; Venn, London; Venn, Leeds; M.D., Huddersfield; University of Aberdeen; D. D., London; A. E., London; Dorset, London; Lady Superintendent, London; Royal Albert Hospital, Devonport; York County Hospital; Alpha, Leeds; Beversion, London; Deaconess Elds, London; Holday, London; Secretary, Cambs; Physician's Son, Middlesbrough; W. E., London; Alpha, Leicester; Bradford Infirmary; Jar, London; M. S., Southport; Graduate, London; M.P., Tottenham; Doctor, Birmingham; E. W. P., Herts; Surgeon, Coldfield; Fides, London; Medicus, York; James, London; Medicus, Wilts; Experience, London; W. B., London; M.D., Notts; Surgeon, Pontypidd; M.D., Yorks.

Midland Weekly Herald, Hull Daily Mail, Herald and Weekly Free Press, Liverpool Mercury, Reading Mercury, Hertfordshire Mercury, Windsor and Eton Express, Surrey Advertiser, Railway Supplies' Journal, &c., have been received.

Medical Diary for the ensuing Week

Monday, July 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., each day in the week at the same hour.

Tuesday, July 31.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, 11 hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

Thursday, August 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHANCING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, August 3.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 4.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords ready means of finding any notice, but is in itself an additional advertisement.

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Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all our Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

A Lecture

ON

RESPONSIBILITY AND DISEASE.

*Delivered to the College of State Medicine,
on July 11th, 1888,*

By SIR JAMES CRICHTON-BROWNE, M.D. &c.

(Concluded from page 182.)

It has been said that were there a window in every human breast society would come to an end, and certain it is that were we all to give expression to every suggestion, thought, and impulse that courses through our minds, this would be a very extraordinary world. There may be stolid, prosaic, well regulated beings who never experience an aberrant thought, a fantastic tendency, or a vicious inclination; but as for most of us, we are but suppressed volcanoes presenting a placid exterior, but full of fire and ebullition within. Most of us are, I venture to say, visited at times by odd ideas, cravings, animosities, and suggestions, which are checked and dissipated by will power, but which, were they during a suspension of that power to obtain outward expression, would declare us mad indeed. The first manifestations of insanity are often but the external display of traits of thought and feeling which during health are held in leash, but which owing to failure of will power have broken loose. I remember the case of a gentleman in a large midland town, a man of high culture but strong enmities, whose mental decay was heralded by the strange habit he fell into of shaking his fist violently at all the men he disliked as he passed them in the street. He always apologised for this act and greatly deplored it, but was quite unable to abstain from it. Sudden and complete overthrow of will power may be illustrated by the case recently described of a wretched Malay, who, on receiving the news of the death of his daughter, instantly started to his feet and ran amuck down the street, stabbing as he went along eleven persons against whom he had no ill feeling whatever.

If we wish to realise what insanity is, and what the consequences are of taking off will power and letting the lower centres go, we cannot do better than watch carefully our own mental experiences in going to sleep. The transition from the waking to the dreaming state may be long or short, but we shall not fail to notice in it the gradual supersession of fact by fancy, an acceleration in the rate of succession of mental images, combinations of ideas under new laws of association, impulses of which we should feel ashamed when awake, and an entire absence of that foresight which is, I think, a better gauge than memory of intellectual power. The power of foreseeing events, and of regulating conduct, not merely by the feelings of the moment, but by a just appreciation of remote contingencies, which is absent in childhood, which it is the great aim of education to cultivate, which reaches its highest perfection in manhood and dwindles again in old age, is the result of a supreme effort of the will, and is invariably absent or enfeebled in insanity. The least likely form of crime for a lunatic to commit is that involving a long look out ahead, deliberate preparation, perseverance in a course of action, and dissembling of demeanour, and I confess I should look with grave suspicion on the defence of insanity set up in any case of slow and secret poisoning.

That voluntary power is invariably impaired in insanity is not perhaps evident to those who have not looked closely into the matter. Is it not true, it may be asked, that some insane persons exhibit extraordinary fixity of purpose and persist in some course of conduct—as, for example, the refusal of food with dogged obstinacy? That is so, but insane obstinacy is no more an indication of voluntary power than is the late rigidity of a paralysed arm. That state of late rigidity in which the arm could not be stretched without being broken betokens that certain lower centres have been cut off from intercourse with higher ones and are undergoing degeneration; and so the unreasonable obstinacy of lunatics in insane conduct merely indicates that certain

mental functions have escaped the regulation of volition, which is enfeebled, and are acting in an irregular and self-willed manner in consequence.

Volition has, we may say, two fields of operation; it regulates within certain limits muscular movements and mental processes; and I would call your attention to the fact that in almost all cases of insanity some interference with voluntary control over the muscles is obvious. One of the premonitory symptoms of insanity is sometimes a change in handwriting, which depends on highly voluntary movements; in facial expression or manner, which means some withdrawal of the controlling and balancing will power from the facial muscles, or those of the trunk and limbs. In mania we see wild and disorderly movements which cannot be stayed by any effort of the will; in melancholia, flaccidity and feebleness of the muscles, which may pass into cataleptic rigidity. In general paralysis we witness tremors and twitchings of the voluntary muscles; and in chronic insanity, antics, gyrations, and contortions of a purely automatic kind. And, parallel with these motor disabilities, we have in insanity a loss of those delicate adjustments of conduct to environment in which good breeding consists, a change in character, with unwonted outbursts of temper, garrulity, self-indulgence, incoherence—a series of mental phenomena signifying a suspension or annulment of the power of the will in certain areas of its mental sphere.

Throughout those pathological states in which a diminished control of the will over muscles may be recognised, we notice a gradual reduction from the voluntary towards the involuntary in whatever the centre or part of it which is diseased represents. In progressive muscular atrophy, we see that the disease begins in the most voluntary muscles of the limb—those of the thumb and index-finger; that it spreads from these to the next most voluntary part—the hand; and that it only ultimately involves the larger and less voluntary muscles of the limbs. In chorea, we observe that the limbs—the more voluntary parts—are affected prior to the trunk—the more automatic part; and the arms, which are more voluntary than the legs, are affected before them. And so through all the pathological states in which diminished control of the will over the mental processes may be recognised we can trace out a gradual reduction from a voluntary towards an automatic condition. No doubt in all cases of insanity a certain amount of volitional power is retained, and this may in certain cases be effectual to some extent over the morbid mental manifestations. There may be contributory negligence on the part of a lunatic, just as there may be on the part of an invalid. Prof. Rühle, of Bonn, recommends the birch rod and shower-baths in certain cases of chronic vomiting, and asserts that children often die of a bad bringing up, and adults because they cannot, when ill, make up their minds to do what is right and omit what is hurtful; and Niemeyer quotes with approval the dictum of the wife of a Prussian general, a most determined woman but a tender mother, that whooping-cough is only curable by the rod. But no one in this country would now sanction such heroic treatment, or believe that anything but evil could come from such stringent appeals to a mere remnant of will in its corporeal relations; and so it would be dangerous in cases of insanity, in which will is obviously and seriously involved in its mental relations, to infer that what survives of it might, if put forth, have prevented a criminal act. In athetosis, in which the muscular movements are typically involuntary, the patient may sometimes by a strong effort control them for a little, but we do not blame him because he does not habitually do so; and in insanity, in which the mental movements are typically involuntary, but yet susceptible of some control, we must not expect of the patient what is beyond his strength—the habitual suppression of his morbid impulses. The criminal act of a lunatic is sometimes so alien to his healthy disposition, or so clearly motiveless, that we have no hesitation in concluding that his true will must have been in abeyance when he fell into it. At other times it follows upon mental struggles which he has himself described, and asked help in, previous to its commission, and is therefore clearly but the climax of a pathological process signifying the overthrow of the will. And at other times, again, it is associated with mental and bodily symptoms which, our experience has taught us, correspond with complete paralysis of will.

A lunatic may unquestionably commit a crime under ordinary motives. It cannot be contended that every mental oddity and isolated delusion is to put a man beyond

the pale of the law, but it is to be remembered that a really isolated, or, as it might be called, encapsulated delusion is a rarity, and that most delusions are but local manifestations of a constitutional vice, involving weakening of will. Most lunatics are, it has been said, mad to their finger tip; and what appear to be their sane acts are generally more or less tinged with insanity.

I cannot pause here even to sketch the several stages of mental dissolution, but I would suggest that there are practically three levels of these in connexion with lunatic crime. These are—the ideational level, the impulsive level, and the automatic level. On the first, the ideational level, the criminal act is committed under the influence of an insane motive or a delusion or hallucination, with consciousness at the time and remembrance afterwards of all that has taken place, but in consequence of a diminution of inhibitory or resisting power. On the second, it is committed under the stress of a sudden and irresistible impulse, which is often a reversion to a mere animal instinct—self-preservation, combative, or sexual,—with vague or imperfect consciousness at the time, obscure remembrance afterwards, and under a still more grave paresis of inhibitory power. On the third, it is committed under the influence of accidental or reflex suggestion, without consciousness at the time or remembrance afterwards, and during the complete abrogation of inhibitory power. As illustrations, I may mention on the first level the case of a man who kills his friend with elaborate preparation to spare him suffering because he has been told by the Archangel Michael that the death of that friend is necessary to the extinction of freemasonry, which is the curse of the human race, and who afterwards describes the homicide in detail, and with evident pride and satisfaction; on the second level, the case of a puerperal woman, who, seeing a glittering knife by her bedside, suddenly cuts her baby's throat, without afterwards having any clear recollection of the event or being able to say why she did it, although the knowledge that she had done it fills her with grief and remorse; and on the third level, the case of an epileptic, who, while recovering from a fit, kills whoever happens to be nearest to him, while still unconscious, and who retains afterwards no trace of recollection of the tragedy.

And here perhaps it may occur to our legal critics who have listened to us with patience thus far to ask how much nearer we have got to any solution of our difficulties. "Let it be conceded," I think I hear them say, "that your medical distinctions are sound, and that the degree of impairment of the will is the true measure of responsibility, how are we to ascertain the impairment of the will? You wish to deprive us of that test—a knowledge of the nature and quality of the act and of its wrongness—which we have hitherto employed, and which was at any rate applicable in a way, and you leave us without any test whatever. How are we to know that a man's will is weakened or on which of your levels he stands, or that he does not stand on that highest level of all where he is fully accountable for what he says and does?" Well, to such legal critics I would reply that it is no small gain to have got rid of a radically bad test, even if we have not a spick-and-span good one to substitute for it, and that the test of a knowledge of the nature and quality of the act and its wrongness in relation to responsibility in disease is radically bad, and is no more a test of responsibility than the acuteness of the colour sense would be of the range of vision. And to these critics I would further point out that it is no small gain to be put on the track, not of a new test—there is no single touchstone for all the metals or for a whole series of alloys,—but on a method of inquiry which will enable us to determine with reasonable scientific surety in a great majority of cases in what degree the will is weakened, that method being simply the established one of medical diagnosis. Disease does and always will present knotty problems to our consideration, but these must always be attacked in exactly the same way, and diseases of the brain are no exception to the rule. We may not at this moment be able to lay down precise rules as to the limitations of the will in disease and how these are to be determined; but in the course of time we shall probably attain to such rules, and meanwhile it is possible for medical men to say, in a large majority of cases, whether and to what extent the will is incapacitated. We can now, by the dynamometer and by electrical tests, definitely declare to what extent voluntary control is impaired in the voluntary muscles or in any set

of them, and we are entitled to look forward to the time when we shall be able, not perhaps with equal precision, but still with fair exactitude, to say to what extent voluntary control is impaired in its mental sphere. Even now, by careful clinical studies, by an observation of the grouping and sequence of mental symptoms, and of the bodily symptoms which accompany them, we are able, in most cases that are submitted to us, to return with reasonable confidence an answer to the question, "Could he help it?" And we can do this in certain cases in which, but for our assistance and medical diagnosis, an erroneous conclusion would almost inevitably be arrived at. A man who had spoken freely on the previous day, when brought into court in the morning and charged with a serious crime, returns no answer to the indictment. When asked whether he is guilty or not guilty, he simply stares at the questioner, and although he evidently understands all that is said to him, and follows out verbal directions given to him, yet not one word does he reply to any interrogation addressed to him. Is he silent of malice or of the visitation of God? Being again questioned by the judge, the policeman behind gives him a push to direct his attention to the Bench, upon which he turns round and swears at that policeman in good set terms. Everyone in court laughs, and it is clear that the prisoner is an impostor, shamming dumbness, who, had he lived a few centuries ago, would have undergone the *peine forte et dure*. But, to make quite sure, a medical man is asked to examine him, and finds that there is loss of power in the right hand, the prisoner being a right-handed man; that his tongue when protruded is turned to the right; that the left corner of his mouth is drawn up when he shows his teeth; and that he labours under mitral stenosis, and he is therefore able to state upon his oath that the man is dumb—not of malice, but of the visitation of God; that he is aphasic, and could not speak if he would, and that the utterance of an oath or interjection, under provocation, is not incompatible with dumbness under such circumstances. A youth, who has expectations on the death of his mother, and who does not live happily with her, one morning, when she enters the parlour in which he is seated, accompanied by a maidservant, rises from his chair, glares at her, goes to the corner of the room where a gun stands, cocks it, raises it to his shoulder, and shoots her dead. When taken into custody, he says he knows nothing about the occurrence, and, considering the complexity of the several steps in it, his statement appears incredible; but a medical man who sees him at once finds that he has been subject to epileptic fits since puberty; that his pupils are dilated; that his tongue bears the mark of a recent bite; that there are many minute red puncta, like flea-bites, over his forehead, throat, and chest; that he has voided urine in the chair in which he sat; and that he often has done odd things after his fits. And the medical witness is therefore able to testify with conviction that the youth's account of his crime is correct, and that he was deprived of volition and reduced to mental automatism when he shot his mother.

A multiplicity of cases might be suggested in which an answer to the question, "Could he help it?" in the case of a person accused of crime, an answer to which the knowledge of the nature and quality of the act test could never give a clue, may be readily supplied by strictly medical testimony. And this brings me to the value of expert testimony in establishing the nature of insanity in courts of law.

It seems to me that nothing has more retarded an approach to a just appreciation of the relations of responsibility and disease than the assent, tacit or explicit, generally given to the dogma that the existence of insanity is a question for men of common sense—a question which they are quite as capable of deciding as medical men or experts. The late Lord Shaftesbury, who, by his philanthropic labours, conferred such signal benefits on the insane, did some disservice to medical jurisprudence when he lent the weight of his authority to this doctrine, and maintained that "persons of common sense, conversant with the world, and having a practical knowledge of mankind, brought into the presence of a lunatic, would in a short time find out whether he was or was not capable of managing his own affairs"; and the late Sir Benjamin Brodie erred, I think, still more grievously when he said: "It is a great mistake to suppose that this is a question (unsoundness of mind) which can be determined only by medical practitioners. Anyone of common sense, and having a fair knowledge of

human nature, who will give it due consideration, is competent to form an opinion on it; and it belongs fully as much to those whose office it is to administer the law as it does to the medical profession."

Now, it may be admitted that there was a time when medical science was in its infancy, when the functions of the brain were unknown, and when only metaphysical explanations of insanity were attempted, at which the existence of insanity in any given case might have been as correctly determined by plain unsophisticated men as by pretentious empirics; just as there was a time when morbid anatomy had not been studied, and when chemical analysis was in a rudimentary stage, at which the existence of poison as a cause of death in any given case might have been as correctly determined by unlearned men as by the alchemists of the period. Further, it may be granted that there are an immense number of cases of insanity in which the symptoms of the disease are so obvious and external, that special skill, although requisite to interpret these symptoms, explain their causes, predict their results, and prescribe treatment, is not necessary to their identification; just as there are many cases of poisoning in which the facts as to the purchase and administration of the deleterious agent are so clearly established, and the immediate consequences to which it gave rise are so patent, that the scientific evidence which would elucidate the composition of the poison, its mode of action and appropriate antidotes, may be safely dispensed with in bringing home guilt to the criminal. But, beyond all this, there are, it must be maintained, cases of insanity of so obscure and subtle a nature that they can only be properly identified by those who have made themselves intimately acquainted with the functions of the nervous system in health and disease, and who have by experience come to appreciate the significance of combinations of mental phenomena and of concomitant bodily variations, which would appear meaningless to the uninitiated; just as there are cases of poisoning so secret and ambiguous that they could not be brought to light without the aid of the toxicologist, who can extract from the tissue and demonstrate in his test tube the lethal substance. In every case of alleged murder by poisoning, the question whether poison was administered with a fatal result and malicious intention is one for the common sense of the jury to decide; but in nine cases out of ten the evidence on which the decision is founded is made up in great part of scientific observations and inferences, which are quite beyond their knowledge and comprehension, and which they are obliged to take on trust. Neither judge nor jury can have any personal knowledge of the symptoms of arsenical poisoning, of the appearances which it leaves after death, or of the processes by which the presence of arsenic in the organs of the body is proved. They may, perhaps, know by hearsay that arsenic causes vomiting and purging, and leaves an inflamed stomach; but they would probably view without suspicion the group of symptoms which would at once suggest arsenical poisoning to a medical man, they would detect nothing abnormal in those changes in the mucous lining of the gastro-intestinal canal which to the trained eye would be specific, and they would be absolutely incapable of following the tests by sulphuretted hydrogen, by silver and copper, by Marsh's and Reinsch's processes, by which the presence of arsenic in the stomach, liver, and kidneys was put beyond doubt. They would have to receive the evidence of experts given upon oath, and subject to criticism and correction by other experts, that the symptoms and post-mortem appearances were those which are caused by arsenic, and that arsenic to a certain amount was found in the body. Their common sense could never conduct them to these conclusions, and in many poisoning cases justice would be frustrated without expert testimony. Now, what I want to argue is that in cases of crime in which the defence of insanity is set up, the common-sense jury, while they must finally decide whether the insanity existed, and in such a degree as to have reduced the prisoner to the condition in which he could not help doing what he did, must be guided to their decision by expert testimony, the force of which they cannot always understand, just as they are in cases of poisoning.

Of course Lord Bramwell denies this, disputes the value of expert evidence, and adheres tenaciously to the old doctrine. "It is contended," he says, "that medical men, and especially those who have experience in dealing with insane persons, have a special right to give opinions when a question of insanity is raised, that it is a question for

experts, and that they are experts. I wholly deny it. I have heard the late Lord Campbell, the Chief Justice, say the same, and object to the question, 'Was the man sane?' saying, 'That is a question for the jury. Insanity is no more a question for an expert than lameness. Is the man lame? Is he mad?' This sounds decisive, but it is really, it seems to me, fallacious reasoning, for, to take Lord Bramwell on the ground which he himself selects, I must remind you that lameness is an outward defect directly cognisable, while insanity is an inward disablement, the existence of which can only be inferentially ascertained. Anyone may satisfy himself that a man has a wen on his head, but only an expert is entitled to declare that he has a cavity in his lung. Then even lameness may be a question for an expert. There are cases of lameness, just as there are cases of insanity, that are unmistakable. A limp, owing to the fact that one leg is three inches shorter than the other, cannot be overlooked any more than the ravings and violence of a maniac. Who runs may read in either case. But there are minor degrees and incipient stages of lameness, and particular kinds of lameness, that can only be detected by a medical man. Thus only an expert, and an able one too, can in some cases distinguish between the lameness that is real and that which is assumed. I am but quoting a not uncommon experience when I recall the case of a young lady who had been pronounced lame by the common sense of a large and sympathetic family circle, and even by a country doctor, and who after having been confined to her couch for many months rose and walked nimbly out of the room when told by an expert (Dr. Buzzard, who had formed his judgment on those electrical tests which only an expert can employ) that she was not lame at all, and had been imposing on her friends. And where lameness is genuine enough it may remain undiscovered by those who have not been taught how to look for it. Some years ago I was waiting for a train at a station in the north, and was sauntering up and down the platform with a very able man, a county magistrate, when we saw in front of us a gentleman known to both of us, who was also walking about while waiting for his train. Immediately on looking at that gentleman I said to my friend, "Do you not notice that Mr. A. B. is a little lame?" to which my friend replied, after a good look, "No, not at all; that is his usual style of walking." I tried hard to make my friend see that Mr. A. B. was a little lame, that he kept his eyes fixed on the ground when walking, threw his legs outward and forward stiffly and with a jerk, and brought his feet down with a thump, exhibiting, indeed, what we know so well as the ataxic gait. But it was in vain. My friend merely replied that Mr. A. B. always was a stiff thick-set little man, and he smiled incredulously when I told him that not only was he lame, but that his lameness betokened a serious disease of the spinal cord. Within six months, however, my friend came to me and said, "You were quite right about Mr. A. B. His lameness has increased rapidly. He has been twice to London, and had joints which he supposed to be dislocated put in by a fashionable bone-setter, and he is now getting quite paralysed. In another two years Mr. A. B. died of *tuberculosis dorsalis*. Now my diagnosis of lameness in this case, when neither the patient nor his friends suspected it, and when, had he been charged with lameness as an offence, he would certainly have been acquitted by a common-sense jury—a diagnosis which any medical man could have made,—shows, I think, that Lord Bramwell is in error in depreciating the value of expert testimony even in so simple a matter as lameness. And if in so simple a matter as lameness expert testimony is sometimes needful, how much more essential must it be in conditions that are more hidden and complicated. Drunkenness, we are told, is, like lameness and insanity, a matter of fact. "If I see that the man is drunk," Lord Bramwell, I fancy, would say, "I cannot help thinking so even if a Paget said he was not"; but in thus thinking and ignoring special knowledge he might do a grievous wrong. A man was seen to reel in the street, to fall, and then to vomit, and the vomited matter smelt of brandy, so a policeman took him to the station and charged him with being drunk and incapable. But the man protested that he was not drunk, having only taken one glass of brandy when he began to feel ill, and so the police surgeon was sent for to examine him, who, finding tonic contraction of the muscles of the neck, staggering gait with a tendency to fall forwards, double optic neuritis, and oscillating movements of the eyeballs, was able to certify that he was not intoxicated, but suffering

from a tumour of the middle lobe of the cerebellum. No one but a doctor could in this case have distinguished between drunkenness and a fatal disease, and, but for the intervention of an expert, an unfortunate man might have had a gross stigma put on his reputation. And so in many cases in which insanity, which is a far more occult condition than lameness or drunkenness, is in question, expert testimony is really essential to decide whether the man is mad, and whether his madness is of a kind that deprives him of self-control. A man who is known to have quarrelled with his wife at times kills her one night, gives himself up to the police, and conducts himself in prison so rationally that no one suspects him of mental unsoundness, and he would undoubtedly be hanged but for the evidence of a medical man sent to see him. The medical man (making out that he had been depressed in spirits, and had harboured all sorts of hypochondriacal delusions for months before committing the murder, that he is profoundly anemic, that his mother died in a lunatic asylum, that two uncles had been insane, and that he himself had been shut up in an asylum after an attempt at suicide during a previous attack of melancholia) feels warranted in declaring confidently that his own account of his crime—which was that, after being entirely sleepless for some nights, a strange rushing came into his ears and a dimness in his eyes, and a trembling all over, so that he felt he must kill his wife, whom he loved dearly, and so did it, and felt better immediately—was perfectly consistent with our knowledge of the way in which impulses arise in the course of melancholia, and that our experience of such cases, and the constant observation of large numbers of them, have convinced us that enfeeblement of will is characteristic of them, and that there occur during their progress impulses which it is impossible by any effort or under any intimidation to resist. And a case which Lord Bramwell himself suggests may be used to illustrate the value of expert evidence. "Take the case of stealing," he says, "with proof that the offender believes he is King of England. Suppose a case of deliberate stealing; he goes to a shop, has goods shown him, and secretes some or picks a pocket. He has a delusion unconnected with his crime. What is to be done with him? Is he to be acquitted? Is he to be half-punished? He is more dangerous than the sane; more in need of a strong deterrent; is he to be less warned and fortified? It cannot be; pitied let him be, but punished he must be; the public conscience would revolt if he was not." And why so? Because Lord Bramwell chooses to conclude that his delusion was unconnected with his crime, whereas expert testimony would unhesitatingly affirm that his delusion was probably the very essence of his crime. When a man, labouring under the optimistic or exalted delusion that he is King of England, commits a larceny, the chances are a hundred to one that he is labouring under general paralysis, fully believes that the whole universe belongs to him, and that he is legally entitled to take whatever he desires, even if he has to do so surreptitiously to avoid trouble, and suffers at the same time from hopeless enfeeblement of the will, both in its muscular and mental spheres. The voluntary muscles in such a man, as might be demonstrated to Lord Bramwell at any moment, tremble and quiver, and have lost their cunning while his thoughts roll on through cloudy immensity, do what he may to condense or direct them. He is, in fact, a dying man, not to be warned or fortified in any way, and to punish him ought to revolt the public conscience much more than to let him go scot free.

If insanity is not a question for an expert, I would ask—How comes it that medical men and not plain men of common sense are called on to sign the certificates and affidavits on which a lunatic is deprived of his liberty or the control of his affairs? How comes it that, in spite of the repeated declarations of judges that expert testimony is of no special value, medical men are still invariably summoned as witnesses in lunacy cases? How comes it that the Lords Justices—the most eminent of judges,—whenever the competency of an alleged lunatic to demand that the inquiry into his mental state shall take place before a jury, or whenever the recovery of a lunatic, so found by inquisition, is in question on his application for a *supersedeas*, require a medical report, and will not receive one from even an experienced legal official? The fact is that practically the utility of expert testimony in insanity is acknowledged, and it is difficult to understand how it could be otherwise, for all who have made only a superficial study

of mental diseases must perceive that there are in them little signs and symptoms, perversions of thought and derangements of bodily functions, which would altogether escape the notice of common sense, but warrant an expert, founding on his experience, in proclaiming that the will is reduced to impotency, and that the lunatic cannot control himself. There is something in the appearance, manner, and mode of expression of lunatics of various classes which would pass unnoticed by common sense, but be characteristic to those who had been accustomed to watch them narrowly. There are styles of morbid thought which cannot be simulated. There are latent or concealed delusions which start into view when the appropriate spring is touched. There is the order in disorder of dissolution which cannot be imitated. There are types of delusions and hallucinations which are easily recognised. And, above all, there are physical signs of disorder of the brain and nervous system which correspond with certain stages in the degradation of will power. But physical signs and mental symptoms in insanity can only be clearly understood in their relation to voluntary control by an expert, whose testimony is therefore of the first consequence when the range of such voluntary control is in question.

To the expert witness in cases of insanity and crime these questions should, it seems to me, be put: Was the prisoner insane at the time when he committed the act of which he is accused? Was his insanity of such a nature and degree as to deprive him of control over his conduct? What are the grounds upon which you have formed these opinions? It would then remain for the jury, aided by the judge, and with the assistance of other experts if necessary, to decide on the validity of the grounds stated, and on the weight to be attached to the opinions expressed.

Expert testimony, to be of the highest value, ought of course to be founded on an examination, or, better still, on repeated examinations, of the accused, made as soon as possible after the perpetration of the crime. The Government have, in several recent cases in which there was a likelihood that the defence of insanity would be set up, secured the highly skilled and expert services of Dr. Charlton Bastian to conduct such examinations, and this is an immense step in the right direction. His verdict as a psychologist and neurologist commands the confidence of the medical profession, and has never been impugned in any way. But insanity is a chronic disease; and even when the expert has not seen the alleged lunatic until some time after his crime, he may still be able to say whether in the course of a disease still existing, or of the recent existence of which there are traces, such a criminal act was likely to crop up as part and parcel of the disease; and whether it is consistent with his experience and with the history of the act that the accused could not help it. When the crime was committed during a temporary paroxysm of madness or during an attack from which recovery has taken place before the examination has been ordered, it may still be possible for an expert to say whether the symptoms described to him form a true picture of mental disease or are only a spurious copy, and whether any wreckage still marks the course of a nerve storm. Sometimes it will be impossible for an expert to make up his mind either one way or the other, and then it is his duty plainly to say so.

And now, gentlemen, before I close I have a practical suggestion to offer which would, if adopted, I venture to believe, do more to reconcile the great professions of law and medicine on the questions at issue between them respecting insanity and crime than any prolongation of those elaborate and sometimes highly spiced logomachies in which they have both indulged in the past. In medical science and practice little progress would be made were we to stop short at diagnosis in our studies of disease, and refrain from verifying or refuting the opinions to which the symptoms and history have conducted us by subsequent observations. Prediction is the test of science, and adaptation is the measure of its power. Astronomy is accepted by the masses of mankind because its professors can foretell eclipses and the transits of stars; chemistry is revered because it can join together the elements and provide for many of our wants; and medical science is entitled to popular confidence just in proportion as it can forecast the course and terminations of disease, and the ravages which, when triumphant, it will be found to have wrought in the textures of the body, and can, by a fresh

adjustment of conditions; prevent its propagation, arrest or retard its march, or modify its features. But the invaluable aid which subsequent observation affords to medical science has been almost altogether dispossessed with in the medical jurisprudence of insanity, and no wonder, therefore, that that branch of medical science is held in low esteem. A man charged with murder is declared to have been insane at the time he committed the crime. A wrangle upon the subject between doctors and lawyers engaged on this side and that takes place in court, and is carried on perhaps for a short time afterwards in newspaper columns by editors and crotcheteers, and then no more is heard of the case. The man is either hanged—and under these circumstances, I admit, very few subsequent observations are possible—or he is sent to Broadmoor, where careful subsequent observations are made and recorded during the rest of his days—observations which could not fail to reflect an instructive light on the proceedings at his trial, and to supply indications for guidance in similar cases, but which remain buried in oblivion. Now, what I desire is to obtain publicity for subsequent observations on insane criminals, and to secure that these observations shall be of a thorough and impartial description. Every year a certain number of prisoners charged with murder are, on arraignment, generally on medical testimony, pronounced incapable of pleading; or are, after trial, and again generally on medical testimony, acquitted on the ground of "insanity (to use the old phrase); or found guilty, but declared to have been insane when they committed the act (to use the new one); or are, after having been found guilty, sentenced to death and left for execution, and, again almost invariably, in consequence of medical intervention, reprieved on the ground of insanity. All these are swallowed up in Broadmoor Asylum, and nothing more is ever heard of them except by their own relatives. True, when these criminal lunatics come to die, there is inserted in the appendix to the annual report of the asylum a few brief notes of his or her case, together with a summary of the pathological changes revealed in the brain and other viscera on post-mortem examination; but these notes, although most ably and carefully prepared under the supervision of the former gifted medical superintendent of the asylum, Dr. Orange, and his energetic successor, Dr. Nicolson, are only distinguished by initials, are technical in expression, do not convey information sufficient to warrant a judgment upon the whole case, and are only seen by those who are specially engaged in the treatment of insanity. What is wanted is a series of skilled and sustained observations on homicide who have escaped punishment on the plea of insanity, made by competent and unbiased authorities, couched in language understood of the people, and published from time to time. And in order that such a series of observations may be pursued, I would propose the appointment of a committee or commission, composed in equal parts of lawyers and medical men, whose duty it should be to visit Broadmoor Asylum as often as they might deem expedient, to examine individually all patients detained there who have been charged with murder, and also the officers of the asylum; and its case-books and registers, and to report to Parliament annually on the mental condition of every such patient, with special reference to the circumstances of the crime of which he or she was accused, and the evidence adduced at his or her trial, adding such remarks on the relations of insanity and crime, and such recommendations for alterations of the law, as their experience may suggest to them.

The report of a Criminal Lunacy Inquiry Commission, or Committee, thus constituted and empowered, would, we can scarcely doubt, be received yearly with eager interest, and be reproduced and commented on in the public press, and especial curiosity would be displayed in connexion with such portions of it as dealt with cases of great doubt and difficulty which had exercised the public mind powerfully. And the knowledge that such a report would be forthcoming annually would, I venture to think, have a salutary and sobering effect on many of those engaged in cases of murder in which the defence of insanity is set up, by reminding them that they might be accountable for their words to the tribunal of public opinion in a stricter sense than heretofore. Looking forward to such reports, the faithful scientific witness would speak with confidence, assured that his evidence, although it might appear strained at the time, would be confirmed by events; while the pseudo-

scientific witness, if there be any such, who is led into the box by a thirst for notoriety or a spurious philanthropy, would pause before committing himself to statements which might rise up in judgment against him in a very damaging and persistent way. And there can be no impropriety in alleging that such reports would ultimately prove useful to judges and counsel, not by rendering them more careful, for nothing can exceed the caution with which they now proceed in murder trials, but by removing misconceptions under which they have laboured, and convincing them that there are more things in heaven and earth than are dreamt of in legal philosophy. It would be no small gain to bear in upon the minds of some of them, as the madhouse memoirs of such reports would sometimes assuredly do, that a nominal knowledge of right and wrong is not incompatible with a total bereavement of self-control and complete subjection to strong delusion, and that a man, who, looked at from a distance, is apparently a voluntary organism, may turn out on close scrutiny to be a mere simulacrum driven about by morbid impulses and casual suggestions as helplessly as is a paper butterfly in the air currents set in motion by a Japanese fan. There is not a doctor amongst us who will not allow that he has had to abandon a diagnosis, formed perhaps with the utmost discrimination and held with confidence, because of the inexorable logic of the progress of the case; and there are, I opine, few judges on the Bench or counsel at the Bar who might not be edified by having brought under their notice now and again the later chapters of a case involving medical considerations with which they had had to deal at a critical epoch in its history.

Upon the general public, too, and our teachers in the press, such reports would have an educational effect, and gradually build up more correct notions than are now prevalent as to the nature of insanity and the kinds of proof which go to establish its existence. I have often thought, when looking at a case of advanced insanity which in an early phase had been a subject of public inquiry, how abashed would be some writers and correspondents who had impugned the decision arrived at and inveighed against the lunacy laws, could they but see the natural development of the cancer the existence of which they had at one time denied; and surely the glimpses into Broadmoor which the reports of a Criminal Lunacy Inquiry Commission would afford would go far to impress moderation on our censors, and satisfy them that what seems "trifles light as air" may be, in questions of madness, "confirmations strong as proofs of holy writ," and that minute symptoms which doctors are laughed at for enumerating may prove of serious import.

And, beyond all this, the deliberations of such a commission as I have suggested would, as I have hinted, conduce in some degree to an agreement between lawyers and doctors on the question of insanity and crime. It is in the atmosphere of the courts of law that differences between them spring up, differences which in private conference speedily dwindle away. It is about theoretical definitions and verbal distinctions that they contend; and whenever they are brought together in actual contact over a case anywhere save in a court of law, the lawyers with striking aptitude adopt the scientific standpoint, and harmony results. My experience of the Board of which I am myself a member—that of the Lord Chancellor's Visitors, which is made up of three lawyers and two doctors—justifies me in saying this; and the experience of the Board of Commissioners in Lunacy, which is made up of three lawyers and three doctors, is, I understand, to the same effect. The severe intellectual training which a barrister goes through, the art which he acquires in his professional practice of sifting evidence and of concentrating his attention upon minute details, as in reading judicial decisions, prepares him to look with insight and judgment upon cases of insanity when they are brought under his personal notice; and I believe I shall be correct in saying that he generally takes to the study of such cases when called upon to do so, with keen scientific interest, and rapidly attains a breadth of view regarding them not inferior to that of any doctor. I anticipate, therefore, that in a Criminal Lunacy Inquiry Commission composed of lawyers and doctors no divergence of opinion would occur. The two wings of the Commission would feel each other's difficulties, and compensate each other's shortcomings. The lawyers would come to realise the incompleteness of the law, and to attach due importance to delicate and obscure forms of

disease of the brain; and the doctors would come to realise the still fragmentary character of their science, and to attach due importance to that maintenance of the universal in its conflicts with the individual will upon which trade, industry, art, and science depend. The recommendations of the commission would, in all likelihood, lead to such amendment of the law as would put an end to conflicts in courts of justice on questions of responsibility and disease.

A CASE OF INTUSSUSCEPTION OF THE CÆCUM, ASCENDING AND TRANSVERSE COLON, TREATED BY ABDOMINAL SECTION, WITH SUCCESS.

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IN view of the comparative rarity of successful operations for intussusception I desire to place the following upon record. It appears to furnish additional evidence, if any is wanted, that abdominal section may be safely undertaken for this condition in its earlier stages even in young children, and ought, therefore, to be resorted to at once if other simpler methods of reduction fail.

Charles S—, aged four years, was admitted into University College Hospital on Aug. 25th, 1887. He had always been a healthy child, and had had no illnesses except measles and whooping-cough; he had been run over by a cab four months before, the wheel passing across his chest. His health had been excellent up to the day before admission; his bowels had been opened at 10 A.M., and he had gone to school and returned quite well. Nothing was noted up to bed-time, but at about 3 o'clock in the morning the child awoke, complaining of pain in the abdomen. He then passed a stool, which was fairly loose, but with no relief of the pain. A little later he tried to defecate, and brought away about a wineglassful of blood, and half an hour later some more. From this time on until 2 P.M., when I first saw him, he continued to lose blood from the rectum at short intervals. On admission, he lay with his legs drawn up and resisted examination. An ill-defined tumour could be felt in the left iliac fossa. The finger introduced into the rectum reached nothing abnormal at first, but was covered with blood and mucus on being withdrawn. When I examined the child his state was as above, but I thought at one moment that I could reach a tumour in the bowel by the rectum. But even uncertainty on this point in no way influenced the diagnosis of intussusception of the large intestine, which appeared quite clear from the history, symptoms, and the presence of a hard tumour in the left iliac region. I therefore proceeded to distend the rectum and colon with water to as large an extent as appeared safe, and this seemed to have the effect of getting rid of the tumour as far as manual examination went. On my return, however, to see the patient at 7 P.M., I found that he had continued in great pain, and to pass blood from the rectum, and that the tumour was as clearly present as before. I therefore decided at once to operate. All antiseptic precautions having been taken and chloroform having been given, I made an incision in the middle line from the umbilicus downwards for about 2½ in. The carbolic spray was only turned on a moment before the peritoneum was opened. On passing in my hand, I found the intussusception without difficulty in the left hypochondrium, but could not at first draw it into view. The incision was therefore prolonged about an inch upwards to the left of the umbilicus, and I was then able to manipulate the mass within the abdomen, though with some difficulty. By drawing upon the intussusciptum from below with the finger and thumb of one hand, and squeezing it upon the intussusceptum with the other finger and thumb, I was able to force the latter upwards and to the right, and gradually to unravel it (still within the abdomen). This was somewhat assisted by drawing upon the portion of bowel which ran into the intussusceptum from above, but was almost entirely accomplished by squeezing the latter from below and at the same time gathering in the slack in my fingers. There was a little difficulty in reducing the last portion; but this was soon overcome by steady pushing and

drawing. The bowel was much congested and marked by submucous hæmorrhages, but was not very oedematous. When satisfied that the intussusception was perfectly reduced, some coils of protruded intestine were washed, and the abdominal cavity mopped out with warm carbolic sponges, and closed in the usual way with seven or eight stout silk sutures. A dressing of salicylic wool was then applied after the wound had been dusted with iodoform, and the abdomen was firmly bandaged. The whole operation and dressing was finished within thirty-five minutes, and the patient bore it very well.

Immediately after the operation the child was given four minims of the tincture of opium, followed by two minims every two hours until the morning of the 27th. On the day following the operation (26th) the child was sick four or five times, probably from the effect of the chloroform, but not afterwards. He was restricted to a milk diet, given in very small quantity. During the night of the 26th the bandage round the abdomen, which was very tight, was loosened a little, giving considerable relief, and on the 27th I examined the wound and found it all that could be desired. The opium was then stopped and a little brandy was given with the milk. On the 28th he was given a little chicken broth, and the bowels were moved naturally for the first time. As soon as the heaviness of the opium passed off he seemed very well. The wound was again examined and redressed on the 29th, and looked perfectly satisfactory, and on the 31st he had a second stool naturally. He was then allowed to have some light solids. On Sept. 2nd the wound was dressed again and for the last time, the stitches being removed; a broad strapping of American plaster was put completely round the body to support the scar. After this there is nothing to note except that the child seemed quite well. During the first three days after the operation the temperature touched 101.2° on two occasions, but was usually below 100°, and after the third day was always so until the patient was discharged on Sept. 16th quite well.

The operation was relatively a short one and was not very difficult. This was due to the fact that the method of unravelling the bowel by traction and squeezing from below, rather than by traction on the included bowel from above, was resorted to at once.

Having been more than once deceived by the disappearance of the tumour under inflation or injection into the belief that I had reduced an intussusception, I was quite prepared for a return of both tumour and symptoms in this case, and found little difficulty in making up my mind to adopt the only other means of saving the patient's life—namely, abdominal section. The age of the patient added, perhaps, to the gravity of the procedure; but there was the hope that by operating early, while the child's strength was unimpaired and before serious structural changes had taken place in the bowel, the result would be quite different from that usually seen where abdominal section is undertaken. In this case the degree of strangulation or incarceration must have been very considerable, for blood was constantly being passed from the rectum, and when exposed by operation the bowel was seen to be deeply marked by ecchymoses. Nevertheless, the reduction of the intussusception offered no insuperable obstacles, the pressure of the mass between the fingers combined with traction on the intussusciptum from below, probably unloading the vessels of the congested part, and so enabling it to slip up within a short time.

The few cases on record in which, like the present, an intussusception has been cured by abdominal section appear to me to open up a very large question. This has already been discussed by Mr. Hutchinson in his well-known classical paper published in the Transactions of the Medical and Chirurgical Society thirteen years ago, and by Mr. Marsh a little later, also by Mr. Howse conjointly with the late Dr. Hilton Fagge in a paper worthy of its authors. But it is a remarkable fact that in spite of the strong arguments in favour of this method of treatment of a very hopeless condition furnished by these gentlemen, and the three successful cases recorded by them together with one by Mr. Godlee, we have heard little or nothing of it within the last twelve years. As a matter of fact, there has not been, so far as I know, a single case of successful laparotomy for intussusception recorded in London during all these years, except Mr. Godlee's, until the present case. Now, what is the reason for this? Either intussusception is not such a common disease as formerly, and there has been no occasion at all to resort to severe methods of treating it; or some

other method, safer and easier than laparotomy, has come into general use in the meanwhile; or, finally, laparotomy has proved itself a particularly dangerous procedure, especially in the case of young children.

Now I do not think it will be asserted that intussusception is less common now than formerly. An appeal to our hospital records would show that just as many cases are admitted yearly as of old. And, as to the second proposition, I do not think that it has been shown that such great improvements in the methods of reduction of intussusception by inflation and injection have been introduced to the notice of the profession as to win its confidence and come into general use. I am aware that in Mr. Lund's apparatus for distending the lower bowel we possess, perhaps, the most perfect appliance yet designed for the purpose; but I have yet to learn that it has effected a revolution in the treatment of intussusception or removed the objections to the method of injection—viz., the danger of bursting the bowel, an accident which has frequently occurred. And as to the third question, whether laparotomy should be regarded as a hazardous procedure, especially in the young, experience is showing us every day that it has no special risks in the hands of careful surgeons, and that each day it is being simplified and improved. As to its propriety in the case of young children, in all of the successful cases above cited the age was below five years and the operation was well borne in three, although performed under difficult circumstances in two cases.

I venture then once more to urge what has been so ably and elaborately pleaded in the papers to which I have alluded—namely, that laparotomy offers a far more satisfactory and a safer means of treating intussusception than the methods hitherto in use, and has been shown by experience so far to have a strong claim upon the consideration of physicians and surgeons. Of course, no one would think of resorting to abdominal section until the milder means of inflation and injection had been given a fair trial. But just as in the case of hernia, we are prepared without hesitation and at once to resort to herniotomy on the failure of properly applied taxis, so, I venture to urge, we should be prepared at once, and without hesitation, to open the abdomen in those cases of intussusception which are not speedily reduced by injection or inflation. It may be objected that there are cases in which, when the abdomen has been opened, the condition will be found irreducible. This will only be true if the operation be undertaken late, and in such cases it is certain that injection could not effect reduction, and would most probably burst the bowel if persisted in. It has been demonstrated by Dr. Fagge and Mr. Howse that two very different conditions are met with in intussusception, one which has been called "incarceration," and the other "strangulation." In the first, which almost certainly runs into the second if neglected, reduction may be effected in every case by laparotomy, if the method of working from below upwards be adopted. But if the bowel by neglect has been allowed to run into the second stage—i.e., of strangulation, it is questionable whether any operative treatment, whether per anum or per abdomen, should be employed, at all events in children, whose powers by this time will be too exhausted for laparotomy, while inflation could do no good, and would probably lead to perforation.

I venture to think that this whole question of the treatment of intussusception is well worthy of the attention of the profession, and in bringing forward this case I have hoped pointedly to draw attention to it. I have hoped also once more to direct attention to those very valuable papers on the subject to which allusion has been made, and in which many of the points here only briefly referred to are handled in detail and in a masterly manner. The case now recorded serves but to emphasise the conclusions therein arrived at, and especially one which Mr. Hutchinson specially lays stress upon. He says: "It is my impression that in future operations the lower end of the invaginated tract ought always to be first sought, and that reduction ought to be accomplished by squeezing it or pulling the sheath downwards, rather than by attempting to pull the contained tube out. I am not at all sure that in some cases this might not be accomplished without bringing the parts into view. Should this not be found practicable, however, it is probable that the operator will find it much more easy in cases of intussusception into the descending colon to bring the lower part into the wound than the upper one. It is the more necessary to draw attention

to these points because they are both probably unlikely to occur of themselves to the operator's mind." In my own case the invaginated portion of gut could not be drawn out of the wound, and was entirely reduced within the abdomen by the method advocated by Mr. Hutchinson and just quoted.

(To be concluded.)

THE SULPHUR SPRINGS OF GREAT BRITAIN AND THEIR THERAPEUTIC ACTION.

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AT this season of the year, when holiday plans are made with a view both to health and pleasure, it may be well to consider the advantages offered by our own mineral springs, and to compare them with those of various continental spas. Visits to different health resorts often prove beneficial by mere change of air, of scene, of society, amusements, or occupation; most so by suitability of the climate selected, and in some degree by the directly medicinal properties of their mineral waters. To these last qualities attention is now directed, and chiefly to the efficacy and mode of action of the sulphurous waters. Many of our more noted health resorts are serviceable to the residents and visitors more by their climate, elevation of site, freshness of air, and by the purity of the water than by any mineral impregnation of it. Malvern is a capital instance in all these points. They are to be found on the chalk hills around London, at Chagford in Devon, Hinckley in Leicestershire, Otley or Ilkley in Yorkshire, and many other places in the north of England, in Scotland, and in Wales. The above qualities add to the efficacy of the small amount of iron found at Tunbridge Wells, or at San Moritz; with other excitants they aid the somewhat stronger chalybeate at Spa. The action of the equally potent alkaline waters of Vichy and of Vals is modified by the mild climate (hot in summer) of Vichy, and the more bracing effect of the higher site of Vals. The slightly mineralised waters of Contrexéville and of Buxton owe much of their efficacy to the elevated position in which they are used, both places being at a similar height above the sea-level. Thermal baths in the summer, when too relaxing in sheltered or low-lying situations, can still be enjoyed at Plombières, 1310 feet above the level of the sea.

Impaired health is not limited to one season of the year, and though our means of restoration are restricted, yet suitable places for rest and treatment are always to be found. In winter days the more delicate patients return to the home fireside or seek sunshine on southern coasts; some less invalided sufferers can still benefit by the pure cold air of the more elevated or northerly stations, or join in the out-door exercises and amusements of Leamington or Cheltenham. The claims of our own country in these advantages are too often neglected; the health resorts around us are remarkably varied, the benefits they offer are available at all seasons, and to all; to reach them no distant separation from friends and home is involved, the fatigues of a long journey and the discomforts of crossing the sea are avoided. Our own mineral springs are as rich in medicinal properties and as varied as those most visited abroad. The bromo-iodides of the Woodhall Spa exceed the proportion yielded by the Kreuznach water. The thermal springs of Bath and the highly mineralised waters of Harrogate surpass those of Aix-la-Chapelle and Aix-les-Bains in the qualities for which they are famed. In sulphurous property the stronger Harrogate water exceeds the springs of Germany or Savoy; this is itself surpassed by that of Strathpeffer in Ross-shire; and this again by the Dinsdale sulphur spring.

For pure sulphur medication this source of Dinsdale-on-Tees is unequalled by any sulphurous water source short of the Alps or Pyrenees. Thermal sulphur waters, if useful in aiding some special remedial effects for which they are sought, interfere with other desired objects of treatment, partly by unduly exciting the circulation and increasing the action of the skin. On the other hand, any excess of saline ingredients in combination with sulphur may act unduly either as aperients or diuretics. At Schinznach in Switzerland is a thermal sulphur water with 22 gr. of the sulphates of soda and of lime, 2 gr. of carbonates, 13 gr. of

chlorides, and 3.5 c. in. of sulphuretted hydrogen to the litre or wine-quart. The Dinsdale spring has, in the same bulk of water, 25 gr. of sulphates, 2 gr. of carbonate, 5 gr. of chloride of sodium, 2 c. in. of CO_2 , and 8.32 c. in. of sulphuretted hydrogen, equal to 2½ gr. of sulphur. The Harrogate water has 1.4 c. in. of sulphuretted gases with some carburets, and 137 gr. of salts, chiefly chlorides, in the pint of 20 oz.; numerous other springs are near, of which that with proto-chloride of iron is remarkable. At Strathpeffer are two sulphur springs; the upper contains 18 gr. in 20 oz., chiefly sulphates of soda and lime, with 3½ c. in. of sulphuretted hydrogen; the lower contains 13½ gr. of the same salts, of which 11 gr. are sulphates, with 2½ gr. of common salt; the sulphuretted hydrogen is only 1.7 c. in. to the pint of 20 oz. There is also a strong effervescing chalybeate spring in the neighbourhood.

Dinsdale is not without its chalybeate water at no great distance, less than a mile, from the sulphur spring; moreover, beyond this is another mildly sulphurous water, and also a mineral spring with aperient and diuretic properties; this is likely to prove of considerable utility, both for its special purposes and as an adjunct to the use of the sulphur water and baths. The composition of this new spring, as analysed by A. W. Stokes, F.C.S., F.I.C., is in grains per gallon: sulphate of soda, 32.9; sulphate of magnesia, 37.88; sulphate of lime, 93.0; carbonate of lime, 33.7; chloride of sodium, 9.0; silica, .56; oxides of iron and alumina, .42. The water, therefore, contains 219.6 gr. per gallon of solid matters. On further analysis as to its freedom from surface infiltration (the spring has recently been reopened) the organic matters yield nitrogen (present as nitrates), 0.28; nitrites, none; ammonia, 0.0014; albuminoid ammonia, 0.0098; oxygen in fifteen minutes to oxidise the organic matter was 0.019 gr., or in three hours, 0.028. This, he adds, is a sample of an undoubted and valuable mineral water entirely free from pollution. These springs are in a sheltered part of the valley of the Tees. The hotel and baths are near the rocky bed of the river, looking to the south; the new spring is on higher ground, but still sheltered from the north. Cliffs of the lower permian sandstone form picturesque additions to some part of the banks of the rapid stream. A line of fault is traced in the sandstone and adjacent millstone grit, so that geologically it closely resembles Harrogate; both are situated on the margins of the millstone grit, the one being at the northern edge of the Yorkshire coal basin, the other at the southern edge of the Durham coalfields; they are thirty miles apart. Gillsland in Cumberland, on the north-western extremity of the same stretch of raised gritstone, has also sulphur and chalybeate springs. The station of Dinsdale is the next south of Darlington on the Great Northern and North-Eastern Railways.

Modern medicine has done much to confirm and explain the confidence expressed by a long series of sufferers in the remedial effects of the natural sulphur waters. Benefit results from their use in certain stages of convalescence, in most rheumatic accidents, in some constitutional disorders, in many local troubles and diseases, especially of the skin and glandular system, in various nervous affections, and in the numerous chronic disturbances of nutrition that interfere so much with health and comfort. Sulphur medicinally acts in three ways, whether used generally or locally: first, as a stimulant or excitant; second, as an alternative or sedative; third, as a germicide or antiseptic. The first of these effects is seen with crude sulphur when used internally as an aperient, or externally in the ointment as a rubefacient; neither of these actions result from the use of sulphurous waters, nor are they such as are desired by the visitors to sulphur baths. The alterative effects, under the second head, are chiefly sought; these vary from slight excitement to a notable soothing influence on the vessels and nerves, hence the relief of irritability of the surface of the body produced by the mild sulphur baths in certain skin diseases. Sulphur sprinkled on flannel for sciatica, and worn closely to the limb, may act in this way; so also the sulphide of carbon vapour as applied, for the relief of tic or migraine, by a late Harrogate physician. Sulphur given with aperients has little general effect; continued small doses of the confection may have some action of this kind, but none is noticed after the occasional use of the compound liquorice powder. In the stomach sulphur is not acted on by the acid gastric secretions; in the alkaline media of the intestines sulphurets are formed and absorption commences. When first absorbed it is arrested in the liver, and finally expelled

after more than one round in the hepatic circulation and the formation of some sulphuretted hydrogen while in contact with carbonic acid in the venous blood. Small doses excite less the activity of the liver, and by frequent repetition more readily pass through the vena cava to the pulmonary circulation. The sulphurets now meet with oxygen and are changed into sulphites and hyposulphites, and thus permeate to the other glandular organs and the skin, and penetrate to the muscles and fibrous tissues. In this way some of the special curative effects in chronic rheumatism may be wrought. Some of the antiseptic properties may be concerned in the alterative effects of sulphur, as in the use of sulphide of calcium in checking the tendency to boils or the effect of the hyposulphites in fermentative dyspepsias. Mialhe has observed that any alkaline sulphuret, brought to the surface of the skin gives off sulphydric vapour under the action of its acid secretions, but that the hyposulphites acted on in the same way set free sulphurous acid with some deposit of sulphur, and, in time, possible discolouration of the skin. The most active antiferments of sulphur are thus found in the tissues, just as salicylic acid is always formed when salicine is given; and seeing the controlling power of this agent in rheumatic fever, some action of the same kind may be due to sulphur. Or it may act so as to modify the chemical metabolism of waste matters in the body, and so favour elimination.

In all acute disease, beyond the impaired activity of excretory organs, there is disturbed chemical evolution of the products of denutrition which delay restoration of health. These two factors are also concerned in chronic and subacute diseases in varying degrees and combinations. Thus in gout, while renal changes often check the elimination of urea, there is always incomplete evolution of waste matters, and that imperfect combustion of the results of dissimilation that leads to uric acid being formed in place of urea. Here the chemical change seems to precede the special organic defect, though itself determined by some altered nerve control; this is seen in lead poisoning, where an exactly similar sequence set up by impaired innervation is the first step. In such cases the combination of saline diuretics or aperients, to excite the activity of the excretory functions, with the use of sulphur, may be advantageous. Not so where the weakly or debilitated are concerned, some of whom may benefit from the influence of sulphur under its third category, and most of whom require to use the chalybeate waters so constantly found in the neighbourhood of sulphur springs. Anæmia has always to be combated, both before sulphur medication commences, and during its course. Dr. Blanc of Aix has remarked on the ready oxidation of sulphur in the blood; this affinity for oxygen creates the demand for an increased supply. Hence the necessity and often the desire for outdoor exercises, thereby the activity of the red corpuscles of the blood is increased, and they also increase in number.¹

The germicide powers of sulphur are well known; sulphur externally and sulphurous acid in the aqueous solution are largely used. Now that the germ or bacillus on which strumous and consumptive disease depends has been put under our view by Koch a much wider field is opened for sulphur medication. The amelioration of many glandular affections in children may thus be explained. Arrest of the devastations of lupus has been noted under the use of sulphur baths and washes long before the nature of the disease was understood; the tubercular bacillus has here lately been detected, and the disease is regarded as a consumption of the skin. The presence of this bacillus in phthisis being demonstrated, it is not surprising to find the use of sulphur attempted as a means of arresting its progress. For this purpose many precautions are needed; in this disease it is of first importance to keep the digestion unimpaired, and the stomach must not be fatigued. All sulphur products are irrespirable; still one of its gases has been used so as to modify some lung symptoms. The time has come when the gradual modification of the phthisical diathesis should receive continuous trial under such favourable hygienic conditions as are known to be requisite in the long contest with so insidious a disease. The sheltered position of Dinsdale offers advantages for such trial; the facilities for frequent change of air to such healthy and exhilarating places as Redcar, Saltburn, Whitby, and Scarborough, with temporary sojourn in the keener climate of Harrogate, would enable young invalids, during all the early summer, autumn,

¹ De l'Action des Eaux d'Aix-les-Bains, Marlioz, et Challe.

and winter to make Dinsdale their headquarters, and the scenery of the Tees, with the great Yorkshire valley and the distant views of the Cleveland Hills, as seen from its northern cliffs, a constant pleasure either to look upon or to remember.

Orchard-street, W.

A CASE OF

MULTIPLE SUPPURATING HYDATIDS OF THE LIVER BURSTING INTO THE PLEURA AND LUNG.

By EDWARD O. DALY, M.A., M.D. OXON, M.R.C.P.,
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By a curious coincidence I had under my care within a very short period two cases of suppurating hydatids of the liver. The first was published in THE LANCET of May 19th, 1888; the second is that of J. H—, aged thirty, a labourer, who was admitted into the Hull Royal Infirmary under my care on Feb. 8th, 1887. He had enjoyed excellent health up to the middle of January, when he began to complain of pain in the right side of the chest. He had also frequently vomited. There was no history of previous syphilis, and he had never suffered from dysentery or jaundice. Lately he had lost flesh rapidly. His daily allowance of beer averaged about nine pints. The abdomen on admission was found to be much distended from enlargement of the liver, the lower edge of which could be traced, running across the abdomen, about an inch below the umbilicus. The hepatic dulness extended upwards as far as the fourth rib, measuring in the mammary line from above downwards eight inches and a half. The surface of the liver was smooth, except to the left of the middle line, where a hard and tender nodule could be felt. The other organs appeared healthy. During the first few weeks the physical signs remained unchanged. The temperature and pulse, however, caused one to be suspicious of suppuration, and on March 7th one or two exploratory punctures were made with a hypodermic needle over the hard nodule and in one or two other situations in front, but without result. On March 8th the patient's condition altered very much for the worse. He was suddenly attacked with great dyspnoea and shock. The pulse became frequent, feeble, and small, and the respiration very rapid, and he was unable to lie down in bed. The physical signs were also materially altered, the hepatic dulness had diminished in extent, measuring from above downwards seven inches, instead of eight and a half, and the hard nodule could no longer be felt to the left of the umbilicus. Over the upper lobe of the right lung in front the respiratory sounds were distant, and there was marked hyper-resonance, with deficient fremitus and voice sounds; laterally dulness existed, with absence of fremitus and breathing, whilst behind there was marked dulness over the greater portion of the lung. Over the scapular and inter-scapular region bronchial breathing and bronchophony were marked, and these sounds could be heard, though less distinctly, to the base of the lung. The patient coughed severely, expectorating a large quantity of bile-stained puriform fluid, which, on microscopical examination, was found to be pus. It was therefore concluded that a hepatic abscess had burst partly into the lung and partly into the pleura. An exploratory puncture was made in the mid-axillary line in the fifth space, and some bile-stained serous fluid withdrawn, which was found to have a specific gravity of 1012, and to contain a large amount of albumen. Several specimens of this fluid and of the expectoration were examined microscopically, but only pus cells were observed. About half a pint of serum was obtained from the pleura by aspiration. As the patient expectorated bile-stained pus freely, and the fluid removed from the pleura was found to be merely serous, it was thought advisable to wait and see what nature would do for him. The expectoration gradually diminished in amount, and by March 28th had entirely ceased, though the severity of the symptoms had only slightly abated. It was therefore decided to make some more exploratory punctures, and the needle was inserted into the liver substance between the ninth and tenth ribs behind, over a tender spot complained of by the patient,

with the result of withdrawing from an ounce to two ounces of thick pus, which was found to contain hydatid membrane and hooklets. An incision was made by my colleague, Mr. Evans, into the spot from which the pus had been removed, and about a gallon of exceedingly offensive pinkish puriform fluid, containing a large number of cysts, escaped. The cavity was washed out antiseptically, and a large drainage tube inserted. The patient unfortunately died suddenly the next day.

The necropsy showed:—1. The remains of a large cyst in the posterior and upper part of the liver. 2. Several other cysts in different parts of the liver. 3. In front and laterally, the pleura was divided into two separate compartments. The upper and larger contained fluid and hydatids in large numbers; the lateral and lower was almost devoid of fluid. Behind the pleura was thickened and its layers adherent. 4. No evidence was found of previous communication between the lung and the hydatid, but the former was much reduced in size from compression. The reason one had been misled was thus rendered clear. The cyst had pushed up the diaphragmatic pleura, and eventually inflammatory adhesion between it and the pleura lining the lung had divided the pleura into two separate compartments. The upper and larger, into which the cyst burst, contained fluids and hydatids; the lower, which alone had been tapped, did not communicate with the hydatid cyst at all, and was almost devoid of fluid.

There are several points worth notice in connexion with this case:—1. Its obscurity when the patient first came under observation; the diagnosis seemed to rest between (a) chronic congestion of the liver due to alcohol, (b) lardaceous disease the result of syphilis, and (c) malignant disease. There was, however, a complete absence of jaundice, which is usual in chronic congestion; absence of any history or evidence of previous syphilis; the patient's appearance did not at all suggest such a cause as cancer; and the emaciation was not what one would expect in a man with a cancerous liver of such dimensions. After the patient had been under observation two or three weeks the temperature and pulse suggested suppuration; but we were not fortunate enough to hit off the right spot or spots in the liver, and so the nature of the case remained doubtful. The sudden expectoration of bile-stained pus, with the change in the physical signs and symptoms, made the diagnosis of abscess in the liver certain. As, however, the microscopic examination of the fluid showed only pus-cells, the true state of affairs continued undetected. I do not, however, think sufficient care was paid to the examination of the fluid. One should not be content with the examination of two or three specimens, half a dozen or more ought to be very carefully examined. Another point I should certainly not omit in the next doubtful hepatic case I have is to explore with a fine hypodermic needle the posterior aspect of the liver. Several punctures were made in front, but unfortunately only in front. They certainly seemed to do no harm (at least I have never seen any bad results myself), though there may be some slight risk in a case like the present one of setting up suppurative pleurisy. I think, therefore, with more care a correct diagnosis might have been arrived at earlier, though I question whether in this case, where the hydatid was multiple, the result would have been different. 2. Absence of any lengthy previous history. The patient believed he was perfectly sound three weeks prior to admission, the time no doubt when suppuration began. 3. The case shows that an abscess, even of large dimensions, situated in the upper and posterior part of the liver may easily escape detection, and by causing the descent of the lower edge of the liver induce a belief in the uniform enlargement of that organ. 4. An ordinary hydatid is characterised by painless enlargement, which may be very great, but is not uniform in all directions, following one direction in particular. In the present case, from the position of the cyst, the enlargement appeared uniform, and much pain was also complained of. Suppuration of the cyst changes the whole aspect of the case, altering both the characteristics of the fluid and the symptoms. 5. Hydatid tumours are rarely multiple. This case, therefore, was an exception to the general rule. The multiplicity was, no doubt, due to the fact that the patient had swallowed several ova of the tœnia, and not, as was once thought, to one cyst being formed from the other by a process of germination. 6. Sudden deaths after operation for suppurating hydatids have been recorded by Bryant, Murchison,

Martineau, and others. In the present case, it was probably due partly to shock, and partly to the small amount of blood lost by a patient whose condition was so precarious.

Hull.

ON CLINICAL THERMOMETRY, AND THE TAKING OF TEMPERATURES.

By SURGEON-MAJOR BOILEAU, B.A., M.D., &c.,
ARMY MEDICAL STAFF.

The "One-minute" Thermometer delusive, and dangerous to use.—Axillary Temperatures v. Mouth Temperatures.—Time required for a Correct Observation.—The Temperature of the Human Body.

IT is now many years since I became interested in clinical thermometry. My first temperature charts, the result of thousands of observations, appeared in the eighth volume (1866) of the Army Medical Department Reports, and I believe they were the first systematic series of charts published by any medical officer in the public services. But in saying this I am open to correction. Be this as it may, I have, at all events, for some five-and-twenty years been taking temperatures with all sorts of thermometers, and in many different parts of the globe, including the East and the West Indies, the Mediterranean, North America, and at home.

My first remarks will now be on the so-called "one-minute" thermometer; and concerning this I had almost written two years ago, but decided not to do so, believing the instrument would soon cease to be advertised; but, the advertisements still appearing, I have changed my mind. The instrument is not only more advertised than ever, but we have now offered to the profession a "half-minute" thermometer, and its use is apparently sanctioned by high authority. In a recent issue of a contemporary, a Berlin correspondent, writing on the health of the German Emperor, says, "The temperature is always taken in the mouth with a 'half-minute' thermometer, which was given to Sir Morell Mackenzie by an eminent surgeon during his last visit to England..... All the physicians are now, however, unanimous in their approval of the 'short-time' thermometer, and it alone is used in the case." The advocates of this thermometer claim that it will register the temperature of the human body in one minute. "To any medical man who has an extensive practice, this is a great desideratum." "By this latest improvement the time required to mark the maximum temperature is reduced to one minute." "This thermometer is guaranteed to take the maximum temperature of patients in one minute." In such terms are its supposed advantages set forth.

Now, a thermometer can only register the temperature of the heat to which it is exposed. It cannot register the maximum temperature of any body until that maximum is reached, and the maximum temperature of the human body, or of the mouth, is not reached until it is covered up or closed for some time, and this time is more than a minute—some would say ten minutes. That the "one-minute" thermometer will register the existing temperature of a body in one minute is true; but the same is true of any other clinical thermometer—even a common bath or garden thermometer will do this. Take a tumbler of warm water, say at 100° F.; plunge any clinical thermometer into it, and you will find that the temperature of the water is registered in less than a minute, probably in less than half a minute. This necessarily happens on account of the very low specific heat of mercury and its high conducting power. The "one-minute" thermometer possesses in this respect for clinical purposes no advantage over any other thermometer, and to suggest that it does is to mislead, and to imagine that it can give the maximum temperature of patients as it is ordinarily obtained is delusive. It is not merely the temperature of a given part of the body that we desire to know—it is the maximum temperature of the part when removed from the cooling influences of the surrounding air, and it takes some time longer than a minute to get this. When a thermometer is first placed in the axilla, that part of the body has been usually more or less exposed to the external air; when the elbow is brought to the side to exclude as much as possible

all external cooling influences, the temperature of the axilla begins to rise, and in five or more minutes it reaches a maximum. How can this maximum (the temperature required for the purposes of diagnosis and prognosis) be measured by any instrument until it is attained? Yet we are asked to believe that the "one-minute" thermometer will do this; that it will give the temperature of the patient, the temperature which is to guide the physician, in one minute; and the instrument is distinguished for this important practical purpose from all other thermometers. This is altogether wrong; but it is worse than wrong—it is, in its possible consequences, dangerous. As it cannot give the required temperature in one minute, a lower temperature is accepted, and this may be one, two, or more degrees below the proper temperature. A nurse, dresser, or patient using this "one-minute" thermometer gives the temperature recorded by it in one minute to the physician, and what may be the consequence? A temperature of 100°, say, is given in place of 102°, or perhaps, what is worse, a temperature under 99°, when the correct temperature is 101° or more. The inference may be that the patient is improving or convalescent, when in reality he may be getting worse, perhaps running into danger, and the anxiety and watchfulness which would result from a knowledge of the real state of things is replaced by a false security, created by the misleading record, and thus the welfare of the patient jeopardised.

When I first saw the advertisements of this "one-minute" thermometer in the *Pioneer* of India, the thought occurred to me, What new physical property has been discovered in mercury that will enable it to fulfil such a purpose? I accordingly sent to Bombay for one, and found, of course, as I had surmised, that it was simply an instrument somewhat more sensitive than the ordinary clinical thermometers, but in no other way possessing unusual qualities, except the disadvantages of much increased fragility and greater cost. This property of increased sensitiveness might be of some use in certain delicate philosophical experiments in which alternating waves of heat and cold had to be measured by seconds, but for clinical purposes it is of no use whatever. Far from being useful, it is likely to be a source of danger.

These thermometers are largely advertised, and, I believe, have an extensive sale, and I know that a power is attributed to them which they do not possess. On one occasion, a few years ago, I gave a lecture and demonstration on these instruments to the officers of the subordinate medical department in a large station hospital in Bengal, and I found that one of the assistant apothecaries doing duty in the hospital was actually in possession of one of them, having lost no time in procuring one on seeing them advertised. This officer had a large number of temperatures to take morning and evening, and he was greatly pleased, as well he might be, that there seemed to be a means of very much curtailing the time necessary for the work. On hearing what I had to say on the fallacy of observations so taken, he produced it, and I was afterwards informed that the agent took it back. I cannot believe there is any intention to mislead in connexion with the sale of these thermometers; the makers probably believe the instruments can save time, and are therefore superior to all other thermometers. I have been assured over the counter most ingenuously that "it gives the temperature in one minute, the others take three minutes."

All that I have said concerning the fallacy and danger attending observations made by these thermometers in the axilla applies *mutatis mutandis* to observations made in the mouth, and they apply with double force to the "half-minute" thermometers. If these thermometers are used as any other thermometers are used they of course answer the same purposes, but they are costly and easily broken, and in those that I have seen the index is set with unusual difficulty.

As to the best part of the body from which to take temperatures, I am decidedly in favour of the axilla. I think the only defence that can be urged for taking them in the mouth—and it is but a poor excuse—is that the practice is convenient, and that it saves trouble; and there is no doubt about this. A person, say, is before you; perhaps a woman in walking dress, or a soldier in his great coat. It is far easier to put a thermometer into the mouth than into the axilla with the usual precautions; and this is the only reason I can see for taking sublingual temperatures. The practice has, however, so many disadvantages that such considerations should have no weight. In the first place, is it not most desirable that there should be uniformity in the taking of tempera-

tures, in order that all should be directly comparable? Is it not desirable that all temperatures should be referred to one standard? It is worse than inconvenient that some observers should make a practice of taking axillary, and others mouth temperatures. They are not comparable without certain considerations; and, as I believe and hope that the majority of observers agree that the axillary temperature gives as true an index of the blood heat as is needed, it would be well if the practice was universal; but this is perhaps the least that is to be said in its favour. There are the following considerations. When you place a thermometer in a person's mouth, you shut his mouth in more senses than one. Whilst the temperature is being taken the patient must be silent, and it really is sometimes distressing to see the practitioner standing by watching the speechless subject, who is, moreover, often very uncomfortable, for many people cannot breathe at all easily with their mouths closed. All this is avoided by taking the temperatures in the axilla. Again, the instrument is more likely to be broken in the mouth than in the axilla. This is the case with children, in cases of delirium, of partial or complete insensibility, certain spasmodic affections, &c. Last, but by no means least, there is the offensiveness of the practice—be it even in the idea only. Is it not objectionable to retain in the mouth an instrument that has been in another person's mouth? Most people object to any but their own toothbrush, even to one belonging to a healthy member of their own family; how much stronger must be the objection to keep in the mouth for some minutes an instrument that in all probability has been recently in the mouths of half a dozen more or less diseased persons. Who would knowingly keep in their closed mouth a thermometer that had been in the mouth of a patient suffering from diphtheria, scarlatina, cancer or syphilis, various forms of ulceration and suppuration, or of dyspepsia with foul breath and loaded tongue, &c.? It is no justification to say the thermometer is always thoroughly cleansed first; for, as a matter of fact, this very necessary measure of precaution is sometimes neglected. It must be remembered, too, that a clinical thermometer cannot, like other instruments, be placed in hot water for the purpose of cleaning it; and it requires very hot water indeed to destroy the contagium of disease. Nor is it in every house that sufficiently powerful disinfectants are always at hand in which to place the thermometer before use. Even apart from the possible danger of disease transmission, the ideas suggested by the practice are, to say the least, disagreeable. No such objections apply to taking the temperature in the axilla. A perfectly clean thermometer is at all times desirable, but, should it not be quite clean, the axilla is a much safer place for it than the mouth.

The allegation that in the mouth a more correct temperature is obtained than in the axilla may or may not be true; it is not of sufficient force to be an argument against axillary temperatures. The temperature of the blood one cannot get; at best we can get only an index to that temperature, and the axillary index is as reliable as the sublingual. The cases in which we cannot take axillary temperatures compared with those in which we cannot or unquestionably ought not to take mouth temperatures are very few indeed. I would not allow any medical student, nurse, or dresser to take sublingual temperatures. I would teach them from the time they first took a clinical thermometer into their hands that the axilla is the proper place to take all temperatures. Uniformity of observations and safety would thus be secured. If some take temperatures in the mouth, some in the axilla, and some elsewhere—some for one minute, others for five, and others for ten,—it is hopeless to expect that we shall ever have standard charts of reference, to say nothing of the evil consequences of misinterpretations. It is a matter of surprise to me that so many practitioners still take mouth temperatures, and still more surprising is it to hear them depreciating the value of observations made in the axilla.

With regard to the precautions to be attended to in taking axillary temperatures, I will only refer to the one which concerns the time necessary to get an observation that may be relied on for medical purposes. From a very large number of observations that I have made and graphically traced I hold that five minutes are sufficient for every practical purpose, and that it is waste of time to occupy a longer period in an observation. It can be easily proved. Take an ordinary temperature chart, and let each vertical space represent an interval of fifteen seconds. Let an assistant

place any clinical thermometer in the axilla of a patient with some feverish affection, and closely watching the rising mercury call out its height every fifteen seconds from the moment of commencing the experiment. Let this be continued for ten minutes. If a graphic representation of the numbers so obtained be now made on the chart, a paraboloid curve will be projected. Obtain several of these under various circumstances, and if an inspection of the whole will not convince an unprejudiced observer that, for all practical purposes of diagnosis and prognosis, a carefully made observation of five minutes is sufficient, nothing will persuade him.

Although the remarks which I have made above on the fallacy attending conclusions drawn from the "one-minute" thermometer are true, it is also true that reliable temperatures may be taken by the application of a thermometer to the axilla for only one minute. A knowledge of this fact will sometimes be of use in saving the time of those who have charge of many patients. It is, for instance, possible to take with one thermometer the temperature of a dozen patients in about twenty minutes, whilst ordinarily it would take over an hour. To do so, the patients should be told (under such circumstances as admit of this method of procedure, and with or without the aid of assistants) to bring their elbows to their sides, and place their arms in the usual position. Whilst the medical man is occupied five minutes in taking the temperature of the first patient, the armpits of the remaining patients are, so to speak, heating up and acquiring their maximum temperatures. It will be sufficient then to place the thermometer in the axilla of all but the first for little more than one minute, and thus one can pass from patient to patient, observing correctly the temperature of each in one minute, and it does not require a "short-time" thermometer to do this; any ordinary clinical thermometer will do it. It must be remembered, however, that the thicker the glass of the thermometer the slower it registers. Of course this quick method of taking temperatures must be done with all necessary precautions. They are obvious, and the person who neglects them would neglect a good many other things.

Finally, as to the axillary temperature of the human body in health, my experience goes to prove that it is always under 99° F. both in the tropics and in cooler regions. Numerous observations made by me in the plains of Bengal fully bear out the conclusions I arrived at fifteen years ago—conclusions which were then published. My observations have now been made in very different climates, under conditions of heat and moisture the most varied; in places where the true shade temperature was very often over 100°; in places where a temperature many degrees below zero was not uncommon; and in places where the hygrometric state of the air, as indicated by the difference between the dry and the wet bulb thermometers, varied from 0° to 30°. I believe, therefore, I am correct in maintaining that the temperature of man is not higher in the tropics than elsewhere, notwithstanding the belief of those who still accept the teaching of Dr. John Davy. For further information on this subject, I would refer to papers of mine in THE LANCET of Aug. 23rd, 1873, and April 23rd, 1878; also to an important paper in the eighteenth volume of the Army Medical Department Reports, published in 1878, by Surgeon-Major J. Crose Johnston; and to communications from Surgeon-General Furnell, of the Madras Army, and others, in THE LANCET of the same year.

Woolwich.

THE APPLICATION OF THE THEORY OF EVOLUTION TO PATHOLOGY.

By ALBERT GRESSWELL, M.B., B.A. Oxon., &c.

THE rules and the reasonings of common sense admit of almost infinite expansion, and we find that the result of this extension of the universal law that every cause must have an effect, and inversely that every effect must have a cause, could we but trace it, does, as a matter of fact, lead us to that belief in evolution which, having previously been recognised in every other department of human inquiry, has at length also been admitted to hold, even in the last strongholds of empiricism, the domains held by the monsters disease and death. For some time it has been held that the universe, together with all its multifarious contents, has gradually been developed from the simplest

forms of matter of a primeval past. The life-work of Charles Darwin, coupled with that of other writers and investigators, such as Herbert Spencer, added the link of vitality to the chain of thought, previously broken and incomplete. Now, one more link has been hinted at, it is for the observers of this age to rivet it; and we must not forget that the difficulties which will be experienced by those who try to do so will proceed rather from a superabundance than from any deficiency of the facts to be gathered together into one unique whole. It must be sufficiently obvious that, since changes or functions displayed by organisms which depart so far from those of health as to be called abnormal can only be classed as part and parcel of the sum total of processes manifested by them, they, too, can have no other than a similar relative explanation. Hence it follows that the idea of evolution in the field of pathology is in reality not only to be accepted in itself as unquestionably true, but is rather, as I hope to show, to be accounted as one of the supports of evolution at large as an indisputable fact. If it is true that all those numerous and involved processes which make up life in all its many varied forms and phases are to be considered in connexion not only with one another, but also with the phenomena from time to time occurring in the outside world; it is also no less true that the general statement applies with just the same force to the matters of fact presented by creatures suffering from disease as it does to the normal functions of healthy living beings.

Now, it is not too much to say that the explanation of certain diseases on the idea that they are caused by the presence and growth of minute vegetable germs in the blood and tissues is one of the most important of all the generalisations which have ever been made in regard to the causation of diseases, and consequently of both the prevention and the cure of them. It has been clearly demonstrated that many diseases are connected with, and apparently result from, the presence of organisms of microscopic size, in different parts of the body, the blood, the lymphatics, the tissues, and the organs. No doubt there are conditions of receptivity on the part of the man or animals liable to be attacked by these germs, and though at present we know very little indeed definitely on this subject, yet the information gathered in regard to these and allied points is gradually but surely growing; and already much has been learnt respecting the best methods of coping successfully with these living germs. Further, while many of the maladies known to depend upon the presence of living vegetable organisms in the fluids or tissues, or both are liable to afflict human beings, some are those of lower animals, while others are alike capable of attacking both human beings and animals indiscriminately. This leads us to the fact that the relation between the diseases of human beings on the one hand and those which afflict animals on the other is a close one, and one of the highest possible significance. This last remark is not so much true on account of what is already known, although that is of deep importance; but because the diseases—and especially of course the contagious and infectious diseases—of animals are now attracting a degree of attention on the part of bacteriologists and comparative pathologists which cannot but closely affect all our ideas as to the inner and obscure workings of disease. Of the numerous diseases which afflict mankind, some at least are certainly liable to be communicated from lower animals; and hence our knowledge, in order to be complete, must be supplemented by the information in regard to therapeutics and preventive measures which can be derived from the study of the first origin of these particular maladies. Three good instances of this general statement may be found in the case of three dread diseases which, as it seems, primarily attack lower animals, though they are also grave scourges to mankind. These three are tuberculosis, anthrax, and hydrophobia, and if we add scarlet fever we have a list of four. Now, tuberculosis is widely prevalent among oxen; and it is not improbable that the disease may be transmitted from infected oxen to human beings by the medium of the milk, and by that of the flesh. It is very clear, therefore, that vendors of milk should be prevented by severe repressive legislation from selling the milk of cows which are badly diseased. Indeed, it is quite as necessary that this precaution should be effectively carried out as it is that the prohibition of the disposal of flesh that is unfit for human food should be duly enforced. Of late years great improve-

ments have been made in relation to such questions as those we are now considering, and this advance in hygienic sciences is highly conducive to the public health; but we must not forget that though much has been done, nevertheless there remains a great deal more to be achieved in the future by the various sanitary authorities. It is to be borne in mind that milk is, unless due care be taken, in several different ways liable to be a source of danger and of death. The germs of scarlet fever, those of diphtheria, those of typhoid fever, and probably those of yet other maladies, may through the agency of milk spread desolation far and wide. It is possible that these germs may be conveyed to the milk by contact of that fluid with the exhalations of patients, or they may be communicated to it by means of the addition of water into which some portion of infected excreta has been accidentally introduced as a consequence of faulty drainage or other hygienic defects or shortcomings. The chief part of the danger arises from the fact that milk is a fluid most admirably suited for the growth and multiplication of germs, so much so, in fact, that if only a few gain entrance into it they will readily multiply, and this is naturally one of the main reasons why milk is so liable to become a source and means of infection.

Moreover, as I have above pointed out, it may now be very seriously advanced that the method of contagion may be of a much more direct kind. In regard to tuberculosis, as implied above, it is at present difficult to be quite certain that human beings can receive the germs of that disease as a result of the consumption of either the flesh or of the milk of tuberculous oxen. With reference, however, to the communicability of scarlet fever by means of infected milk of cows to man, the recent evidence supplied by Drs. Klein, Power, and Cameron seems nothing less than conclusive, and we may almost feel quite certain that one, at least, of the most fruitful sources of the dissemination of scarlet fever throughout the civilised world is that most nutritious, but yet at times most dangerous, article of diet, milk. It has been shown that there is a disease from time to time affecting bovine animals, apparently so mild that it may merely be noticed as a slight eruption, but causing the milk to be of such a nature that it will spread scarlet fever far and wide amongst unsuspecting families. Hence we cannot be too careful in regard to the selection of the milk we use, and it is in all cases a very wise precaution to raise the temperature of that fluid to just below boiling point and to keep it at that temperature for some little time, since this treatment of milk is said to be sufficient to kill the streptococci of scarlet fever if they be present therein. The milk of one infected cow is sufficient to vitiate the whole of the milk of a dairy if it be mixed with that of others, for these vegetable germs will thrive and multiply rapidly, and a very few of them will soon lead to almost incredible swarms of streptococci.

Of other maladies of lower animals which are communicable to mankind I may mention hydrophobia, glanders, and anthrax. In reference to the last-named of these—viz., anthrax—more usually known in human beings under the name of woolsorters' disease, it may be said that the cause of the disease, whether manifested in human beings or in animals, is the same. Rod-like bodies of microscopic size, the anthrax bacilli, swarm in the blood of sufferers from this dreadful scourge. Now it seems to be established, almost beyond the possibility of doubt, that we must look to the outside world for the primary origin of many of the vegetable germs which produce the various maladies to which men are liable to be subjected. The different varieties of micro-organisms require definite conditions for their growth, development, and multiplication. In very many cases damp and wet are associated with putrefactive changes, which last indeed generally follow upon, or rather perhaps cause, the decay of lifeless organic material, both vegetal and animal. This putrefaction, this decay, is the result of the vital processes of certain micro-organisms. It is, moreover, by no means difficult to see how an animal, already suffering and debilitated in consequence of the more direct results of damp and cold, and partially famished owing to the lack of nutrient material, may readily become a prey to the attacks of these minute and rapidly multiplying organisms. Indeed, they may be introduced by means of the lungs or alimentary canal, or may gain access to the blood through an abraded surface. In the course of ages particular kinds of bacteria would gradually tend to become more dangerous than others in the case of some of the various groups of animals respectively.

In such a way as this we may suppose that the origin of certain diseases—for instance, that of anthrax—is to be explained.

The life history of septic micro-organisms outside the animal body is not well known as yet. That they are modifiable by alterations of temperature, and by differences in the medium to which they are subjected, are palpable clues which are being extensively worked out. There are, for instance, some bacteria which under the influence of certain conditions of this kind produce definite pigments. From the results of many experiments, Dr. Klein concludes that there are some definite micro-organisms which, as a rule, exist and grow in various substances, and also possess the power of growing and thriving in the bodies of certain suitable animals, in them producing a definite pathological condition. Just as there are species of plants which act as poisons to the animal body, and other species of plants which, although belonging to the same group and family and although very much alike to the others, have no such power, and cannot acquire such power by any means, so there are micro-organisms which are pathogenic, while others are harmless. The latter remain so, no matter under what conditions, and for how long a time they grow. Further, it is known that careful and thorough drainage, and the removal of all tendencies to wet and putrefaction, must gradually bring about a gradual diminution of diseases like anthrax. Other diseases also, such as ague and malarial fevers, are caused by the prevalence of germ-containing vapours, arising from ill-drained marshy lands, on which the vegetation is always liable to undergo putrefaction.

Having now briefly alluded to the germ theory of disease, and having attempted to indicate in what kind of manner we may suppose that some zymotic diseases may have originated, I now proceed to discuss other aspects of the subject. When dealing with the phenomena displayed by higher animals, we must remember that all animals, both high and low, may be considered as being composed of an almost infinite number of cells, or of structures which more or less closely resemble cells. These cells have been variously modified in all kinds of ways and degrees, in correspondence with, and, so to say, in order to meet the many different requirements of more complex conditions. With these words by way of prelude to the considerations which follow, I now propose to give an account, firstly, of some structural points bearing upon the question of evolution in disease, after which I shall discuss some functional aspects of that subject, and then conclude with a brief reconsideration of the more general points of view. Before continuing, however, I must here acknowledge the copious use of facts and statements contained in a paper written some time ago by Dr. D. Astley Gresswell, M.B., B.A., Christ Church, Oxford.

Glancing for a brief space at the lowest forms of life which are known to us, we observe that they multiply either by splitting into two or more independent parts, or by a very closely allied process—viz., the budding off portions, which gradually increase in size, both before and after they are set free. Regeneration seems to be the more active the younger the individual, and also the lower in the scale of life it may be. It is said that even the ova of higher animals may divide, and that each of the two parts may, in the due course of time, develop into a perfectly formed adult. With regard to the process of budding or gemmation above referred to, it may take place in any part of a lowly-developed organism; but as we advance gradually up the scale of life, we find that it is only certain parts which can take on themselves this function of reproduction. Nevertheless, indications of the primary condition are manifested by such facts as that an arthropod can throw off a leg at the joint above a lacerated segment, and then bud out a new limb from the centre of the stump. Similarly, also, the newt, it is said, can replace an eye. It seems, also, very possible that the granulations which tend to occur on cut surfaces, the papillomata and other growths which make their appearance on irritated patches of the skin or mucous membranes, the villi of the chorion and their abnormal developments, are in reality expressions of a power or property of cells similar to that of fission and gemmation as displayed by the lowest organisms. Moreover, growth and multiplication are enhanced by stimulating, or giving an extra supply of, food to lower living beings. Further, this same fact shows itself in the case of endothelium, when

made to germinate by means of stimulation, and also, according to Kremansky, in that of the cells which are contained in the capsules of cartilage subjected to cauterisation. Again, Stricker holds that every living cell of any higher animal may divide; and similarly, Dr. Beale maintains that pus cells may develop from bioplasm of any part of the body if too freely supplied with pabulum. When such processes as these I am mentioning manifest themselves on a large scale in higher animals, we speak of them as inflammatory; but, as a matter of fact, they are comparable in their essential characters to those which may from time to time occur among individual lower organisms. Certain processes often called inflammatory, even though they occur in the avascular structures of higher animals, are in reality the result of greater nutritive activity, and are represented among living things by the rapid growth I have spoken of above. In support of this indubitable statement, it may be mentioned that the cells which result from inflammation are certainly fitted for but little more than the preservation of their own independent vitality, thereby affording a striking similarity to the two or more cells produced by the division of a lowly developed organism, each part of which is no sooner set free than it proceeds to go, so to say, adrift, about its own business, intent upon carrying out merely the objects and pursuits of its own independent life. In inflammation properly so called, as it shows itself in higher animals, the simple process here spoken of is complicated with other factors. The migratory cells are even still more active, and stoppage of the circulation and the consequent accumulation of leucocytes and ozone-bearing corpuscles are prominent features of the process.

(To be continued.)

A NOTE ON THE TREATMENT OF DYSENTERY.

BY SURGEON-MAJOR S. L. DOBIE.

THE local treatment of dysentery is seldom resorted to, unless as a last resource, except by those who see a good deal of the disease. The orthodox treatment is generally understood to be by large doses of ipecacuanha, in boluses, on an empty stomach, preceded by a dose of laudanum to allay, if possible, the ensuing sickness.

In India, of late years, treatment by tincture of aconite in small frequently-repeated doses has been recommended; and a combination of tincture of cannabis indica with tincture of hyoscyamus has been favourably reported upon. It is worth noticing that, in these two forms of treatment, ipecacuanha, which is generally looked upon as our sheet-anchor in this disease, is omitted. Some five years ago, a writer to THE LANCET advocated the use of nitrate of silver enemata in dysentery. The injections, as far as I can remember, were large ones, and were intended to reach well up the colon. If retained for any length of time an injection of solution of common salt, to render the nitrate of silver inert, was recommended. Another favourite form of treatment is the washing out of the lower bowel with plain warm water at the beginning of treatment, and it may be repeated. This generally gives great relief, and lessens the tenesmus, which is, after all, the most painful condition of the disease. The use of small opiate enemata, to be retained, with or without ipecacuanha, and administered after each motion, is a form of treatment which affords considerable relief. There can be no doubt that, when once the straining and irritability of the lower part of the rectum are checked or lessened, a great deal has been done towards the cure of the acute disease; and certainly three-fourths of the woes of the patient are at an end. The irritable rectum provoking so many calls to stool, and the violent straining which keeps the patient so miserably fixed there, allow the inflamed bowel no rest, and add fuel to the fire of their own irritability.

In treatment by the mouth, my own experience during the last sixteen years in India has been in favour of small doses of ipecacuanha with Dover's powder, repeated often enough to produce a feeling of nausea without actual vomiting. Latterly I have found the addition of cannabis indica to the ipecacuanha and opium apparently an

advantage. It is very likely that treatment by tincture of aconite in small frequently-repeated doses would lend itself advantageously to cases of acute dysentery in which there is a good deal of fever; but I have no experience of it. But for checking the irritability of the rectum and the tenesmus, I know of no remedy so wonderful in its effect as the enema of nitrate of silver to which I have alluded. It is a remedy which is known to, and used by, many no doubt. Some cases treated by it have been reported lately in the *Indian Medical Gazette*, but it is hardly as well known as it ought to be. When the stools are frequent, consisting of flakes of mucus stained with blood, and the patient is suffering torments from straining, then it is that the nitrate of silver enema gives an extraordinary amount of relief.

Unlike the original writer, to whom I am indebted for this form of treatment, I do not give the enema strong or in large quantity. I use six ounces of water with ten grains of nitrate of silver for each enema. Nor do I trouble myself whether the patient retains it or not; as a rule he does not, but if he does it is probable that all the nitrate of silver will be converted into an insoluble compound before it can be absorbed. This enema might be given two or three times in one day; but, as a rule, one enema allays the symptoms for the day, and does not require repeating unless they become urgent again in a day or so. It commonly happens that after one enema the symptoms are not only allayed, but subside altogether; the bowel has rest, the stools become feculent, and a warm bed and diet complete the cure. And while this treatment is so good in an acute attack, it is almost our last resource in those chronic cases so often seen among worn-out invalids sent from India, utterly broken down. In them the thinned mucous membrane, studded with ulcerated patches, is directly benefited by the local application of the nitrate of silver; and here we may use a larger quantity of the enema, and may try to inject it well into the colon. It is encouraging to find how amenable to this treatment is the long-continued, exhausting discharge, which no medicines and no diet seem to control.

In the chronic diarrhoea which sometimes attacks those long resident in the tropics, or which is a sequela of dysentery, in the uncontrollable diarrhoea which often accompanies exhausting diseases, and in the obstinate diarrhoea of infants, so fatal and so often met with in India, the nitrate of silver enema is extremely useful. I may add that my experience of this as a remedy for dysentery, acute and chronic, has been limited to the last five years or thereabouts, and it has been principally among insane natives, a class peculiarly liable to the disease, in the Madras asylum, among native soldiers at Suakin, and among well-to-do Europeans at a hill station in which dysentery is prevalent.

Ootacamund, India.

A CASE OF RUPTURE OF THE BLADDER.

By W. H. BROWN, M.R.C.S.

ON May 4th, 1888, I was called at 2 A.M. to see a young man aged twenty, who while riding home from a concert about 10.30 P.M. the previous evening had met with an accident. Whilst cantering along his horse stumbled and fell; the man was thrown to the ground, and the horse fell upon his body. According to the account given by his companions he was able to rise after a few moments, but was in great pain, and said he "thought it was his bladder." He had not passed urine for some three hours at the least before the accident. He was quite unable to walk, so waited on the road while a buggy was procured to take him home, a distance of half a mile. Hot flannels were applied to the abdomen to relieve the great pain he was suffering, but as he obviously got worse, I was sent for.

On arriving about 3.30 A.M. I found the patient in bed with knees drawn up, distended and tympanitic abdomen; considerably collapsed, with small and frequent pulse; bathed in cold perspiration, and suffering great abdominal pain. He constantly implored me to draw off his urine for him, as he felt an urgent desire to micturate, but had been unable to pass anything since the accident. A No. 10 silver catheter passed easily into the bladder, but drew off nothing but a few drops of pure blood. I diagnosed

rupture of the bladder, and proposed abdominal section as the only chance for the patient—though a poor one in this instance, owing to the very considerable collapse. As I had to send to Sale (eighteen miles) for assistance, I gave the patient one-third of a grain of morphia hypodermically, ordered a little brandy from time to time, with hot bottles &c., and returned home to prepare for the operation. On returning to the patient about 9 A.M. with Drs. Reid and McLean of Sale, I found him in much the same condition—a little stronger, but still showing considerable evidence of shock. A mixture of ether and chloroform was at once administered, and, after shaving the skin and cleansing it with a corrosive sublimate solution, I made a median incision of about 6 in. in length, reaching from a little below the umbilicus on to the pubes. An ounce or two of dark bloody fluid escaped from the lower part of the wound before the peritoneum was opened, and more after dividing that membrane. On examining the bladder (we had excellent light) through the wound, it was found to be almost empty, but no rent was apparent in the fundus or posterior part. On grasping the bladder in the palm of the hand introduced into the peritoneal cavity, and at the same time elevating an irrigating can containing warm boracic solution, and connected by a piece of tubing with a silver catheter in the bladder, the latter organ was felt to distend and fill, and no leakage could be detected at first. When, however, this process was repeated, but with no hand in the abdomen, fluid was presently observed to well up from the direction of the lower and anterior part of the bladder; and, after some trouble, by introducing two fingers deep behind the pubes, an irregular rent about two or three inches in extent was found, and the point of the catheter in the bladder was touched. The bladder contained a quantity of black clot, and the rent led from the bladder into a cavity filled with the same material. This clot was cleaned and washed out as far as possible, both from inside and outside the bladder. An attempt was then made with Hagedorn's needles and holder to sew up the rent, but owing to the inaccessibility of the latter it was unsuccessful. The rent could not by any means be brought into sight, though the abdominal walls were divided quite down to the pubic bone. It was therefore decided to put a tube in the bladder through the rent and abdominal wound, and to irrigate and close the abdomen. This was done, a gum catheter being also introduced into the bladder per urethram, and left *in situ*. The operation lasted a little over an hour, and once or twice during its progress the pulse was very bad. With hypodermic injections of ether and a little brandy by the mouth, the patient showed signs of rallying for a short time, but eventually sank, and died about 8.30 P.M., twenty-two hours after the accident, and about ten hours after the operation. No necropsy could be obtained.

Remarks.—In the last edition of Erichsen's Surgery, it is stated, "When the bladder is ruptured by a blow on the abdominal wall, the rent takes place always through that portion of the viscus which is covered by peritoneum." And this remark seems to have held good as regards all the cases recorded lately. It was so in both Sir William Mac Cormac's successful cases reported in 1886, in Mr. Teale's fatal case last year, and in Mr. T. Holmes' successful case of last year. Now, in my case, I have never been able to feel convinced that the rupture was at all intra-peritoneal; from its situation one can hardly understand how it could be. That in its greatest part, at any rate, it was extra-peritoneal is certain. In the course of the operation it was apparent that the reflection of the peritoneum from the anterior abdominal wall to the bladder was not abnormally low, as in a case recently reported in THE LANCET. The fact that the bladder seemed to fill and distend without much leakage while grasped by the hand in the peritoneal cavity must have been due to pressure of the rent against the pubic symphysis. Besides the unusual position of the rent, this case seems to have differed from all those mentioned above in the presence of considerable and lasting collapse dating from the time of the accident. This was, indeed, I believe, the proximate cause of death. Though no detailed examination was made, yet there was no reason to suspect injury of any other organ. The patient was conscious and intelligent throughout, and complained of no other trouble. In a future case I would certainly endeavour to make sure of the extra-peritoneal part of the bladder before opening the peritoneum.

Malaga, Victoria.

A Mirror

OF

HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

CASE OF TYPHOID FOLLOWED BY MEASLES; PAROTITIS
AND SLOUGHING OF THE FACE.

(Under the care of Dr. LIONEL BEALE.)

IN THE LANCET of June 30th (p. 1295) we published a case of typhoid fever and measles combined. In the following case, although measles did not occur until about convalescent from typhoid, still its following so closely after and its peculiar sequelæ render it rather unusual. For the following account we are indebted to Mr. Francis Ewens, late house physician.

Emma B—, aged twelve, came into the Thring ward at King's College Hospital, under Dr. Beale, on Oct. 4th, 1886, with a history of (for the last ten days) shivering, headache, pain in the back and abdomen, and bad diarrhœa. The temperature was 103°, and the next day typical typhoid spots appeared on the abdomen, fresh ones continuing to appear for the next ten days, and the temperature oscillating between 102° and 104°, with diarrhœa all the time and some slight delirium. The temperature began to fall from the 16th and the diarrhœa ceased, giving place to extreme constipation; about Nov. 1st the temperature was normal. On Nov. 28th, without any premonitory symptom, the temperature suddenly began to rise, reaching 102·4°, and the next day 103·6°, and then a dark-red raised rash, evidently that of measles, appeared first on the forehead and face, spreading by the next day to the trunk and limbs and accompanied by running and suffusion of the eyes, but with little sneezing. The constipation still continuing, the rash faded on the fourth day (Dec. 4th), and the temperature also fell to 100°; but the child, however, seemed unusually weak and ill, and the temperature did not go any lower, but three days afterwards began to rise, with morning and evening oscillation. On Nov. 9th, the urine being quite normal, as it had been all along, the eyelids looked a little puffy, and the angle of the left jaw was tender and swollen, and by the next day both parotid glands were enlarged, swollen, and tender, and the temperature had risen to 104°. The face then became very flushed, and on the next day (Dec. 12th), the temperature having fallen a degree (to 103°), a red rash appeared, covering all the body except the face; the papillæ of the skin were raised and bright red; the rash best marked on the legs, scarcely at all on palms and soles. By now the eyelids were very much swollen. The rash was still distinct on the 15th, fading gradually afterwards; the joints of the legs were shining and glazed. The action of the bowels now became light coloured and very offensive and loose. The child felt extremely ill, the lips were becoming covered with sores, and the food was very badly taken. On the next day the cheeks and all the face began to swell, and on the following day a small slough appeared inside both cheeks; the parotids had in the meantime gone down a little, but not entirely. The lungs up till now had been quite clear, and the urine non-albuminous. The face now peeled in a few places, but was even more swollen. She remained in this condition three days, the temperature being about 100°, the pulse getting feebler and quicker, and the lungs becoming œdematous; then the temperature rose again to 104°, and remained there, oscillating daily to about 101° until death. The eyelids meanwhile were even more œdematous and the cheeks more sunken, the features becoming quite unrecognisable, and the mouth with the greatest difficulty opened. She was given large doses of stimulants, but could hardly be made to take them. By the 24th the cheek had sloughed through at the chin and a tooth dropped out, another following on the 26th, and a foul discharge came from the eyes and nose. Blisters then formed on the front of the legs, thighs, and hips, the eyelids ulcerated like the chin, the lips became blue and swollen; but she still

lingered until Jan. 1st, at which time the lower angle of the mouth and cheek was one huge slough, apparently just about to give way. There had never been any dulness over the lungs, except at the extreme base, but there were râles all over the back, the breathing had become very hurried; the pulse very rapid and almost imperceptible, and the patient for some days had been quite delirious. No post-mortem was obtained. Large doses of stimulants had been given all through, and the new and ulcerated cavities were continually washed out with antiseptic solutions and covered with eucalyptic oil; but the treatment was most difficult, the patient objecting to almost everything. No diagnosis was made as to the nature of the last rash.

CITY OF LONDON INFIRMARY.

INTRA-CRANIAL SUPPURATION WITH NEGATIVE SYMPTOMS;
NECROPSY; REMARKS.

(Under the care of Mr. W. GEM.)

S. B—, aged thirty-eight, corkcutter by trade, a well-developed man, with abundance of adipose tissue distributed over his body, was admitted into the infirmary on March 29th, 1888, suffering from right hemiplegia, with complete loss of motion and sensation *plus* aphasia of three weeks' duration. The only symptoms he complained of were indefinite pains in the head, at times radiating towards the back of the head opposite the torcular and down the neck; he had no discharge from the ear, no lagophthalmos or ptosis; he said his sight was perfect; there was no external tenderness or wound over the scalp, no feverish symptoms, and had had no particular illness; bowels were obstinately confined. History: Was a hard drinker, and after a symposium of a week's duration had a fit and fell, striking his head on the left side. He was treated on admission with compound decoction of aloes, compound spirit of ammonia, and camphor water, *plus* a blister to the neck, after which he felt much better, and continued to improve, and gained a fair amount of use over his arm and leg; his speech also showed great improvement—in fact, he appeared so much better that he was put upon solid food and the iodide of potassium. On April 29th, just a month after admission, the nurse noticed a slight discharge from the ear, which became purulent about fifteen hours before death, also a slight fulness in the neck below the ear about the same time. The only thing he complained of was feeling cold, upon which he was supplied with extra clothing, after which he stated he felt quite comfortable, dissolution taking place at 4 o'clock, on the morning of April 30th, in a very quiet manner, in fact, almost as if sleep had passed into death. It may be added that he felt comfortable, and ate and slept well all through during his stay in the infirmary.

Necropsy, twenty-four hours after death.—Body covered with adipose tissue in its entirety; no scalp wound or fracture of skull. On removing the calvaria there was no congestion of the meninges, but beneath the dura mater, opposite the first occipital convolution, there was a circumscribed abscess about the size and capacity of a hen's egg, filled with greenish-yellow pus, the cavity being lined with a well-marked membrane. There was another abscess, situated over the supra-marginal convolution, which had channelled the brain substance, passing into the Sylvian fissure, and thence to the under surface of the brain and temporo-sphenoidal lobe. There was superficial necrosis of the temporal ridge, and perforation of the dura mater opposite the internal auditory meatus, hence the pus in the ear; there was also perforation over the jugular foramen, hence the pus in the neck beneath the sterno-mastoid, causing the bulging in that region; otherwise the brain and skull were healthy. Section of the internal ear proved it to be perfectly normal, and no signs of otitis media existed. The lungs, heart, arteries, bladder, and intestines were normal, the liver was cirrhotic, spleen greatly enlarged and congested; the kidneys were also congested, with a large amount of adipose tissue around the pelvis and calices. The fundus of the ear was, unfortunately, not examined, although probably not much benefit would have been derived from it in the way of diagnosis.

Remarks.—The query arises, What was the genesis of the abscesses? were they due to the breaking down of blood clots on account of the debilitated condition of the patient from the dire effects of an ill-spent life, or what was the cause of the necrosis of the temporal ridge? was it due to the shock

of falling and striking that side? I cannot look upon the disease of the bone as causing the abscesses, as it would have been impossible for it to get to the situation over the occipital lobe. As regards the pus travelling down the neck, I fancy the counter-irritation to the neck might have determined it to take that course. Touching trephining, I do not think there were any symptoms indicative of intracranial suppuration until a few hours before death; and in reference to the pain in the head, I do not think there was sufficient locality about it, even if pus had been diagnosed, although Mr. Hulke was led into an erroneous conclusion in his cases as regards the pain and the seat of the abscess. On the other hand, we have the authority of Mr. Horsley and Dr. Ferrier to explore when in doubt, but I honestly think, taking the above case on the whole, it was replete with obscurity and misleading in the extreme as regards the salient points of cerebral abscess.

HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.

A CASE OF OTITIS INTERNA AND CEREBELLAR ABSCESS, IN WHICH THE SKULL WAS TREPHINED AND THE ABSCESS OPENED; NECROPSY.

(Under the care of Dr. HUTTON and Mr. WRIGHT.)

FOR the following account we are indebted to Mr. J. Hilton Thompson.

Benjamin M—, aged eleven years. Six months before admission the patient had variola, followed by deafness on the left side and discharge from the right ear, which continued for more than five months, when the left ear commenced to discharge. On admission there was a purulent fetid discharge from both ears, destruction of both membrana tympani, and fungoid granulations at the bottom of the external auditory meatuses. From symptoms developed after admission it was decided that an abscess was situated either in the left temporo-sphenoidal lobe or in the left cerebellar hemisphere, and an operation was advised. The following is a short account of the operation, performed on July 13th: A circle of bone was removed with a trephine one inch and a half in diameter, the centre of the opening being about an inch behind a point two inches above the left external auditory meatus. The dura mater was divided by a crucial incision, and the exposed brain explored in various directions with a director, but without result. Another opening was made with a gouge half an inch above the left superior curved line one inch and a half from the middle line, and an inch above the occipital protuberance. A trocar and cannula were passed through the opening downwards, piercing the occipital lobe and tentorium cerebelli into the cerebellum. On withdrawing the trocar about one drachm of thin fetid pus escaped through the cannula; the latter was left in to serve as a drain, the guard of the cannula having been passed through to a slit in the flap. No paralysis resulted from the operation. Seven hours afterwards Cheyne-Stokes' respiration was noticed, and the patient died eight hours after the operation. The temperature just before death was 106°6'.

At the post-mortem examination, the petrous portion of the left temporal bone was found extensively diseased, and perforated pus appeared to track backwards between thickened and adherent dura mater beneath the left temporo-sphenoidal lobe towards the cerebellum; in the left hemisphere of the latter, was found a large abscess, occupying its posterior inferior and inner part. Some hæmorrhage was also found at the base of the brain.

The importance of such cases as the above, from the influence they may have upon brain surgery, demands their being made public as soon as possible. The above abstract is intended as a preliminary notice; a more detailed account will be published at a later period.

CONSTANT WATER-SUPPLY FOR THE CITY OF LONDON.—The Gas and Water Committee presented their report on a constant water-supply to the City, at a meeting of the Court of Common Council held last week. The inquiry was initiated in consequence of several petitions to the Court on the question. The report enters fully and exhaustively into the subject, and expresses, in conclusion, the opinion, on the facts and information they have obtained, that it is not expedient in the interests of the petitioners and the citizens generally, to take any steps in the direction indicated.

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Specimens.—Removal of Uterine Appendage and Parovarian Tumour.—Peri-uterine Hematocoele.—Vesicular Mole.

A MEETING of the Obstetrical Section was held on May 25th.

Dr. W. J. SMYLY exhibited a Hairpin which he had removed from the Bladder of a woman who came to the City of Dublin Hospital.

Dr. MACAN exhibited—1. A Fibrous Tumour and Uterus which he removed on May 2nd from a woman aged forty-eight in the Rotundo Hospital. When she first came in her uterus was of enormous size, and she complained of excessive hæmorrhage. He determined to remove the tumour. He easily got the stump. The stump, however, unfortunately sank into the peritoneum and gave rise to acute sepsis, which caused her death on the 12th of the month. 2. The remains of an Ovarian Tumour. It proved to be so absolutely rotten that he had to enlarge the incision in order to get command of it, and then to scoop it out in handfuls. It was afterwards obvious that there had been adhesions of the tumour to the intestines. On one occasion her temperature rose to 106°. He found her suffering from bronchitis. He inserted a drainage tube, through which a large quantity of perfectly harmless-looking and inodorous serum came away. The woman had been going on very well since. 3. A specimen of an ordinary Ovarian Cyst. The only thing that made this specimen remarkable was that the case had been for a long time treated as one of ascites.

Dr. JOHN BYRNE exhibited a large Fibroma which he had removed from the uterus per vaginam. It was of an interstitial character, grew on the posterior wall of the uterus, and hung down into the vagina. The woman was thirty years of age. She had one child; her next parturition was an abortion, which was attended with fearful hæmorrhage. He put in a large pessary and sent her back to the country. While in the country she had another abortion, which was also attended with great hæmorrhage. When she returned to the hospital it was found that there was a tumour of such a size that no pessary would hold up her uterus. The tumour occupied the whole of the sacral space. She was chloroformed, and an incision was made close to the upper part of the vaginal wall, and after a good deal of tugging the tumour was got out. The woman lost a great deal of blood, not so much by active hæmorrhage as by a kind of oozing. A couple of silver wires were put in, and she was placed in bed, but never rallied, and died in forty-eight hours. His reasons for performing the operation were, first, the great size of the tumour; secondly, the great amount of hæmorrhage from which she suffered; and, thirdly, the repeated miscarriages which she had sustained.

Dr. PIREFOY communicated a case of successful Removal of the Right Uterine Appendage and Parovarian Tumour in a case of dysmenorrhœa and dyspareunia. He should add that the tumour had been for years of the same size. The ovaries presented the appearance of a slight amount of cystic disease.

Dr. JOHN BYRNE communicated a case of peri-uterine hematocoele, which was treated by tapping and eventuated in recovery. The case was illustrated by a very accurate drawing, made by Professor Birmingham.

Dr. BYRNE also showed specimens of Malignant Disease of the Uterus from a case which proved fatal. The woman, who was aged about fifty, came to the hospital in a very blanched condition in consequence of hæmorrhage. A small malignant growth was found springing from the uterus. There was a great deal of hæmorrhage from the growth, which was repressed. A large tumour was also found, which was evidently fluid, occupying the supra-pubic, left iliac, and lumbar regions. This was quite movable. Malignant disease of the uterus was diagnosed, complicated with a cyst, which was probably malignant. The woman was healthy in every other way. He resolved to remove both the uterus and cyst by abdominal section; but forty-eight hours before her death she had a rigor, accompanied with great pain; her abdomen became very tympanitic; and she complained of great difficulty of breathing, and sank. On post-mortem opening of the

abdomen, which was very fat, a great quantity of serum rushed out. The cyst, which broke down in the hands, was found to be intimately connected with the viscera, and an enormous quantity of a substance resembling pea-soup came from it. The cyst was lined by a membrane, the whole of which was covered with globules bearing all the appearance of malignant disease. The uterus had a very peculiar one-horned appearance. The Fallopian tube was very large and distended. The specimen showed malformation of both the uterus and the tube.

Dr. MORE MADDEN read a paper on Myxoma of the Chorionic Villi, or Vesicular Mole, as a practical contribution to the study of the still obscure pathology of embryonic death in the uterus. Having first described some cases of myxoma of the placental chorionic villi recently met with in his hospital practice, the writer proceeded to point out the general importance of placental disease as a most frequent cause of intra-uterine death and abortion. Amongst the diseases affecting the mother as well as the child are inflammations of the placenta, especially chronic or subacute placentitis, leading to morbid adhesions between the after-birth and uterus, and occasionally giving rise to the two most serious complications of parturition—viz., post-partum hæmorrhage and inversion of the uterus. Another placental disease of no less importance to the mother than to the child is congestion, sometimes resulting in hæmorrhage or placental apoplexy; whilst amongst the placental diseases which chiefly affect the fœtus by impairing or destroying the structural integrity of this organ are œdema, atrophy, and hypertrophy of the after-birth, and the various forms of degeneration—fatty and calcareous; and, above all, that which was met with in this case—viz., myxoma or cystic degeneration of the placenta, or chorionic villi. In his own practice he had now met with six cases of this disease, the infrequency of which appears from the following table:—

Authority.	Cases admitted into the Rotundo.	Cases of hydatidinous disease reported.
Dr. Collins	16,654	—
Dr. Hardy and M'Clintock ..	6,684	1
Dr. Sinclair and Johnston ..	13,748	4

Thus it appears that in 37,036 cases admitted into the Lying-in Hospital there were only five instances of hydatidiform mole recorded, being in the proportion of 1 in 6207 cases. Vesicular disease of the placenta consists in myxomatous degeneration and abnormal development of the placental chorionic villi, either following or producing the death of the fœtus. In the Dublin Obstetrical Transactions Dr. More Madden had already related some cases of this kind. In most of these the hydatidiform mass was expelled from the uterus in the fifth month of pregnancy. The symptoms of this disease can at first hardly be distinguished from those of ordinary pregnancy. If, however, in addition to the signs that usually denote the death of the fœtus the patient experiences occasional gushes of water, together with slight hæmorrhage from the uterus, lasting for a short time and recurring at irregular intervals, we may suspect the existence of vesicular disease in the placenta of a blighted fœtus. The expulsion of these growths from the uterus is generally attended with severe hæmorrhage. With regard to their origin, Dr. More Madden still adhered to the views he published several years ago, that in the vast majority of cases these growths originate in cystic degeneration of the chorion villi of a blighted ovum; but at the same time he also believed, although his opinion has been controverted by others, that vesicular growths, apparently similar to those resulting from chorionic disease, may in some exceptional cases also possibly be found in utero under circumstances that preclude their origin in embryonic disease. And in such cases Dr. More Madden holds that they probably originate in the ovary of an unimpregnated female from abnormal nutrition and perverted or monstrous development of a Graafian vesicle, the ovum, when expelled into the uterus, there becoming adherent, and abnormally proliferating, until by its bulk expulsive action is occasioned. In the way of treatment Dr. More Madden knew of nothing that could be done to arrest the progress of the disease, but an attempt should always be made to prevent its recurrence by improving the general health of the patient by alteratives and ferruginous tonics.

Reviews and Notices of Books.

A Manual of General Pathology. By JOSEPH FRANK PAYNE, M.D. Oxon., F.R.C.P. London: Smith, Elder, and Co. 1888.

The present-day student of medicine is to be envied in having presented to him so many text-books of a high class, which had no counterparts ten or fifteen years ago. The choice must be somewhat embarrassing, but at any rate he cannot complain of lack of opportunities for acquiring knowledge. Above all is this true of pathology—a subject which is full of attractiveness, but which not so long ago was treated almost solely from one standpoint (the anatomical) in even the best of manuals. The interest taken in this subject is, however, greatly enhanced when its scope is widened to embrace the processes as well as the products, the causes as well as the effects, of morbid action. To comprehend all that is proved concerning the principles of pathology is essential to a clear understanding of disease, and therefore any work that deals in a sufficient manner with these important groundworks of medical science is sure to receive a hearty welcome from teachers as well as students. Dr. Payne has amply earned such a reception for his valuable and most useful work, which in several important particulars has for the first time brought within the view of the English reading student the established facts and the most reasonable theories regarding what may be termed “physiological” as contrasted with “anatomical” pathology. It has often been matter of surprise to us that this, perhaps the most important, side of the subject should have been apparently so much neglected in this country. Our pathological societies are in the main concerned with the record of anatomical facts; they do not favour, or at any rate they do not encourage, the prosecution of that kind of research of which Cohnheim was the foremost exponent. Nor even is bacteriology fostered in them, as we might expect that it should be; but this is less to be wondered at, since its pursuit demands so much special attention as to make it a subject of study within the reach of a comparatively small number.

The order in which Dr. Payne has dealt with his subject is systematic, and permits of a very ample survey being taken of it. The work is divided about equally into two parts—viz. (1) The Processes of Disease, and (2) The Causes of Disease. Under the first head are discussed such matters as atrophy, hypertrophy, inflammation, fever, thrombosis, embolism, new growths, &c.; under the latter, the effects of poisons, the specific diseases, and parasites. The author has included many topics which are not usually treated in text-books, or very cursorily dealt with only. Indeed, his work will be found laden with information, and, what is more to the purpose, it is fully up to date. Thus, for instance, in the chapters on New Growths, the subject of the origin of cancer is handled quite in the light of modern inquiry, whilst the chapters devoted to parasites are not only excellent from their lucidity and exactitude, but show a grasp of the vast subject of bacteriology which cannot but be admired. The specific diseases are grouped in six classes, and their leading characteristics sketched, often with the interesting addition of historical and geographical details, which gives a completeness to their treatment. These classes are thus arranged:—1. Acute specific fevers: Scarletina, measles, röteln, small-pox, vaccinia, variella, typhus, typhoid, relapsing fever, plague, Asiatic cholera. 2. Specific inflammations: Whooping-cough, mumps, diphtheria, erysipelas, dysentery, tetanus, hydrophobia. 3. Contagious suppurations: Impetigo contagiosa, contagious ophthalmia, soft chancre, gonorrhœa, pyæmia, septicæmia. 4. Granulation tumours and allied diseases:

ANDOVER COTTAGE HOSPITAL.—A meeting of the friends of this charity was held last week to devise means to relieve the committee from pecuniary difficulties.

Tubercle, lupus, syphilis, rhinoscleroma, leprosy, glanders and færy, anthrax. 5. Miasmatic diseases: Ague, yellow fever. 6. Mycosis. This may be taken as an example of the thoroughness with which the subject is handled. Of the descriptive matter and argument, we must be content to say that it is lucid, sound, and exact; so that the book is one which we fully believe will be very widely read and appreciated.

An Index of Symptoms as an Aid to Diagnosis. By R. W. LEFTWICH, M.D. Pp. 205. London: Smith, Elder, and Co. 1888.

THE author of this little book is to be congratulated upon the happy thought which prompted its compilation. It is really intended as a handbook to those in doubt at the end of a meandering account of symptoms for which the clue is not readily discernible. The whole *raison d'être* of the book is to be found in the frequency with which some common symptom may result from a variety of causes, and the author hopes, by presenting these causes in alphabetical order, to suggest ground for further inquiries until a satisfactory diagnosis can be reached. The arrangement of material is necessarily somewhat arbitrary. Dr. Leftwich has divided his book into sections, dealing respectively with the results obtainable from interrogation, observation, palpation, percussion, auscultation, &c.; he has attempted to indicate relative frequency of occurrence by abbreviations which are readily grasped, and he has added a very useful little chapter on Methods of Diagnosis for the use of clinical clerks, which furnishes many valuable hints. So far as we have tested this little book, it appears to be remarkably free from errors, and to be likely to be very serviceable in its suggestiveness. It is curious that the term "relaxation" is employed in preference to "diarrhœa," both in the body of the book and in the index. Altogether the author has succeeded in producing a little book of undoubted novelty and utility.

OUR LIBRARY TABLE.

On Curvatures and Disease of the Spine. By BERNARD E. BRODHURST, F.R.C.S., Surgeon to the Royal Orthopædic Hospital, and to the Royal Hospital for Incurables, &c. Fourth Edition. London: J. and A. Churchill. 1888.—There is nothing specially noteworthy in this edition of Mr. Brodhurst's book. The discussion of the pathology of lateral curvature of the spine leaves much to be desired, and few readers will be persuaded by the arguments here adduced that the great cause of this deformity is obliquity of the pelvis from some inequality in the lower limbs. The directions for the treatment of the disease are too vague, and Mr. Brodhurst might with advantage have added to the many woodcuts one depicting a spinal support which exactly meets his views. Still more vague is the description of the treatment of congenital dislocation of the hip. We are told that "the treatment of lordosis which is induced by congenital dislocation of the femur is simply the treatment of the dislocation itself. As dislocation is removed, so also is the curve which is produced by it." Then follows a very brief reference to a case on which Mr. Brodhurst "operated"; but the nature of the operation is not even hinted at. Of the result we read: "This child has now every possible and normal leg movement, and the excessive lumbar curve is removed, so that the spinal curves are now normal." These statements are so greatly at variance with general surgical experience that they ought to be well substantiated, and ought, we think, to have been much amplified.

On Gonorrhœal Infection in Women. By WILLIAM JAPP SINCLAIR, M.A., M.D. London: H. K. Lewis.—This little monograph is to a large extent a reprint of papers originally published in the *Medical Chronicle*. Dr. Sinclair is a great

believer in Noeggerath's views as to the very serious consequences of gonorrhœa, uterine complications, hydro-pyosalpinx, ovarian inflammation, sterility, and even puerperal fever, being largely credited to its account. For information is given on the subject of the examination of vaginal secretion, and much interesting, and to many practitioners probably novel, information is given on the various types of the disease. Especially important is the chapter on the "chronic or creeping form." Treatment and prophylaxis are also dealt with. It is, perhaps, well to be reminded that this affection, whether in the male or in the female, is capable of leading to very serious consequences, both to the patient and to others, and Dr. Sinclair is to be congratulated on having brought this truth prominently forward.

Cocaine Dosage and Cocaine Addiction; Cocaine Toxicity. By J. B. MATTISON, M.D. Brooklyn.—In these two papers the author has collected numerous records of the influence of cocaine in comparatively large doses. He vigorously combats the notion that cocaine is free from risk, and endeavours to prove that, in America at least, there is a tendency to the formation of a "cocaine habit." For the treatment of those habitually addicted to opium or alcohol he considers cocaine to be the "most fascinating and seductive, dangerous and destructive drug extant." The little pamphlet is well worth perusal and consideration.

Ireland: its Health Resorts and Watering Places. By D. EDGAR FLYNN, F.R.C.S. Pp. 175. London: Kegan Paul, Trench, and Co. 1888.—The object of this work is to bring "to the notice of that large section of the public who are continually migrating to the Continent and elsewhere in search of that priceless boon the restoration of health, the advantage derivable from a sojourn at the health resorts which lie within easy access of their own homesteads." It gives an account of the principal watering places and spas in Ireland, but is evidently more intended for the general public than for the profession. Many of these health resorts appear to require further development in the means of access and in suitable accommodation; but others—such as Glengarriff, Killarney, Queenstown, and Rostrevor—are well provided, and offer, in the way of scenery, great inducements to holiday makers. We observe a curious mistake in the notice of the mineral spring at Mallow, the only warm spring in Ireland; the temperature of the spring at Buxton, with which it is compared, is stated to be 182° instead of 82°. The book would be greatly improved as a guide-book by the addition of an index.

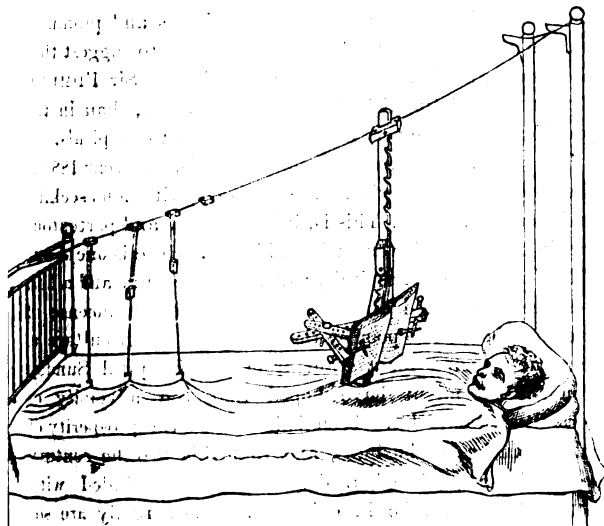
Leslie's Tourist's Guide to the Scottish Highlands. With Sectional Maps, Illustrations, &c. Pp. 96. Perth: D. Leslie. 1888.—This is a very portable guide-book to some of the finest scenery in Scotland. The routes seem judiciously chosen, the descriptions short, clear, and (with the exception of the half page of introduction) free from stilted language. We do not know any handbook which gives so much useful information to intending visitors to Scotland in so small space. Our only objection to it is the small type (rubbish), but it is very clear. The great marvel, however, is the price, which is only 1d. It is the cheapest book we know, considered with reference to the amount and quality of the information it contains, but an index to the principal places mentioned in it would add greatly to its value.

SLOUGHING OF THE CORNEA FROM COLD.—A case of partial sloughing of the cornea is reported by Dr. Kuritz due to exposure for nine hours on a Russian steppe during a snowstorm. Both eyes were similarly affected, somewhat deep ulcers having formed in shape and position corresponding to the openings between the eyelids; the other parts of the eyes were scarcely affected at all. The patient, who had never previously suffered from any affection of the eyes, made a good recovery.

New Inventions.

PATENT BOOKHOLDER.

THIS is a very ingenious contrivance, invented and patented by Mr. Delabere May of Bath, for holding a book at any angle in an overhanging position so as to enable a person in the recumbent position to read comfortably without the labour of holding up the book. It can be easily fitted to any bed or couch, and has the great merit of being very moderate in price. Coupled with it is a method of keeping the bedclothes suspended over a limb or any part of the body, giving all the advantages now derived from the use of a



cradle, without the inconvenience which attends it. This is effected by means of hooks fitted with flat heads, like drawing-pins, passed through the blankets and fastened by a ring to the cord of the bookholder, as shown in the drawing. A piece of elastic with a weight attached to steady the bookholder would probably be a useful addition to the apparatus, and a card of detailed instructions as to the manner of putting together the various pieces of which it is composed appears to be required. It is very portable, as it can be taken to pieces and packed in a small box of card board and weighs under a pound.

THE "BEAUMONT TEAPOT."

ANY suggestion that tends to enhance the wholesomeness of tea-drinking cannot be unworthy of notice, so that no apology is needed for calling attention to a device submitted to us by Messrs R. and W. Wilson & Sons, of London, and which consists in an addition to the teapot of the ordinary pattern of a movable receptacle for the tea affixed at the entrance of the spout. The advantages attending this modification are—(1) that the receptacle in question may be removed when the proper time for the steeping of the tea has expired, and thus the infusion may be kept hot without the possibility of its acquiring the deleterious properties of the leaves; (2) that the beverage is kept perfectly free from grounds, so that the adjunct of a strainer, which it is impossible to keep thoroughly clean, and which is very apt to get clogged, is rendered unnecessary. It will thus be seen that the invention offers an important improvement in the process of tea-making.

MAJOR AMPUTATIONS PERFORMED ANTISEPTICALLY.

To the Editors of THE LANCET.

SIRS,—I beg to thank Mr. Frederick Page for his rejoinder and the answer he has given to the queries in my first letter. In Mr. Page's communication of the 14th ult. we were told that during the year 1887 in the Royal Infirmary, Newcastle-on-Tyne, sixty patients had been submitted to sixty-two major amputations of the limbs and two only had died. I admit that such a low death-rate is an achievement, and that Mr. Page and his colleagues are to be congratulated upon the excellence of their work; but the result, looked at with the knowledge, the qualifying knowledge, of the age of the patients, which last week Mr. Page detailed as follows: thirty-one patients were under twenty years (no death); fourteen were between twenty and forty years (one death), ten were between forty and sixty years (no death), and five were over sixty years (one death)—after all, shows how true is the well-known surgical axiom—viz., that the younger the patient the more likely is recovery to follow, and the older the patient the less likely. One word regarding the use of the expression "antiseptic." Mr. Bryant, a year or two since, in a lecture delivered in London, dwelt in a very *apropos* manner upon the necessity of every writer who employed the term "antiseptic" individualising what he meant. The antiseptic treatment of wounds is now universally practised, but the method, as well as the details of the method, vary so much, that it has long become essential, if any instruction is to be obtained from the recorded results of the practice of any given surgeon, that an explanation should be afforded of the so-called antiseptic method adopted by that surgeon. I confess that at one time I considered that I perfectly understood what was meant by the phrase Listerian treatment of wounds, but at the present moment I believe I am correct in saying that Listerism is a "dark horse"; what it is and what it achieves are known only to those whose location is within the four walls of King's College Hospital. Mr. Page's amputations were all performed under the spray cloud. I have never used the spray for an amputation; my dependence for a good result has always rested upon the most perfect cleanliness of the patient, operator, assistants, instruments, sponges, and room, both during the operation and afterwards.

The following abbreviated narration of my last case but one of thigh amputation will place on record my method and its result. On June 9th last I amputated at the lower third the right thigh of a well-grown boy aged ten years. Every bleeding point was most carefully tied by very fine silk thread, which for months had been soaking in a 1 in 20 carbolic acid solution. The interior and the exterior of the stump having been well douched with a solution of perchloride of mercury, 1 in 3000, the edges were coupled by catgut suture inserted at half-inch intervals, except the centre (the lowest point of the face of the stump) where a short indiarubber drainage tube was inserted. The line of suture was covered by a piece of green protective, over this and the stump some wet, followed by some dry, gauze were laid, both being fixed in position by a bandage of the same material; then the whole of the stump, thigh, and pelvis was enveloped in a thick layer of mercurial wool, maintained firmly in its place by gauze bandages; a wooden splint without padding having been applied behind the stump and thigh, a flannel bandage was evenly wrapped over it and the whole of the dressings, and the patient removed to his bed. As no pain was complained of and the temperature remained normal the dressings were not removed until June 17th (eighth day) when it was seen that the wound had entirely healed, except where the drainage tube protruded; this was removed as well as some of the sutures, and similar dressings were reapplied. The day previously the lad had been removed from his bed on to a couch, and this change was continued daily until, on the fifteenth day from the operation, the stump upon inspection was found to be firmly healed "all along the line." The patient was permitted to move about on crutches, and soon after returned to his home. The cost of the dressings used in this case was estimated by my house surgeon, Mr. Gough, to be about five shillings, not a serious trespass upon the funds of the hospital for the complete healing of a thigh amputation wound.

I am, Sirs, yours faithfully,
Wolverhampton, July 31st, 1888. T. VINCENT JACKSON.

THE LANCET.

LONDON: SATURDAY, AUGUST 4, 1888.

THE meeting of the Council of the Hospital Sunday Fund on Tuesday to discuss the Report of the Distribution Committee and authorise the awards was of a very satisfactory nature. The sum collected this year is larger than that of any previous year. The gifts and legacy of the late Dr. WAKLEY, who, with Sir SYDNEY WATERLOW, inaugurated the movement, gave a larger appearance to the collection in the last three years. But even without this, and in the absence hitherto of any similar benefaction, it is estimated that when the contributions are received the collection will exceed that of all previous years by nearly £1000. The amount up to Tuesday last available for distribution and the usual current expenses was £39,321 17s. 6d., against £39,125 last year. It is one of the great merits of this fund that the expenses of management are so small. Out of the sum we have mentioned £37,721 were assigned to 107 hospitals and fifty dispensaries. It is gratifying to notice that the number of institutions to which awards are made this year is the same as last. It is devoutly to be hoped that we shall have no more new hospitals in the metropolis for some time to come. The present hospitals are not filled, and they are not supported as they should be. When men become charitable again, or revert to that state in which criticism does not check charity, but only keeps it in right ways, the impecuniosity of hospitals will be swept away in a few generous months, and the empty beds will be filled with those who are now languishing from disease in straitened homes. But there is no excuse at present for new ventures, and those who are benevolently disposed will do well to bestow their munificence on old hospitals.

The confidence displayed by the Council in the rules of the fund for regulating the action of the Committee of Distribution, and in the discretion of the members in the use of these rules, is almost absolute. The general fairness of the results is well attested by the slight protest or complete acquiescence of the institutions affected. Even those which get less than they expect or wish seldom venture to challenge the award. This may be partly due to the somewhat complicated data by which the Distribution Committee are guided, and partly to the ability of Sir SYDNEY WATERLOW in handling them. But after all is said, the general justice of the result, as we have said, is admitted. In fact, the general acquiescence in the conclusions of the Committee of Distribution makes the meeting of the Council somewhat tame and formal. Dr. GLOVER raised questions on two or three of the awards. That to University College Hospital, he pointed out, was £156 less than last year; and that to the Establishment for Gentlewomen, Harley-street, was nearly £50 less than in 1887. Sir SYDNEY WATERLOW admitted the excellence of both institutions, but maintained that the cost of management in University College and the weekly cost per patient in Harley-street was excessive, and ought to be reduced. In another case, that of the Metro-

politan Hospital, Kingsland, formerly called "Free," but now affecting so-called provident principles, Dr. GLOVER showed that the cost of management was no less than 45 per cent.—the largest of any institution on the list—while the number of in-patients for last year was *nil*. The annual average of patients' payments during the last three years was only £52—a sum exceeded by the payments of any second-rate dispensary. Sir SYDNEY WATERLOW and Sir EDMUND CURRIE explained that the hospital was in process of transition. Nevertheless, the Distribution Committee have awarded £200 to this hospital. Sir EDMUND CURRIE promises that it will soon justify the hopes of those who believe in the provident principle. But the Distribution Committee is not supposed to act on hopes and promises, but on accomplished work; and we venture to suggest that the grant awarded represents faith rather in Sir EDMUND CURRIE, its distinguished honorary secretary, than in the provident principle very doubtfully applied to hospitals.

The most novel feature of the awards for the year 1888 is the appearance of Guy's in the list of institutions seeking and securing a grant. This is, indeed, a new and portentous fact in hospital and even national history. Here is one of our oldest and richest hospitals, which for a century and a half has been supported almost entirely by the munificence of one man, become so poor by the depression of agriculture as to come begging for a grant from the Hospital Sunday Fund. We might have hoped that the adversity of agriculture would have been balanced by the prosperity of other branches of business, and that this prolific century would have produced a dozen men like-minded with GUY. They may be in existence. They really are so. The "time is ripe and more than ripe" for their appearance. The whole standard of hospital charity is low for want of such examples—so low that Guy's has to appear as a competitor in begging with 150 other institutions which eke out an impecunious existence and minister to the sick poor of this vast metropolis. We do not blame the authorities of Guy's or the Distribution Committee. There are some innovations in the administration of Guy's to which we have adverted, and to which we may have to return, threatening to make it the home of the middle classes rather than the hospital for the poor. But we regret its poverty, and we approve—for the present, at least—of the action of the Distribution Committee in assigning this historic hospital £520. The grant will do something to satisfy Mr. NELSON HARDY and others who think that the south side of London has not had its fair proportion of the Hospital Sunday collection. The Hospital Sunday Council were emphatic in their thanks to various speakers, as well they might be—notably to the Archbishop of CANTERBURY and to Sir ANDREW CLARK—and to various organs of the press, including ourselves. We admit the soft impeachment that we have spared neither expense nor labour this year in trying to advance the cause of hospitals, which for every social, Christian, and medical reason, and in spite of certain admitted abuses calling urgently for remedy, we regard as in the very forefront of charities.

THE practice which has for some time past been adopted in a number of northern districts, and especially in Yorkshire, of building dwelling-houses in blocks of two parallel

rows which touch back-to-back, and which have hence no open space to the rear, nor indeed at the side except in the case of those situated at the end of the rows, is one which has long been condemned on general sanitary grounds. But it has been contended that this system of building had certain advantages; that it enabled a working man's family to occupy a separate house, instead of sharing with others a tenemented house; that it was economical as regards the cost of materials; that in view of the increasing cost of land it had in certain districts become all but a necessity; and that, after all, the idea of its unhealthiness was mere surmise, and was based on no definite facts. On the other hand, it was obvious to many that a system of building which had not been found to be a necessity in nine-tenths of the kingdom, including some of our largest and most populous centres, could hardly be imperative in one or two separate counties; and a large number of the most experienced medical officers of health in the country condemned the practice as tending to injure health; and this on the very important ground that it absolutely prevented the through-ventilation of all houses so erected. But up to the present date there was wanting any authoritative information on the subject; and although the model bye-laws as to new buildings issued by the Local Government Board required that every new domestic building should be provided with a minimum amount of open space both to the front and to the rear, and thus indirectly prohibited any back-to-back houses, yet there have been a number of sanitary authorities, acting, we fear, to a large extent in the interests of local builders, who have maintained that a requirement to the effect that all dwelling-houses should be provided with means of through-ventilation was not applicable to their districts. The Local Government Board have now taken the matter up, and a very elaborate and valuable report, prepared by Dr. FREDERICK W. BARRY and Mr. P. GORDON SMITH, F.R.I.B.A., has been issued on the subject. We cannot profess, within the limits of this article, to review the whole of the report, or even to refer to all the considerations dealt with in it; and therefore we select for present discussion two of the principal points which are referred to by the reporters in their comparison of the respective merits of through houses and back-to-back houses—viz., 1st, that of economy, and 2nd, that of healthiness.

In point of economy there appears, at first sight, much to be said in favour of the back-to-back house. They have only one external wall, the absence of open space to the rear limits the amount of area occupied, and embedded as the building is between three other houses, it does not need thick walls in order to support it or to secure the maintenance of a comparatively warm temperature within. As regards the actual structure, there does therefore seem to be something in favour of this view; but estimates having been secured for the construction of each sort of house, it has been ascertained that in the case of an ordinary workman's house somewhat over £150 in value, the price of materials and of land being the same in each case, "the difference in cost between a through house and a back-to-back house, affording the same accommodation and built equally well, amounts in the case illustrated to £5 in favour of the back-to-back house, a difference which may be approximately reckoned at one penny per week less rent." This paltry

saving can obviously not be justified providing anything really objectionable or injurious can be shown to attach to the back-to-back house, which does not apply to the through house. As to that which is objectionable, apart from demonstrable proof of injury to health, we would point out that even where a given area contains the same number of houses of one or the other sort, there is a tendency in the case of the back-to-back system to a greater huddling together of the houses themselves. And even when wide spaces are provided between the ends of the adjacent rows these have to be largely occupied by an agglomeration of privies and middens, a system which is objectionable in the extreme. The lack of privacy prevents women and children from resorting to the privies; excreta are stored up in the houses all night; and in many cases they are also kept in-doors during the daytime until a certain amount of darkness affords a cover under which the receptacles can be emptied. Morally and socially, the provision of separate privies in small yards exclusively belonging to the several houses concerned is a demand that needs to be met; and this the back-to-back house cannot secure.

But perhaps the most interesting part of the report is that which deals with the influence of different classes of houses upon the health of the inhabitants. And here it may be noted that accurate information was not often forthcoming. It is not that there were no materials by which it could have been procured, but the local data had but rarely been properly made use of, and the inspectors were in consequence almost entirely confined to the extremely valuable and carefully compiled statistics which had been prepared in Salford by Dr. TATHAM. Attention was drawn to these some time since by Dr. RANSOME, who, in a paper on "Tubercular Infective Areas," read before the Epidemiological Society in May, 1887, referred to Salford as exhibiting proof that "in certain streets and courts consisting of back-to-back houses, unfurnished with through-ventilation, tubercular disease was much more common than in other parts of the same town, and that such disease occurred again and again in the same houses." The data on which this conclusion was founded have been exhaustively sifted for the purposes of this report, and they have been utilised for a similar investigation of the influence of the want of through-ventilation on other diseases besides those of the tubercular type. Fortunately the materials afforded by the Census returns of 1881 enabled a subdivision of Salford to be made, which gave groups containing different proportions of back-to-back to other dwellings; and the result of an examination of these areas for a series of years as to mortality from phthisis, other pulmonary diseases, and from general infectious diseases, has been to show that there was a progressive increase in the mortality from all causes, and from each of the specified causes of deaths in direct proportion to the number of back-to-back houses included within the group of districts. Diarrhoea, whether in Salford or Bradford, exhibited the same result in a striking manner; and although the localities affording the materials on which the conclusions have been founded are less numerous than could have been wished yet they are so definite that it is impossible to avoid concurrence with the statement that, other things being equal, death-rates increase "in direct ratio with an increased per-

centage of houses unfurnished with means for through-ventilation." And this holds good even where streets are wide, and considerable open spaces are provided; a result which is of the more importance because it shows that ventilation *about* dwellings cannot take the place of proper ventilation *of* dwellings.

We have only touched the fringe of this report, which abounds in lithographic plans showing the different methods of house construction, and with tables indicating in detail the data on which the conclusions are based. It should be carefully read by all to whom the future health interests of this country have been consigned by the Legislature, and we regret to note that it does not bear the indication, which has appeared on many similar reports of late, that it can be purchased by the general public. It is a document that should be widely circulated, and we hope that if any difficulty should occur in obtaining it, members of Parliament will be urged to demand that a general issue of it should be forthwith prepared.

THE inquiry recently held into the cause of death of the late Mr. MANDEVILLE, sometime a prisoner in Tullamore Gaol, terminated in the finding of the jury that the deceased died of diffuse cellular inflammation of the throat, and that this was due to the treatment he received during his term of incarceration. It may be noted that the imprisonment, which occupied two months, terminated on Dec. 24th, 1887, and that the death occurred a month or so ago. On behalf of the prison authorities it was contended that from whatever ailment Mr. MANDEVILLE suffered the discipline to which he was subjected during his confinement stood in no causal relation to his unfortunate and untimely decease. It may be conceded that, save in one particular—owing to the suicide of Mr. RIDLEY, Mr. MANDEVILLE's prison surgeon—the court was put in possession of all the facts calculated to aid it in the discharge of its function. Affirming and rebutting evidence was taken, and this was embellished by the interpolations and addresses of counsel learned in the law. The political element with which the inquiry was so strongly tinged is quite beyond the scope and intent of the present review. There remains, however, matter enough and to spare for the contemplation of the ethical, forensic, and surgical mind. There was direct conflict of testimony as to Mr. MANDEVILLE's condition on his release from durance vile, and on the part played by the alleged results of his residence in Tullamore prison upon the development of his fatal illness; nevertheless, certain facts remain uncontroverted in connexion with this part of a singularly painful history. The intended and originally prescribed course of Mr. MANDEVILLE's subjection to prison discipline was broken by an incident—justifiable or not—of his own creation—viz., his refusal to wear the regulation garb of a criminal. According to the evidence, he remained for more than twenty-four hours clad only in such ill-fitting garments as a quilt and sheet. With or without other associated causes it is not surprising to find that he suffered from the effects of partial exposure, in the form of sub-acute diarrhoea and soreness of throat. For the insubordination to prison rules just referred to he was consigned to solitary confinement, with bread-and-water diet. It does not appear, however, that any immediate serious consequences

ensued upon this particular course of punishment, nor do his health seem to have utterly broken down, since soon ten days later he regained his freedom, which he used in voluntary participation in the conduct of public meeting. At the same time we would not go so far as to say that vitality had in no way deteriorated during the interval that elapsed between his entrance into, and his exit from, Tullamore Gaol. A prison is not intended to be a health resort; neither, on the other hand, has the State any right to inflict such punishment as shall lead to grave or permanent physical disability. From a careful and impartial examination of the evidence tendered at the inquest, we cannot escape the conclusion that Mr. MANDEVILLE was not subjected to unusually rigorous discipline; for, without impugning the veracity or good faith of the witnesses on either side, we feel bound to place greater reliance on what we may take to be the precise continuous narrative of the prison and departmental officials than upon the necessarily more casual and less complete observations of occasional visitors. Again, Mr. MANDEVILLE's own version of his prison life could scarcely be expected to consist of unqualified praise. While the late Mr. RIDLEY could have thrown upon this episode in the case we can only conjecture, but that conjecture unless Mr. RIDLEY belied his trust, of which there is an entire absence of proof—lends weight to the opinion we have already stated. Nevertheless, if, as alleged, Mr. RIDLEY refused to certify Mr. MANDEVILLE's fitness for special punishment, and still more if he actually stated his unfitness for the same, and yet the plank bed and bread-and-water diet were insisted on and enforced, the officials have certainly a case to answer. We would fain hope, as at present we believe, that the charge in question is without foundation in fact. Again, we find from the record that only a few days before his release Mr. MANDEVILLE refused to allow the doctor to examine him, so that the latter cannot be blamed for not knowing what he was not permitted to ascertain.

We now come to consider a far more serious question from a medical and medico-ethical point of view—the nature and treatment, and the opinions thereon expressed, of Mr. MANDEVILLE's last illness. All are agreed that he succumbed to the effects of diffuse cellulitis about the pharynx and neck—*Angina Ludovici*, as it is sometimes termed; and here we cannot help stating most emphatically that we are much of the same opinion as Dr. MOORHEAD, both as regards the etiology and appropriate treatment of the affection. Allowing for one moment that Mr. MANDEVILLE left Tullamore Gaol deprived of so much of his habitual vigour and strength, we find no facts to support the theory that he had sustained lasting injury to his constitution, or, in other words, that he had acquired an abiding predisposing cause to such an acute disease as diffuse cellulitis; and this being our matured and unbiased opinion, we fail to recognise a warrant for that part of the verdict of the coroner's jury which attributed the death primarily to the deprivation and suffering Mr. MANDEVILLE is alleged to have borne during his term of confinement.

Acute diffuse cellulitis of the neck has always a serious prognosis, for even when treated on the most approved line and by the most skilful hands, it commonly has a fatal termination. It is a malady upon which professional

opinion differs as to its exact cause, incidence, and mode of development, and hence we should be disposed to allow a wide latitude of opinion as to the best possible means of combating it. The balance of opinion seems to be in favour of the theory which supposes it to arise from the implantation of a virus upon the pharyngeal or tonsillar mucous membrane—we see it in some cases following in the wake of scarlatinal sore throat,—and that, the local contagion once established, there ensues a widely and rapidly diffused lymphangitis, with general infection of the system. It may be taken as the type of acute phlegmonous inflammation as regards its pathological anatomy, signs, and symptoms; and the generally recognised mode of treatment is identical with that for other acute infective inflammation—viz., to maintain the strength; to get rid of the poison and its products, and to ward off any special tendency to death. The second of these desiderata is best attained by relieving tension and giving free vent to the local exudation by means of free external incisions. Incisions, to be effectual, cannot be made from within the mouth, on account of the danger of immediate and consecutive hæmorrhage. Except in the very early stages, but little good can be expected from leeching: the mischief is too deep and serious for that.

There is one other matter which calls for comment in these pages. We refer to the licence allowed to medical men in the witness-box to criticise the professional acts of their fellows. A medical, like every other witness, is legally bound to speak "the truth, the whole truth, and nothing but the truth" when upon his oath, but our interpretation of this formula distinguishes between mere personal *opinions* and *facts* within the knowledge of the deponent. If this is the correct reading generally, how forcibly must it tell when the particular subject matter of investigation has relation to questions bearing on the inexact sciences, of which medicine is one of the most problematical. We should require much weighty argument to convince us that one medical witness was justified in speaking of others as professionally incapable.

IN spite of the scepticism which every now and again is brought to bear upon the value of numerous drugs, there are some facts concerning many of them which are universally conceded, some broad principles of action which are admitted as being beyond dispute, some common ground upon which all are agreed. Among the terms employed in medicine few would be allowed to pass unchallenged more readily than the term "physiological action." It is commonly employed in describing the influence of any new remedial agent, indeed it forms the basis of the so-called rational system of therapeutics, as opposed to the empirical. Whenever any new substance is introduced to the notice of the profession, its theoretical employment is almost necessarily based upon definite observations of the influence it exerts upon some healthy organism. This influence, whatever it may be, is ordinarily described as the "physiological action." It has probably been determined by numerous experiments, and when the term is thus employed the influence described is ordinarily restricted within certain very sharply defined limits. It has nothing whatever to do with disease; the introduction of any notion of disease at once breaks up the whole meaning of physiological action.

Disease is to be combated by a therapeutic agent, which may perhaps possess special medicinal properties only when in presence of a morbid state, and thus the charm of simplicity is dispelled; the perfect circle of universality, the halo surrounding the notion of physiological action, is destroyed. Essentially, physiological action is concerned solely with the vital processes occurring as the result of the employment of a drug in a condition of health. Some authors, dissatisfied with the term, have endeavoured to replace it by "pharmacological action," used occasionally as being synonymous with the other, sometimes as indicating a combined action and reaction depending upon the introduction of a new force. Some boldly cut the Gordian knot by eliminating all adjectives and speaking merely of action and uses. The synopsis of the examination of the Conjoint Board has introduced yet another term ("medicinal action"), for the use of which it affords no explanation. It might appear that this distinctly implied a relationship to disease, but the present regulations—*negative* this, since the examination in materia medica may be taken so early in the curriculum that it might well be doubted whether the student could even be expected to exhibit an intelligent knowledge of pharmacology. A first-year's man has hardly had opportunity to grasp physiological details; he certainly knows nothing of disease. In practice it has been found that the deans of the medical schools so well appreciate the difficulty of this ambiguity that they urge students to postpone their examination in materia medica until they have passed the second examination in anatomy and physiology. In other words, part of the first examination is commonly deferred until the second examination has been successfully dealt with. The supposition that a student can pass this examination at an early date after registration is a mere administrative fallacy. The vague term "medicinal action," so far as can be gathered from the experience of candidates, is, by the examiners of the Conjoint Board, understood to be practically synonymous with pharmacological or physiological action. The term of the synopsis is retained in the examination papers, and in the *riid voce*, but candidates are constantly reminded that their answers are expected to apply solely to the changes produced in a healthy organism; indeed, vague references to names of diseases are rejected as irrelevant at this early stage of their studies. The term "physiological action" is sufficiently precise. To urge that a change in physiological processes induced by the action of any agent introduced into the system can hardly be described as a physiological action is surely to argue for the sake of argument. The term is not perfect, but so long as it expresses the notion of the changes induced in the healthy organism it would appear worth retaining. Mr. MEYMOTT TIDY has recently endeavoured to cast fresh doubt upon it. To judge from his words he regards it almost in the light of a cloak for ignorance. "There is a danger," he says, "lest the phrase 'physiological action' should be employed or regarded as explanatory." This remark is made incidentally in the course of a lecture upon "Poisons and Poisoning." It is quite casually that he suddenly asks, "How does strychnine act?" and startles us with his answer, "We know sadly little about it; so little that we use the phrase 'physiological action' to express our want of knowledge." In a sense this may be true, but the term is

sufficiently useful, and is perhaps the best that can be suggested. It merely implies the results of the presence of a drug, and states these results in definite intelligible order. How these results are brought about, what chemical or physical changes lead up to them, are for the present unanswerable questions, which should not prevent the employment of a simple expressive term in lieu of one which is at once vague and misleading. It would appear to be an over-refinement to confuse a junior student with "medicinal action" considered apart from disease. "Pharmacological action" is still liable to be considered pedantic. "Physiological action," in spite of Mr. MEYMOTT TIDY'S warning, is the least open to objection. This term bears a suitable relation to the knowledge a student may be presumed to possess at the time of examination, and the accurate study of the action of drugs in the healthy body should form a fitting link to an appreciation of their influence in connexion with disease.

Annotations.

"Ne quid nlmis"

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his quarterly return relating to the three months ending with June last. The birth-rate and the death-rate were both lower than those recorded in the second quarter of any year since the commencement of civil registration in 1837. It should be noted, however, that in calculating these rates the Registrar-General assumes that the population of England and Wales has increased since the last census in 1881 at the same rate that prevailed between the census enumerations of 1871 and 1881. It is possible, therefore, that the population of the country at the present time may be over-estimated, the result of which would be to understate the calculated rates of births and of deaths; it is, however, very improbable that the error of estimate, as regards the whole of England and Wales, is large enough to appreciably affect the accuracy of the calculated birth-rate and death-rate. There is no sufficient reason to doubt that the death-rate during last quarter was the lowest on record for the second quarter of the year, thus implying an exceptionally satisfactory condition of the public health. An analysis of the information bearing upon the mortality of the quarter furnished by the Registrar-General's return corroborates the favourable evidence afforded by the gross death-rate. It may be stated that the reduction in the death-rate was relatively much larger in the urban than in the rural districts. Compared with the rates in the ten preceding corresponding quarters, the decline in the urban rate was 1·8, and in the rural rate only 0·6 per 1000 of the estimated population. With regard to the mortality at different ages, it appears that the death-rates in the quarter of infants under one year, and of children and adults aged between one and sixty years, were respectively 4 and 14 per cent. below the mean rates in the second quarters of the ten preceding years; while the death-rate of persons aged upwards of sixty years exceeded that average by only 1 per cent. The main saving of life occurred among children and young adults, whose lives are most valuable to the community; and we further find that a very considerable proportion of the saving of life at these ages was due to the reduction in the mortality from the principal zymotic diseases. The deaths from these diseases gave an annual rate of 1·32 per 1000, while in the

ten preceding second quarters of the year the mean rate from these causes was 2·12 per 1000. This implies that nearly 6000 fewer deaths from these diseases were registered during the quarter than would have been the case had their mortality been equal to the average. The death-rate from diphtheria, it is true, was above the average, but those from measles, scarlet fever, "fever," diarrhoea, and small-pox were almost unprecedentedly low, and the rate from whooping-cough was considerably below the average. The zymotic rate in the twenty-eight towns was 1·71 per 1000, and 0·39 above the general rate in England and Wales, and ranged from 0·43 and 0·58 in Portsmouth and Sunderland, to 2·65 in Manchester and 3·14 in Salford. Measles showed the greatest mortality in Plymouth and Bradford; scarlet fever in Cardiff and Blackburn; diphtheria in Oldham and Norwich; whooping-cough in Manchester and Salford; and "fever" in Preston, Nottingham, and Leicester. Of the 310 fatal cases of small-pox registered in England and Wales, 152 occurred in the twenty-eight large towns, of which 84 were returned in Sheffield, 27 in Preston, and 10 in Bristol. The return just issued affords ground for believing that the mortality statistics for 1888 will be still more favourable than those of 1887, when the death-rate was lower than in any previous year of which trustworthy records exist.

ARMY MEDICAL SCHOOL

A SUBJECT of great importance, affecting the Indian Medical Service, was brought before the House last week in the form of a question, by Dr. Tanner, as to the accuracy of a report that it was the intention of the Indian Government to discontinue the system of sending the successful candidates for the Medical Service to undergo a course of special instruction in military medicine, surgery, and hygiene at Netley. Sir John Gorst stated, in reply, that no decision had been arrived at on the subject. "The matter is still under the consideration of the Secretary of State and the Government of India. The reason given in favour of the change is that the special instruction can be given better and at less expense in India. If the present course were abolished, a course of special instruction would be given in India." We should deeply regret such a decision as that foreshadowed in the answer, as we believe it would be most injurious to the interests alike of the Medical Service and of the troops. The establishment of the Medical School at Netley was one of the boons acquired for the army—Indian as well as European—by Sydney Herbert. The need for it and the importance of the instruction to be given in it were most clearly brought out in the evidence given before the Royal Commission over which he presided in 1857, and the beneficial results derived from it have fully justified the recommendation made in that report, and the expense incurred on account of it. We would most earnestly recommend the authorities to study well the evidence in that report before coming to any conclusion unfavourable to the school. It is stated that the special instruction now provided at Netley could be given better and more cheaply in India. We greatly doubt the statement. We do not believe the young men could, on their arrival in India, go through such a course as that now given at Netley without suffering in health, or that, even irrespective of health, it could be better given there than at Netley. To organise a similar establishment in India would involve a large outlay in buildings, apparatus, &c., and a staff which in pay and allowances would swallow up any apparent saving of money. If the saving is to be effected by dwarfing the school and reducing the amount or character of the special instruction given, it will only be an additional instance of that false economy which lessens money expenditure at the cost of life, health, and efficiency. We hold it to be the imperative duty of the

Government to send out the medical officers fully qualified to undertake their duties without having to undergo any further educational training under circumstances which cannot be favourable either to their health or their comfort. To deprive the young medical officers of the special instruction now given, or to minimise its quality, would be a grievous act of injustice to the Indian army for the sake of a paltry pecuniary saving. —

AN ANOMALOUS EPIDEMIC.

DR. JAS. B. RUSSELL, medical officer of health for Glasgow, has published a pamphlet upon a "Peculiar Outbreak of Febrile Disease," which occurred in March of the present year in St. Mary's Roman Catholic Industrial School for Boys. His investigation, which was most thorough, shows that the schools in question are situated in a densely populated district, much enclosed by buildings, and in contiguity to a greatly overcrowded graveyard; that the schools are provided with very limited playgrounds, and are, besides, deficient in internal air space. He finds that the inmates are "children between five and fifteen years of age, the waifs of a large city, weak in constitution, tainted with a proclivity to scrofulous diseases, and generally of low vitality." The death-rate is higher than in other similar schools in Glasgow, and than that of children of the same age living in the lowest districts; the proportion of deaths from pulmonary diseases being "enormous," whilst there have been repeated outbreaks of typhus fever! Of the two schools, that for boys is in a worse state as regards sanitation than that for girls, and the mortality amongst the former is much higher than with the latter. The outbreak in March was "in its nature a febrile disease, tending to implication of the lungs, and especially to pneumonia"; it resembled epidemics recorded in similar institutions which also were of indeterminate nature, but by all observers "associated with insanitary conditions of the nature of aerial contamination." No specific organism was found, but the disease is sometimes rapidly fatal, the local disease being obviously the result of a constitutional infection. It is interesting to note that the post-mortem appearances resembled those of enteric fever in lesions of mesenteric and intestinal glands; and Dr. Russell's suggestion that the cases, although not enteric fever, might well be due to contamination of the air with organic effluvia, and that they would therefore be allied to so-called "pythogenic pneumonia" seems to us to be worthy of acceptance. Dr. Gemmell, who contributes a note on the clinical aspect of the disease, points to its being obviously allied to the acute specific fevers, but he alludes to certain differences in the clinical history of the pneumonic cases from that of "epidemic pneumonia." Whatever, then, the precise nature of the outbreak, it is more than proved to be due to the insanitary conditions under which these children passed their lives. Dr. Russell justly points out that the only radical measure which would prevent the recurrence of such diseases is the removal of the institution to the suburbs, a step which has been constantly urged by the Government inspector, but which has not been adopted for pecuniary reasons. Failing this, Dr. Russell suggests eight steps which are imperatively needed, including the reduction of the number of inmates, the provision of a large hospital ward, of a detached mortuary, of a probationary ward and a play-room, measures as to cleansing and clothing of the children, and "another step, which it is within the power of the local authority to take, and which ought to be taken at once, is absolutely to close St. Mary's Cemetery, and to make arrangements for putting the ground in decent order. It is now," he adds, "as in 1875, 'in a state of rank disorder,' and is used occasionally as an exercise ground for the children."

THE HARVEIAN CELEBRATION.

THE Royal College of Physicians is an august as well as an ancient body. Perhaps it was from a sense of these attributes that it was solemnly resolved at the last comitia to "invite" the Fellows to attend the Harveian Oration on St. Luke's Day in full academics. Some fear was expressed lest, if a more imperative mandate were issued, the interest in this historical ceremony would considerably wane. We may presume that the same invitation will extend to the Members and Licentiates; or is it intended to create a distinction between those who have received the silk of the Fellowship and the mere Member or Licentiate who happens also to be a university graduate? Really, the College should go further, and institute a badge or order, whereby the higher distinction may be recognised by all. And whilst the comitia was about the task of reverting to ancient customs, why not have insisted upon the delivery of the oration in Latin? The other proposal—to revive the practice of dining together in the evening of St. Luke's Day—involved the remarkable admission that for well nigh half a century the College has been committing a breach of trust! Harvey's bequest of his Burwash estate was for the purpose of meeting the expense of the lecture, and of a feast upon the occasion of its delivery. It is high time that the College should atone for its negligence in this respect, and it might be suggested that only those Fellows who observe the ceremonial in the afternoon should be permitted to share in the festivities of the evening; even if the latter be, as the resolution says, "at their own expense."

PAINLESS KILLING.

THE famous Dr. Benjamin Franklin, writing to his friends Messrs. Dubourg and D'Alibard, in May, 1773, concerning the mode of rendering meat tender by electricity, says "that it has been often asserted that animals killed by lightning putrefy immediately." "This," he continues, "cannot invariably be the case, since a quantity of lightning sufficient to kill may not be sufficient to tear and divide the fibres and particles of flesh and reduce them to that tender state which is the prelude to putrefaction. Hence it is that some animals killed in this manner will keep longer than others." From the point here stated Franklin goes on to refer to the application of electricity for the painless killing of animals for food, remarking "that, as this kind of death is more sudden, and consequently less severe, than any other, if this should operate as a motive with compassionate persons to employ it for animals sacrificed for their use, they may conduct the process thus." The description which follows directs that six large Leyden jars, of twenty to twenty-four pints each, should be charged in cascade; that the operator should attach a chain from the interior of the battery to the legs of an animal—a fowl, for example—and, after raising the animal a little way from the ground, should then deliver the charge through the head from the prime conductor. The animal dies instantly. The head may be immediately cut off to make the body bleed, and a fowl may be plucked and dressed at once. In another letter, addressed to Mr. Collinson, Franklin gave an account of his killing a turkey by the electric shock, in which experiment he very nearly killed himself, a point of practice which since his time has always stood in the way of extended efforts to employ electric shocks for the purpose of destroying the lives of the lower animals, or, as it has also been proposed, of criminals doomed to undergo the extreme penalty of the law. The practical details of electrical science are so much improved since last century that we may now assume a degree of safety in the administering of electricity fairly sufficient to be a safeguard to the

operators. But how the plan would act in practice is quite another question. A writer to one of the evening papers, who records his experiences of killing animals by the electric shock, can hardly, we think, be aware of the difficulties that were found to surround the process when it was practically brought to demonstration by Dr. Richardson before the committee of the Royal Society for the Prevention of Cruelty to Animals in the year 1869. In those trials sheep were struck down by the shock, but a charge of ninety-six feet of surface was required in order to be sure of the effect; with every precaution, the workmen were more than once exposed to danger; the expense was found to be too great when many animals had to be slaughtered; and after all was done the process was not so certain as to be satisfactory. If the shock administered was strong enough to kill outright, the animal usually would not bleed afterwards; and if the shock were only sufficient to stun, there were often marked signs of recovery from the unconsciousness when the animal was losing blood from the knife of the slaughterer. For these reasons the plan was given up, and we believe will be again if it should be tried. Indeed, what difference is there between a blow skilfully administered by a pole-axe and an electric shock? We lately saw a bullock felled by a blow through Baxter's mask. The animal was blind to the blow, and was prostrate and unconscious within three seconds. What could exceed this in celerity? On the question, revived in a lay contemporary by Dr. Farquharson, M.P., on the expediency of making the penalty of death in the human subject by euthanasia, we hold by what we have said before, that any such scheme would only lead to the removal of whatever there may be deterrent in the penalty; and would put, actually, a premium on crime. Dr. Farquharson suggests that Dr. Richardson should be called upon to construct a lethal chamber for condemned criminals. We fancy that if the inventor of the lethal chamber for the lower animals were ever asked to assist in the other task, he would refuse point blank, holding, as he does, we believe, the view that it is the duty of science to endeavour to abolish the extreme penalty, not to tinker it up as if it were good, if it were only divested of the barbarities which have lately brought it, once more, into public execration.

THE TURKISH BATH.

MOST of those who indulge from time to time in the luxury of a Turkish bath have need to observe a discreet moderation in its use if they would reap its advantages without incurring its occasional risks. For the majority of persons it is, with this proviso, a wholesome and enjoyable aid to cleanliness. The rheumatic, the gouty, and the dyspeptic have often proved its therapeutic value, and the reason for this is not far to seek. Its superior efficiency as a cleanser of the skin surface, and its powerful diaphoretic action, need only be mentioned in order to commend its use in such cases. The action set up is not, indeed, a purely local one. Not only is the skin excretion vigorously stimulated, but the bloodvessels, the absorbents, and the deeper tissues generally, are washed by the current of outgoing fluid thus set in motion, while at the same time the strain on the frequently overburdened kidneys is lightened, and this organ rendered proportionally freer and fitter for the discharge of its duties. We must not allow ourselves, however, to view the matter in its most favourable aspect alone. Serious mishaps do occasionally occur in the Turkish bath, and of this fact the recent sudden death of a man in one of the northern counties affords a suggestive illustration. The deceased had been a heavy drinker, and suffered from fatty degeneration of the heart. He had been advised by a medical man that he

should not enter the bath, but in spite of the warning so, and appears to have spent the greater part of a night the hot and cold rooms alternately. It should be mentioned that about the same time he indulged, though not freely, in drinking whisky. A few hours later he was found dead in the cooling room. We may remark in passing the obvious need of limitation in the time during which an establishment is allowed to remain open. In this case the immediate cause of death was clear enough to show the danger in such cases, and it is a real one, depends on the bather's health at the time. It is generally allowed that weakness of the heart muscle from actual disease contraindicates a bath of this kind. There are also cases, however, in which almost equal caution is necessary, though the cause of weakness is mere exhaustion from temporary overstrain. This is a point to which the worried, anxious, and the overworked would do well to give a share of attention.

COMBINED CHLOROFORM AND COCAINE ANÆSTHESIA.

PROFESSOR OBALINSKI of Cracow, remarking the antagonism between chloroform and cocaine, determines to take advantage of it in anæsthesia for operative purposes and has now employed the combined chloroform and cocaine method in twenty-four cases with, as he states, the most satisfactory results. He first administers chloroform by means of an Esmarch's mask until the stage of tolerance is reached which is generally in from four to twelve minutes, with the use of from one to three drachms of chloroform. He then injects into the region about to be operated on a solution of cocaine of the strength of from 3 to 5 per cent., the quantity of cocaine injected being from three to five-seven of a grain. Even more than this might, he thinks, be safely used, both because chloroform is the best antidote to cocaine and because part of the cocaine is about to be removed from the body by the operation. After the injection no more chloroform is as a rule given, unless in protracted operations when very small quantities are administered at considerable intervals. For this method several advantages are claimed amongst others the following:—A smaller quantity of chloroform is sufficient; vomiting is very rare; the depression on awaking is much slighter than when chloroform alone is used. The only disagreeable symptoms which Professor Obalinski has observed have been excitement and throw about of the arms in some nervous people, but as this occurs when chloroform alone is used, it is not at all certain that it ought to be ascribed to the cocaine. He recommends the combined method for extensive operations, finding the use of cocaine usually quite sufficient to render minor operations painless.

THE PAY PRINCIPLE IN HOSPITALS.

WE see a strong disposition in some quarters to make appear that the pecuniary difficulties of London hospitals can be seriously reduced by exacting payments from the poor. It is true, as alleged, that there is a section of the community not so poor that they cannot afford some contribution to the hospital funds. The case of St. Thomas's Hospital adduced in an article in an evening contemporary advocates this principle. At one time this hospital was so burdened with debt that it was contemplated to close five wards. But it was found that by admitting paying patients to some of these the authorities were able to keep open the other wards. There is some force in this, but not very much, as St. Thomas's Hospital ought not to have been so embarrassed with debt; but we are ready to admit that there are classes for whom some special hospital accommodation on the payment system is required, and this should be provided. But this is not the main problem.

benevolent people—which is to make the hospital available for the really poor, and to do this on terms of kindness and charity. It is incredible that they, in times of calamity, can make any serious contribution to hospital expenses. For times that are not times of calamity they do not need hospitals at all, and it is to be desired that they should not frequent hospitals. For such times the provident principle is sufficient, and the working classes ought to be left to make their own arrangements for attendance at home. But to call upon them in times of grave affliction to support the hospital system is to reverse our notions of charity, and to say that the rich people of this country are not willing or able to help the poor as they have always hitherto been able and willing to help them. To put people who can pay into the beds of existing hospitals is to exclude those for whom the hospitals were meant. We think this is to raise another hospital problem before settling the old one.

THE COLLEGE OF PHYSICIANS AND ETHICS.

WE understand that at the last meeting of the Royal College of Physicians the Censors' Board reported upon some recent cases of alleged infringement of professional ethics. In two cases explanations satisfactory to the Board had been given; but in a third, and apparently more serious case, a decision has not yet been arrived at. It appears that the Censors' Board received information of consultations being held by certain leading Fellows of the College—gentlemen who have held some of its highest offices—with a practitioner in the West-end alleged to be a homœopath. The Censors' Board, on applying to the gentlemen, were informed that they were not aware that the practitioner in question was a homœopath, that his practice did not conform to homœopathic principles, and, indeed, as he himself had declared in response to a question from one of the Fellows, that he was not a homœopath, but an "eclectic" physician. We forbear comment upon a matter that is still *sub judice*. Nevertheless, it may be well to recall a memorable resolution of the College, passed on Dec. 27th, 1881, after full debate: "While the College has no desire to fetter the opinions of its members in reference to any theories they may see fit to adopt in the practice of medicine, it nevertheless thinks it desirable to express its opinion that the assumption or acceptance by members of the profession of designations implying the adoption of special modes of treatment is opposed to those principles of the freedom and dignity of the profession which should govern the relations of its members to each other and to the public. The College, therefore, expects that all its Fellows, Members, and Licentiates will uphold these principles by discountenancing those who trade upon such designations."

THE DANGERS OF CHLORAL.

ANOTHER instance of the dangers arising from the incautious use of chloral has been recently made public. Mark Robinson, a lad of eighteen years of age, who had some few months since begun a promising career in London, shot himself in a public cab. The most searching scrutiny has failed to assign any cause for the act, but the medical history is interesting and instructive. Gauged by the commercial standard, the boy was a valuable clerk, and a few days before his death had been promised promotion. From a medical point of view he was neurotic, and recently removed from schoolboy sports to the surroundings of city life he became neuralgic. In ignorance of the baneful effects of chloral he drifted into its incautious use, and on the night before his death, appears to have taken five doses. He was found on his bedroom floor in the morning deeply narcotised that a medical man was called to see him. Both

the latter and the boy's father were thankful for the disclosure, and were sanguine that the evil had been recognised in time. But soon afterwards, and while he was still unable to dress himself without assistance, he was summoned by telegram to attend at his office. Ill and quite unfit he went thither in a cab. What ideas must have passed through his mind during that arduous dressing and journey may be learnt from the sequel, for when his employer pronounced him incapable of signing a legal document as witness and sent him home he shot himself on the way with a revolver which had hung in his brother's room at his lodgings. An indolent, phlegmatic, or dissipated lad would have made no such history. But he was industrious, a teetotaler, and free from vice. To him chloral had no suggestion of vice, but it robbed him of his reasoning power and gave rein to an overwhelming idea of duty. How many such deaths will occur before the Government places restrictions upon the sale of chloral which will make its dangers obvious?

THE EDINBURGH UNIVERSITY CLUB.

THE Graduation Day, or, as it is called, the Capping Day, of the University of Edinburgh, is the 1st of August. It is always celebrated in London by a dinner of the University Club. On this occasion the chair was occupied by Sir Dyce Duckworth, a member whose connexion with it dates from a very early period. He spoke with much affection and respect of his *alma mater*. The toast of "The Visitors" was proposed by Mr. Vanderbyl, and was responded to by Mr. Thomson, the newly-appointed librarian of the British Museum, and Dr. Gee, who spoke respectfully of the Scottish schools, though he did not conceal his pride at the even greater antiquity of Bartholomew's Hospital. In the course of the evening it was announced that fifty gentlemen had proceeded to the degree of Doctor of Medicine, and 195 to the double degree of Bachelor of Medicine and Master of Surgery. Messages of congratulation passed between the meeting and Sir William Turner, who acted as promoter in the graduation ceremonies.

THE FLOODS IN THE ISLE OF DOGS.

AMONG the various districts which have suffered from the effects of the late heavy rains the low-lying quarters of London bordering on the Thames call for particular notice. Reports from the Isle of Dogs describe a state of destitution and misery such as many of our more favoured localities will hardly be able to realise. We read of floors submerged with sewage and rain-water to a depth of three feet, furniture ruined, inhabitants homeless, and obliged to sleep where they can in their wet clothes; of roads under water, of pumps acting incessantly, and of railway traffic arrested, the wooden sleepers floating over a submerged line. The hardships and the inconvenience of this miserable state are mainly due to the inadequacy of the existing sewers to remove effectually an excess of rain water in addition to their proper contents. The obvious argument in favour of a separate sewage and rainfall system will not be forgotten by the advocates of this arrangement; and so far, it will be admitted that life in the districts referred to is barely tolerable. We learn, in addition, that disease has already added somewhat to the prevailing discomfort. During the wet weather we may perhaps be spared the ravages of a local epidemic; but it is hardly possible that any considerable summer heat can follow without ripening the germs of disease which have been thus unexpectedly distributed among so many ruined homes and homeless families. Permanent pumps, we understand, are about to be erected in the submerged districts; but their action must, of course, be merely palliative. The real difficulty and source of danger remain as long as means are not taken to secure the free escape of

the sewage and storm-water, and these necessarily imply a radical alteration in the system of drainage. This object has been steadily pursued by the inhabitants of the Isle during twenty years; but, so far, the authorities applied to have afforded them no adequate remedy. The work is, no doubt, a large one; but it is also a pressing necessity which, even if staved off for a time, will almost certainly recur.

LIPOMATOSIS NEUROTICA.

THIS disease consists in the general subcutaneous deposition of fat in a pathological manner, the subject being an individual whose ordinary processes of nutrition are decidedly faulty. Dr. A. McLane Hamilton records a case in the *Archives of Pediatrics*, No. 55. The patient is the son of Mormon parents, both of whom are alive and well. Several instances of neuropathic transmission exist, there being at least one idiotic child. Among the members of the family of the patient various minor trophic skin and hair defects exist, one little sister having one white and one black eyebrow. The patient weighed 13lb. at birth, and was in good health till four years of age, when he had "whooping-cough" and fever. When five years old his face looked thin, and there were strong lines around his mouth when he laughed, and the calves of his legs at the same time became plump and large for a boy of his years. This condition continued for some time with extreme peevishness and irritability. But the case was, according to the author, not one of pseudo-hypertrophic paralysis. There was but little waddling and no very marked exaggeration of the dorsal curve. The tendon reflexes were easily obtained. The hips were mottled, and the circulation defective, and he complained of subjective cold. The muscles all reacted to the faradaic current. The sphincters were natural; sensation was perfect. A year later most of the symptoms had not changed; the knee jerks were still present and the tongue was large, thick, and broad. Now, however, the muscles of the face presented the reaction of degeneration, and the anodal stimulus was stronger than the cathodal. The muscles of the body generally reacted feebly to strong faradaic currents, but quite readily to a galvanic current of six milliampères with cathodal closure. Intellectually the boy presented a curious state of irritability and timidity, a destructive tendency being also marked. Duchenne called attention to certain subcutaneous depositions of fat in cases of atrophic muscular disease which were likely to be mistaken for true muscular substitution or "pseudo-hypertrophic paralysis." Landouzy has published a case of hemiplegia with great fatty deposits. Pitoux and this author observed subcutaneous adipose deposits in old cases of sciatica and neuritis, and Landouzy has reported a case of cervical pachymeningitis with neuritis of the brachial plexus, and atrophy of the muscles of one arm with a phenomenal increase in size due to fatty deposit.

SCAMPED DRAINS.

A CASE came before the Court of Appeal last week in which the plaintiff had bought a house from the defendant; the latter, in answer to an inquiry as to the state of the drains, having stated that he had spent £50 in putting them in order. Relying on this statement, the house was purchased; but soon three members of the plaintiff's family were suffering from enteric fever. On this occurrence taking place, the drains were opened up, and a condition of things was discovered which involved, amongst other things, the removal of forty cartloads of sewage-contaminated earth. For the alleged misrepresentation, the illness, the alterations, and the consequent expenditure the plaintiff sought relief; but the jury found for the defendant, on the ground that he had been as much deceived

by the builder as the plaintiff, and that there had been no fraudulent misrepresentation. The Divisional Court refused a new trial, and this refusal has been confirmed by the Court of Appeal, mainly on the ground that there had evidently been no wilful deception on the part of the defendant. The case is instructive as showing the limit of responsibility as regards persons selling or letting houses in the present state of the law, and as indicating the desirability, on the part of persons buying or leasing house property, of securing a definite warranty from the owners as to the sanitary circumstances of the property before purchase.

THE SANITARY REGISTRATION OF BUILDINGS.

THE Bill dealing with the better sanitation of dwelling-houses, schools, colleges, hospitals, factories, workshops, hotels, lodging-houses, and other buildings within the United Kingdom, prepared and brought into the House of Commons by Dr. Farquharson, Sir Henry Roscoe, Sir Guyer Hunter, and Dr. Cameron, entirely meets with our sympathy in so far as its general aims and principles are concerned. But we fear that in some of its details it will be found open to objection. The compulsory establishment of "sanitary registration authorities" throughout the kingdom is a most important step, and calls, above all things, for a competent staff of experts in order that justice may be done to the public. An attempt is made to secure such a staff by the initiation of examinations under certain bodies. These include the Royal Institute of British Architects, the Institution of Civil Engineers, the Institute of Architects in Ireland, the Association of Municipal and Sanitary Engineers and Surveyors, and the Surveyors' Institution; but it will be most unfortunate if all these bodies become competing authorities for the issue of certificates in sanitary practice. And if anything is done in the matter an effort should be made to secure a combination of these authorities for the purpose of a single certificate having uniform value. But pending the inauguration of the examinations in question, the Local Government Board are to be required to grant certificates to a body of individuals, some of whom are not really competent, and who will acquire the right to hold a Government testimonial of their fitness merely because they happen at the time of the passing of the Act to hold a certain office, which they have secured without any evidence of their competency to fulfil it. We more than doubt whether the Local Government Board will consent to be placed in such an invidious position; and we are inclined to think that, having regard to the small number of surveyors &c. who are well grounded in sanitary knowledge, the Bill should have been tentative in the first instance.

OPEN SPACES IN LONDON.

THE north of London is to be congratulated on a vote for £2500 of the Islington Vestry, which practically secures the purchase and preservation of the Clissold Park. This park, in Stoke Newington, covers fifty-three acres. It is bounded by the New River on one side. It is full of fine trees and beautifully laid out. Its destruction would have been a public misfortune. It is greatly to the credit of Messrs. Rumbelow, Watson Surr, Mote, Price, and others that they have persevered in this cause, in spite of the rough opposition to their first efforts. They have shown great public spirit in this. In every local body it is to be feared there are men who conceive of London as given over hopelessly to the speculative builder, and destined within a measurable distance of time to become a promiscuous wilderness of "long, unlovely streets." They forget that four or five millions of people need air, that life needs to be made healthier and pleasanter for them by the sight of trees and lawns. Happy the vestry that has

members who understand something of the conditions of health in a city of prodigious and unprecedented proportions. Other thanks are due to Parliament, which has facilitated this purchase by passing an Act of Parliament to enable outside parishes to contribute; and last, not least, to the Ecclesiastical Commissioners, who have given this park for this purpose for £10,000 or £12,000 less than they could have realised by selling it for other purposes. The vestry of Hackney, by a large majority, too, have voted £5000 for this purchase, which, to use the words of one of its members, Mr. Dabbs, preserves an ancient property, to create which would cost a million of money and a century of time. In regard to this momentous question of open spaces it is gratifying to note that the working-classes begin to perceive its significance for them. It is they chiefly who are to be benefited by open spaces. No wonder, then, that the Islington Vestry was memorialised in favour of the purchase by the Working Men's Association and by the London Trades Council.

VISIT TO BERLIN OF A FRENCH SEWAGE-DISPOSAL COMMISSION.

REFERRING to the recent visit of the French Senatorial Commission¹ to Berlin, to inquire into and report upon the sewerage of Berlin, and the works of sewage disposal in operation there, Herr Stadtrath Marggraff, the chairman of the Kanalisations-Deputation of the Municipality, says, in a letter addressed to Mr. Charles Hancock, F.S.S., under date July 24th last, "The gentlemen composing the commission referred to, with Dr. Cornil at their head, expressed themselves on the whole very satisfied with all the results they saw achieved by our irrigation system, eulogised in particular the general cleanliness everywhere visible; while they were most favourably impressed, not merely with the good appearance of the crops grown, but above all with the excessively clear and undisturbed character of the effluent obtained."

FIRE INQUEST.

THE first fire inquest has just been held by the City Coroner, under the powers conferred upon him by the Act of Parliament recently passed at the instance of the Corporation in that behalf. In opening the proceedings he is reported to have said that he was anxious to make this inquiry as successful as possible, since it was contemplated to extend the system to other parts of the kingdom. The result, however, can hardly have realised his hopes, for the jury returned a verdict to the effect that the cause of the fire was unknown. This, though a somewhat "lame and impotent" conclusion, was no doubt inevitable, and the frequent rendering of such verdicts is likely to bring the system itself into unmerited disfavour, unless a wise discretion is exercised in the selection of the cases to be subjected to inquiry. The holding of an inquest indiscriminately in every instance of a large fire would, for example, not only entail a vast amount of wholly unnecessary work upon a coroner, but would tend at the same time to destroy the value of his labours. In the great majority of cases the cause is either perfectly well known or clearly undiscoverable, and no suspicious circumstances exist to point to crime. Where these conditions obtain an inquest is plainly undesirable. The report of the proceedings at the inquest in question does not indeed disclose much reason for the investigation, and it certainly was not justified by its results; but it may have been

perfectly well founded for all that. We do not know. But if it should prove that the work of the fire inquest is heavy, we think that its execution should be provided for by the appointment of special officers, and not by the imposition of additional and onerous duties upon those whose hands are already full.

HEALTH OF ENGLISH WATERING PLACES AND HOLIDAY RESORTS.

THE table published annually in the Registrar-General's quarterly return for the three months ending June, giving recent mortality statistics for forty-six of the principal watering places and summer resorts, is probably widely consulted by those who are weighing their choice of a locality for the usual summer holiday. The table this year, however, is published without any estimates of population or calculated rates of mortality. "For it is recognised," says the Registrar-General, "that, after several years have elapsed since the taking of a census, estimates of population in small communities are so uncertain that they cannot be regarded with that amount of confidence which would justify their official recognition." The table, however, still shows the number of deaths referred during the three months ending June last to each of the principal zymotic diseases in the several holiday resorts. This information, the value of which is quite apart and independent of all speculation as to the present population of the different communities, should be in the hands of all who are called upon to choose a safe and suitable holiday resort for children. For information relating to the individual places we must refer those interested to the Registrar-General's table. It may, however, be noted that the zymotic mortality in the aggregate of the forty-six places was almost identical with that recorded in the corresponding quarter of last year, and that it is higher than it should be in localities depending for their prosperity upon reputation for a clean bill of health. Sanitary authorities are too apt to regard the epidemic prevalence of measles and whooping-cough as inevitable visitations; but in the case of holiday resorts frequented by children it might be expected that the injurious results of such visitations upon the prosperity of a season would lead the local authorities to view them in a more serious light. Only a small proportion of our watering places have yet provided themselves with efficient hospital provision for isolation; fewer still make full use of such provision; and scarcely a single place turns this provision to account with a view to stem the natural course of an epidemic of measles or of whooping-cough. Only two deaths from small-pox occurred in these watering places during last quarter, and the deaths from enteric fever were fewer than in recent corresponding quarters, while those from diphtheria were more numerous.

DIPHTHERIA AND COW DISEASE.

THE epidemic of diphtheria in Moulsham, Essex, is disappearing as rapidly as it commenced, and both Dr. Downes, the medical officer of health, and Dr. Bodkin are agreed that the outbreak had no concern with any sanitary defects, but was related to a temporary ailment in certain cows, the milk of which had been used by those attacked; the diphtheria commencing and subsiding with the onset and disappearance of the malady in the cows. The conclusions arrived at as the result of a careful investigation are:—(1) That certain cows have been suffering from a disease which caused small eruptions on the udder; (2) that persons using this milk have been affected with diphtheria in a modified form; (3) that other members of the same family using other milk have not been affected; and (4) that when the cows in question recovered, their milk ceased to be injurious. It is stated that some of the eruptive matter

¹ This commission was composed of the following:—Dr. Cornil (chairman) Messieurs Combes (sec.), Léon Say (ex-minister), Maze, De Sal, Naquet, Krantz, Georges Martin, and De Verninac. They stayed in Berlin several days, and were preceded in their visit by Dr. Lannelongue and Mons. Beckmann, Chief Engineer to the Paris Municipality.

from the cows' udders has been sent to the Agricultural Department of the Privy Council, and it is to be hoped that samples were also forwarded to the Medical Department of the Local Government Board, who have long had under investigation the question of the relation of disease in the human subject with milch cows.

NAVAL MEDICAL SERVICE.

IN our "Medical Notes in Parliament" of this week will be found a very odd and not very intelligible question put by Mr. Frazer-Mackintosh, member for Inverness-shire, respecting the duties of the medical officers of the Marines. It appears that a probationary lieutenant of Marines was "suffering from a disease as a rule proving fatal unless timeously dealt with," of the nature of which, however, we are not informed, and that the surgeons took no steps, directly or indirectly, to inform him "that it was obvious he was labouring under an insidious disease and to warn him of his danger." The lieutenant's health "afterwards suddenly gave way, and failing to pass his final examination, he had been dismissed from the service." The hon. member did not explain in what manner the surgeon was to find out that the officer in question was labouring under this peculiar form of disease unless he was consulted by him, which appears not to have been the case, but the question seems to imply that there should have been no difficulty about this. Instead of asking whether "the time had come for laying down more humane rules" which would compel, and we may presume also enable, medical officers to divine the existence of disease, it would in our opinion have been more to the point if he had asked whether the time had not come when lieutenants, on joining the service, should be instructed to report themselves to the medical officer whenever they had anything the matter with their health, and should be warned that the neglect to do so would involve them in the consequences resulting from disobedience of orders. The lieutenant in question may have erred from ignorance or from neglect, or from intentional concealment, but it is very unfair that the surgeon should be blamed for the consequences of such a course. Lord G. Hamilton fully exonerated the medical officers from any blame in the matter.

THE POPE CELEBRATION.

A VERY special interest attaches to the bicentenary of the poet Pope, which is being celebrated this week at his own suburb, Twickenham. Not only has Alexander Pope left an indelible impress upon English literature and attained a high position in the ranks of British poets, but he accomplished his great task under a burden of adverse conditions that might well have excused a failure as marked as was his success. To say nothing of the serious impediments which a proscribed faith and an imperfect education threw in his path, we need only refer, for the justification of this remark, to the persistent bad health which from the very cradle fell to his lot. An invalid so helpless that he could not even dress himself without assistance, he succeeded, this notwithstanding, in doing work which has surprised the world not less by reason of the enormous industry involved than by its artistic excellence. Therein lies a wholesome moral. It is well not only for the numerous class of those who labour under physical disabilities to learn how much a capable mind and firm resolve may accomplish through the instrumentality of a crippled and shattered body, but it is well, also, for the still larger world to be reminded from time to time how much it owes to the objects of its pity; how much hard work has been done and how many excellent things have been achieved by the sick and the physically unsound. An honest delicacy will no doubt forbid the thrusting into prominence of this aspect of the

great poet's life and work among his admirers who are gathered now at the Twickenham celebration, for he is great enough to dispense with all allowances in the estimate which men form of him; but in offering the expression of our sympathy and congratulation to the promoters of the movement we cannot refrain from touching upon what is to us a point of special interest in the career which they have brought so pleasantly to mind.

THE OXFORD EXTENSION SUMMER MEETING.

WE do not think that anything brighter or better can be done in this rainy weather than to join the University extension students at Oxford, extending from Aug. 1st to the 10th. Even there the rain may have a damping effect, but the intellectual entertainments and the good society will be powerful counteractions, and such is to be the variety of subject, of scene, and teacher that every taste may be sure of satisfaction. Professor Sanderson's two lectures on the Human Body will be delivered on Thursday and Friday, Aug. 9th and 10th, at 10.30 A.M. During the meeting there will be two conferences on University extension, each lasting two hours; the one on Friday, Aug. 3rd, at 8.30 P.M., at the High School for Girls, to be presided over by Dr. Percival, the head master of Rugby; the other on Aug. 7th, in the same place, at 5 P.M., presided over by Mr. H. L. W. Lawson, M.P., Balliol College.

A NOVEL VIEW OF THE NATURE OF CANCER.

DR. C. FORTES of Munich declares¹ from his microscopical examinations that true carcinomata are neither epithelial nor connective tissue tumours, but depend upon the introduction and multiplication of parasites, especially vesicular. He avers that they most resemble echinococcus multilocularis, and gives drawings which obviously show that he takes the alveolar structure to consist of an aggregation of cysts! The reason why these cancer-parasites have been hitherto overlooked is because their walls and their contents are so delicate and transparent as to be indistinguishable from the surrounding tissue. He further declares the "epithelial" cells to be the products or germs of the "cancer capsules." Such views have at least the merit of novelty; if of nothing else.

DISTRICT MEDICAL OFFICERS AND BOARDS OF GUARDIANS.

MR. EDWARD A. PIGGOTT, medical officer for the second district of the Risbridge Union (Suffolk), has been lately compelled to demand an official inquiry by the Local Government Board into his proceedings as district medical officer, in consequence of a series of unfounded charges of neglect which have from time to time been preferred against him by the Board of Guardians. Since Mr. Piggott's appointment some six years and a half ago there has been considerable friction in the medical administration of his district, so much so that he has had to sue the Board of Guardians in the County court for a midwifery fee, upon which occasion they (the guardians) paid the fee into court. The official inquiry now referred to was held at the Kedington Workhouse on June 29th, before Mr. Lockwood, one of the Local Government Board Inspectors. The charge against Mr. Piggott embodied three distinct allegations of neglect, and was of such a nature as to seriously impugn his character in a professional respect. The Local Government Board, after due consideration of the evidence produced at the inquiry, have come to the conclusion that the Board of Guardians have failed to maintain the several charges against their medical officer, and therefore exonerate Mr. Piggott from all blame.

¹ Das Carcinom. Munich: Kutsner, 1888.

HIGHER EDUCATION.

At the meeting of the Royal Commission on Higher Education on Saturday last, Mr. John Marshall, F.R.S., President of the General Medical Council, was heard in support of the views of those connected with the proposed Teaching University for London. Mr. J. F. Rotton (a member of the joint committee of University and King's Colleges), the Rev. Dr. Wace, and Sir George Young replied to various points raised by previous witnesses. The last sitting of the Commission before the vacation takes place to-day (Saturday), when Dr. R. D. Roberts will be heard on behalf of the University Extension Scheme, and Mr. R. Brudenell Carter for the Society of Apothecaries. Sir Henry James will express the opinions of the Societies of the Middle and Inner Temples on the formation of a Legal Faculty in any contemplated new University in London. The Commission will then adjourn until the commencement of October.

AURICULAR EPILEPSY.

THAT irritation of sensory nerves may provoke an attack of convulsions, or loss of consciousness, or indeed almost any other morbid nervous phenomenon, must be admitted sometimes even without the qualification that the central nervous ganglia are in a particularly irritable condition. There seems plenty of ground for believing that nervous attacks, not necessarily of typical character, but resembling Mènière's disease, may proceed from auricular irritation. Boucheron has attributed some of these attacks to excitation of the acoustic nerve resulting from labyrinthine compression (otopoesis) secondary to absorption of air from the cavity of the tympanum, often due to obstruction of the Eustachian tube. Insufflation of the tympanic cavity has relieved this pressure, and led to the disappearance of the epileptic phenomena. Boucheron thinks such cases are of common occurrence, and that they coexist with slight or gross lesions of the auditory nerves.

LAWSUIT AGAINST MEDICAL MEN.

A SOMEWHAT interesting lawsuit is going on in the Brunswick courts against two medical men, proprietors of an institution for patients suffering from nervous diseases. The plaintiff is a chemist, and his grievance is that the proprietors of the institution purchase from him drugs in large quantities, with which they make up their prescriptions for their patients themselves instead of sending them to him to make up. The court of first instance decided in favour of the defendants, on the ground that medical practitioners may make up medicine for their own families, and their patients were in this case inmates of their own house, and would consequently come under the same category, it not having been alleged that any medicine had been sold to persons outside. This decision has not been allowed to be regarded as final, the case having been taken into higher courts.

CHOLAGOGUES.

EXPERIMENTS on the cholagogue action of medicaments and their elimination by the bile have been made by MM. Prevost and Binet. In confirmation of Röhlmann's researches, the animals employed (dogs) were maintained in good health by excluding fats from their dietary. The quantity of bile discharged was increased by alimentation, especially after the giving of peptones. Fat did not cause any augmentation. Warm or cold water, in doses of 150 to 200 c.c., caused a slight increase in the flow of bile. Strange to say, the employment of cold water injections did not disturb the biliary secretion; the assumed value of these enemata in icterus cannot therefore be easily explained.

MM. Prevost and Binet find that bile is the most powerful cholagogue. Subcutaneously injected in sufficient doses, 3 c.c. to 4 c.c. for a rat, death supervenes on collapse, and the autopsy shows the intestines full of bile with liquid stools often containing blood.

HIGH ALTITUDES IN GRAVES'S DISEASE.

PROFESSOR B. STILLER of Buda Pesth has recently had two cases of exophthalmic goitre (Graves's or Basedow's disease), in which remarkable results were obtained by sending the patients to high or moderately high altitudes—that is to say, to health resorts in the Carpathians and the Tyrol, varying from 1500 ft. to 5000 ft. The explanation of the mode of action of this method of treatment is not very evident, especially as it has been generally taught that high altitudes are contra-indicated in cardiac diseases. Professor Stiller thinks it would be well to obtain further observations of the effect of altitudes not only on cases of Graves's disease, but on cases of disturbance of heart compensation generally.

CHOLERA INTELLIGENCE.

No fresh news as to cholera in Europe is forthcoming. The rumour as to its appearance in Naples is denied, but it is evident from the quarantine restrictions imposed by the Austrian Government on shipping coming from the Port of Naples that the rumour has been credited in Austria. In Tonquin and in Cashmere the disease is said to be on the decline.

"THE MILIARIA OF PALERMO."

DRS. LEPIDI-CHIOTI and L. DE BLASI have been making bacteriological investigations on the subject of an infectious disease known as the miliaria of Palermo, the nature of which has not been well established, notwithstanding its unfortunately great frequency. The result of their researches, so far at least, has been to point to the identity of the disease with typhoid fever. Their investigations were conducted on two patients. From one of these some blood was obtained by puncturing the spleen, and from the other the feces served as material. In both cases bacilli were cultivated, which presented great similarity to those of typhoid fever, and cultures in broth when injected into the venous circulation of guinea-pigs produced effects similar to those produced by cultures of typhoid bacilli.

REFLEX NEUROPATHIES.

THE eyes, the ears, the nose, and naso-pharynx constitute sources of reflex irritation leading to the production of various nervous diseases. According to French and German authorities these sensory areas are very fertile in the causation of headaches, epilepsies, coughs, giddiness, gastralgia, and so forth. Ruault and others assert that a great variety of chronic morbid processes of the nose and naso-pharynx may cause such affections, which are also frequently easily cured by local treatment.

PENSIONERS OF SCIENCE.

THE quaint formulas in which it is customary to announce the award of Civil List pensions brings forcibly to mind the familiar but melancholy fact that a life spent in the successful advancement of art or of science affords no guarantee of worldly prosperity or even of freedom from pecuniary embarrassment. Among the names published in the latest return we notice that of Mrs. Mary Hutchinson, to whom, "in consideration of the services of her late husband, T. J. Hutchinson, Esq.,

M.D., of H.M.'s Consular Service, and of his literary attainments," there has been assigned a pension of £20 a year. Another and still more distinguished name is that of Mr. W. Kitchen Parker, F.R.S., whose splendid work in the field of biology is universally known and recognised. Upon him the burden of years has fallen, and we learn with sincere satisfaction that it is to be lightened in future by a subvention of £100 per annum from the Civil List. It is pleasant to be able to record this modest but highly useful employment of public money to the recognition and aid of neglected merit.

FOREIGN UNIVERSITY INTELLIGENCE.

Amiens.—Dr. Mollien, Professor of Anatomy, has been transferred to the Chair of Clinical Medicine.

Berlin.—Professor Hertwig, who was recently appointed to the Second Professorship of Anatomy, will undertake the instruction in Embryology, Professor Waldeyer confining himself to Anatomy proper, naked-eye and microscopical. It is noteworthy that the professorship which was formerly held by Johannes Müller is now divided into four separate chairs.

Berne.—Dr. Sahli has been appointed Professor and Director of the Medical Clinic, in succession to Professor Lichtheim, who has gone to Königsberg.

Buda-Pesth.—Professor Géza Antal has been given charge of the Skin and Venereal Department of the Rochus Hospital.

Königsberg.—A Bacteriological Laboratory is to be erected under Professor Baumgarten.

Prague (Bohemian University).—Dr. Carl Chodounski has obtained recognition as *privat docent* in Pharmacology and Toxicology.

Vienna.—Dr. J. Wagner Ritter has been authorised to act as *privat docent* in Mental Diseases.

Würzburg.—Professor Röntgen of Giessen has been appointed Professor of Physics. Professor Lehmann, who had been invited to Giessen, has been induced to decline the invitation and remain in Würzburg, by the promise of a satisfactory Hygienic Institute. There seems to be some difficulty in filling up Scanzoni's chair, it having been already offered to Professor Fritsch of Breslau and Professor Kaltenbach of Halle, and declined by both of them. It is now intended to offer it to Professor Hofmeister of Göttingen.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

The deaths of the following eminent foreign medical men are announced:—Dr. Koloman Balogh, Professor of Pharmacology in the University of Buda-Pesth, and co-editor of the Hungarian medical journal, *Orvosi Hetilap*. He was the author of numerous papers and of students' manuals, and his notes on the Hungarian Pharmacopœia gained the prize of the Academy of Sciences. He was fifty-four years of age.—Dr. Deleroix, medical officer of the Infirmary of Rebecq, Belgium.—Dr. Fieuzal of Paris.

It is reported that Plant City, South Florida, has been depopulated, with the exception of two or three persons who are unable to be removed and a few attendants, by fever. The buildings, furniture, &c., will, it is stated, be consumed by fire, to effectually destroy any germs of disease, and night and day a strict cordon will be kept up about the city until the frost comes, to prevent any persons from going into other sections of the

DAVID L. MORGAN, C. has been appointed an H. Queen, in place of Inspector

THE Select Committee of the House of Lords appointed at the instance of the Earl of Dunraven to inquire into the sweating system at the East-end of London have presented a report, together with minutes of the evidence adduced before them. They propose to resume the inquiry on the reassembling of Parliament in the autumn, and, subject to the approval of the House, to so enlarge the scope of the investigation as to include the whole of the United Kingdom. It is expected that the House will on Friday give its sanction to this proposal.

THE sudden death, from cardiac disease, is announced of Mr. Frank Holl, R.A. The deceased gentleman, it will doubtless be remembered, was the artist to whose skill the life-like portraits of Sir William Jenner and Sir Andrew Clark, which are exhibited in this year's Royal Academy exhibition, owe their origin; he had also undertaken to paint the portrait, which is now being subscribed for, in memory of the late Dr. Wilson Fox.

SURGEON EVANS GARNONS LLOYD, late 1st Battalion, Rifle Brigade, died on the 22nd ult. at Gresford, North Wales, aged eighty-seven. Mr. Lloyd entered the Army as hospital assistant in January, 1827, and retired on half-pay in 1852 as surgeon in the Rifle Brigade.

DR. CULLINGWORTH has been appointed visiting physician to the General Lying-in Hospital, rendered vacant by the resignation of Dr. Robert Boxall, and will enter upon his duties forthwith. It is understood that the appointment will require confirmation at the next meeting of the governors.

THE Lettsomian Lectures of the Medical Society of London will be delivered next year by Dr. Gowers, F.R.S., who will take for his subject, "Diseases of the Nervous System due to, or related to, Syphilis."

METROPOLITAN HOSPITAL SUNDAY FUND.

ON the 31st ult., a special meeting of the Council of the Metropolitan Hospital Sunday Fund was held at the Mansion House, under the Presidency of the Lord Mayor, for the purpose of receiving the recommendations of the Committee of Distribution as to the amounts to be awarded to the various hospitals and dispensaries from the fund collected on Hospital Sunday.

The notice convening the meeting having been read, the Secretary announced that he had received letters expressing the writers' inability to be present, and then read the minutes of the last meeting of the Council, which was held on May 29th.

Sir SYDNEY WATERLOW then proposed the following resolution: "That the Report of the Committee of Distribution for the year 1888 be, and is hereby, approved, and that the several awards recommended be paid as soon as possible." It was, he said, the sixteenth time that, as Chairman of the Committee of Distribution, it had fallen to his lot to ask the Council to approve of the annual report, and to confirm the awards which had commended themselves to the Committee. Alluding to the appearance of the report in several daily and weekly papers, Sir Sydney Waterlow expressed his regret that such had occurred, as it had not yet received the confirmation of the Council, and on behalf of the Distribution Committee he disclaimed all knowledge as to how the document was procured by the conductors of those journals. The report which was presented to the Council might be divided, he remarked, into two parts—viz., the amount of money collected and the amount and manner of its distribution. He congratulated the Lord Mayor upon the good collection which had been received—it fact, the largest since the institution of the fund. At the present time, £30,536 had been received, and congregations had not yet sent in their col-

institutions; so that a further sum of about £1500 might be confidently expected. The total amount received last year was £40,607. The number of congregations who made collections for the fund was last year 1633, and this year 1648, showing an increase of 15, which was a matter for sincere congratulation. With reference to the 4 per cent. spent on surgical appliances, the money was well spent; no money could be better used. Sir Sydney then explained the manner in which this fund is distributed, and reported that the committee had received several deputations from various institutions. Public criticism of the fund had been this year greater than ever, and he was glad of it. Such criticism, as tending to keep up public interest in the movement, was what the Council most earnestly desired. In 1875 the number of awards to general hospitals was 17, now it is 22; to special hospitals 43, now 51; to convalescent homes 7, now 18; to cottage hospitals 3, now 11; and to dispensaries 47, now 50. With reference to the award of £550 made to Guy's Hospital, it was, he said, larger than if calculated upon the basis of principle laid down by the rules of the Council; but the committee had been placed in a difficult position. The hospital was situated in a poor district, one of the poorest, he opined, in the whole of the metropolis, and it was felt that there was urgent necessity for the maximum number possible of free beds to be kept open, and he trusted that the Council would confirm the award, which was not nearly so large as those made to several other general hospitals. Another question of principle which was not mentioned in the report was that at a certain West-end church no collection was made on June 10th, but on June 17th a collection was made, and the proceeds handed over to a certain hospital. The committee felt that in this case the law should operate, by which the amounts of any such collections are deducted from the amount of the award from the fund. Sir Sydney concluded by referring to the increase in the amounts collected at the various churches, which generally give the largest amounts. St. Jude's this year heads the list, but if the average for two years is taken, St. Michael's takes the premier position with £1012, as against some £900 odd at St. Jude's.

The Rev. R. RHODES BRISTOW, vicar of St. Stephen's, Lewisham, then briefly seconded the adoption of the report.

Dr. GLOVER complimented Sir Sydney Waterlow on his lucid and exhaustive statement, but wished to call attention to the amounts awarded to three institutions. University College, a most deserving institution, received less than last year, now only getting £1354, against £1510 in 1887. The Metropolitan Free Hospital in Kingsland-road received £208. The expenses of management in this hospital amounted to 48 per cent. It was conducted on new, but, in his opinion, doubtful principles. The contributions of the patients amounted to £52 only, and he would be glad to learn more of the facts of this interesting case. With respect to the Establishment for Gentlewomen in Harley-street, it was, he said, a most useful institution, and the fact that it had received £40 less was the more noticeable, because other similar institutions had received larger awards.

Sir S. WATERLOW said that with respect to the last-named institution particular pains had been taken, and two interviews had been held with the management. The Committee of Distribution were satisfied that the expense of management was excessive, and that more voluntary work was needed. The average number of beds occupied was ten, and the number of paid officials was as follows: Chaplain, matron, medical officer, housekeeper, four nurses, and seven servants. The fees to patients had been raised, and this deterred many from entering the establishment. The total expenditure was £2000 per annum, each patient costing £4 15s. per week. With regard to University College, the cost of management was so great compared with other similar hospitals that it had not been felt possible to make a larger award. With regard to the Metropolitan Free Hospital, the committee took into consideration the transference of the hospital and the consequent irregularity in its work. They were always reluctant to depress by a diminished award the management of any institution during its rebuilding or enlarging.

Sir EDMUND CURRIE explained that the provident system had only just come into operation, and that the expenses would soon be materially reduced.

The LORD MAYOR then put the resolution to the meeting, and it was declared carried.

A cordial vote of thanks to His Grace the Archbishop of

Canterbury and to the other speakers at the Mansion House meeting of June 8th, and also to the editors and proprietors of THE LANCET and other journals for special exertions and publications in connexion with the Hospital Sunday Fund both before and after Hospital Sunday, was then moved by Sir Edmund Currie, who said that he considered £40,000 per annum was totally inadequate as the contribution of the richest city in the world, the average collected from each congregation being about £24, not a shilling a head, and the resolution, having been formally seconded, was carried unanimously.

The Rev. R. G. SIMPSON then moved: "That the cordial thanks of this Council be and are hereby given to the chairman and other members of the Committee of Distribution for the labour they have bestowed in the preparation of the awards they have recommended, and for the very efficient report of their proceedings." The resolution, he said, spoke for itself. Those who were alluded to in it did the work, others merely criticised. He was glad to have heard the healthy cross-examination made by Dr. Glover, and felt that the committee were able to answer all questions. He advocated the increase from 4 to 5 per cent. of the sum spent in surgical appliances.

Dr. GLOVER seconded the resolution, remarking that the distribution as a whole commends itself to public opinion, and to the opinion of the Council.

The LORD MAYOR, having supported the resolution, declared it carried unanimously.

Sir SYDNEY WATERLOW then returned thanks, and moved: "That the cordial thanks of the Council be and are hereby given to the Right Hon. Polydore De Keyser, who, as president and treasurer of the fund, has given his zealous attention and valuable time to ensure the success of the collections, and who has thus enabled the Council to disburse the large amount of £39,321 17s. 6d."

The resolution having been carried with acclamation,

The LORD MAYOR briefly returned thanks, and the meeting terminated.

The following particulars of the distribution of the Hospital Sunday Fund awards this year will be of interest to our readers. The general hospitals which receive donations this year number twenty-two, and draw in the aggregate £18,661. The largest recipient is, as usual, the London Hospital in Whitechapel, which obtains £3333, Guy's Hospital is this year added in this class, and receives £521. Five Chest Hospitals have a sum of £3490 allotted between them; twelve children's hospitals, £3083; three lying-in hospitals, £469; six hospitals for women, £1526; and twenty-four special hospitals of various classes, £3933. The last mentioned group includes the London Fever Hospital, but the amount stated does not comprehend any award to the St. John's Hospital for Diseases of the Skin, which is held over pending litigation in which the hospital is involved. Eighteen convalescent hospitals receive £2845; eleven cottage hospitals, £448; seven institutions of various kinds, £922; and fifty dispensaries, £2341. The total distributed amounts, as elsewhere stated, to £37,721, and the usual proportion of 4 per cent. of the sum collected has been set aside as a fund for the purchase of surgical appliances, and amounts to £1600.

ARMY MEDICAL SCHOOL, NETLEY.

THE summer session of the Army Medical School at Netley was brought to a close on the 30th ult., when the prizes gained by the candidates for commissions in Her Majesty's Indian Medical Service were distributed by Colonel Sir Owen Burne, K.C.S.I., member of the Council for India, who was accompanied by Director-General Sir Thomas Crawford, K.C.B., Sir Joseph Fayrer, K.C.S.I., Surgeons-General Sir Thomas Longmore, C.B., D.C., Fraser W. S. Murray, W. C. Maclean, C.B., Professor Sir William Aitken, F.R.S., Deputy Surgeons-General D. Boyes Smith, T. Blatherwick, W. M. Webb, Colonel W. Henning Lee, Brigade-Surgeons Godwin, Surgeons-Major T. Babington, F. Dick, Rob. Harvey, W. T. Martin, and Battie, Surgeons Davies and McGill, Major F. F. Hobbs, the Rev. F. Beamish, G. F. Steven, R. E. Kavanaugh, and the Secretary to the School (Mr. T. Borchert).

Sir THOMAS LONGMORE, having read the list of successful candidates (which is published elsewhere),

Sir OWEN BURNE expressed the pleasure and satisfaction

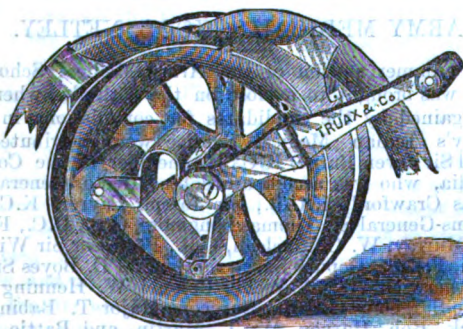
which it gave him to distribute the awards. The position of a medical officer was, he said, both honourable and difficult. It was honourable, because as a loyal subject of the Queen he had to cure friends rather than kill enemies; and it was difficult, because when a medical officer joined a body of men who sometimes did not appreciate him at his full worth, he had to assert himself and show he was master of his profession. Of all the causes or means of destruction to which the profession of arms was subject the most potent was disease; and for this reason all great military commanders, such as Wellington and Napoleon, had given their chief attention to the health of the troops. And why? Simply, speaking in the most selfish sense, because health meant numbers. Even death, as he saw written the other day, was not so great an enemy to them as disease. Death certainly diminished numbers, but disease not only did that, but, in addition, took away men, money, guards, surgeons, hospitals, and carriage, so that very often in critical cases an army in the field was crippled by it. Therefore, he would ask all medical officers to remember that prevention is better than cure, and that their duties were preventive rather than curative. They would, he was sure, excuse him if he gave them a few "wise saws" which they might put in their pockets and carry away, perhaps with advantage. He would urge all alike to treat the soldiers under their charge as if they were private patients, paying large fees, and able to change their medical men at any time they pleased. Let them care for their own health, and show an example in that as well as in other things to those around them. Let them remember they were not combatant or fighting officers, but scientific men; that they were men of medicine, and ought to be proud of the fact. Let them lay to heart, and impress upon others wherever they could, that military hygiene required very great capabilities. In concluding his remarks, Sir Owen Burne reminded his hearers that they could not all be heroes, nor was life altogether heroic, but they could all be straightforward, honourable, religious gentlemen, carrying on their daily round of duties with advantage to themselves and to others. Commonplace as it might appear, this common round of duty was the most honourable thing that a man could fulfil.

Sir JOSEPH FAYRER then delivered a brief address of congratulation and encouragement; after which a vote of thanks was accorded to Sir Owen Burne, and the proceedings terminated.

THE ALLEN SURGICAL PUMP.

IN our issue of Oct. 29th, 1887, we gave a short description of this instrument, which is remarkable alike for the simplicity of its mechanism and the range of its application to surgical purposes. We have since had an opportunity of making a more detailed examination of its singular merits, and proceed to give the results of our investigation. The motive power, on the principle of suction, is gained by

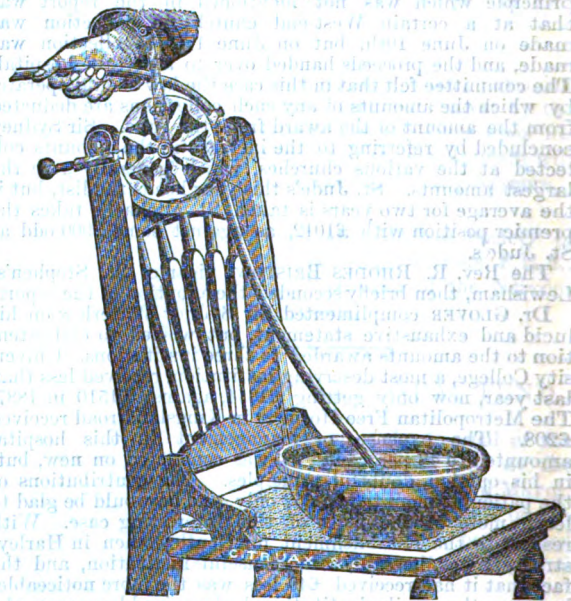
FIG. 1.



the pressure in revolution of a roller contained in a steel framework upon a stout indiarubber tube, so arranged that the tube in question remains *in situ*, and only requires removal after long continued use. (See Fig. 1.) The framework can be fixed to the back of a chair or bedhead,

and can be placed in either a vertical or horizontal position. (See Fig. 2.) By turning the handle, air or fluid, as the case may be, is driven through the tube in a direct or reverse current. With the instrument before us—the one recommended for general use—two and a half revolutions of the handle will cause exactly one ounce of fluid to pass through the tube. Thus it will be seen that we have not only a means of propelling fluid through the tube, but also of measuring the quantity of fluid to a nicety. Let us take one of the many uses to which this invaluable instrument may be put—viz., washing out the bladder. The bladder is first emptied of urine by simple catheterisation. Then a soft catheter is fixed to one end of the rubber tube, the other end of the tube being placed in the fluid intended for injection into the bladder. The handle of the pump is turned until the fluid commences to run out of the eye of the catheter, so that all air is expelled from both tube and catheter. The latter is now introduced into the bladder, and the requisite amount of fluid injected—measured, as aforesaid, by noting the number of revolutions of the handle. To withdraw the fluid from the bladder, all that has to be done is to reverse the direction in which the handle of the pump is turned. The operation can be repeated as many times as desired. There is a clip on the framework of the pump on the side opposite to the handle, by means of which the

FIG. 2.



roller inside is made to press firmly or lightly on the elastic tube, according as it is in or out of action. We may briefly note a few of the other uses to which the pump can be put:—1. The tube can be fixed to a cupping-glass—a set of these are contained in the case—and the operation of cupping easily, rapidly, and efficiently carried out. It has the advantage over the ordinary methods of cupping, in the first place that the suction can be graduated at will, and secondly that no heating apparatus is required to rarefy the air. 2. It can be used as a breast-pump. 3. It gives the means of expanding rubber bags either for tamponing or dilating; thus it may be employed for arresting hæmorrhage, say, from the rectum, uterus, or nose, or for enlarging the cervical canal in obstetric practice. 4. It gives a perfect aspiration, allowing (a) a vacuum to be carried up to the point of the needle, as in a Dieulafoy; (b) fluid to be injected into the emptied cavity and withdrawn at will without once removing the needle or disconnecting the individual parts of the apparatus. 5. It can be fixed to a stomach-pump, the exhausting power of which can be controlled with ease and accuracy. Should any solid pieces of food, for example, plug the orifice of the tube in the stomach, they can be dislodged by simply reversing the movement of the handle of the pump. As in the bladder, so here. The instrument is serviceable for washing out the cavity, and as no disconnections are requisite, the operation of empty-

ing and cleansing the stomach can be performed rapidly, a matter of no little moment in case of poisoning." The instrument has another advantage—viz., that it admits of being maintained aseptic throughout an operation, a great desideratum where internal passages and cavities are the seat of operative procedure—for instance, tapping abdominal cysts, washing out the bladder, &c. Finally, we may quote a passage from the descriptive catalogue: "It may be successfully used as an instrument for litholapaxy, the transfusion of blood, as an epistaxis instrument, the feeding of insane patients, treating cases of intussusception of the bowel, in evacuating the contents of ovarian cysts, and in washing out the peritoneal cavity." The entire apparatus, with a number of accessories, most of which have been referred to, are contained in a handy portable bag.

We can scarcely speak too highly of the apparatus before us. It is a marvel of the scientific application of mechanism to surgery. We predict for it a very general, if not a universal, employment in the profession. The instrument is manufactured by Chas. Truax and Co., 75 and 77, Wabash-avenue, Chicago, Illinois, whose representatives in this country are Messrs. Hilliard and Sons, 65, Renfield-street, Glasgow.

A GERMAN SYDENHAM.

(From a Correspondent.)

By those who believe that the physician, like the poet, is born not made, a corroborative instance will be recognised in the octogenarian, Dr. Franz von Gietl of Munich—"Father Gietl," as the later generations of students loved to call him—who died at his post on March 19th. Accompanying him through the medical wards of the Munich General Hospital, the visitor was immediately impressed with his centripetal insight into the significance and the source of symptoms—with his possession of the "physician's eye," traditionally ascribed to our own Sydenham. No man rated more lightly than von Gietl the pretensions to "physiognomonic diagnosis" which some have claimed as superseding the application of scientific tests; in fact, his whole life was devoted, with an energy and concentration all his own, to mastering or perfecting every aid with which physics, or chemistry, or microscopy could arm him. But with his discriminating memory, ranging down a retrospect of thousands of cases, he divined the meaning of look, expression, attitude, tone—the *ensemble* of the patient's "address," so to speak; and he could tell at a glance the nature of the mischief brewing underneath, with the swiftness and the certainty of the veteran pilot, who can read from the ripple or complexion of the water whether there is rock or shoal, or cross-current to steer clear of. On a less apt physician all this observation would have been wasted; but with him, as with Sydenham and many another born practitioner,

"Old experience did attain,
To something of prophetic strain."

The symptom interested him only as suggesting the source, and, till he had found this, he was sparing, to a fault, in his exhibition of drugs. It was said of him, with pleasant exaggeration, that he could have written his pharmacopœia on his thumbnail. Even after satisfying himself as to the disease, he would treat it in the simplest fashion. Pneumonic patients frequently got nothing from him but hot tea, and made quick and lasting recoveries. Unlike his contemporaries, he latterly withheld quinine in typhoid, holding it, with Tommasi-Crudeli, to be a veritable poison to the vaso-motor system, and especially injurious to the heart. Such fever patients he treated with baths, but only tepid baths, mostly of 23° (Réaumur), often as low as 18° R.; and if asked why he did not prescribe a colder temperature he would smile, and say that it was he who had introduced the cold-water treatment of typhoid into Munich, but that he had learned better than to give baths at 12° R. His other treatment of such cases consisted in nutrition and nursing. His practice, he used to say, hailed from a time when "Feeding your patient you feed the fever" was an aphorism. But as soon as he could think for himself he made the contrary his rule and drew from the writings of Saint Vincent de Paul those lessons as to nursing which, in the founder of that order, amounted to an

inspiration. His honesty was a distinguishing characteristic of him. To the last he maintained that the teacher should still be the first to learn, and when commissioned to investigate an explosion of cholera or typhoid he would set microscopists, chemists, meteorologists, and physicians to work and weary or worry them with questions that often "remitted them to their studies." His researches on cholera remount to its first appearance in Europe in 1831, and he soon reached conclusions which have since been accepted; for instance, that there is a specific cholera poison, the development of which depends on atmospheric influences co-operating with geographical site. Water had not, in his opinion, the slightest share in the diffusion of cholera; it spread through the food and the insanitary dormitory. But he was too sound an observer to think he had said the last word on so obscure a pathological question. In 1873 he wrote, resignedly; "Everything in nature, even morbid life, moves by law, but no disease is so unvacillating, so rigid as cholera." From his researches into it he formed his peculiar theory of fever—namely, the febrile state resides essentially in the parenchymatous fluid or the tissue water (*die Parenchym-flüssigkeit oder das Gewebswasser*). This he learned from those cases in which typhoid patients with high temperature were seized with cholera and profuse diarrhœa, with the result that the fever at once disappeared. But this he left unmentioned, nor carried it beyond the stage of "sufficient reason." His energy abode with him till his eighty-second year, when he still paced the wards as physician in ordinary to the Munich General Hospital, where he made his rounds twice daily, and so left his impress on successive generations of students that the "homœopathic heresy" never had a chance of establishing a clinique in the Bavarian capital. Open as he was to the newest finding or suggestion, he revered the old paths, keeping up his Latin with a punctilio that amused and sometimes annoyed the latter-day school. With his great teacher Grossi, of whom he always spoke enthusiastically, Latin was his only medium of communication, and the ease and grace with which he wrote it may be seen from his inaugural thesis of 1829: "*Fragmenta Pathologica de Neurogangliis*." He was the trainer, the professional parent, of thousands of busy practitioners throughout Bavaria, South Germany, and Switzerland, who ascribed their soundest ideas and practice to "Father Gietl." An hour before his death he was so far conscious as to say, "I am now in dissolution," and, after thanking affectionately all his relatives and attendants, he asked for a hand-mirror in which to view his features. Having done so, he sank back and gradually passed away. His funeral attested the love and respect in which all the light and leading of the Bavarian capital held the octogenarian physician—the "German Sydenham," "Father Gietl."

SOCIETY FOR THE STUDY OF INEBRIETY.

THE Royal Assent to Permanent Legislation for Inebriates was the occasion of a reception by the President and Council of the Society for the Study of Inebriety to the Inebriates Legislation Committee of the British Medical Association, on Friday, the 27th ult., in the rooms of the Medical Society of London.

After a service of refreshments, the President, Dr. Norman Kerr, took the chair, and congratulated the company on the successful issue of a quarter of a century's agitation by the British Medical Association, aided by other bodies, in the enactment of permanent legislation in place of the previous temporary measure. He acknowledged gratefully the valuable services of Sir R. Christison, Dr. A. Peddie, Dr. Donald Dalrymple, Alfred Carpenter, and Stephen Alford; Lord Aberdeen, Dr. Cameron, Sir Walter Foster, Sir Trevor Lawrence, and Sir Lyon Playfair; and specially desired to thank the Government and the Home Secretary, Mr. Matthews, who had done so much to facilitate the progress of the Bill through Parliament. Dr. Kerr had still a lively recollection of similar services at the hands of the then Government and Lord Cross, nine years ago. This, however, was but the first step. All the energies of the friends of the victims of the disease of inebriety must be now devoted to the amendment and improvement of the law to the inclusion of chloral, chlorodyne, and opium inebriety, to the provision of medical care and treatment for the poor, and to compulsion

in incorrigible cases, a far cheaper and better plan than punishment, which was no cure for inebriety. Mrs. Lawson Buntin (Miss Aitken) gave some recitations which were much applauded.

Amongst the resolutions passed was one asserting that the meeting regarded the Inebriates Legislation Act as incomplete and imperfect, and strongly urging the need of such amendments as may be necessary to render the admission to a retreat as simple and easy as possible; to include all forms of inebriety; to empower the proper authority to grant compulsory admission, in well-defined cases, of inebriates unwilling to apply voluntarily; and to provide medical care and treatment for poor and destitute inebriates. Other resolutions thanked the medical press, the Government and Home Secretary, the British Medical Association, and the Houses of Parliament.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5314 births and 2844 deaths were registered during the week ending July 28th. The annual rate of mortality in these towns, which had been 15.0, 15.7, and 16.0 per 1000 in the preceding three weeks, declined again last week to 15.8. During the first four weeks of the current quarter the death-rate in these towns averaged but 15.5 per 1000, and was 5.5 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 8.1 in Derby, 8.3 in Brighton, 12.0 in Nottingham, and 12.4 in Leicester. The rates in the other towns ranged upwards to 20.3 in Manchester, 22.1 in Bolton, 22.3 in Huddersfield, and 25.4 in Halifax. The deaths referred to the principal zymotic diseases, which had been 354 and 311 in the preceding two weeks, rose again last week to 409; they included 156 from diarrhoea, 65 from whooping-cough, 62 from measles, 48 from scarlet fever, 40 from "fever" (principally enteric), 35 from diphtheria, and only 3 from small-pox. No death from any of these zymotic diseases was registered during the week in Derby, whereas they caused the highest death-rates in Newcastle-upon-Tyne, Preston, Blackburn, and Halifax. The greatest mortality from diarrhoea occurred in Wolverhampton, Oldham, Liverpool, and Sheffield; from measles in Leeds, Leicester, and Halifax; from whooping-cough in Manchester and Halifax; from scarlet fever in Birkenhead, Bolton, and Blackburn; and from "fever" in Salford and Newcastle-upon-Tyne. The 35 deaths from diphtheria included 21 in London, 4 in Liverpool, 4 in Manchester, and 2 in Sunderland. Small-pox caused 3 deaths in Preston, but not one in London or in any of the twenty-six other large towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 2 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 861 at the end of the week, against numbers declining on the preceding four Saturdays from 924 to 889; 87 cases were admitted during the week, against 103 and 105 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 176, 164, and 166 in the three preceding weeks, declined last week to 160, and were 28 below the corrected average. The causes of 48, or 1.7 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Leicester, and in seven other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Bradford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16.1 and 18.4 per 1000 in the two preceding weeks, declined to 15.3 in the week ending July 28th; this rate was 0.5 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 10.9 and 11.5 in Aberdeen and Greenock, to 17.6 in Perth, and 24.5 in Paisley. The 387 deaths in the eight towns showed a decline of 79 from the number in the previous week, and included 21 which were referred to diarrhoea, 6 to whooping-cough, 5 to measles, 3 to scarlet fever, 3 to diphtheria, 3 to "fever," and not one to small-pox; in all, 41 deaths resulted from these principal

zymotic diseases, against 28 and 35, in the preceding two weeks. These 41 deaths were equal to an annual rate of 1.6 per 1000, which was 0.7 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 8 and 12 in the preceding two weeks, further rose last week to 21, but were 18 below the number returned in the corresponding week of last year. The deaths referred to the other zymotic diseases did not vary considerably from the numbers returned in the previous week. The 6 fatal cases of whooping-cough and the 5 of measles were all returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 68 and 84, in the preceding two weeks, declined last week to 46, and were 16 below the number returned in the corresponding week of last year. The causes of 52, or more than 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 22.6 and 19.4 per 1000 in the preceding two weeks, further declined to 18.0 in the week ending July 28th. During the first four weeks of the current quarter the death-rate in the city averaged 20.1 per 1000, the mean rate during the same period being 15.6 in London and 15.8 in Edinburgh. The 69 deaths in Dublin showed a further decline of 9 from the numbers in recent weeks; they included 4 which were referred to scarlet fever, 2 to "fever" (typhus, enteric, or ill-defined), 1 to whooping-cough, 1 to diarrhoea, and not one either to small-pox, measles, or diphtheria. Thus only 8 deaths resulted from those principal zymotic diseases, against 21 and 16 in the preceding two weeks; these were equal to an annual rate of 1.2 per 1000, the rate from the same diseases being 2.7 in London and 0.6 in Edinburgh. The deaths from "fever," whooping-cough, and diarrhoea showed a considerable decline from the numbers in recent weeks, while the fatal cases of scarlet fever exceeded those returned in the previous week by 1. Five deaths from violence and 3 inquest cases were registered; and 39, or nearly a third, of the deaths occurred in public institutions. The causes of 17, or 14 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—The date of Surgeon G. D. Hunter being seconded for service with the Egyptian Army is June 9th, 1888, and not as stated in the *Gazette* of May 29th, 1888.

ARMY MEDICAL RESERVE OF OFFICERS.—The under-mentioned Officers to be Surgeons-Major, ranking as Majors (dated Aug. 1st, 1888):—Surgeon Geo. Hogarth Turnbull, M.D., and Honorary Surgeon-Major George William Hatchell, 3rd Battalion, the Connaught Rangers. The undermentioned Officers to be Surgeons, ranking as Captains (dated Aug. 1st, 1888):—Surgeon George Harrison, the Earl of Chester's Yeomanry Cavalry; Acting Surgeon Robt. Thornton Meadows, M.B., 2nd Volunteer Battalion, the Duke of Cornwall's Light Infantry; and Acting Surgeon Alex. Disney Leith Napier, M.D., 1st Haddington Artillery Volunteer Corps.

BENGAL MEDICAL ESTABLISHMENT.—Surgeon-Major Jesse Griggs Pilcher to be Brigade Surgeon (dated May 14th, 1888).

ADMIRALTY.—The Good Service Pension of £100 a year for Inspectors-General of Hospitals and Fleets, vacant by the death of Inspector-General H. J. Domville, C.B., M.D., has been awarded to Inspector-General Sir John Watt, Reid, M.D., K.C.B., Hon. Physician to the Queen from July 10th, 1888.

The following appointments have been made:—Surgeon John D. Hughes, to the *Royal Adelaide*, additional (dated July 26th, 1888); Surgeon Maurice M. R. Mackenzie, to be Surgeon and Agent at Killybegs and Tribane; and Fleet Surgeon Chas. A. Lees, M.D., to the *President*, additional, temporarily (dated Aug. 1st, 1888).

YEOMANRY CAVALRY.—Dorset (Queen's Own): William Rendall, Gent., to be Acting Surgeon (dated July 28th, 1888).

ARTILLERY VOLUNTEER CORPS.—1st Volunteer (Devonshire) Brigade, Western Division, Royal Artillery: Thomas

Henry Tracy Mudge, Gent., to be Acting Surgeon (dated July 28th, 1888); Thomas Finlayson Dewar, M.B., to be Acting Surgeon (dated July 28th, 1888).—1st Worcester: Lieutenant J. T. Thomas, to be Surgeon (dated July 28th, 1888).

ROYAL ENGINEER VOLUNTEER CORPS.—1st Lancashire: Robert Eccles, M.D., to be Acting Surgeon (dated July 28th, 1888).

RIFLE VOLUNTEERS.—3rd Volunteer Battalion, the Hampshire Regiment: Andrew Knox Rickards, Gent., to be Acting Surgeon (dated July 28th, 1888).—5th (West) Middlesex: Surgeon T. W. Nunn, resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the Corps on his retirement (dated July 28th, 1888).—13th Middlesex (Queen's Westminster): Sir Morell Mackenzie, Knt., M.D., to be Surgeon (dated July 28th, 1888).—1st Volunteer Battalion, the Royal Warwickshire Regiment: George Jordan Lloyd, M.B., to be Acting Surgeon (dated July 28th, 1888).

Correspondence.

"Audi alteram partem."

LONGEVITY AND ALCOHOL.

To the Editors of THE LANCET.

SIRS,—I have to thank you for your courtesy in drawing my attention to an article in to-day's LANCET upon the "Habits of Intemperance" Report of the Collective Investigation Committee, lately issued, in the *British Medical Journal* (June 23rd, 1888). The article commences: "The total abstainers have been thrown into commotion by the publication of certain statistics purporting to show that abstainers, after all, do not live so long as other people"; and further on I find: "it can scarcely be credited that the decidedly intemperate live longer than teetotallers, and that free drinkers and careless drinkers live much longer. Such conclusions raise the strongest suspicion of the value of the statistics." I have read these sentences with unbounded astonishment; and, as the matter is one of some importance, I trust that you will accord an equal degree of publicity to my plain statement, which you can readily verify, that the Report in question "purports to show" nothing of the kind, and that no such "conclusions" are to be found in its pages. The writer of the article has correctly quoted the Table (IX.) showing the average ages attained in the different classes, but has omitted to say that nearly a column of the Report (p. 1312) is devoted to pointing out a fallacy involved in the *prima-facie* interpretation of the figures contained in this table, that two extra tables (X. and XI.) are inserted especially to support the explanation there given, and that the Summary of results on page 1316 expressly declines to draw any conclusion from these figures as to the relative longevity of total abstainers. It was open to the writer of the article, if he chose, to deny the fallacy, to dispute the explanation, and to place what interpretation he fancied on the figures; it was not open to him, as a candid critic, to ascribe to the Report a deduction which it unequivocally disclaims the warrant for forming. With your permission I will quote the "conclusions" regarding longevity as they actually stand (p. 1316):—

1. That habitual indulgence in alcoholic liquors beyond the most moderate amounts has a distinct tendency to shorten life, the average shortening being roughly proportional to the degree of indulgence.

2. That of men who have passed the age of twenty-five, the strictly temperate, on the average, live at least ten years longer than those who become decidedly intemperate. (We have not in these returns the means of coming to any conclusion as to the relative duration of life of total abstainers and habitually temperate drinkers of alcoholic liquors.)

How such a singular misrepresentation found its way into an article intended for insertion in THE LANCET, I can scarcely comprehend; but the occurrence in the course of the article of a passage which, "purporting" to be a quotation from the Report, contains no less than fourteen verbal inaccuracies, in the space of seven lines, sufficiently assures me that I need look to no other cause than the obvious carelessness of the writer. I have written this letter with

much reluctance; but THE LANCET is read by so wide a circle, not only of the profession, but of the educated public also, that I should not be doing right in leaving the statements to which I have alluded without formal contradiction.

I am, Sirs, yours truly,

ISAMBARD OWEN.

Hertford-street, Mayfair, W., July 28th, 1888.

* * We are glad to have called forth Dr. Isambard Owen's letter. If he will read our article again he will see that it bears proof of having been written, not to discuss in detail the value of the different tables and data in his report, but to deal with the impression—we might almost say the shock—given to abstainers by his Table IX. We were writing with a paper before us by Dr. Norman Kerr on the statistics collected by the Collective Investigation Committee; and the quotation, of the inaccuracy of which he complains, is taken almost *verbatim* from Dr. Kerr's paper (in the *Alliance* newspaper, July 21st). And it does not differ materially from the definition of careless drinkers in Class C of the report. We are glad to find Dr. Owen's conclusions regarding longevity show so clearly the advantages of temperance, but we are still somewhat surprised to find that in a table which he admits is correctly quoted by the writer in our pages the "decidedly intemperate" live longer than abstainers. It will take a great many statistics of unimpeachable quality to establish this to our satisfaction, though we are not advocates of extreme doctrines on this subject.—ED. L.

DIARRHŒA.

To the Editors of THE LANCET.

SIRS,—In your short article on Saturday last commenting upon the late "unseasonable weather and the public health," the unusually low mortality from summer diarrhœa is pointed out, and you go on to say that "summer diarrhœa is almost exclusively an infantile disease." With your permission I would like to point out that this is a fallacy which many writers on the subject have fallen into. I have studied this subject very fully the last three years, and, at all events so far as Leicester is concerned—and this town suffers probably more than any other in England from the disease under consideration,—it is by no means exclusively, or even chiefly, an infantile disorder. The mortality is principally infantile, but accurate observations show that by far the larger proportion of sufferers are patients of more mature years. I am, Sirs, yours faithfully,

Leicester, July 31st, 1888.

HENRY TOMKINS, M.O.H.

NOTIFICATION OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—In a leading article in the current number of THE LANCET it is said that I state "the medical practitioner has more time to notify than the householder," whereas in my letter I stated my reasons for thinking the medical practitioner was the best person to notify, and amongst these reasons I do not mention the word "time" or in any way suggest that the medical practitioner has more time than the householder. I do, however, believe that he has more conveniences for notifying than many householders, and arrive at that conclusion partly because I have been in general practice and know how difficult it is in many houses to obtain pen, ink, and paper. I regret that my letter was construed by anyone into showing that medical officers of health and their brethren in general practice live in different atmospheres; nothing was further from my intention, and on re-reading the letter I fail to see why that construction was put upon it.—I am, Sirs, yours obediently,

Portsmouth, July 27th, 1888.

R. H. MUMBY.

FIRST AID.—Last week the Right Honourable J. P. Hibbert distributed the medallions and certificates awarded in the third examination of classes formed at the Royal Albert Asylum, Lancaster, in connexion with the St. John Ambulance Association. Of fifty-five men and women who had attended the classes forty-six had passed the examination.

MANCHESTER.

(From our own Correspondent.)

OWENS COLLEGE AND THE CHAIR OF SURGERY.

As already announced in THE LANCET, the Council of Owens College have appointed Mr. Arthur W. Hare as Professor of Surgery in place of Professor Lunad, resigned. Probably no college appointment, certainly none in the medical department, has ever given rise to so much controversy, not to say criticism and discontent, among those most interested (the students of that department) as this has done, and it is but fair to add that this adverse criticism is not confined to present students, but includes former ones, and also a very large proportion of the medical profession of the district.

THE ROYAL INFIRMARY.

At the annual meeting, held last week, it was stated that upwards of 41,000 patients had been treated at the Infirmary and its two branches, the Convalescent and the Fever Hospitals, during the past twelve months, at a total cost of £30,507. Of these, upwards of 8000 were in-patients and the remainder out- and home patients. It was also stated that the number of out-patients during the last few years had been largely on the increase, and it was suggested that many of these ought to be independent of gratuitous medical attendance. A few years since, a rigid inquiry was instituted into the means of all applicants, and those earning more than a certain weekly sum were referred to the Provident Dispensary. The question of hospital abuse, here as elsewhere, is one that is not yet satisfactorily solved or against which an efficient remedy has been provided. Of the 8000 in-patients more than 2000 were received at the Fever Hospital, where large expenditure has been going on in providing increased accommodation for patients and staff, though upon what principle this large expenditure has been incurred it is difficult to say, seeing that the providing for the isolation of infectious disease is in nowise part of the duty of a charity like the infirmary, but should devolve upon the health authorities, from whom the patients are received. It has been hinted that the income derived from the payments received are so large that a good return is made upon the capital thus invested—and that all excess of income over expenditure helps the common fund of the institution. At the monthly meeting of the Infirmary Board a curious application was made by the Manchester Trades Council. It is, and has been, for many long years, the custom of the infirmary to issue to all subscribers "recommendations," by means of which they can send patients for treatment to the infirmary. On this "recommendation" it is stated that the subscriber who signs it has inquired into the circumstances of the applicant, and has found him to be "a proper object of charity," &c.; and these words the Trades Council asked to have expunged as apt to give offence to patients. The request was not complied with. A more sensible suggestion would have been to abolish the "recommendation" system altogether, and the matter has at times been discussed; but hitherto the Board have not seen their way to discontinue this long-standing custom.

SERIOUS OUTBREAK OF SMALL-POX.

We have heard lately but little of small-pox, and a sudden and serious outbreak on Friday last in an educational establishment caused some little surprise. Into a Roman Catholic Industrial School a child had been lately admitted from Yorkshire, suffering, apparently, from a mild and unsuspected attack of the disease, and has been mixing freely with the other inmates, with the result of infecting about seventy of these, all of whom were removed to the Small-pox Hospital during Friday and Saturday, and the whole sanitary staff of the Corporation set to carry out prompt and efficient disinfection, &c. This outbreak is probably unique in point of numbers admitted to hospital in one day from one place, and speaks well for the organisation now in force for the rapid isolation of infectious cases.

PRISON CELLS.

Appropos of your remarks in the last issue of THE LANCET on the accommodation provided for prisoners awaiting trial in police and other courts, it is not creditable to Manchester that its provision in this respect is about as bad as it well

can be, and has been the subject of remark in the House of Commons. The inspector appointed by the Government to report on the cells throughout the country says of those in Manchester that "the whole scene reminded one of the barred cages at the Zoological Gardens occupied by the lions and tigers—with this difference, that the wild animals were better off."

POISONED BY A BROOK.

The statement has been made more than once that cases of drowning in some of our local streams and rivers would more properly be termed "deaths by poisoning" as a closer approach to truth. A recent coroner's inquest on the body of a boy fourteen years old has served to confirm this. The boy in question went to the help of another lad who had slipped into a brook on the north side of the city, when he was overcome by the fumes and offensive gases arising therefrom. Other persons who ran to assist were also overpowered by them, and a man and a woman were rendered unconscious for some time simply from breathing the offensive emanations. Surely it is high time that the powers for the prevention of pollution of rivers were put in force in this district.

HORSEFLESH AS MEAT.

From time to time Manchester is made aware that horseflesh is undoubtedly consumed by some of us, possibly as "prime ribs" or "rump steak," for no one can ever find any labelled "horse beef" at any of the butchers. Two cases lately before the court were there only because the flesh was diseased and unfit for human food, and then the fact came out that it was the flesh of a horse and not of an ox that had been got ready for sale as beef. A deputation from Manchester had an interview with the President of the Board of Trade (Sir Michael Hicks Beach) on Saturday last asking for some legislative action to prevent this fraud going on, and also to check the sale of adulterated lard, which has attained enormous proportions. Sir Michael, however, appeared to be of opinion that ample powers already existed under the present law, if local authorities would but do their duty efficiently and properly enforce the same.

Manchester, Aug. 1st.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

SUNDERLAND.

THE medical officer of health, Mr. A. E. Harris, states that the death-rate of the borough for the past fortnight represented a mortality of 16.6 per 1000. The average death-rate for the corresponding period in ten years was 24.5 per 1000. As regards the new infectious diseases hospital, the borough surveyor said he could not report satisfactorily, for, in spite of wind and weather, and other obstacles, he felt bound to state that more energetic service might have been rendered. The need for the completion of the new hospital will be apparent from what was stated relative to a case of diphtheria at the last meeting of the health committee. A case of this disease was found in a sailor, and he was removed to the infirmary; afterwards he was sent to the workhouse hospital, where he died. All this moving could not be done in a disease of this highly infectious nature without peril to the patient and risk to others. A bridge-leaping mania appears to have set in at Sunderland this summer. The bridge is about 100 feet high in the full tide. Two young men leaped off last May, and escaped, but the last one, on Sunday night last, and the preceding one, about a month ago, have paid the penalty of their rashness by death.

AMBULANCE WORK IN THE NORTH.

The certificates to the successful candidates in the police ambulance class of Newcastle were presented last week in the presence of the Mayor and other officials. The Sheriff hoped that the men would receive next year more than certificates, and expressed his willingness, if the Chief Constable would report the case to him, to give the men who had performed the most signal service in ambulance work a gold medal. In the county of Durham Drs. Hood and Wild, of Tow Law, have received testimonials for their successful instruction of sixty-six students in first aid; while Dr. Brunskill, of Kelloe, has received a presentation

of a silver inkstand from a large class he has instructed at the Kelloe Colliery.

HOSPITAL SUNK IN THE TYNE OFF JARROW.

Last week one of the Tyne Port Sanitary Authority's hospitals sank off Jarrow. The vessel was the central one of three, and was kept for cholera cases, but has been scarcely ever occupied, and there was no one on board when she went down. Some alteration in the ballast was the cause of her sinking. She has been since raised and beached.

PROVIDENT DISPENSARIES IN THE NORTH.

At a late conference at Gillsland, Mr. THOS. BARON, of Kendal, read an interesting paper on Provident Dispensaries, in which he gave a history of the Kendal Provident Dispensary, which, he stated, was begun with 425 members in 1883, this number representing 1600 persons in families. The payments were as follows: Parents and all members of the family under fourteen years of age, 6d. per month; single persons, eighteen years of age and over, 3d. per month; young persons over fourteen and under eighteen years of age, 2d. per month. In addition every time a person visited a doctor or *vice versa* an extra fee of 6d. was charged, this fee being paid to the secretary in addition to the usual fortnightly subscription. Surgical operations were now included. The working expenses of the institution amounted last year to £30 15s. 8d. In Kendal they were fortunate as to funds. A free dispensary formerly existed in the town which had an endowment, but for about fifty years this institution had ceased to exist as such. The interest from this endowment had been given by the trustees to various charitable objects, but when the Provident Dispensary started, it was felt that it had a prior claim, and £45 a year had been granted from this fund ever since. In addition to this sum their honorary subscriptions amounted to £54 5s., so that last year £99 5s. was added to the payments of ordinary members. The total number of members on their books in December last was 641, representing a total of probably nearly 2500 individuals, and the population of Kendal was about 14,000. The number of visits paid, either by or to the medical officers in 1887, amounted to 7536, and for each of these visits the medical men received 1s. In 1886 they received 11½d. per visit; in 1884 9½d. Visits made by doctors to patients after 10 o'clock at night were special, 1s. being paid by the patient, and 4s. additional being taken out of the Central fund. Mr. Baron believed that the institution at Kendal was doing a good work, and might, perhaps, stimulate others, for it had been truly said that "no institutions were more truly charitable than provident dispensaries, which helped the poor to help themselves, and called out and fostered one of the highest instincts of human nature—viz., the desire of independence."

At Alnwick the half-yearly meeting of the Provident Dispensary has been held, and the accounts show a balance, after the medical staff has been paid, of £70 12s. for the half-year.

Newcastle-on-Tyne, July 31st.

DUBLIN.

(From our own Correspondent.)

THE MEATH HOSPITAL, DUBLIN.

At a recent meeting of the Standing Committee of this Hospital, the following resolution, proposed by Sir G. B. Owens, M.D., was passed unanimously:—"That this committee desire to place on record their sincere regret at the loss which this institution has sustained by being deprived of the most valuable services of surgeon James H. Wharton, consequent on his resigning his place on its medical staff; and they most cordially unite in wishing him long life and every felicity in the enjoyment of his well-earned repose."

MEDICAL SCHOOLS AMALGAMATION SCHEME.

The committee appointed by the Council and the delegates from the three schools, it is expected, will complete the details of the proposed scheme to-day (Tuesday), and their report will be considered at a special meeting of the Council, to be held probably on Friday. Considerable alterations have been made in the original scheme, making it more workable, and doing away to a great extent with the objections which have been urged against it. Probably it will

be adopted, with some slight alterations, by the Council, and, if so, will come into operation with very little delay if approved by the Fellows of the College.

BOARD OF SUPERINTENDENCE OF DUBLIN HOSPITALS: ANNUAL REPORT.

The nine hospitals in Dublin which receive aid from Parliament include three general hospitals, five special, and a hospital for incurables. The patients admitted to these institutions during the year numbered 9875, making the total under treatment 10,635, of whom 9376 were discharged cured or relieved, and 512 died. The total average daily number of beds occupied was 744.57, and the mortality was 5.39 per cent. on those treated to a termination. As regards the Lock Hospital, with a view of affording clinical instruction, it was suggested to admit medical students to the practice of the hospital under certain restrictions; but this arrangement has not been carried out, as the governors are of opinion that to admit students to the wards would have the effect of deterring women from entering the hospital. The board recommend the construction of a disinfecting hot-air chamber for the House of Industry Hospitals, and suggest that all infected articles of woollen clothing, blankets, or bedding, if not burned at once, should be submitted to this heat process. They also state that the condition of the baths and some of the lavatories is capable of improvement. The management of the Meath Hospital reflects, it is said, great credit on the committee, who evidently have given careful and intelligent consideration to hospital arrangements. Some of the wards, however, were overcrowded, but this will be obviated by the increased accommodation which the new building in course of construction will afford. The post-mortem room in the Rotundo Lying-in Hospital is too small, and the board are of opinion that this important department of a hospital should be large and well ventilated, and have ample means of renewing the atmosphere, otherwise attendants on autopsies are likely from emanations to convey infection, which is undoubtedly a frequent and unsuspected cause of the propagation of disease. The mortality of the labour patients was .38 per cent., which compares very favourably with the return from a similar institution, the Coombe Hospital, where the mortality was 2.05 per cent. Improved accommodation having been found necessary at the Royal Hospital for Incurables for cancer and consumptive patients, a new structure has been added called the "Victoria Jubilee Wing," and this addition must prove of great benefit to the class of cases admitted to the institution. Of the nine institutions receiving Government aid, the average annual cost per bed for maintenance and for establishment charges was highest in Stevens's Hospital (£61 6s. 9½d.), and lowest in the Royal Hospital for Incurables (£28 8s. 10d.). The Government grant of £15,722 15s. 9d. is very unequally distributed. For example the House of Industry Hospitals obtain £7472 15s. 9d.; the Lock Hospital, £2600; Cork-street Fever Hospital, £2500; Stevens's, £1300; Rotundo, £700; Meath, £600; Incurables, £250; Coombe, £200; and St. Mark's Ophthalmic Hospital, £100.

THE INQUEST ON THE LATE MR. MANDEVILLE.

The coroner's jury have brought in a verdict that the deceased died of cellular inflammation of the throat brought about by the unjustifiable treatment which it was alleged he received in Tullamore Gaol. They also added a condemnation of the aspersions of Dr. Barr on the medical practitioners who attended Mr. Mandeville.¹

At the recent Second Professional Conjoint Examination between the Colleges of Surgeons and Physicians, twenty-eight only passed; out of fifty-eight candidates who presented themselves.

¹ The matter is referred to in another part of our present impression.—Ed. L.

HAMILTON ASSOCIATION.—From the third annual report of this Association, which has just been issued, it appears that a great increase has taken place during the past year in the number of private engagements of nurses, 138 having been completed during the year. Nurses have also been supplied to St. George's, the Seamen's, and Guy's Hospitals, and the Committee of the Association are prepared to entertain applications from other hospitals and institutions desirous of obtaining the services of trained male nurses. The total receipts amounted to £1817, and the expenditure left in hand a balance of £115.

PARIS.

(From our own Correspondent.)

THE CONGRESS ON TUBERCULOSIS.

AS announced in THE LANCET, the Congress for the study of tuberculosis as it occurs in man and in animals was opened at 9 A.M. on Wednesday, the 25th ult., at the Faculty of Medicine. The first thing to be done was to organise the committee, of which M. Chauveau of Lyons, Professor of Veterinary Medicine, was elected president, and Professor Villemin of Val-de-Grâce vice-president. The following are the names of the members of the committee:—MM. Butel (veterinary surgeon at Meaux, the originator of the Congress), Leblanc, Nocard (director of the Veterinary School of Alfort), Rossignol (veterinary surgeon at Melun), Cornil, Grancher, Lannelongue, Verneuil (Professors of the Faculty of Medicine of Paris); H. Petit (general secretary). The questions proposed by the committee were the following: The dangers to which a person is exposed by the use of the flesh and milk of tuberculous animals; the human races and the animal species considered in regard to their susceptibility to tuberculosis; the channels for the introduction and the propagation of the virus in the economy; the early diagnosis of the malady in man and in animals; heredity, contagion, hygienic measures, and the various methods of treatment. M. Chauveau then detailed the programme of the Congress. He pointed out in a very eloquent discourse the importance of the work of the Congress, the large part that French science has had in elucidating the subject of tuberculosis, and referred particularly to the value of the researches of Professor Villemin, who was the first to show that tuberculosis was a virulent, inoculable, and contagious malady. M. Verneuil said it was a matter of congratulation to witness the presence at the meeting of veterinarians and medical men from all parts of the world who are, in common, engaged in researches in which the knowledge of the one body completes that of the other. M. Cornil communicated some interesting experiments on contagion of tuberculosis through the mucous membranes. The cultures of the tubercle bacillus introduced into the intestine penetrate very quickly into the mucous parietes. In introducing into the œsophagus of guinea-pigs a few drops of tuberculous cultures, he always observed at the end of four days submucous tuberculous lesions, with rapid generalisation, without lesion of the epithelium, and bacilli are found in the mesenteric glands. In a second series he introduced the same culture into the vagina of female guinea-pigs, and he observed a rapid uterine tuberculosis. It may, therefore, be admitted that tuberculous inoculation is possible in sexual intercourse when bacilli are introduced. M. Nocard read a paper on the dangers to which one is exposed by the use of the flesh and milk of tuberculous animals. It would appear to result, from his very ingenious experiments, that the muscles destroy or digest, as expressed by M. Nocard, the comma bacilli in such a way that the meat of animals affected with generalised tuberculosis presents but very little danger. Thus, four cats ate with impunity the flesh of a tuberculous cow, whilst a fifth cat that had eaten a lymphatic gland of the same cow succumbed in a very short time to experimental tuberculosis. M. Nocard, therefore, thinks that it is not necessary to exaggerate the precautions, or to hold Koch's bacillus in great dread, adding that one can eat without fear the flesh of tuberculous animals the tubercles of which are limited to the viscera and to the different lymphatics; even that of animals the tuberculosis of which is generalised would be but exceptionally to be dreaded. As regards the milk, this should always be looked upon with some suspicion, and it should never be given to children without its having been previously boiled. Goats' milk may, perhaps, form an exception to this rule, as a tuberculous goat is looked upon as a pathological curiosity. At the meeting on the 26th, the question as to the dangers to which one is exposed by the use of the flesh and milk of tuberculous animals, and the means to prevent them, was discussed. A large number of the members took part in the debate. All acknowledged that the use of the meat, and particularly the milk of tuberculous animals, should be regarded as dangerous. MM. Arloing, Galtier, Butel, Rossignol, and Aureggio would vote for the complete seizure of the meat of all tuberculous animals, instead of the partial seizure

which M. Nocard judges sufficient. The foreign veterinarians present were all partisans of the entire seizure. M. Jorissenne claimed for the Belgian veterinarians the honour of having raised the question of the danger of the use of milk. He stated that of every 100 cows four are tuberculous. In one shed of twenty cows the milk was found to contain a prodigious number of bacilli furnished by tuberculous teats; he therefore insists upon the most radical measures. Mr. Robinson of Greenock does not believe in the distinction that is sought to be established between localised and generalised tuberculosis. Considering the danger shown by statistics, and the frightful proportion of tuberculous subjects among the human species, Mr. Robinson proposed that the most energetic means of preservation should be employed. He said that he came on purpose from Scotland to support these radical measures. All suspected meat should be seized. M. Dionis des Carrières stated that to the present day we have not had the demonstration of a single case of tuberculosis determined by the use of meat taken from a tuberculous animal. He asked why a substance only suspected should be rejected from the list of aliments. He suggested that, before adopting such radical measures, a series of experiments should be duly performed. With this view he proposed that the next criminal that may be condemned to death should be subjected during fifty days to a diet of tuberculous meat, whereby the relation of cause and effect could be traced. M. Peuch of Toulouse showed the noxious action of the milk and the meat of tuberculous cows. The Congress voted, in principle, that the flesh of a tuberculous animal should be seized in totality. Professor Lannelongue made a very interesting communication on tuberculous abscess of the liver. He said that these abscesses had not been indicated by any person before. They would appear to be met with only in children. They are found in the hepatic parenchyma, where they excavate a cavity analogous to the tuberculous cavities of the lungs. They give rise to no characteristic symptom whatever, but are often complicated with perihaptic abscesses. When these latter are diagnosed the surgeon would be justified in suspecting profound abscess. M. Hartenstein read a note on bovine tuberculosis in its relations to verminous phthisis (*phthisis vermineuse*). The author often found in the lungs of oxen large pouches filled with caseous matter, closely resembling tuberculous masses. He observed that it is very important to know that these appearances are deceiving, as one has only to deal with dead parasites, and that the flesh of animals which contain them presents no danger. M. Solles of Bordeaux made a communication of some importance. The subject treated of was a tuberculous culture of the human lung. The author found in the sputa and in the blood of phthisical subjects a micro-organism which is not the bacillus of Koch. It is a microbe very nearly approaching, if not identical with, the micrococcus of erysipelas, and which determined in the rabbit a sort of chronic septicæmia, with extreme emaciation, reducing the original weight of the animal to one-half. M. Solles attributes to this new microbe phenomena more particularly septic of tuberculosis. M. Kalindero, Professor of the Faculty of Bucharest, read a note on tuberculous meningitis in the adult. M. Chambrelent made a communication on tuberculous meningitis during pregnancy, and proposed, in certain cases, to induce premature labour. M. Degive of Brussels proposed a very simple means, employed in Belgium, to avoid all transmission of tuberculosis from a vaccine animal. The heifers which furnish the vaccine lymph are opened before the lymph is utilised, and this is used only when the animal is recognised as being healthy. M. Chauveau observed that this same procedure is in use in Lyons, and in a great many vaccination establishments in France. He considers this the most radical procedure. But tuberculosis is so rarely transmissible by superficial inoculation of the skin, and the vaccine pustules in tuberculous animals are so seldom charged with tuberculous matter, that it would be wrong to fear inoculation of tuberculosis by vaccination, even when the precaution proposed by M. Degive is used.

DEATH OF DR. FIEUZAL.

Dr. Fieuzal died on the 28th ult., after a long illness, at the age of fifty-two years. Although Dr. Fieuzal had not distinguished himself as an ophthalmologist, yet through the influence of his friend Gambetta he was appointed oculist to the Quinze-Vingts, an asylum for the reception

of adults, where a clinic for the diseases of the eye was created on purpose for him, and where, however, he proved himself worthy of the position in every way. He was a skilful operator, and published several works on ophthalmology, which testified to his competency in this special branch.

Paris, July 31st.

ROYAL COLLEGE OF SURGEONS.

At an ordinary meeting of the Council held on Thursday, August 2nd, the minutes of the Quarterly Council of the 12th ult. were read and confirmed.

The following resolution, dated the 20th ult., received from the Court of Examiners, was read, and referred to the Committee of Management for consideration and report:—"That it be represented to the Council of the College that the arrangements for the July Examinations have been unsatisfactory to the Court of Examiners, who would urge that in the interests of the candidates, as well as of the examiners, every effort should be made by the Committee of Management to secure an uninterrupted sequence of days in future."

The eleventh report of the committee on the extension of the College premises was presented, in which the committee recommended the Council to authorise the building of a house for the conservator at an estimated cost of £3410.

(We would remind our readers that the Museum will be closed during the month of September as usual.)

A letter of the 30th ultimo, from Sir Henry Pitman, was read, enclosing a copy of the following resolution, approved and adopted at a meeting of the Royal College of Physicians on the 26th ultimo: "That a committee be appointed, consisting of seven nominated by this College and seven nominated by the Royal College of Surgeons, to report to the two Colleges as to the educational or scientific uses to which the building on the Embankment, now in course of erection by the Colleges, can be best applied, and generally as to its maintenance and management."

A similar resolution was adopted at the present meeting, and the following were elected on the part of the Council: The President, two Vice-Presidents, and Messrs. Marshall, Power, Bryant, and Hill.

A letter of the 27th ultimo from Mr. Wilde was read, forwarding the Supplemental Charter under the Great Seal, with a print showing all the alterations made by the authorities of the Privy Council and the Home Office.

A letter of the 13th ult. from the registrar of the General Medical Council was also read, forwarding, by direction of the President, a copy of the reports of the inspectors, appointed by the Medical Council, on certain final examinations in medicine, surgery, and midwifery held by the Examining Board in England, and requesting to be favoured with any remarks thereon which the Council of the College may have to make. This was referred to the Committee of Management to consider and report thereon to the two colleges.

It was agreed that the annual meeting of Fellows and Members be held on Thursday, Nov. 1st, at 3 o'clock P.M., and that the notices respecting it and the contents of the report from the Council be the same as laid down in the minutes of Council of Aug. 6th, 1885, and of April 12th, 1888.

Obituary.

LUDWIG JULIUS BUDGE.

GERMANY has produced few sounder or more suggestive workers in the field of physiology than Professor Budge, whose death on the 14th inst. at Greifswald, in his seventy-seventh year, we announced in our last impression.

His medical studies began in 1828, and were prosecuted with diligence and success at the Universities of Marburg, Würzburg, and Berlin till 1833. Having obtained his diploma as a duly qualified physician, he settled in practice at Wetzlar, his native town, and shortly afterwards removed to Altenkirchen, near Coblenz. The routine life, however, was not to his taste, the abridged opportunities of scientific research still less so. Accordingly, in 1842 he gave up practice, and resumed with fresh ardour his

anatomical and physiological studies, this time at the University of Bonn, where he became attached to the Medical Faculty, and acted as teacher in anatomy and physiology, to which subjects he added that of zoology. In 1847 he was appointed Extraordinary Professor, in 1855 he was promoted as Professor in Ordinary, and in the following year, such was the reputation he had acquired as an investigator and teacher, he was called to fill the posts of Ordinary Professor and Director of the Anatomical Institute in the University of Greifswald. There he remained till the hour of his death; there, too, he steadily contributed to the high position which Greifswald, as a medical school, has attained among her German sisters. "Old Budge," as the students came affectionately to call him, was very popular and efficient as a lecturer, while unwearied painstaking in the dissecting-room and laboratory. An accomplished "all-round" physiologist, he bestowed particular attention on the nervous system, and enriched that department with several important discoveries. Of these perhaps the most striking—certainly that which brought him most fame in foreign schools—was his demonstration that the sympathetic nerve originates, not in the peripheral system of ganglia, as had previously been taught, but in the spinal cord. This discovery cleared up the influence of the spinal marrow on nutrition, and formed a starting-point for the explanation of numerous physiological and pathological phenomena.

His text-books were, and still are, highly popular throughout Germany, his "Handbuch der Physiologie" (first edition, 1848) marking an era in the scientific exposition of the subject, and retaining its wide popularity in Germany down to the present day by numerous revised reissues. For a less advanced grade of students he prepared his "Compendium der Physiologie," which, as the "Kleine Budge" (the "little Budge"), has proved invaluable to successive contingents of aspirants, particularly in Germany, to professional diploma or licence.

Ludwig Budge died at his post, leaving the University where he worked in the very front rank of German medical schools, and bequeathing to his colleagues and his pupils an example of personal worth and official distinction not easily paralleled.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—

The following gentlemen, having passed the necessary Examinations and having conformed to the bye-laws, were admitted Licentiates of the College:—

- Abbott, Francis Charles, St. Thomas's Hospital.
- Acton, Charles James, Univ. College and Liverpool.
- Appleton, James Enderby, Charing-cross Hospital.
- *Banerji, Umadas, Calcutta.
- *Barnett, John Edward Sewell, Charing-cross Hospital.
- Belcher, Henry Edward, University College.
- Blachford, James Vincent, Guy's Hospital.
- *Blake, William Henry, University College.
- *Bodilly, Reginald Thomas Harker, King's College.
- Brownlow, George Percy, St. Bartholomew's Hospital.
- Bryett, Lewis Thomas Fraser, King's College.
- *Buchanan, Robert James McLean, Liverpool.
- *Bullock, Charles Penry, St. Bartholomew's Hospital.
- Burchell, Ernest, London Hospital.
- *Cameron, Robert Watson, Manchester.
- *Capron, Henri John, Bristol.
- Carpenter, Percy Tranto, St. Mary's Hospital.
- Carter, Weldon Cragg, University College.
- *Cockerton, Herbert, St. George's Hospital.
- Colborne, George, Middlesex Hospital.
- Davey, Samuel, London Hospital.
- Davis, Cyril Stephen, Guy's Hospital.
- Davis, Harry, University College.
- Duer, Charles, University College.
- Duncan, Percy James, Charing-cross Hospital.
- Dyer, John Edward, University College.
- *Evans, George Edward Alfred, St. Bartholomew's Hospital.
- *Falkner, Edgar Ashley, Middlesex Hospital.
- *Field, Edgar Alfred, Edinburgh.
- *Freer, Gerald Dudley, St. Bartholomew's Hospital.
- Fryer, George Ernest, Manchester.
- Gill, Joseph William, Middlesex Hospital.
- Goldney, Arthur George Nelson, Charing-cross Hospital.
- Goodfellow, Thomas Ashton, Manchester.
- Gordon, William, Cambridge and University Colleges.
- *Greeves, Thomas Neville, King's College.
- Grey, John Temperley, Bristol.
- *Harris, George James, Westminster Hospital.
- Harris, Sampson George Victor, Charing-cross Hospital.
- *Candidates who have not presented themselves under the Regulations of the Examining Board

Haviland, Frank Papillon, St. George's Hospital.
 Heale, Alfred Lawson, Westminster Hospital.
 Higgins, Hubert, St. George's Hospital.
 Hill, Robert, Middlesex Hospital.
 Hosking, John Edward Francis, Guy's Hospital.
 Hoosman, Basil Williams, Birmingham.
 Hughes, Samuel Henry, St. Bartholomew's Hospital.
 Huxley, Henry, St. Bartholomew's Hospital.
 Laing, Alfred William, St. Bartholomew's Hospital.
 Langdale, Henry, Manchester.
 Langridge, Frank Washington, Guy's Hospital.
 Leman, Thomas Curtis, Bristol.
 Lockett, John Arthur Pope, London Hospital.
 MacIure, Herbert William, St. Bartholomew's Hospital.
 Martin, Charles Lister, King's College.
 Middleton, William John, St. Bartholomew's Hospital.
 Miles, Charles Henry, Univ. College and Middlesex Hospital.
 Murray, George Redmayne, Camb. and University College.
 O'Brien, Philip Kennedy, University College.
 Ogle, John Gilbert, St. Bartholomew's Hospital.
 Oldham, Benjamin Curwen, St. Bartholomew's Hospital.
 Parkin, Alfred, Guy's Hospital.
 Pearson, James, University College.
 Pennell, George Herbert, Guy's Hospital.
 Pierce, Bedford, St. Bartholomew's Hospital.
 Plant, James Robert, Westminster Hospital.
 Platt, John Edward, Manchester.
 Powell, William, Westminster Hospital.
 Poulter, Arthur Reginald, St. Bartholomew's.
 Pritchard, Trevor John, Edinburgh.
 Rudd, William Arthur, London Hospital.
 Skinner, George Henry, Bristol.
 Skyrme, Henry Edward, London Hospital.
 Stephens, James William, St. Bartholomew's Hospital.
 Summerskill, William, Leeds.
 Sutton, James Bryan, Charing-cross Hospital.
 Sylvester, Harold Augustus, St. Bartholomew's Hospital.
 Tate, Walter William Hunt, University College.
 Tench, Montague, Middlesex Hospital.
 Tresidder, William Elliot, Guy's Hospital.
 Turney, Horace George, St. Thomas's Hospital.
 Vallancey, Aymer d'Estampes de, St. Thomas's Hospital.
 Verdon, Francis, King's College.
 Wade, Charles, University College.
 Watson, Arthur Edmonstone, Middlesex Hospital.
 White, Gilbert Benjamin Mower, University College.
 Wild, Charles Henry, University College.
 Wilkinson, Edmund, University College.
 Willoughby, William George, St. Bartholomew's Hospital.
 Willis, Ernest, University College.
 Wilson, Charles, London Hospital.
 Woodhams, Sidney, Guy's Hospital.
 White, Edgar Ramsay, King's College.
 Wright, Dudley D'Auvergne, University College.
 Wright, Joseph Farrell, Manchester.
 Ziemann, Hermann Peter, Charing-cross Hospital.
 * Candidates who have not presented themselves under the Regulations of the Examining Board.

VICTORIA UNIVERSITY: FACULTY OF MEDICINE.— The following have passed the examinations specified:—

PRELIMINARY EXAMINATION IN SCIENCE.

First Division.	Second Division.
F. J. H. Coutts, Owens College.	J. B. Carter, Owens College.
J. L. B. Dixon, Owens College.	T. S. Collin, Owens College.
A. J. Edwards, Owens College.	J. De Freitas, Owens College.
J. Hartley, Owens College.	F. S. Fletcher, Owens College.
D. Hunter, Owens College.	C. C. Garrit, Owens College.
C. R. Jones, University College.	J. Healey, Owens College.
C. E. M. Lowe, Owens College.	J. Jones, Owens College.
E. C. McCarthy, Owens College.	A. Murgatroyd, Owens College.
C. R. Marshall, Owens College.	J. P. Nixon, University College.
F. C. Scotland, Owens College.	A. J. Partridge, University College.
J. H. Taylor, Owens College.	W. C. Rigby, Owens College.
R. J. Turner, Owens College.	G. M. Y. Whittingham, Owens Coll.
F. J. Woods, University College.	W. A. Wilkinson, Owens College.

INTERMEDIATE M.B. AND CH.B. EXAMINATION.

Second Division.	W. J. Howarth, Owens College.
E. M. Brockbank, Owens College.	J. M. H. Martin, University Coll.
G. F. Chadwick, Owens College.	S. G. Moore, University College.
S. H. Fairlie, University College.	L. Youatt, Owens College.
A. Greenhalgh, Owens College.	

FINAL M.B. AND CH.B. EXAMINATION. (Part 1.)

G. F. Edwards, Owens College.	T. Porter, Owens College.
J. W. Ellis, University College.	H. Ramsden, Owens College.
A. E. Giles, Owens College.	J. Stincock, Owens College.
W. J. Kerr, Owens College.	J. W. Unsworth, Owens College.
W. Nuttall, Owens College.	

FINAL M.B. AND CH.B. EXAMINATION. (Part 2.)

First Division.	Second Division.
* J. H. Barker, Owens College.	J. Brown, Owens College.
* R. J. M. Buchanan, Univ. Coll.	E. C. Lomas, Owens College.
A. E. Giles, Owens College.	
J. M. Johnson, Owens College.	

* Recommended for Distinction in Medicine.

SOCIETY OF APOTHECARIES OF LONDON.—The following having satisfied the Court of Examiners during the past month as to their knowledge of the Science and Practice of Medicine, Surgery, and Midwifery, received certificates entitling them to practise as Licentiates of the Society:—
 Sargent, William Gostwycke, London Hospital.
 Webb, Helen, Royal Free Hospital.

Smith, John Arthur, Leeds.
 Stovin, Cornelius Frederick, London Hospital.
 Bees, William Harris, London Hospital.
 Middleton, William John, St. Bartholomew's Hospital.
 Sheldon, Robert Garnett, Victoria University, Liverpool.
 Stephenson, Owen Taitton, University College, Liverpool.
 Hill, Robert, Middlesex Hospital.
 Motte, William de la, London Hospital.
 Whitaker, George Herbert, St. Bartholomew's Hospital.
 Harris, Percival Seymour, Middlesex Hospital.
 Sleeman, R. Reginald, Cambridge, and St. Mary's, London.
 Hulbert, Henry Harper, Oxford, and St. Thomas's, London.

The following passed in Surgery:—

Lory, A. G. B., London Hospital.
 Gilpin, E. H., Middlesex Hospital.
 Mitchell, E. S., Queen's University, Kingston.
 Bradley, G. M., Grant Medical College.
 Burgess, J. G., Guy's Hospital.
 Cornilliac, J., King's College.
 Gunn, F. W., King's College.
 Lange, A. P., King's College.
 Wilson, A. R., Oxford University.

The following passed in Medicine:—

Holt, H. M., Leeds.

At the examination in Arts, of 217 present, 2 passed in the first class, 30 in the second class, and 148 passed in one or more subjects, but not in all.

The following gentlemen have been appointed Assistant Examiners to the Society by the General Medical Council, and conduct the examinations in Surgery and Anatomy:—
 *Andrew Clark, F.R.C.S., *W. Adams Frost, F.R.C.S., *W. Arbuthnot Lane, F.R.C.S., *G. H. Makins, F.R.C.S., and *W. J. Walsham, F.R.C.S. The following gentlemen have been appointed by the Society as Examiners for the ensuing year:—*Henry Bullock, F.R.C.S., H. Radcliffe Crocker, M.D., B.S. Lond., F.R.C.P., *William Duncan, M.D., M.R.C.P. Lond., *F. de Havilland Hall, M.D. Lond., F.R.C.P., *Robert James Lee, M.D. Cantab., F.R.C.P., *A. H. N. Lewers, M.D. Lond., M.R.C.P., William Robert Smith, M.D., D.Sc., F.R.S. Edin., *John Sherwood Stocker, M.D. Lond., M.R.C.P., Chairman of the Court of Examiners, *John Chas. Thorowgood, M.D. Lond., F.R.C.P., and Francis Warner, M.D. Lond., F.R.C.P. Dr. Klein, F.R.S., has been appointed the Society's Examiner in Physiology for the ensuing year. Dr. Chas. A. Hebbert has been appointed Assistant Examiner by the Society for the ensuing year.

* Members of the Court of Examiners.

ARMY MEDICAL SCHOOL, NETLEY.—The following surgeons on probation in the Indian Medical Service were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions are determined by the marks gained in London added to those gained at Netley, and the combined numbers are as follows:—

	Marks.		Marks.
* Marshall, D. G.	6302	Prasad, K.	5376
† Moir, D. M.	6003	O'Gorman, P. W.	5360
† Whitchurch, H. F.	5852	Gray, W. H.	5347
Roberts, J. R.	5687	Mould, G. T.	5292
Hojel, J. G.	5516	Arnim, H. C. L.	5276
Gee, F. W.	5475	Thomson, G. S.	5252
Grant, A. E.	5397	Pereira, P. C.	5231

* Gained the Herbert Prize of £20, the Montefiore Medal and Prize of 20 guineas, with the Parkes Memorial and Bronze Medal.

† Gained the Martin Memorial Gold Medal and the Montefiore second Prize.

† Gained the prize in Pathology presented by Sir Joseph Fayrer, K.C.S.I.

UNIVERSITY OF GLASGOW.—The following degrees were conferred on July 26th, 1888:—

DOCTORS OF MEDICINE (M.D.).

1. Commended for Theses.

D. Finlay, M.B., C.M., Scotland.	W. Wallace, M.B., C.M., Scotland.
C. Macpherson, M.B., Scotland.	

2. Ordinary Degree.

A. Speirs Alexander, M.B., C.M., Scotland.	John Keay, M.B., C.M., Ireland.
Samuel P. Alexander, M.B., C.M., Scotland.	J. Kennedy, M.B., C.M. Ireland.
T. J. Grime, M.B., C.M., England.	J. K. Love, M.B., C.M., Scotland.
Robert Horn, M.B., C.M., Scotland.	Henry Mason, M.B., C.M., England.
	J. Maxwell, M.B., C.M., Scotland.
	D. C. Muir, M.B., C.M., Scotland.

DOCTOR OF MEDICINE (M.D.) AND MASTER IN SURGERY (O.M.).

Old Regulations.

Donald Munro, Scotland.

BACHELORS OF MEDICINE AND MASTERS IN SURGERY (M.B. AND C.M.).

1. High Commendation.

* Landel Rose Oswald, Scotland. † John Freeland Fergus, M.A.

* Mr. Oswald gains the Bruntton Memorial Prize of ten pounds, awarded to the most distinguished Medical Graduate of the year.

2. Commendation.

Ingh Hight, Scotland.
 R. K. Monro, M.A., Scotland.
 J. J. Younger, M.A., Scotland.
 John McCubbin Johnston, M.A., Scotland.
 Alex. Blair, Scotland.
 James Stephenson, Scotland.
 Paterson Gillespie, England.

William Muir, Scotland.
 John Adams Scotland.
 Hugh Jones, Wales.
 John Smith, M.A., Scotland.
 H. E. G. Lewis, Scotland.
 J. Aimer Thomas, Scotland.
 E. Owen Wills, England.

3. Ordinary Degree of M.B. and C.M.

John Adam, Scotland.
 James Aitken, Scotland.
 V. Menzies Alexander, M.A., B.Sc., Scotland.
 V. E. L. Allen, England.
 Archibald Auld, Scotland.
 William Auld, Scotland.
 Robert Banks, Scotland.
 A. Bannatyne, Scotland.
 C. Barras, Scotland.
 Matthew Beattie, Scotland.
 Thomas Low Blackburn, Scotland.
 Matthew Blair, Scotland.
 Matthew B. Bland, England.
 Finlay Boa, Scotland.
 M. Bonar, Scotland.
 Payton Boyd, Scotland.
 Aloysius Boyle, Ireland.
 C. Brodie, Scotland.
 Alex. Buchanan, England.
 M. Niel Buchanan, Scotland.
 S. Campbell, Scotland.
 John Charles, Scotland.
 James Cook, Scotland.
 Andrew Copland, West Indies.
 I. Osborne Cohen, England.
 E. R. V. Crossfield, England.
 James Culross, M.A., Scotland.
 J. J. Daly, Ireland.
 Andrew Davidson, M.A., Scotland.
 William Diamond, Scotland.
 Donald, M.A., Scotland.
 V. C. Downs, Scotland.
 C. Duncanson, Scotland.
 G. Faulk, Scotland.
 Ferguson, M.A., Scotland.
 Peter Ferguson, Scotland.
 Flindlay, Scotland.
 J. Fyfe, Scotland.
 H. Fyfe, Australia.
 Gardiner, Scotland.
 Gemmell, Scotland.
 J. Giblin, England.
 Hugh Girvan, Scotland.
 Halliday, Scotland.

W. Cowan Hamilton, Scotland.
 J. E. Hunter, Ireland.
 T. B. Hutcheson, Scotland.
 A. B. Kelly, B.Sc., Scotland.
 H. Kirkland, Scotland.
 E. Lang, Scotland.
 J. Livingstone, Scotland.
 W. Livingstone, Scotland.
 J. Mathie, Scotland.
 W. H. Murray, Scotland.
 J. F. D. Macara, Scotland.
 J. N. MacArthur, Scotland.
 D. McCallum, Scotland.
 J. S. McConville, M.A., Scotland.
 A. N. McGregor, Scotland.
 J. McKendrick, Scotland.
 K. C. Mackenzie, England.
 R. D. Mackintosh, Scotland.
 J. T. MacLachlan, Scotland.
 J. MacPherson, Scotland.
 C. R. Niven, Scotland.
 F. L. Norris, Scotland.
 T. L. Paterson, Demerara.
 R. L. Pinkerton, M.A., Scotland.
 W. Primrose, Scotland.
 D. Brumsey, Russia.
 W. Robb, Scotland.
 C. E. Robertson, Scotland.
 W. Roxburgh, Scotland.
 J. Sandilands, M.A., Scotland.
 W. P. Sandilands, Scotland.
 A. Shanks, Scotland.
 R. P. Shearer, Scotland.
 H. R. Sloan, Scotland.
 J. T. Smith, Scotland.
 J. Somerville, Scotland.
 J. A. Stewart, Scotland.
 J. Strang, Scotland.
 A. F. Walker, Scotland.
 J. B. Wallace, Scotland.
 J. P. Wilson, Scotland.
 R. Wilson, Scotland.
 A. S. Witherspoon, Scotland.
 J. Wright, Scotland.
 J. Young, Scotland.

DRAINAGE OF GUILDFORD.—The Guildford Urban Sanitary Authority have agreed on the adoption of a main drain for the town. The separate system is to be employed, and the sewage received into tanks and treated with chemicals.

ROYAL INFIRMARY AND LUNATIC ASYLUM, ABERDEEN.—At a meeting of the managers held last week, it was resolved to purchase the Mansion House, and 283 acres of the estate of Glack, near Inverurie, for £11,000, to form a branch as additional accommodation to the lunatic asylum, in addition the institution has long required.

THE KENDRAY FEVER HOSPITAL.—Mrs. Lambert, of London, who offered £4000 for the erection of the proposed hospital at Barnsley, finding the amount insufficient for the rising and furnishing of the building, has generously increased her donation to £6000, the sum required for the purpose. A site for the hospital has been selected.

COTTON DISTRICTS CONVALESCENT FUND.—The report of the Hospital and General Purposes Committee was laid before the governors of the Fund, at a meeting held at the Westminster Palace Hotel on the 27th ult. during the past quarter 590 patients had been sent to the respective convalescent hospitals, at a cost to the fund of 956 3s.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—The fifty-sixth report, presented to the governors at the annual meeting recently held, showed that the field of usefulness of the institution continued to increase. The expenditure had been somewhat less than the previous year—viz., £4857 6s. 11d., against £5048 10s. 7d. The receipts were fairly satisfactory, the subscriptions, donations, &c., being slightly increased. The legacies received during the year amounted to £1260 10s. 6d., and by this means the debt due to the treasurer of £920 17s. 10d. had been reduced to £111 0s. 8d., and the unliquidated ground rents mentioned in the last report had been discharged. An impetus had been given to the scheme for a new hospital by a donation of £500 for that purpose from Mrs. E. Bingham.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The following, having passed the necessary examinations in July, 1888, have received the certificate of the Association:—Edward Farr Arnour, John Bruce, William Doherty Calvert, Henry Cecil Chapman, George P. Cope, Percy Charles Evans, Edwin Goodall, James H. W. Laing, R. R. Leepis, Henry John Maceoy, M. J. Nolan, Peter J. Rice, William A. Turner, Jane Elizabeth Waterston, and George Robert Wilson.

PROVINCIAL HOSPITAL SUNDAY COLLECTIONS.—The annual Hospital Sunday collection recently made at Marlborough, in aid of the funds of the Savernake Cottage Hospital, amounted to £7 5s. 9d. The Hospital Sunday collection at St. Albans realised £53 13s. 9d., which has been handed over to the treasurer of the St. Albans Hospital and Dispensary. The Sunday collections on behalf of the Wantage Cottage Hospital have amounted to £33 13s. 3d. The recent Sunday collection, organised by the St. Catherine's League of the Cross, in aid of the funds of the London Hospital, amounted to £14 18s. 3d.

THE OLDHAM INFIRMARY.—Mr. Charles E. Lees presided at the quarterly meeting of the Governors, held last week. The report read stated that since the sanitary alterations effected last year there had been an improved condition of health amongst the staff, and cases of preventable diseases among the patients were almost unknown. Especial interest was felt in the proceedings of the meeting, in consequence of the presentations to be made to officials who had been long and honourably connected with the infirmary—viz., to Mr. G. Wainwright, treasurer, a silver candelabra and candlesticks; to Dr. McGowan a handsome marble clock; and to Mr. George Lees, the former secretary, a gold watch.

HUDDERSFIELD INFIRMARY.—From the annual report submitted to the governors and subscribers by the Board of Management at the meeting held on the 27th ult., the institution appears to fully maintain its usefulness and efficiency. A noticeable feature of the report is the continued and increasing interest taken by the industrial classes in the infirmary. They contributed during the past year £943 4s. 7d., against £830 17s. 8d. the previous year, an addition of £112 6s. 11d. The contemplated enlargement of the institution the Board was brought before the meeting. A site has been secured, and the work will be commenced as soon as the amount required is provided. The estimated cost is at least £20,000, towards which £8000 has been given and promised.

INSANITARY CONDITION OF BILLINGSGATE.—It appears the defective sanitary arrangements of this ward have been a long-standing grievance with the ratepayers; and as some alarm has recently been produced in consequence of several cases of illness having occurred—alleged to be caused by the noxious exhalations from the sewers and the insanitary state of the ward,—a meeting of the ratepayers was hurriedly convened, by printed bills, on the 25th ult., which was held in the subscription rooms of the market. There was a large representation of the leading inhabitants, and the following resolutions were unanimously adopted:—(1) That the state of the sewers and the drains in Thames-street is dangerous to health; (2) that the inhabitants are suffering seriously, and are unable to remain in their shops, from the stench arising from the drains; (3) that nausea and sickness of a seriously distressing kind are the results felt by the inhabitants; and (4) that the inhabitants demand immediate attention to their complaint.

ASHBY-DE-LA-ZOUCHE BATHS.—The quiet little town of Ashby-de-la-Zouche was *en fête* on the 24th ult., the occasion being the reopening of the celebrated saline baths. Originally opened in 1822, the baths had gradually fallen into disuse from a variety of circumstances. Recently a company has been formed, and a large amount of public spirit infused into the undertaking, with the result that the buildings, baths, and grounds have been thoroughly repaired, and brought up to the fullest requirements of the present time. Lord Donington presided at a public luncheon, to which a number of medical men were invited. The buildings contain baths for six males and six females, with apparatus for needle, douche, ascending, and shower-baths; a large swimming-bath, 50 ft. by 25 ft.; steam heating appliances, and every facility for the convenience and comfort of visitors. The hotel has been arranged with a view to giving comfortable quarters, and a carefully regulated *cuisine*. The grounds are spacious, well laid out, and the surrounding country affords

typical examples of true English scenery within easy distance by pleasant drives. The local traditions have been recalled by the glowing pen of Sir Walter Scott, and the interest of historical associations will beguile those who can combine such investigations with the search for health. A recent analysis by Dr. Paul shows that the waters are rich in chloride of sodium, chlorides of calcium, magnesium, &c., being analogous to those of Pullna and Kreuznach.

—**EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.**—The Secretary reports to the two Colleges that at the first part of the Examination for the Diploma in Public Health, held on June 4th and 6th by Dr. Stevenson and Dr. Corfield, ten candidates presented themselves, six of whom were reported by the examiners to have passed; and that at the second part of the examination, held by Dr. Ballard and Dr. Thorne Thorne on June 11th, 12th, and 13th, six candidates presented themselves, of whom four were found by the examiners to be qualified for the diploma. The following are the names of the four candidates who are therefore recommended by the examiners for the diploma—viz., Richard James Reece, L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's, 52, Tisbury-road, West Brighton; Adolphus J. Richardson, M.B. Cantab., M.R.C.P. Lond., M.R.C.S.E., Cambridge and London, 45, St. John's-terrace, Hove, Brighton; John Lloyd Roberts, M.B. & C.M. Edin., Edinburgh and Birmingham, Vale-street, Denbigh, North Wales; John Paul Roughton, M.R.C.S. Eng., St. Bartholomew's, Kettering, Northamptonshire.

—**METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.** The Council of the above Association held its quarterly meeting on Saturday at the office, 5, Lamb's Conduit-street, W.C. By the report of the executive committee, it appears that two new branches have recently been opened—viz., at Walworth and Tottenham. At the latter place considerable progress has been made, during the last two months, by the collection of weekly contributions; one satisfactory result of the experiment being that a poorer class of persons are thereby induced to join. An old-established provident dispensary in Westbourne-park has been handed over to the Association, to be conducted as one of its branches. Resolutions in favour of the abolition of the 1s. entrance fee, in the case of persons joining in health, and the plan of receiving, and if necessary collecting, weekly contributions were passed. It was also resolved to organise branches at the East-end, and at Kennington, before the close of the present year. There are now about 30,000 persons who are entitled, in return for weekly or monthly contributions, to medical treatment and medicine at the thirteen branches of the Association, and in case of serious illness at their own homes.

—**BEQUESTS AND DONATIONS TO HOSPITALS.**—By his will, dated Aug. 20th, 1887, Isaac Harrinson, F.R.C.S. Eng., a well-known surgeon in Reading, bequeathed to the Corporation of the Sons of the Clergy £1000; the Society for the Propagation of the Gospel in Foreign Parts, £1000; Additional Curates Society, £1000; the Vicar and Churchwardens of the Parish of St. Mary, Reading, towards providing a stipend for the curates for the time being of the Church of St. Mary, Reading, £1000; the British Medical Benevolent Fund, £500; the Royal Berkshire Hospital, £500; the Reading Dispensary, £500; the Reading-green Girls' School, £500; the Reading Blue Coat School, £500; to his coachman, £500. Bequests are made to his cousins and to his deceased wife's nephews and nieces, and he devises his real estate and the residue of his personal estate, in equal shares, to Dr. James Dodd Swallow, 313, Clapham-road, London, and Miss Charlotte Elizabeth Greenhow Bardsey, Bath-road, Reading, whom he appoints executor and executrix of his will, and by whom the value of the personality has been declared for probate at £43,700 6s. 1d.—Dame Laura Buchan, widow of the late Lieut.-General Sir John Buchan, K.C.B., late of Sussex-square, has bequeathed £1000 each to the Isle of Man General Hospital, the Middlesex Hospital, and the Hospital for Sick Children (Great Ormond-street); £500 each to the Hospital for Consumption and Diseases of the Chest (Brompton), and the National Hospital for Consumption and Diseases of the Chest (Ventnor). Mr. Denis Crofton, late of Mountjoy-square, Dublin, has left by his will £500 each to the Adelaide Hospital (Peter-street) and the Fever Hospital and House of Recovery (Cork-street,

Dublin). The Corporation of London has given 100 guineas to the Royal Hospital for Children and Women, and 50 guineas to the Central London Ophthalmic Hospital.

MEDICAL NOTES IN PARLIAMENT.

Dr. MacCabe.

In the House of Commons on the 28th ult., Mr. J. Stuart asked the Chief Secretary to the Lord Lieutenant of Ireland whether the Dr. MacCabe, at present attending the inquest at Mitchelstown, was the same who filled the office of Medical Commissioner of the Local Government Board; and if so, why was he sent to examine the political prisoners in Tullamore Gaol; whether he had had his attention directed to the recommendation of the Royal Commission on Prisons (Ireland), 1883-4, in which they advise an improved diet for prisoners, and state "it should always be borne in mind that the medical officer of a prison, when he sees fit, may alter or add to the diet of any prisoner whose health seems to require attention;" whether this recommendation was adopted; and whether a circular was issued by Dr. MacCabe, while a member of the Prisons Board, to the medical officers of Irish prisons, requesting them to report in favour of the old scale of diet, which the Royal Commission had unanimously condemned.—Mr. A. J. Balfour said that Dr. MacCabe now fills the office of Medical Commissioner of the Local Government Board. When he visited Tullamore, he was medical member of the Prison Board. The recommendation of the Royal Commission has been adopted. He need hardly add that no such circular as that alluded to was ever issued.

Dr. Barr.

In answer to Mr. Sexton, Mr. A. J. Balfour said that Dr. Barr is medical officer of Kirkdale Prison, Liverpool. He visited prisoners convicted under the Crimes Act in Tullamore last year by direction of the Government. He made a report upon the subject. As at present advised, he did not propose to lay these reports upon the table. Such a course would be contrary to universal practice, and might form a very undesirable precedent. He visited, in addition to Tullamore, Limerick, Clonmel, Cork, Wexford, and Londonderry prisons. By the order of the Government he recently visited Mr. John Dillon. He was not aware whether he refused his name. Mr. Dillon did decline to submit to examination.—Mr. M. Healy asked why the right hon. gentleman was unable to answer the question as to why Dr. Barr refused to give his name to Mr. Dillon.—Mr. A. J. Balfour said he had not the information. If the hon. member thought it important he would inquire.

Vaccination in Wales.

On the 27th ult., in answer to Mr. A. Williams, Mr. Ritchie stated that the hon. member was under a misapprehension in supposing that a certificate of proficiency in vaccination was required by the Local Government Board of every medical man before he could hold a Poor-law appointment. The certificate was required, not for a Poor-law appointment, but for the office of Public Vaccinator. It was the case that there is no public vaccination station in Wales at which this certificate can be obtained; but the Board are not aware that any serious inconvenience has been occasioned thereby. The College of Physicians, the College of Surgeons, and the Apothecaries' Society now require the certificate from every candidate for their diploma or licence, and hence most medical men now obtain these certificates before entering on practice. It is not usual to appoint examiners to grant these certificates in towns in which there is no school of medicine. But if a medical school should be established for Wales, he would be prepared to consider the question of appointing an examiner who would be authorised to give these certificates.

Coroners' Inquests.

On the 30th ult., Sir A. Borthwick asked the Attorney-General whether Her Majesty's Government would be prepared, when the Coroners Bill came before the House, to insert a clause providing that inquests should be held in public, subject to the ordinary power exercised by the Judges of excluding the public and the Press when the evidence to be given was unfit for publication.—The Attorney-General said that he was afraid it was not possible to answer the question of the hon. baronet directly. The question whether any alteration should be made in the law relating to the admission of the public to coroners' courts was one which required to be considered together with other provisions relating to those courts, and he was not able to say more at present than that Her Majesty's Government would give most careful consideration to the question raised by the hon. baronet.

The Inquest on Mr. Mandeville.

Mr. Anderson asked the Chief Secretary for Ireland whether, after the verdict of the jury on the late Mr. Mandeville, that his death was brought about by brutal and unjustifiable treatment, the Government intended to suspend the official or officials responsible for that treatment; whether, after the protest of the jury against treating political prisoners as common criminals, the Government would discontinue that practice; and whether, after the condemnation by the jury of the aspersions sought to be cast upon the medical witnesses by Dr. Barr, the Government would suspend him from his duties as Prisons Inspector.—Mr. A. J. Balfour said that in his opinion the verdict of the jury was entirely unwarranted by the facts of the case, and he did not intend to take any action founded upon it.—Mr. Chance asked whether the Government intended to set aside the verdict which the right hon. gentleman considered to be entirely unwarranted.—Mr. A. J. Balfour asked for notice of the question.—Mr. Clancy asked whether Dr. Barr was the Irishman of that name who was a prominent Tory partisan in Liverpool.—Mr. A. J. Balfour said he had no knowledge of Dr. Barr except in his public capacity.

Royal Marine Medical Officers.

In reply to Mr. Fraser-Mackintosh, Lord G. Hamilton stated that there were full instructions for the guidance of the medical officers of the Royal Marine Light Infantry. The medical officers would certainly not wait to be consulted if they had any reason to believe that any officer or man under their care was suffering from disease.

Anthrax.

In reply to Mr. W. M. Arthur, Viscount Lonsdale stated that no special inquiries have recently been made into the nature of the disease. The anthrax order does not provide for compensation. He informed Mr. Tapping on July 6th that "compensation was only provided when compulsory slaughter was required to prevent the spreading of disease." But in anthrax animals die so soon after being attacked that slaughter could very rarely be enforced, and further, it is very desirable to avoid effusion of blood, which is highly infective to other animals.

Contagious Diseases in India.

Sir J. Gorst informed Mr. J. Stuart that it was too early to expect a reply from India as to the resolution of the House of Commons condemnatory of the Contagious Diseases Act in that country.

Milk from Tuberculous Cows.

The following notice appears in the name of Dr. Farquharson in the Parliamentary papers: To ask the noble lord the member for Lewisham whether his attention has been called to the following extract from a lecture delivered at the University of London by Dr. Sims Woodhead, Sanitary Research Scholar of the Grocery Company, and reported in THE LANCET of July 14th: "It is of course impossible to bring direct experimental proof to bear on the case of the human subject, but the indirect evidence recently adduced by various continental observers, and the examination of series of cases, should be very strong evidence indeed that in children, especially those who are subject to the wretched hygienic treatment and bad feeding to which, unfortunately, so many of our poorer class children are exposed, tuberculosis may be contracted as the result of the ingestion of milk from tuberculous udders." And, whether, in consideration of such an alarming opinion from a high scientific authority, he will consider the possibility of establishing some such systematic inspection of dairies as is now carried out in Copenhagen.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BALEBRIDGE, J. P., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Staveley District of the Kendal Union.

BRIDGICK, H. EDWARD, M.B., B.S. Durh., M.R.C.S., L.S.A., has been appointed Resident Medical Officer to the Chelsea Hospital for Women, Fulham-road, S.W.

BULL, WILLIAM C., M.A., M.B. Cantab., F.R.C.S., Surgical Registrar to St. George's Hospital, has been appointed Surgeon to Out-patients at the Belgrave Hospital for Children, vice H. Marjerson, F.R.C.S., resigned.

CHESBROUGH, E., L.R.C.P. and L.M., L.R.C.S. Edin., has been appointed Medical Officer for the Bowness District, Kendal Union.

DAVEY, R. S., M.D. St. And., M.R.C.S., L.M. and L.S.A., has been reappointed Medical Officer of Health, Walsner.

DIXON, W., M.B. and C.M. Edin., has been reappointed Medical Officer, Elythorne District, Easington Union, Kent.

DODD, T. A., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of the Workhouse, Newcastle-upon-Tyne Union.

ELIAD, E. H., M.B. and C.M. Edin., B.Sc., late Demonstrator of Physiology, Edinburgh University, has been appointed Junior Assistant Physician to the Royal Edinburgh Asylum.

GRIFFIN, INNES, M.B.C.S., L.S.A., has been appointed Medical Officer to the Banbury District, Banbury Union.

LONG, EDWARD, M.B.C.S., M. and L.S.A., has been reappointed Medical Officer for the 5th District, Bridge Union, and 2nd Hougham Division, Dover Union.

MATURIN, H., L.R.C.P. and L.M. Edin., M.R.C.S., L.S.A., has been appointed Medical Officer for the Seventh District of the Basingstoke Union.

MURDOCH, A., M.B. and C.M. Glasg., has been reappointed Medical Officer and Public Vaccinator for the Rainford District of the Prescott Union.

PAINE, G. R. E., M.R.C.S., L.S.A., has been appointed Medical Officer for the First District and the Workhouse, Fordingbridge Union.

RUGG, G. L., L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Medical Officer of the Norwood Schools, and the Norwood District.

SIMMONS, J. W., M.D. Brux., F.R.C.S., M. and L.R.C.P. Lond., has been appointed Senior Medical Superintendent of St. George's in the East Workhouse and Infirmary, Old Gravel-lane.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BRISTOL GENERAL HOSPITAL.—Physician's Assistant. Board, lodging, and washing in the house. Salary £50 per annum.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer. Salary £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing.

ITALIAN HOSPITAL, Queen-square, Bloomsbury.—Assistant Medical Officer.

PARKER OF ST. MATTHEW, Bethnal-green.—Assistant Medical Officer. Salary £100 per annum, rising £25 annually to a maximum of £150, with board and residence.

SPRINGER HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, furnished apartments, coal, gas, laundry, and attendance.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Stipend £125 per annum.

Births, Marriages, and Deaths.

BIRTHS.

THANE.—On the 17th June, at Atherfield, Yass, N.S.W., the wife of P. T. Thane, L.R.C.P. Lond., M.R.C.S., of a son.

THOMAS.—On the 26th ult., at St. Peter's-street, Winchester, the wife of Surgeon G. Harley Thomas, Army Medical Staff, of a daughter.

THURSTAN.—On the 29th ult., at Southborough, Tunbridge Wells, the wife of E. Paget Thurstan, M.D. Cantab., of a son.

VENN.—On the 26th ult., the wife of Albert J. Venn, M.D., M.R.C.P., of a son.

VOS.—On the 24th ult., at Bruce Grove House, Tottenham, N., the wife of G. Herklots Vos, M.B. Cantab., M.R.C.S. Lond., of a daughter.

MARRIAGES.

BARKER—MASON.—On the 25th ult., at St. Cuthbert's, Bedford; Fredk. Rowland Barker, M.B. Lond., Medical Staff, only son of Dr. E. J. Barker, The Mount, Aldershot, and Anne Isabella (Ella), only child of the late C. F. Mason, of Stone, Staffordshire.

HUSBANDS—WHITEHURST.—On the 2nd inst., at All Saints, Finchley-road, N.W., by the Rev. F. W. Snaffles, Harold Wesson Husbands, M.R.C.S. Eng., L.R.C.P. Lond., of Harold, Beds, younger son of T. W. Husbands, R.N., (Clifton, Bristol), to Anne Maria (Marie), elder daughter of the late John Whitehurst, of Cotton Grove, Salop.

MILLER—STUTTFORD.—On the 24th ult., at the Parish Church, Walsner, F. R. Miller, L.R.C.P., M.R.C.S., L.S.A., to Effie, daughter of S. Stuttford.

TUNNICLIFFE—CHARLTON.—On the 25th ult., at All Saints' Church, Speke, by the Vicar, the Rev. F. B. Watkins, M.A., Edwin T. M. Tunnicliffe, M.R.C.S., of Whitestone, London, N., second son of the late F. W. Tunnicliffe, of Blane, Eccleshall, Staffordshire, to Lizzie, eldest daughter of the late William Charlton, of Speke.

DEATHS.

BARKER.—On the 27th ult., at The Mount, Aldershot, Edmund John Barker, M.D., M.R.C.S., L.S.A., aged 70.

BROWNE.—On the 26th ult., at Burnt Ash, Lee, Henry Browne, M.R.C.S., of the South-Eastern Railway Company, aged 64.

LOUTTIT.—On the 27th ult., at Vanbrugh-park, Blackheath, London, James Louttit, M.D., M.R.C.S.E.

JOY.—On the 6th ult., at his residence, 1, Bower Terrace, Maidstone, after many years of suffering most patiently borne, Henry Winkles Joy, F.R.C.S. Eng., J.P., aged 83.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETO. RECEIVED.

BALDWIN & Co., Georgetown, Demerara.

The Georgetown Hospital Reports for 1887. Edited by E. D. Rowland, M.B. Edin. 1888. pp. 125.

BERTHIER, B., Paris.

La Santé par le Tricycle. Par le Dr. Oscar Jennings. 1888. pp. 178.

BLACKIE & Son, Old Bailey, London.

The Movements of Respiration, and their Innervation in the Rabbit. By Max-Marcwald, M.D. With an Introductory Note by J. G. McKendrick, M.D., LL.D., F.R.S. 1888. pp. 177.

BURLEIGH & FLINT, Augusta, Maine.

Third Annual Report of the State Board of Health, of the State of Maine, for the year 1887. 1888. pp. 324.

CHAPMAN & HALL, Limited, London.

Austrian Health Resorts and the Bitter Waters of Hungary. By W. F. Rae. 1888. pp. 292.

CHURCHILL, J. & A., New Burlington-street, London.

A Treatise on Dislocations. By L. A. Stimson, B.A., M.D. With 163 Illustrations. 1888. pp. 589.

The Natural History and Epidemiology of Cholera. By Sir J. Fayrer, K.C.S.I., LL.D., M.D., F.R.S. 1888. pp. 71.

DAVIS, G. S., Detroit, Mich.

The Intestinal Diseases of Infancy and Childhood. By A. Jacobi, M.D. 1887. pp. 301.

DOIN, OCTAVE, Paris.

Formulaire Pratique de Thérapeutique et de Pharmacologie. Par Dujardin-Beaumetz et P. Yvon. Troisième tirage de 1887. 1888. pp. 610.

FANNIN & Co., Grafton-street, Dublin.

The Medical Profession of the United Kingdom, being the Essay to which was awarded the First Carmichael Prize of £200, 1887. By Walter Rivington, B.A., M.B., and M.S. Univ. Lond. 1888. pp. 1290.

The Medical Profession in the Three Kingdoms in 1887. The Carmichael Prize Essay, 1887. By T. Liffan, M.C.P.L. 1888. pp. 385.

FISCHER, GUSTAV, Jena.

Die Entwicklung der Bakterienfarbung: Eine Historisch-kritische Übersicht. Von P. G. Unna. 1888. pp. 80.

Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie. Von Dr. E. Ziegler und Dr. C. Nauwerck. Dritter Band. Erstes Heft. Mit 11 lithographischen Tafeln und 5 Abbildungen im Text. 1888. pp. 187.

Anatomische, Physiologische, und Physikalische Daten und Tabellen zum gebrauchte für Mediziner. Von Dr. Hermann Vierordt. 1888. pp. 803.

HAMILTON, ADAMS, & Co., Paternoster-row, London.

The Thermal Baths of Bath, with the Aix Massage and Natural Vapour Treatment. By H. W. Freeman, F.R.C.S. Irel, M.R.C.S., L.R.C.P. Lond. With 14 Illustrations, Plans, &c. 1888. pp. 379.

HARRISON & SONS, St. Martin's-lane, London.

A Descriptive Catalogue of the Pathological Museum of Charing-cross Hospital. By J. H. Morgan, M.A. Oxon, F.R.C.S. 1888. pp. 131.

KEGAN PAUL, TRENCH, & Co., Paternoster-square, London.

Ireland: its Health Resorts and Watering-places. By Dr. E. Ffym, F.R.C.S. With maps showing the distribution of temperature and rainfall throughout Ireland. 1888. pp. 175.

KNIGHT & Co., Fleet-street, London.

Synoptical Index of the Regulations for Registration of Births, Deaths, and Marriages, in England and Wales. By James Lewis, Inspector of Registration. 1888. pp. 169.

LEWIS, H. K., Gower-street, London.

Diseases of the Skin, their Description, Pathology, Diagnosis, and Treatment. By H. R. Crocker, M.D. With 76 Illustrations. 1888. pp. 746.

Nerve Prostration and other Functional Disorders of Daily Life. By Robson Roose, M.D., F.R.C.S. 1888. pp. 668.

The Abortive Treatment of Specific Disorders by the Biniolide of Mercury. By C. R. Illingworth, M.D. Edin., M.R.C.S. 1888. pp. 24.

A Handbook of the Theory and Practice of Medicine. By F. T. Roberts, M.D., B.Sc., F.R.C.P. Seventh Edition. 1888. pp. 1044.

On the Treatment of Rupture of the Female Perineum, Immediate and remote. By G. G. Bantock, M.D., F.R.C.S. Edin. Second Edition. With 12 Illustrations. 1888. pp. 92.

The Applied Anatomy of the Nervous System. By A. L. Ranney, A.M., M.D. Second Edition. Rewritten, Enlarged, and Illustrated. 1888. pp. 791.

Catalogue of Lewis's Medical and Scientific Library. New Edition. Revised to Midsummer, 1887. pp. 267.

SAMPSON LOW & Co., Fetter-lane, Fleet-street, London.

Incwadi Yami, or Twenty Years' Personal Experience in South Africa. By J. W. Matthews, M.D. 1887. pp. 542.

YOUNG, J. PENTLAND, Edinburgh.

A System of Obstetrics by American Authors. Edited by B. C. Hirst, M.D. Vol. I. Illustrated with Coloured Plate and 809 Engravings. 1888. pp. 808.

The Construction and Management of School Infirmaries and Sanatoria; prepared by the Council of the Medical Officers of Schools Association (Churchill, New Burlington-street, London, 1888), price 1s.—Francesca and other Poems; by W. J. Nottley, M.D. (Digby and Long, Bouvierie-street, Fleet-street, London, 1887).—Pallas's Sand Grouse, its Natural History, with a Plea for its Preservation; by W. B. Tegetmeier, F.R.S. (Horace Cox, 846, Strand, London, 1888), price 1s.—The History and Circumstances of a Peculiar Outbreak of Febrile Disease; by J. B. Russell, M.D., LL.D., with note by S. Gemmell, M.D. (R. Anderson, Ann-street, Glasgow, 1888).—Ragatz-Pfäfers: The Curative Properties of the Baths; by A. Schaedler, M.D., with maps and views (Scheidlin and Zollikofer, St. Gall, 1886).—Keely's Secrets: Part I. Etheric Force identified as Dyaspheric Force. Part II. One Phase of Keely's Discovery in its relation to the Cure of Disease; by Mrs. Bloomfield Moore, July, 1888).—Die Grundlinien der heutigen Syphilistherapie; von Dr. Ernst Schwimmer (Leopold Voss, Hamburg und Leipzig 1888).—An Experimental Contribution to Intestinal Surgery, with special reference to the Treatment of Intestinal Obstruction; by N. Senn, M.D., Ph.D. (J. H. Chambers and Co., Locust-street, St. Louis, 1888).—Fracture of the Spine: its Immediate Treatment by Rectification of the Deformity, and Fixation by Plaster-of-paris Jacket; by H. L. Burrell, M.D. 1887.—Das Carcinom; von Dr. C. Fortes. Juni, 1888. (H. Kutzner, München).—The Altered Relations of Surgery to Medicine (Cavendish Lecture), delivered at the West London Hospital by Sir William Stokes, M.D., Ch.M. Univ. Dub., F.R.C.S.I. (J. and A. Churchill, New Burlington-street, London), 1888, price 1s.—The Physical Culture of Women; by Miss Chreiman, 1888, price 1s.—Sketches of Hospital Life, by Honor Morten (Sampson Low and Co., Fetter-lane, Fleet-street, London, 1888), price 1s.—Index Medicus: Authors and Subjects, vol. x., No. 6, June, 1888 (Trübner and Co., and Lewis).—The Extra Pharmacopœia, with the Additions introduced into the British Pharmacopœia, 1885; by W. Martindale, F.C.S., and W. W. Westcott, M.B. Lond. Fifth edition. (Lewis, Gower-street, London, 1888).—Pierce Gambit, Chess Papers and Problems; by J. Pierce, M.A., and W. Thimbley Pierce (Trübner and Co., Ludgate-hill, London, E.C., 1888).—The Annual Report of the Department for the Insane of the Pennsylvania Hospital for the year ending 21st April, 1888 (Press of Friends' Printing-house, Sixth and Arch-streets, Philadelphia, 1888).—Electric Lighting: its Present Position and Future Prospects, with illustrations; by Hammond and Co., London (Whitehead, Norris, and Lowe, Fenchurch-street, London, 1888), price 6d.—Sull' Uso Terapeutico della Creolina; pel V. Martini (Enrico Torrini, Siena, 1888).—Surgery of the Abdomen; by E. Mears, M.D. (The Medical Bulletin Printing-house, Filbert-street, Philadelphia, 1888).—Inhabited House Duty, how and when to Appeal; by Alfred Chapman (Effingham Wilson).—Magazines for August: Good Words, Sunday Magazine (Isbister); Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper (Religious Tract Society); Scribner's Magazine.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 2nd, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
July 27	29.88	S.W.	60	56	109	69	53	.13	Cloudy
" 28	29.45	W.	64	61	108	67	59	.23	Cloudy
" 29	29.85	S.W.	58	56	110	69	55	.08	Cloudy
" 30	29.50	S.W.	60	57	114	71	56	.10	Overcast
" 31	29.81	N.E.	55	52	93	60	52	.41	Overcast
Aug. 1	29.96	N.E.	55	51	80	59	51	.30	Overcast
" 2	30.09	N.E.	56	54	92	62	52	1.34	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

QUACKERY versus REGULAR PRACTICE.

AN instructive story, illustrating the preference of the public (at least in France) for quackery over science, is just now going the round of the French medical press. A provincial magistrate having received numerous complaints that a certain Monsieur L— was practising medicine illegally, sent for him and interrogated him as to the truth of the reports. To his surprise, the quack fully admitted the fact that he practised, but declared that he was only acting within his rights, being a Doctor of Medicine of the Faculty of Paris, and produced from his pocket his diploma, which was perfectly regular. On being asked why he had concealed the fact of his being properly qualified and posed as a quack, he explained that he had done well as a student, and that having attracted the notice of some of the professors, he was encouraged to set up in practice in Paris. Although a few patients came, he was unable to pay his way, having expended all he had saved in the fees necessary for his diploma, &c. He left Paris in despair, and went on board a cod-fishing boat. In this way he earned a few hundred francs and returned to France, determined to give up medicine and to follow business for a livelihood. He found, however, from time to time opportunities of attending patients, but did not tell them he was a doctor. His fame spread, and he had been making a good income for the last ten years, during which time he had saved and invested about 10,000 francs. He was so convinced of the superiority of the position of a quack over that of a medical man, that he begged the magistrate to keep his secret; for he was positive that if it leaked out that he was a qualified man he would lose all his practice.

H. S. R.—We have no large experience of the value of the drug for the purpose mentioned. But, speaking generally, we may say that we distrust the alleged virtues of "sleep-producers," and more than doubt the ultimate and permanent benefit said sometimes to be derived from their use.

Christchurch.—1. We cannot trace the announcement.—2. There is no evidence, so far as we are aware, that the one kind of down is better than the other.

WILSON FOX MEMORIAL.

To the Editors of THE LANCET.

SIRS,—Kindly allow us to acknowledge the following subscriptions, received since the publication of the last list:—Miss Isabel Goldsmith, £21; Miss Emma Goldsmith, £10 10s.; Dr. H. C. Wilkinson (Sydney), £3 3s.

We are, Sirs, yours faithfully,

W. R. GOWERS, } Hon. Secs.
THOMAS BARLOW, }

July, 1888.

THE CHAIR OF SURGERY IN THE OWENS COLLEGE.

WE have received a rather lengthy communication from the hon. secretaries of the Students' Committee, stating that "it has been considered that it would be unfair to the Manchester candidates for the Chair of Surgery in the Owens College that the editorial statement in a recent number of THE LANCET, which implied a relative unfitness of these gentlemen for the post should remain unchallenged." The statement referred to was as follows:—"One thing, however, is certain—that on the ground of eminent fitness for the post of Professor of Surgery in the Owens College no possible objection can be raised to the selection which has been made." We submit that these words do not fairly bear the interpretation which has been put upon them in the extract from the letter which we have given, and that no "relative," or indeed any, unfitness on the part of either of the Manchester candidates for the post, could be justly regarded as implied in our editorial remarks.

Perplexed.—Careful cleansing of the part with the application of astringent lotions is the most likely way to cure the patient. Failing this, it would be best to perform circumcision.

PRIMARY SYPHILIS OF THE TONGUE.

To the Editors of THE LANCET.

SIRS,—The following account of a common disease in a rare situation may prove of interest.

E. O.—, a sailor aged forty-five, consulted me on March 4th for a sore on the tongue. On examination, a hard, indurated mass about the size of a filbert nut was felt in the middle third of the organ on the left side. It was ulcerated on the surface and sides, and the palate and gums were covered with mucous patches. The cervical submaxillary and inguinal glands were enlarged, and on the following day a copious papular rash appeared; extending from the scalp to below the knees.

The initial lesion of syphilis on the tongue is, I think, rather a rare occurrence, especially so far back as this. The man strongly resented the idea of having contracted it from his fellow-sailors, nor, as far as I could ascertain, were there any others on board suffering from primary or secondary syphilis. He admitted connexion in the ordinary way on Dec. 8th, 1887, two days before leaving London, and first noticed the sore three days after arriving at Calcutta—on Feb. 7th, 1888—and had never been on shore after leaving home. If he contracted it on Dec. 8th this would give a very long incubation period of sixty-one days, so I am still inclined to think he was infected through using a common pipe or in some similar manner from someone else on board.

I may say that all the symptoms are improving under the usual mercurial treatment.

I am, Sirs, yours faithfully,
Hong Kong, March 18th, 1888. J. BELL.

THE MANX CLIMATE.

C. M. P.—From recent investigations—notably those of Mr. A. W. Moore, embodied in a paper read before the Scottish Meteorological Society—it appears that the temperature of the Isle of Man is more equable than that of the surrounding coasts, higher in autumn and winter, similar in spring, and lower in summer. There is little frost or snow, but raw, damp weather is not uncommon. Winds are the same in frequency and strength as on the mainland, though on the island they are more felt owing to its greater exposure. Rainfall is more abundant and frequent than on the neighbouring coasts, though much less than in the mountainous districts above those coasts. Its humidity is rather in excess, while on the whole the Manx climate is equable and sunny, and, although moist, invigorating. Its rainfall, at no time too great, varies considerably in the several districts of the island, and the winds, in spite of its exposed position, are generally mild and damp.

MEDICAL ETIQUETTE.

Subscriber does not give us quite sufficient reasons for his objections to meeting Dr. T.—. The friends had a right to take Dr. T.—'s opinion if they wished it, but our correspondent should have been informed.

Mr. Frank Lane.—We regret we cannot aid our correspondent in the matter, as the report of the case on which our comments were based has been mislaid.

Dr. Macaw (Belfast) will find a notice of the meeting in the letter of our Belfast correspondent published last week.

THE PHYLLOXERA IN SWITZERLAND.

THE report of the Federal Government with regard to the progress of the phylloxera in Switzerland is by no means encouraging, as it states that in the course of last year 609 vines were attacked in the canton of Neuchâtel, 111 in that of Geneva, 49 in that of Zurich, and 12 in that of Vaud. The method of treatment most generally adopted is the use of sulphate of carbon, and up to the present time the proposal to introduce American vines into Switzerland has not met with much favour, though it has been found very efficacious in France.

Mr Rundle would do well to apply to the Curator of the College of Surgeons.

THE RUSSIAN CAVALRY ACADEMY.

THE medical report of the Nicolai Cavalry Academy, where young officers are trained for the Russian cavalry service, has recently been published for the year 1887. During the year the average number of cadets was about 200; 180 cadets were admitted into hospital on 892 different occasions. The mean percentage in hospital from January to July was 0.49, and from September to December, 0.44. The most common causes of admission were gastric and intestinal catarrh, 111 cases; headache is given as the cause in 24 cases; urethritis in 19. Not a single case of syphilis or soft chancre is mentioned. A somewhat interesting case of concussion of the brain occurring in the riding school is reported. The cadet was unconscious for twenty-six hours, with spontaneous evacuation of urine and feces. During this time he kept talking German—a language he had not been in the habit of speaking since he was eleven years old. As soon as consciousness returned, he spoke Russian as usual. The report concludes with some calculations showing the average cost of medicines and surgical appliances for each cadet. Dr. Grimm, the medical officer in charge, did his best to economise the expense of dressings by having most of them prepared under his own supervision by attendants, the result being that the dressings per cadet on the strength cost about 8s. 7d. during the year. As to medicine, 2603 prescriptions were written, the cost of each being under 2d. Of course, in addition to the cadets, there were a number of attendants and their families treated. The statistics relating to these patients are carefully separated from those relating to the cadets.

A. R.—Cheese as an aliment is apt to be greatly vitiated by adulteration, and ought therefore to be used with caution. Recent revelations have shown many of the Italian cheeses to contain much deleterious admixture. On the other hand, the Canadian cheese, according to the chief analyst of the Dominion, is "perfectly pure and free from adulteration."

"ARRESTED DEVELOPMENT OF THE ABDOMINAL WALLS."

To the Editors of THE LANCET.

SIRS,—In your issue of July 21st last I read an interesting clinical note by Dr. Buchanan concerning the above affection. On July 22nd I myself delivered a woman of a female child, of which the anterior abdominal wall was deficient, and presented at the umbilicus a large tumour about the size of a man's fist, which was resonant on percussion. The skin of the abdominal wall only extended to the margin of the tumour, which was covered by a thin bluish, translucent membrane. This membrane I took to be the expanded tissues of the cord. The cord itself was inserted into the most anterior part of the tumour. The child was premature (about eight months), and I may add that it is still living, and seems to be doing well. The cord has not yet separated.

I am, Sirs, yours faithfully,

Manchester, July 27th, 1888. E. VIPONT BROWN, M.R.C.S., L.S.A.

SUICIDES IN FRANCE.

STATISTICS recently published show that the total number of suicides in France for the past twelve months is 7572. Of these, one-fifth were in and around Paris. Poverty appears to have caused only 483 suicides throughout France, and this number includes a morbid fear of impending misery without actual privation. To mental aberration 1975 cases were traced, and 1228 to physical suffering. Among the moral causes domestic trouble comes first, and alcoholism next. Disappointed love and jealousy caused respectively 200 and 27 cases, and dislike of military service 25. The suicidal month of the year is July, and it is noteworthy that since the establishment of the *Œte* on the 14th suicides have increased.

Dr. H. McDermott.—Spiegelberg's Geburtshülfe; Charpentier, Traité Pratique des Accouchements; Tarnier and Budin; Lusk's Midwifery.

PETRIFICATION OF THE CARUNCULA LACRYMALIS.

DR. DOLSHENKOFF mentions in a Russian ophthalmic journal a case of petrification of the caruncula lacrymalis with hypertrophy. The tumour measured 11 millim. by 9 millim., and was covered by conjunctiva. When this was removed, a prismatic structure was seen.

C. F.—1. Any registered person is eligible for examination.—2. At least as good as any other.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Isambard Owen, London; Sir J. C. Browne, London; Dr. Suckling, Birmingham; Dr. Gowers, London; Dr. W. Carter, Liverpool; Mr. Randle, London; Dr. Chepmell, London; Mr. Marshall, Hastings; Dr. Bamber, Dr. Yellowlees, Glasgow; Dr. Peregrini, London; Messrs. Carr and Co., Carlisle; Dr. Thompson, Latimerston, Tasmania; Messrs. Wood and Co., New York; Mr. Perceval, Waratah, Tasmania; Dr. Vandel, Vesey, Albany, N.Y.; Dr. Galloway, Norwood; Mr. Kettleum, Waltham

Cross; Mr. Ryan, London; Mr. J. B. Bailey, London; Dr. Norman Kerr, London; Mr. Foulerton, Chatham; Mr. Folks, London; Dr. Sims Woodhead, Edinburgh; Mr. W. A. S. Hewins, Oxford; Mr. Vincent Jackson, Wolverhampton; Dr. H. E. Jones, Llanwddyn; Dr. More Madden, Dublin; Mr. Percival; Mr. J. Brown, Belfast; Dr. Beresford Ryley, London; Mr. J. Taylor; Mr. J. E. Ady, London; Dr. Alexander Duke, Dublin; Dr. J. W. White, Philadelphia; Dr. J. M. MacCormac, Belfast; Mr. J. J. Weaver, Southport; Dr. W. J. Wilson, Victoria; Dr. McDermott, Belfast; Mr. J. B. Bailey, London; Mr. C. Jackson, London; Mr. A. N. Brown, Manchester; Dr. W. Stephenson, Aberdeen; Dr. E. S. d'Odiardi, London; Dr. Mumby, Portsmouth; Mr. N. Mayne, Longford; Mr. T. B. Campbell, London; Mr. Rundle, Southsea; Mr. W. Carnie, Aberdeen; Dr. Finlayson, Glasgow; Dr. Shuttleworth, Lancaster; Mr. J. H. Wright, Halifax; Dr. Brodric, London; Dr. H. Blanc, Cannes; Mr. Hyde, Buxton; Mr. Beckton, London; Mr. E. A. Piggott, Risbridge; Dr. E. C. Perry, London; Mr. A. T. Hawkins, London; Dr. Erard, Edinburgh; Mr. C. Hancock, London; Mr. W. Sell, London; Mr. Plummer, Beyreuth; Dr. Skerritt, Bristol; D. M. Cambridge; Messrs. Hogg and Sons, London; Mr. Townsend, Exeter; Quero; Perplexed; O. F.; Christchurch; X. Y. Z., London; F. H., Salop; Hon. Secretaries, Students' Committee; S. E., London; The Infirmary, Staffs; G., London.

LETTERS, each with enclosure, are also acknowledged from—Prof. Tait, Birmingham; Mr. Maythorne, Biggleswade; Messrs. Oliver and Boyd, Edinburgh; Mr. Woodcock, Bradford; Messrs. Barton and Co., Congleton; Mr. Flint, London; Dr. Paul, Camberwell; Mr. Van Praagh, London; Mr. Godfrey, Northampton; Messrs. Ross and Co., Belfast; Mr. Swan, Yorks; Mr. Berthier, Paris; Messrs. Hill and Co., London; Mr. Virgo, Oxford; Messrs. Rowntree; Messrs. Bell and Bradfute, Edinburgh; Mr. Tunmer, Harrogate; Messrs. Condy and Mitchell, London; Mr. Gibbon, Carmarthen; Messrs. Beaman and Street, Ashton; Mr. Hay, Hull; Mr. Pope, Hereford; Messrs. Hooper and Co., London; Mr. Campbell, London; Messrs. Schweitzer and Co., London; Mr. Gillanders, Fortrose; Messrs. Brown, Gould, and Co., London; Mr. Budin, London; Dr. Brooks, Salop; Messrs. Isaacs and Co., London; Mr. Treshurt, Hants; Mrs. Cocking, Plymouth; Dr. Hemming, Hants; Mr. Hutchinson, London; Dr. Allwright, London; Mr. Tinker, Staffs; Mr. Smyth, London; Mr. Heywood, Manchester; Mr. Hordley, Staffs; Mr. Herbert, Herts; Mr. Popham, Dulwich; Mr. Needham, Gloucester; Mr. Hogg, London; Mr. Collins, Harrogate; Mr. Elliott, Carlisle; Mr. Baker, London; Dr. Elliott, Andover; Mr. Soper, Dartmouth; Mr. Brand, Cornwall; Mr. Vernon, London; Mr. Parkes, Bristol; Dr. Waters, Liverpool; Mr. Donaldson, Edinburgh; Mr. Street, Lancs; Dr. Morley, Barton-on-Humber; Forceps, Leeds; Staffs. General Infirmary; Beta, Welshpool; Lady Principal, London; S. G., London; Valetudo, London; Hamilton Association, London; R., London; Booz, Leicester; Jarvis-Conklin Co., London; Dorset, London; C. D., Leeds; Maltine Manufacturing Co., London; Sigma, London; Delta, London; A. B., London; Lady Superintendent, Chichester; A. K. B. M., London; Dorset County Asylum; Medicus, Norwood; M., London; Geddes Manufacturing Co., London; Principal, Beccles; B. W., Aberdeen; Medicus, Liverpool; J. K. M., London; C. Y. R., Hasleden; Medicus, Birkenhead; A. B., London; Medicus, Walthamstow; O. Y. L., London; H. B. N., London; Stethoscope, London; M. D., Devon; G. H., Yorks; G. T., Yorks; Medicus, Brighton; S. N., London; H., London.

People's Journal (Fife), Dewsbury Reporter, Liverpool Mercury, Surrey Advertiser, Reading Mercury, Windsor and Eton Express, Herefordshire Mercury, Jarroo Express, Midland Weekly Herald, Manchester Evening Mail, Dunfermline Saturday Press, Herald and Weekly Free Press, The Christian World, The Dawn, the Vegetarian, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 7.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 8.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

Thursday, August 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, August 10.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 11.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an additional advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

Agents for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

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Books and Publications (seven lines and under)	£0 5 0
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Quarter Page	1 10 0
Half a Page	2 15 0
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The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

SUBSTANCE OF THE Presidential Address

*Delivered at the meeting of the British Medical Association
in Glasgow,*

By WILLIAM T. GAIRDNER, M.D., LL.D.,
PROFESSOR OF MEDICINE IN THE UNIVERSITY OF GLASGOW, PHYSICIAN
IN ORDINARY TO THE QUEEN IN SCOTLAND.

DR. GAIRDNER at the commencement of his address said that it did not possibly occur to the gentlemen who were so kind and generous as to ask him to deliver the Address in Medicine last year that they were, in effect, thereby stealing from him the materials for the present address. And yet it was even so, indeed, and very obviously so; for how is a man, twice over within the space of twelve months, to discourse of the present state of the medical art and not at every paragraph to be found repeating himself? He would not trouble his hearers, however, with the heart-searchings and grave disquietudes entailed on him by this little incident. At one time he hoped to have got over it by avoiding medical subjects and speaking chiefly about the past history of Glasgow. But here he found he had his purpose, even if in process of being matured, altogether forestalled by the very numerous and mostly admirably done publications¹ which have been called into existence by the International Exhibition, to the Executive Committee of which he hoped before long they should feel that they were under deep obligations in many ways. He then proceeded in a few words to sketch the rise of the city, and, alluding to its present population, wealth, and importance, concluded his introductory remarks by bidding his hearers welcome to what might be justly claimed to be, in the words of St. Paul, "No mean city."

Dr. Gairdner then proceeded with his address as follows:—

The Physician as "Naturalist."—In seeking about for a topic on which I might occupy your attention this evening, I have been led to make some special reflections on the curious survival among us of an ancient way of thinking that is presented to the mind by the designation in English of the *physician*, or, as Chaucer has it in his well-known Prologue to the "Canterbury Tales," the "Doctour of Physike." I do not know if it has occurred to many of you to observe that in no other language than our own has this survival occurred. The surgeon—*chirurgus*—has, indeed, kept from a very remote antiquity the title which was given to him in the days of his subjection as the *handworker* or *operator* under the direction of the physician. But the most remarkable thing about this last, and conventionally the higher, title is that while it seems to recall a time when the medical art was distinctively associated in the minds of men with the study of *physis*, and when the healer of the sick was regarded as in a very special if not exclusive sense a *student of nature*, it is very hard to discover from the traditions of language, either our own or any other, when this idea first took shape—how and when the notion began to be entertained that the most fitting title for the most highly honoured representative of the medical art was to call him, distinctively, a *naturalist*, or, if you will, a *natural philosopher* or *physicist*. It has occurred to me that it may not be an altogether unprofitable task for one who holds a chair in this University popularly designated as one of *Physic*, to inquire how the idea represented in this word *physic* came first into existence, and how it got floated into such a degree of popularity as not only to have practically displaced to a considerable extent in our own

language the much older one of *medicine*—that is, healing—as applied to the art itself, but to have got itself into currency as applied to the very tools of the art, the drugs with which the physician, so called, was supposed mainly to work his cures. I hope to be able to show you that these words *physician* and *physic* have relations with some of the very best and highest traditions of antiquity, and that it may be possible for us even now to make an application of them which will repay and at the same time justify their retention in the English language, although, it may be, tending also to discover certain deficiencies which still unhappily exist in our systems both of medical and general education.

My argument, in other words, will be this:—For a series of indeterminable ages, from the time, very probably, of Hippocrates downwards to what we call the dark or middle ages, the tradition has continuously existed that the healer or physician of the highest class ought also to be, in a very real sense of the word, a naturalist or perhaps a man of science (physical science being, of course, understood); that it is his prerogative to be trained and exercised after the best manner and according to the most thorough discipline of the science of his age; and that he ought to be (or, at least, that he has been in very remote times) regarded as being admirable and trustworthy as a healer or physician chiefly in proportion to the confidence reposed in him as a naturalist, that is, a humble, reverent, and exact follower and student of nature.

The Hippocratic Tradition—Anticipation of the "Novum Organum."—You are all familiar, no doubt, with the magnificent opening of the "Novum Organum,"² which ascribes to Man as the "minister (or servant) and interpreter of Nature" only so much either of power or of knowledge as he has gained by observing the order of nature, outside of which he neither knows nor can do anything. Now, it is a curious fact, which has not escaped the editors of Bacon in recent times,³ but which may require, nevertheless, to be brought to your notice, that the very word or phrase here used to designate the limitations imposed upon the *power* of Man in reference to Nature is the one which, in a very remote age, had suggested itself to Hippocrates as specially indicating the function of the healer. He is, he must be (according to Hippocrates), "the servant of Nature"—*ὑπακούων φύσεως*. Nor is this a mere accidental expression, which might be passed over as a coincidence not extending below the surface. On the contrary, the expression is taken up and specially commended by Galen (surely the best of all authorities on such a point) as being of the very essence—the key-note, as it were—of the Hippocratic teaching, with which all the later authorities (Aristotle and the Peripatetics), as he tells us, were essentially in accord.

But to return to Hippocrates and his remarkable declaration, that the *iatros*, or healer, is the servant of Nature (*φύσις*). This expression, as I have already said, is no merely casual one in the writings of Hippocrates; for Galen remarks upon it, and (in the full knowledge, therefore, of all that could be said for or against the expression by rival sectaries) he does not hesitate to declare that Hippocrates was "the first to observe the works of Nature"; and that he "is always admiring and insisting upon the sufficiency of Nature, whereby what is necessary for the life of all animals is done *διδόκεται*—that is, spontaneously, and without apparently conscious effort." He thus places Hippocrates distinctly in advance of, if not above, Aristotle and the Peripatetics, in respect of originality in the study of *φύσις*; and he further maintains that Erasistratus, the Alexandrian anatomist, had adopted an inconsistent attitude towards Nature, and that his followers had exposed themselves to ridicule by their unintelligent criticism on what was simply a development by the Peripatetics of the physiology—that is, Nature-teaching—of Hippocrates. It is not necessary to go into this old controversy now further than to show that, by the very fact of its having become a controversy at all, the position of the *iatros*, or healer, as the "servant of Nature," must have been very well known not only to Galen, but probably also to Aristotle: and through these to the Arabian physicians and to the whole of the

¹ The most suitable of these that I have been able to look into are the following:—Constable's Guide to Glasgow (James Maclehoose and Sons); Glasgow, Ancient and Modern, with an Account of the Bishop's Castle, by George Macdougall, F.S.A.Scot., author of *History of Glasgow* (Hay, Nisbet, and Co.); Pollock's Dictionary of the Clyde, 1888 (John Menzies and Co.); St. Mungo's Bells, or Old Glasgow Stories, by A. G. Callant (David Bryce and Son). A work of more research and elaboration, and well worthy of the attention of all who can afford the time, is "Old Glasgow: the Place and the People; from the Roman Occupation to the Eighteenth Century," by Andrew MacGeorge (Blackie and Son).

² "Homo; Nature minister et interpres, tantum facit et intelligit quantum de Nature ordine re vel mente observaverit, nec amplius scit aut potest."—Aph. i.

³ See note at p. 157 of Ellis and Spedding's edition of Lord Bacon's works, vol. i., 1870.

middle ages, of which they were the teachers and law-givers.

Nor did Hippocrates, the father of medicine, escape the reproach which it has been so easy and so profitable in many ways to fling at those who, in a later day, have proceeded in accordance with his precept, if not his example. We hear chiefly from Pliny and Cælius Aurelianus of a certain Asclepiades of Bithynia, a contemporary of Cicero, whose true character it seems rather difficult to decipher, but who at least may be said to have been a fashionable physician in Rome, with a brand-new system of his own. Asclepiades, whose rôle in the treatment of disease seems to have been one of constant interference, or, as we should say, of meddling—some physic, only (it is believed) using as a rule, and in a temporising kind of way, the mildest and most agreeable of medicines,⁴ had, of course, no appreciation at all of anyone who, in his character of a healer, professed to be a "servant of Nature." He said, in fact, that, in speaking of nature as a kind of intelligent principle, Hippocrates was (not to put too fine a point upon it) talking nonsense. Nature is too often bent, not upon healing the man, but (as a witty member of this Association once said in my hearing) on putting him into his coffin! Hippocrates, as the servant of Nature, is simply a *waiter upon death* (*θανάτου μελέτην*). The true business of a physician is to "make himself master of the occasion"—that is, to shove old Dame Nature out of the way, perform the cure *tuto, cito, et jucunde*, and claim all the credit, which, no doubt, he did in Rome, as the quacks in all ages have done everywhere, with great comfort and advantage to himself, and (let us hope) with the minimum of injury to his patients.

The truth and the falsehood that underlie this old-world argument I will not attempt to discuss this evening, having done so already on more than one occasion. I am alluding to it now mainly to show that the position of him whom we now call the physician, in reference to *φύσις*, was a well-recognised one long before the origin of the term *physicus*, as applied to him in the Latin of the Middle Ages and the French of the thirteenth century—from which, in all probability, we have derived our English word. What I have now to do is to inquire how far we are maintaining, in this nineteenth century of ours, the position assigned to Hippocrates by Galen (and, I have no doubt, rightly assigned) of being prominent among the seekers into *φύσις*, or, at all events, capable workers in this field, in accordance with the methods and advances of modern physical science.

The Physician of the Middle Ages.—It may be not unimportant for this purpose to remark that, so far as we can judge of him from literature, the physician of the middle ages, though retaining the name, was in a very small degree, if at all, cultivated according to the type. Chaucer's Doctor of Physike, though very far indeed from being a pedant, was assuredly much more of a *learned* than of a *scientific* physician. The fate of Roger Bacon in the century before Chaucer was an amply sufficient warning to the good-natured and easy-going doctors of his time that anything like original research into *φύσις* was dangerous—nay, liable to be proscribed and punished with imprisonment, perhaps with the faggot, unless it proceeded exactly on the lines of St. Thomas Aquinas, the "angelic doctor." It was very much easier and more comfortable in every way to stick to Hippocrates and his "humours," where everything was sure and safe; and to add a little astrology, which at least was permitted, if not encouraged,⁵ and could get no one into trouble. And when we come down more than a century and a half to Rabelais, two centuries to Montaigne, three centuries to Molière and Guy Patin, we find the position still much the same, or rather, in all probability, worse as respects the *physician*; although surgery and anatomy may have been making some steps in advance. I apprehend that the doctor of medicine in the middle of the seventeenth century in France, unless he has been caricatured out of all recognition

by Molière, must have been altogether the most stupid, pompous, brainless formalist that ever in any age of the world practised the art under a learned title. The satirical portrait of Thomas Diafoirus, and the magnificent installation of Argan in the "Malade Imaginaire," remain for us and for our remotest successors, to show the art of healing may degenerate under the influence of scholasticism, and how base a creature it was at least *possible* to represent a "physician" as having become in the days of Louis XIV., in the midst of a most brilliant outburst of literature and art, at the very time when Harvey's great discovery was slowly making its way against prejudices derived from the darkest of the middle ages, and the still overpowering authority of Aristotle and of Galen.

But at this time the Faculty of Medicine in Paris was probably the last retreat of obscurantism in all Europe, at least within the domain of the physician. In Italy, in England, in Switzerland, in Germany, and in the Low Countries, the spirit of observation and experiment was awakening from a long sleep; and in many departments—anatomy, botany, physiology, surgery—things were moving on apace; but the physician was almost everywhere belated in the race. Even down to the last century, the man of *learning* (of the type of Linacre and Caius) in the Royal College of Physicians of London greatly predominated over the man of *science*, as exemplified in William Harvey; while Oxford and Cambridge, which alone could open the portals of the College, were absolutely *nowhere* as schools either of science or of medicine; and neither taught nor professed to teach anything but a mostly mediæval curriculum. And thus it came about, so late even as the year 1815, that the curious anomaly of the "double qualification" obtained a legislative sanction in English medical education. For, while in most European countries the State and the universities co-operated in arranging and controlling the issue of a single qualifying diploma for the general practitioner, the Royal College of Physicians of London was still too much the college of a learned *caste* to allow of their exclusive privileges being shared by any but university graduates; while the two great English Universities were altogether too helpless, as regards the necessary discipline of a medical career, to make it even possible for them to afford the slightest assistance. The Royal College of Surgeons, on the other hand, which had for ages concerned itself only with anatomy and surgery, to the exclusion of physic, continued on the even tenour of its way, including in its membership men ignorant of Latin, but instructed as regards fractures, dislocations, and surgical procedures generally; while the Worshipful Company of Apothecaries, cleverly perceiving and taking advantage of the enormous gap which was at once apparent between the technical discipline of the pure surgeon and that required for the all-round practice of the medical profession, marched into a position of legal independence through this gap, and, from being the humble servants of the physician, obtained for their licentiates not only the exclusive right to dispense medicines, but the status of prescribing them also, and thus a perfectly just and well-earned rivalry with the physician all over England.

Modern Physic: the Colleges and the Universities.—What I am chiefly concerned to bring under your attention, however, in this connexion is that, according to the historical development, or evolution, of medical education in this country, and especially in England, the physician, in the sense of *Nature studiosus*, the devotee of *φύσις*, as aforesaid, stood a very fair chance of being altogether, and finally, suppressed and wiped out of existence.

What is still wanting in the training of the Physician.—From the earliest days of my experience as a teacher it has been customary with me to use expressions and to act in a spirit, of which you may readily judge for yourselves from the following brief paragraph, taken from an address to students of medicine, delivered more than twenty years ago: "The first lesson to be learned in order to make all other lessons possible is, in my opinion, this: to deal very largely with things and not with mere words; to realise as much as you can all your instruction by making it your own through personal observation; to suffer nothing, if it can possibly be avoided, to lie in the mind as a dead weight of vocables, oppressing the memory and dwarfing the intellect; but to bring everything into the living light of fact and of nature, and thereby at once to assure to yourself the truth and exactness of your knowledge, while at the same time you

⁴ He is reported to have been the inventor of the phrase, "*Tuto, cito, et jucunde*," as applied to medical treatment in general. But he also employed, according to Pliny, magical remedies to a great extent. (See Le Clerc: *Histoire de la Médecine*, 2nd partie, l. 3, cc. 4-7.)

⁵ Judicial astrology, however, which (according to Nandø) was "l'enfant supposé de l'Astronomie," was (he says) very properly condemned by the Church, "non point comme suspect de magie, mais comme une science vaine et chimérique, *qua stultis ea qua geruntur in terris consecratur*; qui veut pénétrer dans nos destinées, et qui par la témérité qu'elle a de vouloir s'élever à la Providence, en fouillant dans l'avenir, combat directement la Religion." So that Chaucer's Doctor of Physike was, perhaps, a heretic after all!

are stamping it down upon the memory by the most sure and lasting of all technical methods."⁶

No one can be more ready than I am to admit that there are—nay, that there must be—limitations in the very nature of the case to the too absolute recognition of this ideal. It is said by some that the spirit of modern science is ungenial and hard, even pitiless, and therefore not at all fitted for the ministrations of humanity; that it tends to make the suffering man, the *patient* (as we call him), into a mere *case*—a thing to be observed and noted rather than a man of like passions with ourselves, and therefore to be treated with consideration and sympathy. There may be just a grain of truth in this; and to whatever extent it is true, we of this medical school claim to be aware of the fact, and to be ever on our guard against the tendency. But none the less it may be affirmed with entire truth, and with cumulative evidence if need be, that all the evils inflicted on poor suffering humanity by the physician as scientist have been but a drop in the bucket as compared with those which have sprung from the too slavish adoption of traditions, in which there never was any trace of the scientific spirit at all.

I will venture in advance (although I know as yet but little more than the general subject on which he is to speak) to commend to your notice the forthcoming Address in Physiology by my esteemed colleague Professor McKendrick, as a sample of the kind of instruction which we of this University and medical school consider to be among the legitimate developments of the study of *physis* as applied to our art. But in doing so I shall venture to anticipate—because I am well assured that anything I can say here will only give expression to what will still more clearly emerge from that discourse—some of the discouragements to which I referred a moment ago—the difficulties we experience in training our students adequately on the lines we have laid down for them. These difficulties are manifold, and they are not of our making, nor are they peculiar to Scotland. I have only time now to refer to two of them.

The first of these difficulties belongs to the medical curriculum, in which, although chemistry, botany, and natural history have long been with us a necessary part, and, so far as they go, a well-conceived and valuable scientific basis for the more technical part of our teaching, nevertheless physics proper—or, as we call it, natural philosophy—the very first step in the study of the laws of matter, is still but very imperfectly recognised. This great omission has arisen, no doubt, from the fact that these laws were supposed to be taught, and in a measure were taught, in connexion with chemistry, which, from its old hereditary relations with pharmacy and the pursuit of the philosopher's stone and the elixir of life, had from time immemorial a claim on the physician. But when we consider how completely modern science has demonstrated the subordination of living bodies and physiological processes, not to a wholly detached set of laws termed vital, but to all the most elementary laws of matter; and, further, the correlation of all the physical forces throughout the universe, so that the living body and its environment act and react on each other throughout infinite space and time, it will be readily admitted, I think, that some kind of systematised instruction in physics, and not a mere elementary examination in mechanics, should be an essential part of an education with a view to the medical profession.

But this leads me directly to the other difficulty, or disadvantage, under which the Scottish universities have hitherto laboured in endeavouring to restore to the healing art its ancient association with the study of Nature. And this is by far the graver difficulty of the two, inasmuch as its rectification depends in no degree upon us or upon any possible change in the medical curriculum, but upon what amounts to a practical readjustment of the entire edifice of general education.

Want of early training in Physics and Natural Science.—The evil to which I now refer, as some of you have already no doubt perceived, is the extremely unprepared state in which the minds of most boys and young men are found at the time of their leaving school as regards the most elementary truths and methods of physical science, and of the observation of Nature. It is now more than a quarter of a century since this great defect in the English public schools attracted the attention of a Royal Commission appointed in 1861, and there is no reason to suppose that in

Scotland at the time in question the state of school education was in this respect much better than in England. Evidence of the most convincing kind was given in 1872 before another Royal Commission to the effect that "the limitation of the examinations (under this revised code) to the subjects of reading, writing, and arithmetic unfortunately narrowed the instruction given in the elementary schools; and that this change, together with the lower standard adopted in the training and examination of pupil teachers and the curtailment of the syllabus of the training colleges, exercised a prejudicial effect on the education of the country." I am well aware, indeed, that in Scotland, and even in our own city of Glasgow, there are schools which have already made some considerable advances in the direction here indicated; and that in the old High School of Glasgow in particular there exists now a chemical laboratory such as would do no discredit to any university. But as regards the schools throughout the country, the advance has been so slow that for a long time to come our boys will leave their schools, and our young men will continue to enter the universities, in a state of great mental unfitness to grasp even the most elementary ideas of physical science, and therefore requiring more than ordinary care to ensure, at the very commencement of a medical education, the preparation in *physics*, which will shortly become all-in-all to the true *physician*.

Religio Medici.—I have now to ask your attention, for a very few minutes only, to a concluding topic, which I approach, indeed, not without fear and trembling, but which is of too much prominence and importance in itself, in connexion with the subject of this address, to allow of my passing it by without some reference.

Probably there may be some of you here present who have been led to take note of a proverb which I am bound to say I have not been able to trace to its source, but which I suspect to have been the growth of that mediæval period to which allusion has already been made in the course of this address: "*Ubi tres medici, duo athei.*" I am not concerned in tracing out for you, even if I were able to do so, the most probable origin of this defamatory saying, nor shall I spend many words in venting my honest indignation upon it as a calumny and a reproach. It will be wiser and more profitable in every way to take it as it stands—as an example of what the late Earl Russell said of proverbs in general—"the wisdom (or in some cases the foolishness) of many," accentuated and condensed into a telling phrase by "the wit of one." From this point of view it may be that there is something more or less worthy of careful reflection in this proverb, even if we should disown it in its literal acceptation. But I need scarcely say to those who are at all conversant with philosophical studies, that to have been accused of atheism in the middle ages may be quite the reverse of a real reproach to any man or set of men. From the time of Socrates downwards, indeed, this reproach has been a part of the stock in trade of vindictive, even if sincere, ignorance and bigotry all over the world; and to have been tabooed with atheism is often, almost without qualification, a passport into the ranks of those who have kept alive the flame of the human spirit, tending, and often vainly struggling upwards, to escape from the jargon of scholastic controversies and the mephitic vapours of ecclesiastical strife. From this point of view it was inevitable—nay, it was essential—that the physician or naturalist, in so far as he really was or aimed at becoming such, should incur this reproach. The marvel rather is to us of this nineteenth century that those who incurred it should have done so little to deserve it. The reproach from a philosophical point of view, inconsistent with atheism, but not seldom conjoined with it, of tampering in an evil sense with magic, was sure to be launched in those days at men who professed to be successfully investigating the *secreta nature* by other than the most orthodox methods. And the prosecution and imprisonment of Roger Bacon on the one side and of Galileo on the other, not to speak of the numerous "martyrs of science" both before and after these, will remain as an imperishable record of the blind and impracticable spirit of mediæval dogmatism, which, covering itself with the mantle of religion, stood athwart the path of the physician for hundreds of years. But although the condemnation on the side of godlessness came most easily and naturally out of the mouths of ecclesiastics, it is not by any means to be inferred that, either in ancient or modern times, it has been confined to them. Even in the kindly and thoroughly human word-picture,

⁶ Medical Education, Character and Conduct, &c. (*ut supra*), p. 70.

drawn for us by Chaucer, of the typical "Doctour of Physike," in the prologue to the "Canterbury Tales," line 440, it comes out that while

We knew he the old Esculapius,
And Dioscorides and eke Rufus,
Old Hippocrates, Hall, and Galien,
Serapion, Rasis, and Avicen,
Averrois, Damascene, and Constantin,
Bernard, and Gatisden, and Gilbertin—

yet, alas! as a sad balance in the way of defect to all this learning of ancient, and also of then quite modern date, it is quaintly and humorously added in a single line, without even an attempt at amplification or excuse, that

His studie was but little on the Bible.

This, then, is the position and the stigma that we have to deal with as physicians or students of Nature and science in the present, as in all former ages, in proof of which you will allow me simply to refer (without at all dwelling upon it) to an article in the actually current number of the *Contemporary Review*.⁷ I will therefore close this address with a very few thoughts of my own on the subject, not at all in the way of controversy or of recrimination, but as expressing the matured convictions of a lifetime on a theme which must needs come home to every man's conscience in the exercise of our profession, and on which I should despise myself if either the desire of saying smooth things, or the fear of saying the opposite, were to move me in the least degree in addressing an assembly like this.

That the active ministry of the healer, if fitly and diligently pursued in a serious and not a sordid spirit, cannot possibly tend to irreverence, or to what I would call essential atheism or godlessness, is, I think, so obvious that it is only wonderful that any doubt should ever have arisen on the subject. That ministry is the ministry of the body, no doubt; physical, therefore, in its aim; physical also, to a certain extent, in its limitations; and I am not one of those who would argue that, because it is so, the physician is thereby degraded and straitened unless he is also constantly invading the province of the religious teacher. But when we consider how closely the one province trenches on the other, and, further, that in all the greater and graver crises of the lot of man on this earth—birth and death, sickness and health, moral contamination producing disease, and, on the other hand, physical disease inducing moral aberrations, and, with or without these, positive insanity,—we must acknowledge that the spiritual element in man is brought necessarily into the sphere of the physician's daily work. I am confident there is not a man in this room who will not emphatically agree with me in saying that a physician who even inclines towards irreverence as his habitual attitude of mind is thereby disqualified from performing aright the greatest of all the services that at times he can render to the sick.

The physician of the future will, I believe, be much more, instead of less, inclined to study the Bible than hitherto, and in this respect will differ greatly from the representative and typical "Doctour of Physike" of the "Canterbury Tales." But he will study it in the spirit of modern scientific freedom and of historical research, not under the influence of mere tradition and ecclesiastical authority. And thus only, as it seems to me, can the reconciliation of science and religion ever be brought about.

The physician of the future will do well if he remembers always the pernicious despotism which has been exercised over his own art (though in a minor degree) by the fetters of these dead orthodoxies, and will therefore be very slow to acknowledge their claims upon him to any more than a historical regard, even in the realm of theology. He will say of them, in the noble words of the Westminster Confession, which (but for the formula connected with it in our Scottish churches) might almost be taken as the Magna Charta of Christian liberty in all such documents—"All synods and councils since the Apostles' times, whether general or particular, may err, and many have erred; therefore they are not to be made the rule of faith or practice, but to be used as an help in both."⁸ But I desire you very specially to remark, as my own personal anticipation, shared, I have no doubt, by many of those now present, that the physician, in his character of student of Nature, will make, and in the end will establish, this claim to emancipation, not in virtue

of any irreverent, much less atheistic, tendencies, but for the very reason that he has access to a revelation of God distinct from the written revelation, and requiring a wholly distinct method of investigation. In obedience to this call, he will, sooner or later, absolutely decline to walk in the leading-strings of ecclesiastical tradition. And in so doing he will (far from fulfilling old Dan Chaucer's satirical description) studiously insist upon the Bible, and especially the New Testament, and, above all, the recorded life, words, and works of our Lord himself, as containing by implication the charter of his emancipation, and the only perfectly free religious atmosphere as yet opened to human thought and inquiry. In proof of which I will now only submit one pregnant saying, with which, if it be indeed the word of God, all those who believe it to be such are bound to find all the other words of God in entire accord—"Henceforth I call you not bond-servants, for the bond-servant knoweth not what his lord doeth; but I have called you friends, for all things that I have heard of my Father I have made known unto you" (John xv., 15).

SUBSTANCE OF THE

Address in Medicine

*Delivered at the meeting of the British Medical Association
in Glasgow,*

BY T. CLIFFORD ALLBUTT, M.A., M.D., &c.,

CONSULTING PHYSICIAN TO THE LEEDS GENERAL INFIRMARY.

ON THE CLASSIFICATION OF DISEASES BY MEANS OF COMPARATIVE NOSOLOGY.

DR. ALLBUTT commenced by remarking that of late years his avocations had prevented an attachment to that kind of special investigation to which his earlier years were devoted; he had, therefore, none of the results of experiment to lay before his hearers. Happily, however, as he thought, the address in medicine should deal rather with the larger aspects of our art—with those broader conceptions which fashion themselves in the mind ripened by diversity of experience and fed by the continual discoveries of others who still labour in the various fields of inductive science. In one large conception of medicine his mind had dwelt for many years, and he gladly seized this time to place it before them, for he believed it to be the *novum organum* of medicine, its instrument, and a clue to its investigation. He asked their permission to make a few reflections on the classification of disease by means of comparative nosology, a method which would coördinate the ever-increasing accumulations of our clinical note-books and of our laboratories, and create a system which, in its turn, would direct and inspire the labours of the inductive inquirer of the future. He then briefly quoted from some addresses and essays which he had published on the subject some years ago, and proceeded as follows:—

In order to attain to a true system of classification, a *diagnosis*, or marshaling of diseases of men, animals, and plants, on a basis of affinity, we must pursue at least four different methods of inquiry—namely, the hereditary, the historical, the geographical, and the experimental methods. These methods of inquiry, which touch each other closely and cannot on all sides be logically dissociated, must, however, be separated for convenience of handling.

The hereditary method.—I will consider first the phenomena of heredity in disease, "to our ears the murmur of a thousand years." We are only on the threshold of knowledge as to the vast significance of the doctrine of heredity, says a recent author.¹ Our survey of family history, even in these days of records of the generations of civilised man, is of course very limited, and very imperfect within these limits. When we disregard the conventional trail of descent in the male line, and remember how rapidly the family tree expands backwards, even in the van of time, we find our scraggy pedigrees so flimsy that we may tend to undervalue the little light which "tradition, time's suspected register," has hitherto undoubtedly afforded. Yet for any fulness of

⁷ "The Scientific Spirit of the Age," by Frances Power Cobbe, *Contemporary Review*, July, 1883, p. 126.

⁸ The Confession of Faith, agreed upon by the Assembly of Divines at Westminster &c., chap. xxxi. Of Synods and Councils, 1643.

¹ Clodd's *Story of Creation*.

Knowledge, the nosology even of a nation is inadequate; we must pierce beyond the human race itself, and pursue our inquiries into the diseases of animals—yea, even of plants likewise—before we can establish our system. Nor is this sufficient. Dividing, as well as we may, the autogenous diseases, such as gout or cancer, from the extraneous, such as small-pox or ague, and these again from diseases like phthisis, in which the extraneous cause is a touchstone of diathesis, we have to investigate the embryology of men and animals, and the diseases of the young which betray reminiscences of earlier forms. The phenomena of arrest, again, must be observed, distinguishing arrest from atavism; nor must we forget to trace the heredity of morbid function in separate parts, even in the leucocytes, which, when so far specialised as in man, are said to have less individual power of fight in them. We have to note, also, the effects on subsequent generations of such external agents as syphilis, alcohol, or depressing passions. Again, we have not only to record single affections, but to compare subgroups of affections—diatheses, as we call them—learning to place them in subordination, distinguishing the more simple, universal, and elementary diatheses such as struma from the more special and complex diatheses such as the nervous; as we distinguish the more simple and elementary neoplasms such as exostosis from those of a more special character. At certain stages of this great inquiry we shall mark the emergence of the larger kinds of morbid process, such as the explicit capacity for fever, which, as I have said, can only come with the explication of that part of the nervous system which makes for thermotaxy. Now, when we look for the facts of hereditary disease in man, even within the limits of modern records, we find that observation has been almost wholly directed to the detection of the recurrence of the same form of malady in one family tree. In my search for recorded facts I can find much information concerning the heredity of phthisis—for instance, of asthma or of cancer,—but the words of Bacon are forgotten: “*Nemo alicujus rei naturam in ipsâ re feliciter perscrutatur.*” To know the affinities of asthma, let us say, we must trace the records not only of asthma, the *res ipsa*, but also the records of all other morbid reversions in the same stock. Thus we may find in this stock not only angina pectoris, which is like it, but gastralgia, which is less like it, and eczema, which is less like it still. Unhappily, this kind of search has not yet been made. Into the causes of hereditary variations, for such are many diseases, I need not enter. The inherent tendency of organisms to vary—“Nature’s bent for inequality,” to use Matthew Arnold’s words—is well known, if not yet explained, and if organisms be exposed to changed conditions for two or three generations a structural effect becomes visible in those which adapt themselves.³ To use Herbert Spencer’s words: “The belief is not to be resisted that the inheritance of functionally produced modifications takes place universally.”⁴ Pathological races, if I may use such a word, thus tend continually to appear, a tendency as constantly disturbed by atavism. Virchow speaks of atavismus “als discontinuirliche Vererbung.” But he says, “*wahre Atavismus ist stets erblich,*”⁵ and is to be distinguished from mere arrest of development from, let us say, a theromorphie heart due to intra-uterine endocarditis. Thus again, in a microcephalic child, we must distinguish between “*pithecoïd atavism*” and “*pathological pitheekismus*,” a distinction not always easy; and, again, say, between slight degrees of hypospadias and the alleged inheritance of circumcision. Once more we have to distinguish not only between theromorphism and atavism, but between maladies essentially and accidentally related, as, for instance, in hemiplegia, between a palsy due to embolism and one due to rupture of a diseased artery, and again between groups of maladies which are essentially connected in the individual but accidental to his family. For instance, tabes dorsalis is often seen in association with diseases of the heart and aorta, but this association may be due to the introduction of syphilis, and the establishment of a new series thereafter. It is only by the careful record in pedigree of every malady, great or small, and the comparison of many such series, that we shall learn thus to distinguish and to separate the accidentally from the essentially related members of them.

Again, we may group—say, under the name of gout—a series which would contain kinds of dyspepsia, of arthritis,

of phlebitis, of arteritis, of nephritis, of angina pectoris, of migraine, of hypochondriasis, of insanity, of eczema, of glycosuria, of neuritis, of bronchitis, of tonsillitis, of hæmorrhoids, and so forth, including probably many other terms which have not as yet been so attributed, such as hæmophilia, as suggested by Mr. Hutchinson. It is obvious that to complete such a series as this or the former, not only would an individual life be inadequate, but so would be the best of clinical pedigrees. It could be completed only by the comparison of a vast number of family histories, and these not within the limits of one family or of one race, but of many, and not on one plot of the earth’s surface, but on all. The comparison of such a human series with those obtained by observation of animals will lead us to the uric acid mode of oxidation in birds, a state normal to them, as Dr. Laycock reminded us, so that gouty families may appear to be a kind of birds.⁶

Again, a neurotic series may consist of other kinds of insanity, of chorea, of eczema, of pruritus, of angina pectoris, of gastralgia, of asthma, of sneezings, of flatulence, of catarrhs, of migraine, of hysteria.

If for lack of material I cannot trace out the affinities of disease as detected in the pedigree of man, still slighter must be any attempt to indicate these affinities in the pedigrees of horses, cattle, or other animals and plants. That special groups of diseases would be notable in such pedigrees I already believe. Roaring, for example, associated no doubt with other special morbid peculiarities, occurs in horses of certain strain. Certain breeds of dogs, such as white terriers, are more liable than others to distemper; bassets are very subject to eczema; and breeders of families of horses, sheep, cattle, dogs, and so forth, would be able to tell us that in animals of definite pedigrees each strain tends to present morbid phenomena in more or less definite and contrasted groups; but, as few animals have been subjected to artificial selection, such comparisons are only possible in those few species. It might perhaps be easier to prove definite morbid proclivities in varieties of plants; but in such a case as “gumming,” for example, it may be difficult to distinguish between an autogenous malady and an inherited affinity for some external morbid agent, a large subject which may interest us presently.

The historical method.—Passing from heredity, as time compels me to do, we have three other methods for our use—namely, the historical, the geographical, and the experimental. The historical method leads to the philosophical in all studies, and no less in nosology. Unhappily, this study has scarcely yet emerged from the prehistoric period. We have to learn how changes of function become in generations change of structure, and how therewith come changes of inverted or morbid function, and this soonest in the highest and least organised parts—that is, of the nervous system, the adapter and organiser. Of heterogeneous maladies we must not, indeed, forget in how many low forms of living organisms are concerned which may vary more than higher organisms, and thus change the sufferings of their victims. Nay more, it would seem that between the infective and passive organisms there is some law of equivalent adaptations ending in the curious immunities of individuals, families and races which seem to correspond with the wonderful impregnations and sterilities of sexual congress. Scanty and indefinite as are the records of human diseases in earlier times, of the diseases of plants and animals we have little or none. That the diseases of men, of animals, or even of plants, have been the same in the far off past as we now see them is contrary to the evidence of more recent time and to the cognate evidence derived from the comparison of racial types. The slower or quicker accumulation of changed characters which results from the action of environment and variation on successive generations must have been visible on the morbid as well as on the normal side of life.

Comparative nosology has to investigate the morbid characters of the races which recent anthropometrical research has done so much to distinguish; but beyond the records of certain striking immunities and susceptibilities, nothing has been done in this direction, and I find myself almost without material for the discussion. Dr. Joseph Coats, of this city, justly observes (THE LANCET, Jan. 14th, 1888) that Hirsch not only avoids this aspect of comparative nosology, but minimises the influence of racial peculiarities as much as possible, though he is compelled to admit many

³ Compare here the Bradshaw Lecture, by Sir James Paget, in 1884.

⁴ Darwin, A. and P., ii., 270. ⁵ Factors of Evolution, p. 35.

⁶ Virchow’s Archiv, vol. ciii.

⁷ Mr. Bland Sutton states that tophaceous podagra has been rarely seen in birds. ⁸ Darwin, A. and P. D., contains many such facts.

facts of the kind against his own inclination in favour of the action of the environment. This, of course, is the attitude of an ardent geographer; and indeed, in a new subject, it may be that all true causes should be pushed to extremes, that we may see what they will cover. But shrewd observers have said for many a day that "breed is stronger than pasture;" and we cannot fail to see how alien races, on the same ground, may and do differ in their features. I will take a few homely instances of racial characters in disease.

I wrote to Dr. Beddoe of Bristol, whose practice lies near the Marches, where racial types are more distinct, to ask him what contrasts, if any, are to be seen between the maladies of the older and newer races in the west of England and Wales. He replied that the phenomena of disease in the "Celts" "differ undoubtedly and, in some ways, curiously" from those in the "Saxon." He goes even deeper, and suggests certain elections in the maladies themselves, attributing cancer rather to dark-haired people, and after them to the rufous, and noting in dark people melancholia, but not especially other forms of insanity, and noting chorea and epilepsy in the two extremes of light and dark.

Sir William Roberts writes to me as follows:—"Easterns, of whom there are many in Manchester, are markedly more susceptible to neurotic troubles than the English—I speak of the males. Greeks, Syrians, Armenians, and Eastern Jews are very much inclined to hysteria, 'visceral neuralgias,' as you would call them, and so forth. I have known all the children of a Greek family pass through a period of profound hysterical disturbance, both boys and girls, extending over the two or three years about puberty, and then pass on to a more steadfast and nervous equilibrium. In a like degree I have observed that Welshmen are unduly inclined to be *malades imaginaires*."

We may inquire whether the nervous instability of Anglo-Orientals is due to their transplantation to new conditions of life. Possibly even in the Welsh the pressure of an alien civilisation may set up an instability extending over many generations, for, reversely, we know that a relative organic perfection of body and mind was attained by the Attic Greeks.

The Dutch are so near akin to the English that their contact with us involves little clashing of temperament, and little change of circumstance. Yet the Dutchmen, whom I see occasionally from Axholme, Crowle, Epworth, and other parts of eastern England, seem to have a seal of morbid as they have of normal constitution. They tend to long life and to the deposit of fat. They are rarely the subjects of irritative neuroses, but rather to mesoblastic deteriorations—to dilated heart, venous stagnations such as chronic œdemata, varicose veins and hæmorrhoids; to apoplexy, and to chronic senile dementia dependent on vascular defects. They seem to be a people of stable nervous equilibrium, not very liable to disturbance from without, and who die, so to speak, rather by gravitation than "driven from their orderly spheres."

Dr. Macdougall of Carlisle, whose home is now in Carlisle, but who has experience both in the Highlands and in the Lowlands of Scotland, tells me that the Scotch Celt when he is sick is "essentially a despondent man hope vanishes with the onset of disease that this is in many instances due to the lack of nerve force," he adds, "I have little doubt."

Of the Scotch generally Dr. Macdougall notes a "relative rarity of purely nervous diseases, believing this people to have stronger and more stable nerve centres as gifts of heredity, derived perhaps from a slower speed in the race of life." "Cancer," he says, "is unquestionably more common in Cumberland than in any other of the border counties." The exceeding rarity of gout in the Scotch he does "not regard as a fixed racial attribute, seeing that the impress of gout is still obvious in those older families whose pedigree may be retraced to days when smuggled wines were cheap, when the use of them was as free as their effects were prejudicial." This is a most interesting observation, and it has lately been publicly made also by Dr. Martin of Portlaw.

I need but refer, as I pass, to the many strange and extreme forms of hysteria seen in the French people and described by Professor Charcot, forms and degrees of it which are rare in England, and rarer in our northern counties than in the southern. Hysteria, in its eminent types, is seldom met with in Yorkshire. The Arab, Dr. Bertherand says, is not liable to tetanus. The poison

of beri-beri, oddly enough, does not attack Europeans until they have lived in the district of it for some time; then they become liable to attack. But for all Aryans—for Europeans and Hindus, let us say, whose habits are so different—its death-rate is low; the average death-rate for all races being 34·6 per cent., and even 51·9 for Chinese; for the European it is 28·6, and for the Hindu 27·8; for the Japanese it is only 12·4. Mr. Darwin has said that these fixities of inheritance are not merely results of antiquity, but are probably necessary correlations of growth.

Not only may we accumulate many more instances, but we may add others from the phenomena of poisons of lower series. The black pigs spoken of by Darwin as unaffected by the blood-root, and the white pigs which are injured by buck-wheat, and, most curious of all, the horses which are poisoned by honeydewed vetches and by fools' parsley only in respect of the white parts of them, come to mind.⁸ The tolerance of morphine by rabbits, again, is well known; but to my mind the strangest of these cases is that of the tsetse fly, which is only fatal to domestic animals, such as the ox, horse, and dog, while the buffalo, zebra, and jackal, bitten at the same time, graze on unharmed.⁹ Man is bitten, but does not suffer; nor do dogs reared wholly on game; but if fed on milk they die, yet all young sucking animals are safe so long as they suck only. Inoculation is no defence, nor any length of life in the district. By the study of concomitant variations there is some law to be found here which will explain, not only these cases, but a whole group of cases in which morphological and even racial similarity are compatible with enormous physiological differences; deductions cannot, therefore, directly be drawn from the results of experiments in one animal to another; such experiments serve rather to promote the building of a series. The differences probably consist in some simple and general condition, such, for instance, as the quantity or intensity of oxidation; in any case it is erroneous to say that the phenomena of disease must differ clinically according to class, and it seems as if we must learn some other perspective of facts than the scale of life and death. But at the same time we must not forget how many are the pitfalls to be avoided by the inquirer, how many the conditions to be observed. For example, Mr. Sutton has shown that avian tuberculosis is not essentially peculiar to graminivorous birds, as was supposed, but is propagated rather in them by the manner of their feeding.¹⁰

Finally, I will refer with the utmost brevity to some facts in the constitutional diseases of animals; and herein I would especially acknowledge my debt to Mr. Bland Sutton, not only for his facts and his large views of pathology, but also for the generosity and tireless pains with which he explains them to pertinacious correspondents. The quadrumana, though so near to man, cannot bear a low temperature. They do not die of phthisis, as commonly asserted, but of bronchitis with atelectasis, and this the more as they are exceptionally liable to rickets. Indeed, rickets and rheumatism are so common in animals as to seem fundamental diatheses. Rheumatism attacks in animals, as in man, the left side of the heart almost exclusively,¹¹ and pericarditis is also a common complication. Rickets in animals leads to far more terrible results than in man. But, says Mr. Sutton, "in mammals each group seems to exhibit predisposition to some maladies and absolute immunity from others."¹² For instance, we find pulmonary affections thus distributed: (1) Primates (excluding man): bronchitis, atelectasis, lobular pneumonia. (2) Carnivora: bronchitis, double pleurisy, lobar pneumonia. (3) Ruminantia: bronchitis, pearl-evil, parasitic bronchitis.¹³ Sclerosis, both in tracts and disseminate, peripheral neuritis and perforating ulcer are found in animals,¹⁴ the so-called "chorea of dogs" being due to sclerosis. Dogs are also subject to tabes. Chronic nephritis, either as a sequel of acute or as an independent affection, is found in horses, and "arterio-capillary fibrosis" may in rare cases be associated with it.¹⁵

Geographical method.—How have the morbid varieties of man arisen? The answer to this question, like that of the origin of races, lies in the dark backward and abysm of

⁸ Darwin, A. and P. D., c. xxv., ed. 1888.

⁹ Vide Livingstone's "South Africa," and Anderson's "Lake Ngami." London, 1856.

¹⁰ Journal Comp. Med., October, 1886.

¹¹ J. Bland Sutton, Diseases of the Vascular Mechanism in Animals, Path. Trans., vol. xxxvii., p. 578.

¹² Extract from private letter, June 5th, 1888.

¹³ Sutton, Path. Trans., vol. xxxvi., p. 548.

¹⁴ Sutton, Gen. Path., p. 27. ¹⁵ Sutton, Path. Trans., vol. xxxvi.

time. We can only say in general terms that as we look backward we find the natural variation of organisms to be more and more under the control of external circumstances, so that, to study the geographical conditions of variation, we must have especial regard to areas long undisturbed, and must register in these the phenomena of morbid variation with the qualities of soil, aspect, seasons, atmosphere, food products, and so forth. Again, as we must not confound nations with races, so must we not confound kingdoms with physiological areas. Mr. Haviland, whatever the ultimate value of his propositions, based as they are upon the features of a mixed, highly modified and shifting population like our own, has at least impressed these principles upon us with great industry and originality. We have also to observe the effect on long-settled tribes of their removal to new areas, such removals, if harmless to individuals, being often attended by morbid consequences to the tube of a very remarkable kind,¹⁶ and likewise the rapid changes which follow a break in the uniformity of external conditions, as, for instance, when a more adaptable race penetrates into the area of a race which has grown into its own climate and has hardened under simple rules and customs into a fixity of type.¹⁷ A close study of the diseases of isolated savage peoples may thus indicate to us simpler stages of our own maladies. For in the migrations of tribes, certain races would succumb to climatic changes which others would surmount and would gain thereby a greater flexibility and development and a greater capacity for further change, the highest parts of the highest organisms being the most mobile.¹⁸ These changes, with their intimate correlations of growth, teach us the lesson again that, as in various families, so in various regions, we must work out in each not only the prevalence of diseases taken singly, but more especially the schedules of its diseases, noting both coexistences and respective degrees of intensity. The United States statistics and Mr. Haviland's inquiries seem to be the only serious attempts yet made to study the genetic affinities of constitutional diseases by the geographical method. The field is enormous, the discrimination of facts most difficult, and general conclusions almost impossible at present—*Qui respiciunt ad pauca facile pronuntiant*.

Experimental method.—Finally, let us consider the results of experiment. Experiment likewise will teach us that drugs and poisons do not vary in their clinical effects upon living beings by gradual augmentation of differences, but by "leaps and bounds," as "musical flames" respond to scales of vibration; it will teach us thus once again that clinical types can be no basis of nosological classification.

Great diversities, contrasts, and strange conjunctions of morbid phenomena do not necessarily signify great divergence of nature in morbid agents, and a classification of disease cannot, therefore, be made only or mainly by putting together like groups of morbid phenomena, but must be made by putting together those groups which, however disparate outwardly, belong to the same series. Can we, then, experimentally test the affinities of morbid groups so as to sort out the like and the unlike, to separate those which only mimic each other from those which are *ἀνθρώπων ὁμοιοί*—alike to the core. Dr. A. M. Brown notes the startling fact "that the most terrible poison (cyanhydric acid) forms the chemical skeleton of that cellular nucleus which is the most active phenomenon of vitality. An internal change which converts a benignant or anabolic molecule into one of dire and destructive malignancy may be exceedingly small. This seems to be equally true whether we consider the products of normal or of abnormal metabolism or the effects of poisons in the body. How strange it is that as the highly organised molecules of our bodies fall into lower orders, giving way to the ascending series, these lower substances take, not a relation of indifference or of mere inconvenience to the former, but of positive and violent antagonism; so that by virtue only of incessant excretion we incessantly escape destruction by those of our own household. It seems to me that as "ptoma-ines" and "leucoma-ines" are classified and their generation detected and distinguished in diseases springing from various causes, and from the various organs of the body, and as these substances again are synthetically obtained, they ought to serve as one

test series for our purposes. A fundamental distinction of this kind seems to have come out already—namely, that poisoning by extractives in general is attended by hyperthermia, and that poisoning by animal alkaloids is attended by hypothermia.¹⁹

Hoppe-Seyler has extracted another substance having peculiar attributes from the spleen, which he has called "adenine." Gautier, again, has shown that there is a distinction between alkaloids formed by bacterial and those formed by normal bio-chemical action,²⁰ though no doubt intermediate substances may exist in any or every degree. The phenomena of isomerism suggest to us how large differences in effect may come about with a rearrangement of molecular groups, and without any change in the sum of their chemical composition. No doubt the highly complex molecular units of tissues in the different varieties and species of animals have a large play of this kind, and may admit of various internal recompositions, and show reactions as various as we see in the relation of saliva to the poison of serpents.

My friend Professor Thorpe, in discussing this matter with me and the strangeness of it, points out the fact that even so simple a body as kakodylic acid, which contains 70 per cent. of arsenic and is perfectly soluble, is yet a non-poisonous body; and he refers especially to the cyanides and carbanines as complex molecular aggregates showing widely different reactions to one or similar agents.

Dr. Weyl²¹ shows that chrysarobin is powerfully poisonous, while its near relation—anthrarobin—has absolutely no action on the living organism, however administered. Although anthrarobin has a great affinity for oxygen, yet it is detected unaltered in the urine. The albuminoids of course have these characters in increasing degrees, but are more difficult to handle.

Those animal extractives and alkaloids which have as yet submitted themselves to the chemist are of no high degree of complexity, and are probably common to a very large part of the animal kingdom, and work on planes far below those on which the highest functions are developed. We should not, therefore, expect to find any test reactions from them which would differentiate human diseases from those of organisms a little, or even much, lower in the scale. The behaviour of bodies of lower degrees of complexity may be better studied in humble forms of life and in plants, in which latter organisms the simpler alkaloids play a very important part.²² If we first learn what special orders of oxidation there are for the generation of motion in the several classes of plants and animals, beginning with the simplest, we shall see how the perversions of such oxidations may differ in the different classes.

The general factor which becomes of next importance to isomerism is inhibition. As we rise to higher and higher planes of function we enlarge the office of inhibition. Every higher order of motion regulates, or in other words inhibits, that of the order below; so that if we could discover a series of counter-potent agents, corresponding in catabolism to the successive planes of complexity in warm-blooded animals, let us say they would give us the means at each stage of neutralising the dominant function on that plane, so that we should be able in plane below plane to liberate each in order, and thus to reveal a series of morbid states caused by the enfanchisement of orders of activity proper to lower stages of life.²³

Drs. Fraser and Crum-Brown revealed to us years ago the great conversions of activity resulting from small molecular substitutions, and the change of selective affinities for animal tissues shown by molecules thus artfully varied in one or a few atoms. Drs. Brunton and Cash²⁴ tell us that the distinctive action of the lower members of the fatty series is their stimulant and anæsthetic action on the nerve centres. The members of the aromatic series also affect the nervous system, but more the motor than the sensory centres, causing tremor, convulsions, and palsies. Again, a substance has been isolated from the spleen by Morell, which has a paralyzomotor action with powerful effect on the medulla oblongata,²⁵ and this substance should be carefully and repeatedly tested upon animals in which the homologue of the medulla is the upper centre, as well as

¹⁶ Darwin: *Descent of Man*, i., 291 et seq.

¹⁷ Vide Bagehot's most interesting essay on *Physics and Politics*, 8th ed., 1867.

¹⁸ The brain of civilised man is nearly 30 per cent. larger than that of the wild man.

¹⁹ Dr. A. M. Brown, quoted by Sir W. Aitken, "Animal Alkaloids," 1887.

²⁰ Vide Sir W. Aitken, loc. cit.

²¹ *Nature*, June 7th, 1888.

²² Cf. Mr. Walter Gairdner, *Proc. Roy. Soc.*, Nov. 24th, 1887.

²³ Compare Dr. Hughlings Jackson, "Croonian Lectures," 1884.

²⁴ *Proc. Roy. Soc.*, March 31st, 1887.

²⁵ Vide Sir William Aitken, loc. cit.

upon all others. Some drugs have a large reducing power, such as curare, by means of which a mammal may be reduced to a cold-blooded animal, whose temperature varies with the atmosphere. By testing such agents over a large series of animals, and by systematic replacement of molecules, we might find the means of subtracting inhibition on successive planes, and so discover some serial order in the resulting diverse morbid phenomena, and form a table of genetic affinities which would show how the proximate principles of higher organisms are the ultimate of the lower.

Wide and untrodden are the Marches which still lie between organic bodies such as those and the mobile and complex molecules of living matter. In these the potentialities of change are as infinite as their functions. We have little common measure as yet for chemical and vital reactions; but we see, as we have seen already in our discussion on races, that as the same chemical or vital agent or even different doses of the same agent may exercise, and in numberless cases does exercise, an enormously different influence upon organisms which are very closely related, so closely allied organic substances may cause reactions seemingly very different in the same organism. Mazy and dissolute as from outside these phenomena may appear, they have, nevertheless, radical and ramifying laws, and classification by genetic affinity is one method at least of discovering them, and of explaining to us wherein consist those changes, so vast physiology, so small phylogenetically and morphologically.

Gentlemen, many of us too well know conditions and times of abasement; times when we see Nature beautiful, magical, but remote, unmindful, pitiless; when we humble ourselves in silence before "Him" who fastened the foundations of the earth, who spread His light upon it and balanced the clouds of the air, who binds the sweet influences of the Pleiades and guides Arcturus with his sons; who gave to the horse his strength, and goodly wings unto the peacocks, and who is King over all the children of pride." But the time and circumstance of this Convocation bring not these moods of awe and withdrawing, but surely those of hope and uplifting even to victory; for, like Jacob at Peniel, we have striven with the Great Unknown, not without prevailing. Our mood to-day is rather that of Sophocles in the well-known words of the Chorus of the *Antigone*, "Wonders are many, and none more wonderful than man; the power that crosses the white sea, driven by the stormy south wind, making a path under surges that threaten to engulf him; and Earth, the eldest of the gods, the immortal, the unwearied, doth he wear, turning the soil with the offspring of horses, as the ploughs go to and fro from year to year. . . . And he masters by his arts the beast whose lair is in the wilds, who roams the hills, he tames the horse of shaggy mane, he puts the yoke upon its neck, he tames the tireless mountain bull. And speech, and wind-swift thought, and all the moods that mould a state, hath he taught him-elf; and how to flee the arrows of the frost and of the rushing rain; yea, he hath resource for all; without resource he meets nothing that must come: only against Death shall he call for aid in vain—*νόσων δ' ἀνθρώπων φύγας ἐνυμφέσθαι*—but from baffling maladies he hath devised escapes."²⁶

ABRIDGED REPORT OF THE

Address in Surgery

Delivered at the meeting of the British Medical Association in Glasgow,

By SIR GEORGE H. B. MACLEOD, M.D.,

REGIUS PROFESSOR OF SURGERY IN THE UNIVERSITY OF GLASGOW,
SURGEON IN ORDINARY TO THE QUEEN IN SCOTLAND.

ON THE PROGRESS OF SURGERY DURING THE LAST
HALF-CENTURY.

AFTER a few opening remarks, Dr. Macleod continued as follows:—

It is my wish, in the time devoted to this address, to attempt a brief epitome of the leading advances which Surgery has made during the auspicious reign of Queen Victoria, as that period is naturally suggested by recent events, and is one over the greater part of which my own

recollections extend. It is fully admitted that in every department of human knowledge our half-century has been signalled by a progress greater, more momentous, and more permanent than any other in the world's history; and in this advance medicine in all its branches has so largely and bountifully shared that even a bare recital of what has been done fires the imagination and makes the heart throb with triumph.

Since 1837 all the collateral sciences on which medicine so largely leans have been in a great measure reconstructed, and the very foundations on which our art is built have been in no small measure relaid. In 1837 the doctrines of Broussais, which had been accepted with the enthusiasm of a revelation, and had deeply imbued the surgical as well as the medical practice of the day, had spent their force. Hahnemann and Brown, Gall and Spurzheim, had come and gone with their disturbing influence, and men turned wearily from the discussion of mere doctrines and the dogmas of authority to a careful study, aided by experiment, of *facts*. Many remarkable discoveries in mechanical science, especially that of the achromatic microscope (1824 and subsequent years), the spectroscope, and the applications of electricity, powerfully contributed to the rapid progress of biology, morbid anatomy, pathology, and chemistry. In 1838 Henle and Mandl made known what their countrymen had then accomplished, and the members of the German school have ever since been the most enthusiastic and competent workers on these subjects.

The most distinguishing features of the period under review (1837 to 1887) have undoubtedly been anaesthetics and antiseptics. They are both "epoch-making" discoveries. Each has done almost as much for surgery as the discovery of hæmostatics, and when combined may, I think, be said to excel even steam and electricity in their gracious benefits to mankind. Though from the earliest times men sought for the means of allaying pain during operation, and numerous imperfect methods (as that of Dr. James Moore of this city, the younger brother of Sir John Moore, by compressing the nerves) had been tried to effect it, yet the statement of Velpeau, published in 1839, may be taken as expressing the opinion held seventeen years before the great discovery: "All research for an agent to destroy pain in operations is a mere chimera and unworthy of further consideration." Suddenly, however, the riddle was solved by one who, recalling the experiments of Humphry Davy with nitrous oxide and sulphuric ether, dimly perceived the use they might be put to in surgery. Whatever credit in this matter may belong to the unfortunate Horace Wells, it was really Mr. Morton who worked out the practical application of ether, and in the theatre of the Boston Hospital may still be seen the sponge by which it was administered on that memorable October morning in 1846. Many of us can still recall the enthusiasm which that discovery evoked, and the unbounded anticipations which it suggested. After the abortive trial of various other agents chloroform was brought into use by Sir James Simpson, within a year of the time when attention was directed to the subject. This, the most valuable of anaesthetics, was discovered by Soubeiran in 1831, and had been shown to be a powerful anaesthetic by Flourens some years afterwards. Many years have passed, but we remember with amused astonishment some features of the warm controversy which arose regarding these agents—the frivolous objections ("religious" and other), the endless discussions and statistics—the hopes and fears which were expressed. It is not, perhaps, too much to assert that the relative merits of these and other anaesthetics, which I need not stop to enumerate, have not even now been universally determined.

Local anaesthesia in its present form is also a conquest of the last half century, and though many agents possess this power, and some of them, like cocaine, are especially valuable for particular purposes, the finely divided ether spray introduced by Dr. Richardson (a distinguished student of the Glasgow school) in 1866, is more efficient and easy of application than any other for practical purposes. Finally, as regards this point, I may note that Braid of Manchester, who published in 1843 on hypnotism, caused much interest in a system which had been largely tried in India, but which has now fallen entirely out of use. I need hardly say that anaesthesia has changed the whole face of surgery. "The lion heart" is no longer the requisite of a surgeon. Finesse and manipulative skill now take the place of force. Innumerable operations are rendered possible which could not before be attempted; and the surgeon has benefited

²⁶ "Antigone," 332-304, Jebb's translation, 1898.

almost as much as his patient. 'It was in this school that the other great improvement of our time, the use of antiseptics in surgery, was practically applied; so that I might be pardoned if I spoke warmly and enthusiastically of that invaluable discovery. But as its principles and practice (though doubtless much modified and simplified of late years) are so well known, and have been so much discussed in former addresses to your Association, and in the whole range of our professional literature, I have no excuse for dwelling upon it at any length now. Suffice it to say that, notwithstanding all the criticism and opposition which it has met with, the fundamental principles on which it rests remain, in my humble opinion, unassailable, and that it has led to practical results—not alone in its immediate effects, but in the discussions and studies which it has produced—which have, in an extraordinary degree, widened the domain of our art, diminished the sufferings, and saved innumerable human beings.

There is no more interesting study in surgical history than the development of our present practice as regards wounds, from the blind groping of the surgeons of last century, to discover the secret enemy which baffled their best efforts, to the brilliant dawn which we have been permitted to see. The proper use and best form of deep and superficial stitches and dressings are also now well established, and the reign of dirty sponges and foul instruments and hands has passed away for ever. Modern pathology has put an end to the keen controversy which for 150 years bulked largely on surgical attention regarding purulent infection. The direct absorption doctrine of Boerhaave held the field to the middle of the eighteenth century, and was followed by the hydraulic, the metastatic, the spontaneous generation, the phlebotic (in various forms), and other theories, till Virchow (1846-56) threw a new light on the subject by his researches on thrombosis and embolism, after which the investigations on sepsis, blood ferment, and micro-organisms explained what was still unintelligible.

As a result of the misfortunes of the Crimean war, and to a less extent perhaps from the alarm caused by the cholera epidemic of 1852, the construction and organisation of hospitals and other public institutions have received more attention during the last twenty-five years than during the previous seventy-five which had elapsed since Tenon wrote. The official statement in 1861 of the insalubrity of the Parisian hospitals—where it was said that it was the exception for a patient to recover from any important operation, so that many of them had to be abandoned from the effects of that "hospitalism" to which Sir James Simpson in 1860 vividly drew attention—helped largely the progress of this question. That intra-mural hospitals are, however, on their trial, cannot be doubted, notwithstanding the immense addition which antiseptics have made to their salubrity; and the multiplication of village infirmaries, country adjuncts to city hospitals, and convalescent institutions since 1860, is evidence of the belief that smaller establishments in rural districts meet modern ideas more nearly than huge piles without space for fresh air and recreation, in the dense and polluted precincts of our great cities.

Of the advances in doctrine and practice since 1837 much might be said. Not only has general anatomy been greatly advanced, but pathological anatomy has been created, while physiology has become a new and practical science under the influence of experiment. Chemistry has also been reconstructed. Experimental and microscopic research have elucidated in a remarkable manner the whole phenomena of inflammation and the febrile condition. The blood and its vessels, the reaction of the tissues involved, the part played by the nerves, the nature of the exudations, with their destinations and changes, as well as the growth, degeneration, and metamorphosis of structures, have all been laboriously studied by the aid of the microscope and by chemical processes. It was within the years 1838-39 that the cellular pathology was born. It took the scientific world by storm. Though no doubt it can be plausibly asserted that, both John Hunter and Raspail dimly foreshadowed it, certain it is that Schleiden, Schwann, and Müller laid its true foundations, while Virchow and his pupils worked it out. Constant advance continues to be made by the use of new and improved methods of research, so that our knowledge of the ultimate elements of the tissues is daily increasing. An immense scientific activity followed the year 1840. Within a few years almost all the tissues and organs and the secretions of the body, both in their normal and altered con-

ditions, were laboriously studied, and the phenomena of the respiratory, digestive, and nervous systems, as well as the great subject of embryology, which throws so much light on congenital deformities, were largely investigated, and by none with more ability than by my late colleague, Professor Allen Thomson.

Within the last half century, and especially since the discovery of anaesthetics, all surgical operations have been greatly improved, and many new ones have come into use. The operator being no longer hurried, or his feelings harassed by the sufferings of his patient, and happily possessing better control of the result, is left free to plan and conduct his operation without embarrassment. In this progress of operative surgery amputation has largely shared. The improved methods of arresting bleeding, both during and after operation, have essentially contributed to its perfection. The indiarubber (1873), and more lately the spiral wire tourniquets of Esmarch, and the "bloodless" system, though now no longer carried out as at first practised, which these appliances rendered so easy of application, have been of the most eminent service in amputations and excisions, as well as in all operations on bones and deep structures. The old method of closing arteries by torsion—used by Galen and Avicenna, but more especially studied by Amussat in 1829—was much in vogue a few years ago; but it and acupressure—described by Heister and many others—which Sir James Simpson (1859) supposed would supersede all other hæmostatic methods, have been replaced by the antiseptic ligatures now in use. The modern practice of using water at a temperature from 120° to 160° F. for the arrest of oozing is in my experience admirable.

Excision of joints and resection of shafts of bone, now of daily performance, were by no means common at the time of the Queen's accession. True, most of the articulations had been cut out during the last century,¹ but it was not till Syme published his book in 1831, giving an account of his results in shoulder and elbow operations, that the practice became general. Syme says that in 1826 amputation at the shoulder was the rule for disease of the head of the humerus; and even as late as 1844 Fergusson says excision of the elbow had not been done a dozen times in London. Syme afterwards—as Langenbeck also—removed the scapula as well as the head of the humerus rather than amputate the arm. In dealing with the knee joint, however, Syme failed, and it was reserved for Fergusson and his pupils, with Jones of Jersey, after 1850, to secure, amidst much opposition, that assured position for excision of the articulation which it now possesses.

Operations on the jaws, which were so much dreaded fifty years ago, that excision of either bone was not infrequently preceded by the ligature of one or both carotids and by tracheotomy, are now performed with very little hesitation or risk. In 1844 both upper maxillæ were removed for the first time by Hayfelder, and in 1842 Maisonneuve excised both lower jaw bones.

Tenotomy is practically another conquest of the last half-century, as it was only in 1831 that Stromeyer perfected what was before a most incomplete process, and made it applicable to many uses.² In 1835 Dieffenbach's work on club-foot showed how great had been the advance since Scarpa wrote in 1804. Little's book in 1837 started the practice of tenotomy in England. During recent years greater liberty is taken in the division of structures, but the antiseptic system has emboldened operators to adopt methods, some of which are both unnecessary and retrogressive, as in the open plan of treating club-foot. The excision of the astragalus, however, or the removal of a wedge from the tarsal bones may possibly be necessary in some very bad cases.

Within the half century aneurysm has been much studied in all its aspects, and its treatment has been simplified, though the methods of dealing with it have been greatly multiplied. It has been shown to be curable by the rapid coagulation of the contained blood, and not alone by the lamination of fibrin and contraction of the sac, a fact long denied; and this has suggested some of the most recent methods of dealing with it. Up to 1842, when the Dublin surgeons laid down the proper mode of using compression

¹ The head of the humerus by White in 1768, the knee by Park in 1781, and the elbow and ankle by Moreau in 1797.

² Hunter divided the tendo Achillis for purely experimental purposes, and in 1784 it was cut in the human subject, as the sterno-mastoid was in 1822, but in neither case subcutaneously, as that term is now understood.

and improved the mechanical means of carrying it out, it may be said that the ligature was alone employed, for though compression in some form—on the surface of the tumour or within it after it was opened, or over the whole limb, or proximal or distal to the sac separately or combined—had been long in use, it was on a wrong principle, as the whole current was stopped and inflammation intentionally produced in the vessel. But whether applied by instruments or the hand (Vanzetti, 1846), the modern method, up to a very recent date, aimed at not entirely arresting the blood flow so as to promote a deposit of fibrin. This dates from between 1840 and 1850. The enthusiasm with which it was pursued for some years has been hardly maintained, from the difficulties attending it, and its not infrequent failure. In some positions, however, it will be always employed; and the remarkable success in abdominal aneurysm obtained by Murray (1864), and in iliac aneurysm by Heath and Mapother, applied to the proximal side under chloroform, has been most encouraging. The method of applying the ligature, which was the great achievement of Hunter (1785), together with the practice of Brasdor and Warltrop (1825–1827) and Anel, have been again much discussed of late years, and distal deligation has been frequently applied with signal success. Antiseptic buried ligatures, with antiseptic dressings, have again placed the use of the ligature in the ascendant, though it would be difficult to excel the success of Syme, who tied the femoral thirty-five times with only one failure before the modern methods were introduced. Since 1852, when Thiery used flexion at the elbow, Mr. Hart and others have applied it to small firm aneurysms of the popliteal with marked success (1858). Galvanism, first used by Phillips in 1832, was unavailing for aneurysm until Petrequin (1845) and Ciniselli improved the apparatus and the methods of employing it. Of less important plans we have had introduced since 1837: Fergusson's somewhat dangerous "malaxation," Blake's displacement of clots by cataract needles, electrolysis with fine needles, acupuncture, now used by leaving gilded entomological pins for days in the sac, acupressure to the main vessel, coagulant injections (ergotine by Langenbeck in 1869, perchloride of iron, alcohol, acetate of lead, tannin, various acids, &c.), foreign bodies, as iron wire, horsehair, &c., passed into the sac (Loreta) or combined with galvanism (Barwell). These plans have been chiefly used when the aneurysm was so placed as to be inaccessible to the more reliable methods, and a certain amount of success has attended them. Finally, I may note that the confidence of the profession in the iodide of potassium has increased of late years as an internal remedy in aneurysm; and that the sedative effects of the bromide of potash are found of great service.

Modern research has greatly advanced the pathology and treatment of fractures and dislocations. Between 1847 and 1855 great attention was bestowed on these accidents. Astley Cooper's pioneer work (1822) did much for the elucidation of these subjects, which were then involved in great confusion; but it is to Malgaigne (1847), more than to any other man, and after him to Smith of Dublin, Hamilton of New York, and Gurlt of Berlin (1860), that we owe our present accurate knowledge. Nothing could excel Malgaigne's systematised and exhaustive researches. Treatment by weight and pulley of fractures of the lower limb, introduced in its present form from America in 1867, but in use forty years previously, is a distinct improvement over the cumbersome long splint. The "immovable apparatus" of the Arabian and Greek surgeons, as varied and improved since 1834 by Seutin, Dieffenbach, and others,³ gives us great advantage in dealing with fractures. Many "mouldable" materials, too (such as poro-plastic and gutta-percha), which from their lightness and close application to the part are of inestimable service, have been added to our resources of late years.

The surgery of the genito-urinary organs has been greatly pursued since 1837, and the mechanical appliances for treatment much improved. The pathology of stricture has been carefully worked out, and the treatment fitted for each variety discriminated. When chemistry had demonstrated the composition of urinary calculi, it was hoped that their solution within the body would be shortly accomplished with the same ease as it was attained in the laboratory. After many and varied attempts in different countries, this has been abandoned, as has also the use of

galvanism alone or with chemical solvents. At present, this hopeful field of research may be said to remain barren of results.

For over fifty years lithotomy has been gaining ground, and since 1878, when Bigelow introduced his litholapaxy, the whole practice has been so changed as to constitute an entirely new operation. The greater capacity of the urethra which Otis demonstrated, the immensely greater tolerance of the bladder to the presence of instruments which Bigelow showed to exist, and the improvements in the apparatus for breaking up and removing the fragments, together with the use of anæsthetics, have all combined to establish the triumph which has undoubtedly been achieved. The extension to young boys (even to infants, as has been lately shown) of the advantages of lithotomy has also been attained, so that great size and extreme hardness are almost the only obstacles which now stand in the way of its universal application. With a better knowledge of the causes which produce calculi, an earlier recognition of its presence, and the modern system of removing it entirely at one sitting, it may be said that one of the greatest of human calamities has been nearly overcome.

Lithotomy had attained to great perfection before 1837, in the hands of many surgeons in all countries, and in none more than in Scotland. The "methods" employed in different schools were very numerous, though the lateral operation, performed with the gorget or the simple knife, was that most followed in Great Britain. Very many modes of opening the bladder were in use in France, and there the now popular hypogastric operation originated (with Franco in 1661), an operation which, by the use of antiseptic dressings and Petersen's (1880) rectal bags (suggested by Garson's experiments on frozen bodies in 1877), has been reintroduced as practically a new procedure. The suprapubic method was largely practised by Cheselden and Frère Côme, who, by the way, used a perineal drain.

I cannot leave this part of my subject without at least referring to the remarkable advances which have been recently made in the surgery of the kidney; the confidence with which it is now stitched to the parietes when movable or opened for drainage, or for extracting a stone (Morris, 1880), and the safety with which it has even been entirely removed (first, by Simon of Heidelberg, in 1869) has contributed to the solution of most interesting physiological as well as surgical questions. Then the ready removal of some growths from the bladder by perineal or supra-pubic incisions, and the admirable results got by MacCormac and others by suturing the ruptured bladder (an idea thrown out by Benjamin Bell in 1789) and cleansing and draining the pelvis are clear and important gains to practical surgery.

During the last half-century venereal diseases have received great attention and a new interpretation. Ricord, in 1838, by his experimental proof of Todd and Bell's views regarding the distinction between gonorrhoea and syphilis, removed the confusion which long followed Hunter's teaching on that point; but his views on the unicuity of the virus were overthrown by the researches of his pupil, Bassereau, in 1852, and the dualists were left entire masters of the field, Ricord giving his adhesion to their doctrine in 1857. Now, Mr. Hutchinson proclaims that doctrine as "dead," and the soft sore as being due to the inoculation of syphilitic pus, in which there is no virus, or in which its active qualities are destroyed. There can be little doubt that constitutional disease often follows sores in which there is no characteristic hardness of base; but specific hardness, if present, is still of the utmost clinical significance.

In recording the improvements in surgical practice in the department of the genito-urinary organs, I would very shortly note the greater command we now possess over fistulae in the male and female organs, brought about by improved manipulative methods. These improvements date chiefly from 1839, when Hayward of Boston took up vesico-vaginal fistula, and Marion Sims and Bozemann introduced wire sutures, covering plates, improved specula, and the knee-elbow position. The labours of the unfortunate Jobert de Lamballe in this department should not be forgotten.

The surgery of the female reproductive organs is an immense subject, and has risen to the highest repute well within the half-century, and has recorded triumphs of the highest importance to the comfort and life of thousands. Very many operations have been performed for the first

³ Plaster of Paris, starch, glue, silicates, dextrine, paraffin, gum and chalk, paper and starch, &c.

time within the last few years, and others have been brought to great perfection. It has been unquestionably the extraordinary success of ovariectomy which has led to the rapid progress of abdominal surgery. We claim for Houston of this city (1701) the pioneer place in ovariectomy, though his operation was but the draining, and not the removal, of a cyst. M'Dowal of America (1809), to whom the initial step is usually ascribed, and who operated in all thirteen times, was admittedly incited thereto by the teaching of John Bell of Edinburgh, whose pupil he was. Lizards of Edinburgh operated repeatedly about 1825, and Clay afterwards continued the practice amidst disappointment and obloquy. Certainly ovariectomy was on all sides met with ridicule and contempt! In 1823, Boyer says, "The least reflection suffices to show the dangers and impossibility of this operation, which has never been performed, and which never will be," and its position, shortly before it was taken up by Sir Spencer Wells (1857-59), is best shown by quoting Sir W. Lawrence's query whether it could be any longer pursued "without damage to the character of the profession." It is undoubtedly to the experiments of Wells on the union of serous surfaces and drainage, and subsequently on the command of bleeding and the treatment of the pedicle, that we owe the present position of the operation, though others have done much to make it not only a justifiable but an eminently safe operation, when the disease is early recognised and a careful aseptic condition assured. Many most important operations in obstetric surgery have been introduced of late years, but these lie beyond my present theme. Cysts connected with the liver and peritoneum, abscesses in the abdomen, fluid in the Fallopian tubes, extra-uterine foetation, excision of portions of the bowel, intestinal obstruction, cholecystotomy (Sims, 1878), improved Cesarean section, and many other grave operations, have been frequently performed, especially in America, within the last ten years.

Colotomy, though suggested by Callisen in 1800, was really not put into practice till 1839, when Arnussat, meditating on the death of Broussais from cancer of the rectum, determined to reintroduce it, notwithstanding its condemnation as impracticable by both Dupuytren and Velpeau.

Pathological research has done much within the half century as to the large and important subject of new growths. Much, however, remains to be done. Since Müller, in 1838, brought neoplasms within the pale of the cellular pathology, and Virchow added so much to our knowledge, innumerable workers, aided by many new or improved mechanical contrivances and beautiful methods of preparing sections for microscopic examination, have turned their attention to the subject. A simpler classification and arrangement have resulted, with a better understanding of the clinical progress and results of tumours.

In no department of surgery has so much that is new and notable been achieved as in injuries and affections of the head. Much has been done, both by experiment and clinical observation, in the localisation of the phenomena of motion and sensation, and though much remains to be done which can only be cleared up by long and accurate research, still results have been garnered sufficient to give a confident hope that before long a complete and reliable map of the brain will be at the service of the practitioner. The brain areas which supply the face, the tongue, the limbs, and the muscles of respiration have been clearly defined by British and foreign physiologists. Clinical observations on man have supplemented experiments on animals, and already fruitful practical results have been obtained, so that the trephine has again come into use, but on far different grounds from those theoretical ones which guided its application at the beginning of the century. The first operation for the removal of a cerebral growth planned on the modern physiology was performed so recently as 1885. The new American perforator is much more precise and speedy than the old trephine, especially when worked by the "surgical engine," which has been invented for driving saws and perforators. In the treatment of affections of the spinal column, Sayre's plaster jacket and its modifications have greatly helped treatment, as have also the systematised exercises of the Ling and Roth methods in lateral curvature.

The improved laryngoscope of Czernac (1858) and Turck, which was the legitimate outcome of Babbington's "glottiscope" (1820) and Garcia's instrument of 1854, has been invaluable in affections of the throat and nose. Excision, partial or complete, of the larynx dates from 1866, and has

now been many times repeated with increasing success, though its adoption in simple growths seems indefensible. Intubation of the larynx is another interesting subject which promises important results. Amputation of the tongue has reached its acme of simplicity in Whitehead's practice with scissors, a bold proceeding rendered possible by the improvement in mouth gags. I have been accustomed to use the *écraseur* or the thermo-cautery, and am not inclined to abandon them, as they have proved reliable instruments in such serious operations. Numerous improvements have been made in operations on the palate, and in the construction of substitutes for it (especially those by Kingsley of New York, since 1844), as well as in the closure of harelip; but time prevents me referring further to them. External (Watson of New York, 1884) and internal (Maison-neuve, 1861) division of undilatable stricture of the œsophagus are proposals of recent years; while gastrotomy, first suggested in 1837 (the year before the celebrated case of St. Martin allowed the subject of digestion to be carefully investigated), has been rendered infinitely more safe by Howse's proposal to secure adhesion between the stomach and the parietes before opening the viscera.

The draining of cavities in the lung has been added recently to our operative and curative resources with encouraging results. The difficulty lies more in an exact diagnosis of the position of the cavity than in the risk of the operation itself, for when there is but one to deal with, and it lies at the base of the lung, and the pleura is adherent over it, the operation is comparatively simple. The whole subject of empyema has been carefully studied within the last few years, and the operation and its subsequent management by drainage and cleansing greatly advanced. Resection of the ribs ("thoracoplasty") and of all unyielding structures, so as to admit of more complete draining and collapse of the cavity, which was a startling suggestion only five or six years ago, is now frequently and successfully performed, and has been the means of saving not a few lives which otherwise would have been slowly and hopelessly destroyed.

In no department of surgery has better work been done in our time than in that of hernia. Here the influence of antiseptic surgery has been very apparent, as it has emboldened surgeons to attempt the permanent cure of rupture in a more complete way than could be achieved formerly,—the sac, in whole or in part, being employed to plug the internal ring, where it is secured either within or without the abdominal cavity, and supported by bringing together the pillars with catgut or wire. Such practice provides a more permanent and reliable barrier to the descent of the bowel than the unstable products of inflammation. Many other points of practice, too numerous to be recorded, have been amended in recent times, as the conservative treatment of injuries of the hand, the management of scrofulous masses by excision, scraping and the electro-cautery, and the discriminate use of caustics and the proper field for the various forms of cautery, whether actual, or gas and electric. The galvano-cautery was first used in England by Professor Marshall in 1850, but to Middeldorpf of Breslau we chiefly owe its systematic use in a large variety of surgical cases, where its rapid action, manageability, and the very light which it emits can be utilised. It can never, however, replace the knife for the mere division of structures, nor the actual cautery for counter-irritation in chronic inflammation. Electricity has made great advances as a practical agent since 1872. In experimental physiology, and as a diagnostic and curative agent, Erb's recent work will do much to promote its more precise use. To Duchenne (1855) must, however, belong the credit of having first recognised its importance; and it is probable that, with the aid of improved batteries and the modern "accumulator," better work will be done in the near future. Among the many ingenious and useful instruments for clinical research and demonstration, the ophthalmoscope stands pre-eminent. Foreshadowed by Babbage in 1847, its present important position in ophthalmic surgery is due to Von Helmholtz, who took it up in 1851, and with Ruete perfected it as a clinical instrument. To it we owe a knowledge of the pathology of the deeper structures of the eye, and the suggestion of various operations which have proved of the greatest service. The introduction of cocaine, since 1884, as a local anæsthetic, has added largely to the progress of ophthalmic surgery. The otoscope, the laryngoscope, and other similar instruments naturally followed on the construction of the

ophthalmoscope, and have been fruitful of good in their respective departments. The sphygmograph, made practically useful by Marey in 1860, realising the idea of Hales (1748) and of Herisson's sphygmometre, has largely aided the diagnosis of many conditions of the circulatory system, and by its pictorial tracings secures permanent records of their variations. The sphygmophone, which professes to render the arterial sounds audible, is still of no practical use. The endoscope, which was much improved by Désormeaux, after 1853, has never attained a practical position from the difficulty of using it, and the limited field to which it can be applied. Recently, however, Leiter, by using the smallest Edison lamp, and improving the construction, portability, and cost, has provided an endoscope which may possibly promote its employment. The thermometer, first used in medicine by Boerhaave and his pupil, De Haën, has become one of the most important clinical guides in consequence of the researches of Traube (1850), Wunderlich, and Zimmermann.

The beautiful discovery of skin-grafting by Reverdin, in 1869, provides us with a valuable resource in many difficult cases of delayed repair and deformity. The permanence of such grafts is not, however, as yet fully assured. The transplantation of periosteum, muscle, bone, nerve, and even eye tissues, has also been achieved of late years under the magic shield of aseptic surgery. Hydrophobia promises to be deprived of its terrors. Extensive burns are no longer dangerous when kept free from pollution, as the intestinal lesions which Curling drew attention to (1842) are now known to be due to septic poisoning. Nerves are stretched, with or without previous exposure, to the relief of many complaints; nay more, divided nerves and tendons also are successfully united by suture. Thermal, chemical, and sea baths have their appropriate domain assigned them. Cod-liver oil and many concentrated foods, easy of assimilation and rendered more so by the addition of digestives, have come into use. Patients are no longer reduced by diet, purging, and bleeding, or blindly over-stimulated with alcohol, but a dietary founded upon their requirements is prescribed before and after operation. The therapeutic advantages of change of scene and climate are fully taken advantage of, as the means of locomotion have been improved and cheapened. Of the innumerable new drugs with which chemistry has endowed us many highly valuable ones have come into general use, while greater concentration and more elegance have been employed in their manufacture. The surgical instrument maker has, by his ingenuity and skill, simplified and improved the surgical armamentarium, and for every purpose has supplemented our manual dexterity.

I have thus, in the limited time at my disposal, and to the best of my power, noted the changes and improvements in surgical theory and practice which have emerged during the last half century. The task I set myself has proved longer and more difficult than I anticipated, as the harvest has been extraordinarily abundant. I am conscious of having omitted much from want of time and knowledge; but I trust I have succeeded in showing that in every branch of the surgical art there has been a wondrous advance, and that the profession to which we belong marches in the very van of the great army, recruited in all climes, whose aim it is to enlarge human knowledge. Such a retrospect as I have attempted makes us reverence a profession whose hope and ambition it has ever been to abate suffering without distinction of race or creed. We see how an abiding and ever-increasing purpose has run through these long ages, and that while we now rejoice at being no longer bound by the authority and crude doctrines which shackled our forefathers, we can yet honour the traditions of the past and appreciate the efforts of that great host of devoted men who have by their unselfish labours built up the famous temple of our art.

WEST OF ENGLAND SANATORIUM, WESTON-SUPER-MARE.—Some time since, in view of the tide receding for some distance from the institution, it was proposed to construct baths within the boundaries of the sanatorium. The cost was estimated at £2000. Towards this sum the lady superintendent has collected £800, and an anonymous donor has given a similar amount. The half of the estimated cost thus raised has stimulated additional efforts to make up the balance, and with this object a sale of work has recently taken place at the rectory, and realised £85 6s. 8d.

Address

ON

THE SURGERY OF THE BRAIN AND SPINAL CORD.

Delivered before the British Medical Association,

BY WILLIAM MACEWEN, M.D.,
SURGEON TO THE GLASGOW ROYAL INFIRMARY.

MR. PRESIDENT AND GENTLEMEN,—Allow me to thank you for the exceptional honour you have conferred upon me by inviting me to address the British Medical Association on my recent investigations in surgery. It would have been more in harmony with my own feelings to have brought before such a meeting the work of others, but that the form of invitation explicitly precludes. From among the various subjects which have engaged my attention, it would have been difficult for me to have singled out one as especially worthy of notice. Fortunately, I was so far relieved from that decision by receiving a very direct hint from one whose position in the Association demands respect. In obedience to that expressed wish I now venture to address you on the Surgery of the Brain and Spinal Cord, a subject which has been of much interest to me, and which I hope may not prove uninteresting to you. In doing so it is necessary to premise, in the briefest possible form, the history of the evolution of cerebral surgery.

The surgery of the head in the past.—Lesions of the head have at all times held a prominent place in the annals of surgery. Much has been done by surgeons to advance the healing art as applied to this particular region. Their efforts have been, however, chiefly directed to the superficial parts, the skull and its membranes, and were exclusively confined to the results of injury. Their operations were simple, undertaken, for the most part, upon the primitive evidence of direct visual and tactile observation. There is no reference made by them to cerebral surgery as it is now known. The brain, whose function was at that time little understood, inspired fear; it was intimately associated with the seat of life; it was the mysterious dome of thought; it gave lodgment in its recesses to the soul; and was surrounded by all the mysticism which a highly speculative philosophy inculcated. Although surgeons did not share the popular belief that to touch the brain was to induce certain death, yet they had just grounds for concluding that to them it was practically inviolable. It was no want of boldness or lack of manipulative dexterity, in which indeed they greatly excelled, that determined this reluctance in dealing with brain lesions. Post-mortem examination revealed the fact that many cerebral lesions could have been easily reached had the surgeons only known during life at what particular part they had been situated. There were two formidable barriers to the advance of surgery in this region—first, the fact that the majority of intracranial operations were attended by inflammatory action, which so often proved fatal as to cause surgeons to shun active interference; and secondly, the brain was a dark continent in which they could descry neither path nor guide capable of leading them to a particular diseased area, and did they attempt to reach it, it could only be by groping in the dark. Therefore they were constrained to confine their efforts to traumatic lesions, and of these to such as afforded external indications of their presence, and which called out clamorously for relief. From the days of Pott to our own there seemed to be a growing conviction not only of the impotence but of the positive harmfulness of active interference, so that the trephine was regarded as an almost obsolete instrument. Yet surgery was fully abreast of the physiology of the day. Such was the state of cranial surgery till 1870.

Two factors necessary for the introduction of cerebral surgery, and how they were obtained.—However one might wish to extend the sphere of surgery to the brain, it was necessary first to adopt means whereby immunity from the inflammation which so constantly attended brain lesions could be secured; and, secondly, to endeavour to gain a better physiological knowledge, in the hope that light might be shed upon the localisation of cerebral lesions. In

the wards of the Glasgow Royal Infirmary, Lister had formulated the theory and wrought out the practice of the antiseptic treatment of wounds, and already much had been done to dissipate the fears of surgeons regarding operations practised on other parts of the body. Experience gained by me showed that not only compound fractures of the skull but large osseous defects in the cranial vault, accompanied by extensive loss of cerebral substance, were quite amenable to treatment, exhibiting no tendency to inflammatory action as long as the tissues were preserved aseptic. When this held true of the rough and often septic lesions produced by machinery accidents, how much surer would well-planned and carefully executed operations be? This conclusion was subsequently amply confirmed by the results of operations undertaken by me for the relief of injury in which the brain had to be exposed, and from which detached portions of it had to be removed. In such instances no inflammatory phenomena interrupted the even course of healing. A striking feature of these wounds of, and operations upon, the brain was the absence of false hernia cerebri, which had hitherto formed such a conspicuous complication of brain lesion in man, and which had so often marred the success of physiological experiments by extending the zone of irritation, and by the fatal results which ensued. It was thus manifest that inflammation arising from exposure of, and operation upon, the cerebrum could be obviated under aseptic conditions. Meanwhile, many workers had been sedulously endeavouring to unravel the intricate and complex questions relating to the structure and function of the brain.

Previously the cerebrum was supposed to perform its functions as a whole in the same way as the liver, heart, and kidneys performed theirs, there being no differentiation of function. Broca in 1861, from observations on human pathology, isolated a particular limited area as the seat of the faculty of articulate language. This very important investigation foreshadowed the localisation of function in other cortical centres, for if the existence of a definite function confined to an isolated area were admitted, then the question arose, How many other centres with specialised functions might there be? Broca's discovery was thoroughly iconoclastic; it shook the notion entertained regarding the unity of brain function to its foundation, it awakened thought and made men explore anew with critical eyes fields which previous investigators were supposed to have exhausted. Dr. Alex. Robertson of Glasgow suggested in 1866 that there were separate sets of fibres for the conveyance of special motor impulses from the cortex. Hughlings Jackson in 1869 stated that there were many limited areas on the brain connected with separate and distinctive functions, founding his opinion not on speculative deductions, but on clinical experience, and on the direct observations of pathological facts. The inception of the idea that there was a portion of the brain whose function was related to motion was treated with extreme scepticism, and the suggestion was likely to have long remained a speculative question had it not been for the advent of another and more direct mode of examination. This new departure consisted in the performance of experiments upon the lower animals by Fritsch and Hitzig, who in 1870 published an account of their observations. They demonstrated the existence of a series of circumscribed areas on the surface of certain of the cerebral convolutions, the electrical stimulation of which caused on the opposite side of the body co-ordinated movement in distinct groups of muscles. These were momentous facts, destined to revolutionise former ideas of cerebral function. But their full force and significance were not recognised, in this country at least, until Ferrier's observations on the brains of animals, undertaken to put to an experimental proof the views entertained by Hughlings Jackson, were published in 1873. Then the mind of the physiological world was fairly awakened. The suggestion of Hughlings Jackson on the motor cortex became crystallised. Another link in the unity of plan of creation was manifest, as even in the higher and more complex brain of man parts existed whose function found homologous expression in that of the lower animals. Abundant proof has been gathered from human pathology, such as that afforded by the elaborate observations of Charcot and Pitres, to put beyond cavil the broad fact that there are points in the human cortex cerebri intimately related to motor and sensory functions of certain parts of the body. The apportionment of definite areas and their precise delimitation is still the subject of investigation.

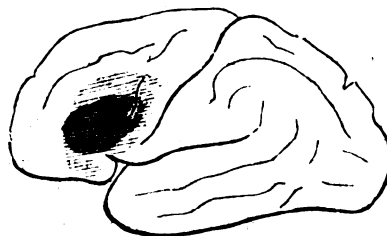
Many interpretations have been put on these facts. Some

hold that the central convolutions are distinctly motor in function, some that they are sensory, others that they are both motor and sensory, and still others believe that the excitable regions of the cortex are but points of departure and not foci of production of motor reactions. These views, interesting in themselves, cannot be discussed here; it is enough for our present purpose to recognise that there are certain regions of the brain in intimate relation with the movement and sensation of certain parts of the body, and which in the presence of either irritative or destructive lesions give rise to phenomena which are of the greatest diagnostic value.

The initial history of cerebral surgery.—This extended physiological knowledge enabled cerebral lesions to be more accurately localised, whilst my experience showed that by preserving aseptic the parts operated on surgical interference with the brain would be robbed of its chief danger.

1. *Case in which the symptoms of focal cerebral disease led to diagnosis of lesion in Broca's lobe.* (See Fig. 1.)—While

FIG. 1.

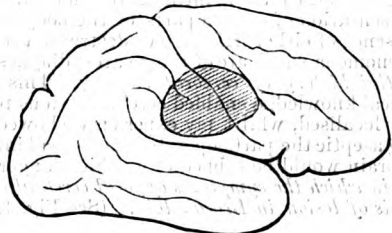


in possession of this knowledge a case of cerebral abscess presented itself to me in July, 1876. The general symptoms of this affection were clearly manifest. A cicatrix on the forehead marked the site of an injury, under which the skull was bare. Had this cicatrix been taken as a guide to the localisation of the abscess and an operation performed there, no abscess would have been found. But other phenomena were exhibited which enabled its seat to be definitely recognised. A convulsion, accompanied by loss of consciousness, commenced on the right side, and gradually involved the whole body. On its cessation, absolute hemiplegia of the right side was present and remained for two hours, during which the patient was aphasic. Both these phenomena became much less marked at the end of this period. From these symptoms the abscess was diagnosed to be situated in the immediate vicinity of Broca's lobe. It was evident that the whole of the base of the left third frontal was not involved in a destructive lesion, otherwise the aphasia would have persisted for a much longer period, and it was probable that Broca's area had become involved in the inflammatory zone surrounding the abscess. Trusting to these localising symptoms, it was proposed to open the abscess aseptically by exposing Broca's lobe. Unfortunately, the result of a consultation was decidedly to negative this proposal. The parents then refused consent, notwithstanding the assumption by myself of the sole responsibility of advising and performing the operation. Thirty-six hours afterwards the convulsions returned and persisted until a fatal issue ensued. After death the friends acquiesced in the proposal to have the operation performed just as it would have been had permission to do so been granted during life. The skull was trephined, the brain exposed, and an instrument was introduced through the third frontal convolution for half an inch, when pus flowed through the incision, proving the accuracy of the diagnosis, and giving poignancy to the regret that the operation had not been permitted during life. The abscess, about the size of a pigeon's egg, was situated in the white matter of the bases of the second and third frontal convolutions. The blade of the bistoury, which had been left *in situ* after insertion through the trephine opening, was found to have penetrated its outer wall. The congested zone in the periphery of the abscess extended from the anterior horn of the lateral ventricle to the cortex of the base of the second, but especially that of the third left frontal convolutions. Here the precise spot in the brain which the abscess occupied was accurately determined from the localising phenomena induced by the focal lesion, which were trusted as indicating its position, though pointing to a different part of the brain from that which would have been selected had the seat of injury been accepted as a guide. The operation showed how easily the pus could have been evacuated, though the unfortunate result to allow it

to take place during life leaves uncertain the ultimate issue, but, judging from my subsequent experience, worse cases have recovered after operation.

2. *Case in which motor phenomena were the sole guides to the cerebral lesion.* (See Fig. 2.)—In 1879 a case with

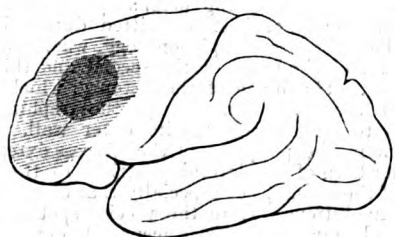
FIG. 2.



definitely localising motor symptoms was seen by me, occurring in a boy, who had had a fall six days previously, which occasioned some slight bruising about the face and head, accompanied by a shade of mental obscuration. At the termination of forty-eight hours he was so well that his parents could with difficulty be dissuaded from allowing him to rise from bed. On the sixth day he had a series of convulsions, the twitchings beginning in the left side of the face, gradually involving the left arm, and subsequently the left leg, during which consciousness was preserved. Paresis of the parts remained, though sensation was unimpaired. On the following day there was a renewal of the convulsions, the parts being affected in the same order, but the convulsions persisted, and finally became general with loss of consciousness. The motor phenomena indicated a lesion on the right side of the brain, pronounced at the lower portion of the ascending convolutions, as the face and arm centres were the first to show evidence of stimulation. The lesion was evidently of an irritative nature, such as might be occasioned by a spiculus of bone driven into the brain, or by a degree of pressure exercised on its surface. It was clearly not destructive, such as might be occasioned by severe cerebral contusion. Dr. Alex. Robertson was asked to see the case, and agreed with me that the motor symptoms presented a sufficiently clear guide to the localisation of the lesion in the lower part of the ascending convolutions. It was therefore resolved to expose that portion of the brain. As a preliminary, the head was shaven, when a scarcely perceptible irregularity was detected in the cranial vault near the coronal suture. When the skull was exposed, a fissure was discovered running across the coronal suture. Trephining was performed at a point slightly behind the auriculo-bregmatic line, and midway between the external auditory meatus and the vertex. This point happened to correspond to the posterior extremity of the fissured fracture. There was no blood between the dura mater and the skull, but the dura had a very dark colour. This membrane was opened, and gave vent to two ounces of fluid and coagulated blood, contained in the subdural cavity. The operation was conducted aseptically, and the patient made an uninterrupted typical afebrile recovery. There was no recurrence of the fits, the paralysis of the left arm soon disappeared, and he is living now, and in perfect health.

3. *Case in which the symptoms exhibited pointed to lesion in the frontal lobe.* (See Fig. 3.)—In 1879 an idiopathic case

FIG. 3.

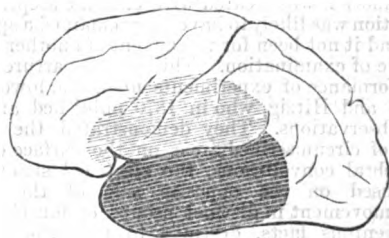


came under observation, in which the totality of the symptoms indicated a lesion in the left frontal lobe of the brain. It occurred in a patient the subject of a small tumour above the left eyeball in the orbital cavity. A tumour had previously been removed by me from that position, and it now recurred. Other symptoms had,

however, meanwhile presented themselves. The left pupil was in a state of stabile myosis; there was obscuration of the intelligence, slowness of comprehension, want of mental vigour, and pain in the head. These pointed to the probability of a lesion in the left frontal lobe, but were not sufficient to permit a diagnosis to be made. The patient was therefore placed under the observation of an educated, skilled nurse. Some weeks later a series of convulsions occurred, the initial stages of which were carefully recorded by the nurse, without which the key to the brain lesion, as indicated by the convulsions, would have been lost, as, when seen by me, they had become general, and threatened speedy dissolution. The convulsions were at the outset strictly confined to the right side, commencing in the face and arm, and confined to these two parts during the initial attacks; the leg on the same side was affected during the third seizure, and ultimately the convulsion became general, with complete loss of consciousness. These phenomena were construed as indicating extension of the irritation to the lower and middle portions of the ascending convolutions; and when this was considered along with the former evidence, it was concluded that an irritative lesion existed in the left frontal lobe. On these grounds it was resolved to trephine midway between the centre of the ascending convolutions and the anterior aspect of the cranium. At this point a minute nodule the size of a barley grain was detected on the outside of the skull. A large trephine was applied, a disc of bone removed, and a tumour of the dura mater, which was exercising pressure on the brain, was exposed. It was half an inch in thickness at this point, gradually becoming much thinner and spreading all over the anterior two-thirds of the frontal lobe. The tumour was, after a prolonged operation, carefully dissected out, along with the brain membranes, where they were involved in the neoplasm. The patient rapidly recovered, was restored to perfect health, and subsequently was able to gain her own livelihood. She lived for eight years afterwards, ultimately becoming affected with chronic Bright's disease, from which she died. The skull and brain were examined, and there was no trace of further tumour growth. This case was published in 1879. A paper by me illustrating some points in the localisation of cerebral affections and the advantages of antiseptic trephining, published in 1881, concludes: "When the skull can be opened, the cerebral coverings incised, and the brain exposed without fear of inflammatory mischief, trephining ought to be employed when the localisation of the lesion is established, and further, besides operating in traumatic cases, trephining is justifiable in idiopathic cases."

4. *Cerebral abscess in temporo-sphenoidal lobe; involvement of motor area; operation; death.* (See Fig. 4.)—In

FIG. 4.

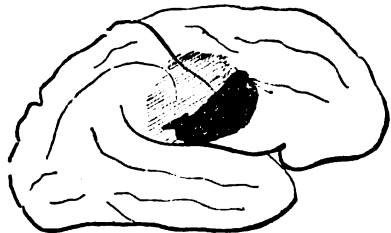


1881 a very large cerebral abscess, located in the temporo-sphenoidal lobe, but involving the bases of the third frontal and ascending convolutions, came under notice, but at such a late period of the disease that before arrangements could be made for the operation the patient suddenly exhibited all the phenomena of the abscess having burst into the lateral ventricles. Prior to this, aphasia could be discerned through the clouded state of the patient's intelligence; there was paralysis of the left third nerve and of the brachial and facial muscles on the right side. From these the extent and localisation of the disease were determined. Notwithstanding the fact that the patient was in *extremis* the operation was performed. The membranes were congested, and the abscess was reached on penetrating a quarter of an inch of the cerebral surface. After several ounces of pus had been evacuated, something like a tennis ball was seen floating in a sea of pus which still remained in the interior of the brain. This proved to be an old encysted abscess, in the periphery of which an acute abscess had developed,

which had destroyed the whole of the temporo-sphenoidal lobe. The patient, though greatly relieved, died from exhaustion. It was seen at the post-mortem that the whole temporo-sphenoidal lobe had disappeared, and the bases of the second and third frontal, as well as the bases of the two ascending convolutions were the seat of acute encephalitis.

5. *Intra-cranial effusion of blood diagnosed from motor symptoms alone.* (See Fig. 5).—There are three other cases,

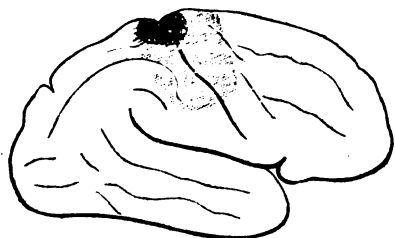
FIG. 5.



which occurred in 1883, to which brief reference may be made, as two of them have already been published. In May of that year a traumatic intra-cranial effusion of blood was correctly diagnosed from the motor symptoms exhibited, as being located over the base of the ascending convolutions. There were no external marks of injury, and the motor symptoms alone were the guides to the position of the lesion. The patient is now alive, in robust health, and regularly at work.

6. *Syphilitic tumour in paracentral lobule diagnosed from motor symptoms alone.*¹ (See Fig. 6).—In the following

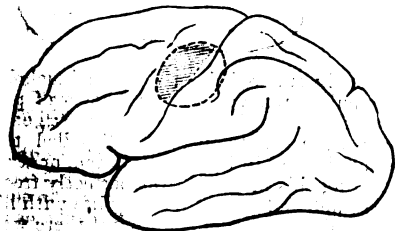
FIG. 6.



month (June, 1883) a case of brachio-crural monoplegia without loss of sensation was relieved by the removal of a syphilitic tumour from the paracentral lobule, and a plastic effusion from the centre of the ascending convolutions. Within a week the patient had recovered the power of the lower limb, and within a month was able to walk and perform her household duties. She has continued since in fair health, and can walk long distances, though with a hemiplegic gait, a certain amount of structural contraction having occurred prior to the operation.

7. *Focal lesion in ascending convolutions recognised from motor symptoms alone.* (See Fig. 7).—A few months later, in

FIG. 7.



1883, a brachial monoplegia was correctly diagnosed, a focal lesion being found in the white substance of the motor cortex of the middle portion of the ascending convolutions. The lesion was an extravasation of blood into the brain, around which encephalitis had occurred, inducing irritation and compression of this area. The relief given was immediate and complete. The patient has since been in perfect health, and regularly at work.

With the relation of these seven cases, all of which occurred

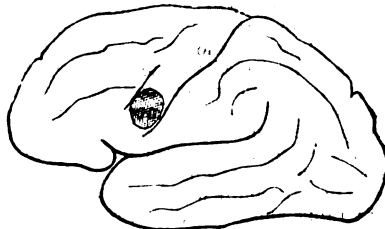
¹ Cases shown at the Pathological and Clinical Society, Glasgow, Jan. 24th, 1884; afterwards printed in the Glasgow Medical Journal.

prior to the end of 1883, the initial history of the movement ceases to be solely personal. In December, 1884, Dr. Bennett and Mr. Godlee, assisted by Dr. Ferrier, had the first case operated on in London in which a tumour was removed by Mr. Godlee from the brain.

Reference may now be made to a few points regarding the present aspects of cerebral surgery.—First, are the localising motor phenomena reliable guides to the diagnosis of cerebral lesions, situated in the motor cortex? My answer is unhesitatingly affirmative. Each case, however, requires to be studied on its own merits, the whole phenomena presented, the *unobtrusive* as well as the prominent features must be carefully searched for, the degree in which each is present must be accurately measured, and the whole weighed and compared with former experience before drawing a conclusion. The various points upon which reliance is to be placed should be tested, wherever possible, by instruments of precision, instead of the rough impressions conveyed by the hand being trusted. In testing the power of the muscles in brachial paresis, the dynamometer will impart much more accurate information than that which can be gained through the sense of touch, and occasionally shades of difference may be determined by it which otherwise would remain undetected. In many cases the evidences of focal lesions are so distinct that a diagnosis is easy; in others they are so intricate that a prolonged and minute investigation is necessary to decipher them; while there are still others in which the signs are so perplexing that at best an approximation only can be arrived at. To lay bare a certain known convolution in a cerebral surface and observe the result of its stimulation is an easier task than to take what appears to be a tangled skein of nerve phenomena, such as is presented by many lesions of the complex brain of man, and to relegate each to its true source, and infer from a study of the whole what particular parts of the brain are affected.

8. *Epilepsy (Jacksonian) induced by focal facio-lingual lesion; removal of cyst from brain; cured.* (See Fig. 8).—

FIG. 8.



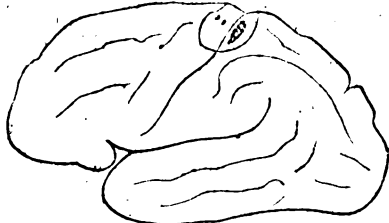
In support of the foregoing, the following instances are adduced, and a case is first presented in which the symptoms were so definite and precise that the diagnosis was easy and permitted me to perform the operation on first seeing the patient. He was twenty-two years of age, and suffered from epileptiform convulsions, each lasting from two to three minutes, and as they occurred on an average every five minutes, he consequently had over 100 in twenty-four hours. The convulsions were limited to the tongue, the right facial muscles and the platysma on the same side. When they subsided the parts remained paralysed. Consciousness was retained throughout. Eight years previously he received an injury to the head, after which his right arm became weak, the weakness persisting though he was quite able to work. It was clear that an irritating focal lesion existed, confined to the base of the ascending convolutions, causing a Jacksonian epilepsy. The only question was, whether the base of the ascending parietal was involved as well as that of the ascending frontal. The contraction of the platysma on the opposite side has been asserted to be induced by stimulation of the base of the ascending parietal. Dr. Whitelocke reminded me, however, that the platysma is often supplied by a branch of the facial, so that a single lesion in the base of the ascending frontal would be sufficient to account for the whole phenomena. The operation was at once undertaken, when in the lower part of the ascending frontal, a cyst about the size of a filbert was found situated partly in the cortical and partly in the white substance of the brain, and was surrounded by a narrow zone of encephalitis. In manipulating the medullary substance, in process of removal of the cyst, the patient while under chloroform had a convulsion, confined to the same group of muscles as were affected in his fits prior to the operation. The con-

vulsion ceased with the removal of the cyst, and he has never since had another. The wound healed firmly under one dressing, the paralysis of the facial muscles soon disappeared, and he has since been constantly at work. The power of the right arm has also been increased. Possibly the cyst might have caused indirectly slight pressure on, or set up an inhibitory action of, the middle portion of the ascending frontal.

This case affords important evidence of the position occupied by the facio-lingual centre in man, and on the whole corroborates that assigned to it by experiments on the lower animals. It was also interesting to note, when the part of the brain was exposed and irritated, that it gave rise to the same kind of convulsion.

9. *Protopasm of the hallux, preceded by sensory impressions and followed by paralysis.* (See Fig. 9.)—In

FIG. 9.



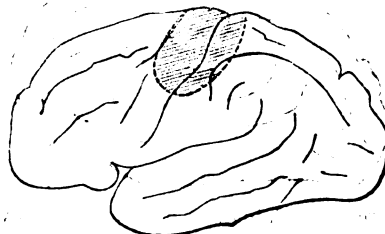
another instance a very definite protospasm, accompanied by a sensory impression, gave the key to the localisation. It occurred in a girl aged seven, the subject of frequently recurring attacks of severe epileptiform seizures, followed by paralysis of the affected parts. At the onset of these attacks the patient first experienced in the great toe of the right foot a painful sensation, of such severity as to cause her to scream out. Shortly afterwards, that toe was firmly extended in tonic spasm, which lasted about five minutes. Sometimes this ended the attack. More frequently it was followed by clonic contractions of the muscles of the right foot, leg, and thigh, where the convulsions often terminated. Occasionally they extended to the muscles of the trunk, then to those of the right side of the face and right arm, the contractions ceasing in the order of accession; rarely did they involve the opposite side, and when they did the patient lost consciousness. Though there was motor paralysis in the affected parts, the cutaneous sensibility remained unimpaired. From the great number of fits which the patient had, following each other in rapid succession, occurring in parts affected with paresis, the result of former attacks, while the cutaneous sensibility remained unimpaired, and from the limited area affected it was concluded that the lesion was cortical. The sensory impression in the hallux, followed by tonic and then clonic contraction of the same part extending to the lower limb, pointed to the upper region of the ascending convolutions as the area of irritation. From the general condition of the patient and family history the lesion was probably tubercular, and, if so, might be multiple. During operation the upper portion of the ascending convolutions was exposed and, with the exception of a few tubercular nodules the size of barley grains adhering to the vessels over the upper part of the ascending frontal, there was nothing visible on the surface. On careful palpation of the ascending convolutions there was found in the upper part of the ascending parietal a circumscribed nodule buried in the brain substance, which on exposure, by cutting through the grey matter was seen to be a tubercular tumour about the size of a hazel nut, which was easily shelled out. As an immediate result there was prolonged trepidation of an erratic kind, affecting the muscles of the right side of the body, but especially those of the arm and leg. These were continuous for fully a week, thereafter gradually subsiding. There have been no fits for over a year, and the girl is now in excellent health. The marked sensory impressions which the lesion produced support Dr. Gowers' opinion, that the parts in the so-called motor area subserve a sensory as well as a motor function. The localisation of the movements of the hallux in the upper part of the ascending frontal has not been borne out by this case (unless the minute barley grain tubercular nodules attached to the vessels in the pia mater could account for the stimulation), the tumour being found in the upper part of the ascending parietal, but the whole lesion could be included in the ring which Beever and

Horsley place on the upper portion of the ascending convolutions.

Other instances.—A brachial monoparesis, accompanied by sensory impressions confined to the same parts, has already been alluded to, in which though the centre of both ascending convolutions was involved, yet the chief lesion was confined to the ascending parietal, and implicated both its medullary and cortical substance.

10. *Brachio-crural monoplegia; cyst removed from brain.* (See Fig. 10.)—In another case, occurring in a boy of three years,

FIG. 10.



a brachio-crural monoplegia with late rigidity was present, the result of a traumatism received eight months previously. This case was kindly sent me by my colleague Dr. Dunlop. In it a large thick-walled, subdural cyst, containing clear fluid, was found pressing upon the motor convolutions, and a spiculum of bone detached from the inner table of the skull was seen to have penetrated the brain. These were removed and the bone was placed in normal position. The patient made an uninterrupted recovery. The paralysis with the contraction of the muscles passed off to a great extent. He could neither walk nor stand before the operation. Now he can run about and use his hand well, though there is still a paresis in both. With these data from my own experience, as well as from cases reported by Messrs. Godlee, Horsley, and many others, it is clear that the motor and sensory phenomena form reliable guides to localisation of lesions in the central convolutions.

Diagnosis of cerebral lesions in non-motor regions may be made from sensory phenomena.—The following instance shows this, and is also an example of the difficulty in finding the exact clue to the lesion, and how easily it may be overlooked.

11. *Psychical blindness the guide to a hidden lesion in angular gyrus: interesting medico-legal aspects; removal; recovery.* (See Fig. 11.)—A man who had received an injury

FIG. 11.



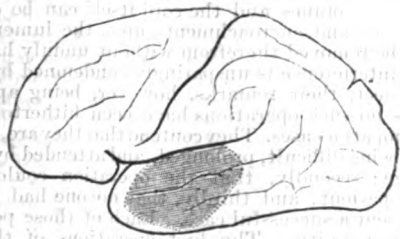
a year previously suffered from deep melancholy, strong homicidal impulses relieved by paroxysms of pain in the head of indefinite seat. Though the pain was excruciating he welcomed it, as it temporarily dispelled the almost irresistible impulse to kill his wife, children, or other people. Prior to receiving this injury he was perfectly free from impulses of this kind, and had led a happy life with his family. Behind the angular process of the frontal there was a slight osseous depression, which could not account for his symptoms. There were no motor phenomena, but on minute inquiry it was discovered that immediately after the accident, and for about two weeks subsequently, he had suffered from psychical blindness. Physically he could see, but what he saw conveyed no impression to his mind. An object presented itself before him which he could not make out, but when this object emitted sounds of the human voice he at once recognised it to be a man who was one of his fellow-workers. By eyesight he could not tell how many fingers he held up, when he placed his own hand before his face, though by the exercise of his

volition in the act, and by other sensations, he was cognisant of the number. He had been in the habit of reading the New Testament, and when he had so far recovered from his injury, he wished to resume his reading. He knew where the book lay near his bed, and could put his hand on it in the dark. One day he stretched out his hand, took the book, recognising it through the sense of touch by its smooth leather covers and the deeply indented letters on its back; he opened it, saw what he considered must be the letters, and the blocking of them into divisions for the words; but they were unknown symbols to him, they conveyed no impression of their meaning, the memory of their signs was gone, it was a sealed book to him. These phenomena, however, gave the key to the hidden lesion in his brain. On operation, the angular gyrus was exposed, and it was found that a portion of the internal table of the skull had been detached from the outer, and had exercised pressure on the posterior portion of the supra-marginal convolution, while a corner of it had penetrated and lay embedded in the anterior portion of the angular gyrus. The bone was removed from the brain and reimplanted in proper position, after which he became greatly relieved in his mental state, though still excitable. He has made no further allusion to his homicidal tendencies, which previously were obtrusive, and is now at work. Such cases of complete mental blindness are rare, and the definite localisation in this case will assist in indicating in man what the function of the anterior portion of the angular gyrus and posterior portion of the supra-marginal convolution subserves.

Other instances have been related above. One where a combination of symptoms pointed to a lesion in the frontal lobe, and acting upon which a tumour was found pressing upon that area of the brain, from which it was successfully removed; in the other a lesion was definitely recognised from the localising symptoms as seated in the immediate vicinity of Broca's lobe. But even in such areas as the temporo-sphenoidal lobe, where destructive lesions may exist without localising symptoms, one may occasionally, by a process of exclusion, definitely localise the lesion as seated in that part.

12. Lesion definitely localised as existing in the temporo-sphenoidal lobe. (See Fig. 12.)—A patient exhibiting

Fig. 12.



symptoms of cerebral abscess had, on the left side, ptosis, stabile mydriasis, paresis of all the ocular muscles with the exception of the external rectus, without external squint. On the right side, paralysis of the facial muscles, which retained power of emotional expression to a slight degree and power to close the right eyelid by an effort of will, though it remained partially open during sleep. He had, also, paresis of the right arm, which, during the few hours he was under observation before operation, had amounted to distinct paralysis. The leg remained normal. There was no diminution of cutaneous sensibility. 1. From these symptoms, it was concluded that a single lesion must be large which could affect at once the third nerve in its course and the lower half of the ascending convolutions. 2. It was clear that it was not a destructive lesion of large size in the motor area, or the crural centre would probably have been involved, thus causing absolute hemiplegia. The same observation applies with greater force to the crus cerebri, which must be excluded, as the effects of pressure would probably have led to more extensive involvement, and, had the pressure even indirectly affected this area, it would have implicated the parts in the reverse order—the leg first, the face last. The tentorium cerebelli would prevent pressure downwards on the pons. 3. The internal capsule could not be the seat of a large lesion, otherwise

hemiplegia with destruction of "Charcot's crossway" would have resulted. 4. Though the whole trunk of the third nerve was involved, paresis was alone produced, probably resulting from a degree of pressure. 5. The lesion was gradually implicating the motor area, from below upwards, and was probably occasioned by pressure and its consequences. The only place where a lesion could be situated producing all these phenomena, just to that precise degree, was the temporo-sphenoidal lobe. It was cut down upon, and in the medullary substance of the temporo-sphenoidal lobe an abscess containing three ounces of pus was found, which was evacuated, when the whole of the above symptoms vanished. Three weeks afterwards the wound was looked at for the first time, and found healed.

Can the motor area be removed in large pieces with impunity from serious consequences?—If this region be of such psychical importance to movement and destructive cortical lesions in it are followed by secondary degeneration of the motor tracts, then excision of these areas will necessarily induce permanent paralysis, late rigidity, and ultimate structural contracture. The removal of large wedges from the brain, especially in the motor centre, will induce serious effects upon the brain as a whole, causing during cicatrization a dragging and displacement of the neighbouring parts, with final anchoring of the cerebrum to the cicatrix. In an acute ulcerative process rapidly advancing, such as an abscess, none can hesitate to evacuate the pus; it is not the living brain substance which is removed, but the peccant matter alone. Epilepsy presents quite another aspect. In the presence of a stationary cicatrix, or of a slow-growing neoplasm in the motor area occasionally producing fits, few would attempt the removal of such a large wedge of the motor region as to induce permanent hemiplegia. Even when the fits are much more numerous and aggravated, it is serious to contemplate the production of hemiplegia while attempting the cure of the fits. No doubt these epilepsies when long continued, especially in early life, are apt to lead to great and extensive instability of the motor cortex; so as to warp the whole cerebral function, and ultimately involve life itself. Still, how much better is the cure by the removal of a large wedge involving the greater part of the motor area? How many people would submit to have the lower and upper limb of the same side of the body amputated by disarticulation at their proximal joints? For this is what the hemiplegia amounts to in the process of cure of their fits. Numerous epileptics have been asked the question by me, but none have expressed their willingness to undergo such a cure. Even had they done so, the circumstances would require to be exceptional to induce one to hazard the life of the patient for so poor a result. It is true that corresponding wedges have been removed from the brains of monkeys, and these animals have survived for months thereafter. In man, also, they have been removed by others; in one instance, reported to me, the patient remained completely hemiplegic until his death, some months after. Nor is the removal of very large tumours, and large wedges of brain, free from immediate peril to life. In several instances, operated on elsewhere, death has ensued; one while the tumour was being removed from the brain, and one immediately after the completion of the operation.

In cerebral surgery, not only does one require to localise the lesion, and to select suitable cases, but also, after exposing the brain and its lesion, to judge when to advance and when to hold the hand. In a case rightly localised from the motor symptoms, a tumour was exposed in the arm and leg centres, on the left side of the brain, but its dimensions were such as to cause me, after carefully contemplating them, to refrain from removing it, as it would have led to a hemiplegia of a much more pronounced character than what was present. Instead, the vessels which supplied it with nutriment, and which ran into its substance from the surface, were all ligatured, in the hope that this would effect a restraining influence on its growth. The patient recovered, and is considerably improved; although the fits are not quite cured, they are not so severe as formerly and are somewhat altered in character.

Anchoring of the brain and some of its consequences.—When injury has been inflicted on the surface of the cerebrum, followed by a plastic effusion and cicatricial formation, the superficial substance is apt to become soldered to the membranes, when these remain intact, which may in turn be soldered to the skull; or, in the event of their detachment, the brain may become directly adherent to the bone by means

of cicatricial adhesion. Thus the surface of the brain becomes anchored or soldered to its rigid walls. It has no longer the free play within its water bed to expand and contract according to the varying states of the circulation; each variation producing a dragging of the brain at this spot, and through it the whole hemisphere at least is affected. Any sudden physical effort pulls on the brain producing a slight shock, a momentary disturbance, just as if the cerebrum had received a blow; vertigo results. People affected in this way cannot rise up quickly or perform any sudden movement of the body or head without experiencing a sensation of giddiness, which sometimes causes them to drop. Consequently they are often incapacitated from pursuing their usual vocations. Following upon this, the grey matter of the cortex immediately surrounding the cicatrix, by the incessant movement, is apt to become unstable and to produce fits. Some cases of traumatic epilepsy are thus caused. Further, if the cortical irritation be continued, encephalitis is occasionally produced, often appearing in a chronic form, and long remaining so, though susceptible of being lit up into an acute affection. If the temperature remains high, active interference is apt to induce an extension of the encephalitis. Operation in such cases should be, when possible, postponed. The disregard of this advice has to my knowledge in one instance hastened the fatal issue, encephalitis becoming rapidly general.

False hernia cerebri.—It is true that round many neoplasms there is a zone of encephalitis, and should this be extensive and of the nature of red softening, false hernia cerebri is prone to form. It was supposed that false hernia cerebri was entirely due to decomposition, many recent writers averring that it cannot occur unless when operations are conducted non-antiseptically, basing their belief on experimental investigations conducted on brains in a physiological state. Had they concluded that the formation of false hernia cerebri after operation was principally caused by decomposition, and always so when it occurred after operation on a physiological cerebrum, they would have been right. The consistence of false hernia cerebri is identical with red softening of the brain, occurring in idiopathic affections in which there had been no operation. In one instance, in which trephining was performed for the relief of pressure causing total hemiplegia, and where the symptoms either indicated acute encephalitis or abscess, or both, the moment the dura mater was opened a large mass of red encephalitis protruded through the membranes, forming a false hernia cerebri on the surface of the scalp. This encephalitis was not occasioned by septic matter introduced through a wound, as it occurred at the moment the wound was made. Round neoplasms red softening sometimes exists, and interference might possibly occasion an extension of the affection, though were the operation conducted with strict antiseptic precautions the possibility of its formation would be reduced to a minimum. With this exception there has been no false hernia cerebri after any of my operations.

Reimplantation of bone, to fill the hiatus in the skull left by injury or made by operation.—Osseous defects in the cranial wall had hitherto remained permanent, the surgeon making no effort to fill the gap. The brain in the majority of cases has thus been exposed, the thin membrane forming an insufficient covering, the patient being doomed for the remainder of his life to wear some kind of plate as a protection from injury. Since 1873 the portions removed by me from the skull have been carefully preserved, rendered aseptic, divided into minute fragments and reimplanted. Whenever there has been immunity from suppuration these have grown and the continuity of the osseous wall has been preserved throughout. In a case of injury nearly one-half of the left anterior portion of the skull was broken into fragments, which lay in a confused mass, mixed with brain substance, shreds of membrane, hairs, debris of lime and blood. The portions of bone were all rendered aseptic, divided into fragments, and replaced, quite a mosaic work being thereby formed. On the tenth day, a portion of the damaged scalp having sloughed, exposed four of the reimplanted pieces, two of which, lying side by side, presented a striking contrast; one being suffused with the pinkish blush of life, the other with the pallor of death. With the exception of two fragments, which shed, all the others remained, grew, and now form a firm osseous wall, affording complete protection. This case, operated on four years ago, will be shown at the demonstration in the Royal Infirmary, along with many others, where lesser defects have been filled. At the same

time a boy whose humerus has been restored by bone-grafting, will be presented. He was operated on ten years ago, and the bone has grown in length and thickness since.

The note elicited on percussion of the skull an aid to diagnosis of the consistence of intra-cranial contents.—When the skull is intact and the ventricles distended with fluid, such as may arise in consequence of tumour in the cerebellum, exercising pressure on the fourth ventricle, the percussion note elicited affords indications of the altered consistence of the intra-cranial contents. In some instances this note has been found prior to the exhibition of other symptoms, indicative of the presence of tumour in the middle lobe of the cerebellum; it, however, became distinct at the later stage. Post-mortems have fully borne out the diagnosis. The percussion note, when properly fanned, is therefore an aid to the altered consistence of the intra-cranial contents. It is clear that it will be of most value in early life, in the diagnosis of tumours of the cerebellum.

Statistical résumé.—Of twenty-one cerebral cases (exclusive of fractures of the skull with brain lesions, the immediate effect of injury) in which operations have been performed by me, there have been three deaths and eighteen recoveries. Of those who died all were in *extremis* when operated on. Two were for abscess of the brain, in one of which the pus had already burst into the lateral ventricles; in the other, suppurative thrombosis of the lateral sinus had previously led to pyæmia and to septic pneumonia. The third case was one in which there existed, besides a large subdural cyst over one hemisphere, extensive softening at the seat of cerebral contusion on the opposite hemisphere, accompanied by oedema of the brain. Of the eighteen who recovered, sixteen are still alive in good health, and most are at work; leaving two who subsequently died, one eight years after from Bright's disease (she in the interval being quite well and able to work), the other forty-seven days after from acute tubercular enteritis.

Operations for the relief of paraplegia caused by pressure on the spinal cord: six cases in which the posterior arches of the vertebra have been removed.—Turning to another portion of the nervous system, to which only brief allusion can be made, it is found that certain sensory and motor phenomena due to lesions within the spinal canal are amenable to operations, which are attended by a measure of success sufficient to offer a prospect of relief to a distressing and hitherto regarded as a hopeless class of sufferers. The spinal membranes and the cord itself can be exposed, and neoplasms and encroachments upon the lumen of the canal may be removed therefrom without unduly hazarding life. Such interference is unsparingly condemned by writers on the subject, their remarks, however, being applied to injuries, as no such operations have been hitherto contemplated in idiopathic cases. They contend that they are, first, full of danger, being difficult, prolonged, and attended by profuse hemorrhage; secondly, that the operation could hardly benefit the patient; and thirdly, that no one had yet been able to present a successful case. Each of those points has now lost its validity. The first operations of this kind were undertaken by me for the relief of paraplegia due to angular curvature of the spine. In such cases pressure may be exerted on the cord either by connective tissue neoplasms, or by direct displacement of the bodies of the vertebrae, both lessening the lumen of the canal. By lifting the laminae from the affected part, the tumour could be removed, and relief at the same time given to the compressed cord were the osseous walls in front found to encroach upon the calibre of the canal. This was successfully carried out by me first in 1883. By the making of an incision on to the tips of the spinous processes and severing the tendinous connexions, and then shelling the soft parts from the bone with periosteal elevators, the hemorrhage was so trifling as to be, for the most part, arrested by sponge pressure, and, with suitable instruments, the operation, though demanding care, was easy to perform.

Case of paraplegia with incontinence of urine and feces due to connective tissue tumour at seat of angular curvature of spine; completely cured by removal of tumour and laminae of vertebra.—In 1882, a boy aged nine years came under observation, suffering from complete sensory and motor paraplegia, with incontinence of urine and feces, which had existed for two years previously, but had been absolute during the last eighteen months. For three years he had had angula,

curvature of the spine, most marked between the fifth and seventh dorsal vertebrae, for which he had been treated by extension and plaster jackets. When seen by me the curvature had become fixed by ankylosis of the bodies of the vertebrae. Treatment by extension and plaster jackets was, however, tried again, under direct supervision, in the hope of amelioration. It proved futile. The limbs were livid and cold, affected with marked spastic rigidity, and with wasting of the muscles. The symptoms exhibited pointed to irritation of and pressure on the spinal cord, at about the level of the sixth dorsal vertebra. Either of two conditions could have produced the pressure symptoms; the existence of a connective tissue tumour, as Charcot points out, occurs in such cases inside of the canal, or by direct encroachment on the canal by displacement of the bodies of the vertebrae. In the former case, the tumour could be removed on exposing the theca, by elevating the laminae of the affected vertebrae; in the latter, the same procedure would permit the cord to expand backwards, thus receding from the point of pressure. The paralysis having existed slightly for two years, and markedly for eighteen months, and showing no signs of amelioration under ordinary treatment, this operation was deemed expedient. Dr. Alex. Robertson saw this case and agreed in the hopelessness of any other procedure than operation. On May 9th, 1883, the laminae of the fifth, sixth, and seventh dorsal vertebrae were removed. There was no pulsation in the portion of the cord exposed. Between the theca and the bone there was found a fibrous neoplasm of an eighth of an inch in thickness, which was firmly attached to the theca and covered about two-thirds of its circumference. This was carefully dissected off. The cord was then able to expand backwards, and its pulsations, which up to this period were absent, began to show themselves, especially opposite the fifth dorsal. Twenty-four hours after the removal of the pressure the limbs had lost their livid colour, were distinctly warmer, the spastic rigidity had greatly lessened, the sense of tickling the soles had returned, and that of touch had improved. The first return of movement was observed eight days after. Soon he had perfect control over his sphincters. Six months subsequently he was able to go about without support. Five years afterwards he walked three miles to pay me a visit. He attends school regularly, joins in all the games, including football, and he says he feels quite strong.

A second but more aggravated case.—In 1884, another case was seen of a somewhat similar kind, though much more aggravated, the symptoms being so far advanced as to indicate organic changes in the cord itself which rendered operation almost hopeless. It was only on the urgent and touching appeal of the girl herself that the operation was undertaken. A dense connective tissue tumour existed between the bone and the theca, which was so firmly adherent to both that in some places the theca was elevated along with the neoplasm. The portion of the cord thus exposed was shrunken to about half its normal dimensions, and lay like an inanimate rod. After elevation of a sufficient number of laminae to expose a portion of the cord, which pulsed, the pulsations were communicated to this rod, pushing it from above downwards, but there was no distensible pulsations in the rod like part of the cord. From the whole appearance presented at the operation, it was considered that there was no hope for her recovering from her paralytic state. However, ten hours after the operation the limbs had lost their lividity, felt warmer to the touch, and the patient said she experienced "a sensation as if she were dreaming that her legs were on and hot water was running through them." From the fourth day after the relief of pressure she had continence of urine and feces, for which alone she declared she would willingly have undergone the operation. Sensation quickly returned to the limbs; motion very slowly. Six months after she could move her limbs freely. Eight months subsequent to the operation she walked a quarter of a mile. She stated she could perform many light duties in the house besides attending to herself. She has since been very well and able to enjoy life.

A third case was also successful, but two others have not been so. One succumbed a week after the operation, the other some months later, to an attack of general tuberculosis. In both of these the temperature was high prior to the operation, and was subject to exacerbations, indicating an activity in the tubercular disease at some part distant from the ankylosed angular curvature. Since this experience no case has been deemed fit for operation in which the

temperature did not run an even, regular, and continuously afebrile course.

Abscess in the posterior mediastinum evacuated successfully.—In connexion with these cases, an abscess in the posterior mediastinum, which was exercising pressure on the heart and bronchi and threatened life, was evacuated with complete success.

Compression of the cord from traumatism.—Another class of cases is that of localised compression of the cord arising from traumatism. Traumatic lesions are, as a rule, so gross, and the destruction so complete, that in such operative treatment can be of little service; still there are cases in which traumatism has produced localised pressure, primary or secondary, which can be relieved.

Paraplegia from traumatism cured by elevating connective tissue tumour and depressed arch of the twelfth dorsal vertebra.—From a coal-pit accident a man, twenty-two years of age, received a severe injury to the spine at the level of the lower dorsal vertebrae, which caused absolute motor paralysis with incontinence. There was marked hyperaesthesia of the affected parts, which increased in severity during the first three weeks, so that he could not bear to have the floor shaken or his limbs touched. Between the third and fifth week a rapid change took place. At the termination of that period the muscles of the lower limbs would not respond to electricity; they had become so shrunken and wasted that the contour of the bones stood prominently out, and, notwithstanding massage of the limbs after the cessation of the pain, the flexor muscles had markedly contracted, causing drooping of the feet and toes and fixation of the joints. Later, the skin over the bony prominences became red, pressure points and bedsores formed, irrespective of the most scrupulous attention; the urine became ammoniacal and his temperature ran high. It was evident that a fatal issue was imminent unless an attempt to relieve the pressure on the spine was at once made. In February, 1885, this was done. The lower dorsal and first lumbar were exposed. The arch of the twelfth dorsal was found fractured and slightly depressed, and between it and the theca there existed a connective tissue tumour, measuring nearly a quarter of an inch in antero-posterior diameter, and extending from the eleventh dorsal to the second lumbar vertebra. Both above and below the twelfth dorsal the tumour gradually shaded off to about one-half of its thickness at that point. It was confined to the posterior aspects of the canal. This tumour was carefully dissected from the theca. The same night there was a decided improvement in the warmth of the lower limbs. He began to move his toes on the third day. A month afterwards the contracted tendons about the ankle and feet were extensively tenotomised to relieve the structural contraction, after which the motor power rapidly increased. He was soon able to walk with support, which a year subsequently he discarded, and now can move about with ease but with paraplegic gait.²

Here are, therefore, six cases in which elevation of the posterior laminae of the vertebrae has been performed; four of these have completely recovered and two have died, one from extension of tubercular disease months after the operation, and after the wound had healed, leaving one in which the operation possibly hastened the death of a patient who was otherwise in such a helpless and hopeless condition. Such operations are now beginning to be practised by others. Mr. Horsley a few months ago published a successful case in which a somewhat similar operation had been performed for the removal of a small tumour of the theca diagnosed by Dr. Gowers.

In conclusion, let us remember that the same phenomena by which we are now able to recognise certain cerebral lesions, and locate them in precise areas, were exhibited by patients who came under the eye of our surgical predecessors, some of whom must have had the album of their memory filled with such impressions, yet they saw not their import. They were so hampered by the intricate physiological dogma of the time that their true significance never dawned on them. The facts were reflected from their brain, as objects from a mirror, and no more. Gentlemen, there are all around us phenomena, each with its hidden truth obtrusively impressing our senses, and how do we fail to read their riddle?

² These last two cases were shown at the Pathological and Clinical Society, Glasgow, December 22nd, 1885, and published in the Glasgow Medical Journal, and notes of the same appeared in the British Medical Journal for December, 1886.

A CASE OF INTUSSUSCEPTION OF THE CÆCUM, ASCENDING AND TRANSVERSE COLON, TREATED BY ABDOMINAL SECTION, WITH SUCCESS.

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(Concluded from p. 201.)

THE following table includes all the cases of intussusception treated by laparotomy or other abdominal operations which I have been able to collect up to date. They are arranged so as to show the relative merits of the various ways of dealing with the condition by abdominal operations. Although the table cannot pretend to be exhaustive, it is certainly very suggestive, and a larger array of figures would probably strengthen the conclusions deducible from it—i.e., that laparotomy compares very favourably with other methods of treating this very fatal condition.

SUMMARY OF COLLECTED CASES.

I. Laparotomy; bowel released (34 cases).

	Recovered.	Died.	Total.
Children	5	18	23
Adults	7	4	11

II. Laparotomy; intussusception irreducible (29 cases).

A. ABDOMEN CLOSED.

	Recovered.	Died.	Total.
Children	0	4	4
Adults	1	1	2

B. INTUSSUSCEPTION RESECTED.

	Recovered.	Died.	Total.
Children	0	7	7
Adults	1	6	7

C. ARTIFICIAL ANUS FORMED.

	Recovered.	Died.	Total.
Children	0	4	4
Adults	0	6	6

III. Artificial Anus without Laparotomy (10 cases).

	Recovered.	Died.	Total.
Children	0	3	3
Adults	0	7	7

ABDOMINAL OPERATIONS FOR INTUSSUSCEPTION (73 CASES).

Laparotomy for Intussusception—Children. (Successful.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Result.
1	Hutchinson	1871	F., 2 years	1 month	Ileo-cæcal	Cured
2	Marsh	Apr. 11, 1875	M., 7 months	13 days	"	"
3	Sands	Mch. 11, 1877	F., 6 months	1 day	"	"
4	Godlee	Mch. 9, 1881	9 months	4 days	"	"
5	Barker	Aug. 25, 1887	M., 4 years	17 hours	"	"

Laparotomy for Intussusception—Adults. (Successful.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Result.
1	Nuck*	1892	F., 50 years	?	?	Cured
2	Fuchsias	June 19, 1824	M., 28 years	9 days	?	"
3	Wilson	1881	M., 20 years	17 days	Iliac	"
4	Howse	July 1, 1874	F., 33 years	18 days	?	"
5	Bellamy	1879	M., 34 years	4 days	Lat. sign. flexure	"
6	Kleberg	1879	M., 40 years	Some hrs.	Colic	"
7	Burckhardt	June 21, 1868	M., 24 years	Sev. mths.	"	"

* Related by Valse.

Laparotomy for Intussusception—Children. (Unsuccessful.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Sir S. Wells	Apr. 14, 1868	M., 4 mths.	4 days	Ileo-cæcal	5 hours
2	Weinlechner	Dec. 2, 1871	F., 6 mths.	4 days	"	6 hours
3	Johnstone	1873	?	?	"	Short time aft.
4	Duncan	1873	? 5 mths.	Some dys.	Ileo-cæcal	Next day
5	Hutchinson	1875	? 6 mths.	3 days	Ileo-cæcal	8 hours
6	Page	Mch. 5, 1878	M., 5 years	4 months*	Ileo-cæcal	10 hours
7	Little	1878	M., 5 years	1 day	Ileo-cæcal	7 hours
8	Marsh	1878	M.?	6 days	"	10 hours
9	Corley	1879	? 9 months	?	General in colon	4 hours
10	Sands	1878	M., 6½ mths.	2 days	Ileo-cæcal	4 hours
11	Stage	1880	M., 3 mths.	1 day	"	2½ days
12	Beck	1882	Under 1 year	?	"	36 hours
13	Haward	1882	17 months	5 days	Ileo-cæcal	Few hrs.
14	Godlee	1882	8 months	2 days	"	1½ days
15	Symonds	1884	M., 5 mths.	Acute, 7 days	"	9 hours†
16	Symonds	1884	F., 6 mths.	20 days	"	Sev. hrs.
17	Foxwell	1886	Boy	10 days	"	"
18	Jacobson	1886	M., 5 mths.	3 weeks	"	?

* Acute for some days.

† Exhaustion, shock, &c.

‡ Death during reduction of intussusception, which was gangrenous.

§ Death at close of operation.

Laparotomy for Intussusception—Adults. (Unsuccessful.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Ohle	Oct. 17, 1810	M., 50 years	13 days	Ileo-cæcal	14 hrs.
2	Mikulicz	May 5, 1882	F., 24 years	10 days	Ileo-cæcal	4 wks.
3	Davies-Colley	—	M., 23 years	5 days*	"	2 days
4	Franks	1884	M., adult	?	"	A few hours

* Acute.

Laparotomy—Intussusception irreducible. (Unsuccessful.)

A. CHILDREN. (ABDOMEN CLOSED.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Result.
1	Gerson	1823	M., 12 weeks	?	Ileo-cæcal	Death
2	Laroyeune	1870 (?)	Child.	?	"	Death
3	Godlee	1882	14 weeks	Some days	"	D., 8 hrs.
4	Jacobson	Unpub.	11 months	24 hours	"	D., 24 hrs.

A. ADULTS. (ABDOMEN CLOSED.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Decker.	1880	F., 58 years	13 mths.	Ileo-cæcal	5 weeks.

B. CHILDREN. (INTUSSUSCEPTION RESECTED.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Howse	1876	? 5 months	1 month	Ileo-cæcal	A few hours
2	Morris	1877	M., 12 years	3 days	Iliac	1 day
3	Weinlechner	1880	M., 5 years	2 days	Colic	Sh. aft. oper.
4	Braun	1882	M., 3 mths.	5 days	Ileo-cæcal	1 hour
5	Polland	1882	F., 3 years	7 days	Ileo-cæcal	3 hours
6	Jaeger	1885	F., 12 years	2 days	Iliac	6 days
7	Knaggs	1886	M., 5½ years	4 days*	Ileo-cæcal	1½ hours

* Acute.

B. ADULTS. (INTUSSUSCEPTION RESECTED.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Küster	1879	M., 42 years	6 days	Iliac	A few hours
2	Fischer	1881	F., 27 years	?	Ileo-cæcal	?
3	Czerny	1883	F., 36 years	8 days*	Ileo-cæcal	A few hours
4	Obalinski	1883	M., 63 years	5 days	Iliac	The next day
5	Czerny	1884	M., 45 years	Chronic	Ileo-cæcal	2 days
6	Czerny	1884	M., 52 years	Chronic	Ileo-cæcal	Recovered
7	Robson	1885	F., 33 years	7 days	Jejunal	?

* Chronic.

† Then acute.

‡ Death at close of operation.

§ Died in 2½ hours of shock.

C. CHILDREN. (ARTIFICIAL ANUS FORMED.)

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Waldenström	1873	M., 20 mths.	Sev. wks.	Ileo-cæcal	A few hrs.
2	Royen Bell	1876	F., 16 mths.	6 days	Colic	7 hours
3	Brown	1882	M., 14 years	1 day	?	6 hours
4	M. Schmidt	1887	F., 10 years	7 days	Iliac	Same night

C. ADULTS.

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Caines	1886 (?)	M., 23 years	5 days	Ileo-cæcal	17 hours
2	Hulke	1879	F., 16 years	1 year*	Ileo-colic	88 hours
3	Marchand	1882	F., 43 years	13 months	Colic	3rd day
4	Saltzmann	1882	F., 29 years	1 year*	Ileo-colic	14 hours
5	v. Wahl	1883	F., 44 years	10 days	Ileo-cæcal	½ hour
6	v. Winniwarter	1885 (?)	M., 60 years	5 days	Colic	36 hours

* Chronic.

III. Artificial Anus without Laparotomy.

CHILDREN.

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Busch	1860	M., 7 mths.	14 days*	?	8 days
2	Hirschsprung	1871	? 22 mths.	?	Colic	40 hours
3	Stuge	1876	F., 6 mths.	1½ days	Ileo-colic	2 days

* Four days acute.

ADULTS.

No.	Operator.	Date of operation.	Sex and age.	Duration of symptoms.	Form of intussusception.	Death.
1	Hanff	1841	M., 36 years	-	Ileo-cæcal	9 days
2	Pirogoff	1852	M., 14 years	Chronic	?	Shortly aft.
3	Robert	1856	F., 23 years	18 days	Asc. colon	2 days
4	Chaswignac	1869	M., 39 years	3 months	Ileo-colic	5 hours
5	v. Thaden	1862	M., 25 years	?	Ileo-colic	10 days
6	Müller	1872	M., 33 years	Chronic	Ileo-cæcal	10 days
7	Heath	1881	M., 56 years	1 year	Ileo-cæcal	Shortly aft.

* Six months chronic, 8 days acute.

EPILEPSY AND MIGRAINE.

By SAMUEL WILKS, M.D., F.R.S.

JUDGING from what I hear and read, antipyrin has been as great a failure in the relief of epilepsy as it has been a success in migraine. I have now used this drug for nearly two years, and having seen its remarkable power in arresting attacks of headache, I can fully corroborate the high opinion held by the profession generally as to its merits. It has, however, by no means superseded other well-known remedies in their more enduring effect in the cure of this disease. As regards the power of antipyrin in epilepsy the result is very different, as not unexpected by me, who never have been able to discern the analogy between the two diseases, and which suggested the trial of the same remedy for both. This is no new opinion of mine, but if not hitherto expressed it has been out of deference to the great names of those who, in their writings, have associated the two diseases together. I have never myself seen the resemblance, but, on the other hand, have observed many and considerable dissimilarities. The only plausible reason for linking them together is their paroxysmal character; that is, persons who may be well to-day may have a fit or attack of migraine to-morrow, but the very difference in the nature of the paroxysm seems to me sufficient to dissociate them. In the one case, the patient may be as well as ever one moment, and the next moment may have fallen unconsciously down without there having been any warning of the occurrence; whereas, in the other case, the attack is approaching for hours, and very often some well-known cause has developed it. Nay, further, a migrainous person may, in the performance of some duty, predict an attack with certainty; he may, indeed, induce it. Then as regards the symptoms, there is nothing in common between them. The attacks are not only altogether unlike, but the epileptic, as a rule, is not a sufferer from headache, nor does the migrainous patient become epileptic. Some years ago I took the trouble to ask the question of epileptics, and the almost invariable answer was that they did not suffer from headache. This is a very important and practical point, for if headache was present, it proved the case to be one not of simple epilepsy, but of fits due to injury, syphilis, or other cerebral disease, and which was often cured by the iodides and mercury when the bromides had failed. Then, on the other hand, I have no history of a migrainous patient becoming an epileptic. The former, as a rule, loses his trouble as years wear on, whilst the latter often becomes more confirmed in his complaint, or his brain altogether gives way. Amongst a large number of cases, I only remember one where there was a suspicion of the two maladies existing together. In answer to what I have stated, it would be maintained by those who regard the two affections as allied, that they admit the difference between the phenomena of migraine and epilepsy, but, nevertheless, they have a common pathology. This remarkable theory seems scarcely warranted by our ordinary mode of reasoning about cause and effect. The only plausible reason for such an opinion ought to be founded on the observation that the migrainous patient often becomes epileptic, or the reverse; but, as I have already stated, this is not true. It might also be maintained that the two affections are seen occurring in members of the same family. Now this, from a very long experience, I also deny. I know many families subject to migraine, but in none is there a single member epileptic. And more than this; the opposite fact is true, that the two diseases attach themselves to a totally different class of persons. The migrainous patient frequently belongs to the most cultivated and intellectual class of society, and is of the temperament called neurasthenic, whilst the epileptic, in my experience, belongs to a lower grade, and is generally the stupid one of the family; if, indeed, his fits are not associated with other grave defects of his nervous system. There is no lunatic or idiot asylum without its numerous epileptics, whereas some of the best descriptions of migraine are to be found in the Philosophical Transactions, given by the authors themselves. There may be, before an attack either of epilepsy or migraine, some altered mental condition; but, if so, in the former it is of the nature, first, of mania and then of stupor, whilst in the latter the mind is often more acute both preceding and during the attack. I will not go so far as to absolutely endorse an opinion expressed

by more than one observant medical man, that migraine is never met with amongst the lower orders, although it is difficult to conceive how such services as those of policemen or engine-drivers could go on were it at all common amongst the working community. A man or woman in a higher grade of society can afford to lose a day now and then without interfering seriously with their vocations. Moreover, there seems no good reason why the two diseases should be thought to have the same seat; in epilepsy it is proved that the brain is the seat of the explosion which causes the phenomena, whilst this is by no means certain in the case of migraine. Here the patient is bodily ill, his pupils are contracted, and thus unlike the dilatation of epilepsy; his stomach and bowels are deranged; his heart's action is depressed; he is cold and shivering, and apparently his whole ganglionic system is at fault. In a word, I see no resemblance between an attack of migraine and epilepsy. I observe they never pass the one into the other, they do not occur in the same families or in the same class of persons, and the remedies which relieve the two diseases are different.

Grosvenor-street, W.

SEA VOYAGES FOR HEALTH.

By A. CROSBEE DIXEY, M.R.C.P. Ed.

So many of our profession are daily ordering patients away for long sea voyages in search of health, with, as a rule, little or no practical experience themselves in the matter, more especially as regards the climatic changes the patient will have to encounter, that I venture to think the few following notes taken by myself in a voyage round the world may be of interest to the profession generally. We left Plymouth on Nov. 19th, 1887, by the New Zealand Shipping Co.'s steamer *Tongariro*, bound for New Zealand direct, *via* Madeira, Cape Town, and Tasmania. The temperatures on the voyage there read as follows:—

On the bridge of the "Tongariro."

November 19th	43°	December 11th	65°
20th	52	12th	60
21st	55	13th	60
22nd	54	14th	48
23rd	62	15th	44
24th	66	16th	44
25th	72	17th	44
26th	77	18th	44
27th	80	19th	44
28th	86	20th	44
29th	86	21st	46
30th	80	22nd	45
December 1st	80	23rd	48
2nd	77	24th	46
3rd	74	25th	54
4th	74	26th	58
5th	76	27th	66
6th	68	28th	65
7th	68	29th	64
8th	69	30th	66
9th	64	31st	67
10th	66		

* Arrived at Madeira.

† Arrived at Tasmania.

‡ Arrived at Cape Town.

§ Arrived at New Zealand.

For these temperatures I am indebted to the courtesy of Mr. Kindlay, chief officer of the *Tongariro*.

Regarding the above temperatures generally, I must mention that they were taken in the deck-house on the bridge of the steamer at 12 o'clock noon in the shade, and that 8° of temperature must be added to each to represent the corresponding temperature in the saloons and cabins, which are of course warmer. Individually, we noticed the great rise of temperature in the first ten days from leaving Plymouth, *viz.* from 43° on deck or 51° in saloon, to 86° on deck or 94° in saloon, a difference of 43°. This occurs in the tropics at latitude north, 8° 41', and continues until the Line is crossed; it is the most trying time for invalids. Another sixteen days bring the temperature down from 86° on deck or 94° in saloon, to 44° on deck or 52° in saloon, another difference of 42°. This occurs about latitude south, 47° 58', and is found to be less trying than the previous heat. From this until Tasmania is reached, the temperature gradually

risers to 64°, continuing about the same to New Zealand. Returning from New Zealand on April 5th, 1888, *via* Cape Horn, Rio de Janeiro, and Teneriffe, the temperatures read as follows:—

On board the "Rimutaka."			
April 5th	56°	April 27th	74°
6th	55	28th	76
7th	52	29th	78
8th	53	30th	78
9th	53	May 1st	88
10th	55	2nd	82
11th	51	3rd	80
12th	52	4th	84
13th	48	5th	89
14th	47	6th	89
15th	47	7th	82
16th	47	8th	82
17th	46	9th	78
18th	46	10th	78
19th	44	11th	70
20th	44	12th	70
21st	44	13th	68
22nd	48	14th	65
23rd	48	15th	61
24th	50	16th	60
25th	54	17th	61
26th	72		

* Arrived at Rio de Janeiro.

† Arrived at Teneriffe.

‡ Arrived at Plymouth.
For these temperatures I am indebted to the courtesy of Mr. Macrae, fourth officer of the *Rimutaka*.

The same remark applies to these temperatures as the former—*viz.*, that 8° must be added to each to represent correct temperature in saloons and cabin. Individually, the rise from 44° on April 21st to 88° on May 1st, a difference of 44°, is the most trying part, and lasts, as in the outward voyage, until the Line is crossed.

The above temperatures may be taken as a fair average of what is usually met with in a voyage taken in the autumn to escape the English winter. Whether the patient is in a state to withstand these sudden changes it is for the physician to determine, but in any case it is well that he should know when giving an opinion that they have to be encountered. The important question as to whether a steamer or sailing ship is most beneficial must be decided according to the case; of course no fixed rule can be laid down. On a steamer one has the advantages of a shorter time in the tropics and an unlimited supply of ice whilst there, of a better table, and of warm sea water baths, so essential in rheumatic and gouty cases; on the other hand, there are the noises of the screw, and the constant rush inseparable from a steamer being driven along at the rate of thirteen or fourteen knots an hour. For the majority of cases a steamer is more enjoyable, and the monotony is less, but for all cases of insomnia, mental cases, or where quietude is essential, a sailing ship is decidedly preferable.

I saw a case of overstudy develop into one of acute mania; this was a case that certainly should not have been sent out in a steamer. In the matter of clothing, invalids should be careful to have light clothing for the tropical weather, this is most essential; and also not to forget a warmer change for the cold which follows. Another important point is choosing one's cabin. Never take one with more than two berths; of these choose the *upper*, it is lighter and more airy; and if possible secure a deck cabin, bearing in mind that it is the extreme heat more than the cold that is most trying to invalids. The port or left hand side of the ship is the best going out; the right or starboard coming home. The extreme cold usually spoken of in coming round Cape Horn is, I think, greatly overrated. In this voyage the thermometer never fell below 44° on deck or 52° in the saloon; and the heat in the tropics, though trying, is far less than would be encountered in returning by the Suez Canal and Red Sea. It is frequently found that the stay of three months in the Colonies seems to do the patient more good than the sea voyage. In any case reaching there in the midst of their glorious summer, with new surroundings, magnificent scenery, and a perfect climate, must naturally have a beneficial effect on all but hopeless cases; and the patient returns with renewed health and vigour, with many pleasant reminiscences of places and people, and with the satisfaction of having escaped an English winter.

Southsea

CASE OF
**RUPTURE OF THE UTERUS AND VAGINA
 WITH ESCAPE OF THE FŒTUS INTO
 THE ABDOMINAL CAVITY;
 ABDOMINAL SECTION.**

By SURGEON-MAJOR J. G. PILCHER, F.R.C.S.,
 CIVIL SURGEON, DARJEELING.

NASIBON, aged twenty-five, was admitted into the Darjeeling Dispensary during the afternoon of May 1st, having been two days in labour. The native dhoi—midwife—who attended the case stated that she had made out a face presentation, which had suddenly disappeared on the morning of the day of admission. The patient stated that she had been delivered of four children previously, all of whom had been born dead. She also stated, but with some hesitation, that they were all born at full term and that she was now at full term; that her pains ceased in the morning.

On admission, the woman was in a state of extreme exhaustion, the pulse was small and thready, she complained of severe pain in the abdomen, and had been vomiting frequently. On palpation over the abdomen all parts of the child could be clearly made out. The abdominal walls were very thin, and the child was evidently outside the uterus in the abdominal cavity. On vaginal examination the promontory of the sacrum was felt protruding sharply forwards into the pelvis. Anteriorly there were two angular projections backwards, each situated about two inches outside the symphysis; these were evidently the bodies of the pubes pressed inwards by the weight of the body on the femora during a period of softened bone. To this cause must also have been due the prominence of the sacrum. The antero-posterior diameter of the pelvis was less than two inches. The os uteri could not be felt anywhere, and the vagina was occupied by a fringe-like body, which felt like omentum. With slight traction this was brought outside the vulva, and was seen to be omentum.

A rupture of the parturient canal with escape of the fœtus into the abdominal cavity was diagnosed. Surgeon-Major Pilcher having been sent for, arrived about 7 P.M., confirmed the diagnosis which had been made, and determined to perform abdominal section.

Operation.—About 7.30 P.M. the patient was placed under chloroform, and an incision made in the median line of the abdomen from two inches above the umbilicus to just above the symphysis pubis. On opening the peritoneum a large quantity of bloody fluid and small clots escaped, and the uterus was at once seen to be firmly contracted. The placenta then edged forwards and was removed with scarcely any traction, and the body of the fœtus lifted out of the abdomen. The uterus was next examined. Its anterior surface was intact, but on lifting it out of the incision it was discovered that the posterior half of the circumference of the vagina was torn away from the cervix. In addition to this lesion there was a rent about three inches long, separating the posterior portion of the cervix from the body of the uterus. The rent in the uterus was then stitched with interrupted catgut sutures, the cavity of the abdomen was sponged out, and as much clot and liquid as could be found were carefully removed. Two large drainage tubes were inserted per vaginam, one into the uterus and the other through the vaginal rent, into the abdominal cavity. The abdominal incision was closed with seven silk sutures, which included the whole thickness of the abdominal wall. The operation was performed under antiseptic precautions, all sponges and instruments having been well soaked in perchloride solution (1 in 5000) and carbolic acid respectively. The wound was dressed with a thick pad of lint soaked in compound tincture of benzoin. The patient rallied well after the operation and was put to bed, some stimulants having been administered, and hot bottles applied to the feet. Half a grain of morphia was given by the mouth. The patient slept at intervals during the night. Her temperature at 7 A.M. was 102°, and her pulse very weak. At 8.30 A.M. gasping respiration was noticed, and twenty minims of sulphuric ether were injected hypodermically. At 9.45 A.M. the pulse was imperceptible, and the woman died from exhaustion at 10.45 A.M.

Remarks.—This case is of interest chiefly on account of the rarity of the condition. The state of the pelvis was

identical with that described by Dr. Playfair as due to osteomalacia. The astonishing statement of the patient that she had been delivered of four children at full time would be inexplicable to anyone not knowing the inaccuracy of the native character. It is much to be regretted that the patient herself was not in a condition to afford fuller information as to her previous history, and that her friends were too ignorant. The dhoi's statement that she made out a face presentation was doubtless perfectly correct. The outlet of the pelvis being impassable, the occiput was driven through the posterior wall of the vagina. The tear in the cervix must have occurred at the moment when the head passed from the uterus into the vagina. Had the patient been seen in the early morning, when the injury first occurred, she would have had a very much better chance of recovery. As it was, when brought to hospital she was in such a state of exhaustion that the operation was only performed as a last resource, and her recovery was hardly hoped for.

The above account has been kindly written by Dr. Peck of the Indian Medical Service, who assisted at the operation, and without whose help it would have been most difficult to complete the operation. The condition of the woman after the operation was not worse than before it, and had the case come under observation earlier, life would most likely have been saved.

Darjeeling, India.

A Mirror
 OF
HOSPITAL PRACTICE,
 BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

**A CASE OF COMPOUND FRACTURE OF THE CRANIUM, WITH
 DEPRESSION AND ESCAPE OF CEREBRAL MATTER;
 OPERATION; RECOVERY; REMARKS.**

(Under the care of Mr. WILLIAM ANDERSON.)

The special points of interest in these cases are fully indicated by Mr. Anderson in the remarks appended to each. The patient, Elizabeth M—, a child aged eighteen months, was admitted on July 2nd, 1887. It was stated that she had slipped from the arms of an elder sister, and fell over the balustrade down the well of the staircase striking her head against the ground about twenty feet below. She was picked up in an insensible condition, and brought to the hospital.

On admission she was collapsed and quite unconscious. There was a small scalp wound over the right frontal eminence, and from the contused aperture was escaping a considerable quantity of blood and brain matter intermingled with cerebro-spinal fluid. The temperature was 96°. A short time afterwards chloroform was administered; the external wound, which was in a very dirty condition, was cleansed. Under antiseptic precautions, the aperture was enlarged to the extent of about two inches and a half and the injured surface of bone exposed. A wide fissure was found over the right side of the frontal bone, extending from near the middle line and about one inch and a half above the orbit downwards and outwards into the right temporal fossa, where it was lost; the bone forming the upper edge of the fissure was depressed and separated from the lower edge sufficiently to allow the insertion of the tip of the little finger into the cranial cavity; the gap was occupied by broken-down brain matter, and there was a good deal of oozing of blood from the depth of the wound. The wound was flooded with a weak carbolic solution, and Mr. Anderson removed—partly with a trephine, partly with parrot-beak forceps—a large portion of the depressed bone, leaving an irregularly circular gap of about an inch in diameter. A ligature was applied to a small anterior meningeal vessel. A drainage tube was then inserted, the external wound was closed as far as the tube would permit, and antiseptic dressings were applied.

After the operation the patient slept a good deal, but was perfectly conscious on awakening. The subsequent progress was good. The temperature did not rise above 99° 8', and no complication occurred beyond a tendency to hernia cerebri, which, however, subsided at the end of a fortnight. The child took food well and appeared to be remarkably intelligent and lively, and no paralytic symptoms were to be detected. The healing process was somewhat slow, but was completed by Sept. 6th, and the child was discharged with a protective silver plate adapted to the seat of the injury. The area over which the bone was deficient was sharply defined, irregularly circular, and about the size of a half crown, and the pulsations of the brain could be distinctly felt through the thin integuments.

Remarks by Mr. ANDERSON.—The case is a fair illustration both of the value of antiseptic surgery and the amount of damage that the brain is capable of bearing without perceptible impairment of its functions. The wound, extending deeply into the hemisphere, was in a most unfavourable condition; severely contused, and covered with all the impurities of an unwept flooring. Nothing but the most careful cleansing of the parts and the observance of strict antiseptic precautions could have delivered the child from inflammatory complications and all the grave risks contingent upon these. With regard to the cerebral injury, it is of course impossible to say that the laceration and contusion of the right frontal lobe have been absolutely without effect upon the intellectual functions, but no change has been perceptible to the relatives of the child up to the present time. The rather free removal of the depressed bone probably lessened the tendency to hernia cerebri. It is, however, obvious that the elasticity of the imperfectly ossified skull in a child of eighteen months would render it unnecessary to encroach as far upon the cranial walls as might be considered expedient in the case of an older patient.

EPITHELIOMA OF THE SOLE OF THE FOOT, WITH IMPLICATION OF FEMORAL AND ILIAC GLANDS.

From notes by Mr. Seddon, dresser.

M. R—, a widow, aged seventy-three, was admitted into St. Thomas's Hospital on March 28th, 1887. The patient said that she had always been well until about six months previously, when she noticed a warty growth on the sole of the right foot. Two months afterwards a swelling was felt in the right groin, and the health began to fail.

On admission, an irregularly circular growth, of about the size of a halfpenny, was found in the middle of the right sole. It was sharply circumscribed, flat, but slightly elevated above the general surface, and covered with a thin bluish-white epithelium, except over a small excoriation near the outer border. It was moderately hard, but appeared to be of little depth, and could be moved freely over the fascia. There was some pain on pressure, but the suffering was not severe. No sign of inflammation was present in or around the disease. On examination of the groin, a group of enlarged glands was found extending from the lower border of the saphenous opening to Poupart's ligament. No evidence of implication of the intra-pelvic glands could be discovered. Twelve days later the growth, which was diagnosed as epithelioma, was excised by Mr. Anderson. It was confined to the skin, and showed no tendency to infiltrate the deeper parts. A mass of glands was removed from the groin, and the wounds were dressed antiseptically. The tumour and glands were examined by Mr. Shattock and Mr. Ballance. The primary tumour had the ordinary characters of epithelioma, and the glands also showed well-marked epithelial proliferation, but in these, interspersed amid the new growth, were innumerable minute areas of purulent infiltration. This latter observation proved to be of especial interest. The local progress appeared to be favourable until the ninth day after the operation. The wounds looked healthy although rather indolent, and the patient was cheerful and free from pain. On April 18th a sudden change for the worse occurred. The temperature rose to 104° 8', all action ceased in the wound, and extreme prostration set in. There were no rigors. On the following day there was incoherence, the breathing was laboured, the tongue dry, the pulse very rapid and feeble, and the abdomen distended. The temperature at 9 in the morning was 104° 8', but sank at noon to 99° 6', to rise again at night to the former height. On the 20th the temperature fell to 102° 8', but without improvement in the symptoms, and death occurred on the morning of the 21st.

At the necropsy, conducted by Dr. Sharkey, the iliac glands were found enlarged and affected in the same way as those excised from the groin; the dependent portions of the lungs were hyperemic and oedematous; the heart was small and flabby, with a large amount of superficial fat; and the aorta was atheromatous. The kidneys presented disseminated hemorrhages of recent occurrence, but no secondary abscesses were discovered in any part of the body.

Remarks by Mr. ANDERSON.—There is little doubt that the death of the patient was caused by a septic infection, starting from the purulent foci in the glands above Poupart's ligament. The operation does not appear to have had any connexion with the catastrophe, since the progress both local and general was all that could be desired until the unexpected rise of temperature on the ninth day, and at no time was there anything in the aspect of the wounds to explain the constitutional manifestations. The clinical features of the case are peculiar. The rather innocent aspect of the superficial growth, with its indisposition to infiltrate adjacent parts or to become inflamed or ulcerated, was not only very unlike that of epithelioma as seen in other parts of the body, but contrasted strongly with the remarkably malignant progress of the disease, as shown by the rapid extension along the lymphatics and the development of multitudinous centres of suppuration in a long and remote chain of glands. The records of epithelial cancer in this situation are very scanty, but so far as they go they are altogether at variance with the experience afforded by the present example.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.

A CASE OF IMPERFORATE RECTUM; OPERATION; DEATH; NECROPSY; REMARKS.

(Under the care of Mr. J. LIONEL STRETTON.)

M. W—, a female child, was born on Feb. 4th in the evening. The following day it was noticed that it had not passed anything per anum, and as this condition continued and the child was in great pain, the medical attendant was asked to examine it next day, Feb. 6th. The finger passed easily through the anus into a cul-de-sac, at the upper part of which there was a distinct bulging during the child's efforts to defecate. An attempt was made to puncture this, but as it was high up and much difficulty was experienced, it was abandoned. Mr. Stretton saw the child on the evening of Feb. 6th, and managed to seize the bulging surface above, which was held with artery forceps, and an endeavour made to puncture. After several failures, owing to the slipping of forceps, the bulging portion was brought into view, and proved to be the uterus, the cul-de-sac communicating with the vagina. As there was nothing behind this which could be laid hold of, and as the child was in great pain, continually crying and making efforts at defecation with a distended and tense abdomen, it was decided to open the bowel in the right groin.

Chloroform was administered, and the usual operation performed. The piece of gut opened was the cæcum, as was evident by a view of the appendix. A large quantity of meconium and faeces came away. The wound was dressed with styptium, and the child removed to bed. It seemed greatly relieved and slept soundly.

Feb. 7th.—Child is very comfortable, taking milk, by the bottle, well. No rise of temperature. Quantities of faeces are passed.

11th.—The intestine bulged through the wound a good deal, causing much strain on the sutures; this was reduced, and a pad applied. Child continues well. Motions becoming more solid.

14th.—Child very sick, causing the bowel to protrude again; this was easily returned, but gave trouble, off and on, for the next fortnight, after which it remained in place. The child began to fall away and refuse its bottle; it gradually became weaker, and died on March 18th. Motions were freely passed up to the last.

Necropsy.—Body very small and emaciated. Abdomen distended. Upon opening the abdomen a large piece of distended gut presented itself, which proved to be the large intestine from the cæcum downwards—i.e., below the artificial anus. The gut was firmly adherent to the opening in the right groin. The sigmoid flexure ended in a pouch which was fixed to the upper surface of the uterus. The

distended portion of the bowel contained solid feces. Nothing else of an abnormal character was discovered.

Remarks.—This case displays an interesting abnormality and emphasises the desirability of such operations. Even those who condemn these operations as scientific experiments could not fail to have been struck with the great relief afforded to the little sufferer. It is yet another instance of serious operation in a very young child (only fifty hours old) with rapid recovery and no constitutional upset as a result. The loading of the lower bowel was accomplished latterly, and was, in all probability, owing to insufficient peristalsis as a result of the general inanition.

NORWOOD COTTAGE HOSPITAL.

MULTILOCULAR OVARIAN TUMOUR; OPERATION; RAPID RECOVERY.

(Under the care of Dr. JOHN H. GALTON.)

A. W—, aged fifty. No family history of tumour. Had one child, twelve years ago. She first noticed a general swelling of abdomen three months ago. Had an attack of peritonitis at that time, for which she was in bed for seven weeks, under the care of Dr. Hatfield, of Forest Hill.

The patient was admitted to hospital on June 29th. She has dark hair and eyebrows, grey eyes, anxious expression. The abdomen measured thirty-eight inches, was dull in the middle and lower regions, resonant in both loins and upper part of hypochondriac and epigastric regions. One inch and a half above and to the left of the umbilicus a band of denser tissue was to be felt passing downwards to the left side of the abdomen. The uterine sound passed a quarter of an inch beyond normal with pain.

On July 1st chloroform was administered by Mr. Sidney Turner, Dr. Miller and Mr. Plummer assisting, and Drs. Hatfield, Holland, Wright, and Wintle were present; the operation was performed, lasting twenty-five minutes. The incision, three inches long, showed very thin cyst-wall, adherent to the anterior abdominal wall; adhesions strong at the upper part. Sixteen pints of fluid and 1 lb. 7 oz. of solid were removed. The lower part of the tumour was thin, free from secondary cysts, while the multilocular portion was at the upper part in the region in which the line of denser tissue was felt before operating. The abdomen was washed out with water at 110°, and three deep (thick silver) sutures, with four superficial (thin silver) applied. After the operation nothing but ice and opium were given for twelve hours, then milk and barley water with beef jelly every two hours for two days. The urine was drawn off every six hours. After the operation the temperature was 97°, and never rose beyond 98° at 6 P.M. on the day of operation, and never exceeded normal at any subsequent time.

On July 5th the wound was examined and found perfectly crusted. On July 7th the bowels acted with enema. On July 8th all the sutures were removed. On the following day urine passed naturally. On July 12th she was sitting up, and on the 14th was out in the garden.

The points of interest in the case are the top-heavy position of the multilocular portion of the growth and the extremely rapid and uninterrupted recovery of the patient.

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Peritonitis.—Pyæmia.—Locomotor Ataxy.—Separation of Coracoid Epiphysis.—Cirrhosis of the Liver.

A MEETING of the Pathological Section of the Academy was held on June 1st.

Dr. M'ARDLE communicated a case of Peritonitis from Perforation, and commented upon the cause of death in such cases.—The PRESIDENT said the paper raised the question as to how far in such cases death was attributable to shock to the nervous system. If that were so to any extent, it might preclude surgical interference with so important a cavity as the abdomen, because the immediate effect of it might be to augment the efficacy of one of the causes of death. If, on the other hand, death exclusively resulted from absorption of materials effused from the peritoneal

cavity, or from putrefactive gases, which would interfere with the heart's action, the objection to operative interference would not arise.—Dr. FINNY requested leave to make an observation. He understood Dr. M'ARDLE to say that it had been found during the last five or six years that in 70 per cent. of the cases of acute penetrative peritonitis in which operative interference had been resorted to there had been recovery. According to his recollection the facts were quite of an opposite character. In cases of chronic peritonitis, where there was purulent discharge, good results from operative interference might be hoped for; but, according to his recollection, in acute cases attended with perforation of the stomach or intestines, any such proceeding had been followed by death.—Dr. M'ARDLE explained that his statement only had reference to cases of septic peritonitis which were not perforative.

Dr. A. W. BAKER communicated a case of Pyæmia of dental origin.

Dr. FINNY exhibited Sections of the Spinal Cord (made by Dr. Henry T. Bewley), displaying the pathological changes found in locomotor ataxy, with certain peculiarities as to the distribution and extent of the sclerosis. The patient had died in Sir Patrick Dun's Hospital, to which he was admitted as a pay-patient at the age of thirty-eight, in December, 1885, for emphysema and cardiac dropsy, with a history of tabes of some ten years' standing. He had been under Dr. Finny's observation three years previously, and had exhibited at that time the following features of the disease, which were still better marked in 1885. Sensory disturbances: Diminution of tactile sensibility in the legs and arms, but more particularly in the forearms. He was unable to state where his feet were, when in bed, until he struck the foot-board with them, and on one occasion, while pinning on his left cuff, he passed the pin through the flesh of his wrist and was not aware of it until, finding the cuff was fixed, he tore away the flesh by pulling it down. He had some paresthesia of the fingers, and described a sensation of great heat in the tips of the right hand, and said that their moisture would at times rise as steam from them. Neuralgic pains were occasionally present in both legs and arms, but was not by any means a prominent symptom. Motional disturbances: Unsteadiness in walking and in turning round; difficulty in maintaining the equilibrium while standing with the eyes closed, or on looking up at a height. There was no ataxic gait, the gait being that of more uncertainty and debility. He had great difficulty in walking in the dusk. He experienced great difficulty in buttoning his clothes, more especially behind him. Reflexes: The patellar reflexes were absent, and the Argyll-Robertson phenomenon was sufficiently marked, though the pupils were not markedly contracted. The sexual reflex: At the time of his last illness the sexual appetite was not inordinate, though early emission followed upon excitement; but for many years preceding it—as early as twelve years of age—the sexual desire was greatly increased, and venery was immoderately practised with masturbation. There was no distinct syphilitic history, though he had venereal disease at the age of eighteen; and there were no appearances of scars. The patient's whole history pointed to a life of sensuality and alcoholism. The notable features in his case were—(1) early and immoderate sexual appetite; (2) the slight amount of tabetic gait; (3) the greater implication of the cervical region of the cord. Post-mortem appearances of the cord: Diffuse spinal meningitis, more especially of the posterior aspect of the cord, and sclerosis involving the cervical region in the highest degree, and to a less the dorsal and lumbar regions. The posterior root zones were well defined by the pathological changes, and more or less involved also are the postero-median columns. The disease was mainly limited to the postero-external columns in the lumbar and dorsal regions, but in the cervical the postero-median, as well as the root zones, were involved to a greater or less extent of symmetry. There were no evidences of ascending degeneration, such as is usual in cases where the lumbar bulb is the seat of the disease, and the sclerotic changes were separated from the grey matter of the posterior commissure and basis of posterior cornua by symmetrical well-defined bands of healthy nerve fibres. A similar condition is well depicted by Dr. Gowers in his "Diseases of the Nervous System," vol. i., p. 310. As it is unusual for death to occur so early in a case of tabes, the specimens possess another interest, as they exhibit the disease in a less pronounced form and extent than is commonly met with in more chronic cases.

Dr. BEWLEY exhibited Microscopical Specimens of the Cord in the case brought forward by Dr. Finny, and mentioned that the disease affected the upper cervical portions of the cord more than the lumbar portions. The case was in that respect peculiar. There was another peculiarity which he had not seen in any drawings of cords affected by locomotor ataxy—namely, that in the cervical region the posterior third of the internal part of the postero-internal column was sclerosed, the middle portion was not sclerosed, and the anterior portion was again sclerosed. The posterior third derived its ascending fibres from the lumbar region, in which there was some disease, and those fibres were consequently degenerated. The dorsal region was not much diseased. The middle third containing fibres from that portion of the cord was fairly healthy. The anterior third containing ascending fibres from the diseased cervical region was much sclerosed.

Dr. STORY read a paper by Dr. E. H. Bennett, who was absent, on a case of Separation of the Coracoid Epiphysis of the Scapula.

Dr. BEWLEY submitted a case of Cirrhosis of the Liver and Thrombosis of the Portal Vein. The specimens were taken from a man aged sixty, who had enjoyed fairly good health, with the exception of occasional attacks of bronchitis, until the 18th or 20th of last March. First piles came on, which gave him considerable trouble. Then his feet swelled, and his legs became oedematous. Afterwards his abdomen began to swell. He lost flesh, strength, and appetite, and his abdomen and legs rapidly increased in size. After about two weeks and a half jaundice came on, and on April 7th he was admitted into the Adelaide Hospital under the care of Dr. Beatty. On May 12th he was tapped. Up to that time it was uncertain whether it was cirrhosis or cancer of the liver that he had. When the tapping was performed the fluid that came away was serous and largely coloured with blood. A hard nodulated mass was then felt under the right costal arch, extending out to the epigastrium. The diagnosis then arrived at was that it was cancer or some malignant disease of the liver. At the tapping eighteen pints and a half of fluid were withdrawn. His abdomen re-filled; he grew weaker, became unable to take food, and died on May 21st. On post mortem examination his abdomen was found to be again immensely distended with fluid, the quantity being between two and three gallons. This fluid also was extremely bloody, and from the deeper portions of the peritoneal cavity large soft blood-clots came. The liver, which weighed four pounds and three-quarters, was found to be in a curious condition. The left lobe presented very typically the characters of extreme cirrhosis, being extremely hard, and converted, for the most part, into bands of greyish dense fibrous tissue. The right lobe was largely increased in size from above downwards, and was bright yellow coloured, the yellow coloured part being marked off by a distinct line from the grey cirrhosis in the neighbourhood. This yellow part was perfectly soft, while the left lobe was like a mass of leather. About half of the right lobe at all events was in this peculiar soft yellow condition. The trunk of the portal vein was filled for an inch or two with a soft clot; but the walls of the vein were perfectly healthy; the vein at some distance from the liver was also healthy. The sections did not show any necrosis of the soft diffuent tissue, but owing to the amount of obstruction to the circulation it was softened and on the way to necrotic change.

The Section then adjourned till next November.

Reviews and Notices of Books.

A Handbook of Gynecological Operations. By ALBAN H. G. DORAN, F.R.C.S. London: J. & A. Churchill.

THIS book treats of those operations upon the female pelvic organs which are accepted by the profession. It deals not with what has been called "minor gynecological operations," and we congratulate the author upon this fact. All the information necessary for carrying out the operations treated of will be found in the work, for the author has not confined himself to a description of the operations simply. Chapter 1 treats of the surgical anatomy of the female organs, a subject imperfectly taught in the anatomical theatre, but of enormous importance in some of the operations performed on the pelvic organs. Chapter 2 treats

of pelvic exploration. In Chapters 3, 4, and 5 will be found an account of instruments and appliances and their use. In Chapter 6 a brief account is given of cystic and allied diseases of the uterine appendages, and the examination of abdominal tumours, while the remainder of the book is devoted to an account of ovariectomy, oöphorectomy, supra-vaginal hysterectomy, operations for fibroid tumours and polypi, vaginal extirpation of the uterus, amputation of the cervix, trachelorrhaphy, operative treatment of extra-uterine pregnancy, Cesarean section and Porro's operation, operations on the perineum, for rectal and vaginal fistulæ and ectopia vesicæ, and on the vagina, vulvar structures, and urethra. Mr. Doran is in favour of performing ovariectomy early, as soon indeed as the tumour is diagnosed, a view which is now generally accepted, but which became tenable only in consequence of the great reduction in the mortality after the operation, brought about after the introduction of antiseptics into surgical practice. The observations on tapping abdominal tumours are excellent. The author is opposed to tapping ovarian and broad ligament tumours as a rule; at the same time he gives clearly the indications which call for this proceeding. All the steps of the operation for the removal of ovarian tumours are given in detail, together with the difficulties the operator may meet with, and the methods for overcoming them. Mr. Doran is not in favour of a short incision in the abdominal wall; but he fails to bring out clearly the first and perhaps the chief advantage of the longer over the short incision—that is, that the longer incision admits of exploration by the whole hand, which will enable the operator to make out the relations of the tumour to surrounding organs, and the possibility of its removal; in fact, to complete his diagnosis. As soon as the abdomen has been opened, it is the first duty of the operator to explore with the whole hand, so that he may make sure of what he has to deal with. Through neglect of this rule the trocar has been thrust into the gravid uterus, fibroid tumours, and even into the enlarged spleen under the erroneous impression that they were ovarian cysts.

The treatment of patients after ovariectomy is fully discussed. The author favours the administration of food by the mouth and by the rectum from the outset, and lays, we think, too much stress upon it. Most patients do well without food for the first forty-eight hours or longer after the operation, while food introduced into the stomach often remains unabsorbed, and causes flatulence and oppression; enemata, again, occasion discomfort, are liable to become very offensive, and set up irritation of the bowel; they should be administered to old or weakly subjects only.

The directions given for the removal of the ovaries and of fibroid tumours, and the other operations treated of in the work, are all that could be desired; but there are questions connected with some of these operations which are still the subjects of discussion, and the conditions calling for oöphorectomy, Emmet's operation, and supra-vaginal hysterectomy for fibroids are matters with regard to which great divergence of opinion prevails. The frequency with which oöphorectomy has been performed has been disapproved by most of the authorities on the diseases of women in this country, as well as by the leaders of the profession generally, while Emmet's operation has not been frequently performed here, or if it has, the results have not been made public. Upon the conditions demanding these operations we find but little information in Mr. Doran's book. The opinions of one or two authorities which are given are insufficient to enable the would-be operator to form a correct judgment as to the necessity of operating in any given case. Those practitioners requiring such a work as "Gynecological Operations" need direct teaching, and such direct teaching exercises a far greater influence than any statement of the opinions of different authorities, however complete. We cannot help regretting the absence in this work of such direct and guiding statements upon these subjects, for, in other respects, the book supplies all the information which the operator requires.

THE LANCET.

LONDON: SATURDAY, AUGUST 11, 1888.

DURING the present week the British Medical Association has been holding its fifty-sixth annual meeting at Glasgow. The gathering has been markedly successful, the sectional proceedings being characterised by commendable zeal, whilst socially the visitors to the great city on the Clyde have been the recipients of the proverbial hospitality of its inhabitants. To-day (Saturday) the members are dispersed in various directions to enjoy the natural beauties of Scottish scenery. In their retrospect of the week's work, all must, we think, concur in the opinion that the address of the President was fully worthy the occasion, and that in some respects it stands out before all the rest of the proceedings to which it was the introduction. If the Association has been fortunate in its place of meeting, and in its work, it has been fully as fortunate in having as President one who, like Professor W. T. GAIRDNER, has throughout his life so fully identified himself with medical education, and who justly occupies so honourable a position amongst physicians of the day. There was a manly, earnest ring about his address, which, combined with shrewd common sense, makes it of abiding interest. Those who heard it delivered must have felt that their President had stood forth as the vindicator of medicine and the position of her followers with regard both to science and to religion.

After a brief allusion—inevitable on such occasions—to the history of the place of meeting, and a contrast of the Glasgow of the past with that of the present, the address passed to its theme, which was, "The Physician as Naturalist and as Healer." Professor GAIRDNER pointed out that the term "physician" recalls the rôle applied by HIPPOCRATES to the healer of the sick. He is the servant of nature, and his whole art is bounded by the observation of natural phenomena and their interpretation. It is interesting to note how the term has become degraded, so that "physic" indicates, not so much the study of nature and the application of nature's laws, as the art whereby it is sought to counteract the operations of nature. For, as Professor GAIRDNER showed, the whole medical world left the path pointed out by HIPPOCRATES to follow only traditions and aphorisms, and instead of becoming a scientific became a *learned* profession, with results which probably can never be estimated. It is remarkable how far above and beyond the generations of physicians that followed him stands HIPPOCRATES in this conception of the rôle of the physician. There were not, indeed, wanting those who cavilled at the ideas of HIPPOCRATES, and who thought it absurd that one who undertook to cast out disease should do so by taking advantage of the natural processes—of the *vis medicatrix nature*. For them and their practice the traditions of the "fathers of medicine" sufficed, whilst those who ventured outside this beaten track, and inquired into the *rationalis* of disease, were scouted as outside the pale of medicine. BACON, who, according to Professor GAIRDNER, adopted almost the very words of

HIPPOCRATES in his famous exordium to the "Novum Organum," had a very poor opinion of the medical profession; he saw how totally opposed to scientific methods were the principles that governed the practice of physic in his day. It is remarkable how, under the influence of so-called "learning," the professors of a practical art like that of healing became for centuries a race of pedants, utterly blind to the facts of nature daily exhibited before them, and bound hand and foot by the traditions of the past. How this erroneous conception of the physician's province prevailed in some countries down to the last century is to be seen in the trenchant sarcasms of MOLIÈRE. We can afford to smile at these criticisms now, but we cannot deny that they were well founded; for even in our country we know how little regarded was HARVEY by the physicians of his day,—a slight of which even now we see some traces in the contempt that some of the "practical" men amongst us have for science. Yet it is owing to men like HARVEY, to those who follow out the maxim that "all the art of medicine depends on observation," that we owe the deliverance from the bondage of creeds and systems, and the disappearance from amongst us of that type of physician characterised by Professor GAIRDNER as a "most stupid, pompous, brainless formalist."

Undoubtedly the growth of science has done much to effect this salutary change; and a large part of Professor GAIRDNER'S address was devoted to establish scientific teaching in its rightful place as the foundation of medical study. With pardonable pride he pointed to the early recognition by the Scotch Universities of the importance and value of science in medical training. And we agree with him that many of our present difficulties in medical education are to be found in the lack of elementary scientific instruction in schools. He did well to recall the emphatic declarations of FARADAY upon this matter, and to remind us how far we are yet from recognising their truth. We commend to educationists his just and true description of the stunting effect of our modern methods of school training upon the intelligence, and the crying need there is for the early cultivation of the senses and the reason in observation of nature's phenomena. We have always urged that natural science is the true basis of medical knowledge, but, at the same time, we maintain that the youth should be required to commence his study of pure science long before he takes up his pursuit of the medical sciences; yet under the present régime of our educational systems this is very seldom the case. The result is that we are compelled to crowd into the few years of medical study not only all that pertains to the structure and functions of the body in health and disease, to the observation of morbid processes and the measures aiding in the restoration to health—not only these vast subjects, but even the sciences on which they are based, such as physics and chemistry! How is it possible under such conditions ever to effect a thorough training of the student, or to make a man a real "physician" in the Hippocratic sense? It is not supposed—it would be absurd to expect—that the medical practitioner should be fully cognisant of all branches of science; but we entirely agree with Dr. GAIRDNER that it is the discipline of mind entailed by the study of science, the importance of indulging habits of accuracy in observation and careful-

ness in inference, that are so important, and, indeed, essential to the making of sound practitioners.

If, then, we agree with Professor GAIRDNER in the views he so ably expressed concerning the pursuit of medicine as a science, as being the true line to be adopted by the physician as the *healer*, we are equally gratified with his noble exposition of the modern *religio medici*. Nor do we think that his remarks on this head are at all misplaced. It is too much the custom of those who wish to de throne science to make capital out of its materialistic tendencies, and to seek to widen the breach between science and religion. But we hold that it is not religion in its *essence*, but only in its false interpretation, that can in any sense be held to be opposed to the study of the marvellous processes of nature. Professor GAIRDNER has done good service in recalling attention to the nature of true religion, and in showing how the physician must be, whether confessedly or not, a religious man. Brought face to face with all the marvels of human material existence, it is impossible for him, of all men, to be blind to the fact that there are problems far beyond his powers of solution; and that, wide as his knowledge may be of the "things that are seen," his personal life and duties would be shorn of their highest sanctions if it were not for faith in the "things that are not seen."

THE efforts we have made to bring under public notice the widespread nature of the evils arising out of the sweating system have met with a prompt response at the hands of our hereditary legislators. First, to point out the new phase of the sweating system in the East-end of London, due to the advent of thousands of foreign refugees, we had the gratification, after four years' agitation, of seeing a Royal Commission appointed to investigate this subject. This done, we at once entered our protest that the East-end represented but a small corner of the grievance; and, to prove this assertion, we held Special Commission inquiries in the principal sweating centres of the provinces. Our first report dealing with the provinces was published last April, and since that time the controversy produced has raged throughout the provincial press. Nor did it fail to find an echo in the London journals. Organs of all parties, notably the *Daily News* and the *Standard*, supported our endeavours, and alluded in complimentary language to the thoroughness of our researches in the provinces. The desired result has consequently been attained; that which we from the first desired has been realised. The original scope of the House of Lords Commission is now recognised as altogether inadequate, and assent has been obtained to carry out the inquiry to other parts of the metropolis and to the provinces. On Friday last the Earl of DUNRAVEN moved to extend the inquiry to "the United Kingdom." The Earl of MEATH, in supporting the motion, justly remarked that the action of the Commission had already indirectly benefited a larger number of Her Majesty's poorer subjects than any legislation which had been effected during the present session.

Consequently the ground over which we have already travelled will be revisited, and this time with all the facilities and all the authority a Royal Commission confers. It will then be found that our pioneer efforts have already brought about some notable alterations. Not only have we the satisfaction of bringing Government action to bear

upon the provinces, but improvements due to the attention aroused by our revelations will have preceded the action of the House of Lords. Of course, attempts of a more or less interested nature were made to minimise the effects of our reports. On several occasions these reports were assumed to be exaggerated or overdrawn; and yet the very persons by whom we were thus criticised themselves confirmed all the important points on which we insisted. Thus, for instance, after several weeks have elapsed and due investigations were made, the Birmingham Town Council held a solemn sitting to hear the report of the Health Committee on THE LANCET revelations. These were described as exaggerated, and yet the medical officer of health asserted that the cubic space in the workshops varied from 448 to 178 cubic feet. It is not necessary to point out that this confirms our contention. There should be at least 250 cubic feet for each person, and naturally there would be less workpeople in the room at the time of the inspector's visit than when business is brisk, so that the cubic space is often less than that mentioned above. Then the medical officer of health went on to say that in some cases the closets were filthy and too near the workshops. This evil, we are assured, will now be remedied; the closets will be removed. So that much will have been gained. Then a letter from Her Majesty's Inspector of Factories was read, stating that "almost all, if not all, the workshops are exempt from lime-washing, being dwelling houses, and papered, although most filthy. The privies are also in most cases very dirty, and the ashpits are not often enough emptied. Ventilators, when provided, the *employés* will not use, and consequently the atmosphere is usually disgusting." This is surely confirmation enough of our report, and this the Birmingham press freely acknowledged. As another excellent practical result, the factory inspector and the medical officer of health of Birmingham have now undertaken to exchange notes and actively assist each other.

At Leeds, where some very great manufacturing interests are at stake, we received our full share of criticism. The *Leeds Mercury* sent a special correspondent to visit all the places we had described. Three very lengthy articles were the result, in which the places we had denounced were depicted in language far more energetic than that which our Commissioner had ventured to use. The Town Council, on its side, held a special inquiry, and the report of Mr. NEWHOUSE, the principal inspector at Leeds, fully confirmed all our statements. Consequently some of the nuisances we specified will be abolished. Dr. GOLDIE, the medical officer of health for Leeds, with commendable energy, at once set to work inspecting and reporting; and, while occasionally introducing a few words to soothe local susceptibilities, he denounced emphatically enough the darkness, the dirt, and the accumulations of dust on the floor and on the rough and unclean walls of the workshops. The deficiency in the number of closets and their filthy condition he also admits, expressing at the same time his surprise that the workers did not exhibit more evident signs of ill health. Thereupon the Corporation Health Committee concluded that some laxity in the inspection of workshops had grown up, owing to the conflict of authority between the factory inspectors and the

sanitary inspectors. Measures were forthwith taken to bring the two authorities together. Then both Dr. GOLDIE and Mr. NEWHOUSE were instructed to inspect periodically all workshops such as we had denounced, and further it was resolved to appoint an additional sanitary inspector, with "the intention of one inspector being specially told off to look after the sanitary condition, not only of the workshops, but the dwellings of the people employed in them."

In Liverpool, Manchester, Glasgow, and Edinburgh the local authorities have also earnestly discussed our reports on their respective towns, and several of the more glaring abuses are now removed. Some of the sweating dens that had escaped observation are now brought under the provisions of the Factory Act; and, what is more important, the authorities are awakening to the fact that a heavy responsibility rests upon them in the giving out of contracts for the making of clothes. In this respect a very edifying discussion took place at the Glasgow Town Council. With regard to municipal contracts, Bailie GRAY explained that "with two gentlemen he called upon various offerers for the making of police clothes in the city. They were anxious to know where the clothing was made. They called on the lowest offerer, a very respectable firm in Argyle-street. They told him he was the lowest offerer, and that they were desirous of seeing the premises where the clothing was made if they got the contract. He frankly told them that he gave them out, and they could not see the premises where they were made. They at once struck that man off the list. They called upon another large firm in Argyle-street, and were shown over the premises where a portion of the clothing was made. It was downstairs, and insufficiently lighted, but they were told also that a very large portion of the clothing would be given out. They therefore went to the next man on the list."

This is assuredly a good example of what should be done with regard to municipal contracts. But more than mere casual inquiry is wanted. Close supervision is necessary, for the terms of a contract are not always observed, and clothes stated to be made on the premises are often sent to the homes of the worker or of some sub-contractor. Still, it will be seen that the municipalities are beginning to look to something beyond mere cheapness. Thus the principles we have sought to advocate are beginning to take root; and even in the course of a few weeks material practical improvements have been realised.

THE address of Sir WILLIAM TURNER on the occasion of the graduation ceremonial in medicine is worthy of the best days and traditions of the Edinburgh University. It is characteristic of Sir WILLIAM that, though himself an Englishman, and a distinguished *alumnus* of St. Bartholomew's and graduate of London, he is a deep believer in the Scotch university system—at least, as seen in Edinburgh,—as well he may be. It has done well for him, and well has he served it. Not, perhaps, sent into the world with the same mission as his gifted predecessor, and possibly endowed with a less soaring and generalising genius in anatomy, he stands, nevertheless, well in the succession, and has brought qualities to the chair and to the school which even GOODSIR had not to give. His common sense is as striking as his

knowledge of anatomy, and he has further the faculty of expression—so that whether before a class of 500 lecturing on the temporal bone, or before a Select Committee of the House of Commons or the Medical Council, defending the Scotch system of teaching and graduation, he is sure to command attention. His address to the undergraduates is interesting in many respects. It shows the immense progress made in medical science and art; and it shows, too, that the Professor of Edinburgh will be lastingly identified with this progress, particularly with two of the chief notes by which the history of medicine in the nineteenth century will be judged—*viz.*, the discovery of the properties of chloroform and the introduction of the antiseptic system into surgery. Sir WILLIAM TURNER rebuts the charge that there is any deficiency in the means in Edinburgh for ensuring the practical element in medical education. True, he lately seemed to make the serious admission in the Medical Council that Scotland, though not generally regarded as an infertile country, could not provide a sufficient number of gravid women to enable medical students to attend the number of obstetric cases required by the English Boards. But he points triumphantly to the splendid laboratories and other new buildings of the University, including a stately Academic Hall, to be presented by Mr. MCEWAN, M.P., to the University; and he shows how the old lecturing system of Edinburgh has been supplemented by one in which the student is made to observe and test facts for himself. The necessity for developing this faculty for observation was insisted on, and Sir WILLIAM TURNER expressed a decided doubt whether this development was much helped by too prolonged a study in the Arts Faculty. He confessed to having got an important lesson out of a dialogue he read in early life between a tutor and his pupil, entitled "Eyes and no Eyes, or the Art of Seeing." The discourse of the Professor was crowned with an admirable discussion of the moral aspects of the profession, and their importance not only to the graduates, but to their patients, their professional neighbours, and the public. The universities are weak in their control over the conduct of their graduates. They have not the judicial and censorial functions of the corporations; and this is a serious deficiency. "Once a graduate, always a graduate" has a serious side to it, as a university has not the power of ridding itself of a member who has acted unworthy of his university and of his degree. It is, perhaps, true that universities hold high before their *alumni* the academic standard of conduct and of character, and it is certain that if the Edinburgh graduates of last Wednesday act up to the principles expressed by Sir WILLIAM TURNER they will advance the reputation alike of their University and of their profession.

SIR JAMES CRICHTON BROWNE's classical and practical lecture, which appeared in our columns on July 28th and August 4th, cannot fail to attract attention, and excite discussion on the question of criminal responsibility, by members of the legal and medical professions, as well as by the educated public at large. For our own part, we unhesitatingly adopt the arguments of the lecturer, and support his appeal for the appointment of a "Criminal Lunacy Inquiry Commission," which he proposes for the purpose of making systematic and periodical investigations

into the condition of criminal lunatics after their consignment to Broadmoor Asylum. There are some prisoners and convicts concerning whose insanity no doubt can arise, even in the mind of the laity; but there are others whose crimes, although apparently—that is, to the ordinary observer—committed whilst in full possession of will power, are yet traceable by the expert to diminution of voluntary control. If happily these latter escape with their lives to be "detained during Her Majesty's pleasure," it is obvious that a complete record of their acts and demeanour during their incarceration should not only be preserved, but published, in confirmation of the grounds upon which they were sent to enforced confinement instead of to the gallows. If this were done, there would be less disposition than there is at present to hesitate to accept the opinion of expert medical witnesses upon the relationship of insanity to crime. Whilst, however, the recorded history of so-called criminal lunatics ends with their public career, there will necessarily be a great tendency to regard with distrust the plea of irresponsibility set up in answer to a charge of wilful murder. Perhaps the most cogent remarks in Sir J. CRICHTON BROWNE'S lecture were those in which he attacked and demolished the tenets held by Lord BRAMWELL upon the most fitting jury—lay or medical—to decide upon a man's insanity. As is well known, his Lordship holds the opinion that "common sense" is sufficient to determine the question at issue, and that there is no necessity for special expert knowledge. Nor is Lord BRAMWELL singular in this opinion, for not long since we had occasion to contest the "common-sense" ruling of one of our judges, "that the question of a prisoner's insanity was one for the jury, and not for the medical witness."

As our readers will have observed, Sir J. CRICHTON BROWNE proposes that the suggested Criminal Lunacy Inquiry Commission should consist of lawyers and medical men. One's first impression would be that so apparently incongruous an admixture of legal and medical minds would be unlikely to yield useful practical results, but such preconception must give way before the assurance vouchsafed that both in the case of the Lord Chancellor's Visitors and in that of the Board of Commissioners in Lunacy—each of which has its legal and medical representatives—"the lawyers, with striking aptitude, adopt the scientific standpoint" when brought into contact with their medical colleagues. It must not be gathered from this statement that the lawyers are mere servile puppets, and that their pay is an "unearned increment" to their means, since "the severe intellectual training which a barrister goes through, the art which he acquires in his profession of sifting evidence and of concentrating his attention upon minute details, as in reading judicial decisions, prepares him to look with insight and judgment upon cases of insanity when they are brought under his personal notice."

We have over and over again in these columns declaimed against the existing legal test of criminal responsibility—viz., the knowledge of right and wrong, or of the nature and consequences of a criminal act. It is long since such test was proved by medical science to be unreliable; since it is so often fallacious. Such a commission as Sir J. CRICHTON BROWNE

move the lethargic legal mind to see the advisability—nay, the necessity—of reform in this important matter, and thus to force the Legislature to substitute proved scientific data for the so-called "common sense" as adopted by Lord BRAMWELL and others. In conclusion, we would suggest that the Criminal Lunacy Inquiry Commission should not confine its labours to investigating the cases of the Broadmoor prisoners, but should act as assessors to the courts appointed to determine the mental condition of persons alleged to be insane.

Annotations.

"Ne quid nims."

THE DIET OF THE SOLDIER.

IN the debate upon the Army Estimates on Saturday last an interesting and important discussion took place on the subject of the diet provided for the soldier. Dr. FARQUHARSON, by whom the subject was introduced, was of opinion that the ration was not only insufficient in quantity, but that the hours arranged for the soldiers' meals were very injudicious, and especially so for the recruits. He expressed a strong hope that the Government would take steps to have the whole subject carefully considered by a departmental committee composed of persons conversant with the subject. His views were supported by Sir G. HUNTER, Mr. HANBURY, Colonel NOLAN, and Lord H. BRUCE. In addition to the insufficiency of the food, complaint was made of the quality of the meat supplied, Mr. Hanbury asserting that "it was by no means the fact that the soldier got the food for which the country paid." It seemed to be generally admitted that the system of inspection of the food was very defective; that it was entrusted too much to young and inexperienced officers, who "knew nothing about the quality of meat"; and that "owing to the meat ration being inspected at an early hour of the morning, the inspection was hurried over, and a large quantity of bone and sometimes of very inferior meat was often passed." We are not quite prepared to say that the amount of food has been proved to be insufficient if all the other necessary conditions were efficiently carried out, but there cannot be the least doubt that the whole system requires careful and practical revision. We do not find that any reference was made in the debate to the cooking for the soldier, but this we are quite certain needs great improvement. The subject was well considered by Lord Herbert's commission, and some steps were taken to provide skilled cooks by the establishment of a school of cookery at Aldershot, but for some reason or other the experiment has failed of success, and the army cooking is still very much below par. Mr. Stanhope has promised that the question of the adequacy of the meat supply shall be thoroughly gone into by a committee. But the scope of inquiry must be extended beyond the mere quantity. An efficient system of supervision of both quantity and quality of the meat delivered to the troops must be devised, and the duty devolved upon officers of experience. Instruction must be given at the military colleges on the subject of the quality of meat, how to distinguish the good from the bad, and officers be thus trained for an important duty, and stringent regulations must be enforced as to the rejection of any meat or other article of food that does not come up to the standard. A change is required in the mode of cooking, and in the nature of the instruction given to the soldiers entrusted with that duty. This, if well devised and adequately carried out, would tend to diminish the complaint as to insufficient quantity, for we believe that in this

manner much that now goes to waste would be utilised. A change is needed in the hours at which the meals are provided, the interval between dinner and breakfast, even when partially broken by tea, being much too long, and giving rise to a craving which is too often made an excuse for indulgence in stimulants. Another very important point for consideration is whether it would be possible, as we feel sure it would be advantageous, to diet the recruits separately from the soldiers during the first few months of their service. The subject is one of great interest to all who care for the welfare of the soldier, and we trust that in the selection of the members of the promised committee the Secretary of State will be careful to nominate officers who have not only had experience, but have shown that they take a practical interest in the question, men not given to fads, and, above all, men who are not likely to take red-tape views of the question. The first point to be considered is what will be most beneficial to the soldier, and therefore to the service; and the second, how this can be effected without such an increase in expenditure as will be certain to excite opposition on the part of those who have to provide the means of carrying on the service—judicious expenditure tempered with a wise economy.

PROTECTION FROM FIRE.

NOT many consecutive weeks elapse without bringing home to Londoners the perils to life and limb which lurk in the liability of our crowded habitations to take fire; and a special interest therefore attached to the Fire Rescue Exhibition which has been held during the last fortnight in the Portman Rooms. Under another aspect, also, the exhibition was of interest, for it afforded striking demonstration of the great versatility of invention applied to the work of rescue under various conditions of danger from fire. But the prevailing impression that a visitor carried away was that much still needs to be done in the way of making inventors understand what are the elementary conditions under which they work, for it would be difficult to collect in any other connexion so much hopelessly useless machinery, or so many examples of misapplied ingenuity. Here, for example, was shown a metal ladder, constructed for stowing away above the topmost window of a high building in such a position that it would, upon being released, fall by its own weight in front of the line of windows below, from which fugitives might desire to escape. But, in order to release it, the unhappy fugitive must lean out at the window for the purpose of reaching the rod or rope which communicates with the locking gear, thus incurring the imminent risk of bringing the iron avalanche down upon his head. Another proposed method proceeds upon the assumption that next-door neighbours will consent to the establishment of internal means of intercommunication between adjoining houses which can be made use of from either side at any moment; and many other equally impossible arrangements were exhibited in the most perfect good faith. But although many useless devices were on view, there were some inventions of real merit exhibited, and the visitor could hardly fail to carry away some valuable hints. Among the classes of fire escapes, the most practically useful seemed to us to be those which consisted merely of a friction block running on a smooth rope, and carrying a band, by which a body can be suspended. The friction of the rope prevents a too rapid descent, and a small handle makes it possible at any moment to grip the rope so tightly as to stop the descent altogether. It affords, therefore, a perfectly practicable way of descending the front of a house, provided there are no flames belching forth below, and making the descent dangerous. But its peculiar merit is that it is perfectly simple in use, the only adjustment required being to make one end of the rope fast to some piece of furniture in the room sufficiently heavy

to bear the strain upon it, and that the apparatus is strictly portable, for the block, rope, and fittings wrap together into a space not exceeding that occupied by a clean shirt. To travellers, therefore, this contrivance offers a cheap and serviceable resource, which may be kept constantly at hand, and might upon emergency prove of incalculable service. Other fire escapes were shown, for which it was claimed that they were portable, but they all required such elaborate anchorage and fitting of one kind or another into the buildings where they were to be used that they might better be described as structural, and none of them was distinguished by any conspicuous merit. For the protection of buildings several highly ingenious appliances were shown, and in this department the success attained was much more pronounced. Of sensitive alarms and automatic sprinklers it would take long to tell; nor have these, from our point of view, the same interest which attaches to appliances having the direct object of rescuing imperilled life from fire. They therefore may be dismissed with a general word of commendation; but we cannot conclude our review without especial notice of a somewhat elaborate respirator, designed to enable its wearer to breathe an atmosphere laden with smoke. The air as it passes through this instrument is first cooled by means of a sponge moistened with water and then filtered by cotton wool saturated with glycerine. Of its efficiency no tests were given, but it may fairly be assumed that, to some extent at least, it would answer its purpose. The idea is one that merits adaptation to other purposes, for it is well known that a vast amount of lung disease is occasioned by breathing atmosphere charged with irritating dust which finds its way into the air passages and cells.

MOVEMENTS OF EXPRESSION.

MIMICRY and gesture arise for the most part as the outcome of the exercise of the imitative faculty. Blindness, whether congenital or acquired, may be partly recognised by the want of play in the countenance; very short-sighted, even if very intelligent, individuals often have very blank faces, unless the errors of refraction have been corrected by artificial means. When speaking or eating the facial muscles of the blind perhaps move less than those of emmetropic individuals. The new-born are naturally devoid of any characteristic play of the face, and this accounts for the difficulty of getting a good portrait, or even a good description, of them. During the first days of life it is difficult to distinguish by the face the joyful from the sad, or the intelligent from the stupid. In the second six months of existence an earnest mode of speaking to a healthy infant brings an expression of earnestness into its face, and a change from gravity to cheerfulness may also easily be produced. Although most of these movements result from imitation, a few are to be attributed simply to reflex sources, and a few have an intuitive origin. So long as words are wanting, children, like the higher animals, communicate their feelings and thoughts by demonstrative movements and behaviour. The infant's first smiles are often misunderstood. An agreeable perception or a feeling of satisfaction is necessary to the causation of a smile, and these sensations must be of sufficient strength to occasion a stimulation of the corresponding parts of the facial nerve centres. Now the number of sensations of pleasurable sort which are possible to a baby of a few days old is very few, and a perception in the proper sense of the word is beyond its capacity. The being bathed or suckled does not cause it to smile, but its countenance expresses simple satisfaction, probably because of the absence for the time being of all uncomfortable feeling. Even sleeping infants a few days old lift the angles of the mouth in an incipient smile, if such it may be named. Very lively faces

with dimples in the cheeks, but with closed eyes and other signs of sleep, are matters of common observation. On the twelfth day of life Preyer observed on the face of a waking infant most of the characteristics of a smile, though the mouth movements were imperfect. It was on the twenty-sixth day of life that he first observed all the signs of an intelligent smile in his own child.

OPIUM POISONING IN INFANCY.

NOTWITHSTANDING the numerous warnings which are so frequently given of the danger of the employment of opiates in infancy, the soothing influence still claims its votaries and its victims. In the last case which has come under our notice four drops of laudanum were administered by the mother to a child about five months old, and, in spite of subsequent treatment, the child died. The case is perfectly typical. The child had been artificially fed from six weeks old, and when it became very irritable the opiate was ignorantly given without any medical advice. It is highly probable that had the child been properly attended to, instead of having laudanum given to it, some slight error of diet or digestion would have been discovered, and the life saved by judicious feeding and comparatively trivial treatment. Only after two hours and a half, on becoming alarmed by the sound sleep, did the mother call in help. The verdict, as usual, amounted only to "accidental death," but the coroner made some very strong remarks upon the ease with which poisons could be obtained. The danger of opiates in infancy are sufficiently appreciated by the profession, but a lingering fondness for soothing potions lurks in the minds of many of the wise women of the poorer classes. Until this is eradicated, or until further restrictions are placed upon their sale, it is to be feared that the infant mortality from this cause will continue to be very high.

LEGISLATION FOR HABITUAL DRUNKARDS.

THE question of habitual drunkenness stands somewhat apart from that of ordinary intemperance. It is more a medical question, or one at least in which the State should be guided largely by the best medical judgment. It is undoubtedly the opinion of most medical men of any authority that habitual drunkenness is a disease, a form of insanity, in which the will of the patient is weak and is hopelessly paralysed by even a small quantity of alcohol. He may make the most virtuous resolutions, and have the best intention of keeping them, but with little chance of success unless alcohol can be kept out of his way. How to accomplish this is the difficulty, and a very great one. The friends of temperance have been rejoicing over the feat of our legislators, by which the expiring Habitual Drunkards Act of 1879 has become a permanent law. The only change of any consequence in the law itself is in the fact that, instead of two justices of the peace having jurisdiction under the Summary Jurisdiction Act, in the place where the matter requiring the cognisance of a justice arises, being required to attest the signature of a drunkard applying to be admitted to a retreat, any two justices may attest. It is well to be thankful for small mercies. But this Habitual Drunkards Act is really a very small one. To require the consent of the drunkard to his own adequate treatment in a retreat is to require the very condition which in the most urgent cases cannot be obtained, and for want of which the majority of habitual drunkards go to the bad without the benefit of even an experiment in their favour. For legislation of this kind we have little respect, and we can be no parties to making legislators think they have done anything adequate by it. Men should not be deprived of their liberty for light reasons. But if the habitual drunkard shows that his disease is of the nature of

insanity, it is no more reasonable to ask his consent for the necessary seclusion and treatment than to ask the consent of any other person of unsound mind. The fourth annual report of the Dalmatry Home at Rickmansworth, for 1887-88, is before us, and is encouraging to those who believe in the attempt to save drunkards. Of 115 patients who have passed through the Home, the after history of ninety-seven is known. Of these fifty-two are doing well, four are improved, four have died, and one has become insane. The average duration of the disease before treatment in these cases was eight years and a half. It is reasonably suggested in the report that had treatment been begun before the disease was so advanced, the success would have been still greater. There is no provision for poor patients that are inebriate, and we seem as yet far from the likelihood of getting such a provision. Of the thirty-three patients admitted during the past year fourteen were admitted under the Act and nineteen as private patients.

MEDICAL INSTITUTE OF VALENCIA.

THE Medical Institute of Valencia, which distinguishes itself by annually offering prizes for essays on various medical topics, which essays may be written in almost any well-known language except German, has recently published its report of the work done during the past session. As a notice of the subjects for prizes appeared in *THE LANCET*, perhaps an account of the awards may not be without interest, especially as the secretary is precluded from corresponding with unsuccessful candidates, their names being in sealed envelopes, which are scrupulously burnt unopened. Upon the subject of "Chorea, its Forms and Treatment," nine essays were received. The first and second prizes were not awarded, but the third was adjudged to an essay written in English by William Kingston, Vance (Chicago). Two essays on the surgical subject—viz., "Tumours of the Ovary: Differential Diagnosis and Surgical Treatment required"—were received. Both these papers were considered to come up to the standard of the third prize. This was awarded to Don Rafael Martínez Seguí of Cheste. The motto on the other paper commences, "Las estadísticas establecen no solamente que la ovariectomía ha conquistado un lugar entre las grandes operaciones quirúrgicas, sino &c." (statistics establish not only that ovariectomy has won a place amongst great surgical operations, but &c.). The sealed envelope will be opened if the author gives his permission, and he will be made an honorary member of the Society. Four essays were sent in for the prizes offered without restriction of subject. Not one of these, however, was considered of sufficient merit to gain a prize. The special prize, given by Dr. Ferrer y Julve, was awarded to Dr. Don Lope Valcarlos Vargas, the author of the only paper sent in for it. The following are the subjects for the present year: Medicine: "Critical opinion on bleeding in the treatment of internal diseases." Surgery: "Etiology, pathogenesis, and treatment of traumatic tetanus." Auxiliary Sciences and Pharmacy: "Chemical methods of disinfection of vitiated air, applicable to public and private buildings, without danger to their inmates." Open subject: Solution of some scientific question, the choice of which is left to the author. An extraordinary prize, consisting of books, will be awarded to the author of the best paper on the "Therapeutic value of Tracheotomy in Laryngeal and Tracheal Affections: amongst the known methods, which deserves the preference for rapidity and success?" There are three prizes in each of the four ordinary classes above mentioned—viz., (1) a gold medal, (2) the diploma of member by merit, and (3) the diploma of honorary member. The papers may be written in Spanish, Latin, French, Portuguese, English, or Italian. They must not be signed, and the author must not, either directly or indirectly, divulge his name. Each essay must bear a motto, and

must be accompanied by a sealed envelope, containing the name, titles, and address of the writer, and bearing on the outside the same motto as his paper. The last day for receiving the essays is Dec. 1st, 1888. They should be directed to Señor Don Dr. Manuel Olmos, el Secretario del Instituto Médico Valenciano, Calle del Triador 11, Valencia, Spain. The prizes will be distributed at the annual meeting, the forty-ninth anniversary of the Institute, to be held on March 31st, 1889.

THE NEUROSES OF HEART DISEASE.

THE nervous symptoms accompanying cases of heart disease are often numerous, and their combination is frequently curious, and not always easily explained on physiological principles. Sometimes the physician finds a large heart with valvular disease, and simply faintness as the only troublesome symptom, and this but an occasional one. Physicians have not seldom been called upon to treat distressing nausea, sometimes with diarrhoea and without any signs pointing to an altered state of the mucous membranes; the heart cannot be said to have failed in its compensation; the tongue may be normally clean; the stools present nothing abnormal, except that they sink in water and are too loose, time not having been allowed for the natural changes incidental to residence in the large bowel. We all know the troublesome, often barking, cough not necessarily associated with congestion of the lungs secondary to the valvular deficiency. No doubt many of the symptoms are to be explained on the view of inequality, if not inadequacy, of the circulation through the abdominal and thoracic viscera, or through the brain and spinal cord; but it seems that we must recognise pure neuroses not so caused, and a careful study of the patient's previous and family history will bring out the neuropathic tendency as well as the rheumatic relationship. Sometimes, in fact, the nervous symptoms are not so much the effect of the heart disease as of a pre-existing neurotic susceptibility which may have actually developed—for example, in chorea—before the rheumatism had involved the valves of the heart. Those who advocate the nervous origin of rheumatism would perceive nothing antagonistic to their belief in this mode of viewing the subject.

THE TREATMENT OF SLEEPLESSNESS.

RECIPES for sleeplessness continue to present themselves. A fortnight ago we discussed the suggestion of a sufferer from this uncomfortable symptom who relied upon a species of artificial dreaming as a means of relief. Another of the same unfortunate class has found the following to be an effectual remedy in his own case. After taking a deep inspiration he holds his breath till discomfort is felt, then repeats the process a second and a third time. As a rule, this is enough to procure sleep. A slight degree of asphyxia is thus relied on as a soporific agent, but the theoretical correctness of this method is somewhat open to question. Certainly there is proof to show that the daily expenditure of oxygen is most active during the waking period, and that nightly sleep appears to coincide with a period of deficient tissue oxygenation. It is at least as probable, however, that other influences are associated with the production and timely recurrence of sleep besides that just referred to. This plan, moreover, however effectual and beneficial in the case of its author, is not without its disadvantages. The tendency of deficient oxygenation is to increase blood pressure and to slow the heart's action. With a normal organ, as an occasional occurrence this might not be of much consequence. If, however, the impeded heart should also be enfeebled by disease, the experiment might be repeated once too often. Another combatant in the struggle with insomnia lays down a series of rules, for the

most part very sensible, to which he pins his faith. Considering that the chief causes of sleeplessness are mental worry and the want of a due amount of exercise and fresh air, he advises his fellow sufferers to observe the ordinary rules of hygiene relating to such matters, to take food and drink in moderation, and to avoid of an evening the use of tea, coffee, and tobacco. In dealing with severe nervous irritation from mental or physical work, he has found a daily rest an almost essential prelude to sleep at night. Thus, he treats of sleeplessness rather as a tendency requiring constitutional remedies than a symptom of mere brain excitation. There is much to be said for his theory and means of treatment.

INJURIOUS DYES IN DOMESTIC ARTICLES.

AS might have been expected, the fact that considerable quantities of arsenic have been detected in various dyed stuffs and in the colours used in household decoration is attracting some attention in the commercial world. There is evidently a fear lest the results of recent inquiry should tell injuriously against the makers and salesmen of goods dyed with this metal, as well as the manufacturers of aniline colours. A contemporary speaks in a somewhat regretful tone of our own remarks upon this subject. In reply, we need hardly say that nothing is further from our minds than, by assuming an alarmist position, to advise any needless restriction of legitimate trade. At the same time, it is clear that no mere commercial advantage can be allowed if it is found to prejudice the health of an unsuspecting public. Experience has abundantly proved that the presence of arsenic in wall papers or hangings is distinctly hurtful, and no choice therefore remains but to discourage its use in these fabrics. This rule necessarily applies to all such aniline colouring matters as have acquired an arsenical taint in their preparation. The only satisfactory solution of the difficulty in the latter case must consist in the adoption of a purer process of manufacture than exists at present. Meanwhile, we may console ourselves with the reflection that many colours as attractive as those derived from arsenic have no such origin, and that some of these may rival in beauty while they excel in permanence the brilliant phantoms of the aniline series.

THE REPRESSION OF INDECENT PUBLICATIONS.

READERS of the Parliamentary news will have followed with equal disgust and indignation the facts related by Lord Mount-Temple last week in his protest against the sale of immoral literature. His action in this matter was by no means unnecessary, since, in spite of the so-called civilisation and the moral sense of our age, the systematic subversion of morality in the manner we have indicated has long been open to observation. The methods of this miserable form of blackguardism are various, but their effects are identical. Whether the offence be embodied in an openly obscene picture or publication, the handbill of a quack practitioner—another very common means of teaching vice,—or the shameless criticism of some prints, its evident purpose and result are to entangle in this filthy bird-line the weak morality of careless young men and women. Why, says Lord Mount-Temple, should not the Public Prosecutor interfere in such cases? Why not, indeed? we may well ask. The subject seems to be one particularly suited to the functions of that official. The reply is that private individuals may prosecute in matters of this kind, or they may move the authorities to move the Police Commissioners, and through them the Public Prosecutor, provided the momentum be transmitted to him by the Treasury, to which he is primarily responsible. Surely most of our readers will endorse the remark of Lord

Fitzgerald that what we want is a summary mode of proceeding which will act surely, inexpensively, and rapidly. It seems, however, that such questions are difficult to deal with on account of the proof and the publicity which they involve. Other nations may, therefore, continue to enjoy the relief afforded by a more summary process, but we shall remain entrenched among our difficulties, and shall as heretofore look at everything, however disgusting, and touch nothing with a remedial purpose. This at all events is the present position of the case, and there is no immediate prospect of a change. The libertine and the licentious quack shall continue for a time longer to sow broadcast the seeds of vice, and we shall not hinder him. Surely something more can be done than has been done to amend this disgraceful evil. Can we not by some simple method of law prevent the sale of indecent prints by summarily punishing the vendor? Can we not in the interest of common decency dispense with much of the disgusting publicity which commonly attends the action of law in such cases? If we cannot, it is evident that our present legal machinery stands in serious need of reconstruction.

TRACHEOTOMY IN CROUP.

DR. VALDE Y ALDEBALDE, writing in a Spanish journal devoted to the diseases of women and children, urges upon his *confrères* the importance of overcoming their reluctance to perform tracheotomy in croup. He thinks that, if the cases in which this operation is performed in Spain, "especially those where the result is satisfactory," were published, medical men in small towns would feel much more disposed to undertake the operation, and the task of reconciling the parents to it would be rendered very much easier. Surely, there is enough already of reporting successful cases. What should be aimed at is that a true mirror of practice should be presented to the profession, which is not the case when unsuccessful operations are omitted and successful ones are duly published. Nothing is more difficult perhaps, than to estimate the results of tracheotomy in croup in private practice, especially under the conditions existing in the homes of the poor.

HOSPITAL RISKS IN ST. PETERSBURG.

It may be remembered that a medical officer of the St. Petersburg hospitals, Dr. Dreipolkher, was sentenced to banishment in the Arctic regions a few months ago, because he had been unable to obtain admission for a poor woman into any of the hospitals, and in consequence of the delay of a few hours she succumbed to the cold. In this case, the entire sympathy of the profession was with the unfortunate doctor, who really seems to have done his best, and to have been entirely innocent of the charge of negligence brought against him. It was predicted at the time that hospital medical officers would probably find that the public would take advantage of the severity of the court to bully and terrorise over them, so that any man who accepted a position on a hospital staff would have to run some risk, however well he might do his duty, of being prosecuted or in some way maltreated by thoughtless, over-exacting, or evil-disposed persons. Something of this kind has recently come to pass. While a hospital medical officer was engaged in examining a patient in the out-patient department a woman forced her way into the consulting-room and loudly demanded instant attention, as she was in great pain. She had a gumboil, it appears. The doctor told her she must really wait a little till her turn should come, when he would attend to her. She then began to cry and make a disturbance and refused to leave the room, so that he was obliged to summon the attendants to show her the door. Nothing more was heard of the case till the evening when the husband, who as a

customs official may be supposed to be a man of some little education, inquired for the doctor who had seen his wife. As soon as he appeared he struck him several blows on the face, asseverating that the doctor's conduct in the morning had made his wife so ill that she had had to have a doctor to see her since. On inquiry being made at the house, the lady was found contentedly sitting at table, the gumboil having broken. It is to be hoped that the customs official and his wife will be taught that hospital doctors cannot be treated in that fashion with impunity even in St. Petersburg. The latest news is that the husband has been discharged from his situation.

CAVENDISH COLLEGE, CAMBRIDGE.

A NEW association has been formed for the purpose of carrying on this College. The Chancellor of the University, the Duke of Devonshire, who has always taken great interest in and been an active supporter of the College, is President, and the Earl of Derby, the Master of Trinity College, and Professors Humphry and Liveing are among the vice-presidents. The College was founded in 1876, for the purpose of enabling students somewhat younger than the ordinary undergraduates to pass through a university course and obtain a university degree, and to secure the greatest practical economy in cost as well as time. It has fulfilled these purposes well, and has, we have good authority for saying, contributed some of the most successful students to the rapidly growing medical school of the University. The object of the new association is to increase the general efficiency of the College, more especially by making much-needed additions to the buildings, which occupy a healthy and agreeable position on the south side of the town. Mr. J. H. Flather, M.A., first-class classic in 1876, and lately tutor, has been appointed Master, and particulars respecting the College can be obtained from him.

ENTERIC FEVER IN SYDNEY AND SUBURBS.

AN instructive document has been issued by the Secretary to the Board of Health for Sydney on the prevalence and mortality for the city and suburbs during the last thirteen years. In the first instance, the number of deaths from this disease in each month of the ten years ending December, 1885, is given, together with the ratio calculated per 100,000 of the population, and from this it is seen that there was a very large progressive increase of mortality—namely, from 46.07 in 1876 to 102.17 in 1885. Following on 1886 there came, however, a change in the statistics. Thus, in 1886 the rate per 100,000 was 90.90; in 1887 it was 58.11; and for the first five months of 1888 it was greatly below that for the corresponding months in previous years. Setting aside any doubts which may arise as to the sufficiency of the period which has elapsed since the improvement commenced for the formation of any final judgment, the story is one that is very characteristic of growing communities, at first somewhat indifferent to faulty sanitary circumstances slowly but steadily growing up in their midst with increasing density of population, and then taking the matter in hand as one that must be dealt with. Information received from time to time from Sydney has given evidence of a feeling that sanitary considerations are now held to be of primary importance, and efforts have within recent years been made to control those conditions with which so preventable a disease as enteric fever is known to be associated. The document now before us lays especial stress on the need for a Public Health Act. This is certainly necessary, but it will probably need to be supplemented by an efficient code of local regulations or bye-laws which shall control the details of house construction in all matters bearing on the health of the inhabitants. Any new Public Health

Act might go much further in this direction than is the case with the corresponding statute in this country. Here, the principles of house sanitation have had to be learned little by little, and in order to give effect to gradually increasing knowledge it has been necessary to sanction the preparation and the periodic modification of local codes of bye-laws which have sought to keep pace with progress in sanitary developments. But there are now a number of definite principles which are universally accepted as to the health requirements of houses—as, for example, in such matters as privy construction, the laying and through ventilation of drains, the flushing and other appliances of waterclosets—which might well be embodied in a general statute, rather than be delegated to local bodies who could either adopt them or leave them alone. We trust the Secretary's advice will be speedily adopted, for we cannot separate the improvement which has recently taken place as regards enteric fever in Sydney from the adoption of certain measures of public health, and we shall look forward with interest to any general statute which may be prepared on the subject.

RELAPSES IN TYPHOID TREATED BY ANTIPYRETICS.

DR. F. T. PASTERNAKSKI, in a lecture delivered before the professors of the Military Medico-Chirurgical Academy of St. Petersburg for the purpose of showing his fitness for the position of *privat docent*, or extra-mural lecturer, in clinical medicine, brought together a number of statistics calculated to show the effect of different methods of treating typhoid fever upon the frequency of relapses. According to his figures, relapses occurred more frequently under cold-water treatment than when indifferent or inactive drugs only were employed. Still more frequently did relapses seem to occur when large doses of quinine—thirty grains per diem—were combined with the cold-water treatment. When large doses of antipyrin, thallin, and acetanilide were substituted for those of quinine, the results as far as relapses are concerned were even worse. There is, however, this to be said, that in Dr. Pasternatski's experience none of the relapses proved fatal, or indeed left any permanent ill effects.

THE LATE DR. LUSH, J.P.

WE regret to have to record the death of Dr. Lush, of Redcliffe-square, S.W. In early professional life Dr. Lush practised at Salisbury, in which town he was to the front in sanitary and other public questions. He did good service especially in the epidemics of cholera in 1849 and 1853, making them an argument for sanitary improvements. Dr. Lush has not been much before the profession for the last few years, during which his health has been greatly impaired. He was the subject of angina pectoris. But his quiet and good nature was in his favour, and at the time of his somewhat sudden death on the 4th inst. he was at St. Leonards. Prior to his retirement from the representation of Salisbury in 1880 his name was constantly before the profession in connexion with questions before Parliament which had more or less of a medical bearing. He took deep interest in medical reform, and was one of the members who endorsed what is known as THE LANCET Bill. He was a member of the select committee which sat on medical reform questions. Dr. Lush likewise took a deep interest in Poor-law questions, also in legislation affecting lunatics and asylums for their care, viewing such subjects rather, perhaps, from the private asylum standpoint, as might be expected from his former connexion with Fisherton House, Salisbury. In 1875 Dr. Lush made a most effective speech in the House of Commons in support of the claims of the army medical officers. He was President of the Medico-Psychological Association in 1879. Dr. Lush

was a Justice of the Peace for Wiltshire. The medical profession lost one of its best friends when he retired from Parliament, where his courtesy and his knowledge of men and medicine were most valuable. Dr. Lush was a graduate of St. Andrews University.

BANK NOTES AND INFECTION.

A CONTEMPORARY directs attention to a point of some sanitary interest in connexion with the use of a paper currency—namely, the transference of infectious disease by this means. He discourses with somewhat alarming realism on the mischievous power possessed by the dirty notes for small sums which are common in some foreign countries. In a like strain he deals with the well-thumbed £1 notes so familiar in the sister kingdom of Scotland. Greasy, discoloured, and old, he seems to trace them passing from hand to hand and class to class, avoiding no form of illness but escaping all measures of disinfection. The question thus opened is indeed to some extent a practical one, and there certainly is, from the medical standpoint, more to be said in favour of a frequent issue of new notes than of the continued circulation of old and dirty ones. The velvet softness of a well-used note is familiar to many of us, and it suggests the distinct advantage of using in the exchange of money some smooth and crisp form of paper upon which the germs of disease would be less likely to establish themselves. No form of paper money can of course be purged from all such injurious influences, but there is no doubt that cleanliness even in this matter is in keeping with sanitary rule.

HOSPITAL LETTERS AND THE CHARITY ORGANISATION SOCIETY.

AN evening contemporary inserts the views of a correspondent who raises a question as to the desirability of subscribers to hospitals complying with a request of the Charity Organisation Society to be supplied with hospital letters. If the Charity Organisation Society wants letters, we think it should pay an equivalent sum for them. There are possibly some people who feel unequal to the exercise of judgment in giving hospital letters, and who may rid themselves of responsibility by handing them over to the Society in question. But surely there are not many such, and it is highly desirable that persons who are kind enough to subscribe to hospitals should accept the whole responsibility of using the letters which they have to give away.

IMPLANTATION OF TEETH.

THE operation of implantation of teeth introduced in America by Dr. Younger, which consists in drilling an artificial socket in the alveolus and inserting therein a natural tooth, has not met with anything like that success which its advocates expected. When commenting on this operation last year we expressed the opinion that the roots would gradually undergo absorption, just as do ivory pegs embedded in bone, and that is exactly what does happen. After a year or two in successful (?) cases the teeth gradually loosen, and, causing trouble, have to be removed. Upon examination the root is found perhaps one-third reduced in size, the cementum in parts completely removed, and the denture excavated out into bays and pits. Microscopical sections of one shown at the New York Odontological Society, by Professors Heitzmann and Bödecker are described. An oblique section showed canaliculi with shrivelled dentinal fibres in them. In these bays there were a number of features worthy of attention. There we saw medullary corpuscles, and the so-called giant cells, and there we saw granulation tissues, myxomatous and fibrous connective tissue penetrating the bays, which were supplied

with a certain number of newly formed bloodvessels. We found here an explanation of the fact that an implanted tooth may be firmly fixed in its newly formed socket; that is, that the granulation tissue had grown into the bays." Even if the tooth should do work for four or five years, which in some exceptional cases it may do, the benefit of the operation is very doubtful.

THE BONN ANTHROPOLOGICAL CONGRESS.

A CORRESPONDENT under date of August 3rd writes:— "Everything promises for this important gathering a success equal to that of the most favoured of its predecessors. The communications on the subject matter before the Congress will be heard and discussed in the Hall of the Reading and Recreation Society every forenoon, and excursions will be made every afternoon to the Siebengebirge, Cologne, and Bonn: at the last-named locality Roman tombs will be opened. At Cologne the possessors of private collections will hold, in honour of the Congress, an exhibition of their most precious treasures in the Walraf-Museum, and on the closing day of the sittings (the 9th inst.) there will be at 10.15 P.M., on the return journey by steamer from Rolandseck, an illumination of the banks of the Rhine, in which the chief riverside residents will loyally co-operate. The presence and participation of Professor Virchow at the Congress would alone invest the proceedings with special interest."

OXYGEN AS A REMEDY.

"WITHOUT oxygen no life" is in some respects a more scientific aphorism than the famous dictum of Moleschott, "Without phosphorus no thought." A contemporary remarks that General Sheridan's illness will be noteworthy for the hard fight made by his doctors against the disease by means of oxygen. Over and over again, when the suffocative paroxysms which seized the General about six weeks ago came on, and he all but expired, a bag of oxygen placed over his face kept life in him, and enabled him to fight the dread foe. It is not often that oxygen proves itself so formidable an antagonist to death, and, though extensively employed after its first discovery, and at the time vaunted as a life-saving remedy, oxygen has not really maintained a high position as a therapeutic agent. It is now in some hospitals and by a few physicians employed to carry patients through attacks of threatened suffocation, but rarely with any but a transient success. In some cases of extensive bronchitis and pneumonia it has seemed to turn the scale in the patient's favour. Some therapeutists have thought that its chief value lies in the constant admixture with it of ozone—a molecular modification of oxygen.

POPULAR MEDICINE.

ENDEAVOURS to teach non-professional persons how to assure their own health are justifiable only to the extent that they are logical. It is quite rational to inculcate main principles of sanitation, such as are illustrated in various nursing duties, in household ventilation; in the disinfection of rooms, and other similar offices. Nor are such cardinal points of practice as come under the convenient phrase "first aid to the injured" incapable of transference on occasion to intelligent laymen, though in any such case a certain basis of technical training is necessary. When, however, we come to deal with medical treatment proper, we take up quite a different position. Some would have it that this is not so, and, with a lavish extravagance of judgment or of principle, would try to show that after a short preparatory and purely theoretical introduction to the structure and actions of his body a very tyro may follow the details of a complicated pathology, may diagnose

and even treat diseases of whose mere meaning he has a hazy notion. Of late a variety of handbooks and magazines have issued from the press charged with the mean such partial instruction. Their character and purpose is obviously irrational, and consequently dangerous, it is our duty to make a serious protest against any attempt to treat a supposed illness by such imperfect light as pages afford.

AN UNQUALIFIED PRACTITIONER AT NOTTING HILL FINED.

THE Medical Alliance Association has successfully prosecuted Francis Reid Walsh, of Holland-road, Notting-hill, falsely pretending to be a registered medical practitioner. On one occasion he said that he was a doctor and had a diploma; on another, that he was about to sell the dispensary, and had that morning received his diploma from Edinburgh. Mr. C. J. C. Pridham, who prosecuted, showed that the defendant was not on the Register. The defendant attempted no further defence than that he opened the dispensary on the understanding that a man would join him. Mr. Curtis Bennett, at the Notting-hill Police-court, said the Medical Act of 1858 was a beneficent one, and fined the defendant £20, with guineas costs.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

THE Committee of Arrangements of this Congress announce that matters are now so far advanced as to assure the success of the first triennial session, which is to be held in the city of Washington on Sept. 18th, 19th, and 20th. The American Ophthalmological Association and the American Otolaryngological Association, in addition to the numerous societies whose preliminary programmes have been issued, will also take part in the Congress, which many distinguished European physicians and surgeons have promised to attend.

METROPOLITAN HOSPITAL SUNDAY FUNDS.

IN reference to complaints which have been presented to us with respect to the apparent delay in our publication of the result of the awards made by the Distribution Committee, we may explain that the information referred to was given by us as early as was compatible with an honorable adherence to the implied regulations governing publication.

FOREIGN UNIVERSITY INTELLIGENCE.

Bahia.—Dr. Cardoso de Andrade has been appointed Professor of Botany and Medical Zoology.

Barcelona.—Dr. Don Iranzo has been appointed Professor of Children's Diseases.

Berlin.—Professor Gerhardt, who holds the chair of Internal Medicine, has been elected Rector Magnificus of the University. The last year that this post was held by Professor of the Medical Faculty was 1882, when Professor Du Bois-Reymond was elected. The name of Professor Virchow was brought forward, together with that of Professor Gerhardt, but the latter obtained the larger number of votes. The new Dean of the Medical Faculty will be Dr. Waldeyer, Professor of Normal Anatomy.

Breslau.—Dr. Eduard Kaufmann has been recognised as *privat-docent* in Anatomy.

Cracow.—Professor Witkowski of Lemberg has been appointed to the chair of Physics.

Granada.—Dr. Don Martinez Vargas has been appointed Professor of Children's Diseases.

Kharkoff.—The late Professor Lashkevich bequeathed about £2000 to the University for the purpose of founding a Laboratory for Experimental Pathology and Clinical Therapeutics.

Leiden.—Dr. A. Nijkamp has been recognised as *privat doctent* in Laryngology and Rhinology.

Marseilles.—Professors Chapplain and Villeneuve have been permitted to exchange chairs, the former taking Operative Surgery and the latter Clinical Surgery.

St. Petersburg.—An analytical department is about to be established in connexion with the hygienic laboratory of the Military Medical Academy, under the charge of the assistant to the Professor of Hygiene, for the detection of adulterations in goods sold in the market.

Valencia.—Dr. Don Gomez Ferrer has been appointed Professor of Children's Diseases.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Professor Paul Langerhaus, formerly Professor in the University of Freiburg, of phthisis, in Funchal, Madeira, at the age of thirty-nine. Dr. Langerhaus was a pupil of Virchow's, and published many papers on anatomy, histology, and pathological anatomy. He had travelled in Syria and Palestine with Heinrich Kiepert, and there studied leprosy, and made a number of skull measurements of the different races inhabiting that part of the world. Since 1875 he had been obliged to live in Madeira because of his health, but he was by no means idle, for he published several works and papers, including a handbook to Madeira and researches on leprosy and phthisis. As to the latter affection, he did not at all believe in its infectious nature, and he wrote several articles combating the views of Professor Robert Koch on this subject.—Dr. Johann Dlauhy, formerly Professor of State Medicine in Vienna, whose career is sketched in another column.—Dr. D. Serapio Arteaga, Professor of Clinical Midwifery in the Cuban University of Havana.

FROM the report on the condition of the metropolitan water supply during the month of June, by the examiner appointed under the Metropolis Water Act, 1871, it appears that the Thames water sent out by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies exhibited a further reduction in the proportion of contained organic matter, which was unusually small in all the samples examined. Of the water principally drawn from the Lee that distributed by the New River Company contained less, and that by the East London Company slightly more, organic matter than the Thames supplies. All the samples were clear and bright.

DR. FRANZ HOFMANN, Professor of Experimental Hygiene and Director of the Hygienic Institute in Leipzig University, has just been chosen Rector of that seat of learning. There is no higher name in continental state medicine than that of Professor Hofmann, as all who remember the greeting accorded him at the great Vienna Congress of last year will understand; and the German journals, professional and lay, are hailing his election as proof that public sanitation is becoming daily more prized in the great centres of scientific education.

A CONGRESS of Polish medical men and scientists has just been held at Lemberg. The attendance was very numerous, about 500 members being present.

INFECTIOUS HOSPITAL FOR HERTFORD AND NEIGHBOURHOOD.—The governors of the Hertford General Infirmary held a special meeting on the 2nd inst. to consider a proposal to erect a hospital for infectious cases for the neighbourhood in connexion with the infirmary. After some discussion it was unanimously resolved: "That it is desirable a hospital for such cases should be erected for the neighbourhood in connexion with the infirmary." Lord Cowper had intimated that he would give a site.

BRITISH MEDICAL ASSOCIATION.

FIFTY-SIXTH ANNUAL MEETING.

Held in Glasgow on August 7th, 8th, 9th, 10th, and 11th.

THE first day of the meeting (Tuesday, Aug. 7th) was by no means favourable as regards weather; a dull grey sky and a drizzling rain prevailed during the greater part of it. From an early hour members were arriving at the University to enter their names, and from their numbers there seemed every prospect of a large and successful gathering. The whole of the fine range of the University buildings is placed at the disposal of the Association, the class rooms being set apart for the sectional meetings, and the large Bute Hall for the general meetings. The extent of the buildings has also allowed of the annual museum being held under the same roof. The antiquity of the exhibition, to which members of the Association have been admitted on a very small charge, also enhances the attractions of the site of the meeting.

After a meeting of the Council at 9.30 A.M., the first general meeting was held at 11.30 A.M. on the 7th. Dr. Banks of Dublin, the retiring President, took the chair, who in a few words congratulated the Association upon its growing prosperity and influence, and handed over his office to Prof. W. T. Gairdner. After a formal vote of thanks had been moved and carried to Dr. Banks for his conduct as president, the report of the Council was presented by Dr. Bridgwater, President of Council, and the financial statement by Dr. Holman, the Treasurer. Dr. Bridgwater, in moving the adoption of the report, alluded to the extension of the branches of the Association in the colonies, and mentioned that applications to four branches had been received from Malta and Tasmania. The roll of members now reached 12,425, the number of new members joining during the past year being nearly 1000. The report was adopted *nem con.*

Mr. E. HART, as chairman of the Parliamentary Bills Committee, moved the adoption of that committee's report. He stated that at the instance of the committee, the Pharmacy Act Amendment Bill had been amended so as in no way to infringe upon the interests of the medical profession; and he referred at some length to the steps which had been taken with regard to the question of relative rank of army medical officers. Referring to other matters in the report, he stated that through the exertions of the committee two important amendments regarding sanitary administration had been introduced into the Local Government Bill—viz., with reference to the areas of sanitary departments and the remuneration of medical officers of health. These amendments embodied principles for which the Association had contended during thirty years, through such men as Rumsey, Acland, Stokes, Farr, Sibson, Michael, and others. He concluded by thanking those members of the House of Commons, such as Sir W. Foster, Dr. Farquharson, and Dr. Cameron, who had spared no pains in forwarding the views of the committee in Parliament.

Dr. FARQUHARSON, M.P., seconded the adoption of the report, and expressed his opinion of the value of the work done by the Parliamentary Bills Committee in keeping the Government informed of the opinion of the profession. As regards the relative rank question, he advised that it should at present be no further pushed, since in the coming session there would no doubt be a very determined attack made upon the Army Medical Department in support of retrenchment.

Surgeon-Major INCE humorously supported the motion, in the course of which he expressed the opinion that sanitation was but little understood, and should be confined to a few highly trained men.

Dr. FITZPATRICK warmly attacked the committee for having devoted so much time to the grievances of army medical officers, who, he maintained, were infinitely better off than general practitioners. He also referred to the compulsory notification of diseases, and accused Mr. G. W. Hastings of sparing no pains to "forge the fetters" which would bind medical men by restrictive legislation.

Mr. HUSBAND supported the action of the committee,

and Dr. ALDERSON deplored that so little attention had been bestowed upon questions of much greater importance to the profession than that of "relative rank."

The report was then adopted.

Dr. LONG FOX moved, and Dr. EASTWOOD seconded, the adoption of the report on the Inebriates Legislation Committee.

Professor MCKENDRICK, in moving the adoption of the report of the Scientific Grants Committee, expressed the opinion that institutions should be endowed rather than individuals; but he spoke highly of the kind of work which had been carried on by those who had received grants from the universities.

Dr. MCVAIL seconded the motion, which was adopted.

The report of the Collective Investigation Committee was then adopted, on the motion of Dr. A. Carpenter, seconded by Dr. Cuning, Dr. Carpenter stating that this would probably be the last time that the motion would be made, since the committee had resolved to terminate its labours.

At 3.30 P.M. the Cathedral was crowded with a large congregation, who were repaid for their attendance by hearing a very remarkable and powerful discourse by Principal Caird. The text was Romans xi., 36, and the whole sermon was directed to an exposition and refutation of the notion that pure materialism was in itself sufficient to sustain the universe. The absolute fairness and fulness with which the learned divine stated the materialistic position was not the least striking feature of his address, which terminated by a statement of two objections "absolutely fatal" to the materialistic theory of the relation of matter and life. It was, he showed, in irreconcilable opposition to the very law of the conservation of energy on which it professed to rest, and, moreover, it begged the whole question at issue.

In the evening a large gathering of members took place in the Bute Hall of the University to hear the Presidential address of Professor Gairdner. On its conclusion a vote of thanks was proposed by Sir Andrew Clark, who spoke in warm and eulogistic terms of the President, and seconded by the Lord Provost of Glasgow. The motion was carried by acclamation. Only a few members remained to debate a resolution which was moved by Dr. Waters and seconded by Dr. Banks. The resolution, which was carried unanimously, ran as follows:—"That the Council of the Association be desired to place before the General Medical Council the following resolution passed at the annual meeting held in Dublin in 1887: 'That the Association is of opinion that the diplomas of the Irish and Scottish universities and other corporations should possess the same privileges in respect of public appointments that are enjoyed by the diplomas of the other divisions of the kingdom,' with the view of obtaining the opinion of the General Council on the subject."

The second general meeting took place on Wednesday afternoon. The President announced that the Council had received an invitation from Leeds for the Association to hold the meeting of 1889 in that city; and, on the motion of Dr. Bridgewater (President of the Council), seconded by Mr. Husband, it was unanimously resolved to accept the invitation, and to elect Mr. Wheelhouse as President. Mr. Wheelhouse responded on behalf of the profession in Leeds.

Dr. Clifford Allbutt then delivered the Address in Medicine, his subject being Comparative Nosology. The address was closely followed by a large audience, and a hearty vote of thanks was accorded to Dr. Allbutt, on the motion of Dr. McCall Anderson, seconded by Sir Dyce Duckworth, and supported by the President.

Only a small number remained to hear Dr. Fitzpatrick move "That every representative attending a Council meeting be paid first-class railway fares, to and from, out of the funds of the Association." He contended that the representatives of the Branches (which formed the "bone and sinew" of the Association) were not mere delegates, and that they should be put on a similar footing as regards members of the General Medical Council. Dr. W. Carter seconded the motion, which was opposed by Surgeon-Major Ince, Mr. Sibley, Mr. Holman (the treasurer), and Mr. Husband, and the previous question was moved and carried. In the evening a conversation, given by the Principal and Professors of the University, took place in the Bute Hall.

The third general meeting was held on Thursday. The Address in Surgery was delivered by Sir G. Macleod, after

which the gold medal of the Association was presented to Mr. Fray Ormrod for his services at the recent colliery accident at Workington. The public dinner was held in the evening.

THE SECTIONS.

MEDICINE.

Dr. MCALL ANDERSON, President of the Section, took the chair shortly after 10.30 A.M. There was a very large attendance drawn together to hear the important discussion upon "The Diagnosis and Treatment of Syphilitic Disease of the Nervous System." After a few preliminary words of thanks, the President proceeded to open the discussion in an exhaustive address. He said at the present day it was sometimes argued that syphilis had become a mild disease, that serious visceral complications, especially of the nervous system, were becoming rare, and that mercury should be reserved for the graver forms of the malady. His experience was entirely opposed to such ideas, and hence he had thought the subject opportune for discussion at that gathering. He feared the milder forms of syphilis, being often treated cavalierly, were peculiarly apt to give rise ultimately to grave visceral mischief, the nervous system suffering to a notable degree. He would first state the general grounds for concluding that a lesion of the nervous system was of syphilitic origin.

1. A history of syphilitic infection. Negative evidence on this subject was of course worthless, patients sometimes concealing, and at other times being really ignorant of, the source of their malady. The longer the disease lay dormant without eradication, the more prone was it to affect the viscera. It should be borne in mind that the nervous system might suffer as the consequence of hereditary syphilis. 2. The discovery of other evidences of syphilis in the skin, mucous membranes, &c. We should look for tubercular and serpigineous eruptions, deep-seated ulceration of throat or tongue, periostitis, amyloid disease without other obvious cause, scars upon the penis, scars at the angle of the mouth or on the palate, perforation of septum nasi, &c. 3. The presence of pains in the bones, head, &c., especially if severe at night, and disappearing by day. 4. The dirty, earthy, sallow complexion so commonly seen as the consequence of syphilis. 5. The age and sex of the patient. These affections generally occurred at or before middle life. He agreed with Buzzard that hemiplegia or paraplegia not associated with kidney disease or embolism occurring in young persons was in nineteen out of twenty cases syphilitic in origin. The male sex was most frequently affected, the proportion in his experience having been twenty males to four females. 6. Occupation. Brain workers seem to suffer most. 7. The multiplicity of the lesions. 8. The variability of the symptoms. 9. The presence of certain fundamental types or groupings of symptoms. 10. The presence of eye symptoms; ophthalmoplegia externa and double iritis were common. 11. Absence of syphilis of the other viscera. 12. The results of treatment. As regards the treatment of these cases, he urged the free use of antisymphilitic remedies. Some of his most brilliant results had been due to the use of mercury in the later stages, even when iodide of potassium had failed. He preferred inunction and hypodermic injection. For the former he used the mercurial oleate ointment of Shoemaker, and for the latter a solution of the perchloride of mercury in the proportion of four grains to the ounce of distilled water.

The discussion was continued by Dr. DAVID DRUMMOND (Newcastle-on-Tyne), who approached the subject from the pathological point of view. There were three classes of gross syphilitic lesions of the brain: 1. Pachymeningitis. 2. Vascular lesions. 3. Gummata. The last was the most frequent. He attached importance to the association of headache, insomnia, and irritability of temper, but thought that too much attention had been devoted to headache.

Dr. GRAINGER STEWART (Edinburgh) showed a patient suffering from most remarkable symptoms, which he thought were due to cerebral syphilis. Whenever the patient closed her eyes or was otherwise withdrawn from light, she instantly had a peculiar fit, characterised by spasm of the glottis, turning up of the eyeballs, complete anaesthesia, and unconsciousness. She would fall if not supported. These fits would last a few seconds, and then she recovered, without knowledge of what had passed. A fit of this kind happened each night when she was falling asleep.

Dr. ROSS (Manchester) had never seen any case parallel to the one shown by Dr. Stewart. As regards headache, he agreed with Dr. Drummond that too much importance might be attached to it; but, nevertheless, it was true that this symptom nearly always preceded outbursts of cerebral syphilis. He proceeded to demonstrate the usual sites of syphilitic deposit in the brain. In the cord the region usually affected was that portion on a level with the junction of the lumbar and dorsal regions. There was paralysis of the bladder and of the sexual function, with exaggeration of the tendon reflexes.

Dr. CLOUSTON (Edinburgh) confined himself to the mental relations of cerebral syphilis. There were four classes of cases. 1. Short delirium during the second stage, very like delirium of acute fevers. It was best marked where there was strong mental and nervous heredity, and was transient, slight, and curable. 2. Mental irritation, delusional suspicions, and unconscious mania. These were due to rapidly developing syphiloma, and brain necrosis extending upwards. The patient usually died in a fortnight. 3. In a third class there was a subtle, slow arteritis, with consequent starvation of certain areas of the brain cortex. This caused immorality, impulsive action, delusions, and finally dementia. 4. An indeterminate class produced by disease of the membranes, bones, &c. He demurred to Dr. Hughlings Jackson's view that the true nerve substance was never directly affected.

Dr. ALEX. ROBERTSON (Glasgow) advocated percussion of the skull as a help in diagnosis. He set a high value on repeated blistering.

Dr. DRYSDALE (London) thought that at least four-fifths of the cases of hemiplegia in adults under forty were probably syphilitic, and that a like proportion held regarding paralysis of the ocular muscles. Brain work and alcohol were predisposing causes. The headache was usually deep-seated.

Dr. COGHILL (Ventnor) related a remarkable case in which there was apparent intolerance of the ordinary doses of iodide of potassium, but in which very large doses were well borne, and resulted in complete recovery.

Dr. ZIEMSEN (Wiesbaden) spoke hopefully of the prognosis in these cases, and urged the free employment of inunction.

Dr. BYRON BRAMWELL (Edinburgh) attached importance to the multiplicity of symptoms, the fact that the cortex was the seat of election, and the age and sex of the patient. Headache might be absent where the vessels alone were affected. Percussion of the skull was helpful.

Dr. STRETCH DOWSE (London) thought that syphilitic disease of the vaso-motor system of nerves was too much overlooked, and that general paralysis of the insane was often syphilitic. He advised the giving of large doses of iodide, well diluted, before meals.

On Thursday Dr. Byron Bramwell and Dr. Milne Murray, gave a demonstration of their graphic method of recording the exact time relations of cardiac sounds and murmurs. Dr. Bramwell claimed that his method excluded the psychical element of uncertainty.

Dr. THEODORE WILLIAMS thought the method very nearly perfect. He had seen cases in which a presystolic murmur seemed to pass into a systolic.

Dr. OLIVER thought by this method that murmurs were recorded rather late.

Dr. Macfee and Dr. McGregor Robertson also spoke.

Dr. BRAMWELL, in reply, said he was pursuing his investigations, but it would be premature to assert that his method would succeed in throwing much new light upon cardiac disease.

Dr. McLACHLAN (Dumbarton) showed a patient suffering from Addison's disease, and read a paper giving the clinical details of the case.

Dr. STRACHAN (Dollar) gave the notes of a case of Pernicious Anæmia successfully treated by arsenic. Small doses of the drug were given.

Dr. AFFLECK (Edinburgh) thought that the nomenclature of the disease required alteration. Cases presenting all the essential features of pernicious anæmia undoubtedly recovered. Arsenic was most useful. He advised the addition of iron and peptonised foods.

Dr. BOYD thought that in many cases of dilatation of the stomach symptoms closely resembling those of pernicious anæmia appeared.

The PRESIDENT thought that many cases of so-called pernicious anæmia were really cases of cancer. In genuine pernicious anæmia, there was no doubt arsenic was the remedy; that it should be given early, and, if necessary, by subcutaneous injection.

Dr. AFFLECK (Edinburgh) read the notes of two cases of Raynaud's Disease. Both occurred in young girls, and in both there was a history of exposure to cold. In the first case amputation of one foot and some toes of the other foot was necessary; in the second case, where the hands were affected, there seemed to be some congenital defect of the arteries. Massage and electricity were tried in this case without benefit.

Dr. DRINKWATER (Sunderland) thought chrysophanic acid by far the best remedy.

Dr. THOMAS OLIVER (Newcastle-on-Tyne) read a paper upon Malformations of the Heart. He showed that a patent foramen ovale might be present and cause no cyanosis until some pulmonary complication arose.

Dr. ORLANDO JONES (Harrogate) read a paper upon a New Remedy for some forms of Heart Disease. The drug he recommended was *Cactus grandiflorus*, which he had found especially useful in asthenic cardiac conditions. He used a tincture of a strength of one in twenty, the dose being from less than one minim to ten minims.

Dr. D. W. FINLAY (London) read a paper upon Bronchiectasis treated by Incision and Drainage. He detailed a case in which he thought it desirable to give the patient the chance which surgical interference might afford. Incision was therefore performed, and much fetid pus evacuated, but the patient sank. It was remarkable that several of the fatal cases had died from cerebral abscess.

SURGERY.

Dr. GEORGE BUCHANAN opened the Section by a few words of welcome.

Mr. T. PRIDGIN TEALE (Leeds) opened a discussion on "The Surgical Treatment of Abscess of the Lung and Empyema." He detailed four cases under his own care of abscess of the lung opening into the pleura. Two of these were cured by free incision and drainage; the others died. He also reported two successful cases under the care of Mr. Hartley (Leeds) and Dr. Davies (Swinton). Mr. Teale concluded: 1. That we are losing our fear of exposing the pleura. 2. The evil of admission of air into the pleural cavity is not the mere exposure of the pleural surface to the air, but is that the lung collapses by the mere admission of air, but is that, where there is a fairly healthy lung and pleura, the rush of air reduces seriously the mechanical power of the thoracic wall over respiration. 3. That in such cases some method of closing the wound to the entrance of air, whilst allowing adequate drainage, must be adopted. 4. That the region of the diaphragm is a situation in which abscesses amenable to surgical treatment frequently occur. 5. Such abscesses can be most safely attacked through the lower angle of the thorax, provided there be dulness at the seat of puncture. 6. As to washing out the cavity of a large pleural, pulmonary, or hepatic abscess cavity, it is probable that antiseptic washing is of value in the early period while the fluid is offensive, but afterwards it tends to disturb the comfort of the patients, and is unnecessary if drainage is effective. 7. As regards excision of a portion of rib, Mr. Teale had no personal experience, but thought it should be reserved for special and exceptional cases.

Sir SPENCER WELLS reported the case of a patient admitted under his care in 1843 to Malta Hospital, apparently dying of phthisis. An abscess had formed in the right axilla. This was opened, and air and pus escaped; it continued open for a long time, but the patient recovered, and is still, after forty years, alive and well. In reporting this case forty years ago, Sir Spencer Wells advocated the incision of the lung in cases of abscess. He still supported this view, and looked hopefully on the operations of incision or removal of parts of the lung in gangrene, and on removal of parts of the ribs in exceptional cases.

Mr. JESSOP (Leeds) stated that the dangers of opening the pleural cavity were more imaginary than real. On two occasions he had opened the pleural cavity accidentally; air entered freely, and the lung maintained its position, size, and shape without sign of collapse. Both cases did well.

Dr. WARD COUSINS (Portsmouth) referred to the difficulties of re-expansion of the lung and closure of the cavity of the pleura in cases of empyema. He advocated free and early incision with drainage. This was especially successful in cases of young children. In adults he did not use drainage tubes after the first few weeks, and he kept the incision open by dilating it when necessary with india-rubber bags. He also recommended the excision of a

portion of the rib in cases of empyema with pulmonary fistula and discharge.

Dr. JOHN DUNCAN (Edinburgh) thought thoracic abscess should be treated like all other abscesses, by opening and drainage. Treatment will vary according to class of case. In children simple opening and drainage will suffice. In adults, in early cases, drainage only is necessary; in medium cases, suction is an advantage, and Dr. Duncan showed an apparatus for the purpose; in old cases where death must occur from amyloid disease, excision of a portion of the rib is required. Dr. Duncan reported four successful cases from this operation.

Mr. WINKFIELD (Oxford) reported a successful case of empyema, in which a portion of rib was removed, and a lost drainage tube recovered from the pleural cavity.

Dr. WEBB (Wirksworth), advocated free incisions, frequent washing, and adequate drainage as the result of a large experience.

Mr. JORDAN LLOYD (Birmingham) referred to two cases in which separate punctures made at the same time yielded serum and fetid pus. These cases were supposed to be interlobular empyemata rather than intra-pulmonary abscesses. He advocated freedom of drainage, and thought that could often be obtained by increasing the length of an incision rather than by increasing the breadth of a tube.

Dr. WARDROP (GRIFFITH (Leeds) deprecated the habit of excision of a portion of a rib as part of a primary operation, and maintained that satisfactory drainage was obtained in the great majority of cases by simple incision and insertion of a tube. He afterwards discussed the manner of re-expansion of the lung after operation.

Mr. EDMUND OWEN advocated the routine treatment of incision, with resection of about half an inch of rib, after which drainage was always efficient. Tubes frequently slipped into the pleural cavity because they were badly fixed. The end of a large tube should be split into four, passed through a hole in a piece of mackintosh cloth, and the ends stitched with silver wire. Mr. Owen then described a case of hydatid of liver evacuated by a deliberate attack across the pleural cavity, about the eighth intercostal space, with successful result.

Mr. TEALE then replied. The diagnosis of cases of abscess of lung from empyema was frequently only made by exploration, but was not of supreme importance; free incision, drainage, care, and cleanliness were chief points to be attended to.

Dr. TH. DE VALCOURT (Cannes) then read a paper on the Usefulness of Winter Sea-baths at Cannes in cases of Scrofulous Disease.

Dr. MURPHY (Sunderland) showed a patient on whom he had performed Gastrostomy for complete closure of Oesophagus eleven months ago. The patient was well and strong, and swallowed comfortably.

Dr. CARMICHAEL (Barrow-in-Furness) read notes of a successful case of Gastrostomy, the patient living six months after the operation, and dying of pneumonia. The stomach was shown.

Mr. BENTON (London) read a paper on the Treatment of Stricture of the Rectum by Electrolysis.

Dr. DUNCAN (Edinburgh) read a paper on the Value of Electrolysis in Angioma and Goitre, and reported numerous successful cases.

Mr. EDMUND OWEN reported the case of a boy of nine years on whom he had operated for intracranial hemorrhage successfully.

Dr. BEAVER RAKE (Trinidad) then narrated his experience of Nerve-stretching in cases of Leprosy. He had operated in 100 cases, and found ulceration and pain relieved thereby; but as regards anaesthesia, tuberculation, and necrosis, there was no improvement.

Owing to the shortness of time there was no discussion on any of the papers read.

On Thursday, Sir ANDREW CLARK described a case of catheter fever that he had watched from beginning to end, and considered interesting as throwing light on the origin of fever. It began with irritability of the bladder and slight oxaluria, but the urine was otherwise healthy. To relieve irritability the patient introduced a clean soft catheter, oiled with carbolic oil of unknown age and unknown character, and removed one ounce of urine. Next morning he suffered much from malaise, and eighteen hours after the introduction of the catheter he had a rigor. The temperature then rose to 105°; pulse 116; respiration quick and laborious; and he passed a restless night. Next morning

he was apparently in an advanced typhoid condition, with frequent desire to micturate; urine clear, but albuminous. In the afternoon he had a second rigor; temperature rose to over 105°. The condition was most alarming: bladder extremely irritable; urine sandy and turbid. Before the introduction of the catheter there were no symptoms of renal disease, and his catheter fever was perhaps a septic fever. To determine this question the carbolic oil was examined by cultivation experiments, but without result. To prove that the oil was capable of preventing septic infection another experiment was made with a drop of decomposing urine, with immediate development of fungi. This fever was not, therefore, due to septic infection. Was it due to pyemia? No; the characteristic symptoms were absent. Nor was it due to injury. He was obliged to fall back on the explanation originally given at the meeting in Edinburgh. (1) Local irritation, felt or unfelt, on the introduction of the catheter, provocative of (2) reflex discharges, causing (3) dystrophic changes in the bladder and urethra, and (4) charging of the blood with excrementitious material, and consequent development of fever; (5) appearance and effects of bacteria.

OBSTETRIC MEDICINE.

The PRESIDENT opened the meeting by an address dealing with the history of obstetric art in Scotland, Ireland, and England. He then noticed recent improvements in obstetrics, especially in regard to instrumental interference. He showed two pairs of forceps; one for low pelvic cases; the other, a powerful instrument, for high and difficult cases. He also adverted to cases in which it is now fashionable to remove the uterine appendages, advocating other and milder methods in preference. Some reference was made to the treatment of uterine fibromata by electricity, and support was given to the method. Dr. Parvin of Philadelphia proposed, and Dr. Halliday Croome seconded, a vote of thanks to the President for his address.

Professor SIMPSON (Edinburgh) then opened the discussion on Intra-uterine Death, its pathology and preventive treatment. He passed in review all the known causes, making suggestion as to their relative frequency and importance, and advocating strongly the continuous use of chlorate of potash, and, where syphilis is suspected, the treatment of the husband rather than the wife.

Dr. R. BARNES (London) advised the induction of premature labour whenever albuminuria showed itself. He called attention to the distinction between fatty degeneration and fatty metamorphosis. He thought that in women who are too young or too weak to bear children haemorrhage into the placenta was very apt to take place.

Dr. BYERS (Belfast) urged McClintock's method of mixing iron with chlorate of potash, especially where there was no history of syphilis, and in late pregnancy. He believed that obstinate constipation was at the root of certain cases of abortion.

Dr. FORDYCE BARKER (New York) believed that many cases of abortion were due to defective growth of the placenta, not a sufficient amount of blood going to the uterus, the patient rather getting stout. He advised spare diet and free exercise, and cited cases in proof of this theory.

Dr. PARVIN (Philadelphia) believed that there is such a thing as simple uterine irritability treatable by drugs, such as viburnum prunifolium, which, he pointed out, was long used by the negro women of the Mississippi before it was introduced into ordinary medical practice.

Dr. WILSON (Baltimore) believed in constipation as a cause; also that many cases were due to prevention of the rising of the uterus in the pelvic cavity.

The discussion was continued by Dr. Aust Lawrence, Dr. Edis, and Dr. A. Routh. Professor Simpson concluded the discussion.

Dr. SAMUEL SLOAN showed his antero-posterior compression forceps, and showed that experiments with contracted pelves and fresh foetal heads showed that antero-posterior blades were most useful, and detailed cases which seemed to prove this.

Professor STEPHENSON (Aberdeen) believed that compression of the head is a wrong principle on which to go when one wishes to secure a living child.

Professor GILL (Belfast) believed that the child's life should not be so much considered as the safety of the mother, and therefore severe forceps deliveries are not desirable.

Professor HARVEY (Calcutta) argued that force might be safely used as the only alternative to craniotomy.

Dr. W. L. REID (Glasgow) showed a pair of antero-posterior-bladed, and, at the same time, axis-traction forceps, and argued that by getting hold of the head in the oblique diameter, and applying sufficient force to effect delivery, all the room possible was left in the abnormally short diameter for the passage of the fetal head.

Dr. SLOAN concluded the discussion by arguing that compression must take place, and the question is how it can most safely be done in the interests of both mother and child.

Dr. A. ROUTH read a paper on Headaches of Pelvic Origin, showing how in flexions of the uterus the use of an intra-uterine stem completely cured the disease.

Dr. BRAITHWAITE (Leeds) said that by the use of an intra-uterine stem, and increasing the menstrual discharge or straightening the canal, he has relieved severe headaches which had resisted many other forms of treatment.

Dr. AUST LAWRENCE said he had seen cases where the relief of flexions by treatment had cured obstinate headaches.

Professor STEPHENSON then read a paper on the Treatment of Amenorrhœa by Permanganate of Potash. His first results were poor, but after a more lengthened trial he got good results in many cases. He also found that ovarian pain and persistent headaches were often cured by the drug. He believed that cases of menorrhagia are often relieved by permanganate of potash, and that the drug cures the abnormal constitutional conditions which give rise to these diseases. Cases were cited in proof of this statement.

The meeting then adjourned.

PATHOLOGY.

This Section was opened in the Law Class-room on Wednesday by the President, Sir WILLIAM AITKEN. He thanked the Association for this honour conferred upon him, and which he felt to be a compliment to the school at Netley. He referred to his previous connexion with the University of Glasgow as demonstrator of anatomy under the late Professor Allen Thomson. In the name of the Section he made welcome the foreigners present—many of them from long distances. Proceeding then with an address upon the Position of Pathology among the Medical Sciences, Sir William Aitken reminded his hearers of the fact that pathology as a science owed its origin to workers in the physiological field, and that human pathology must also have a basis in comparative pathology, the importance of which department had been insisted upon by Sir James Paget and others. The pathologist must follow in the train of the biologist. As instances of the interdependence of pathology and those sister sciences indicated, there were mentioned the relation between the results of disease and experiment upon different parts of the cortex of the brain. Reference was made, too, to the light thrown upon fatal paralysis of the intestine, due to exposure during operation—e.g., ovariectomy—by the minute anatomy of the parts and by experiments with all sorts of irritants. The recent successes in the surgical treatment of tumours of the brain and spinal cord fully justified the experiments of Ferrier, and afforded an argument for relaxing the restrictions in this country upon experiments on living animals. The greatest advances in pathology during the last thirty years were then discussed: firstly, in relation to the better appreciation of the processes of disease; and, secondly, with regard to the increasing importance attached to combinations of facts producing disease. Under the former heading there were mentioned Virchow's investigations on thrombosis and embolism; the study of variations of blood pressure, specially in connexion with albuminuria and heart disease; the whole question of inflammation, with the digestive power most recently ascribed to leucocytes, in virtue of which they are called phagocytes; the knowledge of the processes associated with fever; and in particular the distinction between high temperature in "fevers" and in nervous lesions, as well as the recent observations of Professor Macalister; the appreciation of the factors connected with local death; also of the nature and extent of degenerative processes, whether in health or disease; the views held from time to time of the processes connected with the formation of new growths; and, lastly, the advance in the understanding of the processes of disease associated with parasitical organisms. On the other hand,

with regard to the second heading—the etiological side—much has been learned from the action of poisons as well as from that of ferments. Thus far physiology and pathology were recognised as the basis of scientific medicine, but hitherto physiology had outstripped pathology. Normal physiology, however, could not explain all pathological conditions. There was a large class of diseases left—e.g., the infective diseases are not included in the physiological system of diseases, and still constitute the difficulty of pathological science. They must be considered as having at some period originated *de novo*, and thereafter become autonomous and been communicable by infection only. There might be similar pre-autonomous and autonomous stages for cancer and tubercle. Sore throats were well known at times to increase in severity as they were transmitted from individual to individual until an undoubted diphtheritic form was reached, the occurrence of diphtheria being proved by the subsequent paralysis. There was such an evolution going on as the disease passes between the different individuals, and ultimately we have apparently a different disease. Similarly, no abrupt line could be drawn between Asiatic and milder forms of cholera, all grades of severity being found. So also for puerperal fever and allied conditions. Irregularities from the artificial types of disease were thus so frequently met with that they formed a very important class. The "constitutional diseases" conformed to the biological laws of heredity and environment. They were slowly evolved by the combined action of external and internal influences, and changes when they have occurred are transmitted from one generation to another. Changes in type in the hereditary and specific diseases undoubtedly take place, and are apt to be too little attended to. In pathology and biology it is thus very important to study varieties as well as types, and types vary in disease as well as in species. In disease, as in nature generally, evolution results in new diseases arising, and common disorders may acquire specific qualities; and as the question of biology is the origin of species, so must the question of pathology be the origin of such new varieties of diseases and of such new specificity.

On the motion of Sir ANDREW CLARK a hearty and unanimous vote of thanks was passed to Sir William Aitken for his eloquent address.

Professor EDGAR CROOKSHANK made a communication upon Tubercular Cow's Milk, and another on Anthrax in Swine, of which further abstracts will be given next week.

PUBLIC HEALTH.

The President (Dr. H. D. LITTLEJOHN) opened the discussion upon "Sanitary Legislation." He showed the importance of this section; it brings into relationship the medical man and the practical sanitarian. He next pointed out certain disadvantages in the Burgh Police and Health Bill, such as that the election of a medical officer of health should take place annually. He suggested that he should be removed only by the pleasure of the Board of Supervision, and that the sanitary districts should be enlarged. This would imply such an increase to the salary that the medical officer would be independent of private practice. He also urged that a special certificate should be required for those health officers. As to the notification of infectious diseases, he argued that it was unworkable so long as the medical officer was engaged in private practice. Milk supply, slaughter-houses, and small dwellings are well dealt with in the Act, but the President urged that Scotland required a Local Government Bill for itself, which would grapple with Scottish sanitary legislation. The staff of inspectors must be increased, especially in the large country districts.

Sheriff SPENS differed from the President as to the sanitary provisions in the Burgh Police Act. The great blot in the Scotch system, he thought, was that it is inadequate in the rural districts.

Dr. GLAISTER urged that the areas should be enlarged, so that there be a sufficient population to give an adequate salary to the medical officer.

Dr. HARDESTY made a few remarks.

Dr. CARPENTER moved "That the Public Medical Section of the British Medical Association desires to express its opinion that an amended Public Health Act for Scotland is urgently required, the provisions of which shall apply alike to urban and rural districts." He discussed the various points raised by Dr. Littlejohn, and thought that there

should be a special Minister of Health. The medical officers should be State paid, and under the control of this Minister.

Dr. DUNCAN (Crosshill) held that we should have a differently constituted Board of Supervision for Scotland, which at present does not contain a single sanitary expert. He seconded the resolution of Dr. Carpenter.

Dr. NASMYTH (Fife) expressed an opinion that this resolution should be forwarded to the Secretary of State for Scotland and the Lord-Advocate, and this was unanimously agreed to.

Dr. McVail (Kilmarnock), Dr. Calder (London), Dr. Fitzpatrick (Dublin), and Dr. Graham (Middleton) continued the discussion.

Dr. BRINDLEY (London) read an interesting paper on a Minister of Public Health, in which he advocated a system of medical police, illustrating his remarks by quoting the success of institutions of the kind in Paris and America, and endeavouring to show the great utility of such a system to the people at large as regards sanitation.

Dr. BRUCE (Dingwall) read a paper on a Proposal for Joint Publication of the different Annual Hospital Reports from Scotland. He pointed out that a general collection of statistics would tend to elucidate many points, such as length of stay of patients in hospitals and other matters.

Dr. LITTLEJOHN moved that a committee be appointed to report to the next meeting at Bath the result of a conference with the superintendents of the larger hospitals of Scotland, and this was unanimously agreed to.

Dr. DUNCAN (Glasgow) read a paper on some Researches in the Homes of Hospital Patients, and of Holiday Children, by Dr. Churton (Leeds), who was unavoidably absent.

A discussion followed upon these three papers, to which Dr. J. Francis Sutherland (Glasgow) and Dr. Walker (St. Leonards-on-Sea) contributed.

Surgeon-Major PRINGLE read a paper on 'Sheffield and Leicester compared in their relation to Vaccination and consequent Small-pox Prevalence. Leicester immunity from small-pox was, he said, due to the rigorous system of isolation carried out. This was purely moral and voluntary, not legal or compulsory. But the only preventive of small-pox was vaccination. The late epidemic in Sheffield, the speaker thought, was due to spurious vaccination, much inert and dangerous lymph being used.

Dr. NORMAN KERR (London) read a paper on Some Risks from Attention to Health and Sanitation. Patients sometimes, he said, kill themselves by undue attention to sanitary details as regards themselves. In the case of children, he said, too much coddling and attention were positively dangerous. The paper was written in a humorous strain, and illustrated by many incidents.

Dr. McVAIL, speaking of Surgeon Major Pringle's paper, expressed his high admiration of it, but thought that in the case of the Sheffield epidemic we should wait until Dr. Barry's report was issued before we drew conclusions. In Sheffield the mortality was only 10 per cent., in Montreal 30 or 40 per cent. Therefore Dr. McVail thought that there could not have been so much spurious vaccination in Sheffield as Dr. Pringle supposed.

Dr. BRETT (Watford) always made six marks, and used arm-to-arm vaccination.

Dr. PARKER (Liverpool) had vaccinated 30,000 people in twenty years, and had never had a single complaint. Liverpool, he held, is one of the best vaccinated cities in England.

Dr. CAMERON (Huddersfield) thought that probably in Sheffield there was not so much spurious as insufficient vaccination.

On Thursday the proceedings were opened by a discussion on the Communicable Diseases Common to Men and Animals and their Relationships. The President intimated that Dr. Fleming was to have opened the discussion, but unfortunately he was detained by very serious illness. In his absence Principal WALLEY of Edinburgh opened the subject. He said that anthrax was not at the present moment occupying the minds of sanitarians, but it was most deadly and rapidly communicable from animals to man. Legislation in regard to it was difficult. An outbreak of rabies was stated to have occurred in Edinburgh in 1881, which was stamped out in three months, and anthrax might be in like manner stamped out of the whole country in from six to twelve months. The principal malady at present demanding attention was tuberculosis, one of the

greatest pests to man and animals. Principal Walley had no hesitation in saying that it was communicable from animals to man and back again from man to animals in every possible shape, by ingestion, inhalation, and direct inoculation. Out of thirteen animals slaughtered in Edinburgh two or three months ago for pleuro-pneumonia six were affected with tuberculosis. Poultry were being slaughtered by this disease in thousands, and, in the speaker's opinion, it might be transmitted by eggs. Much indirect evidence existed of the transmission of tuberculosis from animals to man by the medium of flesh. There was no power in Scotland, nor, to a large extent, in England, to enable any official to take charge of animals exposed in public markets and affected with tuberculosis. Principal Walley concluded by moving—"That the Public Health Section of the Association approves of the action of Government in inquiring by commission into the relationship of bovine and human tuberculosis, and urges that as soon as possible such measures be taken as the report of the commission might show to be advisable, and that copies of this resolution be forwarded to the Prime Minister, Secretary for Scotland, and the Lord Advocate."

Dr. FARQUHARSON, M.P., said that no doubt existed that various diseases—such as anthrax—were transmissible from man to animals, but all were slight compared to tuberculosis. It was now known that the bacillus in a tuberculous animal was the same as that in man, and as the milk of such an animal swarms with the bacilli there seems no reason to doubt that by this medium they were transmitted to the human subject. He (Dr. Farquharson) was afraid that year by year tubercular diseases would become more common in Britain. He had great pleasure in seconding the resolution.

Mr. CROOKSHANK (London) said that glanders, anthrax, and other diseases were transmissible to man, but did not arise independently of the lower animals. Tuberculosis, on the other hand, did. It was very common in this country in pigs, cows, poultry, and other animals. The speaker instanced a case in which a rabbit, fed upon milk from a tuberculous cow, died in two months from tubercular disease of the intestines and mesentery. This infective milk was specially liable to produce tuberculosis in children. Mr. Crookshank also referred to the alleged origin of the human infectious fevers from the cow. As to diphtheria and scarlet fever, he believed that at present we did not know whether or not they were derivable from the cow.

Mr. WILLIAM BROWN, F.R.C.S. (Carlisle), read a paper on the Association of Typhoid Fever with an Infective Fever among Cows. There were cases of typhoid fever at a dairy, and in ten weeks twenty cases occurred, and all the affected individuals had derived their milk supply from the infected dairy. The water supply of the dairy was perfect and pure. There was no history of imported infection, and no antecedent case of typhoid in the immediate neighbourhood could be traced. However, it was ascertained that a febrile disorder, having a striking resemblance to typhoid, had existed among the cows previously, and the assumption was that the disease from which the cows suffered was typhoid fever communicable to man.

Dr. SEATON (St. Thomas's Hospital) believed that milk might be contaminated by human agency.

Dr. EDINGTON (Edinburgh) disbelieved in the theory of Dr. Klein's organism.

Dr. TOMKINS (Leicester) said that there was no direct evidence that tubercular disease could be communicated to man, although he believed it could.

Dr. HIME (Bradford) read a paper on Milk Scarlet Fever, and brought forward instances where scarlet fever was in the house of the dairyman, and yet scarcely any cases of scarlet fever occurred in their neighbourhood, although some of the dairies supplied as much as seventy gallons of milk daily.

Dr. CARPENTER said that, on authority, there was as much as 80 per cent. of the meat sent into the London market affected with tuberculosis. He mentioned the case of a school in which scarlet fever broke out. The school was shut up, and the curious fact remained that, although the infected children whilst peeling mixed freely with the other children who did not go to this school, yet these said children did not contract fever.

Dr. M'FADYEAN (Edinburgh) believed that the connexion of human and bovine tuberculosis had been clearly established.

Dr. M'VAIL (Kilmarnock) believed that the infection was due to bovine and not human contraction.

Principal CAIRD showed that the milk of animals affected with tuberculosis could communicate the disease, and said that he thought that instead of 80 per cent. of infected meat being sold it was more likely but 25 per cent.

Principal MCCALL said he believed that tuberculosis in the animal was more dangerous than the same disease in the human subject. He had very seldom found tuberculosis in slaughtered animals.

Principal WALLEY briefly replied.

Dr. CHRISTIE (Glasgow) read a paper by W. J. Simpson, M.D. (Calcutta), on Cholera and its Fostering Conditions in the Endemic Area. A full description of Calcutta, Howrah, and the suburbs generally was given, dwelling specially on the water supply, the tanks, the drainage, the constitution of the streets, and the sanitary system generally. The remedies suggested were (1) a liberal water supply for Howrah and Calcutta; (2) specially constructed tanks; (3) well-planned streets, good drainage and scavenging, and a well-organised sanitary department.

DISEASES OF CHILDREN.

The proceedings in this Section were opened by an address by the PRESIDENT (Dr. Cheadle), dealing mainly with the necessity for more attention being paid to the training of students in the methods of recognising and treating the diseases of infancy and childhood. He drew special attention to the fact that in almost all the hospitals for diseases of children cases under two years of age are not admitted—that is to say, cases are not admitted, as a rule, at that period of life when the congenital faults of structure and of inherited disease show themselves and are most destructive. In order to put the study of the diseases of children on a proper basis, Dr. Cheadle suggested that it be made compulsory for students to show a competent knowledge in this department, that proper systematic and clinical instruction be given in all medical schools, and that infants under two years be admitted to all the children's hospitals.

After the address had been given, the Section was occupied with a discussion on Diphtheria. This was introduced in an able address by Professor Jacobi of New York, who, in the limited time at his disposal, dwelt mainly on the etiological aspect and on treatment. In regard to the mode of entrance of the poison, he emphasised the importance of the loss of the epithelium covering the mucous membranes; and he dwelt also on the structure of the various mucous membranes as aiding or retarding the absorption of a poison applied to their surfaces. On the subject of treatment he spoke with considerable detail, but in the limited space at our disposal it is possible to indicate only a few points to which he referred. At the outset he brought prominently forward the subject of anto-infection, which is far too little dwelt upon, and in connexion therewith he indicated the means by which this might be prevented. In this connexion, also, he pointed out the great necessity there was for avoiding abrasion of the mucus membranes. Thereafter he discussed the various medicinal agents employed, and spoke favourably of the perchlorides of iron and mercury.

Mr. R. W. PARKER spoke of the surgical treatment of diphtheria. Of late, in performing tracheotomy, he has sought to enter the trachea by a single incision after the subcutaneous tissues have been dissected, as the less the tissues are disturbed the less the chance there is of absorption through the cut surfaces. He prefers the high operation, and considers tracheotomy preferable to intubation. In regard to the time for performing the operation, he raised the question whether it was justifiable to operate before dyspnoea had set in. He himself considered that in some cases it was so, as thereby "inhalation pneumonia"—such a fertile source of disaster—might be prevented; but in the subsequent discussion comparatively little support was given to this view.

Professor RANKE (Munich) drew attention to the investigations of Emerich, which, to his mind, had conclusively proved the existence of a micrococcus characteristic of diphtheria. He made some most interesting remarks on the influence of drainage, showing how Munich had, by attention to sanitary matters, been almost freed from enteric fever, while it still continued subject to diphtheria. He also spoke on the operative treatment, and his statistics showed a very large amount of recoveries after tracheotomy.

Dr. WAXHAM (Chicago) gave a demonstration of intubation, which had been very successful in his hands. He

considered it a form of treatment preferable to tracheotomy, but the percentage of recoveries he recorded was not quite so high as that obtained by some from the older operation.

Dr. Gairdner, Dr. Macewen, Mr. Lennox-Browne, and others also spoke, and, Dr. Jacobi and Mr. Parker replied. The discussion was well attended, and was much appreciated.

OPHTHALMOLOGY.

The President, Dr. THOMAS REID, in a few well-chosen remarks, bade the members welcome on this the first meeting of the Association in Glasgow, and expressed regret that, owing to the Congress at Heidelberg, so few of the continental specialists were able to be present. He then called upon Mr. Carter to open the discussion on the Treatment of Senile Cataract.

Mr. CARTER began by stating that, as he had been operating almost continually during the last thirty years, he had therefore seen almost all the modifications of Daviel's operation. In speaking of those modifications, he said that their value depended in great part upon what he called "the personal equation of the operator." He advocated early operation, and did not think the presence of a little cortical matter in the capsule after extraction did so much harm as was formerly supposed. In regard to the question of anaesthetics, he now preferred cocaine to general anaesthesia, and counteracted the dilatation of the pupil by means of eserine instilled half an hour previous to the operation. He believed that the cases of suppuration after cataract extraction were due to uncleanness on the part of the instruments employed, rather than from infection in the eye itself, and he was therefore scrupulously careful to cleanse those thoroughly, especially the teeth of the forceps and the shoulder of the cystotome. He preferred to wash out the conjunctival cul-de-sac with a 15 per cent. solution of Barff's boro-glyceride instead of the mercurial antiseptics which are now so generally used, as he believed that much of the pain and swelling which sometimes followed an operation were due to the use of the latter antiseptic. For the operation he employed a knife with a narrow blade, and in order that it might cut easily and so prevent as far as possible the escape of aqueous, he anointed it with a mixture of equal parts of olive oil and castor oil to which 5 per cent. of eucalyptus oil had been added. He strongly insisted upon the value of an iridectomy, performed either preliminary to or at the time of the extraction, as he considered that that practice was safer, and gave as good results optically as in those cases in which the iris was left untouched. He considered washing out the anterior chamber after extraction to be unnecessary, and thought that with an iridectomy any iritis which might occur as a result of some cortical matter being retained was usually quite controllable by treatment. For dressing he did not employ plaster, but applied a piece of lint smeared with sanitas vaseline to the eyelids, and supported the eye by means of a light compress and bandage, and the eye was left undisturbed for forty-eight hours after the operation. When any opacity of the capsule remained, he preferred to deal with it after the method proposed by Bowman.

The discussion was afterwards carried on by Drs. Meighan, Lloyd Owen, C. H. Lee, Hewetson, Karl Grossman, J. H. Bell, S. Snell, J. R. Wolfe, Powell, Teale, McHardy, and the President. Mr. Carter briefly replied.

Dr. WOLFE gave an excellent demonstration of his method of operating for the extraction of cataract. This consists in performing a preliminary iridectomy downwards. After the lapse of a period varying from seven to fourteen days the extraction is effected. He uses a spring speculum to separate the lids, the patient being in a recumbent position, but employs neither chloroform nor cocaine. The speculum being introduced, he passes a sharp-pointed Graefe's knife through the anterior chamber, both puncture and counter-puncture being in the cornea. This section of the cornea is not, however, completed, a bridge being left. The speculum is now removed, and the lids being separated with the forefinger and thumb, a cystotome is passed into the anterior chamber, and the capsule divided. A blunt-pointed Graefe's knife is now passed through the formerly made puncture and counter-puncture, and the bridge of cornea is divided. The removal of the lens is effected by gentle pressure applied above and below with the fingers. In this method there is very little risk of escape of the vitreous, and in the numerous cases we saw, numbering eleven in all, the procedure appeared to be eminently satisfactory.

PSYCHOLOGY.

Dr. JAMES C. HOWDEN, the President of this Section, gave the opening address. At the outset he remarked upon the assistance to be obtained from physiology in the treatment of insanity. Brain surgery would certainly be of use in the future in treatment—e.g., in cases of epileptic insanity due to depression of bone; also in cases where there was a collection of pus, causing pressure. On the whole, however, surgical treatment can only be adopted in exceptional cases. He then referred to the medical and moral, or, as he would rather call it, the “mental” treatment. There was no specific for insanity. Some, he said, relied upon a purely expectant treatment, but he always believed that “nature helps those who help themselves.” He made some remarks on the proper training of asylum attendants as a step in the proper direction. The “mental” treatment of insanity was the most important of all, and he put special stress on the early removal of the patient from unfavourable surroundings. In speaking of prevention, he referred to the relationship of civilisation to insanity. The conduct of the people as individuals had an important bearing on this question, but the State might do much by wise legislation. With reference to some modern methods of treatment, he was in favour of boarding out well-selected chronic cases; and in regard to the open-door system, he thought this might be pushed too far.

Dr. SAVAGE, in proposing a vote of thanks to Dr. Howden for his address, made a few comments. He thought it was impossible that an asylum superintendent could efficiently treat all the cases in a large asylum without a sufficiency of medical assistants.

Drs. Conolly, Norman, and Gairdner also made some remarks.

Dr. A. K. TURNBULL (Fife and Kinross Asylum), read a paper on “Boarding-out as a Provision for Pauper Insane.” He said this system of dealing with the insane should be adopted when institutional care was no longer required, domestic care being all that was necessary. It was a means for providing for many cases of mild chronic dementia. The advantages he claimed for it were: (1) The patient obtained natural and healthy occupation; (2) it was more economical; and (3) it relieved the pressure on asylums. Of course many requirements must be fulfilled before boarding out any cases—e.g., the latter must be properly selected, and the guardians must be capable of taking charge of such patients.

Dr. YELLOWLEES concurred, on the whole, with Dr. Turnbull's remarks, but thought his plan could only be adopted in a rural district.

Dr. HACK TUKE, in his remarks, said that the injury to the young members of the family into which the patient was received was not sufficiently thought of.

Dr. STEARNS (Hartford, Conn.) said that the boarding-out system had not as yet been adopted in the United States. In that country, in connexion with the State asylums, were two annexes for male and female chronic cases, and under the immediate supervision of the officials in the asylum proper. So far, this system worked very well.

Drs. Mould, Richardson, and Clouston spoke in favour of the boarding-out system under due limitations.

Dr. WIGLESWORTH read a paper on the Pathology of Delusional Insanity (Monomania). In the course of his remarks, he observed that in this affection hallucinations were always primary, and the delusions secondary, and that at the outset it was an affection of the lower centres, the highest centres being unaffected.

Drs. Savage, Mickle, Norman, and Yellowlees took part in the discussion, the latter two remarking there could be no monomania without some disturbance of the higher centres—e.g., judgment.

PHARMACOLOGY AND THERAPEUTICS.

This section was accommodated in the Conveyancing Class room, and was under the Presidency of Dr. James Morton (Glasgow).

Dr. MORTON, in opening the proceedings, said it was to be regretted that our best informed pharmacists were not to be found in the ranks of the medical profession, but amongst chemists and druggists. The progress of pharmacy, which had of late been rapid, was to be ascribed more to the enterprise and competition of pharmaceutical firms than to

the researches and discoveries of the scientific physician. For the purity of the remedies prescribed by the physician reliance had to be placed on the skill and integrity of the pharmacists of such firms. This was becoming every day more completely the case. He suggested the necessity of some education test or Government control; and that every medical student during or before his professional curriculum, should attend a class to be taught by a well-informed pharmacist. In making this proposal he had no desire to under-estimate the knowledge of pharmacy possessed by members of his own profession; but it was not to be expected that under existing arrangements they should attain to a knowledge of this department as accurate and full as that which must be possessed by many of those whose whole time had been devoted to it for many years.

Several papers of interest were read in this Section, abstracts of which must be deferred till next week.

LARYNGOLOGY AND RHINOLOGY.

Dr. FELIX SEMON, the President, delivered an excellent address in which he sketched the history of laryngology in this and other countries. He spoke of the differences of opinion held by those who advocated constitutional as opposed to local treatment, and the controversies which had taken place in consequence thereof. Ten years ago, however, the real advance in the study of laryngology began, and so great had been the progress made, that it was now firmly established in every school of medicine, as might be expected from a department which had so much good in it. Dr. Semon further pointed out that the work done in this country was highly to be commended, and the papers written on this subject were to be counted by the hundred during the past year, many of which were of great merit. He would desire, however, firstly, to have the subjects of laryngology and rhinology made compulsory in the curriculum of medical study; secondly, he desired that the students' knowledge of these subjects should be tested on going up for final examination; and, thirdly, that the organisation of a body of teachers was a matter to be desired, as the teaching at present of diseases of the throat generally took place at hours which made it difficult for the student to overtake it in his course. However great the experience and clinical material might be in this country, it was so widely spread in our cities that it could not be taken advantage of as in most continental schools. Dr. Semon further advocated the communication of subjects of interest at our medical societies, although he did not approve of the formation of special societies.

Dr. DE HAVILLAND HALL introduced the discussion on the Use and Abuse of Local Treatment in Diseases of the Upper Air Passages, and dealt with the use and abuse of remedies in many of the commoner forms of throat affections. He pointed to the energetic manner in which the nose particularly had been attacked by enthusiasts, and said that at first the larynx had received particular attention. Now we heard of people operating on 160 cases in one year, with a view to correcting conditions of the nasal septum. He trusted that these zealous workers would soon be satisfied, and the nasal organ less interfered with.

Dr. GEORGE STOKER seconded the discussion, and treated particularly of the use and abuse of insufflations and the galvano-cautery in the treatment of these affections.

An animated discussion followed, in which Drs. Grant, Hodgkinson, Spicer, Mackenzie, Johnstone, Macintyre, Jacob, and Nelson took part. Great unanimity of opinion was expressed by these gentlemen to the effect that the local treatment, without due consideration of the constitutional, was wrong.

Dr. JOHN MACINTYRE showed a dissection of the human larynx in which four hyo-epiglottidean muscles were exposed, two median and two lateral, and described their origin and insertion. He also exhibited a number of the same muscles in mammals. He said that Luschka refers to the two median muscular bands as having been described in 1743 by Morgagni, but no reference is made to the lateral pair. The muscles are not mentioned in the ordinary textbooks of Anatomy and Surgery.

Dr. SEMON, in the name of the members of the Section, congratulated Dr. Macintyre on his thoroughly original demonstration.

Dr. NEWMAN read a paper on two cases of complete Laryngeal Stenosis, after which the meeting adjourned.

REPORT OF THE AGRICULTURAL DEPARTMENT.

PROFESSOR BROWN'S report of the Agricultural Department, Privy Council Office, on the Contagious Diseases, Inspection, and Transit of Animals for the year 1887, opens with a reference to pleuro-pneumonia, in which it is pointed out that, although inoculation confers a certain degree of protection, its effects are merely palliative, and it is a measure which has in no country succeeded in getting rid of the disease. The only successful procedure has been the stamping-out system. It is suggested that an exhaustive scientific inquiry should be made upon the subject. Pleuro-pneumonia was very prevalent in some parts of Scotland during the past year, the number of outbreaks increasing from 55 in 1884, with 321 cattle attacked, to 324 in 1887, with 1380 attacked. In England the number of outbreaks and infected animals was in 1884—257 and 775, in 1887—293 and 1047 respectively. Wales remained practically free, only one outbreak occurring there in 1884 and one in 1887. The increase is undoubtedly in the main due to the movement of infected cattle—a fact which received a striking confirmation in the case of Lanarkshire, where efforts to stamp out the disease for a long time failed to eradicate it, owing to the existence of unsuspected centres of the disease in that county. Professor Brown insists upon the rigid enforcement of the powers possessed by the local authorities with respect to the movement of cattle in their districts, and alludes to the fact that the disease is one which may remain dormant and unrecognisable for months, as an explanation of the impossibility of at once eradicating it by repressive measures. Still, such measures, promptly and generally applied, should limit outbreaks when they do occur. Swine fever, also highly contagious and fatal, is even more difficult to deal with, and the opinion is expressed that stamping out swine fever will only be carried to a successful issue when cattle plague regulations are enforced. Experimental inquiry as to the value of inoculations has had to be abandoned owing to the difficulties of having a sufficient number of persons licensed to perform such experiments. It is pointed out that three distinct diseases are included in the term swine fever, and the appendix contains a report of a recent inquiry by Professor Schütz upon the subject. The fever prevalent in this country is identical with hog cholera of the United States, but there is also a contagious lung disease (swine plague, Salmon) prevalent in France (*la pneumonie infectieuse*) and Germany (*Schweine seuche*); and also a form of erysipelas (*rouget*, Fr.) These two latter forms have not been identified in this country, but they may exist, although to a very slight extent. Stamping out fails in swine fever because of the general apathy in regard to its ravages. It fails in anthrax from the utter impossibility to prevent the introduction of the spores of the disease. Rabies was much less prevalent among dogs, but the year was marked by the epidemic among the deer in Richmond Park, of which an account is given in the appendix. Glanders and farcy were apparently more prevalent, especially in the metropolis. The report also refers to the importation of foreign animals, and contains in the appendix full reports of the inspectors.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5729 births and 2881 deaths were registered during the week ending Aug. 4th. The annual rate of mortality in these towns, which had ranged between 15.0 and 16.0 per 1000 in the preceding four weeks, was again last week 16.0. During the first five weeks of the current quarter the death-rate in these towns averaged but 16.7 per 1000, and was 5.5 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 9.0 in Bristol, 10.0 in Brighton, 12.0 in Cardiff, and 12.4 in Hull. The rates in the other towns ranged upwards to 19.2 in Wolverhampton, 19.7 in Preston, 21.1 in Huddersfield, and 21.9 in Manchester. The deaths referred to the principal zymotic diseases, which had been 311 and 408 in the preceding two weeks, further rose last week to 432; they

included 215 from diarrhoea, 64 from measles, 61 from whooping-cough, 39 from scarlet fever, 27 from diphtheria, 21 from "fever" (principally enteric), and only 5 from small-pox. No death from any of these zymotic diseases was registered during the week in Brighton or in Cardiff, whereas they caused the highest death-rates in Sheffield, Leeds, and Leicester. The greatest mortality from diarrhoea occurred in Leeds, Preston, Leicester, and Sheffield; from whooping-cough in Norwich, Manchester, and Halifax; from measles in Wolverhampton and Leicester; from scarlet fever in Huddersfield and Blackburn; and from "fever" in Birkenhead. The 27 deaths from diphtheria included 19 in London and 3 in Manchester. Small-pox caused 2 deaths in Preston, 1 in Oldham, 1 in Sheffield, and 1 in Hull, but not one in London or in any of the twenty-three other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 2 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 828 at the end of the week, against numbers declining in the preceding four weeks from 924 to 861; 73 cases were admitted during the week, against 105 and 87 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 166 and 160 in the preceding two weeks, rose last week to 167, but were 25 below the corrected average. The causes of 58, or 2.0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bradford, Leicester, Portsmouth, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Huddersfield, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18.4 and 15.3 per 1000 in the preceding two weeks, rose again to 15.9 in the week ending August 4th; this rate was 0.1 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 6.4 and 10.5 in Perth and Leith, to 18.2 in Glasgow and 18.7 in Aberdeen. The 402 deaths in the eight towns showed an increase of 15 upon the low number in the previous week, and included 22 which were referred to diarrhoea, 5 to whooping-cough, 3 to "fever," 3 to scarlet fever, 3 to measles, 2 to diphtheria, and not one to small-pox; in all, 38 deaths resulted from these principal zymotic diseases, against 35 and 41 in the preceding two weeks. These 38 deaths were equal to an annual rate of 1.5 per 1000; which was 0.9 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 8, 12, and 21 in the preceding three weeks, further rose last week to 22, but were 6 below the number returned in the corresponding week of last year. The deaths referred to the other zymotic diseases differed but slightly from the numbers in the previous two weeks. All the three deaths from "fever," the 3 fatal cases of measles, and 3 of the 5 from whooping-cough were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 34 and 46, in the preceding two weeks, rose again last week to 55, but were 9 below the number returned in the corresponding week of last year. The causes of 61, or more than 15 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 22.6, 19.4, and 18.0 per 1000 in the preceding three weeks, rose again to 21.1 in the week ending August 4th. During the first five weeks of the current quarter the death-rate in the city averaged 20.3 per 1000, the mean rate during the same period being 15.6 in London and 15.8 in Edinburgh. The 143 deaths in Dublin showed an increase of 21 upon the number in the previous week; they included 11 which were referred to whooping-cough, 6 to "fever" (typhus, enteric, or ill-defined), 3 to scarlet fever, 1 to diarrhoea, and not one either to small-pox, measles, or diphtheria. Thus 21 deaths resulted from these principal zymotic diseases, against 21, 16, and 8 in the preceding three weeks; these were equal to an annual rate of 3.1 per 1000, the

rate from the same diseases being 27 in London and 0.2 in Edinburgh. The deaths from whooping-cough, and "fever," showed a considerable increase upon the numbers in recent weeks; the fatal cases of scarlet fever were within one of the number in the previous week. Five deaths from violence and 7 inquest cases were registered; and 44, or nearly a third, of the deaths occurred in public institutions. The causes of 15, or nearly 11 per cent., of the deaths in the city were not certified.

THE SERVICES.

ADMIRALTY.—The following appointments have been made:—Surgeon George W. Bell, to the *Wye*; Surgeon Bowen S. Mends, to the *Vernon*, temporarily; Surgeon John S. Lambert, to Haslar Hospital; Surgeon C. W. Hamilton, to the *Boscawen*; and Surgeon E. E. Bray, to the Royal Marine Artillery, Eastney (all to date Aug. 3rd, 1888); Surgeon Edward J. Biden, to the *Defiance*; Surgeon William Hayes, to Plymouth Hospital; Surgeon F. A. Jeans, to the Royal Marine Artillery, Eastney; Surgeon H. S. Jackson, to the *Monarch*; Surgeon John A. Aherne, to the Royal Marine Depot, Walmer; Surgeon A. W. E. B. Barrett, to the *Ajax*; Surgeon George Welch, to Haslar Hospital; Surgeon Edward H. Williams, to the *Duke of Wellington*; Surgeon Alexander M. French, to the Royal Marines, Plymouth; and Surgeon C. James, to the *Agincourt* (all to date Aug. 20th, 1888).

ARTILLERY VOLUNTEERS.—1st Glamorganshire: Archibald Hood, M.B., to be Acting Surgeon (dated Aug. 4th, 1888).

RIFLE VOLUNTEERS.—5th Volunteer Battalion, the Cameronians (Scottish Rifles): Donald Macphail, M.D., to be Acting Surgeon (dated Aug. 4th, 1888); John Blair, M.D., to be Acting Surgeon (dated Aug. 4th, 1888).—2nd Volunteer Battalion, the King's (Liverpool Regiment): Nathaniel Edwd. Roberts, M.B., to be Acting Surgeon (dated Aug. 4th, 1888).—4th (Stirlingshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): John Brown Robertson, M.B., to be Acting Surgeon (dated Aug. 4th, 1888).—3rd Volunteer Battalion, the Queen's (Royal West Surrey Regiment): Surgeon C. Stirling resigns his commission (dated Aug. 4th, 1888).—1st (Hallamshire) Volunteer Battalion, the York and Lancaster Regiment: Surgeon A. Hallam is granted the honorary rank of Surgeon-Major (dated Aug. 4th, 1888).

Correspondence.

"Audi alteram partem."

LONGEVITY AND ALCOHOL

To the Editors of THE LANCET.

SIRS,—As you have referred to me, pray allow me to state that in no paper or article have I attributed any "conclusions" to Dr. Isambard Owen, other than he has given himself. The paper to which you have alluded was written with the very object of pointing out the error of imputing such a "conclusion" to Dr. Owen, or that intemperate drinkers lived longer than abstainers. This is an error into which a large number of newspapers and of men of light and leading have fallen. The correspondence that has poured in upon me from this misunderstanding has been appalling. I distinctly pointed out that Dr. Owen plainly stated that the returns of the Collective Investigation Committee afforded no means of comparing the duration of life of abstainers and intemperates. I added Dr. Owen's explanation of the apparent anomaly, and some of the conclusions which he felt warranted in drawing from the returns. Though these conclusions are very favourable to temperance, I agree with you in laying very little weight on them. The small number of the cases reported on, 4234 deaths from 178 reporters, is much too restricted a basis to warrant any general deductions of any kind. Another grave defect is that the returns depended on the memory of the returning practitioners for a preceding period of three years, the only guide being the counterfoils of each death certificate book. Considering how few medical men have paid special attention to the alcoholic particulars of any case, and how overburdened a

general practitioner usually is, such a method cannot but be inaccurate. The classification, too, was exceedingly vague. For these and other reasons, while awarding Dr. Owen full praise for the labour and pains he has bestowed on the material at his disposal, I am unable to place much reliance on the returns from this inquiry. It appears to me to be a *sine quâ non* of any trustworthy investigation that the reporters should be asked to report future deaths during a prescribed period. In this way attention would be called beforehand to the particulars required, and thus intelligent observations would be recorded. But such an inquiry must ever be surrounded with great difficulties.

I am, Sirs, your obedient servant,
Grove-road, Regent's-park, Aug. 4th, 1888. NORMAN KERR.

JUDICIAL EXECUTIONS BY HANGING.

To the Editors of THE LANCET.

SIRS,—Your correspondent, Dr. Higham Hill, "hits the right nail on the head" when he complains that "under the existing system the hangman appears to be the sole authority for deciding upon the length of drop, &c." I imagine "the few material points" in his letter might include the important one of the position of the "knot" which is still placed under the left ear, though it is admitted to exercise, and with less force (drop) more fatal leverage when placed under the chin. The ropes used are made of the best Italian hemp and are wonderfully flexible and soft. Berry generally uses one of $\frac{3}{4}$ in. diameter, though he has shown me one of $\frac{3}{8}$ in. which he had used. These ropes become smaller and more cutting when stretched with a weight; the tight leather "washer," which is with difficulty forced down to fix the noose, generally falling 6 inches or more, the amount of constriction of the neck. The hangman is allowed to view his victim through the grating in the condemned cell door long before the hour of execution, and it is on this inspection, together with weight and height supplied by the prison authorities, that he is supposed to make his "calculations." If Berry knew, as he says he did, what was going to happen at Oxford, he might have put three or four common knots on the rope, between his "thread" and the noose, which would have shortened the drop by about a foot, rendered the check a little more gradual, and would not have added twenty seconds to the culprit's stand under the beam. I hope shortly to place before the profession a description of the simple "contrivance" which I brought to the notice of Lord Aberdare's Committee with an analysis of the present system of executions, and of the committee's objections to my proposals, which I hope to find in a copy of their report promised by the Home Secretary through my friend, Mr. Brookfield, M.P.

I am, Sirs, your obedient servant,
J. J. DE ZOUCHÉ MARSHALL, L.R.C.S.I., &c.
High-street, Hastings, Aug. 1st, 1888.

AN EASY METHOD FOR PRODUCING LARGE ANATOMICAL DIAGRAMS.

To the Editors of THE LANCET.

SIRS,—Everyone knows that, having once produced the outline to scale, the filling in of detail is an easy matter in a large diagram. Having wasted some time with pantograph enlarging it was given up. I next turned to the "magic lantern" for aid, and tried as follows:—1. Ground glass to trace the picture, then covered with Canada balsam and sheet of glass used as a lantern slide, but found that fine lines cannot be easily traced, the thickness of glass offering the obstacle. 2. Plain glass coated with benzole varnish (one ounce dried Canada balsam to two ounces benzole); this answered better, but the thickness of the glass again prevented very fine tracings being made. 3. Next, coated mica in thin sheets with the above varnish, and found it answer admirably. Mode of procedure: Having coated the mica with varnish, lay it on the picture or engraving to be enlarged, trace the outlines on the varnished surface with a fine drawing pen and liquid Indian ink. Place this as the slide in an ordinary magic lantern (oil lamp gives ample luminosity—I use an argand reading light in the lantern) and the picture is enlarged to any size according to the distance of the lantern from the screen. I find it is better to use the wall as the screen where the paper or calico is

hung, and it is an easy process to run over the outline on the material with a soft crayon. The tracing, fitting up, and drawing occupy on an average a quarter of an hour. Enlarging on the black board so that the lecturer may fill in is easily done by this method, the room being slightly darkened, absolute darkness not being necessary as only black lines are required, and no fine features or tracery. Thinking it might save time to others, I offer it.

I am, Sirs, yours truly,

W. THIELWALL THOMAS, M.R.C.S., &c.,

Holt Tutorial Scholar, Univ. Coll. Sch. of Med., Liverpool.
June 16th, 1888.

LIVERPOOL.

(From our own Correspondent.)

THE ASSIZES.

AMONG the cases now being tried before Mr. Justice Stephen was one of murder on the high seas. The deceased was the captain and the prisoner the steward. A penetrating wound of the abdomen was caused by a knife; there was no surgeon on board, but the first and second officers did their best in what was evidently a hopeless case, death following in a few hours. Sentence of death was passed. There were many cases of serious assaults and wounding. In one a woman was charged with the murder of another woman by throwing a paraffin lamp at her. The deceased survived the assault, and the prisoner was committed for causing grievous bodily harm; but death ensuing, she was tried for murder. She was acquitted on this charge, but convicted of the minor offence and sentenced to seven years' penal servitude. In another case the dying declaration of the wife, the assaulted person, had been taken, but she fortunately recovered and was able to give evidence. Besides inflicting several wounds upon her head, it was stated that her husband jumped upon her. Dr. Hutchinson of Widnes found her suffering from peritonitis, and for some days she was in extreme danger. For biting off a portion of a policeman's ear a negro prize-fighter was sentenced to eighteen months' imprisonment with hard labour.

SOUTHPORT AS A HEALTH RESORT.

Fifty years ago Southport was an almost unknown village, difficult of access, and without any accommodation for visitors. The formation of the railway some years later gave a great impetus to the place, which was favourably situated for a health resort, and it is now an incorporated borough with a population of 30,000, a mayor and corporation, and a parliamentary representative. From the first it has been built wisely, with long, straight, wide streets at right angles to each other, and the sanitary arrangements are in accordance with the most modern improvements. The air is remarkable for its mildness, the streets drying rapidly after the heaviest rains. There are several large first-class hotels and excellent lodgings to be had. Many Liverpool merchants and others, who have to spend the day here, live at Southport, the train service being most convenient. The deficiency until recently was that the sea was rather distant except in very high tide. The corporation have recently overcome this. They have constructed a sort of miniature breakwater, over which the tide flows, and the water is retained. The promenade is excellent, and there is every comfort and attraction provided so as to counteract the dulness so often experienced at health resorts.

Liverpool, Aug. 7th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE.

THE quarterly meeting of the Newcastle Royal Infirmary showed a much improved and satisfactory condition of the hospital as regards its financial state. There had been an increase in the subscriptions for the quarter of £226, while under the head of donations there had been an increase of £585, and the workmen's donations reached £1427, being an increase for the quarter of over £1000. So much for placing the hospital on a broad basis, and trusting the

people to support an institution by which they so greatly benefit. The expenditure had likewise diminished, the cost per patient being at the rate of £17 7s. 6d. per annum, against £19 in the previous quarter. The Newcastle and Gateshead Water Company have invited the representatives of the two corporations to inspect the great reservoir at West Hallington, Northumberland, now about complete. Some idea of the water resources of the company may be formed when it is stated that this new reservoir will have capacity to store 750,000,000 gallons, so that after this addition all fears as to water supply for Newcastle, Gateshead, and some of the adjacent districts may be set at rest.

CURIOUS BURIAL CASE AT DURHAM.

Last week an inquest was held at Durham, which showed a conflict of female opinion about the birth of an infant which was not satisfactory to the coroner. The body of a child was delivered to a sexton for interment, the woman who took it stating it was stillborn, no doubt by this means hoping to escape burial fees; but, on the other hand, the midwife attending gave a certificate that the child was born alive, in order to get payment from the club. It is right to say that this certificate was not received by the registrar. The matter coming to the notice of the coroner, he held an inquest, and had a post-mortem performed by Mr. Vann of Durham, who testified that the child had not had an independent existence. The fact is many of the lower classes will say that a child has been born either dead or alive just as it suits them to save or to get money.

A HOLIDAY HOME FOR POOR CHILDREN.

The poor children of Leeds and other West Riding towns are indebted to the Hon. Mrs. Geo. Howard of Castle Howard for a rare treat. Thanks to her philanthropy and munificence, a fund of £500 has been subscribed for the purpose of taking the poor children of the overcrowded towns of Yorkshire and giving them a summer holiday of two or three weeks' duration on and about the lovely estate of Castle Howard. Already 600 children have been entertained there this summer, and a further batch was sent last week, and billeted on the cottagers of the estate, as well as filling the Guest House, which was formerly the large hotel near the Castle, and is well known to all tourists. The Hon. Mrs. Howard and family are taking the liveliest interest in the scheme, which is a truly charitable and sanitary one, and deserving of all praise.

SOUTH SHIELDS: THE VALUE OF "FIRST AID."

The *South Shields Gazette* of Tuesday last notices a case which took place on the previous day in South Shields, and which shows very forcibly the value of first aid rendered by a person who has been properly instructed in ambulance work. A little boy, about four years old, got into a saw-mill yard, and playing about noticed a lid in the ground. This (which was a cover to a well about ten feet deep) he lifted up, and falling in the lid or cover closed over him. The accident was not observed by anyone, but an old woman passing noticed strange noises from the well and gave the alarm, and in some little time the child was got out apparently drowned. But Sub-inspector Barrett, of the River Police, who had received regular ambulance instruction, at once brought the "Marshall Hall" method into operation, and with a successful result.

HARTLEPOOL: DIAGNOSIS OF DRUNKENNESS.

At the Hartlepool Petty Sessions last week, a young man was charged with being drunk on July 22nd when in charge of a pony and trap. He resented the charge at the time, and went to a medical man, Dr. Morison, to testify as to his condition. Dr. Morison stated that he found him sober. Questioned as to the tests he used, he said he had given him some very difficult sentences to repeat, which a man could not do if he were drunk, and from his general appearance and the way in which he spoke he concluded he was not drunk. "He smelt a little of drink to be sure, but a man who had the least drop of drink in the world may smell of drink." The Bench dismissed the case.

ACTION FOR LIBEL BY A MEDICAL MAN.

Dr. Eastwood, of the Dinsdale Asylum, Darlington, has recovered £50 and costs, in an action for libel tried at the Leeds Assizes, against a northern contemporary. The libel was a copy of a sensational article copied from another paper, which Dr. Eastwood alleged had a damaging effect on the asylum of which he is the proprietor.

Newcastle-on-Tyne, Aug. 7th.

EDINBURGH.

(From our own Correspondent.)

UNIVERSITY GRADUATION CEREMONIAL.

THE annual Graduation Ceremonial in Medicine took place on Wednesday, Aug. 1st, when forty-eight gentlemen received the degree of M.D., and 192 those of M.B. and C.M. Prior to the "capping" of this large body of graduates, the Chancellor of the University conferred the honorary degree of LL.D. upon Sir Nathaniel Lindley, Lord Justice of Appeal, a highly distinguished jurist and judge, whose name is as well known among lawyers as is that of his father, Dr. John Lindley, among botanists. Among the recipients of the degree of M.D. were three whose theses were of such high merit as to have earned the distinction of a university gold medal. These were Dr. James Graham, who has conducted "A Clinical Study of Hydatid Disease"; Dr. Berry-Haycraft, who writes on "The History, Development, and Function of the Carapace of the Chelonia"; and Dr. George Mackay, whose thesis deals with "Hemianopsia and Hemichromatopsia." After the ceremony of "capping" the graduates, they were addressed by Sir Wm. Turner, who congratulated them upon the degrees to which they had just been advanced. In an interesting comparison of the past with the present, he drew their attention to the great strides in advance that medicine as a science has made since the days of his own pupilage; and on that basis he defended the present system of scientific medical education against the charge that it is too theoretical and not sufficiently practical in its nature. In commenting on intellectual development as affecting the usefulness of the powers it is intended to call forth, he drew special attention to the importance of acquiring a habit of exact observation and its due combination with carefully trained methods of reflexion and comparison. Perhaps the most valuable part of his address was that in which he addressed himself to the consideration of the moral side of professional life. Here he found the opportunity of saying eloquently words of sound advice, which his hearers cannot lightly pass over or forget, and which are calculated to recur to the mind on the many occasions where wisdom is specially needed to guide the professional man. The address was excellently conceived in its form and ably delivered, and it was no small matter of congratulation to those who were present that the speaker used a great opportunity like that afforded for no narrow discussion of academic policy, but for the enunciation of the broad principles of human uprightness and professional rectitude.

THE UNIVERSITY COURT.

At its last meeting the Court recognised the lectures of the following teachers as qualifying courses in the University medical curriculum: Dr. James, in Practice of Physic; Mr. A. G. Miller, in Clinical Surgery; Dr. Hodsdon, in Surgery; and Mr. Geddes (Dundee), in Botany.

Edinburgh, August 8th.

DUBLIN.

(From our own Correspondent.)

ROYAL UNIVERSITY OF IRELAND.

AT a meeting of the Senate held last week, the following modifications in the present regulations respecting the third and fourth year of medical studies were adopted: (a) Medical students may attend lectures on any two of the subjects of medicine, surgery, midwifery, and diseases of women and children, in either the third or the fourth year of their studies, at their own option, provided that (1) the attendance of three months at a fever hospital &c., or on the prescribed ten fever cases, shall not take place prior to the attendance at the course of lectures on theory and practice of medicine; (2) the six months' attendance at a midwifery hospital or dispensary shall not take place prior to attendance at the course of lectures on midwifery; and (3) attendance on practical midwifery and gynaecology shall not take place during the attendance at a fever hospital &c., or on fever cases. (b) Attendance on practical pharmacy may take place during either the third or the fourth year of

medical studies. The Senate have also approved of a slight modification in the courses of biology prescribed for the first examination in medicine. The annual meeting of Convocation will be held on Tuesday, Oct. 30th, and at this meeting a representative of Convocation of the Senate will be elected. Henceforth the attendance to be required on courses of medical lectures will be increased from two-thirds to three-fourths. The Senate have purchased the museum, surgical and pathological collections and drawings, &c., connected with the Richmond Hospital.

LOCAL GOVERNMENT BOARD: ANNUAL REPORT.

In the last annual report attention was drawn to the fact that there was a decrease in the average daily number of persons relieved in the workhouses in the year ended January, 1887, as compared with the number relieved in the year preceding. The returns for the year under consideration show a further decline in those admitted to workhouses, and a decrease of 12,735 in the average daily number of persons who received out-door relief as contrasted with the year ended January, 1887. There was an increase of 3248 in the total number admitted in sickness to workhouses, and an increase of 23,396 in the number admitted who were not sick, thus showing an increase of 26,644 in the total number admitted during the year, as compared with the previous year. During the twelve months ending Jan. 14th last the total number of deaths in the workhouses amounted to 10,187, being a decrease of 507 as compared with the previous return. Deaths by fever were 383, as against 346; by lung disease 1754, as against 1848; and there were three deaths by small-pox, as against one in the previous year. As regards the number of cases in which medical relief was afforded under the Medical Charities Act, it appears that there was an increase of 2930, including those prescribed for at dispensaries and attended at their own homes, as compared with the preceding year. During the year ended Sept. 30th, 1887, 96,489 persons were vaccinated, showing an increase amounting to 1628. The total expenditure of poor-rates for poor relief, medical relief, burial-grounds, sanitary measures, superannuation, &c., was in 1887 £1,338,704, or a decrease of £21,893.

ZYMOTIC DISEASES IN DUBLIN REGISTRATION DISTRICT.

During the June quarter, the deaths from zymotic diseases numbered 272, being a decrease of 105 as compared with the preceding thirteen weeks. Six cases of small-pox were admitted to hospital, but no death from this disease was recorded.

THE CASE OF THE LATE MR. RIDLEY.

The evidence given at the inquest by Dr. MacCabe, who in November and December last was medical member of the Prison's Board, is tolerably conclusive as to the late Mr. Ridley's mental condition previous to his death. Mr. MacCabe has had considerable training in mental affections, and his evidence as a medical man and an expert in psychology is that Mr. Ridley was temporarily insane when he committed suicide. He attributes the cause of his insanity to constant anxiety. He (Mr. Ridley) had passed through a very trying ordeal, and it seemed to dwell on his mind. That and the loss of practice, as well as of popularity, which he seemed to feel very much, and the subsequent loss of sleep for several nights, all led, in Dr. MacCabe's opinion, to a sudden suicidal impulse. He was also of opinion that the reports contributed very materially to the condition of mental strain which led to the fatal act.

At a special meeting of the Ballycastle Board of Guardians, held recently, Dr. O'Connor, late dispensary medical officer, was granted a retiring allowance of £98 17s. per annum.

The Senate of the Royal University of Ireland have re-elected Dr. J. T. Banks their representative on the General Medical Council.

The Treasury have granted a loan of £35,000 for the construction of the new waterworks at Limerick.

Dublin, August 7th.

METROPOLITAN HOSPITAL SATURDAY FUND.—

The fifteenth annual street collection on the 14th ult., in aid of this fund, is announced to be the largest since the institution of the fund, and shows a net increase of £500 upon the preceding collection, which amounted to £5000. The workshop collections have yet to be received.

PARIS.

(From our own Correspondent.)

THE CONGRESS ON TUBERCULOSIS.

(Continued from page 251.)

ON July 27th the members of the Congress visited the laboratory of Professor Cornil. A great number of microscopes, and a still greater number of microscopic preparations, were placed at the disposal of the visitors, who were enabled to examine, under all their phases, the tuberculous lesions, the bacilli of Koch, and the other microbes which may be associated with them. An admirable preparation of actinomycose attracted great attention. From a group of inextricable filaments forming the mycelium of mushrooms deviated some ramified filaments presenting their extremities swollen in the form of gonoides. Dr. Straus, Professor of Experimental Pathology, presented a certain number of animals, on which he continued his remarkable researches. Professor Proust then invited the members of the Congress to visit his recently established Museum of Hygiene. He gave an exposition of procedures and apparatus applicable to prophylaxy. He also showed a model of a stove for disinfection. In this stove are introduced the mattresses, the clothes, and linen to be disinfected, and they are left for twenty minutes in contact with the vapour, heated to about 100° C. No pathogenic microbe, observed M. Proust, can resist this treatment. If all passenger ships were furnished with this stove, he had no doubt that its employment would singularly facilitate the abolition of quarantines of observation. For the disinfection of the sides of the interior of rooms which had been occupied by tuberculous patients, M. Proust employed a powerful jet of a solution of corrosive sublimate, which he effected by the aid of a pump. In the hospitals the sputa of phthisical patients may be easily disinfected by washing the spittoons in a pail covered over with amianthus, and in which boiling water is poured, so that the bacilli will be found in a medium at 90° C., which temperature is sufficient to kill them. In the afternoon the attention of the Congress was called to several interesting communications. M. de Brun of Beyrouth believes in the antagonism between impaludism and tuberculosis. For the last thirty years, tuberculosis, which formerly was very rare on the Syrian coast, has been becoming more and more frequent, at the same time that intermittent fever has decreased. The subjects affected with pulmonary phthisis are of the richest classes, who inhabit the healthiest quarters, and who know how to employ hygienic measures to avoid malaria. On the contrary, persons who bear evident traces of paludal cachexia are only exceptionally affected with tuberculosis, in spite of their wretchedness and their deplorable hygiene. These facts find their explanation only by the law of Boudin. M. Chantemesse wished to know the degree of resistance of the tubercle bacilli thrown into the Seine with the sputa of phthisical subjects. In the water of the Seine, maintained at a temperature of from 8° to 12° C., the bacilli live fifty days. They live seventy days in the water of the Seine maintained at from 15° to 20° C. They may be sown and produce colonies of culture during this long interval of time, but it would appear to result from the experiments of M. Chantemesse that they lose their virulence. M. Arloing communicated the experiments of MM. Galtier and Cadéac of Lyons, which establish that the virulence persists during a month and a half in a fragment of tuberculous organ plunged in running water, and during 120 days if the fragment is immersed in stagnant water. M. Arloing tried to arrest the extension of experimental tuberculosis by extirpating the glands above the inoculation from the sixth day. His guinea-pigs had generalised tuberculosis, as well as those in which the glands had not been removed. He tried also to prevent the evolution of the tubercle bacillus by previously injecting into the guinea-pigs the microbe of typhoid fever; the result was not favourable. Nevertheless, M. Arloing thinks that these experiments should be persevered in. The cholera of fowls preserves rabbits from septicaemia; one may hope that some day there will be found a microbe which will be inoffensive for us, and which would prevent the invading progress of the bacillus of Koch. M. Babes of Bucharest made a very

interesting communication on the bacterian associations of the bacillus of tuberculosis. One often finds in tuberculous cavities the streptococcus of pus, saprogenic bacilli, also other microbes, each of which change their rôle in disease. The one would give rise more to septic troubles, the others are the cause of hæmorrhage or of visceral degeneration. These new notions lead more to the comprehension of the complexity of symptoms observed in phthisical subjects. MM. Redard and Verneuil insisted on the advantages of conservative surgery in the tuberculous osteo-arthritis of the foot in children. M. Duret showed the importance of treating tuberculous glands by the actual cautery. MM. Cornil and Toupet cited two cases in which was developed around a bacterium in a fragment of an oyster-shell a lesion the morphological characters of which were identical with those of tuberculosis. These pseudo forms of tuberculosis are extremely difficult to recognise; cultures and inoculations alone permit them to be distinguished. M. Hureau de Villeneuve protested against employing raw meat and blood in the alimentation of phthisical subjects. He said that raw meat brings on dyspepsia, causes disgust for food, and makes phthisical patients get thinner instead of fattening them. He considers that raw meat is dangerous as food even for healthy persons, as it is likely to produce tuberculosis in them. M. Arloing stated, in the name of M. Galtier, that when raw meat is considered necessary, none but that of the sheep and the goat should be given. As regards blood, that of the goat alone may be drunk without danger, the tuberculous goat being a pathological rarity.

The question treated on July 28th was the following: The Human Races, the Animal Species, and the Organic Media, viewed as regards their aptitude for Tuberculosis. M. Robinson brought to notice the extension of tuberculosis in Asia Minor; M. de Brun its foci in Syria. M. Aguirre of Chili exposed the hygienic conditions of his countrymen. He attributes, partly to the unfavourable conditions in which they live and to heredity the great mortality from tuberculosis which is observed at Santiago and at Valparaiso. M. Legroux drew attention to the polyadenopathy of children, and the signification which ought to be given to this affection. From all time, one was struck with the facility with which the lymphatic glands are irritated and swollen in children. It is termed "lymphatism" when the alteration is little pronounced, and when it is connected with some superficial eruption of the skin; one degree more, it is termed "scrofula," and in graver cases "scrofulo-tuberculosis." For M. Legroux, in all these cases, they are tuberculous lesions. Every child affected with local tuberculosis presents the micro-poly adenopathy; it is found with some degenerated gland clearly tuberculous in those children who are affected with it, and who succumb to an intercurrent affection. If it exists in a child presenting dubious signs of meningitis, one may affirm the diagnosis of tuberculous meningitis. It is therefore necessary that attention should be paid to the small glands in children. At the exhibition of babies, a large baby obtained the second prize: it had this multiplied adenopathy to a high degree. At thirty-two months it died of pulmonary tuberculosis. M. Leloir had studied certain forms of abnormal lupus, and had always found tubercle bacilli. Thus, according to this author, lupus is always a form of tegumentary tuberculosis, but it is an attenuated form, as shown by the rarity of bacilli, the slow infection which their inoculation determines, and the partial non-success of this inoculation. M. Bang of Copenhagen established the frequency of the hereditary transmission of tuberculosis to the calf when the father and the mother are tuberculous; heredity appeared in certain cases to be almost fatal. M. Vargas of Madrid presented a calcareous concretion expectorated by a patient affected with pulmonary phthisis very localised. —M. Hallopeau made an important communication on abnormal lupus. He exhibited an admirable model of one of his patients in the Saint Louis Hospital, affected with an abnormal lupus, the diagnosis of which could be arrived at only by experiment. The patient had been bitten by a horse, and the appearance of the lesion might have given the idea of farcy as well as cutaneous tuberculosis. M. Nocard practised at Alfort some unsuccessful inoculations, which demonstrated that there was no glanders; and, on the other hand, M. Hallopeau established in certain pustulous nodules the presence of the bacillus of Koch. *Apropos* of this lupus, M. Hallopeau objected to the term "pyogenic" given to certain microbes. The micro-organisms do not

produce lesions of our tissues; they secrete poisons, leucomaines, and these latter, irritating our tissues, are the true cause of pus, of tubercle, or gummatas. M. Arloing showed that different animals do not react in the same manner under the influence of tuberculous inoculations. The guinea-pig is an admirable reagent. Inoculation always produces in it the same results; it permits one to affirm the tuberculous nature or not of the substance inoculated. The rabbit is otherwise uncertain, but if it often resists the inoculation of the human tubercle, it always succumbs to the virulence of the bovine tubercle. This is the more reason, said M. Arloing, why we should protect ourselves against so powerful a tuberculous virus. M. Valude had performed some interesting experiments on the tuberculation of the lacrymal ducts and of the salivary glands. Tears are for the bacillus of Koch a bad medium of culture, on account of their chemical composition; the saliva, on the contrary, does not prevent the salivary glands becoming tuberculous by inoculation. The question was then asked why the tuberculous of these glands is as rare as that of the buccal mucous membrane. This depends, according to M. Valude, on the struggle for existence which takes place in the mouth among the numerous microbes which inhabit it; the bacillus of Koch, meeting these numerous and strong enemies, is killed and destroyed by them.

Paris, Aug. 7th.

(To be continued.)

Obituary.

DR. JOHANN DLAUHY.

THE Vienna school owes much to this veteran hygienist, who died on the 31st ult., in his eighty-second year. He was born at Pilsen, the birth-place of the celebrated Skoda, of whom he was both the school and college companion. He graduated, after a brilliant course of study, at Vienna in 1834, became for a series of years assistant to Rokitsansky, and was in 1844 appointed to the Professorship of Pathological Anatomy in the University of Prague. In 1848 he returned to Vienna to fill the chair of Forensic Medicine and State Hygiene. That year of revolution found him actively engaged, in addition to his official duties, as member of the Corps of Public Security and of the National Guard. On the return of tranquillity he enhanced the honourable distinction he had won at Prague by the solid work he performed at Vienna, where for forty years he was a leading authority in the department of hygiene, respected and beloved by his colleagues and pupils. Professor Dlauhy was repeatedly dean of the Medical Faculty, and outside the academic sphere he became widely and favourably known for his researches on the diseases of the heart and on all questions of forensic pathology. His numerous contributions to the "Jahresbericht" of the Society of Physicians of Vienna were appreciated far beyond the scene of their publication. He retired in 1878 on a pension, but his services to the Vienna school and to the medical cause as a whole terminated only with his life.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—

The following gentlemen, having conformed to the bye-laws and regulations, and passed the necessary examinations, have been admitted Licentiates of the College:—

Baker, Arthur Ernest, Charing-cross Hospital.
 Bell, Frederick, St. Bartholomew's Hospital.
 Bremner, Ramsey Allan, Guy's Hospital.
 Brown, Francis Joseph, Middlesex Hospital.
 Burns, Robert John, University College Hospital.
 Caudwell, Francis Bernard H., Charing-cross Hospital.
 Dalley, John, Charing-cross Hospital.
 Davidson, Fredk. William, Westminster Hospital.
 Ensor, C. William, London Hospital.
 Furbur, Edward Price, St. Bartholomew's Hospital.
 Grun, Edward Ferdinand, London Hospital.
 Hancock, John Edwin, Charing-cross Hospital.
 Jowers, Lancelot Emilius, St. Bartholomew's Hospital.
 Kingston, Percy John, St. Mary's Hospital.
 Larkam, Edward Thomas, Middlesex Hospital.
 Lewis, C. Harvey, St. Bartholomew's Hospital.
 Ozzard, Fairlie Russell, London Hospital.
 Part, John Shepley, Westminster Hospital.

*Pym, C. Brownlow, St. Bartholomew's Hospital.
 Roberts, John Wm., Guy's Hospital.
 Shells, W. F. Michael, Guy's Hospital.
 Speedy, R. George Dunell, St. George's Hospital.
 Wilkins, John, London Hospital.
 Wilkinson, John Cooper, Guy's Hospital.

* Candidates who have not presented themselves under the regulation of the Examining Board.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations were, at a meeting of the Council on the 2nd inst. admitted Members of the College:—

Abbott, F. C., L.R.C.P.Lond., Cowley-st., Westminster.
 Acton, C. J., L.R.C.P.Lond., Southport.
 Appleton, Enderby J., L.R.C.P.Lond., Old Charlton.
 Baker, A. E., L.R.C.P.Lond., Camden-street.
 Barnett, J. E. S., L.R.C.P.Lond., Brighton.
 Bedford, C. H., M.B., C.M.Ed., Edinburgh, Skye.
 Belcher, H. E., L.R.C.P.Lond., Grafton-place.
 Bell, Fredk., L.R.C.P.Lond., Preston.
 Blackford, J. V., L.R.C.P.Lond., Penge.
 Bodilly, R. T. Harker, L.R.C.P.Lond., Belitha Villa, Islington.
 Bremner, R. A., L.R.C.P.Lond., Penge-road, South Norwood.
 Brown, F. J., L.R.C.P.Lond., Mornfield-road, Shepherd's-bush.
 Brown, W. S., L.S.A., Guy's Hospital.
 Brownlow, G. P., L.R.C.P.Lond., Manchester.
 Bryett, L. T. F., L.R.C.P.Lond., Girdler's-rd., West Kensington.
 Buchanan, R. J. McLean, L.R.C.P.Lond., Boodle.
 Bullock, C. P., L.R.C.P.Lond., Fortress-road.
 Burchell, E., L.R.C.P.Lond., Kingsland-road.
 Cameron, R. Watson, L.R.C.P.Lond., Manchester.
 Capron, H. J., L.R.C.P.Lond., Clifton.
 Carpenter, P. T., L.R.C.P.Lond., Portsdown-road.
 Carter, W. C., L.R.C.P.Lond., Melton Mowbray.
 Caudwell, F. B. H., L.R.C.P.Lond., Stoke Newington.
 Colborne, G., L.R.C.P.Lond., South Hampstead.
 Dalley, J., L.R.C.P.Lond., Frodsham, Cheshire.
 Davey, S., L.R.C.P.Lond., Cold Harbour-lane, Brixton.
 Davidson, F. Wm., L.R.C.P.Lond., Westminster Hospital.
 Davis, C. S., Lewisham Park.
 Davis, H., L.R.C.P.Lond., Stanhope-street.
 Duer, C., L.R.C.P.Lond., Harewood-square.
 Duncan, P. J., L.R.C.P.Lond., Marlborough-street.
 Dyer, J. E., L.R.C.P.Lond., University College Hospital.
 Elias, J., L.S.A., Maespoth House, Brecon.
 Ensor, C. W., L.R.C.P.Lond., Wimborne.
 Evans, G. F. A., L.R.C.P.Lond., Seaton.
 Exley, J. L. K. C. P. I., Hunslet.
 Falkner, E. Ashley, L.R.C.P.Lond., Middlesex Hospital.
 Field, E. A., L.R.C.P.Lond., Wimbledon.
 Fox, J. S. M.B., C.M.Ed., St. Helens.
 Freer, G. D., L.R.C.P.Lond., Stourbridge.
 Frost, J. K., L.S.A., Saltash.
 Fryer, G. Ernest, L.R.C.P.Lond., Bowden.
 Furber, E. Price, L.R.C.P.Lond., Upper Hamilton-terrace.
 Giles, A. E., M.B. Vic. Univ., St. John's.
 Gill, J. W., L.R.C.P.Lond., Brunton Cottage, Bath.
 Goldney, A. Nelson, L.R.C.P.Lond., Hammersmith.
 Goodfellow, T. A., L.R.C.P.Lond., Hatherton.
 Gordon, William, L.R.C.P.Lond., Bernard-street.
 Greville, S. J. E., L.R.C.P.Lond., Greenock.
 Grey, J. Temperley, L.R.C.P.Lond., Bristol.
 Hancock, John Edwin, L.R.C.P.Lond., Callington.
 Handcock, G., L.S.A., Hunslet.
 Harris, S. G. V., L.R.C.P.Lond., Clapham.
 Harvey, Frank, L.S.A., Plymouth.
 Haviland, F. P., L.R.C.P.Lond., St. Leonards-on-Sea.
 Higgins, Hubert, L.R.C.P.Lond., Wallington.
 Hill, Robert, L.R.C.P.Lond., Mecklenburgh-square.
 Hosking, J. E. F., L.R.C.P.Lond., Forest-hill.
 Housman, Basil W., L.R.C.P.Lond., Bromsgrove.
 Hughes, S. H., L.R.C.P.Lond., Shortlands.
 Huxley, Henry, L.R.C.P.Lond., Marlborough-place.
 Jowers, Lancelot Emilius, L.R.C.P.Lond., Barnard's-inn.
 Kearney, James, L.S.A., Brixton.
 Keller, Otto Eugene, M.B. Berne, German Hospital, Dalston.
 Kingston, Percy John, L.R.C.P.Lond., Sutherland-avenue.
 Laing, Alfred William, L.R.C.P.Lond., Putney.
 Langdale, Henry, L.R.C.P.Lond., Rusholme.
 Langridge, Frank Washington, L.R.C.P.Lond., Herne-hill.
 Larcombe, George Garmany, M.D. Bellevue, Hogarth-road.
 Larkam, Edward Thomas, L.R.C.P.Lond., Highgate.
 Leman, Thomas Curtis, L.R.C.P.Lond., Chipping Sodbury.
 Lewis, Charles Harvey, L.R.C.P.Lond., Gravesend.
 Lockett, John Arthur Pope, L.R.C.P.Lond., Victoria-park-road.
 Lomas, Ernest Courtney, M.B. Vic. Univ., Withington.
 Maclure, Herbert W., L.R.C.P.Lond., Westbourne-park-terrace.
 McCordell, Edward John, M.D. Kingston, Torrington-square.
 McCullagh, Richard Cheveley, M.D. R.U.I., Bournemouth.
 Martin, Charles Lister, L.R.C.P.Lond., Blackheath.
 Midelton, William J., L.R.C.P.Lond., Sutherland-avenue.
 Moss, Arthur James, L.S.A., Whitty.
 Murray, George Redmayne, L.R.C.P.Lond., Green-street.
 Newton, Sidney Frederick, L.S.A., Fareham.
 Onkman Joseph John, L.S.A., Battersea.
 O'Brien, Philip Kennedy, L.R.C.P.Lond., Croydon.
 Ogle, John Gilbert, L.R.C.P.Lond., Camden-street.
 Oldham, B. C., L.R.C.P.Lond., Avonmore-rd., West Kensington.
 Ozzard, Fairlie Russell, L.R.C.P.Lond., Forest-gate.
 Parkin, Alfred, L.R.C.P.Lond., Liversedge.
 Part, J. Shepley, L.R.C.P.Lond., Ashchurch-park-villas.
 Pearson, James, L.R.C.P.Lond., Liverpool.
 Pennell, G. H., L.R.C.P.Lond., Guy's Hospital.
 Pierce, B., L.R.C.P.Lond., Union-road, Tufnell-road.

* Candidates who have not presented themselves under the regulations of the Examining Board in England.

Plant, James Robert, L.R.C.P.Lond., Leicester.
 Platt, J. E., L.R.C.P.Lond., Uppermill.
 * Pogson, J. Wm. Buckley, M.B. Ed., Aston.
 Poulter, Arthur Reginald, L.R.C.P.Lond., Shortlands.
 Powell, William, L.R.C.P.Lond., Brixton.
 * Pringle, J. H., M.B. Ed., Torquhan Stew.
 * Pym, C. Brownlow, L.R.C.P.Lond., Wallington.
 * Richards, G. Oliver, Birmingham.
 Roberts, J. W., L.R.C.P.Lond., Llanidnoes.
 Robinson, E. Stanley, L.R.C.P.Lond., Stourport.
 Rudd, William Arthur, L.R.C.P.Lond., Amhurst-road.
 * Schneehage, Caleb, M.B. Ed., Leeds.
 * Slater, Nelson C., L.K.Q.C.P.I., Liscard.
 * Shells, W. Francis Michell, L.R.C.P.Lond., Streatham.
 * Sims, G. Samuel, L.R.C.P.Lond., Commercial-road.
 * Skinner, George Henry, L.R.C.P.Lond., Bristol.
 * Skyrme, Henry Edward, L.R.C.P.Lond., Chepstow.
 * Smith, Henry Lyon, Chester-le-Street.
 * Speedy, Robert G. Dunell, L.R.C.P.Lond., Queen Anne-street.
 * Stephens, J. Wm., L.R.C.P.Lond., Kilgeran.
 * Summerskill, William, L.R.C.P.Lond., Leeds.
 * Sunderland, Oliver, L.R.C.P. Ed., Bexley-heath.
 * Sylvester, H. Augustus, L.R.C.P.Lond., Barnard's-inn.
 * Tate, W. W. Hunt, L.R.C.P.Lond., The Terrace, Camden-square.
 * Tench, M., L.R.C.P.Lond., Edith-road, West Kensington.
 * Thomas, A., L.S.A., Portland-road, Notting-hill.
 * *Trensidder, William Elliot, L.R.C.P.Lond., West Dulwich.
 * Turney, Horace G., L.R.C.P.Lond., Camberwell-grove.
 * Vallancey, A. d'Estampes de, L.R.C.P.Lond., Tavistock-crescent.
 * Verdon, F., L.R.C.P.Lond., Craven-street, Charing-cross.
 * Wade, Charles, L.R.C.P.Lond., Bascastle.
 * Watson, A. E., L.R.C.P.Lond., Norbiton.
 * White, E. R., L.R.C.P.Lond., Queen Anne's-gardens.
 * White, G. B. M., L.R.C.P.Lond., Hazelside-road.
 * Wilkins, John, L.R.C.P.Lond., Crouch-end.
 * Wilkinson, Edmund, L.R.C.P.Lond., Hammersmith.
 * *Williams, C. Louis, M.B., C.M. Ed., Birkenhead.
 * Willoughby, W. G., L.R.C.P.Lond., Downshire Hill.
 * Willis, Ernest, L.R.C.P.Lond., Torquay.
 * Wilson, Charles, L.R.C.P.Lond., Cambridge-road.
 * *Woodhams, Sidney, L.R.C.P.Lond., Rochester.
 * Wright, D. D'Augerville, L.R.C.P.Lond., Ealing.
 * Wright, Joseph F., L.R.C.P.Lond., Manchester.
 * Wynne, J. Darley, M.B. Dub., Sheffield.

* Candidates who have not presented themselves under the regulations of the Examining Board in England.

UNIVERSITY OF ABERDEEN.—The following candidates have received Degrees in Medicine and Surgery:—

Degree of M.D.

Bennet, Francis A., M.A., M.B., C.M., Victoria, Australia.
 Glaister, John, M.B., C.M., Putney, London.
 *Gordon, John, M.B., C.M., Aberdeen.
 *Griffith, Thomas Wardrop, M.B., C.M., Leeds.
 Hutchinson, A. Cayley, M.B., C.M., West Brighton.
 Jenkins, John, M.B., C.M., Belize, British Honduras.
 Knox, Alexander W., M.B., C.M., Great Yarmouth.
 Lawson, William, M.B., C.M., West Bromwich, Staffordshire.
 Russell, John, M.B., C.M., Arbroath.
 *Savege, James, M.B., C.M., Swancombe, Kent.
 *Struthers, James, jun., M.B., C.M., Aberdeen.
 Tough, William R., M.A., M.B., C.M., Crook, co. Durham.
 Wilson, Alexander, M.A., M.B., C.M., Midcalders.
 * Considered deserving of highest honours.

Degrees of M.B. and C.M.

Allan, George, Fife-Keith.
 Barber, A., Harrogate, Yorkshire.
 Barclay, John, Dunuch.
 Black, John Urquhart, London.
 Buchanan, Geo. J., Punjab, India.
 Cook, Robert H., Aberdeen.
 Cumming, R., Duthill, Strathspey.
 Dack, Wm., Aberdeen.
 Dingwall, Archd., M.A., Aberdeen.
 Don, James, Cults.
 Duke, Alexander L., Arbroath.
 Dunn, S. S., Adelaide, S. Australia.
 Durran, John Geo., Caithness.
 Eatough, R., Brindley, Lancashire.
 Eden, Richard A. S., Aberdeen.
 Ellis, A., Dowling, Aberdeen.
 Ferdinands, Geo. S. P., Colombo, Ceylon.
 Forsyth, John G. A., Abernethy.
 Galloway, A. R., M.A., Inverurie.
 Gibb, George, M.A., Aberdeen.
 Gladstone, Reg. J., Old Aberdeen.
 Gordon, George, Huntly.
 *Grant, Cormack, Caithness.
 Grant, Robert, Tomintoul.
 Gunn, Adam B. M., Caithness.
 Heathcote, B. A., Ilfracombe, Dev.
 *Hillingworth, T. W., Scarborough.
 Joss, John, M.A., Huntly.
 *Keith, Arthur, Turfiff.
 Keyt, F. T., Colombo, Ceylon.

† Highest academical honours.

‡ Honourable distinction.

The John Murray Medal and Scholarship given to the most distinguished Graduate of his year has been awarded to Arthur Keith.

Diploma in Public Health.—Ferguson, A. Cornwall, M.A., M.B., C.M.; Gladstone, Reginald J., M.B., C.M.; King, Walter G., M.B.; Surgeon-Major, with Credit; Mackenzie, Alex. F., M.B., C.M.; Rose, George, M.B., C.M.; Saunders, Alfred M., M.A., M.B., C.M.; Smagt, Francis A. van Der, M.D.

UNIVERSITY OF EDINBURGH.—The following is the list of candidates who received degrees on Aug. 1st:—

Doctor of Medicine.—Chas. Aitken, India, M.B., C.M.; †J. Auriol Armitage, England, B.A., M.B., C.M. (with second-class honours); E. K. Bourne, England, M.B., C.M.; Herbert Bramwell, England, M.B., C.M.; Geo. Crichton, Scotland, M.A., M.B.; A. H. Croucher, England, M.B., C.M.; †Thomas Wm. Dewar, Scotland, M.B., C.M.; †A. Jas. Elliot, Scotland, M.B., C.M.; D. G. Evans, Anglesey, M.B., C.M.; R. H. J. Fetherston, Australia, M.B., C.M.; †O. H. Garland, Scotland, M.B., C.M.; H. J. Gilbert, England, M.B., C.M.; *James Graham, Scotland, M.A., M.B., C.M.; †W. B. T. Gubbin, England, M.B., C.M.; C. H. Gwynn, England, M.B., C.M.; G. Hall, England, M.B., C.M.; *J. B. Haycraft, England, B.Sc., M.B., C.M.; †George V. Hewland, England, M.B., C.M.; †R. S. Hubbersty, England, M.B., C.M.; †Jas. Hutcheson, Scotland, M.B., C.M.; †Fredk. M. Johnson, Australia, M.B., C.M.; F. W. B. Jones, England, M.B., C.M.; C. A. S. Leggett, England, M.B., C.M.; C. J. Lewis, England, M.B., C.M. (with first-class honours); Wm. M. Little, Singapore, M.B., C.M.; *George Mackay, Madras, M.B., C.M. (with second-class honours); J. M'Lachlan, Scotland, B.Sc., M.B., C.M.; M. MacLaren, New Brunswick, B.A., M.B., C.M.; †J. Maitland, India, M.B., C.M.; †D. J. Mason, Scotland, M.B., C.M.; Angus Matheson, Scotland, M.B., C.M.; †P. W. Maxwell, Scotland, M.B., C.M.; †T. Cockburn Meggison, England, M.B., C.M.; W. F. Menzies, Canada, M.B., C.M.; †Alex. C. Miller, Scotland, M.B., C.M.; †W. H. Miller, Canary Islands, M.B., C.M.; Morton, E., England, M.B., C.M.; †Jas. Musgrove, England, M.B., C.M.; John B. Nash, Australia, M.B., C.M.; D. T. Playfair, Scotland, M.B., C.M.; Thos. H. Pope, India, M.B., C.M.; John B. Richardson, England, M.B., C.M.; Douglas M. Ross, England, M.B.; G. F. Shields, California, M.B., C.M.; Geo. Thomson, Scotland, M.B., C.M. (with second-class honours); E. Vaudrey, England, M.B., C.M.; Norman F. Walker, Scotland, M.B., C.M.; †Thos. B. Watson, Scotland, M.B., C.M.

* Those who have obtained Gold Medals for their Dissertations.

† Deemed worthy of competing for the Dissertation Gold Medals.

‡ Commended for their Dissertations.

Bachelor of Medicine and Master in Surgery.—Robt. Abernethy, Scotland; J. Alex. Adamson, Scotland; Robt. Andrew, Scotland; E. F. Armour, M.A., Scotland; R. Arthur, M.A., Scotland; Alex. Asher, Scotland; *Barnett, Louis E., New Zealand; J. H. Battersby, England; J. A. B. Bayly, Cape Colony; L. A. Willem Beck, Cape Colony; H. A. Becker, Orange Free State (received the degrees on Nov. 26th, 1887); W. A. Betts, England; A. J. S. Beveridge, England; J. R. Bird, B.A., Canada; R. D. Booth, England; R. Laing Booth, India; J. T. Borthwick, Australia; N. L. Boxill, B.A., Barbadoes; F. D. Boyd, Scotland; J. W. Bridges, B.A., Canada; R. Broadbent, England; G. M. Murdoch Brown, Scotland; J. K. Brown, England; A. W. T. Buist-Sparks, Scotland; A. E. Bullock, England; A. C. Burnell, Calcutta; T. W. Butcher, England (received the degrees on April 18th, 1888); G. C. Cameron, Scotland; T. V. Campbell, M.A., Ireland; F. H. Carlyon, England; D. B. Carse, Scotland; W. J. Cattin, B.A., New Zealand; C. H. T. Chevallier, England; John Cockton, England; M. W. W. Cowan, England; J. M. Crawford, Scotland; E. C. Cridland, England; A. J. Wilson Dalzell, England; J. H. Deamer, England; R. J. Drummond, India; C. W. Duggan, Scotland (received the degrees on Nov. 26th, 1887); H. A. Eaton, England; *Thos. W. Eden, England; †R. Edie, Scotland; F. A. Elkins, England; A. Elliot, M.A., Scotland; W. E. L. Elliott, Wales; R. C. Elsworth, England; John A. Ewan, M.A., Scotland; C. S. Facey, England; C. C. Fleming, Scotland; *R. A. Fleming, M.A., Scotland; C. M. Flide, Australia; *W. Fordyce, M.A., Scotland; J. A. Forrest, Australia; F. C. J. Fuss, Cape of Good Hope; J. H. R. Garson, Scotland; R. J. George, England; A. L. Gillespie, Scotland; A. Gray, M.A., Scotland; C. Grobbelaar, B.A., South Africa; A. C. Hall, England; A. C. Hartley, Scotland; C. E. Harvey, Jamaica; T. D. H. Holmes, England (received the degrees on Nov. 26th, 1887); W. Hume, Scotland; T. A. Hynes, South Australia; J. C. Jameson, Scotland; †S. Jamieson, B.A., Australia; C. A. Johnston, India; D. J. Jones, Wales; W. Watkins Jones, Wales; G. Kelman, Scotland; P. J. Kenna, B.A., Australia; T. L. Kennish, England; E. J. Keogh, Australia; A. L. Kerr, Australia; W. Kinnear, M.A., Scotland; Olaf Kloster, Norway; G. Knowles, England; J. E. Kuhne, Switzerland; D. J. Kuys, B.A., Cape of Good Hope; H. C. Lampont, Natal; J. M. Loughton, Scotland; †S. M. Laurence, West Indies; S. F. Laurie, B.A., S. Africa; A. S. Lawrence, South Africa; †W. G. Laws, England; J. Liddell, M.A., Scotland; W. Lockwood, England; J. A. Lowson, Scotland; W. Lundie, M.A., B.Sc., Scotland; †F. J. M'Cann, Scotland; Alex. Macdonald, Scotland; J. M'Donald, Wales; A. J. MacGregor, Scotland; G. S. MacGregor, Scotland; T. Macgregor, Scotland; J. R. M'Intosh, B.A., Canada; Aeneas D. M. Macintyre, Scotland; A. M. Mackay, Scotland; D. J. Mackay, Scotland; D. MacLeod, Scotland (received the degrees on April 18th, 1888); W. G. Macpherson, Scotland; *C. Martin, England (received the degrees on Nov. 26th, 1887); K. Maxwell, Tasmania; T. C. Meikle, M.A., Scotland; †J. Middlemass, M.A., B.Sc., Scotland; A. Miles, Scotland; G. V. Miller, England; V. Milner, England; J. G. Moffat, Scotland; *J. Montgomery, Scotland; F. W. G. Morgan, Ceylon; T. H. Morgan, Wales; R. H. Morrison, Australia; C. F. A. Moss, England; *Robert Muir, M.A., Scotland; N. G. Munro, Scotland; P. Murison, Scotland; C. D. Musgrove, England; J. van Niekerk, Cape Colony; J. Nightingale, England; A. B. Northcote, England; C. H. L. Puk, England (received the degrees on Nov. 26th, 1887); J. C. Palmer, Australia; T. C. Paterson, Scotland; B. L. Paton, B.A., India; J. Petersen, South Africa; J. Phillips, England; K. Prasad, India (received the degrees on Nov. 26th, 1887); T. J. Pritchard, England (in absentia); John Randle, Sierra Leone; J. R. Ratcliffe, England; J. C. Rattray, Scotland; E. W. Rayment, England; A. G. Reid, B.Sc., Canada; C. Reid, Scotland; R. Renton, Scotland; W. J. Richardson, Scotland; R. Richmond, England; †J. Ritchie, M.A., Scotland; A. Robertson, M.A., England; C. Robertson, India; R. Robertson, Scotland; J. W. Rodgers, England; D. M. M. Ross, Scotland; R. R. Ross, Nova Scotia; J. Russell, M.A., Scotland; R. A. St. Leger, Cape Colony; G. S. Samuelson, England; M. B. Saunders, England; C. B. B. Savory, England; J. F. Scott, B.A., U.S. America; W. A. Scott, M.A., Scotland; R. B. Shaw, Scotland; G. Shields, Scotland; J. H. Slayter, Canada; C. A. C. Smelt, England; E. M. Smith, Eng-

land; J. Smith, Scotland; J. H. Smith, Scotland; J. Smuts, Cape Colony; W. Smyth, Ireland; J. Somerville, New Zealand; G. H. Steyn, Cape Colony (received the degrees on Nov. 26th, 1887); H. V. Sutherland, India; G. T. Tate, England; G. H. Temple, England; C. T. Te Water, South Africa; I. G. Thomas, Wales; H. Thompson, England; A. Thomson, Canada; A. E. Thomson, B.A., Canada; J. C. Thomson, M.A., Scotland; W. T. Thomson, Scotland; J. Townsley, Scotland; D. Traill, M.A., B.Sc., Scotland; J. H. Traquair, Scotland (*in absentia*); N. G. Trotter, New Zealand; D. Fyres D. Turner, B.A., England; H. Vine, England; F. Watson, Scotland; W. M. C. Watson, Scotland; J. W. Watterson, England; J. C. Webster, B.A., Canada; W. Weir, B.Sc., Scotland; K. N. K. Wells, England; A. Westwood, Scotland; T. B. White, Scotland; H. T. Wickham, England; J. D. Williams, Wales; A. M. Williamson, Scotland; J. H. Wilson, Brazil (received the degrees on Nov. 26th, 1887); R. A. Wilson, England; R. Wise, Scotland; D. Jaa. Wood, Scotland; H. S. Wood, India; E. A. Woodward, New South Wales; W. Wynne, Wales; R. E. B. Yelf, England; T. MacGubbin Young, Scotland.

† Passed the Examinations with first-class honours.
‡ Passed the Examinations with second-class honours.

The following Scholarships, Prizes &c., have been awarded:

Ettles Scholarship—Thomas Watts Eden, M.B., C.M.
Stark Scholarship in Clinical Medicine—James Brown-Bird.
Beane Prize—John Clarence Webster, B.A., M.B., C.M.
Buchanan Scholarship—William Forlyce, M.A., M.B., C.M.
James Scott Scholarship—Thomas Watts Eden, M.B., C.M.
Freeland Barbour Fellowship—John David Williams, M.B., C.M.
Gunning Victoria Jubilee Bell Prize in Physiology—George Neil Stewart, M.A., D.Sc.
Gunning Victoria Jubilee Lister Prize in Surgery—E. F. Neve, M.D.
Wightman Prize—Arthur John Whiting.

CONJOINT SCHEME OF THE COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—At the July Examinations the following passed their Final Professional Examination:—

Clarke, William Crawford.	MacWhinny, Robert John Watt.
Dalton, Charles.	McMunn, James Robert.
Gallivan, Thomas.	Mulqueen, John.
Hardiner, Charles Edward Roche.	O'Dwyer, Peter.
Hayes, Edmund Fleming.	O'Gorman, Michael Charles.
Healey, Coryndon Wm. Rutherford.	Palmer, William Crawford.
Hildge, Henry Johnston.	Pearse, George Rooke.
Jamison, James.	Ronayne, James Francis.
Jennings, James Willes.	Waring, George Alexander.
Johnston, George Ainslie.	Warren, Crawford.
Jones, Charles Dillon.	Whitty, Richard Laurence.
Lewis, Richard Cramm.	Wynne, Wilfred Campbell Phillips.
MacCarthy, Charles Dennis.	

ROYAL UNIVERSITY OF IRELAND.—The following medical graduates of the University have been admitted to the degree of Bachelor of Obstetrics:—

John St. Clair Boyd, Richard Michael Griffin, James Johnson, John McAleer, George Vance, and George Robert Young.

SOCIETY OF APOTHECARIES OF LONDON.—The following gentlemen having passed the qualifying examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society:—

Baly, Ernest, London Hospital.
Howse, Arthur Edward, King's College.
Haviland, Frank Papillon, St. George's and Addenbrooke's.
Hiley, Richard Farmer, St. Thomas's and Addenbrooke's.
Brown, Walter Sigismund, Guy's Hospital.
Howe, George Bradley, Manchester Royal Infirmary.
Fernando, Hilarión Marcus, University College Hospital.
Teuch, Montague, Middlesex Hospital.

The following passed in Surgery:—

Cory, F. G., Manchester.	Lloyd, J. W., Liverpool.
Crickitt, H. H., St. Geo.'s Hosp.	Robinson, G. A., London Hospital.
Lee, H. B., Sheffield.	

The following passed in Medicine:—

Alecock, R., Manchester.	Francis, L., London Hospital.
Chamberlain, R. B., Lond. Hosp.	Lunn, P. T., Middlesex Hospital.
Davis, H., Univ. Coll. Hosp.	Whitehead, J. W., Manchester.

The following passed in Part 1 of the Primary Examination:—

Lee, H. B., Sheffield.	Pearse, R. R., Univ. Coll. Hosp.
Macdonald, L., Manchester and	Wilson, W., Manchester.
Middlesex Hospital.	Wimbush, S., St. Barthol. Hosp.
Mitchell, R. P., London Hosp.	

The following passed in Part 2:—

Bennett, J. M., Liverpool.	Dods, L. F., St. Barthol. Hosp.
Cook, J. C., Middlesex Hosp.	Miller, J. T. R., St. Thomas's Hosp.

SUPERANNUATION GRANT.—Mr. J. R. Donald, F.R.C.S. Eng., late medical officer of the Lower Holloway District, in the parish of St. Mary, Islington, has been granted a superannuation allowance of £77 16s. a year.

ROYAL ALBERT ASYLUM, LANCASTER.—On Monday, Sept. 17th, the new Recreation Hall, to be named in honour of Lord Winnarleigh, who has taken great interest in its erection, will be opened by Lord Herschell, who will also preside at the quinquennial festival, to be held the same afternoon.

OBSTETRICAL SOCIETY OF LONDON.—The Library will be closed from August 20th to September 20th.

A BUST of the late Dr. Wilson Fox has been erected in the Shire Hall, Taunton.

ACTION FOR DAMAGES AGAINST A DENTIST.—Frank Engleman, a sailor, who sued Dr. David S. Skinner, a Brooklyn dentist, for breaking his jaw while extracting a tooth, has received a verdict for £200. He sued the dentist for £1000.

NEW WATERWORKS, CROYDON.—Last week the Archbishop of Canterbury formally opened the new waterworks, to supply the town with water direct from the chalk, which have been carried out by the Corporation at a cost of £50,000.

CONSUMPTION HOSPITAL, BROMPTON.—Mr. T. P. Beckwith presided at the quarterly court of the governors, held on the 2nd inst. The in-patients admitted since May 31st were 239, and new out-patients' cases 2155. Since the alterations and improvements all the beds had been reoccupied.

PROVINCIAL HOSPITAL SUNDAY AND SATURDAY COLLECTIONS.—The Hospital Saturday collections on the 28th ult., at Windsor and Eton, on behalf of the Windsor Infirmary, amounted to £89 17s. 5d. The annual Sunday concert, at Heckmondwike, held on the 22nd ult., in aid of the Dewsbury and District Infirmary realised £55 0s. 10d.

THE MORGUE.—The books of the Paris Morgue show a steady yearly increase in the number of dead bodies received; 400 corpses were brought in 1830. In 1870 the number had risen from 400 to 800; then it fell in 1874 to 550; rose again from 807 in 1880 to 920 in 1881, and from 879 in 1882 to the unprecedented figure of 944 in 1883—the results of wilful murder, accidental death, or suicide.

THE CHILDREN'S JUBILEE OFFERING TO THE QUEEN.—The amount collected, which has exceeded £6000, has been presented, with a diamond brooch, to Her Majesty on behalf of the children, by Princess Victoria of Teck. The money will be appropriated towards the completion of the wing to the Hospital for Sick Children, Great Ormond-street, for which a building fund has been for some time in existence.

REGISTRATION OF PLUMBERS.—At the City and Guilds Institute, Finsbury, last Saturday, an examination was held under the auspices of the Company of Plumbers for Certificates of Registration. The practical examination included various branches of lead work, and the theoretical, questions relating to the several subjects of plumbers' materials, house fittings and sanitation. Seventy-five per cent of those attending passed the full examination.

BEQUESTS AND DONATIONS TO HOSPITALS.—Miss G. J. Austin, late of 77, Oxford-terrace, Hyde Park, has bequeathed £500 each to the Cancer Hospital, Brompton, and the Hospital for Consumption, Brompton; £250 to the Hospital for Sick Children, Great Ormond-street; £150 to St. Mary's Hospital, Paddington; and £125 to the Royal National Sea Bathing Infirmary, Margate.—The Hon. Bowes Daly, late of Killough Castle, Tipperary, has left, by his will, £200 each to the City of Dublin Hospital (Upper Baginot-street), St. Mark's Ophthalmic Hospital (Lincoln's-place, Dublin), the Convalescent Home (Stillorgan, Dublin), and the Hospital for Incurables (Donnybrook-road, Dublin).

A SEWAGE DESTRUCTOR A NUISANCE.—An action of some public interest—Booth v. the Corporation of Blackburn—was tried on Tuesday last in the Nisi Prius Court, Liverpool. The plaintiff was the owner of some property in Blackburn, adjacent to which the corporation had erected a destructor for burning the sewage of the town, and against the use of which he sought an injunction, alleging that the process was a nuisance to him and his tenants, and injurious to his property. When the case was called on counsel stated that the parties, after a consultation, had come to a satisfactory settlement. The terms of the agreement were, judgment for the defendant on the claim, the defendants undertaking, within two years, to make certain alterations by which the injury could be abated, and to pay the plaintiff's costs.

THE LATE MEDICAL OFFICER OF HEALTH FOR BRADFORD.—At a meeting of the Council of the Irish Schools and Graduates' Association held on July 29th, 1888, Dr. H. Macnaughton Jones in the chair, the following resolution was passed:—"That this Council of the Irish Medical Schools and Graduates' Association unanimously desire to express their warm sympathy with Dr. Thomas Whiteside Hime, the distinguished sanitarian, and lately medical officer of health in Bradford, in the circumstances attending on the recent loss of that position; and in conveying their expression of sympathy to Dr. Hime, they wish to record their appreciation of the able and independent manner in which he has discharged his duties as a public official, as proved by the evidence arising out of his recent deprivation of office."

ST. JOHN AMBULANCE ASSOCIATION.—The Princess Frederica, of Hanover, presented on Thursday, the 2nd inst., 246 medallions and certificates to the Polytechnic classes of the St. John Ambulance Association. Mr. John Furley, Director of the Ambulance Department of the Order of St. John, presided, and in his opening remarks alluded to the fact that the Queen has now granted the Order of St. John of Jerusalem in England a Royal Charter, Her Majesty becoming the Sovereign Head and Patron, the Prince of Wales "Grand Prior," and Prince Albert Victor "Sub Prior." The Prince of Wales has also become President of the St. John Ambulance Association, which has now awarded over 132,000 certificates of proficiency and 9700 medallions.

MEDICAL NOTES IN PARLIAMENT.

The Sweating System.

In the House of Lords, on the 3rd inst., the Earl of Dunraven moved to amend the reference to the Select Committee appointed to inquire into the sweating system at the East-end of London by omitting the words "at the East-end of London," and inserting the words "in the United Kingdom."—The Earl of Meath supported the motion, which was agreed to without opposition.

Medical Officers of Health.

In the House of Commons, on the 2nd inst., Dr. Farquharson asked the President of the Local Government Board when the return granted in August, 1887, in continuation of Parliamentary Paper No. 359, of Session 1873, as to the appointment of medical officers of health would be in the hands of members.—Sir L. Playfair asked a question in relation to a similar return.—Mr. Ritchie, in reply, stated that it had been necessary to obtain returns from more than 1500 authorities, and in some cases several applications have had to be made for the information required. The returns are now complete, but in some cases further inquiries will be necessary. He hoped to have the return in the hands of the printers in about three weeks from the present time, and would endeavour to expedite the printing as much as possible.

Lock Hospitals in India.

Mr. Stuart asked the Under Secretary of State for India whether the India Office had received copies of the annual report of the Secunderabad Lock Hospital for 1887, and of the lock hospital in Lucknow for 1887; whether the India Office possessed the reprints, dated August 1st, 1887, of the cantonment regulations containing the "special committee's exposition of the lock hospital rules," or any other copy of that "exposition"; and whether those lock hospital rules were at present in force or not.—Sir J. Gort said that his answer to the first question was no, they are not yet received; (2) yes; (3) paragraph 7 of the dispatch of the Secretary of State, No. 189, of May 17th, 1888, which has already been presented to Parliament, instructed the Government of India to undertake a careful revision of the cantonment lock hospital rules upon the principles there laid down.—Mr. Stuart asked whether the India Office were generally so long in receiving the important documents they asked for as in this case. The document to which he referred was issued on January 1st last.—No answer was given to this question.—Mr. McLaren said that Lord Cross lately stated to a deputation that the whole of the regulations under the Cantonments Acts with regard to those diseases were absolutely suspended and non-existent; and he asked whether the Under Secretary for India would corroborate that statement now.—Sir J. Gort said that if the Secretary of State had made such a statement the hon. member ought to be satisfied with it, and should not require its corroboration by him.—Mr. Stuart gave notice that he would raise that question on the Indian Budget.

Sanitary Condition of Police Cells.

In reply to Mr. C. Graham, Mr. Matthews stated that it was the intention of the Government to do everything in their power to remedy the insanitary state of the police cells in London and the provinces. Active communication was now proceeding with the various local authorities, and there was every prospect that it would be found possible to carry out the recommendations of the committee.

Pharmacy Act (Ireland) (1875) Amendment Bill.

This Bill was read a second time.

The Case of Dr. Middleton.

On the 3rd inst., in reply to Mr. Rowntree, Sir J. Ferguson stated that the £400 deposited by Dr. Middleton as security for his appearance at the trial in connexion with the recent affray at Cordova had not yet

been returned to him, in consequence of the gipsies having appealed to the Supreme Court at Madrid. Dr. Middleton had suffered no injustice at the hands of the Spanish authorities, and the Secretary of State could not found any claim upon the Spanish Government for compensation.

Surgeon Thomas Munan.

In reply to Dr. Kenny, who asked whether the First Lord of the Admiralty would use his influence to procure some adequate compensation for the widowed mother of Surgeon Thomas Munan, who was lost when H.M.S. *Wasp* foundered in September, 1887, Lord G. Hamilton said that he regretted that the conditions of the case did not bring Mrs. Munan within the scope of the regulations that would authorise the Admiralty to assist her.

Tuberculosis.

In reply to Dr. Farquharson, Viscount Lewisham said that the question of including tuberculosis among the diseases dealt with under the Contagious Diseases (Animals) Act was under consideration, together with other recommendations of the Committee which had been recently reported.

On the 7th inst. Dr. Farquharson asked the President of the Local Government Board whether, considering the alarming statement recently made by Dr. Sims Woodhead and others with reference to the communication of consumption to the human subject from the milk of cows suffering from tuberculosis of the udder, he would direct an investigation to be made into the subject by the medical officers of his department.—Mr. Ritchie replied that an investigation of the question whether consumption may be communicated to the human subject from the milk of cows suffering from tuberculosis of the udder would occupy much time and labour, and such an investigation could not be undertaken by the present medical staff of the Local Government Board. The department had, however, for some time past been, and would continue to be, on the watch for any evidence of the communication of disease to human beings by the milk of tuberculous cows. Little or no evidence of this transmission reached the Board from English sanitary observers.

Supply.

On the 5th inst., on the vote for provisions, forage, fuel, and light, &c., Dr. Farquharson suggested the appointment of a committee to see into the whole question of soldiers' rations. A long discussion ensued, in which Sir Guyer Hunter, Mr. Hanbury, Colonel Nolan, and others took part, and the vote was ultimately agreed to.

On the 6th inst., on the report of the vote for the medical establishment of the Navy, Dr. Tanner rose to call attention to the report of the Committee on the Army and Navy Estimates, and pointed out that several points in that report were altogether in antagonism to the statement made by the Director-General of the Navy in his evidence. He drew attention to the evidence given before that committee as to the advantages enjoyed by the Army medical staff as compared with the naval medical staff, in the shape of more pay, more comforts, more leave, and better opportunities of keeping up their medical knowledge. He also suggested that when they came home from foreign service they should have the advantage of attending the metropolitan hospitals and medical schools.—Lord George Hamilton said that the Committee on the Navy Medical Service reported that exceptional advantages of pay and retirement attached to the service. He could not hold out any hope of increased pay being given to medical officers of the Navy. There was no lack of capable candidates, and that would be a sufficient reason for not increasing the vote for the service. The medical officers of the Army might have advantages not possessed by those of the Navy, and it was proposed to appoint a small committee with a view of assimilating the practice in the Army and Navy. It was desirable that Navy medical officers should have access to large hospitals when they came ashore. The medical officers of the Navy acquiesced in the rule that there should only be one officer on board a ship who should be able to inflict punishment.

Prison Dietary (Ireland).

In answer to Mr. J. Stuart, the Solicitor-General for Ireland said that the circular relating to prison dietary referred to by the hon. member was issued in 1886, not in 1885. The circular invited the medical officers to state their opinions and their experience of the effects observed while the new diet was in use. They were not requested to report in favour of the old diet. The result of the circular has not been to induce medical officers to go counter to the recommendation of the Royal Commission.

Public Health Act Amendment Bill.

On the 7th inst., this Bill was recommitted, and certain amendments agreed to.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BOYD, H. K., M.B.C.S., L.S.A., has been appointed Medical Officer of the Fifth District of the Wycombe Union.

FULL, HENLEY, M.R.C.S., L.R.C.P., has been appointed Physician's Assistant to the Bristol General Hospital, vice W. M. Barclay, appointed Assistant Surgeon.

HUNTER, ERWIN J., L.R.C.P., L.M. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Town District of Alverstoke.

LEWIS, W. H., M.B. and C.M. Edin., has been appointed Medical Officer for the Llansaintffraid District, Llanfyllin Union.

LYNDON, RICHARD, M.B.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Deal District of the Eastney Union, vice T. E. Mason, M.D., M.R.C.S., deceased.

PAYNE, A. B., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Deal Urban District and the Deal Division of Dover Port Sanitary District, vice Mason, deceased.

POLLARD, W. R., M.R.C.P. Lond. and L.M. Edin., L.R.C.S.I., has been appointed Medical Officer of the Workhouse, Blackburn Union.

WHISHAW, REGINALD R., B.A., M.B., B.C. Cantab., L.R.C.P. Lond., F.R.C.S. Eng., has been appointed Demonstrator of Anatomy in the Bristol Medical School.

WILDE, LEONARD, M.B. Dur., M.R.C.S., L.R.C.P., L.S.A., has been appointed Senior House Surgeon to the London Temperance Hospital.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

COLAR DISTRICT, Province of Mysore, India.—Assistant Surgeon for mines in this district. Salary £250 per annum for a three years' engagement, passage paid out and home. Lodgings provided, but not board.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—House Surgeon. Salary £50 per annum, board and washing.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon. No salary, but residence, board, and washing will be provided. Appointment for six months.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £80 per annum, with apartments, board, and attendance.

ROYAL BERKS HOSPITAL, Reading.—Assistant House Surgeon. No salary, but board and lodging.

ROYAL HOSPITAL OF BETHLEHEM, London.—Assistant Medical Officer. Salary £300 per annum, with residence in the hospital, furnished only with planned and fitted furniture, and an annual allowance of coals and gas.

SWANSEA HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with board, furnished apartments, coals, gas, laundress, and attendance.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Stipend, £125 per annum.

UNIVERSITY OF ABERDEEN.—The chair of Chemistry in the University.

VICTORIA HOSPITAL, Burnley.—Resident Medical Officer. Salary £60.

WILTON UNION.—Medical Officer and Public Vaccinator for Stapleford District. Salary £70 yearly, inclusive of midwifery and surgical fees. Vaccination fees to be paid for in addition.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 5th inst., at Palmerston-road, Buckhurst-hill, the wife of C. E. Adams, M.B., B.Sc. Lond., M.R.C.S., of a son.

BENHAM.—On the 1st inst., at Rue de Siam, Passy, Paris, the wife of Henry James Benham, M.D. Lond., of a daughter.

HUBBARD.—On the 4th inst., at The Lawn, Diss, Norfolk, the wife of F. Edmund Hubbard, L.R.C.P. Lond., of a daughter.

POTTER.—On the 3rd inst., at Cullompton, Devon, the wife of John Hope Potter, M.R.C.S., L.R.C.P., of a daughter.

SINCLAIR.—On the 3rd inst., at Prince's-street, Storey's-gate, the wife of J. E. Sinclair, L.R.C.P., of a daughter.

WHITE.—On the 1st inst., at Fletcher House, Tottenham, the wife of Octavius M. White, surgeon, of a daughter.

MARRIAGES.

DAVIS—OLDHAM.—On the 7th inst., at St. Mark's, Leamington, by the Rev. T. Gardner, M.A., Rector of Radstock, cousin of the bride, assisted by the Rev. H. L. Maud, M.A., the Rev. Charles Davis, B.A. Oxon., Vicar of Holy Trinity, Hickley, to Annie Mitchell, youngest daughter of the late Riton Oldham, Esq., F.R.C.S., J.P. (County Durham), of West Hartlepool, and Mrs. Riton Oldham, St. Hilda's, Leamington.

HOLMES—WHITE.—On the 25th ult., at St. James's, Piccadilly, Dr. W. Reid Holmes, to Lizzie, only daughter of the late Andrew White, Esq., Ormiston Colliery, East Lothian, and niece of Dr. Slight, 3, Clifford-street, W.

RYAN-TENISON—MARTYN.—On the 1st inst., at St. Nicholas' Church, Saltash, by the Rev. Julian Moreton, Edward Heron Ryan-Tenison, M.R.C.S.E., L.S.A., to Kate, youngest daughter of the late Dr. Martyn, of Chillington, Devon.

DEATHS.

BAIN.—On the 6th inst., at his residence, Blackwall, William Pellow Bain, M.D., eldest son of the late Sir William Bain, R.N., aged 77.

LOUTTIT.—On the 27th ult., at Vanbrugh Park, Blackheath, London, James Louttit, M.D., M.R.C.S.E., aged 56.

LUSH.—On the 4th inst., at St. Leonards, suddenly, of heart disease, John Alfred Lush, M.D., of Redcliffe-square, S.W.; formerly M.P. for Salisbury.

REYNOLDS.—On the 27th ult., at Portnassau, Ballyshannon, County Donegal, John Andrew Reynolds, late Inspector-General of Hospitals, L.M.S., aged 75.

THIELE.—On the 7th ult., at Muree, N.W. India, Herman Thiele, M.B., Surgeon A.M.D.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 9th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Aug. 3	30.25	N.W.	60	56	112	74	51	..	Bright
" 4	30.16	S.W.	57	56	108	69	55	..	Raining
" 5	29.81	N.W.	60	54	100	65	58	.12	Cloudy
" 6	30.17	N.W.	57	52	91	66	52	.03	Hazy
" 7	30.16	N.W.	66	63	119	83	56	.03	Hazy
" 8	30.16	W.	67	62	122	83	62	..	Bright
" 9	30.14	W.	73	67	126	86	62	..	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

"RECOVERY OF VISION BY LIGHTNING."

MR. MARTIN JONES of Birmingham writes, in reference to the annotation on this subject which appeared in our issue of the 28th ult., that Adam Bate, the subject of the supposed recovery, was admitted into the Birmingham and Midland Eye Hospital in December of last year. His right eye was then disorganised, and the left one affected with superficial ulceration with deposit of burnt debris. The right eye was excised, and the left eye, the sight of which was never lost, recovered with slight nebulae, the organ of vision being otherwise perfect. Of course, this explanation disposes of the case under notice, but the scientific accuracy of our remarks on the subject is not thereby impugned.

Dr. W. Fate (King's Lynn).—1. The information will be found in an annotation in our present issue.—2. Reference is made to Metschnikoff's researches in Mr. Bland Sutton's lecture, published in THE LANCET of Feb. 20th, 1886, and in some editorial remarks in the following number.

Mr. W. H. Steeves, D.D.S. (St. John's, New Brunswick) is referred to Sects. 9 & 10 of the Dentists Act, 1878, for the information he seeks.

THE CONTAGION OF PUERPERAL FEVER.

To the Editors of THE LANCET.

SIRS,—On July 17th last I attended the wife of the Rev. —. She is about thirty-three years of age, primipara. I was obliged to do the high forceps operation, and delivered her of a living boy. There was no crack or laceration of any kind internally or externally. On the third morning the patient had a marked rigor, and temperature of 107° F. She has since developed puerperal fever. I have not been attending any case of a contagious kind whatever; but I learned from the husband (who took over some of the effects of his predecessor) that the previous clergyman's wife suffered from puerperal fever just a year ago. The patient occupies the same room, and uses the same bedstead (iron French bedstead); hence, I take it, the disease. I am quite unable to account for it in any other way. The placenta and membranes came away perfectly. There was no clot left, and the delivery itself was all right.

I have to ask now the following question. I expect to leave off attendance in about three weeks' time (about Aug. 28th), and I would like to know how soon afterwards can I safely resume attendance on midwifery again? Is it absolutely necessary for me to go away from the neighbourhood for a time? Or will simple disinfection of wearing apparel over sulphur fumes suffice? I wish to know the earliest date at which I can safely resume midwifery practice, and I would be glad of any suggestions as to fumigation, &c. that those who have had experience in this class of cases may be so good as to offer.

I remain, Sirs, yours faithfully,

Aug. 6th, 1888.

OBSTETRICUS.

WOOLSORTERS' DISEASE.

MR. W. ROBERTS CARR, of Allerton, near Bradford, Yorks, writes that the statement that "it is noteworthy that in all the mills where the precautionary regulations have been observed there has been an absence of woolsorters' disease" is not accurate. Amongst the employees of the firm with which he is connected there had not been for twenty-five years a case of this disease until the regulations were adopted. Since that time two cases have occurred in twelve months.

Hygiene.—The Conjoint Board have never issued any syllabus of works to be read for any of their examinations. The standard for the diploma in public health seems to be much the same as that for Cambridge, and at the Cambridge University Depot in Paternoster-row a pamphlet containing the last examination papers, together with the list of books recommended to be read, can be obtained for 1s. The list contains a number of works dealing with the same subject, and the candidate will himself judge which to select from a needlessly long list. In the second half of the examination it seems evident that knowledge of the recent researches contained in the reports of the Medical Officer of the Local Government Board is held to be of value.

GONORRHOEAL RHEUMATISM.

To the Editors of THE LANCET.

SIRS,—It is only too well known how frequently patients are admitted into our hospitals for subacute rheumatism affecting several joints, which fails to be benefited by salicylates, &c., and which, after it may be several weeks, proves to have been of gonorrhoeal origin. While I was resident at a hospital a man was treated for weeks for subacute rheumatism with salicylates unsuccessfully. Throughout his case the prominent feature was the rheumatism of both temporo-maxillary joints, so that he could not open his mouth wide enough to put his finger between his teeth. Of three other cases in which that joint was affected, I accused the patients of having gonorrhoea, or of having had it lately, and was correct in each case. These four cases were all males. In two other cases (female) I could not be certain that they were gonorrhoeal. The late Dr. Fagge considered the ankles and soles of the feet the most frequently affected in gonorrhoeal rheumatism; and doubtless they are more often involved than the knee, as laid down in all our text-books. In no book have I seen it mentioned that the temporo-maxillary joint is fairly frequently affected and a useful aid in diagnosis.

I am, Sirs, yours faithfully,

Brecon Infirmary, August, 1888.

JOHN B. WEBB.

THE CLIMATE OF TEXAS.

To the Editors of THE LANCET.

SIRS,—I should like to be allowed to ask if the climate of North-West Texas (Concho co.) would be unsuitable for a phthisical patient who has an old cavity in the apex of his right lung? The patient has friends living there, and would receive every attention and comfort.

I am, Sirs, yours faithfully,

Aug. 6th, 1888.

M. K. & Q. C. P. I.

COCA TOBACCO.

THE material supplied under this name appears to be devoid of any harmful properties. The pulse becomes slightly accelerated under its influence, and somewhat fuller; the mental faculties are not appreciably affected. The substance does not possess, so far as we have observed, the narcotic and sedative influence of ordinary tobacco. The fumes are comparatively tasteless, but the odour is distinctly unpleasant and irritating.

Mr. Percival.—Elaborate statistics of female mortality as compared with that of males have been compiled, and may be found in the Government Annuity Tables and in those published by the Institute of Actuaries; but we are not aware that anything deserving the name of statistics has been brought together which treats of distinctively female sickness. The best sickness experience tables are those compiled from the experience of the Manchester Unity, but they represent what is, of course, preponderatingly male experience.

Quæro.—We think that Locum acted wisely in this case. He had sent for N—, who had a sort of partner's position, though not actually a partner, and it was not unreasonable that he should wish to do, and do, the operation. As friends, the question is still more easy of adjustment.

ENLARGED SPLEEN.

To the Editors of THE LANCET.

SIRS,—In answer to the question put to you by Dr. C. W. Williams of Norwich (May 19th, 1888), I beg through you to inform him that Dr. Patrick Manson removed by lithotripsy a large stone from a patient with an enormous spleen in the month of April, 1888. The patient was watched for some time previously to the operation, and treated with large doses of quinine. Although the operation was a prolonged one, the patient recovered without a bad symptom.—Yours truly,

Hong Kong, June 29th, 1888.

JAMES CANTLIE.

Mr. R. G. S.—We think a voyage under the circumstances would be very inexpedient, except, perhaps, in the company of a medical attendant.

Dr. E. B. Truman.—Yes, shortly.

"THE VIRUS DESTROYER."

DR. MACCALL, of Morecambe, writes to us to say that he has at length succeeded in perfecting his instrument for the immediate treatment of bites by animals presumably suffering from hydrophobia, and which formed the subject of communications from him published in THE LANCET of Dec. 24th, 1887, and Jan. 28th following. The chief difficulty appears to have lain in the manufacture of the bichloride of mercury points, the metal not bearing fusion or compression. The points consist of seven parts sugar and one part corrosive sublimate, and, we understand, they will keep any length of time. Dr. Maccall has submitted to us two specimens of the pencils—one in celluloid, and another in aluminium; they are very neat in appearance, may be carried in the waistcoat pocket without inconvenience, and we should be inclined to augur very favourably of their usefulness. We confess, however, to a certain amount of misgiving as to the possibility of danger arising from conceivable carelessness in allowing the tubes to be within the reach of children and thoughtless and ignorant persons—a danger which would seem capable of assuming formidable proportions in view of the probability of the tubes coming into anything like general use. The whole of the Stirlingshire police are, we are informed, being supplied with them.

A Subscriber from 1877.—1. Parkes' Hygiene, Ganot's Physics, Baldwin Latham's Sanitary Engineering, and the Public Health Acts.—2. A beginner would find many useful hints in the introductory chapters of Whittle's Materia Medica. For general purposes later, Squire's Companion to the British Pharmacopœia would be very valuable.

Assistant.—No doubt it is usual for travelling expenses to be paid under the circumstances; but they cannot be sued for as a right.

Mr. W. A. H. Barrett.—No.

"DEAF-MUTES IN THE UNITED STATES."

To the Editors of THE LANCET.

SIRS,—Professor Graham Bell is perfectly correct in his condemnation of huge asylums and the asylum plan in general, but wrong in the remedy he suggests. Dr. Graser in Germany and Dr. Blanchet in Paris advocated and put into practice the instruction of deaf with hearing children, but the plan utterly failed. All that is needed is separate classes for the deaf and dumb, conducted on the same principles as have been advocated and carried out by this Association. Whether the children who live at too great a distance to return home daily are boarded out in private families under proper supervision, as I strongly advise, or in small houses, is a question requiring consideration; but a deaf and so-called dumb child cannot be entirely taught in a school for the hearing. Great advantage would, however, be derived from the deaf child mixing with hearing children in the playground, in drill exercises, and in drawing, needlework, or other technical exercises.

I am, Sirs, yours obediently,

WILLIAM VAN PRAAGH.

Association for the Oral Instruction of the Deaf and Dumb, Fitzroy-square, W., Aug. 2nd, 1888.

QUALIFIED ASSISTANTS "COVERING" ILLEGAL PRACTICE.

To the Editors of THE LANCET.

SIRS,—There is in this district an unqualified man who has been practising here for more than ten years. He holds in his own name the appointment of surgeon to a number of registered friendly societies, collieries, and other clubs. He covers himself by employing a qualified assistant (whom he changes every few months) to sign certificates. He is a member of the local board and board of guardians, and passes generally as a qualified medical practitioner. I should be glad to know whether such practice is illegal, and, if so, what would be the best steps to take to put a stop to it.—I am, Sirs, yours faithfully,

August, 1888.

ENQUIRER.

* * It is only kind to the qualified assistants who enable this unqualified practitioner to hold appointments for which he is legally unfit to let them know that they are acting in a way repeatedly condemned by the Medical Council, and which lays them open to the charge of "infamous conduct" in a professional respect. It would be right if they disregarded such an intimation to bring the particulars before the Medical Council.—ED. L.

Cover Assistant.—A qualified man "covering" one unqualified at a distance of six or seven miles lays himself open to censure by the Medical Council, and possibly to the removal of his name from the Register. The facts should be ascertained carefully, and submitted to the Medical Council. It would be kind beforehand to give fair notice to the parties concerned.

Dr. A. Pavone (Naples).—Our arrangements with regard to the matter mentioned by our correspondent are at present complete.

Mr. Wm. C. Kendal should put the questions to his usual medical attendant. We do not prescribe.

M. B. C. (Galway) should apply to the Patent Office, Southampton-buildings, London, W.C.

Lee has not enclosed his card.

MEDICAL PRACTITIONERS AND THE BUSINESS OF CHEMISTS.

A. B. C.—It is not lawful for a member of the medical profession to be registered as a pharmaceutical chemist. A medical man should not attend as a consultant at a chemist's shop, but should see patients in his own house.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Savage, London; Sir E. Lechmere, London; Dr. Park, Glasgow; Dr. Cogan, Northampton; Mr. Stenhouse, Glasgow; Dr. Hime, Bradford; Dr. E. Seaton, London; Mr. F. Boehm, London; Mr. Simpson, Farnborough; Mr. R. W. Murray, Liverpool; Dr. Buchanan, Glasgow; Dr. Norman Kerr, London; Mr. W. R. H. Stewart, London; Messrs. J. Donald and Co., Edinburgh; Mr. F. A. Southam, Manchester; Mr. Munro Scott, London; Dr. Robertson, Newcastle-on-Tyne; Dr. Dale, King's Lynn; Mr. W. R. Cass, Allerton; Miss Yates, London; Mr. Van Praagh, London; Mr. Barrett, Ely; Messrs. Burgoyne, Burdighes, and Co.; Dr. Spencer, St. Leonards; Dr. McKendrick, Glasgow; Mr. A. C. Dixey, Southsea; Dr. Truman, Nottingham; Mr. Coghill, Birmingham; Prof. Struthers, Aberdeen; Mr. Walker, Aberdeen; Mr. Wylie, Belfast; Mr. Fulton, Canada; Dr. Pavone, Naples; Dr. H. Hun, New York; Mr. Hopkins, Bath; Mr. A. Woakes; Mr. W. H. Bull, Stony Stratford; Mr. E. H. Frazer, Consett; Mr. Steeves, St. John's, New Brunswick; Dr. Burnett; Dr. McMorde, Belfast; Mr. J. Cantlie, Hong Kong; Mr. M. Young, Birmingham; Messrs. Knighton, Hayman, and Co., London; Dr. Aikman, Guernsey; Mr. Lush, London; Dr. A. Yule, Guildford; M.K.Q.C.P.I.; Obstetricus; Country, London; A. B. C.; Assistant; Hygiene; F. C. P., Stroud; Enquirer; Cover Assistant; M.R.C.S.

LETTERS, each with enclosure, are also acknowledged from—Mr. Juler, London; Mr. Hawkins, London; Mr. Lloyd, London; Messrs. Roche and Co., London; Sir J. Sawyer, Birmingham; Messrs. Droncooke and Co., St. Helens; Mr. Gardner, Edinburgh; Messrs. Christy and Co., London; Mr. Bigg, London; Mr. Potter, Devon; Mr. Bates, New York; Mr. Symonds, Oxford; Mr. Thomas, Herts; Messrs. Loeffund and Co., London; Mr. Meacham, Manchester; Messrs. Wyleys and Co., Coventry; Mr. Toller, Salop; Mr. Ernst, London; Mr. Murrell, London; Mr. Reeve, Norwich; Dr. Thomson, Dalkeith; Mr. Cornish, Manchester; Mr. McClelland, Glasgow; Dr. Whitham, Adlington; Mr. F. White, Yorks; Mr. Couzens, London; Messrs. Thompson and Co., Liverpool; Mr. Wilson, Wilton; Dr. Huley, Yorks; Messrs. Smith and Son, Birmingham; Mr. Heywood, Manchester; Mr. Greenwood, Kendal; Mr. Lister, Burnley; Dr. Watkins, Lancs; Mr. Williams, Cornwall; Mr. Logan, Scotland; Mr. Stride, Brighton; Dr. Adams, London; Dr. Wigglesworth; Mrs. Loutitt, Blackheath; Mr. Crozier, Lytham; Mr. Elliott, Carlisle; Mr. Lee, Leeds; Mr. Harly, Maidstone; Mr. Clark, Doncaster; Mrs. Rutley, London; M.D., Derbyshire; J. H. M., London; General Hospital, Birmingham; Hospital for Women, London; N. B., London; M.D., London; 3096, Scotsman Office; G. T., Somerset; E., London; M.D., Birmingham; Dumfries Royal Infirmary; Equest, London; Subscriber; L. M., London; Lady Principal; M. P., London; M. H., London; Jar, London; Gateshead Children's Hospital; Y., London; Dispenser, Southampton; University College, Dundee; A. S. Y., London; C. S. L., London; Hospital for Women, Liverpool; S. Y., London; A. E., Queenstown; Yorkshire College, Leeds; Surgeon, London; Student, London; Cellular Cloth Co.; A. B. V., London; Surgeon, Mon; 781, Birmingham; Queen's Hospital, Birmingham; M.D., Axminster; S. G., London; Orfila, London; Oxon, London; Noncon, London; L. M., London; East, London; B. W. M., Brighton; Glencoe, London; H. M. P., London; Agricola, London; Owner, Harlesden.

Scottish Leader, Reading Mercury, Edinburgh Evening News, Windsor and Eton Express, Ulster News, Evening Post, Herald and Weekly Free Press, Beverley Recorder, Hertfordshire Mercury, Nottingham Daily Guardian, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 14.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.
Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 15.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
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ABRIDGED REPORT OF AN

Address

ON THE

GASES OF THE BLOOD,

*Delivered at the meeting of the British Medical Association in Glasgow,*By JOHN GRAY MCKENDRICK, M.D. &c.,
PROFESSOR OF THE INSTITUTES OF MEDICINE IN THE UNIVERSITY OF GLASGOW.

THE subject I have chosen is a consideration of the gaseous constituents of the blood in relation to some of the problems of respiration. This has been selected both because it deals with a province of physiology in which there are many profound problems connected with the molecular phenomena of life, and also because it gives me the opportunity of illustrating some of the methods of physiological research.

Respiration may be shortly defined as the function or group of functions by which an interchange occurs between the gases formed in the tissues of a living being and the gases of the medium in which it lives. It is interesting to take a brief survey of the investigations which laid the foundations of our knowledge of this subject, as it illustrates to us the fact taught by the history of all sciences that those truths which we now regard as elementary were at one time unknown, and that they have been gained by laborious inquiry. The oldest writers do not appear to have had any clear notions even as to the necessity for respiration. Hippocrates dimly recognised that during breathing a *spiritus* was communicated to the body. Many of the older anatomists, following Galen, thought that the "very substance of the air got in by the vessels of the lungs to the left ventricle of the heart, not only to temperate heat, but to provide for the generation of spirits." This notion of cooling the blood was held by Descartes (1596-1650) and his followers, and seemed to them to be the chief, if not the sole, use of respiration. In addition, they supposed it aided in the production and modulation of the voice, in coughing, and in the introduction of odours. The celebrated Van Helmont (1577-1664) strongly expresses these views, and attaches particular importance to the necessity for cooling the blood, which otherwise would become too hot for the body. About the middle of the seventeenth century clearer notions began to prevail. These rested partly on an anatomical and partly on a physical discovery. Malpighi (1621-1694) discovered that the minute bronchial tubes end in air vesicles, or membranous cavities, as he termed them, on the walls of which, in the frog, he saw with his simple microscope the blood flowing through capillaries. This pulmonary plexus was for many years termed the "rete mirabile Malpighii." The physical observations were made by the celebrated Robert Boyle (1627-1691), who describes in his treatise, entitled "New Experiments, Physico-Mechanical, touching the Spring of the Air," published in 1662, numerous experiments as to the behaviour of animals in the exhausted receiver of the air-pump. He showed that the death of the animals "proceeded rather from the want of air than that the air was over-clogged by the steam of their bodies." He also showed that fishes also enjoyed the benefits of the air, "for," said he, "there is wont to lurk in water many little parcels of interspersed air, whereof it seems not impossible that fishes may make some use, either by separating it when they strain the matter thorow their gills, or by some other way." His conclusion is "that the inspired and expired air may be sometimes very useful by condensing and cooling the blood;" but "I hold that the depuration of the blood in that passage is not only one of the ordinary but one of the principal uses of respiration." Thus, by the use of the air-pump, invented by Otto von Guericke about 1650, Boyle was able to make a contribution of fundamental importance to physiological science. He also first clearly pointed out the real cause of the influx of air into the lungs.

Boyle's observations were published in 1660, and in 1685 we find Borelli (1608-1679), in the second portion of his great work, "*De Motu Animalium*," giving expression to very

clear notions regarding respiration. Thus in the eighty-second proposition he shows that the lungs are not the effective causes of respiration, but are passively concerned in the movements; and in the eighty-third proposition he states that the efficient cause of inspiration is the muscular force by which the cavity of the chest is increased and permits the lungs to be filled by the elastic force of the air. Borelli was also the first, as shown in the eighty-first proposition of his work, to make an estimate of the quantity of air received by a single expiration. At the same time he attributed calm expiration to the elastic resiliency of the ribs, and he pointed out that the deepest expiration could not entirely empty the lungs of air (Propositions 92, 93, and 94). Whilst Borelli thus recognised the air as necessary to animal life, he naturally failed in explaining why this was so, being unacquainted with the composition of the air and of the so-called "fuliginous vapours" (carbonic acid, aqueous vapour, &c.) which were supposed to exist in expired air.

One of the contemporaries of Boyle, Pascal, Spinoza, Barrow, Newton, and Leibnitz—all men of the first intellectual rank—was Dr. Robert Hooke, one of the most versatile and able of scientific thinkers. Hooke was born in 1635, and died in 1703. One of the founders of the Royal Society, its early proceedings show that there was scarcely any department of science at the time to which he did not make important contributions. In particular, he showed a remarkable experiment in October, 1667, to the Royal Society. This experiment showed that it was the fresh air, and not any alteration in the capacity of the lungs, which caused the renewal of the heart's beat. It has been said that a similar experiment was performed by Vesalius, but with this difference, that whilst Vesalius observed the fact, he failed in giving a rational explanation. He supposed that the movements of the lungs affected the movements of the heart, but he did not see, as Hooke did, that the heart moved because it was supplied with blood containing fresh air.

We thus see that the necessity of a continual supply of fresh air was recognised as being essential to life. It was further surmised that the air imparted something to the blood, and received something in return; but no further advance was made in this direction until the researches of Mayow, a name now famous in the early history of chemistry and of physiology. John Mayow was born in 1645, and died at the early age of thirty-four. His principal work was published in Oxford in 1674. In it, by many ingenious experiments, he showed that combustion diminishes the volume of the air and alters its qualities; that respiration also affects the quality of the air; that an animal will die if kept in a confined space full of air, a fact to be explained, according to Mayow, by saying that the animal had used the respirable portion of the air, and that the residue was unfit for life; and, finally, he showed that an animal suffers if placed in an atmosphere the qualities of which have been injured by combustion. Further, he gave the name of "nitro-aerial spiritus" to the "principle" in the air, which he said had to do with life, muscular action, and combustion. Thus, he no doubt came near the discovery of oxygen, made by Priestley nearly a century later. It would be difficult to estimate the enormous influence on theories of combustion and of respiration exerted by the researches of Boyle, Hooke, and Mayow. They prepared the way in physiological science for the next great step—namely, the identification of the gaseous elements concerned in respiration. The dependence of progress in physiology on the state of scientific opinion regarding chemical and physical questions could not be better illustrated than in the history of physiological ideas regarding respiration. Thus the researches of Boyle with the air-pump did much to explain the mere mechanism of breathing. Hooke made this even more apparent, and Mayow gave greater precision to the idea that in respiration the blood lost something and gained something.

The next step in the physiology of respiration was the discovery in 1754 of carbonic acid by Joseph Black, then Professor of Medicine and Chemistry in this University. He showed that in the case of *magnesia alba* (carbonate of magnesia) the disappearance of the effervescence on treatment with an acid after heating was accompanied by a loss of weight. The substance thus given off he called "fixed air," or what we now term carbonic acid. This led to an examination of the salts of lime, and in 1757 he made two important physiological discoveries—namely, (1) that the fixed air was injurious to animal life; and (2) that fixed air was produced by the action of respiration.

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Fifteen years afterwards—namely, in 1772—Joseph Priestley examined the chemical effects produced by the burning of candles and the respiration of animals upon ordinary air; and he made the important discovery that after air had lost its power of supporting combustion, as by the burning of candles, this property might be restored by the agency of plants. Pushing his experiments still further, he found that air, deteriorated by the breathing of animals, might again become suitable for respiration by the action of plants.

Thus the chemical researches of Black and Priestley showed that in respiration oxygen was consumed and carbonic acid produced, although the latter fact, owing to the theoretical views of Priestley as to phlogiston, was not fully appreciated by him. Within a year after Priestley's discovery, a paper on respiration was written by Lavoisier (1743–1794), in which he showed that Priestley was correct in stating that the air lost oxygen in breathing; but Lavoisier specially pointed out that it had gained carbonic acid. No doubt Lavoisier was well acquainted with Black's researches, as is shown by the correspondence between these distinguished men. Lavoisier was the first, however, to make a quantitative examination of the changes produced in the air by breathing. During 1789 and 1790, by a special apparatus, Lavoisier and his friend Seguin attempted to measure the changes in the air produced by the breathing of man. These researches are not of value so much for the results they gave as for the method employed. Lavoisier constructed a still more elaborate apparatus, with which he began experiments. This research, however, he never finished, as in 1794 he fell a victim to the blind fury of Robespierre.

Stephen Hales (1677–1761) attempted to measure the amount of aqueous vapour given off by the lungs by breathing through a flask filled with wood-ashes, which absorbed the moisture, and he estimated the amount at about twenty ounces in twenty-four hours. Similar observations were afterwards made by Menzies and by the eminent surgeon, Mr. Abernethy.

Various other attempts were made to estimate the amount of respiratory changes. In particular, Sir Humphry Davy, in March, 1798, investigated the physiological action of nitrous oxide gas. In this research, published in 1800, he began by observations upon animals, and observations as to the effect of the gas on life, on muscular irritability, on the action of the heart, and on the colour of the blood are recorded with great precision. He then passed on to observations on the respiration of hydrogen, and this led him to a repetition of the experiments of Lavoisier and Goodwin. Next he subjected himself to experiment, and gave himself and friends to experiment, and records a number of interesting physiological and psychical phenomena.

Another eminent man who contributed largely to the physiology of respiration was Lazarus Spallanzani, who was born in 1729 and died in 1799. He became Professor of Logic, Mathematics, and Greek in Reggio in 1754, and about this date published researches on infusoria. In 1760 he became Professor in the University of Modena. In 1765 he showed that many microscopic animalculæ were true animals, and in 1768 he published his celebrated researches on the reproduction of portions of the body removed from worms, snails, salamanders, and toads. He paid special attention to the great question of spontaneous generation, showing that infusions of animal and vegetable substances exposed to a high temperature and hermetically sealed never produced living things. He also investigated respiration, more particularly in invertebrates. He showed that many such animals breathed by means of the skin as well as by the special breathing organs. He placed many animals, but more especially different species of worms, in atmospheres of hydrogen and nitrogen, and showed that, even in these circumstances, carbonic acid was produced. He also showed the production of carbonic acid by the dead bodies of such animals, and reasoned from this that the carbonic acid was produced directly from the dead tissues and not from the action of the oxygen of the air. He contrasts the respiration of cold-blooded and warm-blooded animals, and shows the peculiarities of respiration in hibernating animals. Nor were these by any means superficial observations. They were usually quantitative, and by the use of the eudiometer he analysed the air before and after respiration.

In 1809 the subject of aquatic breathing was investigated with great care by Provençal and Humboldt. They collected

and analysed the gases of water before and after fishes had lived in it for a certain time, and showed that oxygen was consumed and carbonic acid produced by these creatures.

We have now seen how gradually knowledge was arrived at as to the respiratory exchanges. At the beginning of the present century it was recognised that expired air had lost oxygen, gained carbonic acid and aqueous vapour, and had become hotter. Since then many researches have been carried on to determine with accuracy the quantities of these substances.

The results are—first, the expired air, for its own temperature is saturated with aqueous vapour; secondly, the expired air is less in volume than the inspired air to the extent of about one-fortieth of the volume of the latter; thirdly, the expired air contains about 4 per cent. more carbonic acid and from 4 to 5 per cent. less oxygen than inspired air; fourthly, the total daily excretion of carbonic acid by an average man amounts to 800 grammes in weight, or 406 litres in bulk. This amount of carbonic acid represents 218.1 grammes of carbon and 581.9 grammes of oxygen. The amount of oxygen, however, actually consumed is about 700 grammes; so that nearly 120 grammes of oxygen absorbed are not returned by the lungs, but disappear in the body. It must be remembered, however, that carbonic acid escapes by the skin and other channels. These figures may be taken as averages, and are subject to wide variations depending on nutritional changes.

There is, however, another side to the problem of respiration—namely, a consideration of the chemical changes involved in the process.

According to Lavoisier, respiration was really a slow combustion of carbon and of hydrogen. The air supplied the oxygen and the blood the combustible materials. The great French chemist, however, did not entirely commit himself to the opinion that the combustion occurred only in the lungs. He says that a portion of the carbonic acid may be formed immediately in the lung, or in the bloodvessels throughout the body, by combination of the oxygen of the air with the carbon of the blood. Lavoisier's opinions were understood correctly by only a few of his contemporaries, and a notion prevailed that, according to him, combustion occurred only in the lungs, and that the changes in these organs were the main sources of animal heat. Such a notion, however, was contrary to the opinion of the great mathematician Lagrange, announced in 1791, a few years after the first publication of Lavoisier's on respiration. Lagrange saw that if heat were produced in the lungs alone the temperature of these organs might become so high as to destroy them; and he therefore supposed that the oxygen is simply dissolved in the blood, and in that fluid combined with carbon and hydrogen, forming carbonic acid and aqueous vapour, which were then set free in the lungs.

Now, if the production of carbonic acid in a given time depended upon the amount of oxygen supplied in the same time, these views of Lavoisier and Lagrange would be correct; but Spallanzani had shown that certain animals confined in an atmosphere of nitrogen or of hydrogen exhaled carbonic acid to almost as great an extent as if they had breathed air. He was therefore obliged to say that carbonic acid previously existed in the body, and that its appearance could not be accounted for by the union of oxygen with the carbon of the blood.

It might thus be said that two theories of respiration were before physiologists—the one, that combustion occurred in the lungs or venous blood, furnishing carbonic acid and aqueous vapour, which were exhaled by the lungs; the other, that there was no such combustion, but that oxygen was absorbed by the lungs and carried to the tissues, whilst in these carbonic acid was secreted, absorbed by the blood, carried to the lungs, and there exhaled. Some writers, soon after Lavoisier, misunderstood, as I have already stated, the opinions of that distinguished man, and taught that in the lungs themselves there was a separation of carbon which united immediately with the oxygen to form carbonic acid. But this was not really Lavoisier's opinion; and we have to do, therefore, with two theories, which have been well named "the theory of combustion" and "the theory of secretion."

The difficulty felt by the older physiologists in accepting the secretion theory was the absence of proof of the existence of free oxygen and carbonic acid in the blood. Consequently, so long as physiologists had no definite knowledge regarding gases in the blood, the combustion theory, in the most limited sense, held its ground. This theory, although fruit-

FIG. 1.

FIG. 2.

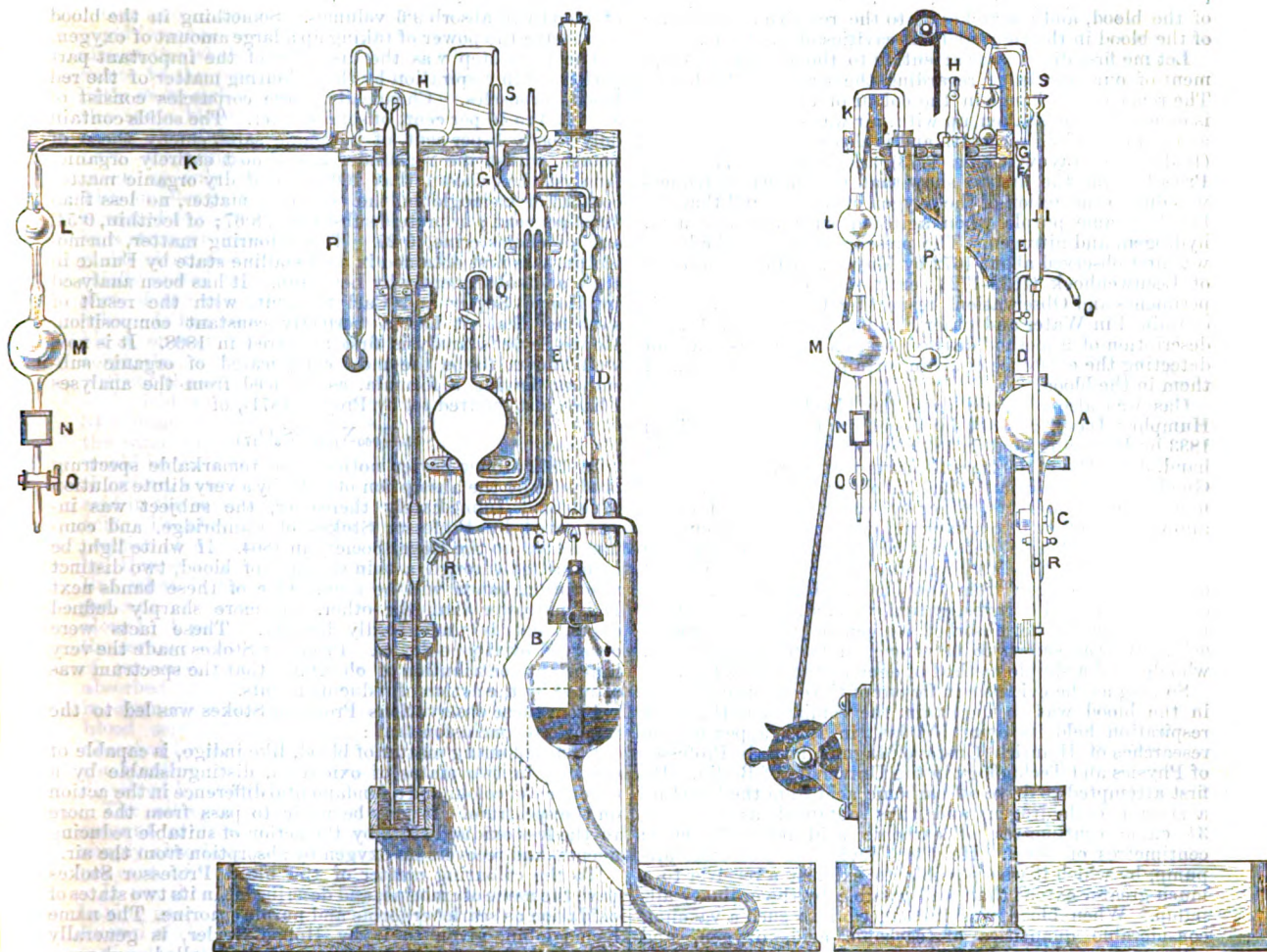
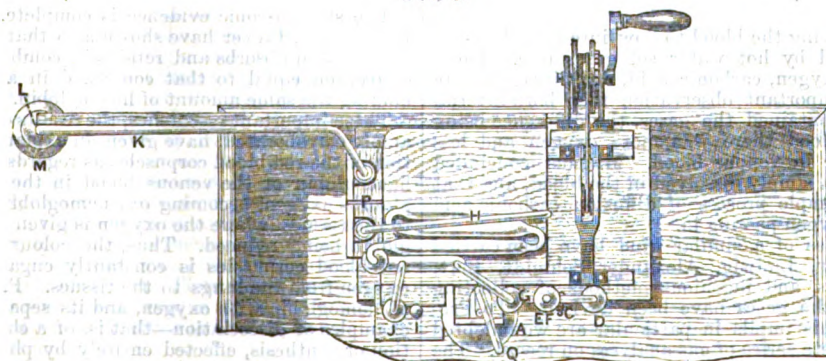


FIG. 3.



Views of a gas pump constructed for the purpose of extracting and collecting the gases of the blood, and suitable for the physiological lecture-table. These views have been correctly drawn on the scale of 1 to 10 by my friend the Rev. A. Hanns Geyer.* Fig. 1, front view: A, glass bulb connected by horizontal glass tube with bulb B; this tube guarded by stopcock C. By elevating B, A is filled with mercury, stopcock of delivery tube Q is closed, and B is lowered; A is thus exhausted and air is drawn into it by tubes E, connected by G with drying apparatus and blood chamber. I, permanent barometer. J, barometer gauge tube connected with part of instrument to be exhausted. Both I and J dip into mercury trough seen below; S, a glass float to prevent mercury from running into drying apparatus when B is raised. After A and the drying apparatus and the blood chamber have been well exhausted, B is raised and mercury may be allowed to pass up D, and then the apparatus acts as a Sprengel pump by the three tubes E. Fig. 2, side view of apparatus: same references. Fig. 3, drying apparatus, placed on a shelf at the top of the pump, consisting of H, tubes containing solid phosphoric acid and U tube P, seen in Fig. 2, containing sulphuric acid. The tube K passes to receiver. In the drawing it is seen to be connected with an apparatus suitable for projecting the spectrum of oxy-haemoglobin by lime or electric light on screen; then exhausting the blood of oxygen and showing the spectrum of reduced haemoglobin. L and M, froth chambers with traps; N, parallel-sided chamber for blood; O, stopcock. The whole pump is modelled on one I obtained about ten years ago from Messrs. Mawson and Swan, of Newcastle, but it has been much altered and added to so as to make it suitable for physiological demonstration. It is evident that the gases can be readily obtained for analysis by driving out of A by delivery tube Q. A rough demonstration of the gases can be made in from five to ten minutes.

* The pump can be obtained from Mr. W. Potter, glass blower, Physical and Physiological Laboratories, University of Glasgow, who will give information as to cost.

ful of many ideas regarding respiration and animal heat, was abandoned in consequence of the evidence afforded by two lines of inquiry—namely, researches regarding the gases of the blood, and researches as to the relative temperature of the blood in the right and left cavities of the heart.

Let me first direct your attention to the gradual development of our knowledge regarding the gases of the blood. The remarkable change in the colour of the blood when it is exposed to, or shaken up with, air was observed so long ago as in 1665 by Fracassati, and is also alluded to by Lower (1631-1691), Mayow, Cigna (1773), and Hewson (1774); but Priestley was the first to show that the increased redness was due to the action of the oxygen of the air, and that the blood became purple when agitated with carbonic acid, hydrogen, and nitrogen. The presence of gas in the blood was first observed about 1672 by Mayow. I find in a paper of Leeuwenhoek (1632-1723), entitled "The Author's Experiments and Observations respecting the quantity of Air contained in Water and other Fluids," published in 1674, a description of a method devised by this ingenious man for detecting the existence of air in certain fluids, and amongst them in the blood.

Gas was also obtained from the blood in 1799 by Sir Humphry Davy, in 1814 by Vogel, in 1818 by Brand, in 1833 by Hoffmann, and in 1835 by Stevens. On the other hand, John Davy, Bergman, Johannes Müller, Mitscherlich, Gmelin, and Tiedeman failed in obtaining any gas. The first group of observers, either by heating the blood, or by allowing it to flow into a vacuum, or by passing through it a stream of hydrogen, obtained small quantities of carbonic acid. Sir Humphry Davy was the first to collect a small quantity of oxygen from the blood. John Davy, by an erroneous method of investigation, was led, in 1828, to deny that the blood either absorbed oxygen or gave off carbonic acid. He was shown to be wrong, in 1830, by Christison, who devised a simple method of demonstrating the fact.

So long as the evidence in favour of the existence of gases in the blood was so uncertain, the combustion theory of respiration held its own. At last, in 1836, appeared the researches of Heinrich Gustave Magnus, latterly Professor of Physics and Technology in the University of Berlin. He first attempted to drive off carbonic acid from the blood by a stream of hydrogen, and thus obtained as much as 34 cubic centimetres of carbonic acid from 62.9 cubic centimetres of blood. He then devised a mercurial air-pump, by which it was possible to exhaust a receiver to a much greater extent than was possible by the ordinary air-pump. When blood was introduced into such a vacuum, considerable quantities of carbonic acid, oxygen, and nitrogen were obtained. This research marks an epoch in physiological discovery, as it threw a new light on the function of respiration by demonstrating the existence of gases in the blood.

Magnus, by allowing the blood to flow into an exhausted receiver surrounded by hot water, set gases free. These were found to be oxygen, carbonic acid, and nitrogen. He further made the important observation that both arterial and venous blood contained the gases, the difference being that in arterial blood there was more oxygen and less carbonic acid than in venous blood. Magnus concluded that the gases were simply dissolved in the blood, and that respiration was a simple process of diffusion, carbonic acid passing out and oxygen passing in.

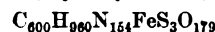
Further researches of a similar kind have been carried out by Setschenow, Ludwig, Alexander Schmidt, Bert, Pflüger, and others, and ingenious methods of collecting and of analysing the gases have been devised. To Professor Pflüger and his pupils in particular are we indebted for the most complete series of gas analyses on record. The result has been to enable us to give the average composition of the gases of the blood as follows. From 100 volumes of dog's blood there may be obtained:

	Oxygen.	Carbonic Acid.	Nitrogen.
Arterial	18.4 to 22.6, mean 20	30 to 40	1.8 to 2
Venous	Mean 11.9	43 to 48	1.8 to 2

the gases being measured at 0° C. and 760 mm. pressure. The venous blood of many organs may contain less than 11.9 per cent. of carbonic acid, and the blood of asphyxia may contain as little as 1 volume per cent. It is clear, then, that the gases of the blood do not exist in a state of simple solution, but that they are largely combined with certain constituents of the blood. Take, for example, the case of oxygen. Berzelius showed long ago that 100 volumes

of water will absorb, at a given temperature and pressure, 2.9 volumes of oxygen; while in the same circumstances, 100 volumes of serum will absorb 3.1 volumes, and 100 volumes of blood will absorb 9.6 volumes. Something in the blood must have the power of taking up a large amount of oxygen.

The next step was the discovery of the important part performed in respiration by the colouring matter of the red blood corpuscles. Chemically, these corpuscles consist of about 30 to 40 per cent. of solid matter. The solids contain only about 1 per cent. of inorganic salts, chiefly those of potash, whilst the remainder are almost entirely organic. Analysis has shown that 100 parts of dry organic matter contain of hæmoglobin, the colouring matter, no less than 90.54 per cent.; of proteid substances, 8.67; of lecithin, 0.54; and of cholesterine, 0.25. The colouring matter, hæmoglobin, was first obtained in a crystalline state by Funke in 1853, and subsequently by Lehmann. It has been analysed by Hoppe-Seyler and Carl Schmidt, with the result of showing that it has a perfectly constant composition. Hoppe-Seyler's analysis first appeared in 1868. It is now well known to be the most complicated of organic substances, having a formula, as deduced from the analyses I have just referred to, by Preyer (1871), of



In 1862 Hoppe-Seyler noticed the remarkable spectrum produced by the absorption of light by a very dilute solution of blood. Immediately thereafter, the subject was investigated by Professor Stokes of Cambridge, and communicated to the Royal Society in 1864. If white light be transmitted through a thin stratum of blood, two distinct absorption bands will be seen. One of these bands next D is narrower than the other, has more sharply defined edges, and is undoubtedly blacker. These facts were observed by Hoppe-Seyler. Professor Stokes made the very important contribution of observing that the spectrum was altered by the action of reducing agents.

From these observations Professor Stokes was led to the important conclusion that:

"The colouring matter of blood, like indigo, is capable of existing in two states of oxidation, distinguishable by a difference of colour and a fundamental difference in the action on the spectrum. It may be made to pass from the more to the less oxidised state by the action of suitable reducing agents, and recovers its oxygen by absorption from the air."

To the colouring matter of the blood Professor Stokes gave the name of cruorine, and described it in its two states of oxidation as scarlet cruorine and purple cruorine. The name hæmoglobin, given to it by Hoppe-Seyler, is generally employed. When united with oxygen it is called oxyhæmoglobin, and when in the reduced state it is termed reduced hæmoglobin, or simply hæmoglobin.

The spectroscopic evidence is complete. Hoppe-Seyler, Hüfner, and Preyer have shown also that pure crystallised hæmoglobin absorbs and retains in combination a quantity of oxygen equal to that contained in a volume of blood holding the same amount of hæmoglobin.

These important researches, the results of which have been amply corroborated, have given an explanation of the function of the red blood corpuscles as regards respiration. The hæmoglobin of the venous blood in the pulmonary artery absorbs oxygen, becoming oxyhæmoglobin. This is carried to the tissues, where the oxygen is given up, the oxyhæmoglobin being reduced. Thus, the colouring matter of the red blood corpuscles is constantly engaged in conveying oxygen from the lungs to the tissues. Probably the union of hæmoglobin with oxygen, and its separation from it, are examples of dissociation—that is, of a chemical decomposition or synthesis, effected entirely by physical conditions; but data regarding this important question are still wanting. If the union of oxygen with the colouring matter is an example of oxidation, it must be attended with the evolution of heat, but, so far as I know, this has not been measured. If heat were produced in considerable amount, the arterial blood returned from the lungs to the left auricle would be hotter than the blood brought to the right auricle by the veins. This, however, is not the case, as the blood on the right side of the heart is decidedly warmer than the blood on the left, a fact usually accounted for by large influx of warm blood coming from the liver. The heat exchanges in the lungs are of a very complicated kind. Thus heat will be set free by the formation of oxyhæmoglobin; but, on the other hand, it will be absorbed by the escape of carbonic acid, and by the formation of aqueous vapour, and a portion will be used in heating the air of respiration. The fact that

the blood in the left auricle is colder than that of the right auricle is, therefore, the result of a complicated series of heat exchanges, not easy to follow.

Our knowledge as to the state of the carbonic acid in the blood is not so reliable. In the first place, it is certain that almost the whole of the carbonic acid which may be obtained exists in the plasma. Defibrinated blood gives up only a little more carbonic acid than the same amount of serum of the same blood. Blood serum gives up to the vacuum about 30 volumes per cent. of carbonic acid; but a small part—according to Pflüger about 6 volumes per cent.—is given up only after adding an organic or mineral acid. This smaller part is chemically bound, just as carbonic acid is united to carbonates, from which it can be expelled only by a stronger organic or mineral acid. The ash of serum yields about one-seventh of its weight of sodium; this is chiefly united to carbonic acid to form carbonates, and a part of the carbonic acid of the blood is united to those salts. It has been ascertained, however, that defibrinated blood, or even serum containing a large number of blood corpuscles, will yield a large amount of carbonic acid, even without the addition of an acid. Thus, defibrinated blood will yield 40 volumes per cent. of carbonic acid—that is, 34 volumes which would be also given up by the serum of the same blood (without an acid), and 6 volumes which would be yielded after the addition of an acid. Something, therefore, exists in defibrinated blood which acts like an acid in the sense of setting free the 6 volumes of carbonic acid. Possibly the vacuum may cause a partial decomposition of a portion of the hemoglobin, and, as suggested by Hoppe-Seyler, acid substances may thus be formed. But what is the condition of the remaining 30 volumes per cent. of carbonic acid which are obtained by the vacuum alone? A portion of this is probably simply absorbed by the serum; this part escapes in proportion to the decrease of pressure, and it may be considered to be physically absorbed. A second part of this carbonic acid must exist in chemical combination, as is indicated by the fact that blood serum takes up far more carbonic acid than is absorbed by pure water. On the other hand, this chemical combination is only a loose one, because it is readily dissolved by the vacuum.

The nitrogen which is contained in the blood to the amount of from 1·8 to 2 volumes per cent. is probably simply absorbed, for even water is able to absorb 2 volumes per cent. of this gas.

If we then regard the blood as a respiratory medium having gases in solution, we have next to consider what is known of the breathing of the tissues themselves. Spallanzani was undoubtedly the first to observe that animals of a comparatively simple type used oxygen and gave up carbonic acid. But he went further, and showed that various tissues and animal fluids, such as the blood, the skin, and portions of other organs, acted in a similar way. These observations were made before the beginning of the present century, but they appear to have attracted little or no attention until the researches of Georg Liebig on the respiration of muscle, published in 1850. He showed that fresh muscular tissue consumed oxygen and gave up carbonic acid. In 1856, Matteucci made an important advance by observing that muscular contraction was attended by an increased consumption of oxygen and an increased elimination of carbonic acid. Since then, Claude Bernard and Paul Bert, more especially the latter, have made numerous observations regarding this matter. Paul Bert found that muscular tissue has the greatest absorptive power. Thus we arrive at the grand conclusion that the living body is an aggregate of living particles, each of which breathes in the respiratory medium passing from the blood.

In connexion with the respiration of tissue, as determined by the analysis of the blood gases and of the gases of respiration, there arises the interesting question of the ratio between the amount of oxygen absorbed and the amount of carbonic acid produced, and very striking contrasts among animals have thus been determined. Thus in herbivora the ratio of the oxygen absorbed to the carbonic acid produced, or the respiratory quotient, as it is termed by Pflüger, $\frac{CO_2}{O}$, amounts to from 0·9 to 1·0, while in carnivora it is from 0·75 to 0·8. Omnivora, of which man may be taken as the example, come between $\frac{CO_2}{O}$, 0·87. The quotient is greater in proportion to the amount of carbohydrate in the diet, whether the animals are carnivora,

herbivora, or omnivora. The respiratory quotient becomes the same, about 0·75, in starving animals—a proof that the oxidations are kept up at the cost of the body itself, or, in other words, the starving animal is carnivorous. The intensity of respiration in different animals is well shown in the following table, in which the amount of oxygen used is given per kilogramme of body weight per hour:

Animal.	O in grammes.	Respiratory quotient.	
		$\frac{CO_2}{O}$	$\frac{CO_2}{O}$
Cat	1·007	0·77	
Dog	1·188	0·75	
Rabbit	0·918	0·92	
Hen	1·300	0·93	
Small singing birds	11·360	0·78	
Frog	0·084	0·68	
Cockchafer	1·019	0·81	
Man	0·417	0·78	
Horse	0·563	0·97	
Ox	0·552	0·98	
Sheep	0·490	0·98	

I have now placed before you the generally accepted doctrines regarding the problems of respiration. But one has only to examine them closely to find that there are still many difficulties in the way of a satisfactory explanation of the function. For example, is the union of hemoglobin with oxygen a chemical or a physical process? If oxyhemoglobin is a chemical substance, how can the oxygen be so readily removed by means of the air-pump? On the other hand, if it is a physical combination, why is the oxygen not absorbed according to the law of pressures?

The absorption of oxygen probably takes place as follows. The inspired air is separated in the alveoli of the lung by delicate epithelial cells, and the endothelial wall of the pulmonary capillaries from the blood which circulates in the latter. The exchange of gas takes place through these thin porous membranes, so that the velocity of the transit must be practically instantaneous. As the oxygen is bound loosely to the hemoglobin of the corpuscles, the laws of diffusion can have only a secondary influence on its passage, and only so far as it has to pass into the plasma so as to reach the blood corpuscles. The plasma will absorb, at 35° C., about 2 volumes per cent., if we take the coefficient of absorption of the plasma as equal to that of distilled water. Many of the blood corpuscles of the pulmonary blood have just returned from the tissues with their hemoglobin in the reduced state, and the latter at once withdraws oxygen from the plasma. In an instant more oxygen passes out of the pulmonary air into the plasma, from which the oxygen is again quickly withdrawn by the hemoglobin of the corpuscles, and so on. It is a remarkable fact that, in certain circumstances, tissues and even organs may continue their functions with little or no oxygen.

The conditions regulating the exchange of carbonic acid are quite different. Carbonic acid is contained in air only in traces, and its tension in the air is almost nothing. The air contained in the lungs is not wholly expelled by each respiration, but a part of the air of expiration, rich in carbonic acid, always remains in the lung. It is evident, then, that by the mixing of the air of inspiration with the air in the alveoli the latter will become richer in oxygen and poorer in carbonic acid. The air in the alveoli, however, will always contain more carbonic acid than atmospheric air. Pflüger and Wolffberg have found the amount of carbonic acid in alveolar air to be about 3·5 volumes per cent., therefore its tension will be $\frac{3·5 \times 760}{100} = 27$ mm. of mercury. The tension of the carbonic acid in the blood of the right ventricle (which may be taken as representing venous pulmonary blood) amounts, according to Strassburg, to 5·4 per cent. = 41 mm. of mercury, and is 14 mm. higher than that in the alveoli. Carbonic acid will therefore pass by diffusion from the blood into the alveolar air until the tension of the carbonic acid has become the same in the blood and in alveolar air. Before the state of equilibrium is reached, expiration begins, and removes a part of the air out of the alveoli, so that the tension of the carbonic acid again becomes less than that in the blood. During the expiration and the following pause, the elimination of carbonic acid continues. This physical arrangement has the advantage for diffusion, that by expiration the whole air is not driven out of the lungs; for if expiration had emptied the lungs of air, the diffusion would have ceased altogether during

1 Dr. Immanuel Munk: Physiologie des Menschen und der Säugethiere, 1888, p. 82.

expiration and the following pause, and diffusion would have been possible only during inspiration. There would thus have been an incomplete separation of the carbonic acid from the pulmonary blood. But as air remains in the lungs, the stream of diffusion between pulmonary blood and pulmonary air goes on steadily and fluctuations occur only in regard to its velocity.

Any account of the gaseous constituents of the blood would be incomplete without a reference to the ingenious theory recently advanced by Professor Ernst Fleischl v. Marxow, of Vienna, and explained and illustrated in his work,² a work distinguished alike by the power of applying a profound knowledge of physics to physiological problems, and by a keen and subtle dialectic. The author starts with the antagonistic statements that of all animal substances hemoglobin is the one which possesses the greatest affinity for oxygen, or that substances exist in the animal body which, at least occasionally, have a greater chemical affinity for oxygen than hemoglobin possesses. If the tissues have a greater affinity for oxygen than hemoglobin has, how is it that in the blood of animals that have died of asphyxia there is still a considerable quantity, in some cases as much as five volumes per 100 volumes, of oxygen? It is well known that the blood of such animals invariably shows the spectrum of oxyhemoglobin. The tissues, then, do not use up all the oxygen of the oxyhemoglobin, and they cannot therefore have a stronger affinity for the oxygen than hemoglobin has. On the other hand, as the tissues undoubtedly seize hold of the oxygen and rob the hemoglobin of it, it would appear as if they really had a stronger affinity for the oxygen. There is thus a contradiction according to Fleischl v. Marxow, and it shows that our theories as to the ultimate chemical changes of respiration are not valid.

But if tissues have, as all admit, an affinity for oxygen, and if at the same time we grant, for the sake of argument, that this affinity is not strong enough to dissociate the oxygen from the oxyhemoglobin, can we conceive any physical action which would, in the first place, perform the work of dissociation, and then present the oxygen to the tissues in a form in which they would readily take it up? Ernst Fleischl v. Marxow holds that he has discovered such an action or agency in the stroke of the heart. He founds his theory on some remarkable experiments, which may be readily repeated with an ordinary tight-fitting hypodermic syringe: 1. Immerse the syringe wholly in water so as to exclude air. Place one finger over the nozzle, draw up the piston for about half the length of the syringe, and then suddenly remove the finger from the nozzle. The water will rush in, and gas will be given off in considerable amount, the water being quite frothy for a short time. This is what one would expect. 2. Then carefully empty the syringe of air and gently draw it half full of water; then place the finger on the nozzle and draw the piston up a little, so as to leave a vacuum above the water. In these circumstances a few large bubbles of gas will come off, but the water will not froth. 3. Empty the syringe thoroughly; fill it half full of water; raise it obliquely, so that the knob at the end of the handle of the piston is above the water; strike the knob sharply with a piece of wood, using the latter as a mallet; then draw the piston up a little, so as to leave a vacuum above the fluid.

He then applies this theory to the phenomena of the circulation and of respiration. Starting with the query why the stroke of the heart should be so sudden and violent, when a much slower and more prolonged rhythmic movement would have been sufficient to keep up the tension in the arterial system on which the movement of the fluid depends, he boldly advances the opinion that it serves for the separation of the gases. The blood is kept in motion by a series of quick, sudden strokes, because, for the taking up of the oxygen by the tissues and the elimination of carbonic acid by the lungs, it is not sufficient that the blood runs steadily through the systemic and pulmonary circulations; and therefore a short, hard stroke is given to it immediately before it enters the lungs and immediately after it has left the lungs. These strokes liberate the gases from a state of solution, and they become mixed with the fluid in a state of fine dispersion. This condition of fine dispersion is favourable for the elimination of the carbonic acid by the lungs, and for the taking up of oxygen by the tissues.

Fleischl v. Marxow then proceeds to state that loose chemical combinations may also be dissolved by shocks, the gas passing into a condition of fine molecular dispersion,

and that a quick repetition of the shocks prevents a recombination. As examples of such loose combinations, he cites oxyhemoglobin and the compounds of carbonic acid with the salts of the plasma. It is here, in my opinion, that the theory fails from want of experimental evidence. There is no proof that shocks, such as those of the contraction of the right and left ventricles, can liberate gases from loose chemical combinations such as those with which we have to deal, and it is somewhat strange to point to the explosion of certain compounds excited by strong mechanical shocks or by vibratory impulses.

Enough has been said in this address to show that in the study of respiratory mechanisms we meet with numerous examples of the same wonderful adaptation of organic structure to physical conditions as may be traced in the mechanism of the eye or of the ear. The structure of a lung or of a gill is just as much adapted for the play of the physical laws regulating gases as the retina is tuned to the vibrations of the ether, or as the organ of Corti responds sympathetically to the waves of musical tone.

ABRIDGED REPORT OF AN

Address

ON

THE USE OF THE FORCEPS AND ITS IMPROVEMENT,

Delivered at the meeting of the British Medical Association in Glasgow,

By T. MORE MADDEN, M.D., F.R.C.S. ED.,

PRESIDENT OF THE SECTION.

By judicious instrumental assistance we may now, in many instances, safely abridge the duration of that formerly often long-protracted period of parturient suffering which, when a student, I have too often seen allowed to continue unrelieved for forty and fifty, and even for eighty, hours and upwards. Moreover, the former appalling frequency of child-destroying operations has been reduced in an exact proportion to the increasing employment of the forceps. Nor have the limits of the utility of this instrument as a substitute for the cephalotribe, craniotomy forceps, cranio-clast, *et hoc genus omne*, been even yet fully reached. The main reason why any embryotomic instruments are still included in the ordinary obstetric outfit appears to me the fact that most midwifery practitioners do not recognise sufficiently the compressive power of the long forceps, and, moreover, rely exclusively on some one form of forceps, whether the head be above or within the pelvic cavity, and without reference to the kind of mechanical power—tractile, lever, or compressive—that may be specially required in each case. Desirable as it may be to carry as few implements as possible in the obstetric bag, it is nevertheless impossible to combine in any one instrument properties so distinct as those referred to. In operative midwifery there should surely be some definite proportion between the power employed and the resistance to be overcome. Hence it seems about as needless to resort to an instrument of such compressive and lever power as the double-curved long forceps to assist delivery in an ordinary case of delay in the second stage, as it would be to employ a steam-hammer to crack a walnut.

I have endeavoured to carry out these views in the two instruments now exhibited, which have been considerably modified and, as I think, improved in the course of experience since I first demonstrated the use of their original models. The first is a short straight traction forceps (Fig. 1),

FIG. 1.

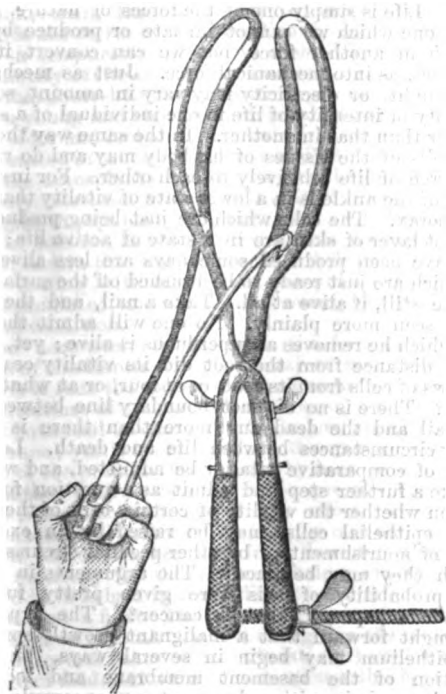


² Die Bedeutung des Herzschlages für die Athmung: eine Neue Theorie der Respiration.

the blades of which are only six inches in length and are so curved as to fit the fetal head very exactly, and so widely fenestrated as to allow the scalp to protrude when applied, and thus protect the maternal passage during extraction. This instrument, as may be seen, is very portable, and, locking loosely, is easily applied; and being a really efficient tractor, as I have proved by experience of its use in upwards of three hundred cases, may therefore be employed in nine-tenths of the cases in which any instrumental assistance is required—namely, those in which delay arises from inertia in the second stage of labour.

The second instrument (Fig. 2) is intended only for cases of difficulty from disproportion or pelvic flattening. The blades are therefore of considerable length and strength, and are approximated by a powerful screw, by which the amount of compressive force exercised may be exactly regulated. The affixable traction rods are easily closed or separated by a simple and novel mechanical arrangement. My tractors differ in several respects from any others, and are so made as to be applicable to any forceps, including in their handle a case for hypodermic syringe and discs. This forceps, as will be seen, is not only a tractor and lever, being convertible at will into a short traction forceps by the removal of the compressing handles, but, in its entirety,

FIG. 2.

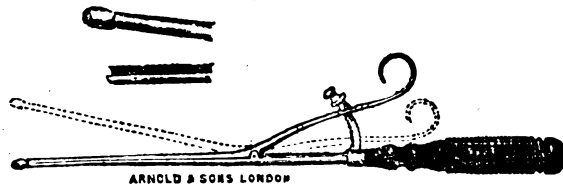


when these are affixed, is moreover a compressor of great power, with which the fetal head may be gradually moulded out and compressed within the limits of viability, so as to admit of delivery through pelves, from which a living child could hardly be otherwise extracted. I need hardly add that such an instrument as this latter requires great caution in its use, and should be employed only in the exceptional cases for which it is designed, and as a substitute for embryotomic implements. These instruments are made by Messrs. Corcoran, Stephen's-green, Dublin, who have very successfully carried out my views in their construction.

Recent progress of gynaecology.—The development of this branch of medicine since our Association last met in Scotland has been still more remarkable than that effected in the practice of midwifery during this period. Thus, for example, only a few years ago many of the most frequent forms of endo-uterine and peri-uterine disease were beyond the diagnostic and remedial reach of gynaecologists, then unprovided with those means of rapidly and thoroughly dilating the cervical canal, or with the many other methods of direct investigation, by the aid of which any well-educated practitioner may now recognise and treat endo-uterine, ovarian, tubal, and other intra-peritoneal and pelvic con-

plaints that baffled detection or treatment. (Fig. 3.) Nor in those pre-antiseptic days could have been anticipated the wonderfully successful results since realised from laparotomy operations, and more especially ovariectomy, as well from some still more recent developments of

FIG. 3.



intra-peritoneal surgery in tubal and other diseases, including even peritonitis and cancer of the uterus; the latter a subject which has been recently elucidated in Dr. J. Williams's Harveian Lectures. In the last-named cases, however, it is a debatable question whether we should persevere further with the intra-peritoneal procedure for the removal of the uterus introduced by Freund, in view of the better results obtained from the vaginal method advocated by Dr. Martin of Berlin; and also whether in the latter case the operation should be limited, as recommended by Dr. Williams and Dr. Braithwaite, to the removal of the cancerous portion, and not be extended to the extirpation of the entire uterus. Only within the time referred to has the general correctness of Dr. Graily Hewitt's views with regard to the importance and treatment of uterine displacements and flexions become commonly accepted. Neither were the symptoms and appropriate treatment of ovarian displacements understood until a more recent period, when attention was directed to them by Dr. Barnes's able paper on this subject in the *American Journal of Obstetrics*, and in a minor degree, perhaps, also by a memoir of mine on the same topic in the *Transactions of the Irish Academy of Medicine*. Nor is it so long since the bearing of cervical lacerations on pelvic pathology, as first demonstrated by Dr. Emmet of New York, first became recognised in this country. Finally, the diagnosis, importance, and curability of diseases of the uterine appendages, such as hydrosalpinx and pyosalpinx, together with several other of the causes of female suffering and death, were in like manner practically ignored by gynaecologists until within a very recent period.

Treatment of Fallopian tube diseases.—With respect to the tubal diseases, to the operative treatment of which so much attention is now devoted, and which I have elsewhere fully discussed, I shall only here again observe that, whilst recognising the fact that in some instances of pyosalpinx and hydrosalpinx the removal of the diseased uterine appendages affords the only available means of treatment, and fully appreciating the surgical skill by which operations for this purpose have been brought to their present perfection, I have not in my own experience found laparotomy operations as generally necessary in such cases as they are apparently now deemed by others. On the contrary, I am confirmed, by increasing observation, in the belief that in some instances these tubal diseases, more especially in cases of hydrosalpinx, may terminate favourably without any surgical treatment, and, moreover, that in other cases such collections, whether purulent or serous, may be evacuated by cautious aspiration through the vaginal roof. Very recently I had an opportunity of again proving the advantages of this method of treatment in the case of a lady who, after many months of suffering, was sent to me from a distant country to have the affected uterine appendages removed, but whom I succeeded in relieving of her trouble, with the assistance of my friend, Dr. Duke, by aspirating the Fallopian tube, and thus removing about ten drachms of fluid from the distended duct. I would, therefore, still urge the expediency of a fair trial of other less serious methods of treatment before resorting to the extirpation of the uterine appendages in these cases generally.

Operative treatment of uterine tumours.—This topic, I am glad to see, will be brought before you during this meeting by those eminently qualified to speak on the subject; and I trust that in the ensuing discussion some new light may be thrown on the comparative merits of the various intra-peritoneal and vaginal surgical procedures advocated in such cases, as well as on the value of electrolytical treatment. Nor, in this connexion, should the possi-

bility of arresting the growth of these tumours in some instances by appropriate medical treatment, as well as the greater probability of thus effectively checking hæmorrhage so occasioned, more especially by the free administration of ergot and iodide of potassium, to which I have elsewhere called attention, be entirely lost sight of. As to the former or surgical method, I may, however, venture to repeat that in the majority of cases of interstitial and subperitoneal uterine tumours no active treatment whatever appears to me essential, inasmuch as such growths seldom, if ever, destroy life, and in many cases become arrested in their development and quiescent in their symptoms at the menopause, or may even possibly disappear altogether in the course of time. The latter event is, however, too exceptional to have much influence in determining the expediency of surgical treatment, and more especially that by oophorectomy, which is unquestionably called for in the case of fast-grown fibroids, giving rise to otherwise uncontrollable urgent hæmorrhagic or pressure troubles, particularly when occurring in young patients. With regard to hysterectomy, although exceptional cases may occur in which this procedure is necessitated, the average mortality that has followed its performance is such as to forbid its general employment, as an operation of election, in a disease the average mortality of which when left to nature is so comparatively insignificant. Whilst as to myotomy, in view of its too common results, I can only repeat that it would appear to me a method by which a patient may be effectually removed from a tumour, rather than as an operation by which a tumour can be safely removed from a patient.

Although I have so nearly exhausted the allotted limits of this address, I cannot omit a few words in reference to the latest and most promising of the methods available in the treatment of uterine fibromata—namely, that by electricity. Within the past year and a half I have had occasion to try this method, in some ten instances, in my hospital and private practice; and, so far as the arrest of hæmorrhage is concerned, the result was most satisfactory, the bleeding being thus arrested in six of these cases. But, with regard to the cure of the disease from this treatment, the possibility of which had been demonstrated in the experience of Dr. Apostoli and others, who had employed it on a much larger scale, I can only say that, whilst I have not as yet seen the complete subsidence of the tumour effected in any of the cases so treated by myself, in three of them its apparent bulk became distinctly diminished even after six weeks or two months' treatment of this kind. It should, perhaps, be added that in all these instances I used Dr. Apostoli's original abdominal electrode, the current used being of course monopolar, and acting directly on the growth by the intra-uterine pole, and was obtained from a powerful Leclanché battery of an estimated maximum current strength of 250 milliampères. In the first of my cases I employed the electrolytic negative current, but after a little experience I abandoned this, and in the subsequent trials used only the positive current, which, although non-energetic as a galvanic-caustic, is far less liable to give rise to trouble, and from its decided hæmorrhagic action is more suitable to these cases of large hæmorrhage-producing tumours, in which alone this or any other active treatment seemed to me generally necessary. If, however, the results obtained by Dr. Cutter, and, still more conspicuously, those recorded by Dr. Apostoli, from the employment of electricity—namely, permanent benefit in 95 per cent. of the cases of fibromata thus treated by him—should be confirmed, as I hope may possibly be the case, by the larger experience of those who are here about to discuss this disease, then we should have good reason to congratulate ourselves on having at last arrived within sight of the long-sought-for safe and effectual curative treatment of uterine tumours.

EDINBURGH VOLUNTEER MEDICAL STAFF CORPS.—

On the 10th inst. forty-two members of the Edinburgh Volunteer Medical Staff Corps, under the command of Dr. Cathcart, left the Waverley Station by the 10.20 London train en route for Aldershot, the headquarters of the corps, where they are to undergo ten days' training. Hitherto the corps has been represented at the Aldershot training by deputation merely; but on the present occasion the corps goes as a corps, Government paying the railway fares of the men, finding them in victuals during training, and allowing 10s. per man for expenses in addition.

WHAT IS THE CAUSE OF CANCEROUS INFECTIVITY?

By JAMES BRAITHWAITE, M.D. LOND.,

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IN consequence of the editorial comments with which my previous paper, entitled "What is Cancer?" was favoured, I find myself very properly challenged to answer the important question which forms the title of the present communication. I do so with the full knowledge that failure in this implies the rejection of my theory as a working hypothesis. The subject, however, is one involving a more profound knowledge of what life is than we as yet possess, and still the answer depends upon this very point. On this account especially I ask the kind indulgence of the profession.

Before considering the question "What is the cause of cancerous infectivity," it is necessary for the reader to realise that vitality is comparative. We are apt to look upon a thing which is alive as simply alive, "and there is an end of it"; whereas one thing may be more alive than another. Life is simply one of the forces of nature. It is the only one which we cannot initiate or produce by conversion from another force, but we can convert it into other forces, as into mechanical force. Just as mechanical force, or light, or electricity may vary in amount, so may the vitality or intensity of life in one individual of a species be greater than that in another. In the same way the component cells of the tissues of his body may and do vary in their degree of life relatively to each other. For instance, the skin of the ankle is in a lower state of vitality than that of the thorax. The cells which are just being produced in the lowest layer of skin are in a state of active life; those which have been produced some days are less alive; and those which are just ready to be brushed off the surface are less alive still, if alive at all. Take a nail, and the same thing is seen more plainly. No one will admit that the morsel which he removes as superfluous is alive; yet, if not, at what distance from the root did its vitality cease—at three rows of cells from its root, or at four, or at what exact distance? There is no distinct boundary line between the living nail and the dead any more than there is under ordinary circumstances between life and death. Let this doctrine of comparative vitality be admitted, and we may then take a further step and admit as a question for consideration whether the vitality of certain cells of the body, such as epithelial cells, may be raised by an excessive amount of nourishment or by other peculiar circumstances in which they may be placed. The arguments in favour of the probability of this were given pretty fully in my previous paper, "What is cancer?" The hypothesis was brought forward that a malignant growth springing from epithelium may begin in several ways, but that penetration of the basement membrane and lodgment of cells beneath it, with subsequent non-encapsulation of the growth, are essential factors in all. In one set of cases the proliferation of cells upon a free surface is the first step, and the penetration is the effect of this proliferation; in the other the penetration is the first step, and the proliferation is the effect. In either case, however, the degree or intensity of life of the invading cells is increased. It is especially so when over-nourishment is the prime cause, whether from an excessive meat diet, or whether from non-use of even a proper amount of daily food, owing to an inactive life. When, however, from whatever cause, as a first step, epithelial cells become lodged in the softer tissues below the basement membrane, their supply of nourishment will be considerably increased. These cells, then, naturally hardy, somewhat incompressible, growing with great rapidity, and unable to die by abrasion, as is usual with epithelium cells, have their "tension" or intensity of life increased. It is now but a step to infection of the neighbouring lymphatic glands. The simple vection of the cells along the lymphatics I need not advance arguments in favour of: the possibility, probability, nay certainty, of this will be admitted. The question is, What happens when three or four of these cells arrive in a lymphatic gland? They then find themselves in a machine accustomed to deal

with effete and barely alive matter. Could we measure the degrees of life, we might imagine that of the gland cells to be 10 and that of the effete matter or lymph 2, but of the invading epithelial cells 15. Their vitality, therefore, overpowers that of the gland cells, and, as in the original locality where the parent growth took place, the invaders win. The success, therefore, of the invading epithelium cells is simply a question of comparative vitality. In a case of vention of cancer cells such as we are considering, the odds in favour of the invaders is still further increased by the tissues in general of the patient being in a lower state of vitality than in health. He probably is in a high state of chemical nutrition, but is probably in a low state as regards the quantity or the tension of his vital fluid, from anxiety and the wear and tear and the disappointments of life. We must remember that we do not yet understand life. It has not been studied, and it cannot be, as electricity has been. When electricity was first known, no person could have guessed or supposed that there would turn out to be such a quality as tension as opposed to quantity, or what we call positive and negative states. It may yet be discovered that there are qualities of life as well as quantities. It is evident that the life in the cancer cell is superior in some way, in quality, in quantity, in tension, in intensity, or in rapidity of formation, to the life in the cells of the gland to which it is carried; for it destroys them, grows faster, and crowds them out of their natural and proper place. I think, then, that a higher or more intense degree of life is the secret of what is called the infectivity of cancer cells—a comparative intensity, assisted by a lower tension or quantity of life in the part invaded. Experiments made upon this point should consist of transplantation of epithelium from a young and vigorous individual to the gland or tissues of an older and feebler individual of the same species. It is, I see, stated in the leading article of THE LANCET mentioned that the transplantation of living epithelium by embolism actually has been known to result in the production of a new growth capable of indefinite increase. The writer adds that he does not as yet admit this to be a settled and ascertained fact in the case of normal epithelium. We are, however, dealing with epithelium the nutrition of which has been stimulated, and which is not consequently in precisely a normal condition.

How accurately in nature is the food adapted to the wants of the tissues of the animal or plant consuming it. How is it that the spores of a mushroom must pass through the intestines of a horse, whilst those of a cow will not do? They both feed in the same field: how small must be the difference; yet it is one vital to the spores. Consider the effect of the peculiar food given by bees to a worker grub which they wish to develop into a queen. The food is the cause; the increased life is the effect. How is it that the tortoiseshell butterfly lays her eggs on a nettle, whilst she herself has drawn her food from flowers? How is it that it is necessary for the life of a hair-worm that its larva should have lodged in the bodies of two distinct individuals, a gnat and a fish? The least divergence from the proper nourishment is fatal. Actual changes in the texture of the flesh of several fishes (salmon, trout, &c.) are occasioned by change of food. If water cultures show the lowering effect of depriving seedlings of certain constituents of their normal food, why may not an increase of these constituents cause an increase of vitality and growth? I believe no bacterium will ever be discovered as the cause of cancer. Is not an epithelium cell, from its very peculiarities, to all intents and purposes a bacterium itself when out of its proper place and lodged amongst other tissues, and this especially when the first step of all has been over-nourishment by excessive and improper food? It does not happen to be long, or to be round, or to resemble in appearance in any way a bacterium or a coccus, but it is under these circumstances practically

only a year ago, having just removed a uterus entire, for cancer of its body, and looking into the abdominal cavity from the small space where the womb had been, I could see the peritoneum of a coil of bowel freckled with minute white spots from cancer cells, which had taken root, and were growing; yet the peritoneal basement membrane had not then been penetrated. I once added a few drops of nitric acid to the urine of an elderly woman suffering from merely a bad feverish cold, and was startled to see the deep blue of pure iodine appear. The urine held in solution a large amount of iodide of potassium. She had

repeatedly and for years taken this drug for rheumatism, but assured me she had had absolutely none for two years. This iodide must therefore have been held or stored by the cells of (probably) the liver. Why, then, had it thus suddenly been thrown off? Because the electric state of the blood and of the secretions made from it had become reversed by the febrile state. The blood and the secretions, the skin and the mucous membranes, are well known to be in opposite electric conditions. I think it not improbable that when an intensely vital cell comes into contact with one of lower vitality, as in the case of the cells in the peritoneum which we are considering, they will be in opposite electric states and adhere. This is, however, merely a surmise, and not essential to the explanation; because it is quite reasonable to suppose that, apart from any aid to anchorage like the electric one suggested, when a cell with its life in a high state of tension rests and remains for a time upon a spot in the peritoneum, it will adhere and draw nourishment. Proliferation, which is merely another word for intense life and rapid but ill-regulated multiplication, then takes place, and a colony is established. It has previously been shown how penetration of a basement membrane may take place by cells growing exuberantly upon a free surface. The same thing will occur when the proliferation has thus been established on the surface of the peritoneum.

If my view, therefore, is correct, the whole question of infectivity hinges upon the following points:—1. The certain fact of life being comparative in amount, a varying quantity in different tissues and cells of the same individual. 2. The probability that, just as decreased nourishment causes decreased vitality, so increased nourishment will cause increased vitality or life fluid in cells. 3. The probability that, as the cells of various tissues require different and varying forms of nourishment, so an increase in the food of one especial ingredient may cause an increase in the life fluid of one especial set of cells. 4. The probability that, when cells of different degrees of life compete for space, those of a higher grade will displace those of a lower grade, other circumstances being equal. 5. In the case of epithelium cells thus competing, their inherent peculiarities assist this competition in a remarkable degree. The truth or not of these propositions of course admits of argument and dispute, but they will, I think, be admitted by most men as reasonable and worthy of consideration. This question of cancer is the great question of the day in our profession; it is the dreaded disease, the very thought of which causes horror, and the actual existence of which is worse than death itself. To the elucidation of this question we are all called to devote our thoughts and energies.

Leeds.

THE USE OF LIVING BONE AS A BOND OF UNION AFTER EXCISION OF BONES AND JOINTS.

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THE various opinions which have from time to time been held in reference to the union and repair of bone have until recently undergone but little change in their essential elements. The ancients believed¹ that callus was formed by the extravasation of a gelatinous fluid, which gradually acquired consistence, and united the fragments in the same manner as a cabinet-maker would glue together two pieces of wood. Duhamel² regarded the periosteum as the "organ of ossification," and thought that after a fracture the periosteum of the two fragments first grew together and then swelled, forming a circular elevation around the line of fracture. This thickened membrane he thought was soon converted, first into a gelatinous and then into a cartilaginous substance, in which vessels developed and different points of ossification arose. Haller and Dethleef, after a long series of experiments, disputed this view, and concluded that

¹ Samuel D. Gross, M.D.: *Anatomy, Physiology, and Diseases of the Bones and Joints*. 1830.

² Mémoires de l'Académie Royale des Sciences. Paris, 1741.

the callus was formed by the gelatinous juice exuding from the extremities of the fractured bone, especially from the medullary texture, and diffused all about the fracture. John Hunter referred the formation of callus to the organisation of the blood which is effused around the ends of the fragments; Fougereux, to the extravasation of lymph which became organised by inspissation; Larrey, to the action of the vessels which are distributed through the substance of the osseous tissue. Howship, after a number of experiments, concluded that the theory of Hunter was correct, and that the blood which is effused immediately after the occurrence of a fracture becomes, under all circumstances, the medium in which the ossific process is first established. Bordenave believed that, instead of the callus arising from the periosteum or from the extravasation of lymph, it was due to a process analogous to that which nature employs for the union of the soft parts. Dupuytren taught in 1819 the doctrine of the union of fractures by means of provisional and permanent callus largely derived from the periosteum.² Many years later Wagner³ taught that the periosteum plays the principal part in the repair of the division of bone caused by resection, and to such an extent that it is sufficient of itself to form any bony material which may be needed to replace the bone removed. In the cranial bones it is probable that the dura mater takes the part of the periosteum. He adds that reproduction of bone, although only in a slight degree, may take place even without periosteum from the medullary cavity or the diploë, or from the soft parts which surround the bones. He says that the substance of the bone itself does not appear to contribute to the reproduction of bone, and that Klencke is the only author who expresses an opposite view. Since then the investigations of Paget, Klein, Billroth, Virchow, Cornil, and others have taught that new bone builds itself up out of most different materials, and that the theories regarding callus, which endeavoured to show that it was developed in but one way or out of but one substance—i.e., extravasated blood, periosteum, exuded fluids, medullary tissue, &c.,—each had a grain of truth, as all of those tissues occasionally take part in the repair of bone. The general belief still was, however, that both as to the life and the growth of bone, the periosteum was almost or quite essential, and it remained for Mr. Macewen of Glasgow to demonstrate, as I believe he has done by a series of well-considered observations and experiments, the relative unimportance of the periosteal membrane and the possibility of ossification occurring around completely detached and isolated bony fragments. He has shown that, while on the one hand the periosteum is not the potent osteogenic factor which many thought it to be, on the other hand the soft tissues enclosed in the osseous tissue play the chief rôle in the development and reproduction of bone. I have had the pleasure of examining with him the case of regeneration of the humerus which he has recorded, and it certainly goes far to establish the truth of the above statement. Among the other propositions which he formulates⁴ is the following most important one: "Not only do detached portions of bone deprived of their periosteum live when reimplanted in their original position, but such portions are capable of living after transplantation. Parts of deeper layers of bone which had no periosteal connexion have been transplanted and lived and grown." This statement is supported by both observation and experiment, and rests upon the fact that bone is produced and regenerated by proliferation of osteoblasts, and both its development and reproduction can take place independently of the medulla and periosteum. So far from regarding the periosteum as the structure which can alone secure or reproduce bone, the surgeon who accepts these teachings will not trust it to regenerate bone unless it has adherent portions of sound osseous tissue, from which alone by the process of proliferation can osseous regeneration take place. In January, 1887, Dr. Bernays of St. Louis reported⁵ some experiments in which by the use of bone sawdust of various degrees of fineness, he produced bone in different positions, in the soft parts of the extremities, the abdomen, and back of two dogs. These experiments have not been confirmed, and Dr. Bernays records the fact that all his attempts to graft large pieces of bone in animals were failures, the pieces simply becoming surrounded by "periosteal bone tissue" and remaining as foreign bodies, which subsequently had to be extracted.

The use of some method which should, in any case of operation on ununited fracture, or in excisions of joints or bones, meet the two indications of complete fixation of the fragments and the supply of a healthy stimulus to bone reproduction, has long been recognised by the profession. Dieffenbach's ivory pegs, the wire sutures of Flaubert, the seton of Valentine Mott, and the steel pins employed in the treatment of ununited fractures, are examples of various attempts in this direction, which have had varying degrees of success. In 1878 Dr. Alexander Patterson of Glasgow reported⁷ a case of ununited fracture of both bones of the forearm, in the treatment of which a portion of dog's bone was used as a means of procuring union. The ends of the fractured radius were separated about three-quarters of an inch, and in this interval was placed a corresponding section of the humerus of a dog. It was held in place by a wire passed through holes drilled through the ends of the bone, and then through other corresponding holes in the fragments of the radius. Its periosteum had been first reflected for a short distance, and was then brought down over the line of junction of the bones. The ulna was simply wired together, and later was found firmly united; but at the end of six weeks union was not complete in the radius, and the wound remained open for twelve months. At the end of that time the dog's bone, reduced to about half its size, came away, after which the wound healed completely. Without the knowledge of this unsuccessful case of Mr. Patterson, I recently, in a case of complete excision of the knee joint, employed a similar portion of dog's bone for fixation of the femur and tibia. The case was one of extensive tubercular synovial disease, with softening and disappearance of the cartilages, and with caries of the head of the tibia and the condyles of the femur. At the proper stage in the operation one of the metacarpal bones of a medium sized dog was removed with thorough antiseptic precautions, and brought to me wrapped in a warm carbolised towel. The piece of bone measured about three inches in length. A small cavity, just large enough to receive the end of the bone, was excavated in the lower extremity of the femur, and a corresponding one in the upper end of the tibia. The bone was then fitted tightly in place, and held the parts so firmly in position that the whole limb could be supported by the heel without displacement. It was dressed and placed in a bracketed wire splint. The subsequent course of the case was as follows. After a week or ten days, during which there was no elevation of temperature, there was a sudden rise to 102°5°. I found that there was an accumulation of sero-purulent fluid beneath the upper flap; on evacuation, this was found to be quite aseptic, but it continued to discharge for several weeks longer, gradually diminishing in quantity, but retaining a gelatinous consistence, possibly due to admixture with synovial secretion. The temperature also remained slightly above normal. The patient's complexion and general appearance, and a slight cough, gave rise to the suspicion of pulmonary tubercle, though no physical signs were then discoverable. The limb remained in good position, the mechanical effect of the bone peg having been all that could be desired. There was no evidence that it was acting as a foreign body or in any way interfering with the process of repair. On the other hand, there was no marked advantage to be observed from its use, many cases of excision of the knee, in my experience, having done at least equally well under the use of the bracketed wire splint, and without other means of fixation having been used. When I last saw the patient (in the middle of June), about six weeks after the operation, he was apparently nearly well, and was likely to have a good limb. The case cannot be said to demonstrate anything conclusively as to the use of living bone in these cases, beyond the fact that such portions of dogs' bones can be made to serve the same mechanical purpose as ivory or steel pegs, and with no greater risk of acting as foreign or irritating substances. Many similar observations will be required to show whether or not they aid or hasten osteogenesis.

Philadelphia.

⁷ THE LANCET, VOL. II., 1878.

THE BRITISH ASSOCIATION.—The forthcoming meeting of the British Association will be held at Bath, at the Drill Hall. On Sept. 5th Sir H. E. Roscoe will resign the chair, which will then be taken by the president-elect, Sir Frederick Bramwell, who will deliver an address.

² Gross, *ibid.* Cooper's Surgical Dictionary (London, 1825).

⁴ On the Process of Repair after Resection and Extirpation of Bones. Sydenham Society, London, 1859.

⁵ Annals of Surgery, vol. vi., 1887.

⁶ Med. Brief, vol. xv., p. 48.

THE APPLICATION OF THE THEORY OF EVOLUTION TO PATHOLOGY.

BY ALBERT GRESSWELL, M.B., B.A. OXON., &c.

(Continued from p. 207.)

Now, the next step in pathological products which we have to consider is one in which the growth and multiplication of cells, instead of being merely transitory phenomena, establish themselves more or less persistently in a permanent form. It may briefly and unhesitatingly be said that all new formations, as instances of which the enchondromata may be here mentioned, are markedly characterised by the preponderance of cellular elements modified in various ways and degrees. They may fibrillate, and may even become calcified, but very rarely, if ever, do they develop into the highest forms of tissue, the muscular and nervous. Of course this is what we might expect, since it is clear that the tissues of most important specialisation must necessarily be produced, so to say, with greatest difficulty. Speaking generally, it may be said that all the tissues of all organisms, both low and high, have been proved to be so much like the modified results of primitive cells, more or less closely blended together, that we may suppose them in all cases to have arisen from cells in the first instance. We have now, however, to add this further fact above mentioned—viz., that those growths which are spoken of in pathological language as new formations are also indubitably traceable to the growth and proliferation of the same units, cells, or at any rate cytodes. Together with this we must also bear in mind the additional statement above made—viz., that the newly-formed cells may be modified in various ways and degrees, or indeed, on the other hand, so little changed as to be scarcely distinguishable from those parent cells which originally gave them birth. In short, new formations clearly point to a remote ancestral condition when the primary importance of cells as units, distinct and not combined, was very much greater than it can be in higher organisms, in which each constituent cell is most intimately dependent upon the activities of the other cellular units with which it is so intimately combined. Among the different kinds of new formations the enchondromata most pointedly illustrate the reversional characters of which I am speaking.

Enchondroma myxomatodes exhibits characters like those of the notochord of the vertebrata. The cells of some enchondromata are stellate, their processes uniting to form a network, and in the *Selachii* similar cells are present. Again, these enchondromata are most usually found in the limbs, and especially in the distal parts of the limbs. Now, the primary condition of the vertebrate limb is seen in the *Selachii*, among which fishes the limb is composed of a great number of cartilaginous rods, which are arranged definitely, and increase in number towards the distal extremity of the pro-ptyrgium, the meso-ptyrgium, and the meta-ptyrgium. It certainly appears possible that the enchondromata situated in homologous parts may, so to say, point backwards to the ancestral condition of the limb. Corroboration of this statement is seen in the frequency with which cartilaginous bodies develop in connexion with certain joints of the limbs in man and animals. These cartilaginous nodules may be either single or multiple, and some may be as large as a small apple. Cruveilhier figures several round cartilaginous bodies as occurring in an elbow joint, and it has also been observed that cartilage cells have been found in the synovial tufts of some joints. Again, new formations of capillary vessels are, as a rule, congenital, and they are also much more generally met with in the skin of the head and neck than elsewhere. These two facts may suggest the possibility that they are in some degree homologous with the vessels which develop about the epiblastic involutions lining the visceral arches of the lower vertebrata. In support of this idea, it may be remarked that Dr. D. A. Gresswell recently observed in a patient a nevus which extended in a snake-like manner down the right side of the neck. The nevus was distinctly raised, and it tapered towards its extremity, and passed down the external auditory meatus for some distance.

Having now considered some of the indications among

some abnormal structural phenomena of higher animals which remind us of remote ancestral conditions, we now, in pursuance of the same line of argument, propose to consider some special facts connected with the early division of the cells, which make up the developing embryo of a higher animal into the three separate divisions known as the embryonic layers. The lowest living beings consist simply of undifferentiated protoplasm, almost identical throughout both in regard to form and in regard to functional capacity. The next stage in animal life is that which is represented by the diploblastica, in which there are two distinct layers of protoplasmic units, either of which is in some measure capable of discharging the function of the other. A third stage is that displayed by the triploblastica, in which each layer is largely independent, both in regard to structure and in regard to function, and is by no means capable of taking on the functions of another layer. Similarly, stages comparable to these are passed through in the early development of the embryo of any higher animal, the three layers being known as the epiblast, the mesoblast, and the hypoblast. Now, the resemblance which attaches itself to those parts of higher animals which have been developed from this epiblast is seen in many ways. For instance, some mammals develop hair within the mouth, and the majority of the members of this class of animals are provided with a few hairs within the nose, and also within the external auditory meatus of the ear, and some also on the conjunctiva of the eye. Moreover, it is well known that the *Selachii* show in the clearest manner steps of transition between scales on the skin, on the one hand, and teeth in the mouth, on the other, and it is to be remarked that both scales and teeth are limited to regions which have developed from the epiblast. Again, the occurrence of hair all over the body, with the exception of the palms and soles—an exception which is what we should expect on account of the friction to which these parts are constantly subjected—has been noted both in man and in woman.

The rashes of the specific fevers, too, sometimes illustrate the similar origin of the parts which they affect. For instance, the rash of scarlet fever may occur in any part of the skin and even on the face, though it may be only seen there with difficulty owing to the two facts, firstly, that the skin of the face is naturally full of blood, and secondly, that the scarlatinal rash is much more uniform than most rashes, and hence not so easily observed. The rash occurs also on the scalp, on the oral and faucial mucous membranes, probably also on the nasal mucous membrane, as is evidenced by the constant thick stream of discharge so frequently seen flowing from both nostrils in infants and children, also on the conjunctiva, in the external auditory meatus of the ear, probably also in the middle ear and Eustachian tube. These latter points lead us to the recollection that the mucous membranes of the fauces, Eustachian tube, middle ear, and external ear are derived from the lining of one cleft—the tympano-Eustachian cleft, the representative of the permanently open spiracle of the *Selachii*. Similar observations are to be made in regard to the two diseases, measles and small-pox. Again, in reference to the drugs belladonna and jaborandi, we know that belladonna causes dryness of all parts of the skin, including the mammary involution, and also of all parts of the mouth and throat, while jaborandi does the reverse of this. Similarly, a sufferer from rheumatic fever has a moist tongue and an especially moist skin, and a phthisical patient also generally has a moist tongue and skin. Again, it seems very possible that the comparative frequency of hair-bearing cysts in the brain and in the ovaries points to the original development of those structures.

In turning now to a consideration of the erect posture, we find many points of supreme interest and value bearing upon our topic. Before it can stand erect, the newly born babe is only capable of crawling as a means of progression; and for some time after its birth the relation of its head and legs to its trunk is similar to that presented by a lower animal. At a comparatively early age the child begins to bear with all its weight upon its legs, and this fact serves in some degree to explain the greater frequency of knock-knee and bowed leg in human beings as compared with animals. Among vertebrates the erect posture is maintained in the more highly differentiated, and it may be supposed that remote progenitors of animals which are now erect were prone. It is clear that the lower surface of a prone animal corresponds to the front surface of an erect one. The

ventral or abdominal surface, which in a prone animal is in relation with the earth, comes to be in the case of an erect animal in relation with space. Herein a great alteration in the supply and loss of heat is involved. To the prone the earth affords a protection from excessive radiation. This is illustrated by the fact that rabbits, when placed in the supine position, die of refrigeration.

Again, it is manifest that the abdominal contents of an erect animal tend, in case their supporting tissues should yield, to press upon the pelvis and inguinal structures, while it is equally clear that in prone animals the pressure is directed downwards and also perhaps forwards, in accordance with the slope of the ventral wall of the abdomen. Hence arises the fact that femoral, scrotal, and obturator herniæ are rare in animals as compared with man, while diaphragmatic and umbilical herniæ are equally common, if not even more usual. The rudimentary condition of those vertebrae coming after those called sacral which support the pelvic girdle has apparently special reference to the erect posture. There is no doubt that a bulky tail, or even a small one, could not but embarrass the action of the legs of an erect animal. Many arboreal animals assume the erect posture, and yet possess tails which they use as prehensile organs. The anthropoid apes, moreover, have the tail only poorly developed. Again, the shape of the rudimentary tail changes as prone animals become erect, in such a manner that it serves in some degree to support the pelvic structures. In the hind limbs of quadrupeds the circulation of the blood is feebler than in the fore limbs. Possibly the erect posture in man may still further impede the circulation of blood in the lower limbs. Hence we may explain the frequency with which gouty deposition in man first occurs where the circulation is most sluggish. Furthermore, the erect posture affords a freer play to the movements of the four extremities. The late Dr. Rolleston used to teach that this additional freedom had removed the necessity of the continued development of the panniculus carnosus, which muscle is useful in ridding the skin of some parasites, also in certain defensive and offensive operations, as, for instance, in the erection of the spines of the diodon, the scales of serpents and of the manis, the quills of the porcupine, and the bristles of the hedgehog. Human beings, however, in virtue of their erect posture, possess so much more freedom of movement of the four extremities than prone animals, that this muscle atrophies as a result of falling out of use. The fact that man has remnants of this muscle in the platysma myoides, and, according to Heale, in several muscles of the head, is to be considered in relation with the fact that hairs still flourish on the head, the face, and upper part of the neck. Birds, however, are erect, and yet some have a remarkably well-developed panniculus carnosus. An albatross was recently found by Dr. D. Astley Gresswell to have large tendons inserted into its feathers and skin. It is, however, very clear that in birds the fore limbs are specialised for flight, their freedom of movement in other directions being consequently correspondingly curtailed.

Man is right-handed, as indeed also are quadrupeds, though to a far less extent. In human beings the fore limbs, being much freer than in animals, have acquired far greater independence of action. The fact that the right limbs have taken on the more complex tasks is attributed to the left side of the brain receiving a more direct supply of blood, and this view is strengthened by noting the frequency with which embolism occurs on the left side of the brain as compared with its less general occurrence on the right side; just as, similarly, the greater frequency with which embolism manifests itself in the left kidney as compared with the right is attributable to the more direct course of the blood to the former. Again, the functions of an organism, or of the aggregate of organisms, no less than the structures of an organism, or of the whole aggregate of organisms, are most intimately connected one with another. Indeed, the mutual interdependence of functions is almost universally admitted. The assertion that the various processes of change going on in a higher animal—that is, its functions, have been evolved in association with one another—has been amply supported both inductively and deductively. The phrase “associated functions,” like the corresponding idea of “correlated structures,” expresses a great and undeniable truth. A canary when building in captivity may be seen to fly about its cage with the straw before placing it in position—that is to say, it unnecessarily attempts to do under altered circumstances things which canaries, when making their

nests under the ordinary conditions of nature, are actually compelled to do. Though, then, in new circumstances both animals and man acquire new habits, still in many cases relics of the old ones remain. Those functions which will persist for the longest time are those which have by any means whatsoever been most strongly impressed upon the organism or upon its progenitors.

If we examine carefully all the numerous processes undergone by animals, we shall see that they may roughly be divided into two sets—viz., those of *work* and those of *rest*. It is quite true that these two sets are not entirely distinct, but rather they are intimately connected together somewhat in a similar manner to that which links together heat and cold, or light and darkness. We shall find it convenient to speak of one group of functions as the *associates of work*, and of the other as “the associates of rest”; and we shall hope to show that when some of the associates of work are decisively manifested there will be a tendency for others to appear; and similarly in the case of the phenomena of rest these, too, work to a great extent in association with one another. The one great aggregate of processes is evoked when the organism must obtain food, effect its escape from pursuers or fight an opponent, when, in short, it must exert itself to the utmost in measures of self-preservation of a direct and active character. The other great division of functions is exemplified when these objects have been met, when the end has been achieved for the time being, or when the mechanism of activity concerned in work needs rehabilitation and repair. These two well-marked associations of work and rest, developed in the healthy animal for the ordinary purposes of life, make their appearance also in the field of disease. When thus manifested, certain correlated processes of the one kind or of the other may in some cases work for good. Probably they may more frequently be productive of harm; while in some, unless they be checked, they may actually kill. The organic functions which make up the state of excitement are in reality processes of work, of activity. The effects of irritation however produced, those of pain, of joy, of fear, of any impulse to movement of whatever kind, are in some degree similar one to another. In disease we find phenomena corresponding in some measure with those of the chase and the fight, with the defensive measures adopted in fear and fright, and so on; and even death may result from excessive and unbalanced action of the vital mechanism, as in extreme fear and intense pain. While certain associated processes may have been, and may still be, of the greatest benefit under certain conditions, they may none the less work great harm, so far as the individual is concerned, under certain other allied conditions. Thus a reaction of inestimable value under certain conditions may be one which under other allied conditions can not only serve no useful purpose, so far as we can see, but may even impede or retard recovery to a very considerable extent, and so bring about even a fatal issue.

Turning now to another but an allied point of view, we remark that the phenomena which constitute day, like those which make up night, have likewise in each case been co-existent for immense periods of time. Moreover, it is to be remarked that the associates of work have alternated with the associates of rest to a large extent in the same way as day has alternated with night, and on a larger scale to some extent as summer with winter. Consequently we shall not be surprised to find later on that the rhythm of surrounding conditions has left its impress on the organic rhythm. An animal at work has an acceleration of pulse and of respirations, excitement, increase of perspiration and of faecal discharge, and augmentation of metabolism and of the temperature of the body. Now there certainly is evidence to show that, if some of these be aroused, there is a tendency for others or of all to be also aroused. If the temperature of an animal be artificially raised, the pulse and the respirations are accelerated, and the cutaneous glands are more active. The converse is the case if the temperature be reduced. A muscle, while contracting, rises in temperature, and there seems to be a very considerable total increase of heat in the body during action. Again, together with action, with excitement, and with alarm, provided it be not too great, there is also associated an acceleration of the pulse. The ready response of the temperature of a child, or of a patient convalescing from febrile conditions to changed circumstances, is well known.

Again, the action of some chemical compounds serves to

illustrate the association of vital processes above mentioned. For instance, the administration of nicotine produces acceleration of the heart's action, perspiration, and diarrhoea; while morphine, on the other hand, causes a slowing of the pulse, a dry skin, constipation, and sleep. It may very readily be seen that the associates of rest are the counterparts of those of work; but we must not forget that a state of rest may vary from that of simple repose to the pronounced rest of sleep or hibernation. Now, it is well known that if a man or an animal abstains from taking physical exercise constipation very often results, and it is also to be noted that if one or more of the associates of work are kept in action sleep is not to be obtained. For example, when too hot or greatly excited from any cause we cannot sleep. As we have pointed out above, there is apparently an association of certain vital processes which are concerned in action, so that if one is strongly aroused, or, *a fortiori*, if more than one is evolved, the others are generally also induced. There is also another association of vital processes which we call rest; and if some of these are exhibited, then in a general way the others will also be more or less strongly apparent. If we compare these two, work and rest, together, we meet with many striking points. Further, if muscles are freely exercised they may become hypertrophied, while if excessive rest be allowed they become atrophied. This same rule applies also to other tissues and organs. The two states, rest and work, ought to be alternated with each other. It is most important that this rhythm of waste and repair should be attended to, for otherwise the muscle, the limb, or the organism, as the case may be, suffers when waste exceeds repair.

Again, if we compare together day and night, we find that the daytime is characterised by the presence of sunlight and of sun-heat, and that in the daytime there have been manifested by animals for untold ages the associates of work. The pulse and respirations are more frequent in the daytime, and there is a separation of a greater amount of carbonic acid gas and urea. The body temperature also is higher. It has been proved by Dr. D. A. Gresswell that light stimulates the action of the heart, and that tropical heat is accompanied by rise of the temperature of the body. The factors, then, which constitute day, external or inorganic and internal or organic, are each and all concerned in adding to the activity of vital processes. The external factors (light and heat), in reference to the internal, stand of course in the relation of cause to effect, not only directly, but also indirectly, since they afford opportunities for working which are not present at night. In short, a rhythm has thus been established in organisms in regard to day and night, and this rhythm is, moreover, still kept up, even when some of the factors concerned in the causation of it are altered, just as also the variations in the frequency of the pulse which have reference to meal-times persist, even if we pass the whole day without food. For example, if we commence working by night and resting during the day, it is some time before we obtain a reversal of the temperature curve, and the reversal is probably never quite complete. If, on the other hand, we proceed gradually from one meridian to the antipodal meridian, we gradually change all the associated factors of what was our day for those of night, and under these circumstances the daily curve of body temperature persists, although there are facts which tend to show that the older-established rhythm does not yield with the very best grace. Moreover, in pyrexial conditions the body temperature tends to rise and to fall at the same times as it does in health. Again, the fact that pain is so generally more intense by night than it is during the day, and the greater likelihood of a febrile patient being restless and afterwards delirious by night than by day, though the temperature be no higher, may be compared with the fact that in health, when hot during the night, we cannot sleep, while we may, even when hotter, be able to sleep by day. Day being the time for action, the febrile temperature is, therefore, more easily borne at that time than it is during the night. The division of time into months has reference to the phases of the moon. It has been suggested by Darwin that menstruation points to an ancestral time when spring tides brought an extra supply of food. The fact that delivery occurs usually at the time of a menstrual epoch and the times at which antepartum hæmorrhages occur may have the same explanation.

(To be concluded.)

THE COMPARATIVE THERAPEUTICS OF ANTIPYRIN AND ANTIFEBRIN.

By ROBERT PARK, M.D.

PHYSICIAN TO THE GLASGOW SAMARITAN HOSPITAL.

THE generalisation which I ventured to make at the conclusion of the report of a case published in THE LANCET for May 12th of this year, to the effect that antipyrin would be found best adapted for the treatment of sthenic cases and antifebrin for asthenic, has been criticised by Dr. Hamilton of Hawick, in your issue of June 2nd, his experience having led him to form an opposite opinion. It is not surprising that opinions and conclusions drawn from the never exactly comparable data of clinical observation should be widely divergent, when in the more exact realms of morbid and experimental pathology we read and hear of exactly opposite conclusions being arrived at by equally competent observers from a consideration of exactly similar data. Thus, as cognate to our subject, I find, on referring to a paper in the *International Journal of the Medical Sciences* for April, 1886, p. 397, which I studied very carefully at the time of publication, Beyer writes that Cappola found that "toxic doses of antipyrin did not diminish blood pressure, the heart continued to beat with great energy, and was finally arrested in systole."¹ Filehne found the heart, on the contrary, after death, "arrested in diastole." Arduin also states that "it kills by heart paralysis." Beyer's own conclusions, from experiments which appear to have been carefully planned and crucial, are that "antipyrin, though largely dilating the veins, increases the power of contraction of both auricles and ventricles, and has no injurious influence upon the blood nor the muscular tissues, and therefore possesses, indeed, all the good qualities of a perfect antipyretic."

Now my clinical experience leads me entirely to endorse Beyer's views as to the physiological action of antipyrin; but, in practice, it is often found that the therapeutics of a drug is varied by a great number of conditions with which the physiologist has not to contend. I need not enumerate these, as they occur to the mind of every practitioner. Suffice it to recall here the fact that there are certain cases, and notably those of tuberculosis, where antipyrin fails to bring down the temperature, and where antifebrin is likewise powerless in this respect, though it may possibly prevent hyperpyrexia. The explanation is not to be found in dosage or mode of administration, but either in the patient or the disease, or the one modified by the other. Idiosyncrasy, no doubt, counts for something—that is, some of the recorded phenomena following slight doses of antipyrin can only be explained, on account of their anomalous character, by reference to some anomalous individual characteristic.

Albeit I think we possess some clinical data whereon we can rest secure in saying at least that the question of whether the patient is sthenic or asthenic has a most important influence. To begin with, I may be permitted to refer to the case reported as showing the fact that antipyrin can be given continuously in full doses frequently in a sthenic case without harm, but with benefit. On the other hand, in the *Practitioner*, No. 238, Mr. Bokenham of St. Bartholomew's Hospital states that: "In the headaches due to debility he had to confess that the results were not entirely satisfactory." "One of the patients, after the first dose of three grains, said 'she felt as if the top of her head were being lifted off,' and would not take any more." He also relates another case of a medical man who took three grains for a headache and was seized with a feeling of "weakness and giddiness." Mr. Bokenham attributes this to idiosyncrasy. Supposing him to have been a strong and robust man, would the effect not have been much more serious if he had been an asthenic? To a lady weakened with long-continued illness I administered a single dose of ten grains on going to bed. She exclaimed shortly thereafter, as I am informed: "Oh my! What a queer feeling! I feel cold all over! I feel as if I was freezing inside!" Hot bottles had to be procured and an additional supply of warm blankets, in order to bring about a reaction. That this effect of impending collapse was not due to idiosyncrasy in her case is proved by the fact that she has since had the

¹ Arch. It. de Biol., 1884, fasc. II., 134

same dose administered, but after she has been in bed and comfortably warm there. The drug was administered as an anodyne, no pyrexia being present. Then Friedländer's observations go to prove that "antipyrin acts better on well-kept children than on those who are poorly taken care of."² According to Cappola³ it produces a fall of temperature "normal or pathological." It will be admitted, I think, that a remedy capable of lowering normal temperature must be used with great care in asthenic patients.

Turning now to antifebrin, Dr. Hamilton's experience that it is not adapted for asthenic cases is noteworthy, especially in view of the manner he prescribes it—viz., in small doses often repeated at short intervals. I do not think it is beneficial to administer it so for zymotic pyrexia at all, and even in cases of inflammatory pyrexia I think it should be given *ad hoc* in large doses at long intervals. I have had very disappointing results—unequal effects—from it given both ways; but I have no doubt now that the large dose and long-interval method is the right one. The only case of relapse of scarlet fever I have ever seen occurred lately in a sthenic case which had been treated by antifebrin; and in another sthenic case of *S. anginosus*, and an asthenic acute tuberculosis, the troubles were entirely unmodified unless it were by preventing hyperpyrexia. In asthenic enteric in twelve-grain doses it has seemed to induce earlier apyrexia, however, and to have answered well in various asthenic phlegmasia. As to the question of dose, I find Fürbringer⁴ has given thirty, forty-five, sixty, and in one case 120 grains without any toxic action of consequence. Then in the same journal for January, 1887, the observations of Drs. Colin and Hepp⁵ at the clinic of Professor Kussmaul of Strassburg are epitomised. They found "it can be used in relatively large doses without causing toxic effects; the size of the dose was determined by the character, severity, and stage of the fever, and also the idiosyncrasies of the patient. The effects were quite as rapidly induced, and were four times stronger than those produced by antipyrin. The impression made by it on the pyrexia is better effected by larger doses at longer intervals than by smaller doses at shorter intervals."

Finally, as to the dose and mode of administration of antipyrin, whilst the latter must be largely left to the discretion of practitioners, there is evidence to show that the large dose and long-interval method is here also the better, whether it be given hypodermically or otherwise. In THE LANCET, I think, sometime last year, Dr. Germain Sée wrote advising hypodermic injections of eight grains. This allows for a dose of from thirty to thirty-five grains given by the mouth. Blanchard has given⁶ from sixty to ninety grains in acute rheumatism, from fifteen to thirty grains in acute exacerbation of chronic bronchitis, ephemeral fever, influenza, &c., single doses being frequently adequate. Ungar gives from fifteen to twenty grains for hemiparesis. Friedländer says, "Nine grains are sufficient for a child two years of age, and the effect will last about twenty hours." Lauder Brunton gives the dose at "thirty grains hourly for three hours and one grain and a half for every year of a child's age may be given hourly for three hours."⁶

In conclusion, I would say that, whether the generalisation I ventured to make proves ultimately to be correct or not in practice, practitioners will find it of service to keep the question in view when prescribing these drugs.

Glasgow.

A NEW METHOD OF EXTENSION IN HIP-JOINT DISEASE.

By A. H. TUBBY, B.S. LOND., F.R.C.S. ENG.

THE objects aimed at in applying extension in disease of the hip joint, whether by means of weights or splints of various descriptions, may be briefly summed up thus: firstly, the necessity of obtaining complete rest of the affected part, not only in the sense of freedom from movement, but also the prevention of that reciprocal irritation which ensues when diseased surfaces are in contact, in this particular instance inducing very severe pain and muscular spasm;

and, secondly, when the inflammation subsides, to ensure as little resulting deformity of the spine, pelvis, and limb as possible. Many methods have been and are employed, but some of them are not simple and efficient, and others are open to grave objections. The plan which I venture to suggest fulfils all the requirements of early treatment, and is very simple in its application.

It is now generally agreed that to apply weight extension to the limb, regardless of its position, is not only useless, but often mischievous. The reason is not far to seek. If, in the stage of abduction and flexion, a weight be simply applied to the leg by means of a stirrup, a part of the force acts along the line of the tibia, and not that of the femur, and so is of little practical value, while the remainder, which is in the direction of the upper part of the limb, tends to produce negative rather than positive results. We have to deal with an apparently extended thigh, but in reality there is flexion compensated by lordosis of the lumbar spine. Any force, then, which tends to bring the thigh in contact with the bed, without diminishing the lordosis, increases the tension of the anterior muscles of the thigh, and of the inflamed anterior ligaments of the capsule of the joint, upon which, as a fulcrum (to quote Mr. Barker's words), "the leverage of the femur will still further force the head into the acetabulum, and bring the diseased surfaces in closer contact."

Mr. Howard Marsh's plan in the stage of rigidity and pain is to raise the limb until all lordosis has disappeared, and thus, having ascertained its true position, to place it on an inclined plane the angle of which corresponds with that of the thigh, and then to apply weight extension. By using a sufficiently broad surface the limb can be accommodated in almost any degree of abduction or adduction. When all the muscular spasm has subsided, the limb is placed horizontally on the bed, and extension still maintained. But this method takes no cognisance of the accompanying lateral curvature of the spine, nor does it secure as much separation of the joint surfaces as possible. We know that in abduction the affected side of the pelvis is tilted downwards, and there is a lateral curvature of the lumbar spine with the concavity looking towards the sound side. By the application of one weight only the pelvis is still further tilted and the curvature increased.

The method which I have seen employed by Professor von Volkmann at Halle is the following. In abduction a weight is applied to each leg, but the heavier weight is on the sound side. What is the result of this? There is still extension on the diseased side as before, but there is another force acting on the pelvis from the sound side. This latter force, in the first place, tends to render the pelvis horizontal, and, acting lever-like with the lumbosacral articulation as a fulcrum, not only corrects the tilting, but also separates more thoroughly the diseased surfaces, and still further ensures a normal spinal curve when cure takes place. This happens more frequently without operation than we are led to suppose in general hospitals, and this statement is verified by the statistics of Mr. Howard Marsh. But Professor von Volkmann's plan is not applicable if flexion and abduction be present, but only when the former has disappeared.

I would suggest, then, that if we have to deal with a diseased hip, with much muscular spasm and excessive pain, a combination of the two methods should be employed—viz., to place the affected part on an inclined plane of such an angle that the lumbar spine is in complete contact with the bed, and then to apply a weight to each limb, but that on the sound side should be three or four pounds heavier than that on the diseased side. In the condition of abduction only, Professor von Volkmann's plan fulfils all requirements; and in adduction, with the pelvis tilted upwards on that side, one weight only is needed to compensate the deformity. Weights can be readily extemporised from calico bags filled with shot.

Halle, Germany.

TOLWORTH INFECTIOUS HOSPITAL, KINGSTON.—

A hospital for infectious cases, situated at Red-lion-lane, Tolworth, has been provided for the district by the Kingston Rural Sanitary Authority. It is erected on land comprising about three acres, and consists of four large buildings, each disconnected and isolated. The special isolation block contains four wards, two respectively for males and females. The total expenditure has been £7850.

² Quoted in Provincial Medical Journal for June 1st, 1888, p. 283.

³ Inter. Journ. Med. Sciences, April, 1886, p. 397.

Loc. cit., p. 523, 1887.

⁵ Loc. cit., April, 1886 and 1887, pp. 527 and 528.

⁶ Pharmaceutics, &c., p. 824.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

POISONING BY ACONITE AND BELLADONNA.

By HUGH R. JONES, M.A., M.B. CANTAB.

AN old lady, seventy-five years of age, swallowed by mistake a large tablespoonful of a mixture of equal parts of aconite and belladonna liniments. She vomited almost immediately, and an emetic of salt-and-water was administered by her friends. On the arrival of myself and my friend Dr. Hunt Cooke at 10 P.M. (three-quarters of an hour after the liniment had been swallowed), she was retching and vomiting, and complaining of a curious sensation in her throat and of tightness across her chest, which prevented her lying down. Pulse 98, slightly irregular, small and weak; pupils equal, not dilated. I washed her stomach out with warm water and gave her two drachms of brandy at once, and afterwards the white of an egg beaten up with two drachms of brandy and half an ounce of water every hour, in small quantities at a time. This appeared to relieve the vomiting, which was almost incessant. The pulse grew weaker and weaker, slower and more irregular, until an attack of faintness came on at 10.30 P.M. The pulse was then 64, and imperceptible at the wrist; when felt at the elbow it was weak, extremely irregular, and intermittent. The extremities were cold. Respiration ceased, and the patient became quite rigid, the jaws being firmly closed, with conjugate deviation of the eyes to the left. This attack was relieved by ten minims of brandy given hypodermically. The pulse improved slightly, but gradually failed again, until at 10.50 P.M. she had a second attack, similar in all respects, which was relieved in the same way. From this time there was a gradual though tardy improvement in the pulse and marked diminution of retching, so that at 1 A.M. I was able to leave her fairly comfortable. During the greater part of the time she was slightly delirious. The following day she had great abdominal soreness and occipital headache, but had otherwise quite recovered. The symptoms seem to have been almost entirely due to aconite, the delirium alone being possibly assignable to belladonna. The effect of the brandy was so marked each time it was given that I considered it unnecessary to use digitalis or any other drug.

Llanwddyn.

A PLEA FOR THE USE OF THE RHINOSCOPE.

By WM. ROBERTSON, M.D.,

SURGEON TO THE THROAT AND EAR HOSPITAL, NEWCASTLE-ON-TYNE.

THE following cases, although not of exceptional interest, supply sufficient proof of the advisability, as a matter of routine, of the use of the post-nasal mirror in every case of the description referred to.

The first case is that of Mr. R—, who came to me complaining of deafness of four years' duration. A watch was heard on contact only, and, with the exception of some cerumen in both meatus, the case further presented very little evidence of disease to the ordinary methods of investigation. The pharynx was healthy, and the nose remarkably free from catarrh or stenosis. The history was that he had suffered from a chancre four years ago, that subsequently he became deaf, and had remained so ever since. On arriving in England, he had consulted various medical men, all of whom failed to make out any cause for the deafness. With the help of the mirror a curious state of the post-nasal space was noticed. It was found occupied by heaped-up masses of hard, dry crusts. On removing these, an explanation of the deafness was accounted for. Extensive ulceration surrounded the right nares posteriorly, exposing the vomer in the neighbourhood. The tissues in the space were extensively infiltrated, and both tubes choked. Chromic acid was freely applied to the disease, whilst a spray was ordered for constant use. The internal treatment consisted of blue pill and iodide of potassium. In two days the hearing had improved, so that a moderate pitch of the voice could be heard.

The second case, that of Miss I—, is an example of a numerous class who present themselves with symptoms, although indefinite, pointing towards implication of the upper air passages. A prominent symptom in this young lady's case was a severe pressing pain over the root of the neck posteriorly, forcing her to lean forward, in which position she got relief. The other symptoms were periodical attacks of somnolence in the daytime; palpitation, frequently awakening her in the night; depression, and irritability of temper. This state of matters had continued more or less for ten or eleven years, during which term various diagnoses were arrived at: incipient heart disease, commencing tuberculosis in one or other lung, hysteria, want of occupation, &c. Examination of the nares anteriorly betrayed nothing, with the exception of a marked deviation of the septum to the right, and hypertrophy of tissues over both lower turbinated bones. The pharynx was normal and roomy. With the mirror a large polypus, about the size of a nut, was discovered protruding from the right nares posteriorly. On removing this through the mouth, another equally large was brought into view, and was snared through the nose. All the symptoms mentioned disappeared, and appropriate treatment of the other lesions finished the case.

One cannot be too careful in examining the nose in patients who present themselves complaining of throat symptoms with no apparent lesion there, for, in examining such, small polypi are often discovered in the posterior regions, while anteriorly the nose appears to be unaffected.

Newcastle-on-Tyne.

ABSCESS IN THE FEMORAL REGION SIMULATING HERNIA.

By H. V. DREW, M.R.C.S., L.R.C.P.L.,

LATE RESIDENT SURGEON TO THE TIMARU HOSPITAL, NEW ZEALAND.

KATE O. B—, single, aged about thirty, was admitted into the Timaru Hospital suffering from a fluctuating swelling in the right femoral region, evidently an abscess; temperature 104°. About a fortnight before being admitted she was serving dinner, when, after carrying a somewhat heavy dish, she was seized with violent vomiting and acute pain in the region of the umbilicus. She did not notice any swelling, nor had she previously noticed any, and was before this event in perfect health. Her mistress sent for a medical man, who for some reason could not come. She had complete constipation. This occurred on the Tuesday night. She continued in the same condition until the Thursday morning. Domestic medicine had been resorted to, and aperients had been administered, of course without relief. On the Thursday morning the symptoms suddenly abated, and on the Saturday she was seen by a medical man, who apparently made no diagnosis. Some short time after this she complained of a swelling in the femoral region, and she was sent to the hospital without a word concerning the history of her illness. From the above symptoms the diagnosis of unrelieved (surgically) strangulated femoral hernia was made. The patient declined to allow the abscess to be opened, though suffering from severe constitutional disturbance; so hot fomentations were applied and opium given. The next day the skin sloughed, and a quantity of pus, faeces, and a small slough were discharged. Her temperature fell to normal after the cavity had been cleaned and dusted with iodoform. Faeces and gas continued to be discharged for about a fortnight, when the wound gradually granulated up and the patient left the hospital well.

From what I could gather the patient seemed to have suffered acutely, and the strange thing about the case, apart from her fortunate recovery, appears to be the long interval that elapsed before the crisis occurred—viz., from the Tuesday night until the Thursday morning.

New Zealand.

THE LEWISHAM TRAGEDY.—The chemist's assistant who supplied eight grains instead of five drops of liq. strychn., by which mistake it will be remembered a Lewisham publican recently lost his life, has been fined £5 and 12s. costs for not labelling the bottle in which it was supplied with the name and address of the seller of the poison, and omitting to cause any entry to be made of the sale in a book kept for the purpose.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

PADDINGTON INFIRMARY.

A CASE OF HYSTERICAL APHONIA IN A WOMAN AGED SEVENTY-ONE; RECOVERY; REMARKS.

(Under the care of Dr. T. D. SAVILL.)

THE chief point of interest in the case here recorded is the age of the patient at the time of the development of the affection for which she was under treatment.

H. B—, a woman seventy-one years of age, was admitted on June 7th, 1888. She was a small, sparely-built woman, of a neurotic temperament, and complained of complete loss of voice. The loss of voice had come on quite suddenly one morning eight months previous to admission, while she was recovering from a slight attack of bronchitis, and it had persisted ever since. She was quite unable to speak above the lowest whisper. The lungs were emphysematous. The urine was of low specific gravity, and contained a faint trace of albumen. The arteries were somewhat firm. She complained of occasional attacks of giddiness, but otherwise she seemed in very good health for her years. The climacteric had occurred twenty-six years previously, and there was nothing worthy of note in her previous or family history. There were scattered patches of partial anaesthesia over the left leg, right thigh, and both arms, and well-marked ovarian tenderness on both sides.

On laryngoscopic examination the next day, an adductor paresis of the vocal cords was discovered. There was no congestion, ulceration, or growth discovered which could account for the loss of voice. From this circumstance, the patchy anaesthesia, the ovarian tenderness, the patient's temperament, the history of sudden advent, and the adductor paresis, the aphonia was ascribed to functional causes. A strong faradaic current was then passed across the larynx by means of a reophore placed externally, one on each side, and the patient was encouraged to call out. She was promised that the application should cease immediately that she did so, and after much evidence of tribulation she uttered articulate and vocal sounds.

During the next few days there was a slight tendency to relapse, but the threat of another application was sufficient; it never really became necessary, and she left the infirmary perfectly well on June 20th to resume her occupation—that of charwoman.

Remarks by Dr. SAVILL.—Hysterical aphonia is by no means a new disease. Heberden gave an excellent description of it in his "Commentaries,"¹ published in 1802. He points out the peculiarity that in some cases, although the patient can laugh, she cannot speak aloud. It usually comes on and disappears suddenly, he says, and the disease is very liable to relapse. All the remedies he tried were unavailing. Hysterical aphonia is by no means a rare disease, and this case presented no special difficulty of diagnosis. The chief point of interest lies in the age of the patient. The times of life at which it most frequently occurs are under thirty and at the climacteric; and though it may occur at other times, I am not aware of any recorded cases over seventy years of age. In the foregoing case, as is usual, the affection was due to an adductor paresis of the vocal cords. It was cured, as it generally may be, by a violent shock. I am not disposed to regard the electricity as having any special virtue *per se*. It is the suddenness of the shock, combined with the pain and unusual sensation produced by the faradism, which is the chief agent. The short time (eight months) during which the disease had existed made it easier to cure. Some may be inclined to take exception to my use of the word "hysterical." But, while I am not concerned to defend it on any other ground, it has the advantage of being established by long custom, and therefore conveys a clear idea to the mind of the reader, and repre-

sents a more or less definite group of clinical phenomena. The unbounded gratitude expressed by this patient at her cure is a point worthy of note. It illustrates the fact, which I have found pretty constant, that patients suffering from these affections are very desirous of deliverance from them, and indicates the reality of the disease.

BURTON INFIRMARY.

A CASE OF TRAUMATIC TETANUS; RECOVERY; REMARKS.

(Under the care of Mr. BELCHER.)

FOR the following report we are indebted to Mr. Oldham.

A. D—, a healthy youth, aged nineteen, a scavenger, was admitted on April 19th, 1888, with a lacerated wound of the outer side of the right hand; the abductor indicis and first lumbricalis were torn through, the index metacarpophalangeal joint was opened, and the soft parts contused; the hemorrhage was free and the wound filled with grit. It was dressed with carbolic lotion, iodoform, and "Gamgee" tissue.

April 25th.—Dressed daily to date; hand swollen and painful; wound sloughy. Linseed poultice applied. Temperature: morning 99°, evening 100°.

26th.—Wound improved; half an inch of a digital nerve exposed. This was pulled and cut off short. Temperature: morning 99°, evening 98° 6°.

30th.—Wound healing; dressed with wet boric lint.

May 2nd.—Constipation relieved by white mixture; one or two ash points in the wound. In the evening he had a rigor. Temperature 103°; pulse 112. Complained of a sore throat and stiff neck. Said he had caught cold from an open window. Fauces congested. Twenty grains of salicylate of soda were ordered every two hours.

4th.—Temperature: morning 103° 2°; pulse 112. Angles of mouth drawn up; masseters contracted; unable to eat his fish dinner. Temperature: evening 101° 6°.

5th.—Temperature: morning 99°; pulse 112; respiration 30. Trismus and risus; recti abdominis stand out like tense cords. The patient was removed to the private ward. Soap enema ordered; a sixth of a grain of extract of physostigma every hour. After five doses this was increased to a third of a grain every hour.

6th.—Typical and severe tetanus had now developed. To take the extract (one grain) every half hour. At midnight he was worse; two grains of the extract given every half hour.

8th.—Wound more healthy; symptoms persistent and worse. Sixty grains of chloral during the night. Physostigma continued; has lost much flesh. Sordes. Temperature 98° 4°; pulse 120.

10th.—Temperature normal; spasms every fifteen minutes, lasting one minute; pupils contracted.

11th.—Temperature normal; pulse 96. Great thirst; tongue dry and cracked. Since midnight of May 6th has been taking the extract at the rate of ninety-six grains every twenty-four hours. To continue the extract, two grains every hour.

12th.—Great pain in loins; spasms every twenty minutes. One ounce of brandy mixture ordered every four hours.

15th.—Spasms less; wound healing rapidly; tongue moister.

16th.—Disturbed by admission of another patient; spasms more frequent.

20th.—Wound nearly healed; spasms only when excited or disturbed. Ate some bread-and-butter with difficulty.

22nd.—Mincemeat ordered.

30th.—Ordinary diet. Spasms are now once or twice in twenty-four hours. Recti muscles are rigid.

June 5th.—Sat up in an armchair for half an hour.

8th.—Walked out of doors for ten minutes.

12th.—Discharged cured.

Remarks by Mr. BELCHER.—Causation: 1. The injury. 2. Dirty wound; a scavenger. 3. Nerve exposed and cut. No symptoms for seven days. 4. Exposure to chill from open window. Must we (if perfectly logical) cross out the descriptive adjective in our title, and take the romance out of the case? I fear so. Look at the rise of temperature, the red fauces, the salicylate of soda treatment pointing to catarrh before tetanus cut in. May I digress? I only recall as under my own care four cases of tetanus; the first years ago, when I was house-surgeon under that accomplished surgeon, the late Mr. John Gay. I sent off for him at night, saying I had a case of hydrophobia from the bite of a pig. He went back grave, remarking, "What a disappointment—

¹ *Commentarii de Morborum Historia et Curatione*, cap. 100, p. 406.

fatal!" The second (idiopathic): Many years since a drunken man was carried by his companions into the public-house, where he lived (and died), stripped naked from his muddy clothing, and left all night with an easterly wind blowing upon him from the open easement. The third, many years ago, again an injured finger, tetanus moderate, I decided to amputate. The patient had not taken many inspirations of the chloroform when—I have no doubt now, it puzzled me then—spasm of the glottis occurred, and instant death. To return to the fourth, our present case. In five days he took of the physostigma (fresh specimen from Harris, Birmingham) ninety-six grains, and for nine days forty-eight grains, without paralysis, probably the largest dose taken for so long a time. It "beats the record" of Ringer—two grains and three-quarters hourly for a day and a half, and for a short time four grains hourly. Anticipatory tracheotomy had been declined, but every precaution was taken to ensure its performance if perchance in time.

MOUNT BISCHOFF HOSPITAL, TASMANIA.

ACUTE INTUSSUSCEPTION; LAPAROTOMY;
RECOVERY.

Under the care of Mr. MONTAGU PERCEVAL.)

E. A. S—, aged twenty-one, a miner, had been complaining for a few days previous to the accident of soreness in the lower part of the right side, from his leg having slipped through the rails while wheeling a truck, and on the afternoon of May 23rd, while twisting the truck on a sheet of iron from one line to another, he experienced a sudden violent pain in the lower part of the stomach, which "doubled him up" and produced an intense feeling of sickness, but he did not vomit.

The patient was seen at 6.30 P.M. Decubitus dorsal, and knees raised. Sharp pain in right side; nausea present; face flushed; pulse 80, hard, and full. On examination, a distinct tumour could be felt in the right iliac region, which was tube-like in character, three inches in length, and an inch and a half in width. The bowels had been freely opened before the accident. Two grains of opium were given, to be followed by one grain every three hours, with the view of checking peristalsis and vomiting. Only a few spoonfuls of water were allowed to quench the thirst. At 10 P.M. the pain was slightly easier.

May 24th.—No sleep; restless; pain easier; no vomiting; nausea present; retention of urine; has not passed flatus; abdomen tympanitic. Ordered removal to hospital, where a consultation was held with Dr. Kennedy, who agreed as to diagnosis. It was first suggested that inflation should be tried to overcome the obstruction. This was done, until struggles on the part of the patient (although the conjunctiva was perfectly insensible) compelled Mr. Perceval to desist without success. Distension by means of fluid was then tried, but this also failed in overcoming the obstruction. The vomiting being severe, it was decided to keep the patient under the full influence of opium, and perform laparotomy the following morning.

25th.—Little sleep; no pain. A catheter was passed. No flatus; tympanites less. Methylene was used in the place of chloroform to avoid subsequent vomiting, but in this case it was not so successful as had been hoped from results obtained previously. An incision was made four inches in length along the linea alba, commencing an inch and a half below the umbilicus, and continued on until reaching the fascia transversalis, which with the peritoneum was divided upon a director. There was very little venous oozing during the incision. On opening the cavity of the abdomen it was found to contain four ounces of serous fluid. The small intestine for about the length of eighteen inches above the obstruction was intensely congested. On passing the hand into the cavity of the abdomen, the seat of stricture was found to be at the ileo-caecal valve, and, as far as could be judged, about three inches of small intestine projected through that opening; this was returned after four attempts by pressure between the fingers from behind forwards. The incision was then closed with wire sutures and the wound dressed with a pad of lint with carbolic oil and bandage. No antiseptics were used in the accepted meaning of the term, as means were not at hand; precautions were taken to have all instruments, sponges, &c., carbolicised, and the open wound protected by warm pads of lint saturated with carbolic lotion. Some little vomiting occurred, which

was controlled with champagne. At 7.30 P.M. a catheter was passed. Pulse 64; temperature 99°. The treatment consisted of one grain of opium every three hours, and a tablespoonful of extract of meat was given every hour.

26th.—Morning temperature 99°; pulse 56. Fair night; not much pain. Passed urine and flatus. Evening temperature 99.2°. Much easier; sleeps; no vomiting. Takes beef-tea well.

27th.—Morning temperature 98.8°; pulse 60. Slept several hours. Evening temperature 99°.

28th.—Morning temperature 99°; pulse 62. No pain. Evening temperature 99°; pulse 60.

29th.—Morning temperature 98.4°; pulse 52. Slept well. The opium pills were discontinued, and the quantity of beef-tea increased.

30th.—Morning temperature 98.4°; pulse 48. Wound healed; stitches removed. Allowed milk foods.

31st.—Temperature morning and evening normal.

June 1st.—The patient expresses himself as quite comfortable. An enema was given, which acted well. From this date the patient made uninterrupted progress towards recovery, and was able to get up on June 10th.

BRITISH MEDICAL ASSOCIATION.

FIFTY-SIXTH ANNUAL MEETING.

Held in Glasgow on August 7th, 8th, 9th, 10th, and 11th.

PERHAPS the most striking and interesting event of the week's proceedings was the address which Dr. Macewen delivered on the morning of Aug. 9th, in the Bute Hall, upon his "Recent Investigations in Surgery." The following morning a large number of members attended the Royal Infirmary by invitation, when Dr. Macewen, Dr. Morton, Dr. Fleming, Mr. H. E. Clark, and Dr. Knox gave clinical demonstrations in the wards and operating theatre.

At 2 P.M. on Friday, the honorary degree of LL.D. was conferred on several gentlemen connected with the meeting of the Association. The ceremonial took place in the Bute Hall, the chair being occupied by the Very Rev. Principal Caird, Vice-Chancellor of the University. Professor Robertson, Dean of the Faculty of Law, presented each of the recipients in turn to the Vice-Chancellor, who "capped" them.

The following is the list of those upon whom the honorary degree was conferred: Sir William Aitken, Dr. T. Clifford Allbutt, Professor B. Ball (Paris), Dr. G. T. Banks, Dr. Fordyce Barker (New York), Dr. Moritz Benedikt (Vienna), Dr. Bridgwater, Dr. J. Macintyre, Dr. W. C. Maclean, Dr. Jas. Morton, Dr. W. Munro, Dr. F. W. Pavy, Sir G. H. Porter, and Dr. D. Yellowlees.

After this the members adjourned to the Natural Philosophy Class-room, where Professor M'Kendrick delivered the address in Physiology; and the concluding general meeting was held, the usual votes of thanks to all concerned in the success of the meeting being passed.

At 4 o'clock a garden party, given by the Faculty of Physicians and Surgeons, took place in the Botanic Gardens. It was very numerously attended, the visitors being received by Dr. Morton, President of the Faculty, and Mrs. Morton. The same evening a conversation was given by the Corporation of Glasgow in the Exhibition buildings, the Grand Hall and Fine Art Galleries being set apart for the purpose. This was not the least brilliant and successful of the gatherings of the week, and was very numerously attended.

On Saturday excursions were made by the members and their friends to various places of interest—viz., (1) Lanark and Falls of Clyde; (2) Ayr, and the Land of Burns; (3) the Perthshire Highlands, Lochcarnhead and Crieff; (4) Callander and the Trossachs; (5) Arran; (6) Stirling, Bridge of Allan and Dunblane Cathedral; (7) Rothesay, and the Kyles of Bute; (8) Loch Lomond.

During the week various shorter excursions were planned, and, indeed, no pains were spared to make the visit to Glasgow a memorable as well as an enjoyable one.

THE SECTIONS.

MEDICINE.

On Friday, the 10th inst., Dr. McCall Anderson in the chair, Dr. THEODORE WILLIAMS (London), in opening a discussion upon the Value of Inhalations in the Treatment of Lung Diseases, remarked that the direct application of medicinal agents to the air passages dated from Hippocrates, who used fumigations, employing a pot through the lid of which a reed passed conducting the vapour to the mouth, sponges being used to prevent scalding. The return to the use of inhalations of late years might be traced partly to the accumulation of proofs that various substances could be absorbed by the air passages, and partly to the antiseptic system. The fact, however, that this direct mode of treatment had hardly held its own against the indirect mode of giving drugs by the stomach was presumptive proof that inhalations *per se* were inadequate for dealing with pulmonary diseases. The various methods of inhalation might be classified as follows:—1. Inhalation of gases, such as oxygen, nitrous oxide, atmospheric air (condensed or rarified), or vapours of certain medicines (volatile) at low temperatures, as ether, chloroform, nitrite of amyl, and iodide of ethyl. 2. Moist warm inhalations. 3. Dry fuming inhalations. 4. Atomised sprays. 5. Respirators containing antiseptic substances. As regards the first of these methods, there could be no doubt of its efficacy, as the full physiological effects of the various drugs were thus obtained. If antiseptic agents could be pushed to the same degree, and the patient brought thoroughly under their influence, it was probable that the results in pulmonary disease would be much more successful than they were at present. The second method had the great drawback of saturating the air with watery fluid, and, according to the experiments of Dr. Hassall, it was very doubtful whether any considerable proportion of the medicaments used really reached the diseased area. This mode of treatment was useful in croup, laryngitis, pharyngitis, and in affections of the larger bronchi, but its utility in capillary bronchitis and phthisis was doubtful. He had performed a series of experiments to determine whether drugs were really absorbed by this method, and had found that turpentine was readily absorbed, but that iodine was not. This was the more remarkable, inasmuch as iodine was easily absorbed by the stomach. Hæmoptysis had been rather frequent in connexion with these experiments. Of the third mode there were examples in the case of Himrod's powder, the use of medicated cigarettes, the inhalation of iodine fumes, carbon cones, &c. The evidence available seemed to show that the drugs thus employed were more effectual if given by the mouth. The fourth method (atomised sprays) seemed ineffectual to cause the penetration of the medicaments to any depth, and was apt to cause hæmoptysis. The fifth method was a favourite one, and many inhalers were in use, of which he might mention Burney Yeo's, Coghill's, and Curschmann's. The radical defect of this method was that it impeded free respiration, the patient feeling like a muzzled dog. His conclusions were as follows:—1. That the success of inhalations as a mode of medication depended principally on the easy convertibility into gas or vapour of such substances as were clearly desirable for the purpose. 2. That, consequently, bodies which were volatilised at ordinary temperatures were more readily absorbed by the lungs than bodies which had to undergo combustion before conversion into gases. 3. That all moist inhalations where steam, watery vapour, or spray was the vehicle of medication, were but slowly absorbed by the lungs, and entered the circulation in small quantities, and in some cases not at all, the slow rate of pulmonary absorption contrasting strongly with the rapidity of gastric absorption of the same medicines when swallowed, as proved by their detection in the urine. 4. That medicinal inhalations were more useful in diseased conditions of the pharynx, larynx, and larger bronchi than in those of the alveoli and lung parenchyma. 5. That in pulmonary disease the antiseptic respirators, while they lessened cough and reduced expectoration, exercised no lasting remedial influence upon the morbid condition, and did harm by impairing freedom of respiration.—Dr. ANDREW SMART (Edinburgh) exhibited a new species of inhaler for fitting into the nose. He had a strong belief in the efficacy of inhalation, his patients frequently expressing their sense of the benefit which they derived from their use. He regarded creasote as one of the most valuable remedies in this mode of treatment, but advised its dilution.—

Dr. LANDSAY (Belfast) said he had given inhalations an extensive trial, and was disposed to regard them as of considerable value in affections of the bronchial tubes, but as of very doubtful utility in diseases of the lung tissue proper. In acute bronchitis inhalation of simple steam was a remedy of great value, lessening spasm and promoting secretion. In chronic bronchitis inhalations impregnated with turpentine, carbolic acid, or creasote were valuable for improving the character of the expectoration. The real controversy in the question raged rather round the value of inhalations in phthisis. He had begun their use with hope, but his results had been mainly negative. He feared the amendment so often reported by patients from the use of inhalations, as stated by Dr. Andrew Smart, was exceedingly fallacious. Patients liked active treatment, and were very partial to novel remedies. To the so-called bacillicide treatment of phthisis there were, in his opinion, three strong objections: 1. It was not clear that the destruction of a microbe so tenacious of life as the bacillus of tubercle could be effected by any inhalations at our command. 2. If the bacillus could be destroyed, the receptivity of the patient to fresh infection would remain, and so nothing material would have been effected. 3. The adoption of warm inhalations and the use of inhaling chambers &c. were very prejudicial to that hygienic treatment of phthisis of the value of which there could be no question. Whatever success in the treatment of phthisis he had seen in his own practice or that of others had been obtained by a radically different method—viz., by aiming at improving the constitutional condition and thus lessening the receptivity of the patient. This was effected by the rigid regulation of the mode of life, by diet, by tonic remedies of various kinds, and, when possible, by change of climate.—Dr. IRELAND (Edinburgh) had had considerable experience of the pine forests of the Himalaya, and he had certainly seen some cases of early phthisis which had seemed to derive benefit from their residence among them.—Dr. COGHILL (Yentnor) had given great attention to this line of treatment, but it had not hitherto quite realised the expectations which he was inclined at first to expect from it. He was convinced, however, that it was founded upon a correct pathology, and thought it the duty of the profession to persevere in their investigations, in the hope of discovering some agent that would fulfil the necessary conditions. He had seen considerable advantage from inhalations in phthisis, bronchitis, and bronchiectasis. He was against the use of oro-nasal inhalers. He was disposed to think that medicated inhalations reached the diseased portions of the lungs specially.—Dr. SMITH (Netley) wished to say a few words upon his extensive experience of India. He protested against sending consumptives to that country, as, during the hot, damp weather of the monsoons the disease progressed with much greater rapidity than at home. He had been struck by the utility of inhalations most of all in a class of case which had come much under his notice—viz., where a hepatic abscess ruptured into the lung. He had seen hectic fever controlled by Coghill's inhaler and inhalations. He had been in places where the inhabitants attached great value to inhaling the fumes from kerosene wells, &c.—Dr. DENISON (Colorado) said he thought there was less and less effect obtained from inhalation as we went from the large bronchi towards the periphery of the lung. It should be remembered that in phthisis recovery was brought about by the development of fibroid tissue; hence it was probable that the inhalations go to the open alveoli—i.e., to the healthy portions of the lungs. There was no medicament at all in the air which he regarded as the most useful in phthisis—viz., the cold dry air of high altitudes. In dry climates there was much more moisture exhaled from the lung than in humid climates, and the exhaled moisture was probably a vehicle for carrying off the bacilli.—Dr. GIBSON (Newcastle-on-Tyne) advocated the use of dry-powder inhalations, such as nitrate of silver and sulphate of copper, diluted with dried sugar or lycopodium.—Dr. BRETT (Watford) thought there was truth as well as wit in the saying that "Patients die because they won't expire." Free respiration was essential in phthisis.—Dr. WILLIAMS, in reply, expressed his gratification that the discussion had, in the main, served to substantiate the views put forth by him in his opening address.

Dr. CAVERHILL (Edinburgh) exhibited a patient suffering from remarkable symptoms connected with disease in the motor area of the brain.—Dr. ROSS (Manchester) made some remarks upon the case.

Dr. PAVY (London) read a paper on Neuritic Symptoms

in association with Diabetes. These symptoms closely resembled those of *talus dorsalis*. There was a species of ataxia, numbness or hyperæsthesia, lightning pains, and impairment or loss of patellar tendon reflex. There was deep-seated pain, described by patients as being "in the marrow of the bones." He regarded the symptoms as identical with those of "peripheral neuritis." They were seen almost exclusively in the milder forms of diabetes occurring after middle life, and were amenable to treatment, iodide of potash being most valuable. One point of distinction between this condition and *talus* was that in the former the patient could stand with his eyes shut. The symptoms bore no relation to the severity of the diabetes.—Professor JACOBI (New York) had seen this condition in diabetes, and had found salicylate of soda very useful.—Dr. Smart, Dr. Harrison, and Dr. Ross made some remarks.

The proceedings of the Section soon after terminated.

SURGERY.

The day's proceedings on Friday, the 10th inst., began with a special discussion on the Operative Treatment of Club-foot, opened by Mr. LUND, of Manchester, who said that while in early cases moulding of the foot, with or without tenotomy, was sufficient to cure the deformity, there were many severe cases, or cases delayed till there was great and permanent deformity of bones, which required excision or resection of bones for their relief. He suggested that the discussion should be specially directed to the consideration of these latter methods. He had been the first to excise the astragalus for severe talipes, and he now showed the patient to the section, after sixteen years. The movements and shape of the right foot were extremely good, there being merely a slight depression in front and to the outside of the ankle joint. The left foot, however, was very stiff, and still somewhat deformed, the patient walking on his toes, as if there was some ankylosis of ankle; the muscles of both calves were much atrophied. The astragalus was considered by Mr. Lund the key to the deformity, and its removal afforded the best results in bad cases. Properly to judge of the effects of operations, the cases should be seen in after years.—Mr. R. W. PARKER (London) read a long and interesting paper referring in detail to the anatomy of the parts and the nature of the deformity. The only constant condition he had found in his researches was the shortening of the ligaments of the foot. The bones were not always altered in shape. In early talipes a change of shape of the astragalus of the nature of a reversion to the Simian type was common. All infants might be said to have a certain amount of talipes, and could supinate the foot to some extent; but unless there was a shortening of the ligaments there was no permanent talipes. Bones were altered in relation to each other and in shape by pressure, and if they were not radically at fault there was no need to excise them, unless in very late and severe cases. The treatment of club-foot should begin very early. The foot should be forcibly straightened and fixed in plaster-of-Paris for a fortnight at a time. If this were repeated several times the result was generally good. Tenotomy was never called for, and would only substitute a defect of development of bones for the talipadic deformity.—Dr. OGSTON (Aberdeen) had operated on 173 cases of talipes, and had found no one method suitable for all cases. Talipes was not a defect or paralysis of tendons, and was not to be cured by cutting tendons. Tenotomy of tendons in their sheaths was absurd, as no union ever took place. Stretching of tendons in early life was easily effected; the foot at six weeks of age should be forcibly moulded till it does not spring back, then fixed in plaster-of-Paris for six weeks. The incurved adducted position was remedied first, then the tendo Achillis was always cut. If necessary the plantar fascia might also be cut. According to the age of patient, from three to eight sittings might be necessary for the rectification of the adduction, and from one to three for that of the incurvation. Tarsotomy by subcutaneous puncture and chain saw passed round the foot was done five times, but was now given up. Excision of the wedge of the tarsus was done three times, and, though it looked pretty, was not useful. Excision of the astragalus was done in five cases, and with great success; it was easy, and the rectification was greater than after any other mode. Osteotomy above the ankle had also been done in ten cases, and with good results, but this had been superseded by Lund's operation.—Dr. WHITSON (Glasgow) supported

the operation of tarsotomy, and showed two patients cured by excision of the cuboid.—Dr. GEORGE BUCHANAN (Glasgow) said that early cases might be forcibly moulded, but late cases with limbs curved and bones twisted out of place he had usually treated by tenotomy of the tendo Achillis, and section of the plantar fascia, muscles, and ligaments down to and opening up the talo-scapoid joint. He had operated by Lund's method in one case, now in hospital, and the result was so far most satisfactory.—Mr. SYMONDS (Oxford) said he made in all cases a complete section of the bones at the point of greatest convexity of the deformity with chain saw and slides, one surface in the other, fixing in plaster-of-Paris for three months. The new callus thrown out made a firm arch. He reported a case of this operation in a child of six weeks.—Mr. NOBLE SMITH (London) considered that osteotomy was rarely required under ten or twelve years of age. All operative measures should be deferred till resistance of structures seemed to demand it. For early cases there should be moulding and fixation in plaster-of-Paris for eight or ten days.—Mr. LUND replied, and congratulated the Section on the usefulness of the discussion.

Mr. BERNARD ROTH (London) read a paper on Scoliosis, or an accurate and practical method of recording cases of lateral curvature of the spine, and showed on a patient the mode of applying his soft metal tapes.

Mr. C. B. KEETLEY (London) read a paper on Plastic Amputations of the Foot.

Mr. R. H. NICHOLSON (Hull) described a case of Double Pyosalpinx cured by aspiration.

Dr. W. H. MYERS (Fort Wayne, U.S.A.) made a few remarks on the Treatment of Acute Peritonitis following Laparotomy.

ANATOMY AND PHYSIOLOGY.

The Section of Anatomy and Physiology met on Wednesday, August 8th, in the Anatomy Class-room, at 10.30 a.m.

Professor JOHN CLELAND, M.D., LL.D., F.R.S., occupied the chair, and delivered the presidential address. After referring to the honour done him in electing him as President of this section, Professor Cleland, in the course of a brief address, dwelt upon the interest and importance of teratology as exemplifying the influence of natural laws working in unnatural or unusual circumstances. He referred to the possibility of grave deformities arising in some one part of the body through localised irritation, and especially to the influence of irritation in causing excessive proliferation at unusually early periods, and the formation of double monstrosities. These monstrosities might be classified under three heads: the abcranial, the abcaudal, and the combination of these in one. The relative frequency of polydactylism could be understood by consideration of the early development of the carpus and tarsus as compared with the time of elongation of the limbs. As modifications of environment modify individuals and races, so external agencies were accountable for the production of monstrosities. He pointed out how little reliance could be placed upon statements as to the influence of shock or of strong impressions on the mind of the pregnant female in giving rise to monstrosities. He showed, in illustration of this, an anencephalic monster whose deformity had been attributed by the parents to the effects produced upon the mother's mind by the peculiar appearance of a cervical vertebra of a horse, so painted as to resemble a clergyman with uplifted arms and head seated upon the trunk, and said that such deformity was attributable rather to dropsy of the cerebro-spinal axis setting in after section of the cerebro-spinal canal, with consequent obliteration of the cerebral vesicles. Thus monstrosities were not to be passed over as mere freaks of nature, but were valuable illustrations of the action of natural laws. Professor Cleland referred to his preparations, both human and comparative, normal, abnormal, and pathological, numbering 411 specimens, displayed in an adjoining room.—Professor STRUTHERS (Aberdeen) proposed a vote of thanks to Professor Cleland for his interesting paper, and referred to the importance of anatomy and physiology as a basis of medical and general scientific study.—Professor PETTIGREW also wished to thank Professor Cleland for his able paper.

Professor C. B. LOCKWOOD showed a series of microscopical preparations from the rabbit, illustrating the development of the Circulation and Respiration. They were arranged to show the development of the heart in the splanchno-pleura

in front of the general body cavity, its attachment to the pharynx by the meso-cardium posterius, and the gradual shutting off from the pleuro-peritoneal cavity of the pericardial sac. He traced further the development of the diaphragm, partly from the ventral aspect, partly from the dorsal, and also the development of the larger somatic and splanchnic veins.

Professor LOCKWOOD read for Mr. W. Arbuthnot Lane a paper on the Influence produced by Excessive Strain upon Muscles and Ligaments. Mr. Lane showed that many deviations from normal types were explicable upon mechanical grounds. Many experiments were going on in the modifications produced in the organism in the exercise of special trades, as in sailors, shoemakers, porters, &c.: how the scapula was modified in shape by the great development of bony tuberosities at the point of attachments of muscles subjected to special exercise, and similarly at the attachment of the deltoid to the humerus and of the soleus muscles to the tibia and fibula. So, too, we found more or less ossification in ligaments, more especially where they were subjected to great pressure, as in the ligamentum nuchæ.

Dr. A. M. PATERSON (Demonstrator of Anatomy, Owens College) read a paper on the Position of the Vertebrate Limb, considered in the light of its innervation and development. Dr. Paterson held that the nerves were alone to be regarded as of importance as evidence of original segmentation in an attempt to determine the position of the limbs as regards the vertebral column. He maintained that the limbs were inconstant in their position, and tended rather to be moved backwards than forwards upon the vertebral column, the position of the posterior limb being less constant than that of the anterior limb, and that with this change of position there might be other concurrent changes. He maintained also that the limbs are developed from the lateral and anterior thirds of the primary cylinder trunk.—A short discussion ensued, in which Dr. Mackay and Dr. Cleland took part.

Professor BENEDIKT (Vienna) read a paper on his Cranio-metric and Cephalometric systems, with Demonstrations of his method of applying them.

Mr. MACDONALD BROWN read a paper on the Construction of the Cardiac Ventricles in the Mammalia, with more special reference to the right ventricle, and its action in forcing the blood onwards into the pulmonary artery by pressure of its crescentic wall upon the wall of the left ventricle. He referred also to the position and function of the moderator band and its constancy in the human heart.—Professor STRUTHERS suspected that too much importance might be given to the moderator band from its teleological name. It might merely be a vestige of no special importance.—After some words by Professor Cleland, Mr. Macdonald Brown replied.

The proceedings on Thursday commenced with a paper by Professor CLELAND, entitled "The Nature of certain forms of Double Monstrosities." In the course of his remarks he described the various ways in which such monstrosities occur, and showed how cases of supernumerary limbs were to be interpreted. This paper, by the President of the Section, led up to a demonstration by Dr. MACDONALD BROWN, of the "double-bodied" boy "Lalloo." Dr. Brown also gave an interesting account of the case, and an opportunity was afterwards afforded those present of examining the boy for themselves.

Dr. BARLOW read a paper for Dr. B. W. Richardson on some Original Observations in Physiological Therapeutics made on the Fresh-water Jelly Fish.

Mr. BERRY HAYCRAFT gave the results of his recent Investigations on the Production of Taste and Smell.

Dr. ST. JOHN BROOKS read a paper on the Morphology of the Epitrochleo-anconeus.

This was followed by a paper, prepared by Mr. J. BERRY HAYCRAFT and Dr. E. W. CARLIEL conjointly, upon (1) Morphological Changes which occur in Blood during its Coagulation; (2) Demonstration of Human Blood retained in a fluid condition when suspended in castor oil. They pointed out the effect that solid substances have of stimulating the colourless corpuscles to amoeboid movement, and argued that the coagulation of the blood was due to the action of the living rather than of the dead leucocyte.

Professor R. J. ANDERSON, M.D., read a paper on Pelvic Epiphyses, giving the results of his examination of specimens from a large variety of vertebrates.

Dr. BENJAMIN HOWARD (New York) gave a demonstration on the Hyoid Bone and its relations. He showed that the hyoid bone is the key to the raising of the epiglottis by its muscular and ligamentous connexions above with the lower jaw, and below with the larynx and epiglottis, and how by simply bending the head as far backwards as possible the epiglottis is raised, and a wide post-oral air way is opened between the nares and the larynx.

On Friday Dr. A. MELVILLE PATERSON read a paper on Congenital Diaphragmatic Hernia in an Infant, in the course of which he spoke of its relative frequency on the left side as compared with the right.—Professor LOCKWOOD thought that this might be explained in connexion with the development of the vitelline veins.

Dr. GREVILLE MACDONALD gave the results of his investigations on the Mechanics of the Nose as regards Respiration, Taste and Smell. He explained a simple form of apparatus devised by himself for testing changes in the heat and moisture of respired air, and advanced the view that the superior spongy bone had to do with the appreciation of flavours as the middle spongy bone has with smell.—Professor RUTHERFORD thought that the question as to the appreciation of sense of flavour or taste by the superior spongy bone deserved further investigation.—Professor CLELAND referred to the supply of Jacobson's organ in the sheep with branches from the olfactory nerve and from Meckel's ganglion.

Dr. A. SYMONS ECCLES read a paper on the Internal and External Temperature of the Human Body, as modified by Muscle Kneading, with Sphygmographic and Sphygmanometric Records. The external temperature was at first raised and then fell, while the internal, which was at first slightly lowered, afterwards rose. Thus, on the whole, there was an approximation of external and internal temperatures. The pulse rate was lowered, and the sphygmomanometric readings at first rose and then showed a marked fall.—Professor RUTHERFORD thought the value of the observations would have been increased by noting the amount of CO₂ excreted during the experiments.

Dr. E. H. EZARD read a communication on a New Appearance in Medullated Nerve Fibre. When a medullated nerve fibre is treated with a 1 per cent. solution of osmic acid, and thereafter with glacial acetic acid, the darkened white substance of Schwann presents at first the appearance of a network, as if circular holes had been punched out of it; then the network becomes more open, and finally the dark substance entirely disappears. Dr. Ezard showed specimens demonstrating these changes. He held that the network is artificially produced.

Professor RUTHERFORD explained in detail, with the help of diagrams and models, his views as to the Structure and Mode of Contraction of Striated Muscular Fibre, referring to the differences of appearance seen in the muscle of the crab when in states (1) of physiological extension, (2) of relaxation, and (3) of contraction.—Professors McKendrick, Anderson, and Cleland made a few remarks upon various questions raised by Professor Rutherford's views.

Professor C. B. LOCKWOOD introduced a discussion on the Teaching of Anatomy. Defining anatomy as the science of the interpretation of the structure of living things, he claimed as a necessary part of its study biology, embryology, and histology. He held that mere cramming should be avoided, and that examinations should be made of real educational value. He wished to see the subject approached from a synthetical point of view, as rendering obscure points more intelligible to the student, illustrating his remarks by diagrams showing the development of the splenic and hepatic arteries. If diagrams were to be used, too much importance were not to be attached to them. An abundant supply of fresh material and numerous demonstrators were indispensable.—Professor STRUTHERS agreed in most points with Professor Lockwood, and thought that most of his remarks could be taken as describing the present mode of teaching anatomy in Scotland.—Professor RUTHERFORD, among other remarks, referred to the good work done in London schools, many of which were unendowed.—Dr. BROOKS commended the use of dissected specimens as an adjunct to actual dissection.—Dr. Mackay and Professors Anderson, Griffiths, and Cleland having spoken, Professor Lockwood briefly replied.

OBSTETRICS.

On Thursday, 9th inst., Dr. HALLIDAY CROOM (Edinburgh) opened the discussion on Obstructive Dysmenorrhœa and Sterility. He believed that in many cases dysmenorrhœa was due to constitutional states such as gout and rheumatism. He did not believe in obstructive sterility, but rather that the sterility was due to congestions of the endometrium, and that those cases where mechanical interference did good were cases in which the congested and otherwise unhealthy condition of the endometrium were relieved.—Dr. R. BARNES believed thoroughly in obstructive dysmenorrhœa causing sterility, and due both to atresic conditions and flexions of the canal. He believed that dysmenorrhœa and sterility were closely associated. Discussion was the best treatment, without the after-use of intra-uterine stems.—Dr. DUKE (Dublin) thought that dilatation did good by allowing free discharge of fluids from the uterine cavity.—Dr. STEPHENSON (Aberdeen) believed that we had made very little progress in our knowledge of dysmenorrhœa, and he objected to mechanical interference. He urged the use of apioi as a valuable means of relief.—Dr. BYERS (Belfast) urged the view that opinions as to treatment differed, because men thought of different forms of disease. He quoted cases where mechanical interference seemed to cure the sterility.—Dr. AUST LAWRENCE (Bristol) believed in obstructive dysmenorrhœa, and cited cases where treatment seemed to have cured cases of this disease and sterility.—Dr. BRAITHWAITE (Leeds) believed he had met with many cases of obstructive dysmenorrhœa, and presented a specimen showing a pinhole cervical canal, where there had been no dysmenorrhœa. Probably the freedom from pain was due to the shortness of the stenotic part. He believed in very thorough dilatation, so thorough as to permit the index finger to pass into the uterine cavity.—Dr. WALTER (Manchester) stated that the pain in connexion with obstructive dysmenorrhœa often came and went at different periods, and so led to a wrong diagnosis. He believed in treatment by mechanical means.—Dr. W. L. REID (Glasgow) believed more in obstructive dysmenorrhœa than in obstructive sterility. He coincided in the view that operative interference did good, but much more by improving the general condition of the uterus than by the simple dilatation of the cervical canal.—Dr. HEYWOOD SMITH (London) believed in obstructive dysmenorrhœa. He thought that simple dilatation was not of any lasting service, but that incision of the internal os followed by free dilatation is useful.—Dr. A. ROUTH (London) stated that a large number of cases of stenosis were associated with sterility, but dilatation simply was of little use unless followed by the wearing of an intra-uterine stem.—The PRESIDENT believed in obstructive dysmenorrhœa, and stated that the most common and most successful treatment was the mechanical.—Dr. CROOM concluded the discussion by stating that, while formerly he practised mechanical treatment, he did not do so now, and yet had quite as good results.

Dr. W. L. REID showed and described an instrument for the Rapid Dilatation of the Cervix Uteri. It consists of a graduated series of conical screws with prominent but rather blunt threads. He stated that where an organic stricture had to be overcome rapid destruction of fibre must result, and claimed for the conical screw, carefully used and with antiseptic precautions, that it was a rapid, efficient, safe, and comparatively painless method.—Dr. DUKE (Dublin) showed a new two-bladed dilator for the rapid expansion of the cervical canal. It consists of two thin but powerful blades, which are expanded by a wedge being forced between their basal portions by means of a screw in the handle.—Dr. HEYWOOD SMITH did not favour any form of rapid dilatation owing to its danger.—Mrs. GARRETT ANDERSON believed in rapid dilatation and practised it constantly.—Dr. AUST LAWRENCE thought that rapid dilatation was dangerous, and that tents were far better, and, with antiseptic precautions, much safer.—Dr. IMLACH (Liverpool) believed that the dilators shown would be useful only when the canal was so large that there was no use for dilatation.—Dr. PARVIN (Philadelphia) believed in mechanical dilators, and thought Hegar's were the most useful.—Dr. WALTER showed his instruments for securing the broad ligaments during extirpation of the uterus per vaginam.—Drs. BRAITHWAITE and ROUTH made some remarks on the subject.

Dr. R. BARNES (London) read a paper on Analogies between Menstruation and Gestation and Puerpery, in their

Physiological and Pathological Relations. He believed that certain forms of puerperal fever are due to materials generated in the patient's system, and that this is proved by the evidence seen in connexion with menstrual phenomena.—Dr. BRAITHWAITE discussed the question, and Dr. WARREN (Melbourne) stated that he found small clots remaining in the uterus produce marked poisoning, accompanied by fever.

The PRESIDENT then read a paper on the Rapid Curative Treatment of Cystitis in Women. He said it was a common and dangerous disease, and advised that, after the elimination of organic disease of the kidney and ureters, the thorough dilatation of the urethral canal, sufficient to permit of perfect bladder rest for a week or ten days, should be practised.—Dr. DUKE said he had seen a number of cases cured by the method suggested by Dr. Madden.—Dr. JESSOP (Leeds) stated that Weiss's dilator was found very useful in such cases, and that Mr. Teale of Leeds had introduced this treatment many years ago.—Dr. BOYD (Dublin) supported this method of treatment, and spoke to the after-management of such cases.—Dr. BYERS (Belfast) believed that some uterine affection was often at the root of the disease, and that treatment directed to the uterus would often suffice.—Dr. HEYWOOD SMITH (London) asked what amount of rapidity of dilatation was practised.—Dr. S. SLOAN (Glasgow) said that dilatation simply often perfectly served the purpose.—Dr. R. BARNES (London) said that malpositions of the uterus were often to blame for the irritability of the bladder.—Dr. HARRISON (Liverpool) said that great care in the use of a catheter was often of great service in such cases.—Dr. SMITH (Bolton) said bella-donna was highly useful.—Dr. MORE MADDEN closed the discussion.

Dr. WALLACE (Liverpool) then read a note on three forms of Fallopian Disease: 1. Subinvolution (open tube). 2. Hypertrophy (open tube). 3. Complete Stenosis (Inflammatory). The Section afterwards adjourned.

The SECRETARY (Dr. W. L. Reid) read a translation of a paper by Dr. Apostoli on some novelties in the Electrotherapeutics of Gynecology. He spoke, in the first place, of the relief of pain by galvano-puncture with negative and with positive electrodes of gold, especially in cases of perimetritic inflammation accompanying fibroid tumours. In hæmorrhagic cases Dr. Apostoli used a special gelatinous electrode, also one of gas carbon. He next discussed the dosage of the current and the method of application, drawing special attention to the sensibility of the cervical tissue.—Dr. AVELING quoted Dr. Keith's condemnation of hysterectomy, and maintained that this method should be tried before having recourse to the knife. He read four cases in support. He described his method of measuring tumours, and exhibited an instrument. He also showed his electrode.—Dr. LAWRENCE (Bristol) spoke of a beginner's difficulties. He described his rheostat, electrodes, &c.—Sir SPENCER WELLS thought that in cases where there was a long pedicle surgical treatment was still advisable.—Dr. BRAITHWAITE described an extra-abdominal case.—Dr. IMLACH attacked the method; he wanted more results.—Dr. OLIVER (Newcastle) spoke in support of this form of treatment in cases after the menopause.—Dr. HEYWOOD SMITH removed the ovaries in such cases.—Dr. ROUTH saw relief of symptoms, but temporarily.—Mrs. GARRETT ANDERSON had been disappointed with the results.—Dr. EDIS had seen poor results. He still removed the ovaries, and got his patients much sooner out of hospital than those under Dr. Apostoli.—Dr. BELL (Glasgow) wanted the theory explained.—Dr. MARCUS (Paris) had seen good results as regards symptoms, but the treatment lasted long, as did also that of phthisis.—Dr. HARVEY (Calcutta) had seen a hundred of Dr. Apostoli's cases, with relief of symptoms, and in many with diminution of the tumour.—Dr. MORE MADDEN spoke of Dr. Cutter's work, and condemned spaying. He had treated many cases with good results, but was unable to keep his patients long enough in hospital.—Dr. APOSTOLI said the treatment was not radical, but removed symptoms; as cases vary, so must the treatment. He did not think that the treatment would be applicable to ovarian tumours.—Dr. AVELING thought the chief drawback was the time required.—Dr. LAWRENCE treated his cases as out-patients.

Dr. BERRY HART read a paper on a case of Cesarean Section (Porro's modification). He thought the modifications of Sanger and Leopold had made the Cesarean section the operation of the future. He chose the Porro modifica-

tion, as the woman did not wish to become pregnant again. He did not think peptonuria a constant consequence of labour.—Dr. MURDOCH CAMERON detailed a case of successful Caesarean section. He used seven silk stitches for the uterine wound, and condemned the use of the drainage tube.—Dr. ROBERT BARNES (London) believed that Sanger's operation is, as a rule, the better, but approved of Porro's when the patient wished to avoid a future pregnancy.—Dr. IMLACH (Liverpool) asked what was recommended in cases in which the child was dead.—Dr. HEYWOOD SMITH asked why Dr. Cameron had not performed Porro's operation in his case.—Dr. DUKE (Dublin) asked why the child had not been put to the breast.—Drs. HAET and CAMERON replied.

Mr. TRUAX (instrument maker, Chicago) then showed and demonstrated the use of a surgical pump, which could, by the use of various additional pieces of apparatus, be used for a great variety of surgical and medical purposes.

The proceedings of the Section were then brought to a close by a vote of thanks to the President, proposed by Dr. Leishman, and seconded by Dr. Robert Barnes.

PATHOLOGY.

On Wednesday Professor EDGAR CROOKSHANK made a communication on Tubercular Cows' Milk. He reported the examination of milk in the cases of two cows with undoubted tubercular disease. In each case the udder was affected, being indurated and nodular. The milk having been allowed to stand, a small quantity of the deposit was prepared on a cover-glass, and without difficulty abundant tubercular bacilli were found on staining. Tubercular lesions were discovered in the cows on examination after death. Some of the milk, having been mixed with other food, was given to rabbits, and after an interval of some months diarrhoea set in and death resulted, tubercular ulceration of the bowels and affection of the mesenteric glands being discovered post mortem. Dr. Crookshank regards the tubercular bacillus of the cow as identical with that found in man. In view of the fact that milk from tubercular udders must frequently come into the market, he considers that immediate legislation is demanded.—In reply to Dr. Joseph Coats, Dr. Crookshank said that the disease of the udder was not a mere local condition, but part of general tuberculosis. Its importance, however, consisted in the fact that if the udder was unaffected the bacilli were not found in the milk.—Mr. LOGAN drew attention to the fact that butchers were in the habit of sending meat from cattle which they knew to be tubercular into the market, and that danger might thus arise, especially from the inner surfaces of the ribs having been possibly implicated by extension of pulmonary mischief.—Dr. CROOKSHANK agreed in speaking of such conduct as general, and not prohibited. The virus would, however, be destroyed during the process of cooling. Such a safeguard did not exist in the case of milk, as it is usually consumed unboiled. In reply to Mr. Maylard, he stated further that it was taken for granted that boiling of the milk would destroy its harmful influence, but that this had not yet been definitely proved.—Mr. EDINGTON asked if there were any difference in size between the tubercular bacillus as found in bovine and human tuberculosis, and if it were possible that one might have been evolved from the other.—Professor CROOKSHANK stated that the opinion that there was such a difference in size, as held by Klein, was probably due to the fact that Klein had examined bovine tuberculosis only in sections. The bacillus as found in tubercular milk has quite the same size and appearance as that found in tubercular sputum. Inoculation experiments with sputum and milk gave the same lesions (and the same bacilli) in rabbits. Difference of opinion existing as to whether or not the pig is subject to tuberculosis, Professor Crookshank thought noteworthy a case in which he had an opportunity of making microscopical examination. The animal had had cough, constipation, discolouration of the skin, but no rise of temperature. Lesions were found after death which might to the naked eye have suggested lymphadenoma, but the microscope proved them by the presence of numerous typical bacilli to be tubercular.

Professor CROOKSHANK next read a paper upon Human and Bovine Actinomycosis, which he had studied for a number of years both at home and in Germany. Among the cases which he narrated was that of a heifer with a large growth

in the parotid region, measuring eight inches by ten. It was discharging from several sinuses a quantity of yellowish muco-purulent matter, which on examination was found to contain grains of actinomycosis. The animal having been killed, the usual appearances in such cases were seen and the lungs (especially the left) showed nodules at the margins of the lobes and throughout their substance. These had the appearance of tubercular deposits, but were demonstrated microscopically to be actinomycotic. The kidneys, uterus, ovaries, and tongue were healthy. The animal having been said to be "one out of several," investigation was made, and the ailment found to be common in the fen-land, and called "wens," "stickfast," &c. It was said to be treated generally by caustic, and the animals were subsequently sent into the market; 8 per cent. were found to be so affected. Several other cases having been detailed, Professor Crookshank summarised his results as follows: Bovine actinomycosis is common in this country, especially in the fen districts. It occurs as wens or tumours in different parts of the body; it occurs in the lungs, as well as in the mouth and tongue. Unquestionably the disease is found also in man, but there are certain differences. In man there is a mycelium formed and easily demonstrated, whereas the "clubs" are found with difficulty; in animals, on the other hand, the "clubs" are easily demonstrated, but there is a tendency to calcareous degeneration rather than to the formation of the mycelium. The question may thus be raised: Do there exist two distinct organisms, or are these differences due to the difference in soil afforded by the human and the animal body? Questioned by Mr. Edington, Professor Crookshank said that he had made many attempts to cultivate the organism, but had not yet succeeded.

Professor CROOKSHANK then reported a series of investigations upon the occurrence of Anthrax in Swine. He said that, while it was admitted that pigs die after eating the offal from cattle which have died of anthrax, there has been much difference of opinion as to the cause of the pig's death, some affirming that it was due to septic poisoning. The bodies of such pigs, on being examined, are found to contain, in the very striking enlargement of the throat which characterises them, a great quantity of gelatinous subcutaneous infiltration. Their tonsils are found to be ulcerated, and, indeed, gangrenous. Such were the appearances in a pig which was caused by the speaker to be fed on offal from anthrax-affected cattle. Experiments were further made by the injection subcutaneously of equal parts of broth and blood from the spleen of cattle killed by anthrax. In such cases great infiltration took place in the throat or abdomen, according as the one or the other was chosen as the spot of injection. The animals died, and, on examination, there were found purplish patches on the liver, as well as local boss-like enlargements of the spleen. Similar results were obtained when the injection fluid was taken from guinea-pigs which had been killed by anthrax; and similar results also when the fluid was prepared from pure agar-agar cultivations, provided sufficient dose was given. From the pigs dying in the last series the organism was again taken, and caused anthrax in guinea-pigs. Confirmation of these results was obtained from a case in which it was positively known that the spleen of a cow which had had anthrax was eaten by certain pigs on the same farm. These latter gave the same appearances as in the other cases, especially the enlargements of the spleen. Bacilli were obtained from the organs, cultivated, and found to cause the disease in other animals. Pigs, both old and young, are thus undoubtedly susceptible to anthrax. In reply to Prof. Roy, it was added that all spontaneous cases hitherto studied had been apparently caused by the ingestion of offal, no other means of inoculation in such cases having been observed.—Prof. MACFADYEAN asked if there were any explanation of the difference in symptoms between anthrax as occurring in the pig and as occurring in other animals; also as to any difference in the period of inoculation.—As regards the symptoms in the pig, Prof. CROOKSHANK thought that the swelling in the throat, which was invariable in the pig, was probably due to the disease being caused by the ingestion of offal. The tonsils in such cases are found ulcerated or necrotic, and it may be here that the bacillus finds entrance. In the cases where the disease was induced by injection, the gelatinous infiltration and swelling did not take place invariably in the throat, but was determined by the position of the injection. In such cases, the track of the needle is gangrenous, and there is great exudation around. The term of incubation

varies. In one case death occurred within twenty-four hours; in other cases after an interval of four or five days. Great stress must be laid upon a sufficient dose being administered. Failure in observing this may, perhaps, explain the difference of opinion which has prevailed upon the question of the communicability of anthrax to swine.

Mr. ALEXANDER EDINGTON (Edinburgh) subsequently gave a demonstration upon the Methods of Bacteriology, at the close of which an opportunity was afforded of examining the instruments and apparatus.

PUBLIC HEALTH.

On Friday, the 10th inst., the sitting commenced with a paper by Dr. TATHAM (Salford) on the Desirability of a General Extension of Compulsory Notification of Infectious Disease, with especial reference to a proposed system of Disease Registration. He said that he was convinced of the concurrent advantages of disease notification and hospital isolation, and argued that notification should be applicable to the whole country. He had obtained the co-operation of thirty-two of his colleagues in the public health service, and had maintained a system of disease registration on a small scale. The registration of infectious diseases, however, for the whole country was obviously a matter of State concern, and should be carried out by some central department, preferably the Local Government Board.

A discussion on the Disposal of Sewage was opened by Dr. JAS. B. RUSSELL (Glasgow). He said that in Glasgow this was a subject of the highest importance. In 1790 the first common sewers were formed, and in 1860 there were sixty miles of sewers. The Clyde was now not more offensive than it was forty years ago, although such a very large amount of sewage was discharged into it. This was due to the widening and deepening of the river, by which the sewage was carried at a much greater rate than formerly towards the sea. The dredging by the Clyde Trustees had also aided in the purification of the Clyde. Dr. Russell then described the various methods proposed for the proper disposal of Glasgow sewage, and detailed the reports of several commissions appointed for this purpose. He stated that one of the first questions to be investigated by the authorities of the extended municipal area of Glasgow would be this important subject.

Dr. CARPENTER (Croydon) discoursed also on the Disposal of Sewage. He submitted his well-known views upon this subject, and re-stated the series of propositions which he had brought under the notice of the International Congress in London in 1881. Briefly stated, they are: (1) That the application of the sewage of a water-closet town to land near dwelling houses is not injurious to the health of the inhabitants, provided the sewage be fresh and applied in an intermittent manner, and the effluent be capable of rapid movement from the irrigated fields; (2) that the effluent water is satisfactorily cleansed by the soil, if not less than an acre is provided for each 250 persons; (3) that vegetables grown are safe for food; (4) that neither parasitic nor infectious diseases are produced; (5) that the farming should be encouraged from a political economy point of view. The speaker proved the soundness of these propositions by the results of the sewage farm at Croydon, and earnestly recommended the same as applicable to all water-closet towns without exception. He felt sure that it would be more satisfactory when it was so utilised than for it to be sent into the Thames, the Mersey, or the Clyde.

Dr. C. R. DRYSDALE (London) read a paper upon the Berlin and Parisian Sewage Farms, and contended that the only rational way of treating the sewage of cities and restoring the purity of rivers was by agricultural utilisation on suitable soils and areas, as used in Berlin, Paris, Croydon, Birmingham, and elsewhere. The London Board of Works were making a great mistake, the tanks to be erected costing £1,000,000 and the chemicals &c. about £100,000 a year. Dublin and Glasgow had rivers which were a disgrace to civilisation. Dr. Drysdale then described the Paris and Berlin sewage farms, and urged that this method should be adopted in this country.

Mr. T. J. DYKE (Merthyr-Tydfil) communicated a paper on the Disposal of Sewage at Merthyr-Tydfil. In his absence it was read by Dr. Duncan. — Mr. BAILEY DENTON, C.E., adopted the method of Frankland, known as "downward intermittent filtration," in disposing of the sewage from Merthyr, Dowlais, &c. The work was finished in 1881, and since then from 100,000 to 300,000 gallons of the

liquid strained from the sewage had daily passed over, and through the soil of twenty acres of land. There had been no injury to health in carrying on the work; the land acted as well as ever in clarifying the liquid sewage; the effluent water was perfectly clear and colourless; there had been no "clogging" of the soil, no bogginess of the surface; and during 1886 and 1887 the work of the farm had been carried on at a profit. — Dr. MURRAY (Forfar) described the method of sewage disposal in Forfar. Both intermittent and surface filtration were used; on the land devoted to the former method cabbages, carrots, mangolds, and turnips were raised; on the latter grass and turnips in rotation. The financial results were satisfactory, and the death-rate had been lowered since the introduction of this method. — Dr. WHITELAW (Kirkintilloch) and the PRESIDENT described the manner in which the sewage of Kirkintilloch and Edinburgh were respectively disposed of. Both speakers strongly advocated the employment of filtration areas.

A discussion followed, in which Dr. Davis (Chicago), Colonel Jones, Mr. W. R. W. Smith, and Mr. Bateman (Norwich) took part. Dr. Russell briefly replied.

Dr. J. FRANCIS SUTHERLAND (Glasgow) read a paper on Hospital Administration. In Britain there were, he said, 650 hospitals, containing 38,000 beds, and maintained at a cost of not less than £1,700,000. The proportion of beds to the population in different cities, and the annual cost per bed, varied to a large extent. It was a notorious fact that many hospitals were largely in debt; in the London hospitals there was last year a deficiency of £100,000, which was partly met by selling out stock. In the next place, Dr. Sutherland showed that the accommodation was far short of what it should be; in large districts throughout the country even absent altogether. Hospitals should also be quite "free" to deserving sufferers. As a remedy for these and other defects in our hospital administration, the proposal was made that voluntary effort be assisted and encouraged by parliamentary grants, as in the case of training ships. For the better government of hospitals, and in the interests of economy, the present divided and expensive system should be replaced by the administration of a central bureau, which would be thoroughly representative in its character, and have under its control every hospital, voluntary or parochial. This bureau should be composed of urban and rural representatives from among the subscribers and from public bodies, and Crown representatives. The speaker urged the necessity for an inquiry into the present system by a Royal Commission, which would soon discover the weak points.

The Section afterwards rose, a vote of thanks having been previously passed to Dr. Littlejohn, the President.

DISEASES OF CHILDREN.

On Thursday, the 9th inst., the proceedings in this Section were devoted to a discussion on Rickets, opened by the PRESIDENT (Dr. Cheadle). In his opinion rickets was a general disease, and the various causes commonly assigned, such as insanitary surroundings &c., are all subsidiary to one chief cause—viz., bad feeding. Infants fed by hand are extremely liable to the disease, especially if fed on farinaceous diet. This is owing, not to the presence of starch, but to the absence of certain essential ingredients in the food. Dr. Cheadle insisted on the absence of fat in the food as the most essential factor in the causation, although he believed that the absence of nitrogenous substances and also of phosphate of lime had a considerable influence in the causation. He did not regard syphilis as having any essential bearing on the disease, though when present it would accentuate it. He supported his views with a very interesting reference to some experiences in regard to the rearing of young lions in the Zoological Gardens. The connexion of rickets with infantile scurvy, itself markedly a diet disease, was brought forward in aid of his conclusions, while he did not neglect to indicate that the occurrence of late rickets was difficult of explanation under his view. The enlargement of the liver and spleen said to occur in rickets he looked upon as by no means an essential part of the disease, but probably due to concurrence with syphilis. Treatment by food followed a natural sequence. He believed rickety children were over-drugged, and he regarded milk and cream and raw meat as preferable to cod-liver oil and iron. — Dr. OGSTON (Aberdeen) introduced the surgical aspects of the subject, dealing mainly with flat-foot and spinal curvature. — Dr. RANKE (Munich) spoke

in support of the views of Dr. Cheadle, while Dr. A. JACOBI (New York) controverted them to some extent. He regarded the condition of the bloodvessels and of the heart in relation to congestive conditions as of more importance than the diet in causation, and in regard to treatment he expressed a strong conviction in favour of the beneficial effects of phosphorus administered in the pure form.—Dr. CARMICHAEL (Edinburgh) agreed with the views of Dr. Cheadle, and advocated inunction with cod-liver oil.—Dr. ASHBY (Manchester) did not accept the view that defective food was the cause of rickets. He believed rather that it was an inherited dyspepsia, which prevented the taking of proper food, that ought to be blamed. The enlargement of the spleen, he suggested, might be purely of an anemic origin.—Mr. E. OWEN (London) strongly supported the opinion that rickets was due to improper food, and he specially instanced the prepared foods for infants. He then discussed various surgical points.—Dr. FINLAYSON made some interesting remarks on the occurrence of rickets in Glasgow.—Messrs. Pughe, Freer, and Parker also took part in the discussion, and Dr. Cheadle replied.

OPHTHALMOLOGY.

On Thursday, the 9th inst., Dr. GEORGE MACKAY read a paper, entitled "A Contribution to the study of Hemianopsia of Central Origin, with special reference to acquired Colour-blindness." After reviewing the five cases already published, and stating that in those cases the methods of examination were either incomplete or defective, he related the methods of examination he employed in the cases he has had an opportunity of examining, and showed his test objects.—The President, and Messrs. Hewetson, Benson, and Grossman took part in the discussion which followed, and Dr. Mackay suitably replied.

Mr. H. B. HEWETSON read a paper on General Neuroses having an Ophthalmic Origin.—Messrs. Carter, Bickerton, and the President took part in the discussion.

The other papers read were as follows: Sailors and their Eyesight, by Mr. T. H. Bickerton; Colour-blindness, with a Demonstration of New Tests, by Dr. Karl Grossman; Operation for opening the Sheath of the Optic Nerve for the relief of Pressure, by Mr. R. Brudenell Carter; the Value of the Cautery in the Treatment of Ulceration of the Cornea, by Mr. J. C. Renton; some cases of Conical Cornea treated by the Actual Cautery, by Mr. Rickard Williams; on the Use of Cocaine, by Mr. W. McKinlay.

Mr. Bickerton also showed a case of Unusual Corneal Opacity in Process of Recovery.

In the afternoon a number of the members of the Ophthalmological Section met at the Eye Infirmary, Berkeley-street, for the purpose of examining the large collection of scientific instruments contained in the classroom of the institution. The PRESIDENT gave an interesting demonstration of several instruments devised by himself and of use in ophthalmic practice. Amongst these the following may be mentioned: 1. A new self-registering perimeter. This instrument was devised for the purpose of utilising the colours of the spectrum-grating, and by means of it the relative intensity of a given colour sensation in the lateral parts of the field can be compared with that of the centre at the same time. The mechanism of registering is so arranged that the extent of either side of the field in any meridian can be quickly determined. 2. A portable ophthalmometer, illuminated with the electric light, and of about the same size as an ordinary refraction ophthalmoscope. With this little instrument the curvature of the cornea can be measured very rapidly, and it was devised with special reference to the detection of astigmatism after the operation of cataract extraction. 3. A modification of Mr. Carter's perimeter for determining the field of fixation in the horizontal meridian. Two white discs travelling on the arm of the perimeter are so arranged that, when one is fixed by the yellow spot, the other is over the optic nerve entrance, and consequently remains invisible until the limit of the field of fixation is reached. A number of microscopic sections were also exhibited, as well as the large collection of pathological and anatomical specimens contained in the Infirmary Museum. At the close of the meeting Dr. Reid performed several cataract extractions by the combined method, both with superior and inferior corneal section. In every case antiseptic precautions were used. The demonstration lasted for two hours, and formed by no means the least interesting part of the work of the section.

On Friday (the President in the chair), the following papers were read and discussed: (1) On the Treatment of Entropion and Trichiasis by the Transplantation of Buccal Mucous Membrane, and (2) Hyalitis Punctata, by Mr. A. H. Benson; (3) On the Treatment of Symblepharon by Transplantation of Mucous Membrane from the Lip, by Dr. T. S. Meighan; (4) Chronic Nasal Catarrh as a Reflex Cause of Accommodative Asthenopia, by Dr. P. W. Maxwell. Dr. Karl Grossman showed microscopical specimens of Argyria of the Conjunctiva, and of a Cavernous Sarcoma of the Choroid. On the motion of Dr. Brailey, London, a vote of thanks was awarded to Dr. Reid, the President of the Section, and the proceedings terminated.

PHARMACOLOGY AND THERAPEUTICS.

This Section met on Wednesday, when Dr. JAMES MORTON, the President, delivered his address.

Professor THEODORE CASH made some remarks on Carbolic Acid, Antipyrin, Antifebrin, and their Allies, especially as regards their antipyretic, analgesic, and antiseptic actions.

A valuable paper by Dr. DUJARDIN-BEAUMETZ on the Phenacetine was then presented, a translation of it being read by one of the secretaries. It was pointed out that there are three phenacetines (or acetphenetidines)—the meta-, para-, and ortho-acetphenetidine. The first possesses no therapeutic properties, while the second is more powerful and satisfactory than the third. The history of the drug was then discussed, and its physical and chemical properties noticed. In investigating the physiological action of the agent, its insolubility was found to hinder its subcutaneous administration, and rendered experimentation on animals difficult. It was definitely made out, however, that if phenacetine is toxic in character at all, it must be so in but a very slight degree. Therapeutically the phenacetines have a double action. They lower temperature (especially in pyrexia) and soothe the pain. In fever half a gramme lowers the temperature from 1° to 2° C., the effect lasting usually about four hours, though sometimes longer. Abundant sweating is produced, and often a sensation of collapse. Phenacetine in fevers shows itself superior to antipyrin and acetanilid in producing marked antithermic effects without toxic phenomena. But it is as an analgesic that the drug outrivals these its predecessors; while it is in this respect quite as powerful as antipyrin or acetanilid, it does not cause the pain in the stomach or the scarlatiniform rash of the former, nor does it give rise to the cyanosis of the latter. He had given it for months in daily quantities of from one to two grammes, and had never observed any bad effect. He had used it for the relief of every form of pain (neuralgias, migraine, rheumatic pains, muscular rheumatism, acute articular rheumatism, the lightning pains of tabes, &c.), and always with the best results. In hysteria and hysterical pains it answers better than bromides, and it procures sleep in nervous insomnia. Phenacetine is to be regarded as a narcotic as well as an analgesic, a depressor of the excitability of the medulla. The dose of phenacetine (the para-acetphenetidine) is one to two grammes daily, given in single doses of half to one gramme. It is best given in *cachets*. M. Dujardin-Beaumetz concluded as follows:—1. In the phenacetines we have excellent antihyperthermic and analgesic remedies. 2. Of the three, two only possess therapeutic properties: para- and ortho-acetphenetidine. 3. The ortho-acetphenetidine must be given in rather larger doses than the para-salt; the medium dose of the latter is from 1.5 gramme to 2 grammes per day. 4. These two salts seem to be devoid of toxic properties. 5. They are powerful antithermics and very active analgesics, which ought to be substituted for antipyrin for the following reasons: (1) because they are non-toxic; (2) because they act in doses one-half smaller; (3) because they are one-half cheaper; (4) because, finally, there is no monopoly in their manufacture.—Professor LEECH (Manchester) considered that the injurious influence occasionally produced by the dehydroxyle compounds would prevent their coming into general use as antipyretics, the more newly introduced substances, antipyrin and antifebrin, being more safe and at the same time more powerful.—Dr. A. D. MACDONALD (Liverpool) said that on first learning anything of the germ theory, in 1879, he had caught at the principle of the antiseptic treatment of zymotic diseases; and, after administering carbolic acid internally in scarlet fever and whooping-cough, he had indicated his views in a

short article in the *Edinburgh Medical Journal* of September, 1881. Then and now he held (1) that antiseptics is the rational principle of treating all germ diseases; (2) that it is our duty to discover the antiseptic substance which is most antagonistic to the micro-organism of each disease; (3) that we cannot sterilise the human organism, but, by appropriate antiseptics, we may lower the vitality of the disease germs and prevent poisoning of the organism by the germs' excrement.—Dr. ILLINGWORTH (Accrington) said that the action of antipyretics, such as antipyrin, is to prevent the formation of fibrin. This is proved by the cyanosis induced by the drugs and by the reduction of oxyhaemoglobin. These drugs should, therefore, never be used in diseases associated with diminution of fibrin—e.g., typhoid, and all germ diseases. It is only safe to give it in cases of pyrexia due to catarrhal causes.—Dr. WILBERFORCE SMITH remarked that the action of disinfectants in diseases caused, or probably caused, by micro-organisms was of great interest. We must go outside the indiscriminate use of carbolic acid or other powerful substances, which, to destroy micro-organisms in the blood or deep tissues, must go near to destroying the blood and tissues themselves. Quinine acts specifically on the blood and spleen of persons even when not affected with malarious fever. The organism recently described as present in ague acts, so to speak, on the same platform. Mercury and syphilis, in like manner, naturally act on corresponding tissue—skin, mucous membrane, and bone.—Dr. R. KIRK (Glasgow) had found that in cases of pneumonia, typhoid fever, and general febrile conditions, with a temperature of 103° or 104° , carbolic acid might be given with absolute safety in doses of four grains every two hours, until the temperature fell to 100° or 101° . In these cases, when the temperature was reduced below 102° by the drug, he invariably found that the general *bien-être* and comfort of the patient were much improved, and, as he believed, his chances of recovery much enhanced.—Dr. SIDNEY MARTIN was interested in the observation that antipyrin in some cases produced fever instead of reducing it, because he had found the same in some experiments on the action of the active principle (a globulin) of the jequirity: with a large dose in pigeons, simply a great depression of temperature occurred; with a small dose, the temperature sometimes rose one or two degrees before falling. With regard to the analgesic action of antipyrin, Dr. Martin had found the drug of great service in relieving the pain of aneurysm; but, owing to the large amount of liquid required to be given hypodermically, ecchymosis, abscess, and scarring may result locally, unless the liquid be gently rubbed away after injection.—Dr. RALPH STOCKMAN (Edinburgh University) then read a paper on the Coca Alkaloids.

On Thursday two cases of Xeroderma Pigmentosum, presenting peculiar features, were shown, in the absence of Dr. W. Allan Jamieson, Edinburgh, by Mr. Hugh JAMIESON, M.B., his clinical assistant. The following are short notes of the cases. R. E—, aged fifteen, a stout lad, had been under observation for more than three years. Father, mother, and nine brothers and sisters were healthy. Since the age of three years he had been subject to an eruption, affecting solely the uncovered parts of the body, which commenced to appear about the middle of February in each year, and continued with intermissions and exacerbations until the end of September. From then till the following February he remained free. At the season when the complaint recurs, or when a fresh outbreak threatens, a feeling of chilliness comes on, his face swells and turns red; the redness, however, is soon restricted to individual blotches, on which flat vesicles form, from a pea to a sixpence in size, the redness persisting as an inflammatory areola round each. The centre of the vesicle now assumes a dark reddish-brown, and finally dries up, while the edges continue vesicular, in this resembling a vesicating erythema multiforme, or hydroa. Some blisters rupture, and their contents form dry, thick crusts, often blood-stained, greenish, or black, which conceal an ulcer. From the first appearance of a crop till the crusts have fallen off and the skin beneath has cicatrised, a period of three weeks may elapse. This is succeeded by a short interval of rest, or a fresh crop may develop before the previous blisters have subsided into quiescence. The face all over the ears, especially the margin of the auricle and the backs of the hands, are the parts principally attacked, but the nape of the neck suffers to some extent, and when he was a boy, wearing short trousers and socks, similar

blotches and blisters formed on the exposed part of the leg, and some white smooth scars are still discoverable there. As a result of these repeated attacks the cheeks and backs of the hands and the ears are much disfigured by large scars, smooth and glossy. On the temples and between the scars on the face there are irregular-shaped areas of brown or yellowish-brown staining, and one or two telangiectases can be found when carefully looked for. So far no watery tumours or new formations have appeared. The second case was a much milder one, having lasted a shorter time. G. T—, aged eighteen, born and still resident in the country. Father and mother and ten brothers and sisters healthy. He is a clear-complexioned ruddy lad. At the age of thirteen the attacks of which he complains began and have recurred every year since. He came to the Royal Infirmary in the middle of May, 1888. In April, earlier in a bright, later in a dull spring, his ears swell, turn red, and blisters form on them, particularly attacking the margins of the auricle. These blisters break and leave crusted excoriations, which heal slowly and are succeeded by scars. Fresh blisters form at intervals all through the summer, but cease to be produced about the end of September. During the winter the ears sometimes swell, but no vesicles form. On the cheeks, backs of the hands, and nape of the neck, round, small, isolated vesicles develop, each surrounded by a narrow red areola, the remains of a red blotch which had preceded the vesicle. These vesicles are numerous upon the cheeks, less so in the other situations. In all the situations named white scars are to be seen left behind by previous attacks. The lad has some ordinary freckles on the face, but there are as yet no patches of pigmentation and no telangiectases. These cases are allied to those formerly described by other observers by the localisation, limited to parts of the surface exposed to light, by the eruption of red blotches, and by the production of cicatrices, and in the more advanced cases by atrophy of the skin, brown pigmentation, and telangiectases. They differ in the fact that freckle-like staining did not occur early or primarily, that the prominent lesions were vesicular, and that in both the ears suffered most. Light and not excessive heat seems the principal exciting cause, acting on a latent but unknown predisposition; and the lessened power of the sun's rays in this northern attitude may perhaps explain the difference in the primary lesions and the variations from the characters described by others.—Mr. MALCOLM MORRIS regretted that Mr. Jamieson was not present to give more information about the cases. In the absence of microscopic specimens it was impossible to make a diagnosis. At present there was no sign of epitheliomatous change, and until that showed itself it was speculative to call the cases xeroderma pigmentosum, or Kaposi's disease.—Dr. BROOKE (Manchester) doubted very much whether the second case (G. T—) was really one of xeroderma pigmentosum. There were no ephelides, no atrophy except from suppurative lesions, and no telangiectases. The lesions consisted in this case primarily of vesicles (now affecting the ears only) which rapidly ulcerated and led to obstinate ulceration and pock-like scarring.—Dr. C. R. DRYSDALE (London) said that he was inclined to think that the case brought before the Section as one of Kaposi's disease was merely an example of acne caused by the action of sun and heat.

Dr. SHOEMAKER's paper on Beta-naphthol was read by title. It referred to beta-naphthol as an entirely innocuous substance in the quantities in which it is usually prescribed, and stated that the much-praised hydro-naphthol is simply an impure beta-naphthol.

Dr. C. R. DRYSDALE then made some remarks on the so-called Abortive Treatment of Syphilis and on Alcohol as a Therapeutic Agent.

Mr. BRINDLEY JAMES then read a paper on the treatment of Scabies by a summary and radical method similar to that adopted in the St. Louis Hospital in Paris. He described in detail the preparation of several ointments largely employed in such cases.

Professor T. FRASER then read a paper on the relative value of Codeine, Morphine, and Atropine in Diabetes Mellitus, in which he drew attention to the close resemblance, both chemically and physiologically, of codeine to morphine.—Dr. WILBERFORCE SMITH referred to the idiosyncrasies which affect the result of opiates upon the general health. Had Professor Fraser satisfied himself from a sufficiently large number of cases that there was no adequate ground for the commonly received opinion

that codeine was less likely than morphine to prove disturbing?

Dr. A. D. MACDONALD (Liverpool) reported three cases of poisoning: (1) Suicidal attempt by swallowing "two-pennyworth of laudanum." Injection of apomorphine hydrochlorate and coffee by the stomach brought the patient round. (2) A woman stated she had swallowed three grains of morphia, but showed no symptom of morphia poisoning. An emetic prevented further statements of a similar kind. (3) A woman took strychnine in the form of vermin killer. Apomorphine was given hypodermically, and chloroform by inhalation; half an ounce of bromide of potassium with twenty grains of chloral were also given. The patient recovered.

Dr. R. DOUGLAS KERR read a paper on the Thermal Treatment after Acute Rheumatism, with a short outline of the system pursued at Bath.

Dr. A. R. COLDESTREAM read a paper on Florence as a Health Resort. He first gave an account of the climate, the water supply of Florence, and drainage, which is not perfectly satisfactory. It is not suitable for chest or throat ailments. Phthisis is very common among the Florentines. Articular or muscular rheumatism, acute or chronic, is not the kind of case for Florence. Patients should arrive in the middle of September; earlier than this it is too hot. Until the end of October the weather is clear and cold. November and December are wet. January is bright and sunshiny, with occasionally snow. There are cold winds from the north in January, February, and March. April and May are the best months, and in June it becomes warm.

Dr. R. B. MACPHERSON then read a paper on the Want of Uniformity in Strength of Medicinal Substances. The author pointed out the desirability of remedies, especially the more active ones, being presented to the physician of definite and uniform strength. Though this principle is sufficiently recognised in the Pharmacopœia, he is strongly of opinion that, in reality, it is not attained to such a degree as it might be. Several interesting examples were cited of drugs which exhibit great variations in the proportions of active principle contained in them. The investigation carried out by Dr. Seaton and Mr. Otto Hehner was referred to, in which, out of fifty prescriptions sent out to various shops in the parish of Chelsea, no fewer than seventeen were incorrectly dispensed, though none were scheduled as incorrect if the chief constituent proved to be within 10 per cent. of the amount ordered.—In the brief discussion which followed, Dr. R. STOCKMAN thought that Dr. Macpherson had gone too far in denouncing medicinal substances as being so generally impure. He had for five or six years tested drugs extensively, and it was the rarest thing to find an impurity or adulteration, especially in mineral substances. The vegetable preparations were also very generally standardised, especially those of opium. With regard to vegetable preparations, it was much more difficult to obtain uniformity of strength.

Dr. C. R. ILLINGWORTH (Accrington) then read a paper on the Medicinal Treatment of Acute Diseases of the Organs of Respiration.

In closing the programme of the section, Dr. Cash, then in the chair, spoke of the value of many of the communications made in the Section, and the importance of the discussion following them. The Section was, he said, one growing in importance and favour, but it did not as yet hold the place amongst the Sections to which it was entitled. Many papers, he remarked, were read in other sections which were clearly the property of this one; and he hoped that, with the recognition of this fact, and with the increase of the contributions on pharmacology and therapeutics, the success and utility of the Section would be greatly increased.

On Friday Dr. STRETCH DOWSE (London) gave a demonstration on a patient of the details of Massage. He described and demonstrated the three processes, *effleurage*, *pétrissage*, and *tapotement*.

LARYNGOLOGY.

On Thursday, 9th inst., Dr. MACINTYRE (Glasgow) introduced the discussion on Nasal Stenosis, and entered into the symptoms, pathology, and treatment of simple catarrh of the turbinated bones, to which he confined his remarks. He also entered into the question of reflex neuroses, giving his experience of these. He insisted on the necessity of prophylaxis, a question of great importance to the general practitioner, and on constitutional as well as local treatment, referring to the use of the galvano-cautery, which he largely employed.

He showed a number of instruments devised by himself for these purposes, as well as a switch-table for heating and lighting as required in diseases of the throat. In conclusion, the subject of necrosing ethmoiditis was discussed.—Mr. CRESSWELL BABER (Brighton), who followed, laid stress on the effects of nasal stenosis on the physiognomy, voice, and chest, and the senses of hearing and smell. In the treatment, he recommended for mucous polypi their removal with the cold snare and galvano-cauterisation, and for adenoid vegetations removal with the finger-nail or forceps.

Dr. DUNDAS GRANT next read a paper entitled "Two Hundred recent Cases of Nasal Obstruction." He pointed to the frequent coincidences of disturbances in the region of the throat, ear, and nervous system, and their general disappearance on the removal of the obstruction. He exhibited several instruments employed by him in treatment, and advocated the use of the galvano-cautery snare in preference to the cold snare, as causing less pain. A discussion followed, in which Drs. Stoker, Hunt, Hodgkinson, Roe, Hall, Spicer, Newman, and McBride, took part. The majority favoured the use of the cold snare in the removal of mucous polypi, although all recommended the destruction of the base with some agent which would prevent return. To secure this it was necessary to keep the patient under observation for some time after operation.—Drs. Macintyre, Baber, and Grant having replied, the President summed up the discussion in a few well-chosen remarks.

The other papers read were: Remarks on the Pathology of Echinoderm of the Triangular Cartilage, with a new operation, by Dr. Greville Macdonald (London); Hay Fever and its Allied Conditions, by Dr. Peter McBride; Account of a Case of Tumour of the Naso-pharynx, by Dr. R. McKenzie Johnston; Remarks on the Removal of Naso-pharyngeal Polypus, with specimen, by Dr. Christopher Lewis; Cases of Fibro-mucous Polypus of the Naso-pharynx, by Dr. C. Warden.

On Friday Dr. PERCY KIDD (London) opened the discussion on Hæmorrhages from the Pharynx and Larynx, and said that his opinion was that, apart from ulcerating carcinoma, suppuration, and traumatism, hæmorrhage from the pharynx and larynx is very uncommon, nearly always slight, and practically devoid of importance. In most cases of so-called hæmorrhage from the throat, the larynx and pharynx are not actually concerned, the blood coming from the lung or from the cavity of the nose or mouth.

Dr. HODGKINSON (Manchester) next read a paper, and stated that hæmorrhage was of importance partly on account of its moral effect, which was great, but chiefly as an indication of serious organic disease. He spoke of the difficulty of truly interpreting the various signs and symptoms—firstly, because small hæmorrhages from the lungs occur without giving evidence to us by thermal or stethoscopic examination; secondly, the anatomical relationship of the parts in question are so close that blood easily passes from one region to the other. In doubtful cases it is necessary to enjoin precautions necessitated by pulmonary lesions, rather than to conclude it to be from the throat.—A discussion followed.

The other papers read were: Some Unusual Forms of Laryngeal Neurosis, by Dr. Ernest Jacob; a Case of Lupus Vulgaris of the Upper Respiratory Tract, with Polypus (Lupus) of the Larynx, by Dr. R. H. Spicer; also by the same gentleman, Clinical and Pathological Observations in Affections of the Tonsils (Faucial, Lingual, and Pharyngeal), in the light of recent views as to their functions; Notes on Tonsillitis and Tonsillotomy, by Dr. Christopher Lewis; Dr. T. Middleman Hunt on Acute Epiglottitis, a question of Nomenclature.

Dr. SEMON, at the end of the day's sitting, congratulated the members on the successful way in which the meetings had been conducted. He thought much valuable information had been obtained by each from the discussions which had been so thoroughly and enthusiastically taken up. He thought that this Section had now fully established its claim to be a distinct and separate one.

Votes of thanks to the President and secretaries closed the business.

THE MUSEUM.

The Annual Museum had the advantage of being beneath the same roof as the meeting-places of the Sections and general assemblies. It consisted of six departments: A, Foods and Drugs; B, Pathology; C, Anatomy; D, Physiology; E, Instruments and Books; F, Sanitation. Amongst

the exhibits in Section A were collections of drugs &c. by Messrs. Allen and Hanbury, Burroughs, Wellcome, and Co., T. Christy and Co., Corbryn, Stacey, and Co., Evans, Sons, and Co., Ferris, Boorne, Townsend, and Boucher, Glasgow Apothecaries' Company, C. Green and Co., C. J. Hewlett and Sons, Lorimer and Co., J. Richardson and Co., Savory and Moore, W. H. Schieffelin and Co., W. R. Warner and Co., and others. In Section B, Professor G. Buchanan exhibited calculi removed by lithotomy and lithotripsy; Dr. H. C. Cameron, calculi and other specimens; Mr. W. Cathcart, a series of specimens illustrative of tubercular synovitis of the knee; Dr. J. Coats, a series of specimens of embolism and aneurysm of cerebral vessels, another series of tumours of the brain, and an extensive collection of uterine and ovarian tumours; Mr. A. Edington of Edinburgh showed a complete series of cultures of micro-organisms, and Mr. Maylard of Glasgow had similar preparations. Dr. S. Man, Mr. Stuart Nairne, Dr. Mackie Whyte, Dr. D. Fraser, and Mr. T. W. Nunn showed various specimens; whilst Dr. Newman exhibited a series of specimens of diseases of the kidney; Dr. Beavan Rake, of leprosy; Dr. Lindsay Steven, of diseases of the heart; Drs. Norris Wolfenden and Sidney Martin, of laryngeal growths. In Section C, anatomical preparations and casts were shown by Dr. Bowles, Professor Chiene, Professor Hamilton, Mr. W. A. Lane, Dr. Macintyre, Dr. Paterson, and Dr. Reid. In Section D, microscopical and bacteriological instruments and appliances were shown by Messrs. R. and J. Beck, H. Crouch, W. Hume (Edinburgh), Ross and Co., Jas. White (Glasgow), and A. Fraser (Edinburgh); whilst Dr. Carlier, Demonstrator of Physiology at the University of Edinburgh, exhibited a series of normal tissues and organs. In Section E, instruments &c. were shown by many firms, including Arnold and Sons, J. Coxeter and Son, Down Bros., Ferris, Boorne, Townsend, and Boucher, J. Gardner, W. B. Hilliard and Sons, Lynch and Co., Mayer and Metzger, Pickard and Overy, K. Schall, and J. Weiss and Son; whilst medical literature was well represented in the complete collections of new works shown by Messrs. Holmes (Glasgow), H. K. Lewis (London), J. Maclehose and Sons (Glasgow), Macmillan and Co. (London), Young J. Pentland (Edinburgh), G. Redway (London), and A. Stenhouse (Glasgow). In Section F, numerous sanitary appliances and inventions were exhibited, this collection being arranged in a marquee erected in the quadrangle. A complete catalogue of the museum was given to each member, who also received a Handbook to the Medical Institutions of Glasgow, which had been specially prepared in view of this meeting.

THE BOWER AND KEATES INDEMNITY FUND.

THE following statement by the Committee of the above Fund has been sent to us for publication:—

The case of Messrs. Bower and Keates was brought to the notice of the profession by a circular sent out in December, 1883, to all medical practitioners in Great Britain and Ireland, whose names appeared in Messrs. Churchill's Medical Directory for that year. The circular stated that on Aug. 31st, 1882, a child was suffering from sporadic laryngitis, and suffocation was impending. With the consent of the parents tracheotomy was performed by Dr. Bower, assisted by Mr. Keates. The operation was done skilfully and successfully, the child surviving for twenty-four hours, and subsequently dying of the further effects of the disease. A civil action was afterwards brought against these gentlemen by the father of the child for allowing him to clear the tracheotomy tube by suction in order to avert the impending death of his child. The jury disagreed on this trial, and it is in evidence on this occasion that the parents expressed their satisfaction with the treatment which their child had received. Failing in this action, the parents brought a criminal prosecution against Dr. Bower and Mr. Keates, and the mother of the child on Sept. 11th, 1883, swore an information before the sitting magistrate at the Lambeth Police-court, charging them with the manslaughter of the child. When Dr. Bower and Mr. Keates appeared to answer this charge, they found, to their astonishment, that it was adopted and pressed against them by the Public Prosecutor. Amongst other grave consequences of the intervention of the Public Prosecutor these two should be

noticed—namely (1), that these gentlemen, though charged as criminals, could not bring an action for malicious prosecution; and (2) that they were debarred the usual right of claiming payment of their expenses from those who had so unjustly prosecuted them.

It was felt that a more verbal expression of sympathy with these gentlemen would not under the circumstances be sufficient, seeing that they had incurred legal expenses estimated at nearly £1000. It was in view of the propriety of aiding Dr. Bower and Mr. Keates in this matter that the following resolution was passed at a meeting held at Sir William Jenner's residence on Monday, Dec. 10th, 1883: "That a committee be formed for the purpose of collecting subscriptions to defray the legal expenses incurred by Dr. Bower and Mr. Keates in their defence from the charges recently brought against them, and of preparing a statement by which the subscribers may express their sympathy with those gentlemen and their conviction that the treatment of the case for which they were prosecuted was right." The circular was signed by Sir William Jenner, Sir James Paget, Dr. Richard Quain, Mr. John Marshall, Dr. J. M. Bright, Mr. Thomas Bryant, Dr. Wilson Fox, Dr. J. Grey Glover, Mr. Jonathan Hutchinson, Mr. J. T. Jackson, Dr. Walter Moxon, Mr. Sidney Turner, Dr. F. A. Mahomed, and Dr. R. W. Burnet. So hearty was the response to this appeal that within a week the required sum was subscribed, and before the list could be closed £1726 had been received from 1954 subscribers.

The committee hoped to have wound up the business with which they were entrusted at a much earlier date, but great delay was entailed by the fact that a new trial was threatened, and that difficulties were put in the way of having the costs taxed. The more legal costs, as certified by the taxing master, amounted to £931 10s. 11d., and that sum was paid over to Messrs. Bower and Keates.

Some months ago the committee, having paid all costs and other expenses of the fund, found that they had a balance of about £500. They issued a circular to all the subscribers, stating that it was proposed to give part of this sum to assist several similar deserving cases, on behalf of which application had been made, and to divide the surplus amongst medical charities; but that if any subscriber objected to these proposals, he could receive back the proportion of his subscription on applying to the hon. secretary. The majority of the replies received were in favour of the distribution suggested by the committee, and they have acted accordingly, giving £150 to Mr. Ralph Hodgson, late of Lewisham, who successfully defended himself from a charge of indecent assault at an expense of about £500, £50 towards the expenses of the defendants in the case of Gibson and wife v. Jeffries and Hills, £50 to Dr. Brown in the case of Lennard v. Brown and others, and £50 to Dr. West Symes in the case of Moss v. West Symes. The balance the committee have distributed between the British Medical Benevolent Fund, the Royal Medical Benevolent Fund Society of Ireland, the Royal Medical Benevolent College, Epsom, and the Society for the Relief of Widows and Orphans of Medical Men.

The committee cannot close this statement without a brief reference to the lamented deaths of Dr. Wilson Fox, Dr. Moxon, and Dr. Mahomed, who to a large extent initiated the movement which they did not live to see carried out, but to which they zealously contributed by their exertions so long as their valuable lives were spared.

(Signed)

WILLIAM JENNER, Chairman.
RICHARD QUAIN, Treasurer.
R. W. BURNET, Hon. Sec.

August, 1888.

"AN EASY METHOD FOR PRODUCING LARGE ANATOMICAL DIAGRAMS."

To the Editors of THE LANCET.

SIRS,—There is a simpler method than that suggested by your correspondent, Mr. Thomas, for enlarging drawings for lecture purposes—viz., the substitution of gelatine films, which are easily obtainable, for the mica sheets covered with varnish which he recommends. These cost next to nothing, are always ready, and the surface is easily drawn on by a pen and ordinary or Indian ink. The drawing board bearing the paper is best hung on the wall. It is easy by this method to obtain an outline of a most complicated

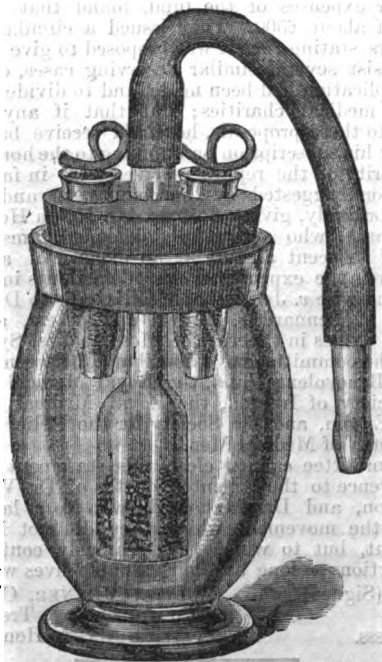
drawing in a few minutes. I generally use a "Silber" argand gas-burner in the lantern as more manageable than the three-wicked oil-lamp. I do not think it is generally known by medical and other lecturers that lantern slides can be shown without darkening the room if only the screen be shaded, and a disc of not more than five feet diameter be used. A "blow-through" oxyhydrogen jet is very easy to manage, and the lantern can be placed on the lecture-table and manipulated by the lecturer. Good diagrams are very expensive, and the paper alone costs nearly as much as a photographed lantern slide.

I am, Sirs, yours faithfully,
Leeds, Aug., 1888. ERNEST H. JACOB, M.D.

New Inventions.

GODFREY'S PATENT CHLORIDE OF AMMONIUM INHALER.

THE vapour of chloride of ammonium has recently been largely employed in the treatment of catarrh of the mucous membrane of the ear, nose, and throat, and it has also been used in bronchitis, asthma, and hay fever. Hitherto there has been some difficulty in arranging the conditions which shall give a plentiful cloud of chloride of ammonium in a neutral state, excess of acid or of ammonia requiring careful removal. From the accompanying illustration it will be seen that by an exceedingly simple arrangement a perfectly neutral cloud is obtained. The inhaler consists essentially of three tubes passing through the indiarubber

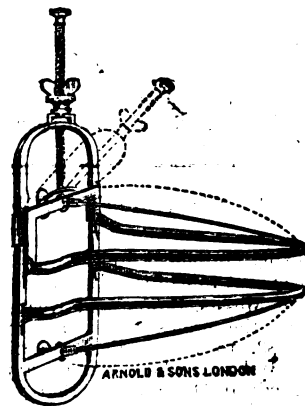


cork which closes the inhaler bottle. The centre bell glass is lightly plugged with a piece of sponge moistened with cold water; the two smaller tubes contain cylinders of a porous substance on protected wire-holders, and are charged by being dipped respectively into hydrochloric acid and ammonia. Upon suction being exerted at the mouth-piece, fumes of these two fluids pass into the inhaler and mingle and combine chemically, giving rise to dense white fumes of chloride of ammonium. Inhalation being continued, these fumes are necessarily drawn through the centre bell tube into the air passages, excess of acid or of alkali being arrested by the moistened sponge. We have carefully tested the inhaler,

and find that the resulting fumes are completely devoid of any irritating or offensive properties. The body of the inhaler containing no water, any aromatic volatile substance may be introduced as desired. The inhaler is supplied in a neat cedar-wood box, containing supplies of acid and ammonia, the former being in a green glass bottle which corresponds with the green tube of the inhaler. The only word of caution we would venture to give in connexion with this instrument is that it is absolutely essential that the sponge in the centre tube should be freshly moistened every time the inhaler is used. Messrs. Godfrey and Cooke, of 30, Conduit-street, London, are the patentees and sole makers of this inhaler. Its price is moderate.

NEW RECTAL SPECULUM.

THERE are various symptoms complained of by patients referable to the rectum as a cause of trouble, and requiring a visual examination of the parts. In hospital practice, it is an easy matter to anaesthetise the patient, and by stretching or forcibly rupturing the sphincter and obtain a full view of the rectal walls. In private practice few patients will submit to such a severe proceeding unless driven to it by extreme suffering, so that if a satisfactory examination is to be made, without much pain to the patient or the necessity for ether or chloroform, it is essential that the examination should be made with a speculum which will give the least annoyance. The illustration represents a light wire speculum, with parallel action and easy of introduction, which, when properly used, will, with the minimum amount of discomfort to the patient, afford the examiner a good view of the rectal walls. The screw, with winged nut, which divaricates the blades, is kept towards the sacrum of the patient, and when the instru-



ment is *in situ* the necessary amount of expansion can be effected at will, the blades working parallel, while an anterior and posterior screw at the base of the instrument will, when worked, bend the flat rod (running from top to base of each blade) into a convex shape, and so bulge out and stretch the rectal walls as to obliterate the usual folds, and that without any additional strain on the sphincter itself. I know of no other rectal speculum working on this principle, as the lax part of the rectum above the sphincter is never put on the stretch by the ordinary rectal specula in use, so that a fissure or small growth &c. could be easily overlooked, and the patient persuaded that nothing was wrong there. The speculum can be taken asunder for portability or for cleaning, and I fancy the instrument I have endeavoured to describe will be found on trial to fulfil the advantages claimed. It is made by Messrs. Arnold and Sons, London.

Dublin.

ALEXANDER DUKE, F.R.C.P.I., &c.

THE LANCET.

LONDON: SATURDAY, AUGUST 18, 1888.

THE Parliamentary Session, which has now reached what would in ordinary circumstances be its termination, has been marked by the devotion of a quite unusual proportion of time and attention to questions affecting the health of the public or other matters in which the medical profession is specially interested. In legislative projects marked activity has prevailed, and although the result attained falls, as was to be expected, much below the result attempted, we are able to record, with a lively satisfaction, a very considerable amount of reform of a peculiarly useful though unobtrusive kind.

In any such review the premier place will naturally be assigned to the Local Government Act. The vast extent of the ground which it covers, even in the reduced proportions in which it has passed the Legislature, entitle it to this position. But our views upon all its main features have been so fully expressed from time to time as they have severally come under discussion that it is quite unnecessary to review it here and now. A passing mention of the Act and a general reference to our previous utterances are all that the present occasion demands or even permits. As part of the other legislative work of the session may be enumerated the measure by which the Habitual Drunkards Act, on which we offered some comments last week, has been rendered permanent.

Another little statute that is of great significance to those whom it affects is the Factory and Workshops Act, by which the factory hands of Scotland acquire two days of holiday-making in the year in place of Christmas Day and Good Friday, and this, as tending to increase the facilities of wholesome recreation, may be welcomed by all well-wishers of the poor. The Act is, however, somewhat limited in its application, and its traceable results may be expected to be small. Much larger and more visible consequences may be looked for from the operation of the Merchant Shipping (Life-saving Appliances) Act. The duty of carrying an adequate equipment of appliances for the saving of life in cases of emergency is now unequivocally defined and enjoined upon all who send British ships to sea. The preparation of rules by which this duty is to be enforced has been entrusted to a committee composed of the representatives of the shipping community on the one hand and of the Board of Trade on the other. The effect of the statute will chiefly depend upon the results of their deliberations, but we entertain the hope that it will be found to increase very appreciably the security of life at sea.

Less directly connected with the conservation of life and health, but still of sufficient importance in these respects to receive mention here, is the remarkable inquiry into the charges made against the Metropolitan Board of Works, conducted by Lord HERSCHELL and his coadjutors. Public attention has indeed been turned, and necessarily so, much more upon the inquiry itself and the facts brought by it to light than upon the statute by which the tribunal was con-

stituted. The inquiry has still to be completed, although the fate of the Board has probably been already sealed; but its inception, and therefore, in a sense, all that flows from it, must be credited to the session under review.

Passing from these measures, which have been safely carried through all the stages necessary to invest them with the force of law, we may next notice some in which we have a lively interest, and which, thanks to the prospect of an autumn session, are still among the legislative possibilities of 1888. These include, indeed, some of the most important measures, from a medical and sanitary point of view, that have been brought at all to the notice of Parliament. Thus the Pharmacy Act Amendment Bill, in which the House of Commons took, when first it was first brought down from the Lords, so little interest as to allow it to be counted out, still stands for second reading in November. So also the Coroners Bill, in which an attempt has been made to consolidate the law relating to coroners and their duties, has been saved from destruction by the postponement to the autumn of its later stages. Again, the Bill for providing for the Better Housing of the Working Classes has in like manner been saved from Parliamentary shipwreck, and its second reading fixed for an early date in the autumn sitting. But the most important of them all is the Public Health Act, with which the names of Mr. HASTINGS and Dr. FARQUHARSON are associated. This, if it passes into law, will make the notification of infectious disease to the local sanitary authority a compulsory duty upon the responsible occupier of a house, and, if effective, will do more than any other measure of our time for the extirpation of preventable disease.

Among the abortive attempts at legislation which the past session has witnessed are some which we cannot regret, but more which we would gladly have seen bear fruit. To the former class belong the Bill brought in by Mr. PICTON for abolishing the penalties by which the practice of vaccination is at present enforced. Among the latter may be mentioned the Lunacy Acts Amendment Bill of the Lord Chancellor, which promised some relief to medical practitioners in the discharge of most difficult and at present most burdensome duties. So with the Sanitary Registration Bills, which were directed to movable abodes and to buildings occupied as schools, or for any other quasi-public purpose respectively. Of these we entertain the hope that they will at no distant future receive the attention that they deserve. Without committing ourselves to all the principles embodied in Mr. REID's Bill for the Housing of the Working Classes, in the Factory Acts Amendment Bill, or in Sir JOHN LUBBOCK's Early Closing Bill, we may admit in general terms the importance of dealing comprehensively with these large subjects.

Such, then, is, from our special point of view, the legislative outlook at the commencement of the Parliamentary recess. But Parliamentary activity is by no means limited to legislation, and how important are those deliberative functions which are never even intended to take shape in Acts of Parliament may well be represented by a mere enumeration of the topics thus treated. For example, there are the highly valuable though academic discussions which have taken place in the House of Lords upon the sweating system and the sanitation of the Dublin Barracks. Again, there

are the important papers which have been produced showing the duration of the hours of labour in railway service, and the telling filip which was administered to the official conscience by the discussion on June 1st in the House of Commons of the outbreak of small-pox at Sheffield. Finally, to make our record even fairly complete, we must not omit to notice the mischievous resolution adopted a few days later on the motion of Mr. McLAREN, respecting the working of the Contagious Diseases Acts in India.

However, upon the whole, the record is one to be reviewed with a considerable measure of satisfaction. Some things have occurred which we regret, but more in which we are glad to have been able to co-operate. "Something attempted, something done," has earned, and fairly earned, the "long vacation."

THE subject chosen by Dr. CLIFFORD ALLBUTT for the Address in Medicine delivered on the 8th inst. at Glasgow was one which, more than any other perhaps, serves to show the incompleteness of medicine as a science, and from the very nature of the questions involved seems to offer but little hope for any marked advance in the region indicated. The subject was the "Classification of Diseases by means of Comparative Nosology," and the address indicated the great need there is for such a classification. But at the same time it clearly proved how utterly inadequate are the data we at present possess for framing any kind of nosology like that aimed at. Here and there we get glimpses and fragments of the natural affinities of disease, and of their modification in time, place, and race; but there are huge lacunæ to be filled—and filled, too, not simply by the patient collocation of facts at the hands of any one man, but by the united efforts of all engaged in observing disease, whether in man or the lower animals, or even in the vegetable kingdom, and that not in one generation or one lifetime, but over a period of time which is practically unlimited. Certainly Dr. ALLBUTT has succeeded in disturbing the complacency with which we are most of us wont to regard the present enlightened condition of medical knowledge, and he must have made his audience feel that, with all our boasted acquisitions in pathological science and in etiology, we are yet very far from having attained a fulness of knowledge concerning even the groupings and relations of disease. In all humility we feel bound to accept the position which the contemplation of our ignorance in this respect assigns us, and can only look forward to the far distant future when our descendants, with riper experience and fuller information, shall have advanced some way towards the framing of a natural classification of disease.

Nevertheless, as Dr. ALLBUTT took great pains to demonstrate, we have even now considerable material to hand, which serves at least to illustrate the magnitude and the complexity of the task to which he invites us. The address literally teems with suggestive facts, which point the way towards the goal, but are far from landing us at it. It was no fault of Dr. ALLBUTT that he frequently led his hearers to a point which seemed near finality, when he felt bound to confess that there were many links wanting in the chain which have not yet been discovered; and although occasionally it is possible to make up the defects

by speculation, yet as such a procedure is seldom either scientific or safe, the probability is that if pursued it would only lead to error. Speculation and hypothesis have their legitimate place, and are sometimes of much service in enabling us to grasp great principles; but they must be kept within their sphere, and not permitted to take the place of proven facts. Dr. ALLBUTT, early in his address, alluded to the growing complexity of the nervous system as having its counterpart in the domain of disease, and illustrated it very happily by reference to the remarkable recuperative power, and the autonomy of parts of the body in animals of simple and low organisation, as contrasted with the finer knit body of the higher animal, in whom every part is responsive to the sufferings of every other, or, as he put it, where local morbid change is subordinated to the balance of systemic forces. That there are animals whose nerve organisation renders them incapable of fever was one of the suggestive hints that arose from this speculation; whilst another was the application of the same thought to civilised mankind, and the growing tendency to neurotic disease, or, in other words, to the connexion between the nervous system and disease from the development of new factors due to the greater exercise of the higher faculties.

It would not be possible to follow this able address through all the intricate paths it took. Our readers have the opportunity of judging of its quality for themselves, and we can but commend it to their earnest and thoughtful study. It was a difficult task which Dr. ALLBUTT undertook; but he faced it manfully, and unfolded a vast number of facts gathered from all sources, and marshaled in as systematic an order as the subject would permit. He showed how the endeavour to attain to a perfect nosology might be made on at least four separate lines—namely, the hereditary method, the historical method, the geographical method, and the experimental method. In each department there are certain facts available; but in each also there is an infinite amount of knowledge still wanting. Moreover, as he showed, we require to extend our survey of disease over the whole animal and even the vegetable kingdom. We have to unravel the characters impressed by transmission through generations, and to determine how these are influenced by the operation of "artificial selection," which has replaced that of natural selection in civilised mankind; we have to inquire into the geographical distribution of disease, and into the recondite subject of animal poisons; in fine, we have opened up to us so vast and bewildering a region of research that courage may well be wanting to attempt to scale the height towards which Dr. ALLBUTT points us—namely, a perfect nosology.

OUR readers cannot fail to peruse with pleasure and profit the able Addresses in Surgery delivered at the meeting of the British Medical Association by Sir GEORGE MACLEOD and Dr. WILLIAM MACEWEN. The former dealt with the discoveries and developments that have been made in surgical art and science during the last half-century; whilst the latter is a splendid record of the progress made in one particular branch of operative procedure.

Sir G. MACLEOD did not confine himself to a recital of the changes that have taken place in matters purely

medical and surgical during the period mentioned, but, taking a wider survey, brought under notice what he termed "the reconstruction of the collateral sciences," showing how much that had previously been hidden in "the Dark Continent" had been brought to light by scientific research. In the brilliant light of existing knowledge it looks strange that within living memory such valuable aids to the investigation of the problem of life and death, health and disease, as the achromatic microscope and the spectroscope were things unknown; and that electricity had received little, if any, of its medical applications. Yet such is the case. The greatest achievements in surgical practice have been rendered possible—nay, certain—by the discovery of anaesthetics and by the perfection of the antiseptic treatment of wounds. Procedures which had previously been held as impracticable on the one hand, or as instances of mere operative audacity on the other, are now ranked amongst the surest surgical triumphs. After passing in review the most notable examples of the outcome of anaesthesia and antisepticism, Sir GEORGE MACLEOD touched upon the erstwhile clouded atmosphere in which the pathologist groped in search of the true explanation of the nature and method of septic infection, citing the views held in order of time by various investigators and theorists. There could not be a more fitting example of the difficulties under which truth is extracted from the tangled web of much that is false, more that is equivocal and but little sure. Still even the wildest assumptions have been of service, either directly by bringing to light—perhaps unexpectedly—something of worth, or indirectly by stimulating research in a different direction. The germ theory of disease could hardly have been worked out with rapidity and success save for the vigorous advocacy of spontaneous generation with which it was assailed. As Sir GEORGE pointed out, the terrible havoc made by "preventable disease" during the Crimean war, and the devastating attack of cholera in 1882, were circumstances which stimulated the search after knowledge in this particular channel. Passing on to the subject of Pathological Anatomy, which the lecturer averred had been created since 1837, he gave in order and detail the steps by which its extension and simplification had been attained; showing how the discoveries of SCHLEIDEN in the vegetable world were turned to profit in the study of animal tissues. Since Sir GEORGE MACLEOD entered the active ranks of the profession, he has witnessed the birth, the acceptance and the almost general disavowal of VIRCHOW's theory of "cellular pathology." Space fails us to give even a cursory notice of all the matters touched upon in Sir GEORGE MACLEOD's exhausting review, for the history of half a century of medical progress cannot be written in a few lines. Suffice it to say that within the period mentioned the treatment of aneurysm has been amplified and improved; the study and treatment of fractures and dislocations have been conducted upon a more scientific basis; whilst abdominal and intracranial surgery has practically been created.

Dr. MACEWEN's address is worthy of unqualified praise. The subject, of which he is a master, has been argued with all the skill of a special pleader and summed

up with the studied impartiality of an experienced judge. The professor has received by instalments the record of Dr. MACEWEN's experience in the operative surgery of the brain and spinal cord. It now has presented to us in a more complete yet concise form a recital of his practice. In his earlier passages he sketched the history of the development of the regional and local anatomy of the brain, and then proceeds to exemplify the way in which he has turned his knowledge of that anatomy to practical ends. It seems strange at first sight that cerebral surgery should have been neglected so long, for it is only within the last few years that anything has been attempted in this field except in cases of traumatism; and even then the guide to interference was the rough-and-ready one furnished by external appearances and general nervous derangement, rather than by a well-regulated study of "localisation." The success that has attended Dr. MACEWEN's operations on the brain, whether in cases of injury or idiopathic disease, has been, we might almost say, phenomenal, and our readers will understand this when they consider the extreme gravity of the symptoms, and the inherent difficulties that beset the necessary operative procedures. We are entirely at one with him in his protest against the indiscriminate performance of operations in all cases, even where a coarse anatomical lesion can be diagnosed and reached. A patient troubled with epileptiform seizures can scarcely be advised to barter his present infirmity for paralysis, which may be total and must be abiding, or, as Dr. MACEWEN pithily puts it, for the equivalent of amputation at the hip and shoulder joints, since this would be the result of removing large wedges of the cerebral cortex. We cannot commend too highly the lecturer's honesty in publishing the fact that, having exposed the brain and found a widely and deeply extended lesion, he has desisted from completing the operation. Nor is the extent of removal of the brain substance the sole factor in the determination of the performance or avoidance of an operation, since, as Dr. MACEWEN shows, after the brain has been exposed, even though healing goes on uninterruptedly and well, the cerebral substance is likely to remain anchored to the skull directly or by the medium of its adherent membranes. In this way disturbance of the cerebral circulation is likely to arise, the brain being no longer free to ride upon its water bed, and to adjust itself to the varying strain that muscular action is continually imposing upon it. We are glad to see it insisted upon that false hernia cerebri consecutive to encephalitis is not necessarily dependent on the septic condition of a wound, but that it may arise from the irritation caused by the tension of tumour. Dr. MACEWEN states a case where, on incising the dura mater over a new growth, the surrounding tissue affected by red softening at once protruded through the trephine aperture. In conclusion, we make favourable mention of the author's discriminating remarks upon the question of opening the spinal canal for the removal of a tumour or inflammatory neoplasm, or for elevation of bone depressed by injury or replaced by caries. It is obvious that in such cases a careful consideration of the nature and duration of the symptoms, of the relief likely to be attained, and of the chances of failure or fatality, must

be made before the surgeon is justified in undertaking what must be admitted to be a dangerous operation.

LORD WOLSELEY contributes an interesting article on "Courage" to the current number of the *Fortnightly Review*. The subject is treated from the popular and military, rather than the psychological, point of view, and the article is interesting mainly as showing the value attached to personal bravery by a distinguished soldier. That value is a very high one. "Nothing is so fascinating as reckless courage," says LORD WOLSELEY, who goes on to depict from materials gathered on many a hard-fought field the magnetic attraction exerted by the man, who, indifferent to personal peril, leads the assault and is foremost in the breach. Such men are, he says, invaluable to a general, and are indispensable when some forlorn hope, some enterprise of peculiar and imminent danger, becomes necessary. The rank and file follow with enthusiasm the naturally brave, and reverence for courage seems to be one of the deepest instinctive racial attributes of an Englishman. This reverence, though no doubt the fertile source of much that is noblest in our national character, has also its evil side. "It is the base and root of that creed of honour which we all esteem, and which not a few among us prize more highly than the nobler teachings of Christ."

LORD WOLSELEY is emphatic that a sound physique is indispensable to the development of a high type of courage. "I regard courage as the mental correlative and equivalent of perfect physical health. My experience has taught me that high courage is generally accompanied by physical soundness." This is essentially a soldier's analysis, correct in a sense, but inadequate. In military life the courage to will must be associated with the physical force to execute, otherwise it is obviously of little avail; but no psychologist would admit that there is any necessary nexus between soundness of organ and limb and that inflexibility of will and contempt of death which constitute the highest type of valour. The history of the world is full of the great achievements of the physically weak, and we are familiar with the spectacle of the ardent mind "fretting the puny body to decay." Such men, however, are for the most part obviously excluded from military life, and direct parliaments or dominate literature rather than command armies. Hence LORD WOLSELEY'S opinion is, from his point of view, correct in the main, though he himself admits that a valetudinarian, such as WILLIAM III., may be a great and successful commander. Such cases are, however, from obvious considerations likely to be rare.

Again, LORD WOLSELEY regards courage as the attribute rather of the better bred, and traces this fact of experience to two considerations: first, that the upper classes inherit, on the whole, a better physical strain than their social inferiors; and, secondly, that these classes have the pride of ancestry as a potent motive impelling them to heroism, and restraining any tendency to cowardice. There is truth in both these views; but, on the other hand, bravery is almost innate in our race, and no scion of the aristocracy could show more supreme contempt of danger than that with which the Scottish Highlander or the Irish Celt rushes upon his foe. Perhaps the difference, whatever it may amount to, is best accounted for upon evolutionary grounds. The

noble is accustomed to lead, the peasant to be led. This in time develops a certain sentiment of class which finally becomes a fixed and hereditary instinct.

Casuists have often debated whether the palm of bravery belongs of right to the man who is constitutionally insensible to danger, or to him who, being naturally timid, has force of will to restrain his timidity, and to perform deeds of heroism. LORD WOLSELEY declares unhesitatingly for the former, arguing that, whatever philosophers may say in the cool atmosphere of their studies, the naturally brave man is the more "lovable" character, and the one to whom others will instinctively turn in moments of supreme peril. It is difficult to demur to such weighty testimony, and yet that strength of will which can quell passion or still the quakings of a fearful heart is surely akin to much that is noblest in man. Courage is, however, like love. We admire feelings that are instinctive more than those that are the result of cool deliberation, and no doubt in the main we are right in so doing.

LORD WOLSELEY has much that is interesting to say regarding the tests of courage. He regards it as the greatest test of all "to be at a distance from operations for which you are responsible, but over which you cannot exercise control." Here again, of course, speaks the military commander. Probably medical life affords tests of courage as great as this. The appalling emergencies which from time to time occur in surgical operations, perhaps when help is most distant and the need most urgent, are a supreme test of personal bravery. Nor is the physician exempt from tests as severe. A sudden and unexpected encounter with a homicidal lunatic, the heartrending scenes of a cholera epidemic, the overwhelming crisis of family affliction—these show a man's fibre as truly as the more evident perils of war.

The writer concludes with some personal recollections of an eventful life. Among the bravest men whom he has known, he mentions Captain Sir WILLIAM PEEL, Sir GERALD GRAHAM, V.C., and General GORDON. The last-mentioned has succeeded in impressing his extraordinary personality deep on the page of contemporary history. He united in himself a combination of apparently the most dissimilar attributes—the tenderness of a woman with the dauntless bravery of the bravest man, "an unbounded sympathy for all the animal creation," with "an absolute disregard for human life." For him, says LORD WOLSELEY, "danger had actually and positively nothing terrible about it." He regarded this life only as the poor prologue to a nobler stage of existence, and cared not whether the first wandering bullet carried his dismissal from a world which to him had few pleasures and no engrossing fascinations. Such a character may be a beacon in troublous times to hold aloft the light of religion and duty, but it has in it a morbid element not wholly admirable. Contempt for this world is not usually a mark of wisdom, nor is an impatient desire for release from present duty to be commended. Those despise this life who have misused it, and the renunciation of worldly joy, which so readily apes the attitude and language of piety, may at bottom be only the unconscious confession that such joy has been forfeited through vice, folly, or misfortune. The Romans depicted man as a sentinel on guard, whose deepest infamy it would be to

desert his post. Christian ethics must not be perverted to hold up before us any lower ideal.

OUR readers will find in another column the final report of the Committee of the Bower and Keates Indemnity Fund. It will be read with interest as a record of one of the most successful appeals to medical men on behalf of injured and maligned brethren, who had done their best in a difficult case, which can be found in the history of the profession. The intervention of the Public Prosecutor in this case was most unfortunate. By this intervention **MESSRS. BOWER and KEATES** were debarred from bringing an action for malicious prosecution and from the right of claiming payment of their expenses from those who, to use the expression of the magistrate, "persecuted" them. The medical profession is beset with difficulties, and its most delicate duties have often to be performed under the most urgent circumstances. Large fees do not requite the professional labourer in such cases. But it is hard indeed when in place of these he is put on his defence in a law court in one trial after another. This was the case which in December of 1883 excited the interest and the sympathy of the profession to such a remarkable extent that, within a week, over £1700 was raised, and the Committee had quickly to stop the flood of subscriptions. They came from all parts of the United Kingdom, and from nearly 2000 subscribers. It is a fine illustration of the fact that, when properly moved, the profession can act with effect, and that when "one member" suffers the rest of the body suffers with him. It would be wrong to forget that the splendid success of this movement was due very largely indeed to the sympathy of the leaders of the profession and to men in a consulting position. The movement practically emanated from Sir WILLIAM JENNER'S house, and all the meetings of the Committee have been held there. Sir JAMES PAGET, Sir WILLIAM GULL, Professor JOHN MARSHALL, and the late Dr. WILSON FOX were present at the first meetings. There was another influence the recognition of which is painfully binding. The enthusiasm of the late Dr. MOXON will be a memory with those who knew him. The facts of the case excited that enthusiasm, and he spent days over it, as if it were a new pathological specimen, or as if a large fee was to accrue to him for his labours and his time. The same is true in scarcely a less degree of the late Dr. MAHOMED, whose untimely death necessitated the appointment of another honorary secretary, Dr. R. W. BURNET, who has had an amount of trouble in connexion with the legal complications of this case only known to the Committee, and who has saved considerable sums of money by his mastery of its details and his attention to the legal charges. The disposal of the surplus is announced in the report, and will meet with the approval of the profession. Practically, it has already done so; for our readers will remember that some weeks ago the Committee intimated their intentions on the matter subject to the approval of the subscribers, which was virtually given, as the report explains. The moral of the whole case is twofold: first, that the Public Prosecutor should be careful how he undertakes action against those who are entitled to his protection; and, secondly, that the medical profession

has only to hold together to make the public understand that it is as vain to attack its members in relation to the discharge of their difficult duties as it is ungenerous. We have many times of late noticed with satisfaction a strong sense of justice in legal decisions of questions between medical men and their accusers; but there is still one drawback. Justice is generally forthcoming, but at what a cost to the medical man of time and health, of money and of reputation. "The law's delay" in this case has extended over four or five years, and its costliness is shown in the fact that about £1100 has been needed to defend medical men who did their duty.

Annotations.

"Ne quid nimis."

FOOD REFORM.

ONE, and that not the least important, of the movements at present operating in the direction of increasing the physical vigour and, correlatively, the mental and moral condition of the people, is that which has for its object the improvement in the kind and the quality—i.e., the purity and the dietetic value—of the food in common use. In this matter, as in other things, prejudice and fashion have had too much sway. To take only one example, that of bread—how difficult it appears to be to persuade people that as the whiteness of a loaf is increased, so, *pari passu*, is its nutritive value diminished. Then, again, as to the kind of food. The general impression among the poorer and more uneducated classes is, no doubt, that the heavier and more bulky the mass, the more in weight that can be got for a certain sum of money, the better the bargain; whereas, in fact, bulk is a comparatively unimportant factor in the question of economic dietetics. We have before us the last published Report of the Bread and Food Reform League, which we commend to the attention of all who desire to assist in the amelioration of the lot of the struggling poor. This report gives an encouraging statement of the progress of the movement towards awakening a more extended interest in food questions, and its promoters are worthy of all praise for their exertions in diffusing information on a subject which lies at the very root of many of the evils which afflict the lower strata of society.

THE RAILWAY FEVER.

THE phenomenal rapidity of railway journeys with which we have lately become familiar has so far elicited little but the favourable comments of public opinion. The venture appears to have justified itself as an engineering success, and its commercial results or probabilities have evidently up till the present satisfied the rival companies now racing against each other. It appears, therefore, to be a fitting time to inquire whether health and bodily safety are affected by the new energy thus imparted to our customary mode of travel, and what will be the probable effect on our physical condition if the same zeal for velocity should take possession of railway directors throughout the country. In endeavouring to answer this question, we have to consider first its immediate relation to life and limb—in other words, the liability to accident. So far no catastrophe has occurred to alarm the onlookers at the great race; and we sincerely trust that we may learn—if learn we must—the insecurity of this railroad hurry without the bitter teaching of experience. It will rest with the companies to supply such metals, vehicles, and officials as will guarantee the

prevention of any serious mishap. Let it be granted that they are able to do this with reasonable accuracy, and there still remains another important consideration. This is the probable influence of such hasty journeys if frequently repeated. The question is one of those which appeal most directly to the mind of those daily birds of passage—the numberless army of business men living out of town. What would be the probable effect on their health of a morning and evening run of, say, from fifty to one hundred miles? We venture to say that country air thus acquired would be for most of its possessors a dearly purchased gain. The working day for such a one begins we may say, with an hour's oscillation of his brain structure—not, indeed, to an alarming degree, but nevertheless implying a chronic, rapid, and recurrent molecular disturbance. After this comes again for the same organ a day's work and worry, then again in the evening a return of the railway tremor. Evening also brings the country air and rustic recreation, and the traveller thinks that he has done well to obtain these for himself and family without neglecting business for one day. For a time, perhaps, he feels assured of this, but we fear only for a time. To live a racing life all through the day, to dine and try to sleep while hardly free of his feverish hurry,—this does not accord with a prospect of longevity. Work is hurry and worry; rest is pushed into a corner; and though the man lives, he cannot be said to live well. On the whole, therefore, we would advise that the swift journey should remain, if at all, as the luxury of the distant and occasional traveller. For those who frequently use the line, and for railway employees themselves, especially the drivers and stokers, its constant use can hardly be conducive to health. Education will doubtless do much to establish a habit, and some of us perhaps will in future travel with comfort amazing distances in brief intervals of time; but for those who have not early learned the habit, and perhaps for others also, the new system of hurry does not commend itself to our judgment as a wholesome practice.

EFFECT OF IRON ON THE VITAL PROCESSES.

M. SKVORTSOFF, who has been working in the pharmacological laboratory in Warsaw under Professor Tumas, has published an account of some experiments made with the view of elucidating the pharmacological effect of preparations of iron. His experiments were conducted on a dog, the nitrogen of the meat, urine, and faeces being estimated by the Kjeldahl process, the urea by Liebig's process, and the hæmoglobin by means of the new hæmochromometer of Malassez. The method adopted was as follows: the dog was kept the whole time on animal food, iron reduced by hydrogen being mixed with the food. The animal having been got into a condition of nitrogenous equilibrium was given iron for twenty days in gradually increasing quantities from 0.01 gramme to 0.08 gramme per diem. Then the nitrogenous metabolism was determined daily during seven days after the cessation of the iron. Twenty days after the conclusion of this period, the animal having recovered its nitrogenous equilibrium, 26 per cent. of the whole blood in the body was taken from the jugular vein, the percentage of hæmoglobin in the blood having been determined for some days previously. Subsequently this was again determined for a few days. Fifteen days after the venesection, when the hæmoglobin had returned to its normal amount, a second venesection was performed, about 34 per cent. of the whole quantity of blood being this time abstracted. After this second blood-letting the animal was given iron in quantities of from 0.06 to 0.25 gramme per diem, the hæmoglobin being determined as before. Fourteen days after the second vene-

section a third was practised, about 25 per cent. of the whole quantity of blood being taken. After this no estimation of the nitrogenous metabolism was made, but the hæmoglobin only was determined. The general results obtained are thus stated in a short "preliminary notice" communicated to the *Vratch*. 1. Iron does not affect to any appreciable extent the nitrogenous metabolism in the healthy subject. 2. The internal use of iron in quantities greater than 0.02 or 0.03 gramme per diem (in the dog which formed the subject of the experiment) decreased the assimilation of the nitrogenous parts of food, but only to a small extent; thus before the iron the nitrogen assimilated was 98.4 per cent., during the administration of iron the nitrogen was only assimilated to the extent of 97 per cent. 3. The assimilation of the nitrogen of the food was somewhat increased after the abstraction of blood whether iron was given or not. 4. If, after the bloodletting, iron was given with the food, the hæmoglobin increased more rapidly than if iron was not given. After the first venesection, when no iron was given, the hæmoglobin did not attain its normal quantity for fifteen days. After the second, which was by far the more copious abstraction of blood of the two, the administration of iron brought the hæmoglobin up to its previous percentage in five days, while in ten days it had exceeded its original percentage. It should be stated that the percentage of hæmoglobin immediately after the two bleedings was found to be the same. 5. The weight of the body after the bleeding increased more rapidly under iron than without it. After the first bleeding without iron, the rise in weight on the seventh day was 80 grammes. After the second bleeding, iron being given, the rise in the same time was 180 grammes. After the third bleeding, which was performed as a control experiment, the rate of increase of hæmoglobin, no iron being given, was similar to that observed after the first bleeding.

CHRIST'S HOSPITAL

THE Charity Commissioners have issued a series of suggestions for the reconstitution of Christ's Hospital—the "Bluecoat School," as it has been popularly called. The four to five hundred schoolboys, wearing the quaint dress and having uncovered heads, as they might be seen through the somewhat prison-like bars from Newgate-street, attempting to find amusement and physical recreation in the confined quadrangle of their city home, are shortly to be transferred to a more open space in the country. It is a matter of surprise that the school should have been retained so long within its present confined area. As we have before represented, it is unsuited to the growing schoolboy, and the site is more valuable for other purposes. But the scheme of the Charity Commissioners is not limited to the transfer of the schools to the country. The surplus funds arising from the disposal of the present site will be sufficient to found day schools in London on the lines of Merchant Taylors', St. Paul's, and the City of London Schools; and girls are to benefit by the extension. This and other portions of the scheme may appear a misapplication of the intention of the original founder, but in reality it is no more than an amplification of his good intention, and the greater benefit thereby of larger numbers. The *Educational Times* of August 1st calls attention to the probable loss of income from one source—viz., through the withdrawal of the privileges of governors arising from their subscriptions, which the very limited payments of the better-to-do scholars it is contemplated to impose will be inadequate to balance. The chief defect of the scheme appears to us to be the small extent to which paying scholars are to be admitted to the new school when transferred into the country, after the manner of Charterhouse, Marlborough, and other public schools.

Christ's Hospital will have the machinery of public school education in action, and it might just as well be extended to remunerative scholars, making the profit therefrom a benefit to the foundation. To limit a school like Christ's Hospital to charitable purposes places the scholars at a disadvantage. They are too much from one class, and that the least fortunate in the struggle for existence. They are the children of educated and refined parents who have not been able to battle with the world so successfully as others have done. The children of such persons require to be intermixed with large numbers of those of the more practical and successful in life. This is essential to a full education, and it is one of the main and most valuable features of our present public school system. Christ's Hospital in the country should consist of paying as well as foundation scholars in a central building. Masters' boarding-houses should be attached for the children of more affluent parents, thus ensuring a sufficient variety from the social classes among the pupils, and at the same time yielding income enough to ensure the services of the best masters. If this is lost sight of in the new scheme, Christ's Hospital will be placed at a disadvantage with other public schools, and the good of the foundation will be limited. The profits on two or three remunerative pupils should be sufficient to educate an additional foundationer and aid in his maintenance. Eton, Winchester, Harrow, Rugby, Charterhouse, and Marlborough are not the less sought after by affluent parents seeking the highest educational advantages for their children, because some of the pupils are educated on the foundation, as "foundation scholars," from charitable bequests, after the manner of the scholars of Christ's Hospital.

POISONING BY CHLORATE OF POTASH.

Two deaths from poisoning by chlorate of potash are reported in the *New York Medical Record*, of July 21st, 1888. The account is given in a very carefully written paper by Dr. George L. Peabody, Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, New York City. We are so apt to think lightly of the power of this drug as prescribed in small doses, that it is well to know that in large quantities it can produce disastrous effects on the blood and the chief organs, and so cause death. In one case related, the patient was a young Irish girl, single, aged twenty. She was admitted to the New York Hospital on April 10th, 1888, at 4 P.M. She had taken on the previous evening two tablespoonfuls of chlorate of potash by mistake for a dose of Rochelle salts. On admission she was in a state of profound prostration; her temperature 99° F.; pulse 136; respiration 32. Her surface was very cyanotic, and her breathing rapid but not laboured; her pulse, though not very rapid, was very feeble. She vomited freely before and after admission to the hospital. In spite of whisky, digitalis, and strophanthus, the symptoms got worse. At 6 P.M. her temperature had risen to 104°. During the night the bowels acted three times, the motions being dark-brown and of semi-solid consistency; dark-coloured urine was passed involuntarily. It was proved to contain many blood cells, large masses of altered hæmoglobin, and much albumen. The next morning her temperature fell, and the pulse and respiration improved for a few hours. By noon the pulse and heart were again profoundly weak, and the temperature rose to 101.2°. Dr. Peabody was impressed by the very extraordinary colour of her skin and conjunctivæ and lips, as well as by her great restlessness. The intense anæmia with a cyanotic hue, and a very distinct sepia-brown chocolate tint where the epidermis was thin, were remarkable. Inhalation of oxygen produced no improvement. She slept steadily, and died thirty-seven hours after the poisonous dose. At the necropsy the colour of the body was not materially changed, and a slight

hue of jaundice was added to the anæmia and chocolate colour. The blood of the great vessels was all liquid, and of a very dark chocolate colour. The heart was soft and flabby; there was slight dilatation of the left ventricle. The lungs were normal, but the cut surfaces very brown in colour. The spleen was large, firm in consistence, and of a very distinct chocolate colour. The kidneys were large, their capsules not adherent, their surfaces smooth, and both were diffusely stained with the same chocolate-coloured blood. The bladder contained three ounces of urine, of a dark brownish-black colour, and not at all translucent. The chief lesions were those of the heart and kidney. Microscopically very extensive fatty degeneration of the heart was evident, especially in the papillary muscles of the left ventricle. Many of the straight tubes in the pyramids of the kidneys were found filled, even to distension, with broken-down blood cells and methæmoglobin. A spectroscopic examination of the blood revealed the spectrum of methæmoglobin with great distinctness. The conversion of the hæmoglobin into methæmoglobin explains the dyspnoea and the altered colour of the patients. We cannot give the facts of the second case in such detail. The patient was fifty-three years old, and for two years at least, according to his servant, he had been in the habit of taking chlorate of potash "by the pound" for a chronic throat trouble. He also looked very pale and waxy. He became ill with feverish sore-throat, and on one occasion had taken more chlorate of potash than usual. He became very anæmic, passed no urine, vomited, and was jaundiced. He became steadily weaker, and died comatose. The distension of the tubes of the kidney with altered hæmoglobin and the degeneration of the heart muscle were as in the previous case. The bladder contained two ounces of urine, almost black in colour. The gall-bladder was filled with thick, very dark-green bile. The spleen was six times its normal size, and of a very dark chocolate hue. The kidneys were of the same colour. They had a granular surface, but were not distinctly atrophic.

PRISON RULES IN SCOTLAND.

THE Secretary of State for Scotland has just issued a new set of prison rules, in which the duties of the medical officers of Scottish prisons are, among others, very carefully and minutely set out. In the main the duties thus defined coincide with those of medical officers in English prisons, but in one or two particulars the new regulations enlarge the medical man's responsibilities. Thus, he is charged with the care not only of the prisoners, but also of the families of officers and servants of the prison. He is also made responsible for the preparation of an indefinite amount of statistical matter at the direction of the Commissioners. He is required, like his English *confrère*, to make a quarterly inspection of the prison premises, and in addition to this he is frequently to examine the "washing-places, baths, and other provision for the purposes of cleanliness and sanitation, and see that they are in efficient working order." The inspection of the food supplied to prisoners, both when cooked and while uncooked, is specifically prescribed to him. The regulations relating to the attendance of the sick and the weekly visitation of prisoners in good health are practically the same as those which obtain south of the Tweed, but the new Scottish regulations also direct the medical officer to examine the prisoners from time to time during their employment at labour, with a view of satisfying himself as to their fitness for the tasks imposed. He is also to be consulted in every case where it is proposed to subject a prisoner to close confinement or to dietary punishment, and his sanction is only to be given after personal examination. So far the duties of the medical officer are offices of mercy intended to mitigate the severity of punish-

ment, and in England his whole duty may be said to be comprised in that description. In one particular, however, the medical officer of a Scottish prison is to be pressed into detective service, for it is now defined as a part of his duty to report to the governor of the prison any mark which he may observe on the person of a prisoner capable of serving the purpose of identification. Thus it will be seen that the new regulations have been prepared by the light of past experience, and give a very detailed view of the functions of the medical officer of a prison. The tendency of the time undoubtedly is to attach increasing importance to the due discharge of these functions, and we believe it will be found that greater attention to the health and sanitary surroundings of the prison population, far from diminishing the efficiency or the effect of prison discipline, will powerfully assist those influences tending to reform the criminal which it will be the aim of all enlightened legislation to strengthen.

SNAKE POISON.

DR. A. E. FEOKTISTOW has published a communication to the Imperial Academy of Sciences of St. Petersburg on the effect of snake poison on the animal organism. His experiments, which numbered some 300, were conducted with the poison of *Vipera ammodytes*, *Vipera berus*, and *Crotalus durissus*, obtained from about eighty of these animals which were kept in a building suitable for them. No physiological difference could be discovered between the effects of the poison of the three snakes mentioned. The average quantity of poison introduced by a bite was found to be in the case of *Vipera ammodytes* 0.065 gramme, the maximum and minimum being respectively 0.17 and 0.01 gramme, all the bites being after at least three days' abstinence from biting. When the bites were repeated one after another, it was found that from three to five bites were sufficient to use up all the poison. In the case of *Vipera berus* only about 0.03 gramme was delivered per bite. The rattlesnake delivered ten times that amount, or 0.3 gramme. A snake which was first curarised and then injected with muscarin presented no increase in the poison secretion; indeed, no means is at present known of increasing or diminishing this secretion. Various monads were apparently unaffected by a 2 per cent. solution of snake poison; spermatozoa also lived for hours in fresh, neutral, or alkaline solutions, but were killed immediately by an old acid solution. Bacilli and bacteria not only lived but multiplied in solutions of snake poison, so that it is evident that this cannot be a general protoplasm poison. A large number of observations on the physiological effects and post-mortem appearances are given which are well worth attentive study. The paper being published in German is fortunately accessible to most scientific men. Regarding the lethal dose for different animals, the author remarks that it is impossible to give it with any approach to scientific accuracy, for the fresh poison does not always contain the same amount of water, and the inspissated substance contains albumen and other indifferent substances, the percentage of the active principle being entirely unknown. At all events, snake poison is not to be compared with the most toxic alkaloids, as the latter prove much more rapidly fatal even in far smaller doses. It is to be remarked that the young of mammalia during the first four days of life are less affected by snake poison than adults, even amongst animals which are peculiarly susceptible to it; thus while a full-grown rabbit will die in from one to five minutes after a bite from a large rattlesnake, a rabbit a few days old will live for from ten to fifteen minutes after a similar bite, and a very young kitten will survive a bite some three hours. The reason of this difference is probably the undeveloped state of the central nervous

system. The best therapeutic means for combating snake-bite are undoubtedly restoratives, especially preparations of ammonia, as they raise the blood pressure, but they are only of service in slight cases; in severe cases these remedies increase the hæmorrhage of the lungs and other organs. The American plan of giving large doses of alcohol is erroneous in principle, because, while it is true that in small doses alcohol stimulates the vaso-motor nerves, in large doses it paralyses them. Lacerda's treatment by permanganate injections into the venous circulation has proved useless in all cases where a really lethal dose of the poison had been given, and appears to rest on an erroneous assumption. Special experiments regarding hypodermic injections of permanganate in the locality of the bite are still required, but its usefulness is very doubtful, for whenever a lethal dose is inserted it is so rapidly absorbed that the permanganate injection is almost sure to be too late to do any good. At present a physiological antidote cannot even be conceived to exist, as we have no means of opposing the paralysis of the spinal cord, the intra-cardiac terminal branches of the vagus, the cardiac ganglia, the splanchnics, the respiratory centre, &c. The treatment must, therefore, be conducted on other lines, and Dr. Feoktistow is about to commence a series of researches in a new direction altogether, the nature of which he does not indicate. It must be remarked that death frequently follows snake bites after a prolonged period, and is due not to any direct toxic action, but to the morbid changes which have been set up in vital organs. This chronic poisoning, as it may be called, frequently follows doses of smaller amount than those which are immediately lethal.

"BETTER THAN NOTHING."

THE British public is sorely in need of "a new set of images," according to Lord Beaconsfield. Conventional language, however, dies hard; and the satire of "Tancred," though of forty years' standing, has not succeeded in laughing down "last not least"; "crowned with success"; "leave no stone unturned," and replacing them by fresh equivalents. "Wise saws," too, would be all the better for revision, if not for actual readjustment; nay, even more so than the usages of speech; for they assume a certain wisdom, and even authority, inasmuch that we are often duped and dominated by them. Mr. Goschen, on a memorable occasion, has shown how many abuses, how much *laissez-faire* legislation, owe their longevity or actual existence to the phrase "after all," the germ of a great deal of the practical torpor that entrenches itself behind "let well alone." For us medical men there is another phraseological offender, almost as mischievous in the sphere of health as its congener, "after all," is in that of politics. At this season, when a temporary break in routine life hurries off so many citizens to the foreign health-resorts or watering-places, there is no phrase so frequent on the lips of the holiday-taker as "better than nothing." The over-wrought curate or fagged lawyer runs abroad to this or that fashionable "kur," to take so many baths or daily beverages or massages as the case may be, and if it is suggested that the course is insufficient, or the time spent over it too short, the answer is very apt to be "Yes; but it is better than nothing." Now, there is a very grave risk in such proceedings—a risk to which the non-medical public seem but little alive. Like every other therapeutic agent, a mineral water, whether as a beverage or as a bath, must be taken, when indicated, in certain proportions, under certain conditions of time and circumstance, and subject to certain modifications during the course. Repeatedly the home physician has to treat cases of chronic disease where all the symptoms have been seriously complicated through the disturbance wrought on the patient by foreign mineral waters used just often

enough, or just long enough, to worry the system—to set in operation a series of blood changes which, before they result in the expected good, must complete a certain well-understood cycle. A powerful alterative, in fact, has been commenced by the patient, but it has not been followed up to its proper issue—it has been arrested in its course, so as to be operative only to complicate, not to cure. This is peculiarly the case with those waters that contain arsenic in varying proportions, the partakers of which, having received benefit from them once, resort to them again often on their own account, and think a few days of their use, if not all that could be wished, at least “better than nothing.” The same may be said of the massage. A sufferer from incipient atheromatous degeneration goes abroad to put himself under some well-known *masseur*. He has twelve days at his disposal, and he employs them in a dozen operations at the hands of the powerful manipulator. He does not realise that the accelerated metabolism—the histolytic waste—caused by the *masseur* is in excess of his power to repair it, and, deceived by a certain immediate sensation of lightness or nimbleness, he perseveres to the twelfth day, and returns home to find himself in the condition of an athlete who has been over-trained, with perhaps permanent damage done to the walls of the heart. “Better than nothing” in his case has been “worse than none at all.” He had much better have kept out of the *masseur*'s hands than have undergone a daily-recurring series of muscular exhaustions more depressing than a three hours' brisk walk each day would have been. As with the mineral water so with the massage; a graduated interval has to intervene between each dose or each operation. Time must be given to the system to recover from the shock of the new series of conditions imposed on it. But the duration of this interval, as, indeed, the resort to the “kur” in the first instance, can be regulated with safety by the physician alone, whose painful experience it often is to fight a losing battle in attempting to retrieve the *dyscrasie* or the systemic exhaustion induced by the patients acting on the fallacious half-truth involved in “better than nothing.”

THE PERCUSSION LIMITS OF THE STOMACH.

IN a paper in the *St. Petersburger Medicinische Wochenschrift* on the boundaries of the stomach and intestinal canal, by Dr. P. Jaschtschenko of Rostoff on the Don, the view of Traube and some other anatomists, that the stomach when empty falls back and does not lie in apposition with the abdominal or chest wall, is controverted; also his belief that the fuller the stomach is the lower its inferior border lies. According to Dr. Jaschtschenko's observations, the inferior border of the transverse colon extends as far downwards as the umbilicus; the superior border, which is 6 centim. higher, lies at a distance of 4 centim. below the sternum. When the gut is quite empty, the inferior border lies a little higher, or 1 centim. above the umbilicus. In the right and left hypochondriac regions the superior border passes under the costal arch, being covered on the right side by the lower border of the thorax and the lower border of the liver, and on the left by the lower border of the thorax only. If the left half of the transverse colon and the upper part of the descending colon are full, the stomach being empty, a more or less dull percussion sound will be obtained over the lower part of the thorax on the left side, but above this there will be a tympanitic note up to the inferior border of the lung. If a part of the colon is empty, the stomach being full, a dull note will be obtained over the stomach, and a tympanitic note over the transverse and descending colon—that is, when the individual is in a standing or sitting posture. When he is lying on his back there will be a tympanitic note all over, with the exception of course of the region of the spleen. It is known that the superior

border of the stomach lies against the lower border of the left lung, its inferior border coinciding with the transverse colon. This never changes its place, the filling of the stomach causing the dulness to extend from below upwards, not from above downwards, as Traube thought. Again, the stomach when empty does not collapse and fall back, for it is always under these circumstances distended with air. After death, in consequence of the loss of tone of the diaphragm, the abdominal organs rise somewhat above their position during life.

FLOODS IN THE ISLE OF DOGS.

THE floods in the Poplar district have endangered the health of the entire neighbourhood. Under the boards, in the basement of the houses, the filth left by the subsiding waters gives off the most powerful odours, and is considered as little better than sewage. It will be no easy matter to render such houses healthy again. Disinfectants are distributed, but this in itself will not suffice; it may only help to conceal the danger. Cannot the unemployed be set to work to scour out these houses, scrape the deposit off the surface of the walls, lift up the floor boards, and clean out thoroughly whatever may be underneath, thus making all dry and wholesome again? The public authorities are face to face with the prospect of a serious epidemic, which will involve much suffering and considerable outlay. It would be more economical, and, above all, more humane, to prevent such an epidemic by taking immediate and energetic measures. This might have the further advantage of finding work for some who are actually suffering from want, and by giving them the means of earning their daily bread contribute in another way to the maintenance of public health. We should therefore recommend the local authorities to at once organise bodies of men to clean all the houses, leaving the possibility of recovering some of the outlay from the house-owners to be decided after the present pressing danger has been removed. Even if in this the authorities fail, and are compelled to bear the whole expense, it will be, we maintain, cheaper than an epidemic.

COLOUR AND VISION TESTS FOR SEAMEN.

THE practically important subject of colour-blindness deserved more careful treatment than the passing notice allowed it in a recent meeting of Parliament. Its very serious consequence in the case of railway officials has long been recognised, and has led the companies to examine their servants carefully with reference to the state of their colour sensation. It has been suggested that seamen might with advantage be subjected to tests of a similar kind. At present the examination undergone by railway employees in respect of ordinary visual accuracy and of colour perception is more particular and also more general than that applied by the Board of Trade to seafaring men. The railway companies commonly submit the eyesight of their servants, virtually their whole staff, to a series of careful tests for colour and for ordinary vision. In the mercantile marine, as far as we can learn, the tests for near and distant sight are not insisted on by the controlling board, and a knowledge of those for colour is required of officers only. It is not quite clear to what extent accuracy of colour vision is essential to the ordinary seaman. As a rule, his report of a light in any position is at once ratified by the officer of the watch, who is accountable for its further definition. Consequently the seaman's personal responsibility is not great, and the quality of his colour sense has evidently for this reason received but scanty attention. The same argument would doubtless be used to excuse his inability to read accurately the signals assigned by the marine code for daily use. After making every such allowance, however, there appears to be substantial reasons why the

authorities should exert their influence in the direction of reform as regards this question. It is certainly desirable that freedom from ordinary errors of refraction should be required of officers, and we would say of men also, seeing that for the duties of a "look-out" acuteness of sight is often most necessary. Nor is it at all clear why seamen of the grade of warrant officers are not subjected to the same visual tests as officers of a higher class. We have no desire to hamper with needless restrictions a service which as a rule works well, and there is doubtless a much more constant call for accuracy of sight on the railway than at sea. Still the laxity allowed in the latter case is in striking contrast with the strict method observed in the former, and the dangers of the shipping-crowded port are neither few nor petty. It is probable that these risks, if not those of the high seas, would be lessened if even the sailor before the mast could always be justified in believing his eyes.

A SEASIDE DANGER.

IN spite of much careful instruction in the meaning and treatment of infection, there are still many to whom the mention of its dangers and its duties apparently conveys but little sense of responsibility. Among ignorant members of the working class one finds a prevalent unconcern, which is perhaps hardly to be wondered at. Among the more intelligent section of the population something of a truer insight might be looked for; but even here the careless or wilful callousness occasionally displayed in regard to this matter is remarkable. In an instance lately reported to have occurred at a northern watering place, the circumstances, as stated, display an unusual dulness of perception in this particular. A lady is said to have requested the use of a separate bathing machine for two of her children, on the plea that they were suffering from scarlet fever and must not be allowed to bathe with two others who were free from it. In other words, the safety of her own family was a consideration to be remembered, but that of others who might afterwards use the infected machine was of no consequence. The machine keeper very properly declined to grant this absurd and selfish application. We have the doubtful satisfaction of learning more than one lesson from this incident. In the first place, it is evident that the care of those who own and let vehicles, whether for bathing or other purposes, is in vain unless the public generally will assist them in protecting its health from wanton or careless injury. Further, we learn, and not for the first time, that children convalescent from infectious illness are sent to the country to recruit while still capable of communicating the disease. Thirdly, it is evident from the above narrative that the children may be heedlessly subjected to a danger as real as, if not more so than, that of the original illness—the risk of nephritis from exposure of the peeling skin surface to cold. We would fain hope that the facts of this case as reported are capable of some other explanation than the above.

GENITO-URINARY SURGEONS.

WE have before us "the Preliminary Programme of the American Association of Genito-Urinary Surgeons," for its meeting to be held in Washington on Sept. 18th, 19th, and 20th. There are no less than thirty-four communications on this preliminary programme. The expression "Genito-urinary Surgeons," which does not seem to us a happy one, indicates the disposition to erect a new specialty, which we trust will be reconsidered. The very enumeration of subjects will show the diversity of the complaints which are to be suggested as the special care of the genito-urinary surgeon: The effect of rapid changes of altitude in advanced

interstitial nephritis, operations on the kidney, syphiloma of the vulva, the *Filaria Sanguinis Hominis* in the United States, especially in its relationship to chylocele of the tunica vaginalis testis, the prophylaxis of syphilis, demonstration of a perfected evacuator, and an improvement in the method of removal of debris from the bladder, &c. We readily grant and rejoice in the recent improvements of surgery in its application to the kidney and bladder and the related parts. But all this has been accomplished without the creation of a new specialty and without disjoining the operators from the great body of their surgical brethren. It is not a wholesome sign, this tendency for a group of men to fly off from the great body of their brethren and put a special label on themselves. Where is it to stop? Is syphiloma of the vulva to be regarded as something apart and special; or can it be separated without harm to the general conception of the case in which it occurs? Admitting that many of the local affections enumerated in this programme are highly important and demand exquisite surgical skill, can they be regarded as the special care of "genito-urinary surgeons" without narrowing surgery itself, and without risk to that larger view of local disease which often see its origin in other than local causes? One thing is certain, that the men in our British schools who have shed most lustre on the surgery of these and other parts are general surgeons, in general hospitals, who would refuse to be labelled the surgeons of a part and not the whole of the body.

OVER-PRESSURE IN SWISS SCHOOLS.

IN the education of youth the Swiss Republic yields to no European state—indeed, much of the system in operation throughout the schools of France and Germany in particular owes its initiation to Swiss precept and example. In return, Switzerland is not slow to take hints from her neighbours, Latin or Teutonic, and the controversy that has of late years been agitating these countries as to whether or in what degree "over-pressure" exists in their schools has drawn her attention to the possible prevalence of the same evil in her midst. The Medico-Chirurgical Society of her chief canton (Berne) has just resolved to evoke what information on the subject may be scattered throughout the Confederation, and has offered to public competition a prize or prizes for the best and next best essays on the following question: "Up to what point is there ground for entertaining the criticisms which have been made from a medical point of view on the intellectual over-pressure of children in the schools of a Swiss territory?" The essayist must have restricted his observations to a given area of the population, which shall comprehend education at establishments of different characters; from those he will have to draw precise etiological conclusions as to the effect which too severe requirements imposed on the pupils may have upon the health of these latter; he must have studied the relative proportion of the cases of illness occurring in the educational establishments under his observation; and, lastly, he is warned that an essay of a purely theoretical character, or a mere compilation from books embodying facts which he has had no means of personally examining, will be excluded from the competition. A sum of 800 fr. (£32) is set apart for the successful competitors, whose essays will become the property of the Society; permission, however, will be granted them to publish their essays at their own expense on condition that a limited number of copies be put at the Society's disposal. The essays must be written in the French or the German language; they must be provided with a motto, and they must be accompanied with a sealed envelope containing the writer's name and address. June 30th, 1889, is the date on or before which the essays must be lodged with Professor Korker, Berne, the President of the Medico-Chirurgical Society. So that in about a

year's time the educational world may have an opportunity of profiting by the opinion of Swiss experts on a question which, in greater or less degree, has brought physician, schoolmaster, and legislator into keen, if amicable, controversy throughout the scholastic centres of Europe.

"SYRRHAPTES PARADOXUS."

A LITTLE pamphlet has just been published by W. B. Tegetmeier,¹ which contains an excellent chromo-lithograph of Pallas' sand grouse and an account of its characters and habits, and of the successive appearances it has made in Europe. The bird differs so essentially from the other and better known sand grouse which constitute the genus *Pterocles*, that it has been made the type of a new genus, *Syrrhaptes*, from *συρραπτες*, to sew together; because the toes, except the last joints, are closely united. The genus includes only one other species, a native of Tibet. Pallas' sand grouse, *Syrrhaptes paradoxus*, is one of the most characteristic birds of Mongolia. In summer they migrate to the north, but winter in the Gobi desert. The principal food of the enormous flocks that are there found consists of the seeds of the *Agriophyllum gobicum*. At sunrise they leave their roosting-places, and fly very fast and very low for tens of miles to their drinking-places, describing a circle before settling, to assure themselves of the absence of danger. They construct no nest, the eggs being deposited on the sand. These are three or at most four in number, elliptical, yellowish-grey in colour, with reddish spots. The female does not sit on the eggs very closely, but leaves them when approached within twenty paces. Those that were shot in England were found to have in their crops the seeds of *Lotus corniculatus*, *arenaria*, *polygonum*, *poa*, and *Lepigonum maritimum*. Their flesh is very delicate and pleasant to the taste. The present is the second great migration of these birds into Europe. The first took place in the year 1863; and it is remarkable that Professor Newton was able to predict that a repetition of the irruption would take place, partly from their natural increase in numbers, and partly from his observation that the birds were so strong on the wing that they were able to beat the falcon in rapidity of flight.

STRIKES AND SWEATING IN PARIS.

The Times, in an article on Sweating in Paris, gives some figures which go far to prove that the workpeople of Paris, especially the women, are as poorly paid as the victims of the sweating system in England. Some of the sums accepted by sweaters for the making up of various articles of clothing are very similar to the prices mentioned in the course of our reports on sweating in the provinces. If this is the case, then the condition of affairs, so far as public health is concerned, must be worse in Paris than in the large industrial centres of England. The drainage and the ventilation of Paris houses are very unsatisfactory. Disinfection and isolation are not obligatory. Thus, whatever the danger of contaminating clothing and other articles in England, this risk is infinitely greater in France. We would put this phase of the subject forward, and trust it may elicit the attention of social reformers in France. More important than this is the undoubted fact that the reduction—equal to 50 per cent. within the last six years—of the rate of wages paid to women working in Paris has greatly increased immorality in that town. Women are often at work all the week to earn only four shillings, and of course it is impossible to live on this sum. No wonder that general dissatisfaction prevails among the working classes. The strikes in which men only have taken part are also an indirect reflection of what the workwomen suffer. It must further be borne in

mind—and this has a very material effect upon public health—that provisions, the first necessities of life, are much dearer in Paris than in London. To provide the municipal receipts all articles of food are heavily taxed as they enter the town, and these *octroi* dues stand in the stead of our rates and taxes. But they weigh very heavily upon the working classes, especially on the navvies, who, in consequence of their out-door work and great physical exertions, require more food than workers engaged in other occupations. Under these circumstances, 4½d. per hour is not sufficient pay; and the Paris municipality in giving 6d. an hour to all who work for the town has set a good example.

THE CHOLERA IN SICILY DURING 1887.

MR. WILLIAM STIGAND, in a consular report from Palermo, gives some account of the serious conditions with which cholera in Sicily was associated in 1887. In Palermo, where the mortality was not so excessive as in some other parts of the island, he states that, owing to the ignorance prevailing, the cholera induced a condition of savage panic. Vegetables, fruit, and fish were regarded with suspicion; lean and gristly beef reached a famine price; the richer classes were regarded as disseminating the poison with a view of exterminating the poor; and both sisters of charity and medical men were stoned unless protected by a military escort. Cleanliness in its most elementary form seems unknown, and the result is that the most filthy odours prevail, and that wholesome water is rarely procurable. In Messina, according to Vice-Consul Rainford, the accumulated filth of the back streets found its way during a storm on Sept. 8th into the terra-cotta water conduits, and immediately afterwards cholera broke out. Panic ensued, and, whatever the cause may have been, we regret to read that "many of the chief medical men fled, as well as numerous apothecaries"; food was most difficult to procure, and had it not been for the cheap kitchens and help afforded by a voluntary society known as the "Croce d'Oro" a numerous population would have starved. Nothing but education can remedy such a state of things.

WINTER HÆMOGLOBINURIA.

DR. A. MATIENZO, writing in *La Escuela de Medicina*, a Mexican medical journal, reports a case of paroxysmal, or winter hæmoglobinuria, which has been under his care. The disease is of course not very common anywhere, and we gather from Dr. Matienzo that it is almost unknown in Mexico. The patient was a man of over seventy years of age, who as a rule enjoyed good health, and was particularly active and hearty for a person of his time of life. About half a dozen years ago, when starting for a hunting expedition one winter's day, he felt his feet very cold and swollen, and when he arrived at the rendezvous he noticed that his urine had the appearance of being tinged with blood. He went on with the expedition, however, the exercise bringing warmth to his extremities. In a few hours' time the urine which he passed was free from red colouration. This was the first appearance of the affection, and he seems to have consulted no medical man until December, 1886, though he had passed bloody urine occasionally every winter after getting his extremities chilled. When seen by Dr. Matienzo he complained of extreme cold in the feet, rendering the toes quite numb. The hands, nose, and ears were cold and livid, there was also slight headache; pulse and temperature were normal. The urine was dark but clear, and when treated by heat and nitric acid presented a solid mass of reddish albumen. On microscopic examination, not a red corpuscle could be seen. The diagnosis, therefore, was hæmoglobinuria. The guaiacum test was successful; crystals of hæmin were also prepared.

¹ The Field Office, Strand.

The urine, on spectroscopic examination, presented the two absorption bands considered to be characteristic of oxyhæmoglobin, and one more to the left due to methæmoglobin. The treatment adopted was of a very simple character, the object being to produce reaction and to enable the patient to recover his natural warmth. A cup of hot tea, with a little alcoholic stimulant, the patient being kept in one room, was all that was needed. The attack passed off, and the urine regained its normal character in a few hours. The only treatment which Dr. Matienzo considers likely to be of any value is the avoidance of cold and chills as a precautionary measure. In such a climate as that of Mexico, it is of course more practicable for a patient to arrange to remain indoors in very cold weather than it would be in latitudes where cold weather is of longer duration.

RETREATS FOR POOR INEBRIATES.

POOR INEBRIATES are poor indeed. They spend what little money they have in drinking, and there is no legal provision for their maintenance in those Retreats which are established under the Habitual Drunkards Act, and which are practically used only by the well-to-do classes. It may be said that habitual drunkards are not entitled to consideration; but this will scarcely be said by medical men, who know the morbid character of the dipsomaniac habits. They at least will appreciate a benevolent experiment, which is being tried at Croboro' by Lieutenant-Colonel T. M. Whale, R.M., that of an industrial farm on which the dipsomaniacs are said to be supplied with healthy and constant occupation, placed under partial restraint, and supplied with wholesome food. More than half the patients are destitute and pay nothing, and the others only 10s. a week. No wonder that there is a deficiency of £250 in the funds. The experiment seems to us a most interesting and benevolent one, and we trust will receive support. It is said also to have been a successful one, as nine out of eleven cases considered incurable have received permanent benefit. Subscriptions should be sent to the hon. secretary at the Industrial Melnagh Farm, Croboro'.

THE INFLUENCE OF TYPHOID FEVER ON SOME OTHER DISEASES.

THAT diseases characterised by hyperkinesis may disappear at the onset of typhoid fever is fairly well known as regards chorea. Couturier has observed a case of disseminated sclerosis in which great amelioration of the symptoms was apparently produced by an attack of typhoid fever, the ankle clonus and other exaggerated movements being notably diminished. The difficulty, however, of separating some cases of spinal sclerosis from functional spasmodic paraplegia must be remembered. A sudden event, or one of some intensity, often makes a difference in cases of neurasthenia, but the difference is not always in the direction of improvement; a fright has cured paraplegia and, on the other hand, has made paraplegia worse.

TYPHOID BACILLI IN THE KIDNEYS.

DR. KONYAEFF has published some researches, which he has made with the help of Dr. N. V. Uskoff, on the microscopic structure of some little nodules found in the kidneys of typhoid fever patients, in twenty-one cases out of 120 post-mortem examinations of bodies dead of this disease in the Alexandroff Hospital in St. Petersburg during the year 1887. The preparations were stained with a solution of methyl in dilute spirit and fuchsin in a 5 per cent. solution of carbolic acid. In all the cases examined there were found in the centre of the nodules colonies of slightly coloured bacilli precisely like those of typhoid. No others were seen. In

two cases these were successfully sown in nutrient jelly, and from them a double kind of colony was developed exactly like typhoid colonies. Potato cultures were also reared, and the microscopical examination of these left no doubt that the jelly cultures were cultures of true typhoid bacilli.

ELECTRIC RAILWAY ON THE BÜRGENSTOCK.

FROM Thun, under date August 6th, a correspondent writes:—"Among the many favourite resorts on the Lake of Lucerne at which the holiday maker can enjoy the pure air, the delicious quiet, and the exhilarating scenery of the Alps, the Bürgenstock has long held a prominent place. The hour and a half consumed between Stansstad, the station on the lake, and the hotel on the Bürgenstock used to be felt as the most wearisome out of the twenty-four from the starting-point in London; but now that one drawback to the pleasure of the journey has been removed. On the 8th inst. was opened the electric funicular railway, which begins just at the base of the mountain at Kehrliten, the new landing-place; and in a few minutes, at the cost of one franc, the traveller will find himself transported, as pleasantly as in a balloon, to the hospitable portals of the Bürgenstock Hotel. The old tedious journey round by Stansstad and up the mountain side—the latter stage of it costing from ten to twenty francs—is now a thing of the past; and even those who do not intend to make a sojourn on the Bürgenstock, but who would not like to miss the glorious prospect it commands, can, from Lucerne, reach the hotel by lake and electric railway in the forenoon, ascend to the Hamtschwand or summit, and enjoy the view of the lake and its sisters, the Sarnen, Sempach, Baldegg, Hallwyl, and Zug, and of the peaks of the Rigi, Pilatus, Mythen, Weissenstein, and the Alps of Glarus and Unterwalden, with part of the Bernese Oberland, returning to Lucerne in time to catch the Milan express, which reaches Basle in the evening. The swift flowing Aa, at Buochs, supplies with its 150 horse power the force required for the railway, as well as for the electric illumination of the hotel. It is but fair to add, however, that until the weather improves Switzerland is no place for the holiday maker with limited time at his disposal. For three weeks, with but a few partially sunny days, the rain has fallen in torrents, and as I write the cold is so severe that we have had to light the fires, which are not usually kindled till October."

DO LIBRARY BOOKS SPREAD INFECTION?

A GOOD deal of discussion having taken place on the subject of the spread of infectious diseases by means of the books in circulating libraries, the Dresden municipal authorities have had a thorough experimental investigation of this question conducted. A number of much-used volumes from the town library were taken for the purpose. The dust from the leaves and covers was sown in nutrient media and cultures reared, the result being that no microbes belonging to infectious diseases were found—the dust being, in fact, nothing but ordinary dust of a harmless character. Again, the dirtiest leaves in the books were rubbed first with the dry finger and then with the wet finger. In the first case scarcely any microbes were found on the finger; in the second case plenty were found, but all appeared to be of a non-infectious character. Especially is it noted that there were no tubercle bacilli. Lastly, books were soaked for two days in spirit containing 10 per cent. of carbolic acid. This treatment destroyed all the bacilli, and proved harmless to the volumes. The conclusion arrived at was that the danger of circulating libraries spreading infection is very slight, but a recommendation is given to dust books well before reading them, and never to wet the finger in the mouth for the purpose of turning over the leaves.

LIVER ENLARGEMENT IN RICKETS.

RICKETS is credited with the power of producing a large liver and spleen. Dr. Edgar Hogben, writing in the *Birmingham Medical Review* (August) describes histological changes to account for the enlargement of the liver. It is well known that the visceral enlargement was believed by Dr. Dickinson to be due to infiltration by some translucent material which was not albuminoid, because it did not give the characteristic iodine reaction. The changes described by Mr. Edgar Hogben are very interesting, and amount to those met with in hypertrophic cirrhosis. A pericellular growth was not noticed, the overgrowth of connective tissue being chiefly around each lobule. In the livers of young infants, not apparently suffering from any disease, an increase (as compared with the adult) in the number of nuclei in the branches of Glisson's capsule is practically a normal phenomenon. Dr. Hogben admits the possibility of alcohol playing a part in the causation of the cirrhosis. A long past scarlatina or other acute specific disease may also be a cause of cirrhosis. The suggestion has been made that there is a general biliary hepatitis coincident with the catarrh of the mucous membranes of the stomach and bowels, so common in rickets.

GALVANO-PUNCTURE IN GOITRE.

DR. WEINBAUM reports, in a recent number of the *Frach*, two cases of goitre in girls, occurring shortly after menstruation had been established, which were entirely cured by passing the current from a battery of twenty cells through the tumour by means of two gold needles inserted into opposite sides of the growth for the depth of a few millimetres. In one case 150 sittings were required. These were prolonged during eight months, as small eschars frequently formed round the cathode, and it was thought well to give these time to heal before repeating the treatment. Each sitting lasted from ten to fifteen minutes. It is noteworthy that, after the tumour in this case had to a large extent become absorbed, the girl's general condition began to give rise to some alarm, cough, night sweats, and amenorrhoea coming on. However, by means of arsenic and iron, the patient ultimately recovered, and has enjoyed excellent health since, the only signs of the goitre being the cicatrices due to the needles.

EFFECT OF ACIDS ON THE SENSE OF TASTE.

THE intensity of the sour taste of an acid appears to be related to its chemical composition. Dr. Corin found that the intensity of the sensation of sourness produced by different acids of an equal degree of strength was not the same, neither was it proportional to the amount of replaceable hydrogen. The effect on the sense of taste was found, however, to vary with the atomic weight with solutions containing an equal amount of acid hydrogen replaceable by metal; so that the acid taste was stronger in proportion as the molecular weight was lower.

POISONING BY HEMLOCK.

THE sad occurrence last week at Consett, county of Durham, noted by our Newcastle-on-Tyne correspondent, by which two boys, brothers, were poisoned in a rather unusual way, has directed attention to hemlock. It is one of the oldest vegetable poisons, and yet it is one that is not popularly well known. It does not appear whether the plant was the *conium maculatum*, or the *circuta viroea*, or water hemlock, or cowbane; probably the latter, because it is most common in the north of England and in Scotland, and

because it has a more hollow stem. The hollow structure of the stem would very likely cause it to be selected by the boys for the purpose of shooting haws through, while the long time it would be kept in their mouths would favour the absorption of its juice, which is a virulent narcotic acrid poison at all times, but at this season most active. The coroner's remarks were timely and judicious; he said "he hoped this matter would be well-ventilated in the newspapers, so that parents might warn their children of the dangerous nature of some of these plants. He thought the time of adults would be profitably occupied if they occasionally took their children for walks through the fields, and explained to them the things which were dangerous."

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS IN WASHINGTON.

WASHINGTON is to be honoured again by another gathering of physicians and surgeons. It is called the first Triennial Session of the Congress of American Physicians and Surgeons, and will be held on September 18th, 19th, and 20th. A number of eminent physicians and surgeons from abroad are expected, including Professors Esmarch and Gerhardt, Drs. Rafael Lavista of Mexico, Dr. J. L. Reverdin of Geneva, Sir Spencer Wells, Sir William MacCormac, Drs. Priestley, Ord, Grainger Stewart, and Ferrier, and Messrs. Lawson Tait, Victor Horsley, Bryant, and Annandale. About thirteen separate medical associations of specialistic character are advertised to hold meetings about the same time.

TYPHUS IN SALFORD.

DURING the spring of the present year typhus invaded a well-known fever haunt in the district of Regent-road, Salford, and during the second quarter of the year the disease has shown a greater prevalence there, fifteen patients having been removed from that quarter to the Wilton Hospital. According to Dr. Tatham's quarterly report, in which some account is given of the precautionary measures adopted, Salford would probably have been suffering severely from typhus at this time had it not been for the effective aid received from the medical practitioners of the borough under the clauses of the Notification Act. Both small-pox and typhus have been held in check by means of the provision for notification.

THE CASE OF THE LATE GERMAN EMPEROR.

THE statement that has appeared in some of the German papers that Sir Morell Mackenzie does not intend to publish a reply to the allegations of the German physicians is, we are informed, unfounded. It is understood that his answer will be issued in the course of a few weeks simultaneously in German and in English. The English edition will be published by Messrs. Sampson Low, Marston, and Co., of St. Dunstons House, London.

A PANIC is reported to exist at Jacksonville, Florida, owing to the spread of yellow fever. A rigid quarantine is enforced, and disinfectants freely and generally used. Large bonfires, with mixtures of pitch and sulphur, are maintained in the infected districts. No fever has as yet appeared in St. Augustine and other towns in Florida, but the inhabitants are said to be in a state of natural alarm.

At the University of Tomsk, Dr. Stanislaus Zaleski, assistant in the Pharmacological Institute in Dorpat, has been appointed to the Professorship of Chemistry and Medical Chemistry.

IN an action for libel, tried on the 10th inst. at the Birmingham Assizes, brought by Mr. C. W. R. Iliffe, medical officer of the Coventry Workhouse, and coroner for North Warwickshire, against the proprietors of a Coventry newspaper, he obtained damages for £1000 for articles published in that paper charging him with complicity in what was known as the "Coventry Workhouse scandals."

BRIDES-LES-BAINS.

By H. BLANC, M.D., F.R.C.P.

I HAD heard so much of Brides-les-Bains—the Carlsbad Français, as they call it—from French colleagues at Cannes that I decided on paying the place a visit, to judge for myself of its claim to compete with its powerful German rival. The waters of Carlsbad and Brides have many points in common, both containing the sulphates of soda, of lime, and of magnesia, the bicarbonates of lime and of magnesia, carbonic acid gas, &c. The temperature of the waters of Brides is that of the colder Carlsbad springs—i.e., 95° F., but it could easily be warmed to the temperature of the Sprudel itself, as is done at Tarasp. However, for the present no arrangements have been made to do so. The salts of iron exist in the waters of Brides to a marked degree; the red ochre deposit is very abundant wherever the water flows, and a slight inky flavour is perceptible to the taste. Dr. Delastre rightly considers these salts of iron of great value in lessening the debilitating effects of the water when taken in somewhat large quantities. On the other hand, iron does not always agree with those who otherwise require alkaline purgative waters, and it is well that this fact should be insisted upon, to enable the profession to select the cases where alkaline waters containing a fair percentage of iron are required.

From what I have seen during my three weeks' stay at Brides, and from kind information received from Drs. Delastre and Desprez, I am inclined to believe that these waters will agree best with the anæmic and the lymphatic; better with women and children than with men, always provided that the digestive organs have retained some power, and that the patient does not suffer from the painful forms of dyspepsia.

Dr. Delastre, in his able notice of Brides-les-Bains, states that these waters have a remarkable and special action on the liver, favouring the biliary secretion; and I agree with him that in catarrhal conditions of the bile ducts, or in deficient secretions of bile due to an anæmic condition with slow circulation, these waters must act favourably. They find also, as Dr. Delastre states, a good application in those who have suffered from intermittent fevers contracted in southern lands; and in those also who, without actually suffering from malarious fever, have long resided in the tropics, and whose portal system is passively congested; indeed, for these latter, Brides has better claims than Carlsbad, the chloride of sodium, and especially the iron these waters contain, stimulating nutrition, and acting favourably on the blood itself. Both Drs. Delastre and Desprez speak very highly from practical experience of the favourable influence of these waters on diabetes, when met with in anæmic and debilitated subjects. Brides is also much valued by French physicians in the treatment of atonic dyspepsia, attended with constipation or with chronic catarrhal diarrhoea. Their diuretic influence being marked, they are indicated in the gouty, in those suffering from catarrhal affection of the urinary tract, and wherever effete matter is not readily eliminated; finally, prescribed in large doses and assisted by vapour baths, they are supposed to lessen obesity.

In close proximity to Brides-les-Bains we find the powerful iron and chloride of sodium baths of Salins-Montiers, a sea bath at the temperature of 95° F., to which iron in large proportions is added. These baths are of great value as a stimulant tonic, and act very favourably on those who are not liable to congestions. They are of great service to scrofulous and lymphatic children, and are prescribed with advantage in certain atonic uterine affections attended with considerable leucorrhœic discharge, congestion of the

generative organs being greatly lessened by the combined influence of the Brides water taken internally.

Brides-les-Bains is situated in a pretty but very narrow valley some 1700 ft. above the sea; the neighbourhood is well wooded, replete with pleasant and shady walks, and near at hand lofty mountains arise, whose glaciers contrast very beautifully with the green hills and fir-covered peaks which surround them. Brides is intensely hot during the fashionable season—i.e., July and August, but the place is delightful in spring and autumn, when the air is cool and bracing. The place is easy of access; the railroad for the present is completed as far as Albertville, whence the diligence or private carriages bring visitors to Brides in about four hours and a half, through beautifully cultivated valleys rich with vineyard and orchard, and dotted with picturesque villages.

If I could find a fault with Brides-les-Bains it would be about the food. I have rarely met with, in my many travels, better cookery or more attentive service, but for those undergoing the cure the dietary is decidedly too rich, too varied, and too abundant, and it must be a great trial to look on these good things and not dare touch them, as here, as well as at Carlsbad, those who take the waters are forbidden to eat pastry, butter, uncooked fruit, and highly-seasoned dishes. I suggested to my medical friends here that it might be advisable to have a separate table for those who drink the waters, where they would only find food adapted to their condition; but I was told that such an arrangement would not answer, that members of the same family, some drinking the waters, some not, would object to take their meals at different tables, and that moreover, as a general rule, those undergoing the cure carried out very faithfully the directions they had received regarding the kind of food they must avoid.

There is a small casino here where are found on a small scale most of the amusements and distractions so necessary to the French when they repair to a watering place for health's sake or for pleasure. A very fair band plays in the park after lunch, and again in the evening in one of the casino rooms, where the young people dance away for a couple of hours; "Early to bed and early to rise" being the motto all follow here. Apart from a few English and Americans, most of the visitors are French; polite, courteous, and friendly, they give a gay and pleasant look to the place, which although small is anything but dull.

I was very agreeably surprised to observe during my short stay here a marked improvement in several noticeable cases, and how much better some looked who on first arrival seemed too ill to reap much benefit from the cure. Several of the visitors had on a previous occasion taken the waters at Carlsbad, and they were loud in their praise of the benefit they had derived from their visit to Brides, feeling less depressed, less tired, and altogether stronger than they did while at Carlsbad.

In concluding this brief notice of this pretty little watering place, I believe that I am justified in saying that the waters of Brides-les-Bains, combined in some cases with the warm chloride of sodium and iron baths of Salins-Montiers, are of great therapeutical value, and are indicated in many disordered conditions of the digestive, urinary, and other organs, especially to those who are benefited by the addition of small quantities of iron to alkaline, aperient waters. Brides-les-Bains is at its best in the spring and autumn, and as an intermediary station for invalids and others who spend the winter on the Riviera none better could be found.

PRESENTATIONS.—The departure last week of the two house surgeons, Mr. Coombe and Mr. Priestley, and the house pupil, Mr. Wightman, from the Sheffield General Infirmary, was made the occasion of a very interesting presentation. The nurses, servants, and patients of that institution showed their appreciation of the attention and courtesy they had received from those gentlemen by desiring their acceptance of a handsome salad bowl, a marble clock, and a pair of opera-glasses, bearing suitable inscriptions.—Dr. Clabburn, who is leaving Chiswick for Buenos Ayres, South America, has been presented by his personal friends and others resident in the neighbourhood, as a token of their regard and esteem, with a handsome gold watch and chain, and a portfolio containing an illuminated address, bearing nearly 200 signatures. The members of the Chiswick Police Force, to whom Dr. Clabburn was surgeon, have also presented him with a silver mounted walking stick.

Pharmacology and Therapeutics.

SALICYLIC ACID IN METRORRHAGIA.

DR. FELICI has found salicylic acid arrest the flow in two cases of metrorrhagia in a wonderfully short time, and thinks it should be tried extensively by other medical men in similar cases. His first case was one of carcinoma where the hæmorrhage had been constant and profuse, and had defied all ordinary styptic remedies; a plug of carbolised cotton wool, soaked in a solution of salicylic acid, was applied to the uterus, and completely arrested the hæmorrhage within a few minutes. The second case was one of simple metrorrhagia during the menopause, but of so violent a character that the patient became collapsed. Ordinary remedies were tried, with merely temporary effect. Finally, Dr. Felici introduced into the uterus a dossil of cotton wool soaked in a concentrated solution of salicylic acid on the end of the uterine sound. This arrested the hæmorrhage in a few seconds, and no return occurred.

COCOANUT AS A VERMIFUGE.

Professor Parisi of Athens when he was in Abyssinia happened to discover that ordinary cocoanut possesses vermifuge qualities in a high degree. He took one day a quantity of the juice and pulp, and shortly afterwards felt some amount of gastric disturbance, which, however, passed off in a few hours. Subsequently he had diarrhoea, and was surprised to find in the motion a complete tænia, head and all, quite dead. He made inquiries of the Abyssinians as to their knowledge of this property of the cocoanut, but they knew nothing about it. After returning to Athens Professor Parisi made a number of observations, which were most satisfactory, the tæniæ being always passed and quite dead. In only one case was the head wanting. He orders the milk and the pulp of one cocoanut to be taken early in the morning fasting, no purgative or confinement to the house being required. Doubtless pharmacists may, as he suggests, make cocoanut preparations which may answer the same purpose, and perhaps may prove rather more convenient. At all events, eating a cocoanut is a much less unpleasant ordeal than the usual dose of male fern, followed by a violent purge; and if it ultimately prove as efficacious as Professor Parisi seems to think, it will be an excellent addition to our list of vermifuges.

LINSEED AS A SUBSTITUTE FOR GUM ARABIC.

A correspondent of a pharmaceutical contemporary writes: "Linseed is recommended as a substitute for gum arabic. The seeds are first boiled with water for an hour, the resulting thick mass filtered, and then treated with twice its volume of 90 per cent. of spirits of wine. A flocculent white precipitate separates, from which the dilute spirit can be readily decanted. A yield of 10 per cent. of dried 'gummi lini' on the weight of the seeds taken is obtained. The gum forms a clear, grey-brown, fragile mass, which dissolves in water without taste or smell, similarly to gum arabic. Two grammes are sufficient to form an emulsion with thirty grammes of oil, which resembles the emulsion formed with gum arabic, both in taste and in appearance."

CREOLIN IN PURULENT OPHTHALMIA AND GONORRHOEA.

Acute and chronic purulent ophthalmia is satisfactorily treated, according to Dr. Margaritti, by means of a solution of creolin of the strength of 1 in 400. This is instilled into the eyes and used for moistening compresses which are applied externally. At first a burning sensation is experienced, but after about five minutes this subsides and the eyes feel much more easy, and the patient is able to open them without difficulty. Gonorrhœa which has resisted other treatment has frequently yielded in Dr. Margaritti's practice to irrigations, twice daily, with a solution of creolin of the strength of 5 to 8 per cent., administered through a hollow sound.

CASCARINE PASTILS.

Cascarine pastils (Tompsett) are very useful and agreeable. They may be easily swallowed entire, and even chewing them does not cause disgust. We have frequently prescribed them, and with good results. Each pastil contains twenty minims of the liquid extract of the British Pharmacopœia.

COCAINE.

MM. Langlois and Richet have sought to determine the influence of the temperature of the body on the convulsions caused by cocaine. They first of all ascertained the general phenomena consecutive to intoxication with certain doses of cocaine. It was found that the more elevated was the temperature of the animal the less cocaine was required to cause convulsions. Dogs whose temperature was raised became more and more likely to develop nervous agitation. Cocaine itself causes an elevation of the temperature of the body before provoking convulsions; this elevation is an adjuvant to the convulsions; further, convulsions in their turn raise the temperature of the body; thus a sort of vicious circle is established. The only way to break this circle is to cool the animal by means of cold baths, and so prevent the favouring influences of pyrexia.

TREATMENT OF WHOOPING-COUGH.

M. d'Heilly treats this affection by means of a compound powder, composed of salicylate of bismuth, five grammes; powdered benzoin, five grammes; sulphate of quinine, one gramme; to be used as an insufflation five times a day. Michael employs powder of benzoin and quinine; Guerder, a mixture of boric acid and powdered coffee; Carlaz, subnitrate of bismuth and powdered benzoin. In the early stages, the mixture of one part each of quinine and bromide of potassium with two parts of starch is useful.

ICHTHYOL IN ERYSIPELAS.

Dr. Jadkevich, writing in the *Meditsinskoe Obozrenie*, recommends ichthyol in erysipelas, which he says gives better results than any other drug. He employs an ointment composed of sulpho-ichthyolate of ammonia and hog's lard in equal proportions, and he covers the parts to which the ointment has been applied, with the exception of the face, by means of varnished paper. Under this treatment all the cases recovered in from one to two days.

MENTHOL OINTMENT.

Menthol ointment (Shirley) is a useful mode of applying menthol. It is under many circumstances a better application than the pure crystal. As to there being menthol in the ointment in abundance, the merest trial on any skin possessed of ordinary sensation at once shows. Menthol ointment has in our hands relieved the infra-mammary pain of hysteria as well as more definite neuralgia.

THE OBSERVATORY OF MONT SOURIS.

(From our Roving Correspondent.)

THE enlightened policy of the municipality of Paris in fostering the observatory at Mont Souris for the scientific study of meteorology cannot be too highly commended, and the "Annuaire" just issued, containing a report of the work carried out during 1887, fully justifies the municipality for the expenditure which the observatory involves. I trust that those who are answerable for the sanitation of London will find time to fully consider at least those portions of this interesting year-book, which deal with the purification of sewer water as carried out in Paris. M. Albert Lévy, who is the chemist to the observatory, and who makes an elaborate report on the condition of the drinking water, also deals with the condition of sewer water and drainage water. As various statements have of late been made in the general press and elsewhere on the so-called Paris sewage farms, and as the question of the purification of the Thames is still, and is likely to be for some time, a burning question of national importance, I feel that I shall be serving the interests of your readers and the public by giving a summary of this report. M. Lévy says: "The refuse water of Paris, as well as part of the cesspool water, are brought by sewers to three collectors emptying into the Seine below Paris. Two of these collectors, one on either bank, empty 300,000 cubic metres daily into the Seine. The third collector receives the water from the slopes to the north of the Butte Montmartre and the higher regions of Paris, is situated at St. Denis, and receives 50,000 cubic metres daily. In 1867 the municipality commenced attempting to purify the sewer water by means of the action of permeable soil and vegetation, such purification having as

secondary consequences the disinfection of the Seine below Clichy and St. Denis and the fertilising of the irrigated ground. These experiments are still going on in the peninsula of Gennevilliers. Part of the water of the two first collectors has been pumped into the soil, while the water of the third collector falls by gravitation on to the plain of Gennevilliers. The water thus distributed in 1887 was 25,000,000 cubic metres."

From the above I gather that the total sewage water of Paris amounts to 350,000 cubic metres per diem, or 127,750,000 cubic metres per annum. Rather less than one-fifth of the whole is subjected to irrigation. The sewer

water was repeatedly analysed during 1887, and the mean results of these analyses are given for each month for each of the two collectors.

The drainage of the subsoil at Gennevilliers has been very thoroughly carried out, the sewer water after permeating the soil finding an exit to the Seine by four main drains. The water from these drains has also been repeatedly analysed, and a comparison of the analyses of the sewer water and the drain water shows at a glance the effect of the permeable soil on the sewage. This result is given in the following table, which states the amount of the various ingredients in milligrammes per litre—

				NITROGEN.					
		Lime.	Chlorine.	Organic matter.	Ammoniacal.	Albuminoid.	Nitric.	Total.	
Sewer water (mean result)	...	205	74	44.5	20.8	3.4	4.3	28.5	
Drains (mean result)	...	310	105	1.8	0.0	0.4	19.0	19.4	

Stated broadly and shortly, the effect of the irrigation on the sewage water is to increase very considerably the lime and the chlorine, and to remove about 96 per cent. of the organic matter. The effect on the nitrogen in the water was very interesting. Of the 28.5 parts contained in the sewage water, 9.1 were apparently taken up by the herbage, 19 parts were oxidised, and only .4 part was unchanged. This statement is, of course, only proximately true, for the varying conditions of rain and sunshine, heat and cold, would cause a varying concentration and dilution of the effluent. The mean result of the analyses of the drain water is given for each month of the year except January, when the continued frost probably hindered the operations. For the six winter months of February, March, April,

October, November, and December the average escape of nitric nitrogen averaged 20.7, while for the five spring and summer months the average was 17.1. The maxima were in December (22.9) and February (23.9), and the minima in August (11.9) and September (14.6). In the former months the soil was dormant, while in the latter it was active, and the nitrogen found its way to the vegetable and fungoid growth. An interesting experiment was also carried on during the year in the laboratory at Clichy by M. Durand-Claye. This consisted in irrigating daily with one litre of Clichy sewage water a column of earth enclosed by glass plates, having a height of 2 metres and a superficies of $\frac{1}{4}$ square metre. The average result for the year is given below:—

										NITROGEN.						
										Lime.	Chlorine.	Organic matter.	Ammoniacal.	Albuminoid.	Nitric.	Total.
Clichy sewage	...	...	...	...	...	...	...	...	...	186	73	35.8	21.1	2.6	5.0	28.7
Effluent	...	...	...	...	...	...	...	...	...	262	71	2.6	0.0	0.4	21.0	21.4

This laboratory experiment shows results which differ in an interesting way from those obtained by irrigation in the open air. There was no increase of chlorine, and the removal of organic matter and nitrogen was slightly less perfect. The results of the Clichy experiment appear to be erratic, and seem to be difficult of explanation. I give below the total nitrogen for each of eleven months in the year, contained (1) in the Clichy sewer water, (2) in the drains of Gennevilliers (average), and (3) in the effluent from the Clichy experiment:—

	Clichy sewer.	Gennevilliers drains.	Clichy experiment.
February	26.9	24.2	16.4
March	23.1	20.6	21.4
April	33.9	21.2	25.7
May	28.7	19.4	20.0
June	27.1	18.8	17.7
July	20.6	21.3	13.5
August	19.5	12.1	17.7
September	30.9	15.1	21.2
October	34.7	19.0	25.9
November	32.9	18.6	30.9
December	37.2	23.3	19.4

Be the explanation of the variations in the amount of retained nitrogen what it may, the experiences of Gennevilliers and the experiment at Clichy both point conclusively to the fact that albuminoid and ammoniacal nitrogen contained in sewer water can be made to disappear under the influence of irrigation through earth.

Dr. Miquel has made a series of experiments on the effect of irrigation on the microbial population of sewer water. He says that the water of the sewers was found excessively impure, as might be expected; "it is not by thousands, but by millions, that the microbes in each cubic centimetre have to be reckoned." His mean results show that each cubic centimetre of the water in the Clichy sewer contained 6,000,000 microbes, while the number in the sewer of St. Ouen rose to 40,700,000. The St. Ouen sewage was thus between six and seven times richer in microbes than the Clichy sewage; and of these microbes about 20 per cent. were micrococci, while the rest were bacteria and bacilli. "It is my opinion," he says, "judging by my preliminary investigations that the varieties of microbes found in sewer water

amount to over 1000. The species already known and described are lost in the excessively varied flora of dirty water. Whatever may be the amount of impurity of these waters, I can testify to the rapid and almost complete purification by means of broad irrigation." The results of the microscopic analysis of the water of the four drains of the peninsula of Gennevilliers afford a startling confirmation of this assertion. The average result shows that the water of these four drains contained respectively 54, 167, 905, and 5210 microbes per cubic metre. The last two figures show conclusively (according to Miquel) that the drains from which the water is taken are contaminated at one or more points in their course. In short, sewer water having an average of 23,000,000 of microbes per cubic centimetre when thrown on the soil of Gennevilliers returns to the Seine with an average of 1600. The mere fact of filtration through the soil is sufficient to render these waters 15,000 times more pure from the point of view of microscopic life. Surely these facts deserve attention from the Metropolitan Board of Works, which is attempting to purify the London sewage by the addition of half a grain of lime to the pint.

REQUESTS AND DONATIONS TO HOSPITALS.—The late Mrs. C. H. Law French, of the Lindens, Gateacre, near Liverpool, leaves by her will £1000 to the Sea-bathing Infirmary at Margate, and £2000 to the Liverpool Hospitals. —The Misses Crowther, of Ash Villa, Newton-road, Leeds, have subscribed £200 towards the building fund of the Harrogate Bath Hospital. —From the recent Friendly Societies' demonstration at Kirkstall Abbey, Leeds, £40 has been allotted to the medical charities. —Count Carlo A. Clericetti, late of 58, Montpelier-road, Brighton, has bequeathed £1000 to the Sussex County Hospital, £400 to the Asylum for the Blind, Eastern-road, Brighton; £300 to the Brighton, Hove, and Preston Provident Dispensary; and £200 to the Sussex Eye Hospital, Queen's-road, Brighton. —The Calverley and Guiseley Cricket Clubs have handed over £25 to the Leeds and Bradford Infirmary. —Donations to the building and general funds of the Great Northern Central Hospital have been received from Mr. H. R. Williams, of Lime-street, amounting to £31 10s.; and a sum of £37 13s. from the Amalgamated Friendly Trades and Benefit Societies.

THE CHEMICAL TREATMENT OF SEWAGE.

MM. P. CHARSTAING and E. BUILOT have contributed to the Proceedings of the Académie des Sciences a carefully prepared account of the results obtained in Brussels by the method of rendering sewage innocuous by treatment with chemical reagents. In the course of their paper they remark that for the purpose in view there are two methods in actual use: "1. The method of irrigation, or the purification of sewage by means of the soil and cultivation—a method which is widely advocated and available when command can be had of large expanses of land adapted to this use, and when the water which has to be purified is not highly charged with putrescible matter. 2. Chemical methods, which have for some years past fallen into great

disrepute, but which, in consequence of advances recently made and still possible in chemical science, demand a careful consideration."

They continue: "The first method has been [much studied, we may say studied exclusively, in France. This very circumstance has led us to examine the value of the chemical methods, believing as we do that in the public interest no single plan which may contribute to the public health ought to be overlooked or neglected. Many methods of effecting the chemical purification of effluent sewage water have been proposed. The effluent water of the city of Brussels has been analysed with a view to determining (1) its composition, and (2) the alterations produced in its composition by chemical treatment with a view to its purification. The analysis gives the following result:—

"SEWAGE WATER OF THE CITY OF BRUSSELS.

		Taken from the mouth of the collectors.		Purified.
Appearance		Turbid		Limpid
Odour		Nauseous and ammoniacal		None
Chemical reaction		Very alkaline		Slightly acid
Dry residue per litre		5.357 grammes		0.697 gramme
Mineral matter		3.826 "		0.587 "
Organic matter &c.		1.531 "		0.110 "
Suspended matter		1.060 "		None
Composition of the organic matter dissolved in 1 litre of water.	Nitrogenous	Ammoniacal	Free ammonia	None
			Ammonia salts	None
	Organic	Nitrates		0.011 gramme
				None
	Total nitrogenous matters	Crystalloid		0.010 gramme
		Albuminoid		None
	Organic carbon		2.434 "	0.021 gramme
	Alumina		Not determined	Not determined
	Sesquioxide of iron		0.200 gramme	0.030 gramme
	Lime		0.030 "	0.005 "
Composition of the mineral matter dissolved in 1 litre of water.	Magnesia		None	0.300 "
	Chloride of sodium		0.050 gramme	0.030 "
	Potash		0.100 "	0.030 "
	Silica		1.970 "	0.037 "
	Phosphoric acid		0.006 "	0.004 "
	Sulphuric acid (SO ₄ H ₂)—in combination		0.126 "	0.003 "
	Free ammonia		1.344 "	0.058 "
	Sulphuric acid	By weight	736.5 cub. centim.	None
		By volume	0.008 gramme	None
	Oxygen		4.5 cub. centim.	None
Composition of the mud suspended by the effluent water in the collecting mains. The water contains 1 gramme of this mud, comprising—	Organic matter	None	0.060 gramme	5.00 centimetres
				None
	Mineral matter	Nitrogen (organic)	Not determined	None
		Carbon		
		Oxygen		
		Hydrogen		
		Lime		
		Alumina		
		Iron	0.351 gramme	None
		Phosphoric acid	0.180 "	None

They then proceed to discuss the analysis as follows:—

"1. *Organic matter.*—It will be seen from the preceding analysis that the effluent water upon the method of carrying away the whole of the sewage becomes very highly charged with organic matters, among which nitrogenous products predominate. The proportion of substances dissolved is about 5.35 grammes per litre in the effluent water of Brussels, whereas it varies in Paris from 2.59 in the Asnières main to 2.50 grammes in the Saint Denis main. There is a still greater difference in the proportion of nitrogen, for whereas the water in the Brussels main contains 2.434 kilogrammes per cubic metre of nitrogen in solution, and 60 grammes in the form of suspended matter, that of the Paris outfalls does not contain more than from 44 grammes at Asnières to 140 grammes at St. Denis of nitrogen in all forms. Lastly, the weight of putrescible organic matter is about 2 kilogrammes per cubic metre in the water of the Brussels outfalls, and does not exceed 910 grammes in that of Paris. The effluent water at Brussels after being purified by chemical processes is limpid and inodorous; its composition, no doubt, shows that it would not be fit for domestic use, but it is so far pure that if turned into a river it could not give rise to any infection, and, furthermore, it contains a sufficient quantity of oxygen in solution to allow fish and vegetable life of high orders to develop in it. Is the purification by the chemical process more perfect than purification in the soil? Reference to publications made upon the subject of purification in the soil shows that water so treated after separation from solid sewage retains from $\frac{1}{10}$ to $\frac{1}{20}$ of its original nitrogen. The foregoing analyses show that the whole sewage treated chemically retains about $\frac{1}{10}$ of

its original nitrogen, but what would this same water (undivided from solid sewage) retain after treatment in the soil?

"2. *Mineral matters.*—The mineral matters held in solution in the water examined are of less importance than the organic bodies; it is nevertheless worthy of remark that 1 cubic metre of effluent water (in the whole sewage system) can furnish about 2 kilogrammes of potash and 100 grammes of phosphoric acid, whereas the effluent water of Paris only contains about 80 grammes at most of potash and 40 grammes of phosphoric acid.

"3. *Gas in solution.*—The presence of ammonia in a free state, or held in feeble combination by carbonic acid, is a matter of great importance; sewage water spread upon the land may, under certain conditions, give up this gas to the air, and 1 cubic metre of sewage may thus set free 736 litres of ammoniacal gas; moreover, volatile phosphoric compounds which are highly poisonous may be given off by this water, to say nothing of sulphuretted hydrogen and other nauseous and unwholesome emanations. In the chemical method these dangers cannot arise if proper precautions are adopted in the arrangement of the apparatus."

The authors then sum up their inquiry in the following results:—

"It thus appears to be clearly established—1. That the purification of sewage by chemical means is perfectly practicable. 2. That it can be applied continuously and without the production of unwholesome emanations. 3. That the employment for agricultural purposes of the nitrogen, potash, and phosphoric acid contained in the sewage can by this method be easily effected."

THE MEDICAL SCHOOL OF HELSINGFORS.

DR. PETERSEN gives in the *St. Petersburger Medicinische Wochenschrift* some interesting particulars about medical matters in the little University of Helsingfors, to which he has been paying a visit. Although in the Russian empire, the University of Helsingfors is apparently arranged in quite a different manner from other Russian universities, which all form parts of a system to which even Dorpat, where the language used is German, may be said to belong. At Helsingfors, though the language of the common people is Finnish, the lectures are all in Swedish; consequently, Helsingfors may be considered as belonging to the Scandinavian system of universities rather than to the Russian. Dr. Petersen turned his attention first to the Pathological Institute, a new building, well-arranged, and replete with all the necessary arrangements and apparatus for pathological research. He then went to the syphilitic and dermatological clinic, which is presided over by Dr. Smirnow, whose name has been prominently before the profession in connexion with the hypodermic method of administering the insoluble salts of mercury as calomel or the yellow oxide in syphilis. The clinic in which Smirnow's work is done is not a very satisfactory structure for the purpose, being more like a barrack than a hospital: It contains altogether fifty or sixty beds. It is, however, proposed to utilise a portion of the new surgical clinic which is now being erected for the syphilitic and dermatological department. Dr. Petersen explains that, notwithstanding Dr. Smirnow's scientific excellence, he has as yet only been given the charge of this clinic provisionally, and, in consequence of the opposition of some of the members of the faculty, it seems very doubtful whether he will be appointed professor. On going through the wards Dr. Petersen was much struck by the entire absence of cases of soft chancre, and was told that this form of disease was exceedingly rare in Helsingfors. When it does appear, it is always during the season when navigation is open; but in winter there is never any at all. The explanation of this may be partly due to the extreme cleanliness of the female Finlanders, and partly to the excellence of the police sanitary supervision. The frequency of soft chancre may be taken, according to Dr. Petersen, as a good index to the efficiency of the police control, and therefore he suggests that St. Petersburg, where soft chancre is the most common form of venereal disease met with in the hospitals, may well take a lesson from Finland.¹

Skin diseases are not very common in Finland, and leprosy exceedingly rare; not more than one or two cases being seen during each year.

The surgical clinic, which is still in its old and inconvenient premises, is under the care of Prof. Saltzmann. The dressing chiefly used is moss, a very useful and, in Finland, economical material. The results obtained are excellent.

The new building, which is almost ready, was planned by the late Prof. Estlander, and will be roomy and well arranged. The pay system is, it appears, to be rather largely adopted, as out of 154 beds no less than ninety are for pay patients, the terms being graded in several classes. In order to ensure satisfactory nursing, which it seems is not easy to be obtained in Finland, "owing to the absence of sisters of charity," Prof. Saltzmann has sent the matron abroad (at the expense of the State) to be trained.

The operation material is considerable, as Helsingfors is the only university town in Finland, and so patients come from long distances. Epithelioma of the face is very common, though these cases are usually operated on by local surgeons, so that they do not come very largely to Helsingfors.

¹ According to the latest intelligence, as was mentioned in THE LANCET of July 28th, the Parliament of Finland has now made not only prostitution, but all illicit connexion criminal.

THE GALEN CLUB.—This Club (30, Sackville-street, W.) is now open for the reception of members, and the original list, which is limited to 400 names, is, we are informed, nearly completed. There is no entrance fee for original members; the annual subscription for town members being four guineas, and for those living in the country two guineas.

THE ANNUAL MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE annual meeting of the Medico-Psychological Association was held in Edinburgh, within the Hall of the Royal College of Physicians, on Monday, August 6th, under the presidency of Dr. T. S. CLOUSTON, of the Royal Edinburgh Asylum. There was a good attendance of members and other medical men. Amongst those present were Sir Arthur Mitchell, K.C.B.; the President of the Royal College of Physicians; Professor Benedikt, of Vienna; Dr. Stearns, U.S.A.; Drs. Affleck, Byrom Bramwell, Melvor Campbell, Campbell Clark, Rooke Ley, Miller, Mould, Needham, Conolly Norman, Rayner, Rogers, Rutherford, Savage, Sibbald, Hack Tuke, Turnbull, Urquhart, Watson, and Yellowlees.

The PRESIDENT having taken the chair, thanked the Association for the honour they had done him, and welcomed it to Edinburgh. The officers and Council for 1889 having been elected, the President being H. Hayes Newington, M.R.C.P.E., amongst other resolutions, one was carried agreeing to approach the General Medical Council in regard to the recognition and registration of the certificate of efficiency in psychological medicine, now given on examination by the Association. It was reported by Dr. HACK TUKE that forty-six candidates had received this certificate within the past two years in Great Britain and Ireland. The hope was strongly expressed that this certificate will come to be the accepted and recognised test that a medical man holding it is qualified for any lunacy appointment, and that in any future Lunacy Act he will be considered qualified for the performance of any medico-legal statutory duty.

At the afternoon meeting, Dr. CLOUSTON read an address on Secondary Dementia, from the clinical, hereditary, and evolutionary points of view. An animated discussion, invited by the President, followed, in which Drs. Hack Tuke, Savage, Yellowlees, Conolly Norman, Stearns, Ireland, Wigglesworth, Fletcher Beach, Rogers, Rayner, and Urquhart took part. The President's views were, in many respects, concurred in, but were also criticised and differed from. The proceedings were brought to a close by the President of the College of Physicians expressing, on behalf of the College, the pleasure it had given the College to see the Association within its walls, and by a vote of thanks to the President for his address, moved by Sir Arthur Mitchell, K.C.B., and seconded by Dr. Needham.

PROSECUTION UNDER THE DENTISTS ACT.

MR. HENRY FRANCIS PARTRIDGE, of 76, Sterndale-road, Shepherd's-bush, appeared to summonses before Mr. D'Eyncourt, charging him with using at his business address, 43, Sussex-place, Old Brompton-road, the name and title of dentist, and the letters L.D.S. (Licentiate of Dental Surgery), thereby implying that he was registered under the Dentists Act of 1878. Mr. R. E. Melchheimer was counsel for the prosecution, and Mr. G. Elliott for the defence. There was really no dispute as to the facts of the case. Mr. Partridge is the proprietor and originator of the South Kensington Ladies' Dental Association, and he held a diploma from the Royal College of Surgeons, Ireland, as Licentiate of Dental Surgery. He took to advertising, and the College of Surgeons, considering this unprofessional, cancelled his diploma, with the result that the General Medical Council of England withdrew his name from the Medical Register. Mr. Partridge applied for and obtained a *mandamus* against the Medical Council to compel them to restore his name to the Register, and this was decided in his favour. The Council appealed, but the decision of Mr. Justice Mathew was upheld. In giving judgment in the appeal case Lord Esher said that although he had decided in favour of Mr. Partridge, the medical authorities could deal with him for "disgraceful" conduct, the word "disgraceful" being of course understood in the sense of "unprofessional" dealings. The suggestion made was acted upon. Notices in regular form were given to Mr. Partridge, and last year he was removed

from the Register. Since that time he has made no alteration in his style of qualification and address. Mr. Elliott, on behalf of Mr. Partridge, said that there had only been a technical infringement of the Act, because the action of the Medical Council did not affect the defendant's capacity as a dentist. His skill remained with him, although his diploma had been taken away. Mr. D'Eyncourt fined Mr. Partridge £5 and three guineas costs.—*The Times*.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Oldham Urban District.—Dr. Niven's annual report on the borough of Oldham deals very largely with the conditions which need amendment in the interests of public health. In the first place, it would appear that the Westholme Infectious Hospital is no longer of sufficient size to meet such emergencies as must necessarily be expected, and some new permanent accommodation is needed. House property in the district is insufficiently controlled during its construction. Thus, part of the surface soil is clay, and hence dryness of foundations becomes a matter of exceptional importance. And yet the requirement as to damp courses, which is a general one in most codes of bye-laws, is here a permissive one, depending on the requirements of the corporation or the surveyor for the time being—an arrangement which, in Oldham as elsewhere, leads to most unsatisfactory results. In other respects, and especially as to thorough ventilation, houses in this district are defective, and both typhus and tuberculous diseases are thus favoured. Considerable pains have been taken by Dr. Niven to ascertain the condition of the farms near Oldham whence the town milk supply is derived, and also that of the so-called dairies and other places where milk is stored in the borough. The result, apart from the knowledge which has been thus acquired, is unsatisfactory in the extreme. Absence of light, of proper ventilation, and of cleanliness were found but too frequently; and as regards crowding of cows in ill-ventilated places, the farmers excused themselves by stating that the animals would take cold if air were freely admitted. This is the same old story that used to be heard when it was suggested that tubercle and ill health must be met in our factories by providing the *employés* with air fit to be breathed. Milch cows largely suffer from tubercle, their milk is consumed by children inheriting a tuberculous tendency, and yet the condition under which cows are kept is as yet very generally ignored by those who are entrusted with the control of public health measures. In the present state of affairs, we entirely concur with Dr. Niven in urging that no milk should be consumed which has not been boiled or otherwise cooked. The general death-rate of the borough during 1887 was 23·8 per 1000, the so-called zymotic diseases going to swell the rate, and amounting themselves to 4·1 per 1000.

Eastbourne Urban District.—Excluding deaths amongst visitors, the death-rate for Eastbourne during 1887 was 11·4 per 1000. Some diphtheria occurred in the town, and it appears from Dr. Fussell's report that the Local Government Board, on being informed of it and of the conditions under which it occurred, made the very pertinent inquiry, "Why were the nuisances not removed previously to such outbreak?" As to this, the answer from Eastbourne is that "Our legal powers are weak or doubtful as to the abatement of some sanitary defects." The answer is vaguely worded; and we must admit that it has often occurred to us in reading reports on different sanitary districts, that obvious sources of danger, as to which there could be no doubt of the sufficiency of the existing powers, have apparently been allowed to remain untouched until the mischief which the sanitary law is intended to prevent has been allowed to take place. Eastbourne, we imagine, is not often open to the challenge it received; it has done an immense amount of work to secure a high standard of public health, and so far its efforts appear to have been very successful. But there are many sanitary districts in the kingdom to which such a question might well be addressed.

Ilkley Urban District.—There has been an exceptional

increase in the death-rate of this district, but it has been largely due to maintained prevalence of whooping-cough, which, if fatal, soon tells on a small population of some 5500. The report does not refer much to the general sanitary circumstances prevailing, but Dr. Scott points to good work done in nuisance removal, in enforcing bye-laws, and in regard to supervision of slaughter-houses, dairies, &c. A hospital has long been a desideratum, and it had long been talked of; but, owing to the recent refusal of Bradford any longer to take outside cases of infectious diseases into their hospital, an iron one has been hurriedly erected for Ilkley. It remains to be seen how far it will be adapted to the current requirements of the district.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 4984 births and 3174 deaths were registered during the week ending August 11th. The annual rate of mortality in these towns, which had been 16·0 per 1000 in each of the preceding two weeks, rose last week to 17·6, and was higher than in any week since May last. During the first six weeks of the current quarter the death-rate in these towns averaged but 16·0 per 1000, and was 5·2 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 9·2 in Derby, 11·4 in Huddersfield, 12·0 in Portsmouth, and 12·6 in Hull. The rates in the other towns ranged upwards to 19·9 in Leeds, 20·9 in Sheffield, 23·0 in Manchester, and 23·5 in Plymouth. The deaths referred to the principal zymotic diseases, which had been 311, 409, and 432 in the preceding three weeks, further rose last week to 477; they included 247 from diarrhoea, 74 from measles, 61 from whooping-cough, 35 from scarlet fever, 33 from diphtheria, 22 from "fever" (principally enteric), and only 5 from small-pox. No death from any of these zymotic diseases was registered during the week in Oldham or in Plymouth, whereas they caused the highest death-rates in Manchester, Liverpool, and Leeds. The greatest mortality from diarrhoea occurred in London, Preston, Norwich, Liverpool, and Leeds; from measles in Bradford; from whooping-cough in Manchester; from scarlet fever in Blackburn; and from "fever" in Nottingham and Sheffield. The 33 deaths from diphtheria included 25 in London and 3 in Nottingham. Small-pox caused 3 deaths in Manchester, 1 in Nottingham, and 1 in Preston, but not one in London or in any of the twenty-four other great towns. The Metropolitan Asylums Hospitals and the Highgate Small-pox Hospital contained only 2 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital was 821 at the end of the week, against numbers declining in the preceding five weeks from 924 to 828; 67 cases were admitted during the week, against 105, 87, and 73 in the three previous weeks. The deaths referred to diseases of the respiratory organs, which had been 160 and 167 in the preceding two weeks, further rose last week to 183, but were 4 below the corrected average. The causes of 68, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Sunderland, Portsmouth, Preston, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Sheffield, Oldham, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 15·3 and 15·6 per 1000 in the preceding two weeks, declined again to 15·9 in the week ending Aug. 11th; this rate was 2·0 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 11·2 and 14·6 in Leith and Dundee, to 17·6 in Perth and 18·9 in Greenock. The 395 deaths in the eight towns showed a decline of 7 from the low number in the previous week, and included 18 which were referred to diarrhoea, 7 to diphtheria, 6 to measles, 5 to whooping-cough, 2 to scarlet fever, and not one to small-pox; in all, 44 deaths resulted from these principal zymotic diseases, against 41 and 38 in the pre-

ceding two weeks. These 44 deaths were equal to an annual rate of 1.7 per 1000, which was 0.9 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had increased in the preceding four weeks from 8 to 22, declined again last week to 18, and were 19 below the number returned in the corresponding week of last year. The deaths referred to diphtheria, "fever," and measles showed an increase upon the numbers in the previous week, while the fatal cases of whooping-cough and scarlet fever scarcely differed from recent weekly numbers. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 84, 46, and 55 in the preceding three weeks, declined again last week to 45, and were 17 below the number returned in the corresponding week of last year. The causes of 50, or nearly 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 18.0 and 21.1 per 1000 in the preceding two weeks, declined again to 19.4 in the week ending August 11th. During the first six weeks of the current quarter the death-rate in the city averaged 20.1 per 1000, the mean rate during the same period being 16.0 in London and 15.6 in Edinburgh. The 131 deaths in Dublin showed a decline of 12 from the number in the previous week; they included 4 which were referred to diarrhoea, 3 to scarlet fever, 3 to whooping-cough, 2 to "fever" (typhus, enteric, or ill-defined), and not one either to small-pox, measles, or diphtheria. Thus 12 deaths resulted from these principal zymotic diseases, against 8 and 21 in the preceding two weeks; these were equal to an annual rate of 1.8 per 1000, the rate from the same diseases being 3.2 in London and 0.8 in Edinburgh. The deaths from whooping-cough and "fever" showed a considerable decline from the numbers in the previous week, while those from diarrhoea were more numerous. The fatal cases of scarlet fever corresponded with the number in the previous week. Three deaths from violence and 2 inquest cases were registered; and 34, or more than a quarter, of the deaths occurred in public institutions. The causes of 16, or more than 12 per cent., of the deaths in the city were not certified.

THE SERVICES.

WAR OFFICE.—Army Medical Staff: The undermentioned Surgeons-Major are granted retired pay (dated Aug. 15th, 1888): Arthur Wellesley Roche and Thos. Kingston, M.D.; Surgeon Thomas Robert Lingard, M.B., has retired upon temporary half-pay (dated Aug. 3rd, 1888).

Surgeon-General Sir William James Moore, K.C.I.E., Bombay Retired List, to be Honorary Physician to the Queen, vice Inspector-General B. P. Rooke, M.D., Bombay Retired List, deceased (dated Aug. 15th, 1888).

Surgeon-General James Macnabb Cunningham, M.D., C.S.I., Bengal Retired List, to be Honorary Physician to the Queen, vice Inspector-General W. A. Green, Bombay Retired List, deceased (dated Aug. 15th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Alex. Disney Leith Napier, M.D., to be Surgeon-Major, ranking as Major (dated Aug. 15th, 1888); Surgeon Peter Broome Giles, F.R.C.S., England, 1st Herefordshire Rifle Volunteer Corps, to be Surgeon-Major, ranking as Major (dated Aug. 15th, 1888).

INDIA OFFICE.—The Queen has approved of the retirement from the Service of the undermentioned Officers of the Indian Military Forces:—Deputy Surgeon-General John Henderson, M.D., of the Madras Medical Establishment (dated July 1st, 1888); Brigade Surgeon George Sackville Sutherland, M.D., of the Bengal Medical Establishment (dated June 26th, 1888); and Surgeon-Major Charles Fredk. Ogilvie, M.D., of the Bombay Medical Establishment (dated June 6th, 1888).

The Queen has approved of the resignation of the Service by the undermentioned Officer:—Surgeon William George McEvoy, of the Madras Medical Establishment (dated June 1st, 1888).

ADMIRALTY.—Surgeon Edward A. Spiller, to the *Albatross*,

and Surgeon Reginald T. A. Levinge, to the *Thetis* (both dated Aug. 9th, 1888).

THE HONOURABLE ARTILLERY COMPANY OF LONDON.—Thomas Edwin Foster McGeagh, Gent., to be Surgeon, vice Rawlins, retired (dated Aug. 11th, 1888).

ARTILLERY VOLUNTEERS.—1st Cheshire and Carnarvonshire: Daniel Lovett Hubbard, Gent., to be Acting Surgeon (dated Aug. 11th, 1888).

RIFLE VOLUNTEERS.—5th Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): John Ritchie, M.B., to be Acting Surgeon (dated Aug. 11th, 1888).

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE-ON-TYNE.

IN my note of July 25th in reference to the sanitary condition of the Jesmond district of Newcastle-on-Tyne brought into prominence by an extensive outbreak of scarlet fever, I mentioned, from facts known to myself and from the newspaper correspondence, that the condition of the main drains was not above suspicion. This remark gave rise to a spirited correspondence in our local papers, and the assertion made in my letter was at times denied and again supported. It has now received a full corroboration from the city engineer; at least the *Newcastle Chronicle* states that "no pains have been spared by the city engineer to discover whether there is any defect in the drainage of Jesmond. In the course of an examination it has been found that a large drain, or rather part of a main sewer, which has been in use for the last fourteen or fifteen years, is damaged in several places." In order to have a perfect drain an application will in all probability be made at the next meeting of the City Council for power to put in a new drain, and there is no doubt that the Council will accede to the request, knowing that a defect in a large drain of this nature may do more damage to the health and lives of our citizens than an explosion or a great fire. It is satisfactory to think that the notes in THE LANCET and the correspondence in the daily papers have so far proved effectual.

THE PNEUMONIA OUTBREAK AT MIDDLESBROUGH.

At the last meeting of the Middlesbrough Board of Guardians the subject of the late epidemic of pneumonia was under consideration. Dr. Malcolmson, the medical officer of health, recommended the immediate testing of the workhouse drains. It appears that Dr. Ballard, who is conducting the Government investigation, has already come to the conclusion that the disease was communicable. In the workhouse they had forty-three pneumonia patients. They were inmates, not in the sick wards, but in the general wards, where the surroundings were supposed to be healthy. Of these forty-three patients, seventeen had died. As well as the forty-three cases which arose at the workhouse, fifty-eight went in from outside. Dr. Malcolmson stated as to the cause that the most acceptable theory was a chill, and that people working in hot places were more liable than others; but this would not apply to the workhouse, where the conditions were entirely different, where there was no hard work, and where they did not get too much drink. Dr. Ballard is still on the spot pursuing his inquiries.

HOSPITAL DEMONSTRATIONS IN THE NORTH.

Last week has been marked by the number and popularity of the demonstrations in behalf of many of our northern hospitals. The connexion between the friendly societies and the hospital system—as a speaker remarked at the demonstration in favour of the North Riding Infirmary and the Cottage Hospital at Middlesbrough—is most desirable, and is evidently increasing, and depends, in my opinion, in giving all classes, and largely the working classes, a direct share in the working of these institutions. At Stockton, Mr. Mark Whitwell, at the demonstration in behalf of the Stockton Surgical Hospital, referred to the Bristol Children's Hospital (of which he is the founder), stating that it was established in 1866, and occupied a building which cost £20,000, of which only £500 is unpaid. Last year 300 in-patients and 4000 out-patients were treated.

The collection for the Stockton Hospital was nearly double that of last year. At Northallerton there has also been a hospital demonstration and sale of work, the amount realised being greatly in excess of last year. Ripon seems to have exceeded all, for it is stated that the committee of the fancy fair which was held last week will be able to hand over to the Ripon Cottage Hospital £1500 after paying all expenses.

FATAL POISONING OF TWO BOYS BY HEMLOCK.

A sad case of poisoning by hemlock took place at Consett, county of Durham, last week, by which two brothers, aged respectively five and eleven, lost their lives. The boys on Sunday, in their play, got the stem of a hemlock plant to shoot haws through. The next day they were violently seized with the usual symptoms of hemlock poisoning, and both died in a few hours, notwithstanding prompt attendance from Dr. George Renton and Dr. Frazer, whose evidence was very clear—namely, that the plant was very active in July and August, and that they would in holding the stem for some time in their mouths absorb the juice. The stem, too, was broken off, not cut, and this would facilitate the flow of the juice.

Newcastle-on-Tyne, Aug. 15th.

DUBLIN.

(From our own Correspondent.)

IRISH LUNATIC ASYLUMS.

FROM the thirty-seventh annual report recently issued, it appears that at the close of last year the insane in Ireland had increased by 561 as compared with the preceding year. This increase occurred among the lunatics in public asylums, poorhouses, and in private institutions, and is considerably more than in any previous like period. The admissions into district asylums for the year numbered 2863, which, with those previously admitted, make a total of 12,940 under treatment, of whom no less than 620 were relapsed cases; some for a fourth and fifth time, and not a few at regular intervals—facts indicative of the recurrence of mental disease. Of these 12,940 inmates, 1582 were discharged, of whom 1123 had recovered, 375 were relieved, and in 84 instances no improvement had taken place. The mortality amounted to 857, or a death-rate of not quite 7 per cent. on the total treated. With respect to the curative and beneficial results of treatment during last year, the former, if compared with admissions alone, would show a return close on 40 per cent.; but on the average under treatment, the cures would stand at about 11 per cent., and the improved at nearly 4 per cent. As regards the relative proportion of the probably curable to the incurable, they stand in the ratio of 1880 of the former to 8619 of the latter, in which are included, to the number of 827, epileptics, lunatics, and idiots. The average capitation cost on the daily average of inmates amounted to £21 3s. 6d.

IRISH PHARMACY ACT (1875) AMENDMENT BILL.

The Dublin Branch of the Chemists and Druggists' Association of Ireland, at a recent meeting, adopted the following resolutions in reference to this Bill, now before Parliament:—"Resolution 1: That having read and fully discussed the proposed Irish Pharmacy Act (1875) Amendment Bill now before Parliament, and while recognising the necessity of providing a proper register of qualified pharmaceutical chemists and chemists and druggists, we consider the Bill deals most unfairly with the rights of chemists and druggists, and we hereby empower our committee to take whatsoever steps they may think necessary to oppose the Bill, unless such concessions can be obtained from the promoters as will satisfy our just demands. Resolution 2: That having regard to the undoubted intention of the principal Act to establish permanently two grades of persons entitled to retail poisons, and having regard to the requirements of the country and the interests of the public, we consider the Bill should provide for the continuance of the two qualified classes—(a) 'Pharmaceutical chemists' entitled to dispense prescriptions; (b) 'Chemists and druggists' entitled to retail poisons, but not to dispense prescriptions. Further, that every reasonable facility should be given to persons holding the minor qualification becoming candidates for the major, and that an apprenticeship

of four years under either should entitle a candidate to present himself for the final examination of pharmaceutical chemist. Resolution 3: That we express our unqualified condemnation of the degrading and insulting Clause No. 13, introduced by the Select Committee of the House of Lords into the Bill, as being quite uncalled for and absolutely without precedent. Resolution 4: That copies of the foregoing resolutions be forwarded immediately to the members of Her Majesty's Government, members of Parliament, and members of the Council of the Pharmaceutical Society of Ireland." Mr. S. P. Boyd was deputed to proceed to London to cooperate with the deputation now in London from the Northern Association.

QUEEN'S COLLEGE, GALWAY.

The President in his annual report states that the progress of this institution was arrested in the session 1882-83, and the College has not since regained the position it previously occupied. This interruption occurred from the dissolution of the Queen's University in Ireland, and also from the pecuniary pressure on that class of the community from which the College chiefly derives its support—arising from the general depression in trade and agriculture. He adds that the system of education which proved so effective in the past will be maintained with unabated vigour in the time to come; and he does not relinquish the hope that the College, participating in the general improvement of the country, will yet resume its former career of progress and public usefulness. Great additions have been recently made to the museums in connexion with the departments of Physics, Natural History, and Physiology, which may now be said to be in a perfect state of efficiency for teaching purposes.

Dublin, August 14th.

PARIS.

(From our own Correspondent.)

THE CONGRESS ON TUBERCULOSIS.

(Concluded from page 292.)

ON Sunday, July 29th, there was no meeting, but the members of the Congress visited the Veterinary School at Alfort, where sick animals were exhibited, and they had an opportunity of examining the corpses of tuberculous animals.—On Monday the question discussed was: "The media of the introduction and the propagation of the Tuberculous Virus in the Economy; prophylactic measures." M. Torkomian of Scutari pricked his finger in performing the necropsy of a subject who died from generalised tuberculosis in 1882. Three days afterwards he noticed with some anxiety the production of an anatomical tubercle, and was afraid that he would undergo the same fate as Laennec. In a few weeks, however, the glandular swelling, which had promptly manifested itself, disappeared, as also the anatomical tubercle itself, and ever since M. Torkomian has always enjoyed, and still enjoys, excellent health. Hence it is concluded that superficial inoculation of tuberculosis in man is not necessarily followed by generalisation. MM. Verneuil and Chauveau were also affected with an anatomical tubercle, and the disease in them also remained local. They remarked that this is often the case; the superficial inoculations are not favourable to the evolution of the bacillus of Koch, and if the soil is resistant one observes only an insignificant local lesion. Moreover, as observed by MM. Villemin and Barthélemy, the anatomical tubercle is not always a manifestation of tuberculosis; it may be developed around other organisms than the bacillus of Koch. Professor Jeannel of Toulouse had performed numerous experiments on the rabbit, to study the generalisation of tuberculosis. The extirpation on the fourth day of the glands above the point inoculated did not prevent the success of the inoculation, which is a proof that the bacilli had not been arrested in the lymphatic system. Moreover, the blood of a rabbit inoculated by subcutaneous grafting behaves like a virulent dilution from the second day, perhaps earlier. Injected *en masse* in the peritoneum, this blood determines an experimental tuberculosis. Hence M. Jeannel does not believe in local tuberculosis; for him the malady is generalised in all the organism before manifesting its existence by visceral localisations. Professor Straus placed during from one hour to forty-eight hours sporulated cultures of the bacillus of

Koch in contact with the pure gastric juice of a dog. After six hours the bacilli had lost none of their virulent action. After twenty-four hours this action was destroyed. It may thence be seen that the tubercle bacilli are not rendered inoffensive by their sojourn in the stomach. Nevertheless, the gallinaceæ appear to be rarely infected with tuberculosis through the intestinal canal. M. Straus had given daily to fowls during several months, enormous quantities of the sputa of phthisical subjects. In none of the fowls was there any trace of tuberculosis, not even in those which in one year had swallowed as much as fifty kilogrammes of tuberculous sputa. M. Landouzy studied the tuberculosis of infants. He showed with what facility infants are infected; but in them the malady assumes the character of an acute infection; the child succumbs to the tuberculous infection before the localisation is able to manifest itself, but the nature of the infection is demonstrated by the presence of the bacillus. This cause of death is frequent. Of three children which succumb, one is tuberculous. This must be made known. It must also be known that defective alimentation, the milk of tuberculous cows, is the great cause of infantile tuberculosis; but what should also be known is that the infection may be hereditary, and that heredity purely paternal is common. M. Landouzy thinks that these grave considerations should be maturely weighed before contemplating the founding of a family, but which are unfortunately too often overbalanced by other interested motives. And yet to secure a robust race the prophylaxis of syphilis, of alcoholism, and of tuberculosis must be rigidly enforced. M. Legroux showed the ill effects of bringing up children with the bottle. He proposed that the Congress should intervene on behalf of ignorant populations; that all mothers should be instructed as to the dangers that they subject their infants to in giving them cows' milk unboiled. The only milk of which one can be pretty sure is that of the goat or ass.

On Tuesday, July 31st, communications were made on the following subjects: The Early Diagnosis of Tuberculosis in Man; the Early Diagnosis of Tuberculosis in Animals. M. Espina y Capo, of Madrid, read the summary of a work on the signs which permit of an early diagnosis of tuberculosis in man. He attributes great importance to the measurements of the chest. When the intermammary space does not exceed 17 or 18 centimetres, when the axillary index does not exceed 72 centimetres, there are great chances that one has not to do with a case of pulmonary tuberculosis. M. Arloing was struck with the fact that the inoculations of scrofulous glands did not always produce the same result. He inoculated a rabbit with the scrapings of the strumous abscess of a young girl. The rabbit lived eight months, and was not affected with tuberculosis, and the girl got well. He inoculated another rabbit with the debris of a scrofulous gland removed from a young girl. The rabbit at the end of two months was affected with tuberculosis, and the patient died with generalised "granulie." M. Arloing asked whether scrofula is always of a tuberculous nature, or whether it is capable of being classified as simple and as tuberculous. He simply put the question, and contented himself with demonstrating that scrofula is very variable in its evolution, and that the inoculation of animals may furnish, in certain cases, valuable elements of prognosis; according to the manner in which it acts on the two animal reagents—the guinea-pig and the rabbit. All tuberculous inoculations succeed in the guinea-pig. But in the rabbit only the inoculation which is highly virulent succeeds; the success of an inoculation in rabbits would therefore indicate the great virulence of the inoculation, and one can deduce from it the gravity of the infection, and the probability of a promptly fatal issue. On the contrary, the success of an inoculation in the guinea-pig and its non-success in the rabbit would permit one to infer an attenuated tuberculosis of slow evolution or even unsceptible of being checked. M. Verneuil treated the question of experimental inoculations from a surgical point of view. He showed the importance to the surgeon of knowing with certainty the specific nature or not of the lesion which demands his intervention. He asked how this condition is to be ascertained. There are two procedures, the one, twenty years old, due to Villemin, the French procedure, the procedure of experimental inoculation; the other, more recent, the procedure of the microscopic examination of the specific bacteria, the procedure of Koch, the German procedure.

Certainly it is good to be able to recognise in the field the microscope the bacillus of Koch, and to affirm tuberculous nature of the lesion by examination of a diseased product, but whether this is a practical means is another question. The country practitioner, even if he has the instrument at his disposal, would probably not be sufficiently instructed in bacteriology to avail himself of it. Could he devote to his researches sufficient time? In what conclusion could he, like the first bacteriologist, draw from a negative observation? For it must not be forgotten that the absence of the bacillus proves not its presence alone has an undeniable significance. On the contrary, inoculation is easy to practise; it is inexpensive, it takes but little time; and its signification is other than precise. Every guinea-pig inoculated with the contents of a simple tube of Pasteur in the peritoneum presents at the end of twelve or fifteen days manifest lesions if the inoculation had been practised with tuberculous matter, and never presents granulations in the spleen or peritoneal substances of another nature be inoculated. Thus researches of the laboratory complete the clinical examination, and M. Verneuil does not doubt that medical men will soon know how to employ the living reagent, so simple and so powerful, which he indicates. The communication of M. Landouzy, even to-day, offers a particular interest. He studied the morbid proclivity, innate and acquired to tuberculosis. It has long been known that fair or red persons have a singular predisposition to phthisis. M. Landouzy has verified the exactitude of this unfortunate disposition of the Venetian type, as he terms it, tendency to tuberculosis. M. Landouzy has also discovered in persons marked by the small-pox. Of three hundred persons in this condition, examined at the hospital, only one was exempt from tuberculosis. Hence M. Landouzy insists on the necessity of making vaccination compulsory as variolous subjects are not only likely to spread a small-pox, but later on they may disseminate tuberculosis.

The Congress had received many other very interesting communications, of which it is impossible to give even a brief summary here. Towards the end of the meeting the following propositions were noted: 1. All meat of tuberculous animals should be seized. 2. Instructions should be given to all consumers explaining the dangers of contagion and the precautions to be taken against contagious maladies against suspicious aliments, &c. 3. A rigorous inspection of dairies should be instituted.

In closing the meeting of the Congress, M. Chauveau, President, spoke of the great success and the practical utility already manifest from the proceedings of the Congress. He recalled the recent researches which led the present Congress to consider tuberculosis as an infectious malady. He seen by the illustrious Morgagni, and afterwards suspected by Andral and Laennec, the infectious nature of tuberculosis is now no longer disputable since the work of Villemin, Koch, and others, to which may be added the testimony of those who had made communications to the present Congress. M. Chauveau did not forget to recall the work of the School of Lyons, the researches of which have placed the identity of human tuberculosis and bovine tuberculosis beyond a doubt, and the transmissibility of a similar malady from one species to another is fertile in practical consequences. It is for this reason that medical men and veterinarians have met together, in order to discuss what measures should be adopted to preserve the people from this terrible plague, and he hoped that the work of the present Congress which is now closed had contributed some measure to throw light on the subject of tuberculosis. He then announced that the next Congress will be held in Paris hence. It will be presided over by Professor Villemin who was unanimously elected to the office.

DEATH OF DR. ÉMILE DECAISNE.

Dr. Émile Decaisne died on Aug. 5th, in the sixty-seventh year of his age. Dr. Decaisne was well known as a writer and he was the author of a Dictionary of Medicine, in the compilation of which he was assisted by Dr. Gorecki. Paris, Aug. 14th.

THE INTERNATIONAL CONGRESS OF HYDROLOGY AND CLIMATOLOGY is to hold its second triennial session in Paris next year, at the beginning of October, in connection with the exhibition there. The president of the committee is M. E. Renou, vice-president of the French Meteorological Society.

INDIA.

(From a Correspondent.)

HOSPITAL ACCOMMODATION FOR INFECTIOUS DISEASES IN BOMBAY.

THE Corporation of Bombay has been considering recently a proposal to establish hospital accommodation for infectious diseases in a certain district. That in Bombay, as in other large Indian cities, there is a felt want for separate hospitals for cholera and small-pox, there can be no doubt. Cholera may be said to be perennial, and so also is small-pox. The sanitary condition of the native town is deplorable, and is favourable in almost every respect for the propagation of both these diseases. If there were separate hospitals established and maintained under proper management and control, it would decidedly be a step in the right direction—so far, at least, as prevention is concerned; and there is no doubt that a certain percentage of those who now die would recover under proper treatment. In this connexion Indian municipalities would do well to provide that in the case of small-pox the infirmary itself be not rendered the *fons et origo mali* by its gates being left ajar for free ingress and egress. Side by side with hospitals for infectious diseases some attempt at compulsory notification of these should be initiated. The measure would need to be introduced gradually and with discretion. It is to be hoped that this important subject will receive from Indian municipalities their earnest attention and countenance.

THE COUNTESS OF DUFFERIN'S FUND.

It would appear from two interesting papers issued by the honorary secretary that, without in any way interfering with the independence and freedom of action of the National Association for Supplying Female Medical Aid to the Women of India, that body has secured the assistance of the Supreme Government in two important matters, which doubtless would go a long way to elevate its *locus standi*—(1) the Surgeon-General will advise the Association (gratis of course) as to the selection of its *employees*; (2) the work done for the Association in dispensaries, hospitals, and schools will be supervised by medical officials. The Government, however, desire it to be distinctly understood that its *employees* are in no way to be recognised as Government servants.

SURGEON-MAJOR JOHN PRENDERGAST, MEDICAL STAFF.

I beg to call the attention of the profession to the very painful case of the Misses Prendergast, sisters of the late Surgeon-Major Prendergast, who was recently drowned at Kiskee in India. Mr. Prendergast, it will be remembered, was severely wounded in the battle of Tamai whilst continuing to attend a wounded soldier after (to use a military expression) "the square had been broken up." He was the sole support of his two young sisters, to whom he used to send half of his pay from India, who now mourn their loss and are left penniless and in a most pitiable condition. The case is worthy of kindly support, and I sincerely trust readers of THE LANCET will stretch out a helping hand to the two young ladies thus left destitute. In India a subscription has been started at the instance of Surgeon-General Thompson of Bombay, who, I dare say, will be pleased to receive subscriptions from those of your readers who are in this country. The under-mentioned medical gentlemen in Dublin have consented to receive and dispose of subscriptions: C. G. Kilkelly, Esq., J.P., 12, Upper Fitzwilliam-street; R. F. Tobin, Esq., 59, Stephen's-green; F. G. Abye Curran, Esq., Lissom-field; and G. M. Dobson, Esq., Portobello.

THE CHOLERA.

This disease has very nearly abated in Cashmere, but it prevails still in many parts of the country, though not to any great extent.

THE SANITATION OF CALCUTTA.

Lord Dufferin has recently paid a visit to some of the insanitary native parts of Calcutta. There his lordship must have witnessed dirt and filth in the most noxious forms that a dense population can produce, saturating the ground and contaminating the air. There are groups of huts crowded with people, with open drains and ditches

filled with seething, bubbling, and noisome corruption. In close proximity there will be found a tank (one such in which Professor Koch found his comma bacilli) in the water of which the people bathe, wash their clothes and their culinary and other utensils, and carry away the same water for drinking and cooking purposes. Such are the conditions that have been described by Dr. Simpson, the medical officer of health, but they are not dealt with. Prompt measures are needed to cope with such serious evils. The question is, who is to take the initiative? The Calcutta municipality, like the rest of the fraternity, is apathetic, and, instead of setting to work, are eager to take up the cudgels against the health officer, whose zeal and ability are the two very points they so dislike. Side by side with veritable facts, it is amusing to find Sir George Campbell telling the House of Commons that Calcutta and its suburbs are in nowise in need of sanitary reform.

THE PARSEE LYING-IN ASYLUM.

About a year since, this institution was established in Bombay, by voluntary subscription, to meet a much-felt want; and a meeting took place the other day to witness the progress it had made during the period. It would appear that among the Parsees there were 1200 children born during the year, of which number 120 were born here. Mr. Temuljee Nariman is the honorary secretary and physician; and to him, the committee consider, is due the credit for the success of the institution. At first there was accommodation for only six at a time, but, as the demand for admission increased, provision had to be made for ten. Up to date, 99 females had taken advantage of the institution, and 188 more had been registered, but owing to the limited accommodation 580 had to be refused admission. The total funds of the asylum amounted to 28,769 rupees, which included 2861 rupees collected as fees from patients. The total expenditure was 12,489 rupees, leaving a balance of 6280 rupees in hand. Mr. Temuljee is in favour of there being two such asylums: one for the poorer classes, to be maintained by public charity; and the other for the better classes, which should be rendered self-supporting. The colleagues associated with Mr. Temuljee are Messrs. Cowasjee Pestonjee, Jehangheer Cursetjee, and Dinshaw Master (who give their professional services gratuitously, and also supply medicines free of charge), and Mr. D. N. Parakh, the consulting physician. It is to be hoped that this example of the Parsees will be followed by other communities in Bombay.

NEW FACTORY ACT.

There are many deficiencies in the present Factory Act, which is worked in a very loose way. Children of the age of seven are worked nine hours a day. At present children of eight and nine, palmed off as adults, are employed in adult work. The remedy for this is to insist that children's work be limited to half the day. But then astute mill agents will evade the law by working children in one mill for half a day and in another the other half.

THE EXTRA PENSION OF THE INDIAN MEDICAL SERVICE.

The Government of India have ruled, under date of May 25th, 1888, that in future the application of a medical officer for the extra pension of £100 per annum must be accompanied by an official application to retire from the service within the year, in order that both the applications may be considered at the same time.

SHOCKING FATALITY ON BOARD A CLAN STEAMER.

On June 16th, while the steam-ship *Clan Mackintosh* was on her way to Madras, a series of deaths, due to asphyxia caused by the poisonous emanations from a portion of the hold of the steamer in which stores are kept, occurred almost simultaneously. The chief steward on that date, it appears, accompanied by two others, entered the store-room for the purpose of issuing the week's rations to the native crew, and another man was left on the second deck to receive the stores as they were handed up. The first three had hardly reached the store-room before they were suffocated by the poisonous vapours, and the man who was left above was also overcome and fell into the hold. Seeing this man fall, a fireman who was close by at the time reported the matter to the second officer, who proceeded with a lighted lamp to investigate. He also had barely reached the bottom of the hold when the lamp was extinguished, and he himself fell down. The first officer then went down, after having slings arranged above. He found the body of the second officer, and had it hoisted

on deck, himself following shortly after. It appears he went down into the hold a second time to recover the body of the chief steward, but in this noble endeavour he was overcome, and fell beside the other four victims. The second officer, the third engineer, and two quartermasters, besides several of the native crew, were with difficulty resuscitated by the exertions of the surgeon and others.

Bombay, July 17th.

Medical News.

UNIVERSITY OF LONDON.—The following have passed the Intermediate Examination in Medicine held in July:—

Entire Examination.

First Division.—Ellen M. Tinnis Berthon, London School of Medicine for Women; John Henry Bryant, Guy's Hospital; Archie Tillyer Collum, Charing-cross Hospital; Douglas Drew, University College; Bertram Whewell Hogarth, Guy's Hospital; Yarnold Hubert Mills, London Hospital; Richard Walter Richards, St. Bartholomew's Hospital; Sidney Herbert Snell, University College; Wm. Howard Sturge, London Hospital; Herbert Tilley, University College; Lewis Williams, University College.

Second Division.—Harold Wm. Colmer Austen, St. Bartholomew's Hospital; Frank George Bushnell, University College; John Norton Collins, London Hospital; James Dickinson, Westminster Hospital; Emily Louisa Dove, London School of Medicine for Women; Herbert Annesley Eccles, St. Bartholomew's Hospital; John Grimshaw, London Hospital; William Jn. Hancock, B.Sc., Owens College; Harold Hodgson, Guy's Hospital; Wm. Willoughby Kennedy, St. Bartholomew's Hospital; Ronald Edward S. Krohn, University College; William Britain Morton, University College; Chas. Carter Moxon, St. Thomas's Hospital; John Ernest Paul, University College; William Penberthy, London Hospital; Arthur Edward Price, St. Thomas's Hospital; Eric Law Pritchard, King's College; Richard Henry Read, Owens College; Frank Allan Roberts, Yorkshire College; Leonard George Seudamore, St. Thomas's Hospital; Abraham Thomas, Guy's Hospital; Ethel Newton Tribe, London School of Medicine for Women; Walter Twyford, Owens College; H. Woolnington Webber, Guy's Hospital; A. Stanley Wohlmann, Guy's Hospital; Thos. Jason Wood, University College; John Young, Guy's Hospital.

The following Honours candidates have been recommended for a pass:—

John Alfred Codd, B.Sc., Yorkshire College; Richard Hamilton, Owens College; Frederick Johnson, St. Bartholomew's Hospital; William James Potts, Owens College.

Excluding Physiology.

First Division.—William Barker Bale, Owens College; Reginald Spencer Pearson, Owens College; Mildred E. K. Staley, London School of Medicine for Women; Seymour Graves Toller, St. Thomas's Hospital.

Second Division.—Edward Mansfield Brockbank, Owens College; Theodore Henry Ionides, University College; Charles Ewbank Lansdown, St. Mary's Hospital; Elizabeth Margaret Pace, London School of Medicine for Women; John Gratton Wilson, London Hospital; James Yeomans, University College.

Physiology only.

Second Division.—James R. Andrew Clark, University College; William Adams Clark, St. Bartholomew's Hospital; Harold Andrew Kidd, St. Mary's Hospital; Harry Lambert Lack, King's College; Edward Roberts, Guy's Hospital; John Alfred Waring, University College.

The following candidates have passed the Intermediate Examination for Honours in the subjects indicated:—

Anatomy.

First Class.—George F. Blacker (Exhibition and Gold Medal), University College; Herbert Horrocks, B.Sc. (Gold Medal), Owens College; *Florence G. Longbottom, London School of Medicine for Women.

Second Class.—Joseph J. Whitaker, B.A., University College; Mary Darby Sturge, London School of Medicine for Women.

Third Class.—Annette Matilda Benson, London School of Medicine and Mason College.

Physiology and Histology.

Second Class.—Annette Matilda Benson, London School of Medicine for Women; Augustine Griffith, University College; George Francis Blacker, University College.

Third Class.—Alice McLaren, Minnie L. C. Madgson, and Ethel Mary N. Williams, all of the London School of Medicine for Women.

Organic Chemistry.

First Class.—Sasi B. Mitra (Exhibition and Gold Medal), University College; Thomas Grigor Brodie, King's College.

Materia Medica and Pharmaceutical Chemistry.

First Class.—Geo. F. Blacker (Exhibition and Gold Medal), University College; Annette Matilda Benson, London School of Medicine for Women; William McAdam Eccles, St. Bartholomew's Hospital.

Second Class.—Ellen Margaret Farrer, London School of Medicine for Women.

Third Class.—Augustine Griffith, University College; Alice McLaren, London School of Medicine for Women; William Griffiths, B.Sc., Melbourne University and Middlesex Hospital.

* Obtained the number of marks qualifying for a Gold Medal.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the July sittings of the Examiners

of the Conjoint Board the following candidates passed the Final Examination:—

W. H. Large, Llandudno; Patrick O'Callaghan, Carndonagh, county Donegal; C. Lucius Strangman, Carriganore, co. Waterford; Thomas Burns, Edinburgh; C. B. Humphreys, Glasgow; E. D. Duffett, Glasgow; A. E. Hubbard, Tamworth; C. H. Jackson, London; W. Vaughan Griffith, Tremadoc, North Wales; C. B. Richards, London; Joseph Buck, Whitby; J. Hunter, Ayr; J. Westwood, Edgbaston, Birmingham; Sarah Gray, London; J. M'Cartney, Partick; James W. Chapman, Belfast; Bertram B. Hoggan, Brighton; Cuthbert S. Morrison, Edinburgh; Jonathan Steele, Cumberland; Montague S. W. Gunning, Partick; Patrick Rowan, Dublin; John Caldwell Thomas, M.D., Whiteabbey, co. Antrim; H. Stedman, Towcester.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At meetings of the Court of Examiners held on the 7th inst. and following day the undernamed obtained the Fellowship of the College:—

Battersby, John, Army Medical Staff.

Mosse, Charles G. Drummond, Army Medical Staff.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—In the list of names published in our last issue of those admitted Members, for "Smith, Henry Lyon, Chester-le-Street," read Smith, Harry Lyon, L.R.C.P. Edin., Chester-le-Street.

PRINCE ALBERT VICTOR has consented to act as President of the Great Northern Central Hospital, the new buildings of which were lately opened by their Royal Highnesses the Prince and Princess of Wales.

VACCINATION GRANT.—Mr. J. H. Hughes, public vaccinator of the Ombersley district of the Droitwich Union, has received the Government grant for efficient vaccination in his district (seventh time).

SUPERANNUATION.—Dr. John Woodhouse, late medical officer for the first district and the workhouse of the Hertford Union, has received a superannuation allowance of £80 per year.

PROVINCIAL HOSPITAL SUNDAY AND SATURDAY COLLECTIONS.—The third annual Holbeck, New Wortley, and District Infirmary Festival in aid of the Leeds Infirmary, held on Sunday last, produced £50 10s. The first Hospital Sunday collection at Hertford, which took place on the 5th inst., on behalf of the Hertford Infirmary and the Herts Convalescent Home, realised £138 3s. 3d.

A SCOTTISH CREMATION SOCIETY.—Last week a meeting was held in Glasgow by those favourable to the formation of a Scottish Burial Reform and Cremation Society. Dr. Cameron, M.P., occupied the chair. Resolutions were passed disapproving of the existing methods of burial in Scotland, and expressing a desire for the substitution of less expensive and more sanitary methods of disposing of the dead, approving in particular of cremation. A society was subsequently formed, under the title of the Scottish Burial Reform and Cremation Society, to effect the objects in view.

OPHTHALMIC PRACTICE IN A RUSSIAN RURAL HOSPITAL.—According to a report issued by Dr. Tephiashin, the medical officer of the Glasoff rural hospital, the number of eye cases treated between November, 1885, to the end of 1887, was 4289. Of these 54 per cent. suffered from affections of the cornea, 39 per cent. from conjunctival affections, 32 from diseases of the lids, 2.3 per cent. had glaucoma, and 2.7 per cent. disease of the lens. Altogether 1542 operations were performed, 1242 of which were for entropion and trichiasis, Paquelin's thermo-cautery and Gaillard's suture being the treatment usually adopted. Extraction of cataract was performed 76 times, and iridectomy 176 times.

CARMICHAEL COLLEGE OF MEDICINE.—The following scholarships and prizes have been awarded for the Session 1887-88:—Carmichael Scholarship: J. Fullerton. Mayne Scholarship: G. Penrose. Prizes: Anatomy, first year, V. Cooke, J. Boon, A. Arthur; second year, J. Thompson. Materia Medica: J. Wilkin, E. Keeble. Botany and Zoology: C. Crawford. Chemistry: G. Farmer, W. Russell, H. Bentley. Physiology: J. Thompson. Histology: E. Du Cane. Surgery: G. Joyce. Operative Surgery: R. Mawhinney (gold medal), Marie Rockstro (silver medal). Practice of Medicine: E. Du Cane. Practical Chemistry: E. Du Cane. Medical Jurisprudence: Marie Rockstro (silver medal), J. Falkiner. Midwifery: R. Mawhinney.

FOREWARNED.—At the last meeting of the Chester Board of Guardians, a letter was read from the secretary to the Chester Infirmary respecting the small-pox patients admitted to that institution from the union. The Infirmary Board, while willing to receive small-pox patients as heretofore, when able to do so, drew the attention of the guardians to the possible event of the infirmary hospital being full, and their consequent responsibility to make provision for these cases in anticipation of such a contingency.

WOOLSORTERS' DISEASE.—At the Bradford Town Council meeting on Tuesday attention was directed to the greater stringency of the Bradford regulations for the prevention of this disease, in reference to the manipulation of certain kinds of wool, the enforcing of which, it was alleged, would tend to cause persons engaged in that branch of trade to go outside the borough. It was suggested, to obviate such a disadvantage, that steps ought to be taken to obtain regulations applicable to the country generally. The Town Clerk hereupon stated that he had been in communication with the Local Government Board and had asked for a deputation to be received on the subject, and was waiting a reply.

BRADFORD FEVER HOSPITAL INVESTMENT FUND.—The trustees of this fund, last week, resolved that the consideration of the committee's report with respect to investments, which showed the total amount invested to be about £20,000, should be adjourned. It is proposed shortly to convene a meeting to consider the distribution among the charities of the town of £10,000 of the money invested. Of the remaining £10,000 it has been decided to give £4000 to the North Bierley Union towards erecting a new hospital, leaving £6000 still to be disposed of as the trustees may deem advisable. A sum of £500 left by the late Mr. Chas. Semon in aid of the hospital, it has been arranged to give to the committee of Semon's Convalescent Home, Ilkley, for the purposes of that institution.

MEDICAL NOTES IN PARLIAMENT.

Private Lunatic Asylums.

In the House of Commons, on the 9th inst., in answer to Mr. W. Corbet, Mr. Matthews stated that he was informed by the Lunacy Commissioners that they have no knowledge of the actions for libel brought by Dr. Eastwood beyond that contained in the newspapers. As far as the Commissioners were aware the allegations were unfounded, and, having regard to the result of the litigation, they did not consider any inquiry on their part to be necessary. It would be observed that no attempt had been made to justify the libel. The Government hoped to be able to reintroduce the Lunacy Bill next session, but could not undertake to insert such a clause as was suggested.

The Sweating System.

On the 13th inst., Mr. Cremer asked the Secretary of State for the Home Department whether the Government would, during the recess, seriously consider the necessity for making a considerable increase to the present staff of factory and workshop inspectors; and whether, in order to overcome the objection that had been urged that such increase would involve a serious expenditure out of the public funds, the Government would authorise organised bodies of workmen to appoint and pay inspectors, providing the Government retained the power to accept, control, and dismiss men selected by the workmen's organisations.—Mr. Matthews replied that the Government would consider the question during the recess. Any definite action could not be decided upon until the select committee reports. The Government would not be able to entertain the proposal made in the second paragraph.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BLUETT, J., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health to the Chesterfield Borough.

BURTON, S. H., M.B., B.S.Lond., F.R.C.S.Eng., has been appointed Assistant Surgeon to the Norfolk and Norwich Hospital, vice M. Beverley, appointed Surgeon.

CASSAL, Mr. C. E., has been appointed Analyst for St. Mary, Battersea, Parish.

COLLINS, K. TREACHER, M.R.C.S., L.R.C.P., L.S.A., has been appointed Curator and Librarian to the Royal London Ophthalmic Hospital, Moorfields.

HUTCHINSON, PROCTER, M.R.C.S., late Resident Medical Officer, has been appointed Assistant Surgeon to the Hospital for Diseases of the Throat, Golden-square, W.

MACLINTOCK, J., M.D., M.B., and C.M.Edin., has been appointed Medical Officer of Health for the Borough of Leeds.

MILLIGAN, WM., M.B.Aberd. and C.M., has been appointed House Physician to the Northern Hospital, Liverpool.

ROBERTSON, A., M.A., M.B., C.M.Edin., has been appointed Assistant House Surgeon to the Halifax Infirmary and Dispensary, vice C. M. Hill, M.R.C.S., &c., resigned.

SCOTT, KENNETH M., M.B., C.M.Edin., M.R.C.S., has been appointed House Surgeon to the Central London Ophthalmic Hospital, Gray's-inn-road, W.C., vice L. S. Manning, M.B., C.M.Aberd., resigned.

TURNER, GEORGE, M.B., L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer of Health for Bishop Stortford, Buntingford, Hertford, and Ware Rural Sanitary Districts, and for Bishop Stortford, Hertford, and Ware Urban Sanitary Districts.

WOOLVERTON, E. G., L.R.C.P. and L.M., L.R.C.S.Edin., has been appointed Medical Officer of No. 2 District of the Aylesbury Rural Sanitary District.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF SHEFFIELD.—Resident Medical Officer for the Winter-street Hospital.—Resident Medical Officer for the Lodge Moor Hospital. Salary for the former, £200 per annum, and for the latter £150 per annum, with board, lodging, and attendance.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon. No salary, but residence, board, and washing will be provided. Appointment for six months.

GENERAL HOSPITAL, Nottingham.—Junior Resident Medical Officer. Salary £100 for first year, with an addition of £10 a year up to £120, with board, residence, and washing.

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £90 per annum, with apartments, board, and attendance.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

MEDICAL MISSIONARIES.—Apply to R. H. Combes, Secretary, Guild of St. Luke, Galeson, Eton-avenue, Hampstead, N.W. Doubly qualified Medical Man, to proceed to Magila, E. Africa. Salary £200 per annum.—Medical Missionary for Madagascar.

ROYAL HOSPITAL OF BETHLEHEM, London.—Assistant Medical Officer. Salary £300 per annum, with residence in the hospital, furnished only with planned and fitted furniture, and an annual allowance of coals and gas.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Lower Seymour-street, Portman-square, W.—Physician to Out-door department.

UNIVERSITY OF ABERDEEN.—The chair of Chemistry in the University.

VICTORIA HOSPITAL, Burnley.—Resident Medical Officer. Salary to commence at £250.

WINCHCOMBE UNION.—Medical Officer. Salary £65 per annum, and in addition, midwifery, surgical, and vaccination fees.

Births, Marriages, and Deaths.

BIRTHS.

BARLOW.—On the 9th inst., at Wimpole-street, W., the wife of Thomas Barlow, M.D., F.R.C.P., of a daughter.

GREENFIELD.—On the 11th inst., at Teriot-row, Edinburgh, the wife of W. S. Greenfield, M.D., F.R.C.P., of a daughter.

MARRIAGES.

BATTEN—CONDER.—On the 14th inst., at East Parade Chapel, Leeds, by the father of the bride, Rayner Derry Batten, M.D.Lond., eldest son of John W. Batten, Esq., of Aisle-gardens, London, to Katharine Roubilliac, second daughter of the Rev. R. R. Conder, D.D., of Leeds.

HUBBARD—JONES.—On the 9th inst., at the Parish Church, Beckenham, by the Rev. Geo. Jones, B.A., brother of the bride, assisted by the Rev. Henry Arnott, Rector, Walter Lovett Hubbard, M.R.C.S.E., L.R.C.P.Lond., M.D.Bux., of Rugeley, Staffordshire, to Annie, second daughter of R. Hesketh Jones, Esq., J.P., of Beckenham, Kent.

SMITH—FELTHAM.—On the 25th ult., at St. John's Church, Wynberg, Cape of Good Hope, by the Rev. Ralph Doyle, Rector, assisted by the Rev. Rice Thomas, M.A., Chaplain to the Forces, Frank Smith, M.R.C.S.E., L.R.C.P. and L.M., of Coventry, to Bertha, elder daughter of H. J. Feltham, Esq., of Stellenberg, Wynberg.

THOMPSON—GRAHAM.—On the 8th inst., at Worthing, William Fookes Thompson, M.B., of Launceston, Cornwall, to Harriet, younger daughter of Thomas Graham Graham, Esq., of Trevear, Worthing.

DEATHS.

BRYANT.—On the 28th ult., at his residence, College-lane, Gibraltar, after a short illness, John Henry Bryant, M.R.C.S., L.R.C.P., elder son of the late Dr. Bryant, of Sussex-square, Hyde-park, and Highwoods, Reading, in his 46th year.

STALKER.—At Kaitangata, Province of Otago, New Zealand, Daniel Stalker, M.A., M.B., younger son of Daniel Stalker, Leven, Fife, in the 34th year of his age. (By telegram.)

N.B.—A fee of 5s is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 16th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Aug. 10	30.03	S.W.	73	68	124	87	67	..	Bright
" 11	30.10	S.W.	65	60	86	69	59	..	Overcast
" 12	30.01	S.W.	66	62	111	73	58	..	Cloudy
" 13	29.86	S.W.	64	58	122	72	57	..	Cloudy
" 14	30.21	N.E.	59	52	111	70	51	..	Bright
" 15	30.11	E.	57	53	101	65	52	..	Hazy
" 16	30.15	E.	56	50	107	62	49	..	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

INTERMITTENT MANIA.

INHIBITORY PAREISIS may be induced by an infinity of causes—by cessation of mechanical work, change of locality, or both these conditions combined. This was noticed by the physicians of antiquity—by none more pointedly than by Aretæus, whose "floruit" is placed by scholars about A.D. 150. In the chapter *περί Μανίας* of his singularly thoughtful and well-written treatise he adduces the following instance. A house-constructor, as long as he was at work on the premises, proved himself a skilled artisan, capable of measuring, cutting, planing, joining, adapting, and finishing off correctly the woodwork of the house he was engaged upon; he would mix familiarly with the journeymen he hired (*ἐργαστήρι*), bargain with them, and pay them a just wage for their work. In this way, so long as he was on the scene of operations, he was in full possession of his faculties. But if he happened to go to the market-square, to the bathing establishment, or to any other place where necessity called him, he would no sooner have laid down his tools than he would begin to groan, then shrug his shoulders as he sallied forth, till he had got out of sight of his familiars and of the work and place he was employed at, whereupon he became a perfect madman (*παύσαν ἐξεμάλvero*). But he had only to come quickly back to the scene he had left, and at once he was in his right mind. Such, says Aretæus, was the association in his case between locality and reason.

Messrs. Hertz and Collingwood.—It would be against our rule to name a gentleman for the purpose.

W. C., M.R.C.S., L.R.C.P.—A legal agreement is of course binding.

ARTIFICIAL RESPIRATION.

To the Editors of THE LANCET.

SIRS,—Will you permit me a few lines to draw attention to a method for producing artificial respiration in a new-born infant. It is this:—Place the infant on its back, feet towards you, with your hands slung-like beneath its body about midway, the thumbs in front round the thorax. Now raise your hands a few inches upwards, so that the body becomes arched by the extremities falling on either side. Do this lifting about fifteen or twenty times in the minute, keeping the body in the upward position for a short period each time. In lowering the body apply gentle pressure by squeezing the thorax with your hands and thumbs. One important point in this method is that both mouth and glottis are opened, and any fluid in the trachea or lungs is able to flow out. I have found this means of producing artificial respiration successful on several occasions, and in one case where Marshall Hall's method had failed.—I am, Sirs, yours truly,

West Kensington, Aug. 12th. EDGAR JENNINGS, M.R.C.S., L.S.A.

MEDICINE'S FORGOTTEN WORTHIES.

AN "Old Mortality" of medical training and sympathy might do for the deserving practitioners of times past what the descendant of the Scottish Covenanters (in perhaps the most powerful of the Waverley Novels) did for his progenitors in the cause of religious toleration and civil freedom. Nowhere throughout Christendom—ay, even in savage countries—would he lack opportunity or material for his work of epitaphial rehabilitation. Let the medical man, on his too brief holiday, whether at home or abroad, take a stroll through the cemetery of town, or village, or hamlet, and he cannot fail to come across the tombstone, dating one or even two centuries back, of some professional brother who to prolong or to sweeten the lives of his fellows made willing sacrifice of his own. The inscriptions in which such an honourable career is set forth are often quaint, not seldom striking, always interesting. Many a romance of still-life lies unevolved in the simple lines, and sets the sympathetic reader on a train of mental reconstruction which his heart tells him cannot be far from the truth, however the imagination may mould the details. When the gay world transfers its pleasure-seeking self to sequestered Alpine regions, it might now and again make salutary use of its time in visiting the modest little "God's acre," and reading in the inscriptions over the "rude forefathers of the hamlet" the secret of many a happier, if humbler, life than its own. Switzerland is full of these biographical surprises and tombstone homilies. Nowhere, indeed, will the searcher after "Medicine's forgotten worthies" find more occasion for the rehabilitating task when in the congenial mood. In the old church of Thun, for instance, standing surely on the sweetest knoll ever chosen for a last resting-place, within sight of the venerable snow-hills, within hearing of the blue and swift-flowing Aare, and encompassed with wooded slopes and picturesque chalets, the abodes of "industrious peace," lies an honourable physician, whose name (and hardly even that) is all that survives of him among the townfolk for whose ancestors he lived and laboured. Half hidden under the archway that leads to the church portal a quaint tablet let into a corner of the wall arrests the eye with its polyglot inscription in Hebrew, Greek, and Roman characters. Some "Old Mortality"—possibly a pious descendant—has retraced the words, which even now are only just legible, on the stone. Omitting the Hebrew, we read:—

Ἰγούος E Mundo immundo
Ἰαούς Mundus

JOHANNES RUBIN, Medicinæ Doctor, Bürger der Stadt Thun, lebte auf Erden 72 Jahre.

Gott liesse mich die Kunst der Leibs-ärzneyen wissen,
Der Seele war ihr Artzt auss Gottes Wort bekannt,
Der Tod hat meiner Kunst den schwachen Leib entrissen,
Die Seele lebt vernügt in ihres Artztes Hand.

1720.

which, translated, sets forth:—

Jesus is Unspotted from the
Healing World

JOHN RUBIN, Doctor of Medicine, Citizen of the town of Thun, lived on earth seventy-two years.

God enabled me to know the art of bodily healing; from God's Word the soul knew its Healer. Death has wrested from my art the frail body; the soul lives in bliss in its Healer's hand.

1720.

Possibly a translation of the German quatrain into eighteenth century Latinity may give a better notion of the original than contemporary English prose:—

Me Deus edocuit medicinam corporis ergo,
Verba Dei psychæ cœu medicamen erant.
Ars mea concessit Morti pro corpore pugnans,
Nunc fruëris cœlo, psychæ, medente Deo.

Small "help from fancy" would suffice to conjure up the living presence of the Swiss physician, and the medical historian might profitably muse on the state of science at the time when Harvey's great discovery was still new. Such salutary exercise of head and heart may be indulged in by the practitioner on his holiday, and nowhere to better purpose than in the country which the majority know merely as the "playground of Europe."

A Successful Candidate has enclosed his card but has omitted to communicate his address.

"MOVEMENTS OF EXPRESSION."

To the Editors of THE LANCET.

SIRS,—In connexion with your article on the above subject, it may be interesting if I relate an experience of mine some years ago. Two days after the birth of a male child, I was informed that he had not passed any urine, and on examination I found that the bladder was very much distended. With some difficulty I passed a probe into the urethra, and on the urine bursting forth like a fountain, the child's face changed from one drawn and haggard with pain to one beaming with smiles. In this case a child certainly smiled within three days of birth.

I am, Sirs, your obedient servant,

Southsea, Aug. 11th, 1888.

ALBERT BENTHALL, M.R.C.P.

"ARRESTED DEVELOPMENT OF THE ABDOMINAL WALLS."*To the Editors of THE LANCET.*

SIRS,—Having seen notes of several cases of the above in your issues lately, I thought particulars of a similar case might be of interest. In August, 1887, I was called in to see a child which had been born the night before my first seeing it. The mother was a primipara and had been attended by a midwife. On examining the child I found a circular aperture in the anterior abdominal wall, situated about midway between the pubes and ensiform cartilage. The opening was about three inches in diameter, and was covered in by a thin membrane of a yellowish-green colour, into the lower portion of which the cord (a small and slender one) was inserted. The margin of the aperture was well defined, and had a rounded appearance as though the skin were turned in under itself. Whenever the child cried the membrane was forced out by the intestines and became quite tense, in fact, I was alarmed at first for fear it might rupture. In other respects the child was a fine healthy boy. The cord fell off in the usual manner, and the skin gradually grew over the membrane, from the circumference towards the centre, until the whole was covered in. After this skinning over had taken place the whole presented a puckered appearance, the skin being arranged in folds radiating from the point of insertion of the cord. The abrupt margin of the circle can still be distinctly made out on manipulation, and of course the abdominal wall is weak at this part, and requires to be supported by a belt having a pad sufficiently large to overlap the margins of the aperture. The child has grown rapidly since birth, and is now well and strong.

The treatment adopted was simply to place a piece of oiled lint over the membrane, and on this a pad made out of a large cork bung, covered with wash-leather, and of sufficient size to overlap the margins of the opening. This was fixed by a few strips of adhesive plaster and a bandage applied. Later on, when the skin had grown over the membrane, an ordinary umbilical bandage with a large pad was worn, and is still worn. I did not form any opinion as to the nature of the membrane at the time, but it was possibly the expanded tissues of the cord.

I am, Sirs, yours faithfully,

Farnborough, Aug. 5th, 1888. I. TRACY SIMPSON, M.B.C.S., &c.

E. T. S.—There is evidence of much curious research and patient reading in "Medical Economy during the Middle Ages," by Z. F. Fort (B. Quaritch, London). It is, indeed—what its author describes it—"a contribution to the history of European morals from the time of the Roman Empire to the close of the fourteenth century." But the style is very cumbersome and pedantic, though the facts and illustrations are laboriously compiled. A vivid realisation can be got from the book of the obstacles scientific medicine had to encounter from the belief in supernatural agency as the *causa causans* of disease, and from the consequent recourse to occult remedies for its cure.

Tenax.—A person using the title M.D., C.M. from a United States college ought to indicate the source if using the title in this country. If the person in question has English qualifications, he should indicate the source of his medical degree. We presume that each institution has its own roll of graduates and diplomates; but there is no register of the same legal significance and authority as in the United Kingdom.

Mr. R. Gordon.—If a specimen be forwarded to us, it shall have attention.

VALUE OF REST IN GASTRIC HÆMORRHAGE.*To the Editors of THE LANCET.*

SIRS,—The following case may prove interesting to some of your readers, as it shows the great value of absolute rest in gastric hæmorrhage.

On July 3rd I was consulted by W. B., aged thirty-eight years, who complained of most of the symptoms of gastric ulcer. He had not vomited blood or passed blood by stool. I put him on Hudson's white mixture, and ordered a milk diet. On July 12th, at 10 A.M., I was hurriedly sent for to see the patient. When I arrived I found him lying in bed. He had then vomited over two pints of blood in about fifteen minutes. I at once injected ergot, placed cloths wrung out of cold water over the stomach, and kept the patient perfectly quiet. I gave a mixture of gallic acid, lead, and opium after each time he vomited. I repeated the injection every fifteen minutes, and in an hour and twenty minutes the hæmorrhage was completely stopped. He vomited about a pint and a half of blood after I got there. I saw him again at 11 A.M. The pulse was very good, and he had no more vomiting. I ordered an exclusively milk diet, the patient to be kept at perfect rest. About two hours later he got out of bed, directly commenced vomiting blood, and died in ten minutes. When I arrived I was told that he had vomited fully two pints of blood, but could not say, as it was taken away. No autopsy was made.

I am, Sirs, yours faithfully,

Consett, Aug. 6th, 1888. ED. FRAZER, L.R.C.S.I., L.K. & Q.C.P.I.

J. R. L.—Our correspondent deserved a much more grateful recognition of his important services than he has received. We cannot advise him to break the ordinary rule of fraternal service; but there would be no harm in his enlightening the parent of his patient a little by demurring decidedly to the hysteria hypothesis.

SURGEON NUNAN OF H.M.S. "WASP."

MRS. NUNAN, mother of Surgeon Nunan, who was drowned in September last, when the ill-fated *Wasp* foundered, and respecting the hardship of whose case a question was asked last week in the House of Commons by Dr. Kenny, M.P., which was reported by us at the time, writes stating that the reason alleged by the Lords of the Admiralty for refusing her assistance is that at the moment her son was drowned he was not actually supporting her. He had, however, done so, and intended to renew his assistance in the immediate future, and our correspondent thinks that she has a reasonable and equitable claim for assistance from the Government in her widowed and infirm old age.

Valeudinarian.—There are, up to the present, in the Canton Grisons seventeen mineral baths and twenty-six springs used medically for bathing and drinking, and there are nine springs of which the water is exported. But equally important with these are the climatic sanatoria, of which the number is now twenty, and their elevation above the sea from 920 to 1856 metres. Most of these are open in summer only; but Davos, St. Moritz, and Maloja are celebrated winter resorts. As a whole, the scenery is magnificent, and opportunities for the pursuit of botany are abundant.

Sumbul.—The question is put in too vague a form to admit of a satisfactory answer.

Mr. Geo. Gent.—He can use his degree if he indicates the source of it.

THE PAY PRINCIPLE IN HOSPITALS.*To the Editors of THE LANCET.*

SIRS,—I have read the articles in THE LANCET on the above subject from time to time with much interest. I know something of the practical working of it. I am connected with a hospital where the principle has been in operation for a dozen years with the most satisfactory results. It is not carried out by "exacting payments." It is carried out in the following manner:—1. The patient or the responsible friends are asked to contribute to the funds according to their means; the scale of charges is a sliding one. 2. In case the patients or friends cannot pay anything, the clergyman of the district where the patient comes from, or some other equally well-known person, may make a collection among a few who know the circumstances of the case to defray the weekly payments. If anything remains over, it is retained in the hands of the collector for the next case. 3. Trade societies and other organisations pay for their members. Now all trade societies are well able to pay for the hospital treatment of the members. 4. It is not too much for a master or mistress to pay hospital expenses for three or four weeks for a faithful servant. A great deal of money might be saved to the London hospitals by a little more care in admitting patients from the provinces. In many of the cases the persons are quite able to pay a liberal fee to their medical adviser. In their native districts the probability is that it is never known that these persons were charity inmates of a London hospital, except in the case of a death, where the body is brought home for interment.

I am, Sirs, yours faithfully,

Belfast, August, 1888.

W. K. M'MORDIE.

An Honorary Secretary.—We think our correspondent must have misunderstood the secretary of the Hospital Sunday Fund. At any rate, he has received a very imperfect notion of the many data which enter into the consideration of the Distribution Committee of the Hospital Sunday Fund in making their award. They are required by the rules in every case to fully inquire into the merits and pecuniary needs of the institution, and the award is to depend on the judgment formed by the Committee upon such merits and needs. We need not say that "merits" involve a consideration of work and results.

Dr. T. D. Smyth (Quebec).—Yes, the name, qualifications, and address are correctly given in the Register for 1888.

Cibum petere.—Our forthcoming Students' Number, to be published on the 8th prox., will contain the information desired in a complete form.

"PAINLESS KILLING."*To the Editors of THE LANCET.*

SIRS,—Your note under this heading in your last issue reminds me of a plan I have adopted for some years in my own poultry yard. A large wide-mouthed stoppered bottle is kept charged with an ounce of chloroform. When a chicken has received sentence of death, it is held firmly under the left arm and its head alighted into the mouth of the bottle. A few deep inspirations follow, and the bird without a struggle becomes unconscious. Then, holding it by the legs, its neck is dislocated by a quick stretch. This appears to be a perfectly "happy despatch." The plan is so simple and expeditious that it might be generally adopted.

I am, Sirs, yours faithfully,

Manchester, Aug. 6th, 1888.

F. BADEN BENDER, F.I.C., F.C.S.

ERRATUM.—In our report in last week's issue of Dr. Galton's case of Ovariectomy at the Norwood Cottage Hospital, seventh line from the end, for "crusted" read "united," the former conveying an impression of healing by scabbing instead of, as was the case, by first intention.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Reich, London; Dr. E. H. Jacobs, Leeds; Mr. Patterson, London; Mr. T. F. Pearce, Watford; Dr. Robertson, Newcastle-on-Tyne; Dr. Hummel, Philadelphia; Dr. T. D. Smyth, Quebec; Mr. S. D. Hine, Stockland; Dr. Mattison, Brooklyn; Mr. Palmer, Newbury; Messrs. Sampson Low and Co., London; Lieut.-Col. Whale, London; Messrs. Hertz and Collingwood; Mr. J. J. de Z. Marshall, Hastings; Mr. Smith, Great Yarmouth; Mr. R. Gordon; Mr. E. Jennings, London; Messrs. Lee and Martin, Birmingham; Mr. J. P. Murray; Messrs. Reynell and Co., London; Prof. d'Odiardi, London; Mrs. Nunan; Messrs. Eason and Son, Dublin; Mr. A. Benthall, Southsea; Mr. Tupholme, South Kensington; Mr. F. E. Cave, Leeds; Mr. A. Routh, London; Mr. Pye Smith, Sheffield; Mr. L. G. Peters, Goben; Messrs. Riddle and Co., London; Dr. J. H. Galton; Mr. Berthier, Paris; Messrs. Dawson Bros., Montreal; Mr. Moullin, Cavendish-square; Messrs. Boot and Son, London; Mr. T. Robinson, London; Mr. Snodgrass, Glasgow; Mr. Sawyer, Birmingham; Mr. Huggins, Malvern; Mr. Dixey, Southsea; Mr. Allan, Liverpool; Mr. Briscoe, Bolton; Mr. Winkworth, Brighton; Mr. May, co. Mayo; Mr. S. Hyde, Buxton; Mr. Colman, Glamorganshire; Mr. Forbes, Stonehaven; Mr. Stephens, Winchcombe; Mr. Johnson, Leicester; Mr. Childs, Leeds; Messrs. Hogg and Son, London; Mr. Unsworth, Liverpool; Messrs. Orridge and Co., London; Mr. Chater, Newport; Mr. Keeley; Messrs. Robertson and Scott, Edinburgh; Mr. A. E. Barrett, London; Dr. Buchanan, Glasgow; Mr. F. N. Williams; Megrim; Royal Infirmary, Glasgow; S.; W. C.; Lex; R. W., Aberdeen; Mens, London; Physician and Surgeon; Nurse, London; An Hon. Secretary; X. Y., Leeds; Lady Superintendent, Hull; Forceps, London; D. D., London; Seaside, London; Tenax; J. R. L.

LETTERS, each with enclosure, are also acknowledged from—Major Pead, London; Mr. Gilmore, Bristol; Miss Moses, Merioneth; Mr. Monk, London; Mr. Whittaker, Derby; Messrs. Russell, Liverpool; Dr. J. Coster, Hackney; Mrs. Turner, Finsbury-park; Dr. Stalker, Dundee; Dr. Harding, Whittlesea; Mr. Day, Dublin; Messrs. Burgoyne and Co., London; Mr. Warnots, Brussels; Mr. Crozier; Mr. Dowse, London; Dr. Barnes, Portsea; Mr. Twining, Galloway; Mr. Mundy, London; Mr. Arnold, Gloucester; Mr. Bunting, Notts; Dr. Collins, London; Mrs. Mansolf, Maidenhead; Mr. Walker, Beds; Mr. Voss, Queensland; Mr. Parker, Bristol; Mr. Rees, Plymouth; Mr. Daghish, Jarrow; Mr. Thwaites, Bristol; Mr. Crasweller; Messrs. Godfrey and Cooke, London; Dr. Aitchison, Blackburn; Messrs. Squire and Son, London; Mr. Heywood, Manchester; Victoria Hospital, Chelsea; R. W., Chiswick; Studens, Sheffield; Medical, Huddersfield; Guest Hospital, Dudley; M. A., London; A. E., London; S., London; Lady Superintendent, Canterbury; Medicus, London; Medicus, South Hampstead; Medicus, Dewsbury; Applicant, London; Hilda, Yorkshire; G. T., Chard; Cantab, London; Omega, Ipswich; Dorset, London; M., Clapham; J. B., Crewe; Secretary, Maidstone; Aerial, London; Electric, London; Assistant, Leeds; A. B., London; Stanley Hospital, Liverpool; G. L.; Medicus, Exeter; St. John Ambulance Association, London; Tenotome, London; M. M. M.; D. M. E., New Cross; M. D., Derbyshire; Chemist, London; G. H., London; M. B., Maidstone; Surgeon, London; G. I. M., London; C. L. L., London; Anthopos, Leyton; Manchester, London; Sigma, London; T. M., Liverpool; Devonian, London; B., London; X. X. Z., Hackney.

Liverpool Courier, North British Daily Mail, Reading Mercury, Glasgow Herald, Morning Post, Hertfordshire Mercury, Herald and Weekly Free Press, Surrey Advertiser, Freeman's Journal, The Colonies and India, Christian World, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 21.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 22.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

Thursday, August 23.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, August 24.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 25.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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The Bradshaw Lecture

ON

URÆMIA.

*Delivered before the Royal College of Physicians,
August 18th, 1888,*By WM. CARTER, M.D., B.Sc., LL.B.LOND., &c.,
PHYSICIAN TO THE ROYAL SOUTHERN HOSPITAL, LIVERPOOL;
PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS,
UNIVERSITY COLLEGE, LIVERPOOL.

MR. PRESIDENT AND GENTLEMEN,—My first duty is to thank Sir William Jenner for having, as President of this College, paid me the high compliment of requesting me to give the Bradshaw Lecture for 1888; and my next is to state that in choosing Uræmia as its subject I have no hope of being able to resolve the many difficulties which surround it. My task must be the more modest one of making to it such small contributions of fact as I have been able to gather from my observation of cases, and of indicating the more fruitful and hopeful work of others. Indeed, the pathogeny of uræmia is so obscure, and the difficulties which surround its investigation are so great, that it seems doubtful if it can ever be completely elucidated; yet some recent researches, and especially those of Feltz and Ritter, Bouchard, Brieger, and others who will be mentioned, have so far lightened the obscurity, that we may now anticipate, and even see reasons for some of those apparent anomalies and contradictions in the manifestation of symptoms which formerly seemed hopelessly puzzling.

Uræmia may be defined as the altered condition of health caused by the accumulation within the body of poisonous products that should be eliminated by the kidneys. But the symptoms of this altered condition are so various in themselves, and so variously combined, that within the limits of this general definition what on the surface appear to be altogether different diseases are sometimes found. Thus, after apparently similar degrees of suppression or diminution of urine, some patients have only violent and persistent vomiting, the brain remaining clear; others have this with diarrhoea superadded; and others, again, become comatose. Some are convulsed, others delirious, others asthmatic, while in yet others nervous symptoms come and go in a seemingly capricious fashion, a transient but recurring hemiplegia, hemiplegia or lesser paralysis, cephalalgia, tinnitus, or deafness, alone betraying the serious attack that is being made upon the nervous centres; while in not a few the symptoms that most attract attention are epistaxis or altered cutaneous sensations or various cutaneous eruptions.¹ It is not surprising that many explanations have been offered of such various phenomena.

The first serious attempt to comprehend within one general theory all differences was that of Traube. According to him the nervous symptoms were due to cerebral anæmia, and never occurred without preceding cardiac hypertrophy and blood dilution. Heightened blood pressure caused cerebral oedema, which in its turn caused cerebral anæmia, and, as this affected one or another portion of the brain, there would be a predominance of either coma or convulsions, these last being limited if the anæmia was limited, general if it was general. On this ingenious hypothesis, it seemed clear why a paralysis or spasm might be limited to one side or one limb, or even to a part of one limb, and why, instead of being permanent, it might pass away. A localised anæmia causing a localised oedema, and oedema and anæmia being removed on removing their causes, heightened pressure and watery blood, appeared so completely to explain what had previously been an unexplained puzzle that the theory was eagerly accepted. And doubtless, when the oedema and anæmia do occur, their effects must be added to and complicate those produced by other causes. But the theory was too exclusive. Traube had never seen uræmia where the left ventricle was

not hypertrophied; and, as others had done so, they perhaps as wrongly wholly rejected his theory as he had rejected all others. Curiously enough, however, a question so easy of determination as the more or less watery condition of the brain in any given case had never been settled by actual examination. Bartels² admits that he had not determined it, and that he was not aware that others had done so. The following two cases are of some importance, therefore, as bearing upon the point. The first was that of J. B., a young man, who was admitted into the Royal Southern Hospital, Liverpool, under my care, in January, 1878, suffering from scarlatinal nephritis. He died after seven weeks' illness, having been very dropsical, and towards the end suffering from vomiting, cramps, convulsions, and coma. The kidneys were much enlarged and the heart of normal size. The brain was examined first. Twenty grammes, partly of white and partly of grey matter, were taken from the middle lobe, carefully dried for forty-eight hours at 82° C. over sulphuric acid, then pulverised and dried again in a similar manner until weight was no longer lost. The weight when the drying was completed was 4.15 grammes. The fluid part therefore equalled 15.85 grammes, the percentage proportions being 79.25 water to 20.75 solid, or almost exactly those of normal brain substance—viz., 80 water and 20 solids. The second case was one of chronic contraction of the kidneys, and the patient for some days before his death was drowsy and slightly delirious. The brain was examined in an exactly similar manner to that just mentioned, when the proportion of solid matter was found to be decidedly greater than in the normal organ, the percentages being 74.55 liquid and 25.45 solid. In this case, moreover, two of the circumstances supposed to be especially favourable to the production of cerebral oedema existed in a marked degree—viz., a heightened blood pressure and a watery condition of the blood, for the left ventricle was enormously hypertrophied, its firm outer wall being one inch thick. The cardiac valves were competent, and the heart, when freed from clot, weight 1 lb. 5 oz. The specific gravity of the blood removed from the vena cava was only 1.0276.

But before absolutely rejecting Traube's ingenious theory it ought to be considered in the light of certain recent experimental facts, when that modification of it adopted by Jaccoud in France and some eminent physicians in our own country will seem far from unreasonable. Such facts are those adduced by M. Raymond,³ and after him by M. G. E. Bernard.⁴ M. Raymond first incised one of the inferior cervical ganglia in the rabbit, so as to deprive a cerebral hemisphere of vaso-motor control, and then tied both ureters, but instead of the resulting uræmic convulsions being bilateral as usual, they were limited to one half of the body—the half opposite to that of the operation. Yet the only difference observable between the hemispheres post mortem was that one of them appeared to be affected with very slight oedema. Here, then, was a general uræmic poisoning, followed by local symptoms, caused apparently by local vascular dilatation. Whether it was the scarcely noticeable oedema caused by this dilatation, as M. Raymond thinks, that determined the unilateral convulsions, or, as seems equally possible, the larger amount of poison which the dilated vessels allowed to act on one side of the brain, yet the facts remain that the convulsions were unilateral, and that they were on the side opposite to the hemisphere whose vessels must have been dilated.

We have no absolutely certain post-mortem signs that enable us to say that either local dilatations or local spasms of cerebral vessels have occurred during life in any case of Bright's disease, but as at any rate vascular spasm certainly occurs in other and sometimes strangely limited parts, where the death-like pallor which it produces can be plainly seen, it is at least not improbable that it may also occur in some of the vessels of the brain, where from the nature of the case it cannot be seen. The "dead hand" is regarded by some—M. Dicufofy, for example—as common enough to be ranked among the marked and early signs of uræmia.

Before referring to some recent inquiries, I desire to make a few observations on one or two points which I think are not without practical importance. The first is

¹ Ziemssen's Cyclopædia, vol. xv., p. 111.² Archives Générales de Médecine, vol. i., 1838, p. 97.³ Contributions à l'Étude des Paralysies dans l'Urémie, par G. E. Bernard, pp. 54 et seq.⁴ Three striking examples of this kind of manifestation are given by Dr. Samuel West in vol. xxii. of St. Barthol. Hosp. Reports, pp. 226-7. No. 3391.

as to the supposed utility of dropsy to the Brightic, and the danger of precipitating uræmic convulsions &c. by any rapid reabsorption of the presumably toxic dropsical fluid. In proof of the noxiousness of this fluid, Bartels⁵ relates his now well-known case where a violent storm of nervous symptoms broke over a patient whose dropsy was rapidly disappearing as he lay streaming with perspiration in a blanket pack after half an hour's immersion in a bath of a temperature of 102.5° F. This case seems to have coloured medical opinion ever since its publication. Without entirely denying the validity of the explanation, I cannot help thinking that it is open to much doubt, for the following reasons—viz., that the rapid absorption of such fluids often takes place without inconvenience; that convulsions not unfrequently come on during the very height of the supposed conservative dropsy; and that (if the patient is not jaundiced or very feverish) the fluids themselves, when examined, appear to be simple both as regards their organic and inorganic contents; and as the rapid relief of dropsy is often a matter of some moment, it will be unfortunate if a doubt is cast upon the propriety of promoting it by all legitimate means.

Since the publication of Bartels' book, I had a somewhat similar case to the one which he relates; but I felt inclined to attribute the nervous symptoms to a different cause, and, as it illustrates what I venture to think is an important point of practice, I make no apology for briefly mentioning it here. It was that of a robust man, John J—, aged twenty-nine, who came into hospital on Feb. 13th, 1879, suffering from general dropsy of ten days' duration. The urine contained a quarter albumen. The bowels having been relieved, a hot-air bath was used. As the result of this, he perspired profusely; but the pulse was much quickened, the temperature raised, and he at once complained of headache. The œdema began immediately to disappear; but some sixteen hours after the bath he had a slight attack of convulsions, during which the face and limbs twitched and the tongue was bitten. An hour later a much more severe attack occurred. He was bled at once freely from the arm; and twenty-seven grains of chloral being administered by the rectum, he slept quietly all night, and next day had a soft and natural pulse. Ten days later he left, without dropsy, but with the urine still albuminous. It seemed to me then, as it does still, that the nervous symptoms were due less to the reabsorption of poisonous fluids than to the induction by the heat of the bath in one already half way towards uræmia of great arterial dilatation and excitement (a condition of cerebral vessels comparable to that produced on one side of the brain of Raymond's and Bernard's rabbits) and increased body temperature.⁶ The headache certainly came on before any reabsorption of fluid could have taken place, for it was immediate. Since that time I have made it a point of practice to have both the pulse and temperature carefully watched, and, if either rises much or headache occurs before perspiration is induced, to have the bath at once withdrawn and the surface of the skin sponged with tepid water, or vinegar-and-water, before it is employed; and though I have frequently seen a rapid disappearance of dropsical fluids, I never again saw accidents follow it. The very patient in question returned to hospital in February last, just nine years after the former treatment, as dropsical as he then was, and, having as part of his treatment the hot-air bath (used with the precautions mentioned), soon lost his dropsy and other threatening symptoms without any attendant inconvenience.

Though there is less need of evidence on the second point, I will briefly mention a case which impressed me much at the time of its occurrence. In October, 1881, I was requested by a medical friend in Liverpool to see with him his nephew, a little boy aged ten, who on the twenty-first day after scarlatina, and while very dropsical, had suddenly become convulsed. I was informed that three other children of the family had all been affected in the same way. At about the end of the third week after scarlatina, in the height of dropsy, they had

been seized with convulsions, which quickly to death. The child in question was extremely œdematous. Instead of bleeding him, therefore, the hot-air bath, and so soon as he could swallow, purgative and diaphoretics. The sweating was by degrees the œdema and the convulsions and, though it was six months before albumen absent from the urine, he became perfectly now, as I hear from his uncle, a strong he of seventeen years of age. If dropsy were tive and the absorption of dropsical fluid as it is sometimes said to be, the fates of the ought to have been exactly reversed. As position of the effused fluids, though it is improved, and, with the exception mentia jaundice and fever, not a little improbable t poisonous, we very frequently meet with ments as the following: "We know that the trated into the cellular tissue is rich in urea and so that their rapid absorption into the blood occasion an intoxication more or less acute." know nothing of the kind. We simply in Bartels' case; and what of positive evidence th I think, to an exactly opposite conclusion. It practice for many years past to examine these have been very much struck with the rela amount, both of urea and salts, which they con when the vomited matters have been rich in substance. In an instance lately there was gramme of nitrogen in 100 cc. of subcutaneous f

The next fact to which I desire to direct a influencing if not causing some of the symptom is the progressively diminished alkalinity, if the end the actual acidity, of the blood which oc cases. Schottin, as referred to by Bartels, all but does not, so far as I am aware, support his facts. The facts which I wish to put in evid point are such as follow. Subcutaneous effusio into serous cavities, and purulent secretions ordinary circumstances, alkaline or neutral. disease, on the other hand, they are frequen acid. I will transcribe a few notes made at va Thin pus collected on several occasions from sical bullæ, which formed during the last wee J. B—'s life, while he was suffering early in uræmia, caused by post-scarlatinal nephritis, found to be "very acid." It is noted that care thoroughly to cleanse the surface of the incising, so as to prevent admixture with Fluid from the chest in the same case "decid J. C— (May, 1878): Post-mortem serum fro pleural cavity "distinctly acid." D— (March Chronic Bright's disease; fluid from the right pl "decidedly acid." In one case, where death very rapidly from uræmia in a young diabete been ill only three weeks, this acidity exte blood itself. Its subject was a robust you labouring man, who up to fifteen days before hospital had scarcely ever had a day's illne worked hard in the open air, but had had a good food. Two days after admission, and treatment other than a mild purgative had bee any restrictive diet imposed, while lying in bed suddenly somewhat delirious. The temperatu the pulse to 76; the respiration became sigh pupils were widely dilated. He was not comato reflexes were present, and he could swallow his tongue up to four hours before his death, place sixteen hours after the delirium was fi Only 32 fluid ounces of urine were secreted twenty-four hours preceding his death. On t day he had passed 105 fluid ounces. This urin on ultimate analysis to yield but .205 gramme per 100 cc., which, for the amount secreted, but 1.845 gramme for the day, instead of so grammes, the normal amount for a man of hi urea was 0.45 per cent., so that what nitroge was eliminated as urea. Post mortem, the blood clear serum obtained from the cerebral ven decidedly acid.⁷ Of this there can be no

⁵ Bartels, p. 136.

⁶ Bartels seems himself to show the probable correctness of this interpretation by his account, at page 144, of a stout robust man, aged thirty-five, who went into a Russian steam bath heated to 66.5° C. "Within twenty minutes the thermometer placed in his rectum rose from 37.8° C. to 41.9° C., whereupon he had a violent convulsion and lost consciousness." In this case there were no dropsical fluids to be absorbed, the man, for anything that is said to the contrary, being healthy, and merely the voluntary subject of observations on his body temperature.

⁷ Des différentes formes de dyspnée chez les Bri Augustin Uribe, p. 76.

⁸ In a recent communication to the Brit. Med. Journ. (p. 205), Dr. Squire disposes of all such cases as the al summary manner by the short statement—"Of course an

examined them again and again, and got others to do so as well. The fact that the amount of nitrogen contained in the urea of a given quantity of urine was exactly the same as the total nitrogen of the same quantity shows that there was no question here of poisonous alkaloids—at least that none such were being discharged by the kidneys; and it seems probable that the symptoms were due to a sudden interruption to the ordinary processes of oxidation owing to the acid condition of the blood. The urine gave but a slight red reaction with solution of ferric chloride. Comparing the symptoms in this case with some of those of uræmia without glycosuria—the slow weak pulse, low temperature, and dilated pupils,—and remembering the acidity of the serous and other fluids in some of these latter, it is not, I think, unreasonable to suppose that a diminished alkalinity of the blood might have combined with other causes to bring about the result.

Turning now to the experimental methods of investigating uræmia. These have really only been commenced within comparatively recent years, and though they show us more distinctly than we were ever shown before how great are the difficulties to be overcome before, in any given case, the pathogeny of the affection can be understood, yet, by showing us at the same time what are some of the causes of those difficulties, they encourage us to hope that patient investigation will ultimately greatly lighten the obscurity that now surrounds it. Considerable discredit has been thrown upon these methods by various writers, notably by Bartels, and it must be admitted that great caution is required in interpreting clinical facts by the results of experiments on the lower animals. Yet, after exercising all legitimate scepticism concerning the value of these results, the fact remains that they are opening up new and hopeful methods of practice, as well as confirming and establishing what was good in older methods, by giving previously unknown reasons for their being good. One of the best contributions to this subject is the conscientious and masterly inquiry of MM. Feltz and Ritter into experimental uræmia, the full account of which was only published in 1881. The main conclusion come to by the authors, which alone can be mentioned here, was that the only real toxic constituents in the urines of health were the potassium salts, and “that these, therefore, by accumulating in the blood or fixing themselves in excess upon the anatomical elements, are almost always the true agents of intoxication.” There was one weak point, however, in the assumption that, because the non-potassic constituents of three days' secretion did not produce very serious symptoms, they were therefore non-poisonous. It is scarcely necessary to state, perhaps, that, amongst the organic constituents, urea (the one from which the morbid condition derives its name) was found to be the least harmful. But there early arose another question. Urea itself is not at all or but very little poisonous. Under the influence of ferments, however, it is easily and often decomposed within the bladder, and more easily still in the laboratory, one of the products of its decomposition being ammonium carbonate. Could ammonium carbonate be poisonous? And could such diminutions of the normal proportion of urea as are often found in the urine of uræmics be the result of the decomposition of this latter within the blood, and the consequent impregnation of it with the poison thus necessarily formed? These questions were most natural, and the theory of Ferriehs based on this presumed intra-vascular decomposition, its denial and disproof by Claude Bernard, its modification by Treitz (who supposed the intestinal mucous membrane and not the blood to be the actual seat of the decomposition, and the effects to be due to reabsorption from it), and its reassertion and support by ingenious but insufficient experimental proofs by Cuffer, are all now matters of history. The probability is that uræmia has many causes, and this one among them, and that everything that has been advanced may have some measure of truth and some applicability to particular cases. It is not impossible also that uræmia in the sense in which it is here defined, as the altered condition of health caused by the accumulation within the body of poisonous products that should be eliminated by the kidneys, may come to be recognised as an

important factor in many diseases, infectious and non-infectious alike. Even sound kidneys may be incompetent to remove waste products with sufficient rapidity to prevent them from producing ill effects if these are suddenly and enormously increased, while those which are shrunk to half their normal size will suffice (as we often see) if the amount of material to be removed be but small. The late Dr. Murchison¹⁰ recognised the uræmic element in typhus fever.

The relations, if any, between putrefactive changes and the chemical reaction of living tissues have yet to be clearly established. It is noticeable, however, that in the successive stages of chemical change undergone by muscular tissue during decomposition, as observed by MM. Gautier and Etard,¹¹ after the formation of acid products, one is reached as early as the fifth day in summer, where, coincidentally with the dissolution of the muscle structure proper, aminonia is evolved, and fixed and volatile alkaloids of various kinds are formed. Whether these chemical facts have any bearing on clinical facts, time will show. Quite recently, however, a fatal case of uræmia came under my care, which impressed me very much, and made me think that the connexion might not be so remote as would at first sight appear. The patient was a male, aged fifty-two, who up to six weeks, as he said, but as we learned from his relatives really nine weeks previously, had been in apparently perfect health, and doing his work as steward on a large transatlantic steamer as well as he had ever done it. He then caught a severe cold, and became rapidly weak, but continued to perform his duties for seven days, at the end of which time diarrhoea, vomiting, and exhaustion compelled him to go to bed, where he remained till his admission to hospital on June 25th, 1888. Up to the illness in question he had been very stout. He looked extremely ill, spoke with a faint voice, was very slow in answering questions, and, as his account of his illness proved, had failed in memory. The tongue was dry; the pupils were in a medium condition of contraction, but responded instantly to light; the temperature was subnormal (96.2°); the pulse 92, and very weak. There was no trace of dropsy either of subcutaneous tissues or cavities. His height was 5 ft. 4½ in., and he weighed but 6 st. 4½ lb. During the day succeeding his admission he passed only eleven fluid ounces of urine. This was faintly alkaline; specific gravity 1.010; contained one-fifth albumen and 1.5 per cent. of urea. It presented, moreover, a very unusual appearance. On standing, a bright blood-red layer, almost half an inch thick, rose to the surface. It looked as if stained with carmine, and was sharply separated from the underlying lighter-coloured liquid. There was not the faintest trace of blue when it was treated with tincture of gualacum and ozonic ether; while with solutions of phosphomolybdate of sodium and terchloride of gold it gave dense precipitates, the former reagent imparting to it an intense green colour. There had been no vomiting for twenty-four hours, when at midday on the 27th he died almost suddenly, before the first quantity of oxygen, which had been brought to his bedside in the gasometer for the purpose of daily administration, or any other medicine (except fifteen grains of sodium sulpho-carbolate in nutrient enemata,) had been given. The condition immediately preceding death was one of collapse. He was quite clear in his mind, asked the ward sister in a faint voice if he was not dying, and before the house surgeon could reach him was dead. The collapse was so sudden and severe that the impression on the mind of the ward sister, a lady of great experience, was that internal hæmorrhage must have taken place. The peculiarity of the case, however, does not end here. An examination was made twenty-three hours after death. The weather was quite cool, and the body did not show the least sign of decomposition; yet the only two whose duties brought them very closely into contact with it were made ill. Our able pathologist, Dr. Charles Macalister, was quite well up to the moment of commencing the examination, and, though long engaged in similar work, often with much more likelihood of being upset by it, had never been made ill before. Immediately after opening the body he became faint and giddy, was shortly afterwards seized with diarrhoea and vomiting, and was so ill in the night that his friends had to obtain medical assistance. By the following day the vomiting had passed away, the diarrhoea continuing a day longer.

of the blood is an impossibility.” The certainty of the acid reaction in the present case renders any discussion as to its impossibility needless. But whether it was present just before and as a cause of death, or merely just after and as a consequence of it, I am not able to say, although I think probably the former.

¹⁰ De l'Urémie Expérimentelle, par V. Feltz and E. Ritter, pp. 341-4.

¹¹ Murchison on Fevers, 2nd ed., pp. 21 and 163.

¹² Comptes Rendus de l'Académie des Sciences, vol. xciv., pp. 1367 et seq.

The senior porter, whose duty it was to sew up the incisions, suffered from exactly similar symptoms for the same length of time. The only organs presenting any appearance of disease were the kidneys. Each weighed but 1½ oz.; heart, 11½ oz.; left ventricle somewhat hypertrophied. Is it unreasonable to ask whether that volatile product, which caused faintness, giddiness, diarrhoea, and vomiting in Dr. Macalister and the porter, may have been the product which caused exactly similar symptoms in the patient, and whether the cessation of the vomiting and purging, by means of which it may have provoked its own discharge in both cases, may not have led to such an accumulation within the patient as to cause fatal collapse?

The most recent and suggestive work in experimental uræmia is that of Bouchard, whose conclusions, as set forth in detail, with the facts on which they were based, in his suggestive lessons on "Auto-intoxication in Disease," may be thus briefly summarised. The urine as a whole is poisonous. The sources of its toxicity are fourfold—namely, (1) aliments, and more especially their potassium compounds; (2) the absorbed soluble products of intestinal putrefactions; (3) secretions, such as the bile, saliva, &c.; (4) tissue disintegrations. Between their several sites of origin within the body, or of their introduction into it from without, and the kidneys, their common site of exit, these traverse the blood, and, if not removed from it with rapidity, poison the tissues. Those that are taken up from any portion of the alimentary canal undergo the modifying influence of the liver, an influence now proved in many and different ways to be of the utmost use in protecting against auto-infection. Even this simple enumeration would be sufficient to show how various and variously combined the toxic elements may be in any given case of uræmia, and what a modification of symptoms might be expected according as one or the other of them should chance to predominate. But it conveys no adequate idea of the extent and variability of the urinary poisons, even in health. By careful injections into the veins of different animals, Bouchard established such facts as the following—namely, that the urine secreted during the night differs from that of the day not only in the degree but in the nature of its toxicity, the former being mainly convulsive in its action, the latter soporific or coma-producing; that that of one part of the day differs from that of another; that the night urine, though specifically heavier, is less poisonous than that of the day; that hard work in the open air markedly diminishes the toxicity, while a mere passing indisposition, indicated by no more serious symptoms than a transient feeling of weariness, markedly increases it; that, within the limits of ordinary health, it varies with the degree of cerebral activity, the presence or absence of constipation, and innumerable other circumstances until lately thought to be of little importance; that the several constituents are not only different from, but to some extent antagonistic to each other; and so on. Furthermore, by comparative experiments on animals with urines in their natural condition and decolourised by animal charcoal respectively, by injecting at different times aqueous solutions of those portions of the dry residue of evaporated urine that were severally soluble and insoluble in alcohol, and by employing first one and then another definite constituent, such as urea or the potassium compounds, and observing their physiological effects, Bouchard determined the presence of seven distinct toxic substances combined together in the most variable proportions under different circumstances, of which two were convulsivant (one of the two being either the colouring matter or contained in it), one (probably urea) diuretic, one narcotic, one sialagogue, one pupil-contracting, and one temperature-reducing. These could not all be isolated and their chemical composition determined; yet the conclusions seemed inevitable from the methods of experimentation adopted.

Coming out of these and similar inquiries, we have, at any rate, the broad general fact, unknown and not even suspected a short time ago—viz., that the urinary poisons may have very different effects, according to the times and circumstances of their formation, either stimulating or inhibiting the same cortical cells of the cerebrum, causing at one time paralysis and at another convulsive movements in animals into whose vascular systems they are injected. It is not correct, therefore, to say, as is said by Uribe and implied by many writers, "that the convulsions or the uræmic dyspnoea occur in paroxysms, with intervals of calm between them, while the cause which provokes them persists."¹²

But the cause does not persist, for it may and does differ from hour to hour. Now we can understand how paralysis and convulsions of the same parts may succeed each other, as in the following case. James J—, aged forty-six, in hospital for chronic Bright's disease, became suddenly blind, and lost the use of the left hand and arm on the morning of Dec. 21st, 1887. Towards evening the paralysis disappeared, but later still he had general convulsions, which attacked the previously paralysed as well as other parts, while two days afterwards, and for many weeks, there was neither paralysis nor convulsion; or, as in a case related by Dr. Davidson at the Liverpool Medical Institution on Jan. 5th, 1888, of a female, aged twenty, who in the course of Bright's disease had paralysis of the right arm and aphasia, both of which disappeared before death, the brain post mortem being simply pale and watery.¹³ These and many similar cases related by M. G. E. Bernard prove also that the following statement by Sir Wm. Roberts, however generally correct, cannot be regarded as universally so: "It is a marked feature of uræmic phenomena that those which are of a paralytic nature affect the sensorium and the special senses, while those of an opposite kind (exalted irritability) affect the voluntary muscles, and not the special senses." Sensorium, special senses, and voluntary muscles were involved alike in paralysis in James J—.

There must also be a reason, and in the different relative amounts and degrees of diffusibility of the narcotic and convulsive constituents of the urine respectively there may possibly be the reason, for the absence of convulsions often characterising the uræmia of absolute suppression in persons healthy up to the time of the suppression, of which probably most physicians have seen examples.

The fact of physiologically antagonistic principles existing together in the same organism has now been so well established in regard to vegetables that we might have anticipated that, like many other facts relating to the two kingdoms, it would be equally established in the case of animals. The paralyzing physostigmine and tetanising calabarine of the Calabar bean, the narcotising morphine and tetanising thebaine of the poppy, the heart-energising digitaline and heart-depressing digitonin of digitalis, are conspicuous examples of the former, as are the facts established by Bouchard and others of the latter. M. Bouchard has endeavoured to appraise the toxic value of the various urinary constituents, giving one-ninth to the urea, two-fifths to those substances (including the colouring matter) that are fixed by animal charcoal, a very small but unmeasured fraction to ammonia or its compounds, and the remainder to the mineral constituents, at the head of which stand potassium salts. Such an evaluation, however, differs from that made by others, as will be seen directly, and at the best can be but the barest approximation to the truth even with the urine of health, seeing that the composition of this fluctuates so greatly; while even this limited approximation fails in disease where new causes of complexity present themselves. There is always, for example, a marked increase in its toxicity in persons suffering from any febrile disorder, whether alone or as an accompaniment of renal disease, whereas in non-febrile diseases there may sometimes be an increase and sometimes even a decrease of toxicity. Such a decrease occasionally marks the glycosuric urine, while icteric urine, the albuminous urine of chronic parenchymatous nephritis, and the urines of those suffering from cancerous cachexia or grave anæmia, even though there be no fever, are twice and sometimes three times as poisonous as those of health. An alteration in the character of the poison takes place in the febrile condition, for MM. Lépine and Aubert have shown by a number of careful experiments that, whereas in normal urine the toxicity of the organic is to that of the inorganic matter as 15 to 85, the proportion in many febrile diseases is as 45 to 55. A difference is, then, clearly to be anticipated in the symptoms of uræmia according as it is due to mechanical obstructions in persons in health or to disease of the renal cells, accompanied or not by lessened function of the liver or by any fever.

The most recent endeavours to unravel the complexities of this difficult subject are in the detection, separation, and determination of the chemical constitution and physiological action of animal alkaloids. Some of these (such as the fluorescent substance discovered by Dr. Bence Jones)—creatinine, xanthine, hypoxanthine, carmine, &c.—have been known for a good many years, but it was mainly owing

¹² Op. cit.¹³ Liv. Med. Chir. Journal, July, 1888.

to the announcement by Pouchet in 1880 of his discovery in normal urine of a hitherto unknown alkaline base, consisting of fusiform deliquescent crystals forming definite salts with acids, that a renewed impetus was given to this research, and it is now fairly well established that a number of these compounds (the "leucomaines" of Gautier) are formed as the result of all normal cell life. Some few have been isolated and their chemical and physiological properties determined. In health the amount formed is so small and the elimination is so rapid as to prevent any injurious accumulation within the organism. Not so, however, in disease. Alkaloidal and other substances of great activity not found in health, and varying in their nature with the character of the affection, have then been separated from the tissues and found in the urine, and if the kidneys and other eliminators should make default the tissues become poisoned. A combination of careful clinical observation and chemical research in this direction may be expected to do much to elucidate disease. When reading what is said of xanthocreatine, one of these substances separated by Gautier in well-defined crystals from muscular tissue, one is tempted to run ahead of what has been proved, and to ask if the symptoms of some uræmias may not possibly be due to it. It is thus described by Hongounenq: "They" (the crystals) "exhale in the cold a faint cadaveric odour. . . . They are toxic, even in minute dose determining faintness, somnolence, extreme fatigue, and repeated diarrhoea and vomiting."

In this direction will probably have to be sought the cause of the distressing dyspnoea, frequently amounting to the most terrible asthma, and of other disturbances of respiration, to which Brightics are liable. One patient in hospital early in 1887 used often to wake suddenly in the middle of the night as if his chest were tightly grasped, the sensation being followed by prolonged orthopnoea. Another, a male aged fifty-four, was attacked pretty regularly at 9.45 P.M. In the case of a third, a female aged forty-nine, admitted on Feb. 9th, 1879, I find the following note taken on the day after admission: "For four nights has been unable to lie down owing to breathlessness, which has commenced every afternoon at five." Now that we know that the character of the urinary poisons varies from hour to hour, and markedly from day to night, we are the less surprised at such temporary storms.

On listening to the chests of some of these patients, even at the time of their greatest respiratory distress, but little rale or other sign of obstruction to the entry of air may be detected, there being the greatest difference in this respect between the uræmic asthmatic and the ordinary asthmatic patient. The fine whistlings and cooings of the latter may be absent, though the gasping may be as painful both to experience and to witness. The mind is almost irresistibly led to seek an explanation in a change in the calibre of the bloodvessels rather than of the air vessels, and with the knowledge of the immediate spasm of the pulmonary and other arteries, and the consequent intense dyspnoea produced by the intravenous injection of very minute quantities of muscarine, as has been so ably demonstrated by Dr. Lauder Brunton, and the further knowledge that neurine and choline, two alkaloids structurally and physiologically allied to muscarine, have actually been separated from the human body by Brieger, it anticipates the time when one of these or some allied substance shall be proved to be the cause of the asthmatic paroxysm, and when a physiological antagonist shall be discovered capable of unlocking the spasm and relieving the distress as promptly as atropine does in the case of muscarine poisoning. We sometimes have more than conjecture that pulmonary arterial spasm exists, in the actual occurrence coincidentally of spasm of the systemic arteries. Thus, in John C—, one of my hospital patients under treatment in 1878, and in whom the asthmatic attack occurred with great regularity almost every night at 9 o'clock, there was superadded on one occasion (as I have elsewhere reported) so marked a failure in the general blood supply that he was believed to be dying; hands, arms, feet, and legs were quite cold, the breath was gasping and difficult, and he was unable to speak. The free administration of ozonic ether, wrapping all the extremities in hot cotton-wool, and the employment of a hot air bath, were followed by relief, and subsequent attacks confined to the chest. Moreover, the kind of remedies that bring relief, so different from those which relieve the ordinary asthmatic, also points to the spasm of the bloodvessels as the chief cause of the dyspnoea.

That nitrogen combinations of an unusual character are

formed during many morbid states, and especially in those attended with fever, is easily proved by one or all of the following methods—viz., either by comparing the specific gravity of the urine before and after having filtered it through purified and washed animal charcoal, or by comparing the amounts of nitrogen as determined by absolute analysis before and after such filtration, or, lastly, by comparing the amount of nitrogen voided as urea with the total amount of nitrogen voided. In health there is little or no difference either between the specific gravities or between the proportions of total nitrogen under these two sets of circumstances, while many observations prove that nearly all the nitrogen eliminated in the urine is eliminated in the form of urea, not more than from one-twentieth to one-twelfth being in any other combination. In disease all this is changed, and the differences then often become very great, as much sometimes as one-third, or even one-half, of the total nitrogen being voided in some form not decomposable by alkaline hypobromites.

What have the newer studies of recent years taught us? Have they led to any newer and better methods of treatment? It must be admitted that in the last respect research has largely served in this as in many other departments but to emphasise and confirm the value of practice already established. But it has done more: it has pointed out early symptoms, the importance of recognising which cannot be over-estimated, and by establishing the relations between these and defective renal function has driven home upon the medical mind the necessity of determining by frequent examination the relation between body weight and the amount of urinary constituents. Insurance offices are beginning generally to recognise the value of this, and their requirements will healthfully stimulate medical men to go further in urinary examination than has up to lately been thought necessary. The accumulation of toxic products in the blood and tissues is often very slow, and the slighter the warning afforded by early symptoms the more valuable will treatment be likely to be. The principles on which practice must be based consist mainly—1. In cutting off one or other of the urinary poisons at their source, now that we know to some extent what these poisons consist of, and whence they are derived. Under this head we recognise the great importance (a) of limiting potassium salts both in food and in medicine; (b) of employing the simplest and most easily assimilated diet, such as milk; (c) of bowel disinfection; (d) of maintaining at its best the functional activity of the liver; (e) of care in the nature of nutrient enemata, when these are required. 2. In directly or indirectly withdrawing or diluting the poison by (a) venesection, (b) purging, (c) sweating, and (d) transfusion. 3. In burning up the poison by (a) active exercise, and (b) the administration of oxygen or oxydisers. 4. In antagonising the poison, or at least overcoming special symptoms. Reducing the above principles to practice, the first caution inculcated as to potassium salts would lead to the substitution of sodium bromide and other sodium salts for the corresponding ones of potassium, as the former have only one-fortieth of the toxicity of the latter. According to Bouchard, one-fifth of the total toxicity of normal urines is due to poisonous products reabsorbed into the blood from the intestines, and resulting from putrefactive changes which the residue of food undergoes there. Can the formation of such products be controlled? If a healthy man is fed for a given length of time on an ordinary mixed diet, and then for an equal length of time on milk alone, the urine of the second period is much less poisonous to animals when injected into their veins than that of the first; hence the great value of milk as an article of diet to the Brightic. But this value was firmly established by Dr. George Johnson from clinical observations, and has been fully recognised for many years by all practical physicians. The compact and small faecal residuum from milk, the deficiency of this residuum in biliary colouring matter, and the small proportion of potassium salts in milk all help to explain its utility. But it sometimes happens that it cannot be digested; the question then arises as to whether the destruction of biliary colouring matter and of the soluble products of intestinal putrefaction can be effected, even when dietetic means fail. A practical answer seems to be given by such experiments as the following. If a healthy man is fed during a given period on an ordinary mixed diet alone; and during another and equal period on a similar diet *plus* certain agents capable of disinfecting the contents of the lower bowel, there will be as great a difference in the toxicity of the urines under the two sets of circumstances as there is

under a milk and non-milk diet respectively, it being much less when the disinfectants are used. The best bowel disinfectants are naturally those which pass through the intestines unchanged, exercising their local effects on the way, and the employment of these is suggested for the purpose of cutting off one cause of indirect blood contamination at its source. The idea is a valuable one, and its application capable of and already receiving wide extension. Naphthalin, iodoform, and animal charcoal, being among the least soluble of non-poisonous antiseptics, are on that account chosen by Bouchard and recommended for the purpose indicated. Our choice, happily, is not limited to any one mode of administering these, or even to these substances alone, or the utility of the principle would be seriously curtailed. That they will arrest putrefactive changes in the bowel, and the last-mentioned diminish the colouring matter of the urine, is certain; but although a healthy man may by an effort take a mixture containing the large quantities of them required for the purposes indicated, it is, unhappily, often otherwise with the subjects of Bright's disease, and especially with those in whom uræmic symptoms are present. The stomach is so abnormally irritable in them that even the blandest nutriment is often rejected, and almost all medicines share the same fate. Occasionally, however, the disinfectants are tolerated, and when they are distasteful in one form, the manifold resources of modern pharmacy can present them in others that are not so. It is well to know that even iodoform and naphthalin can be so presented as to be perfectly free from odour, while iodol has little odour to correct. Though I feel no doubt as to the value of this principle in the treatment of uræmia, and though I have applied it to practice on all fitting occasions, yet the time during which this application has been made is too short to warrant me in speaking in other than these general terms of approbation. M. Bouchard, however, mentions three cases where, in the practice of his colleague, M. Tapret, uræmic accidents yielded when intestinal antiseptics were realised; and one under his own care, where a "formidable uræmic dyspnoea disappeared on the morrow after the administration of naphthalin." He adds, with characteristic fairness and caution: "These are only four facts, but they are encouraging, especially when one considers the small number of therapeutic means at our disposal for combating uræmia." This note of encouragement will probably be re-echoed by us all. But if the poisons have been already absorbed or retained in sufficient quantity to produce convulsions or coma, something further must be attempted. It is then open to us, according to circumstances, to abstract some of the poison by abstracting a portion of the blood which contains it, or to dilute the poison by diluting the blood by the addition either of healthy blood or other fluid; to try to draft away some of the poison by organs compensatory to the kidney; or, lastly, to antagonise the symptoms by appropriate medicines administered hypodermically or by the bowel.

Whether blood shall be added or abstracted must depend largely on the general condition of the patient. If the pulse is hard and quick a moderate bleeding will do no harm, even if he should be anæmic, and if he is not anæmic will be likely to do much good. And perhaps I may be pardoned for alluding to what I conceive to be an error, even yet too largely prevalent—namely, that if the disease is advanced enough to cause uræmic convulsions, it must also be advanced enough to cause anæmia. This certainly is not the case; a person may be overwhelmed with fatal convulsions in the midst of apparently robust health, and the contracted kidneys and hypertrophied heart alone reveal post mortem the length of time that the disease had existed. Happily there is a great margin of reserve in the healthy kidney, or probably we should all be liable at times to uræmia. But when contraction has proceeded to any extent, though the increased outflow caused by the large heart and heightened blood pressure may preserve the patient from uræmia under favourable conditions, yet these are very easily disturbed, and then danger becomes immediate. I have already related an instance where relief to convulsions was afforded by a free abstraction of blood, and where the patient came under treatment nine years after. This is an example of some few that have come under my notice. In the night of July 23rd, 1881, I saw, with Dr. A. Williams of Liverpool, a robust man, aged sixty, whose tight arteries and large heart told unmistakably of renal cirrhosis, even if there had not been the

confirmatory evidence of the abundant discharge for a long time of urine of low specific gravity. After a twitching, which had commenced in the right forefinger and extended thence to the right arm and leg, he had become the subject of general convulsions, which had recurred for some hours with scarcely any conscious intervals. Sweating was profuse; temperature 105° F.; and he was deeply comatose. We immediately bled him very largely from the right arm. The quantity of blood was not measured, but I do not think it could have been less than from twenty-five to thirty fluid ounces. There was an immediate diminution of the convulsions, which shortly ceased altogether, and soon afterwards the patient appeared to be well.

But adding to the blood will equally dilute the poison, and if the patient is very anæmic, as well as very unconscious, it may be the only safe, and even the only possible, way of doing it. M. Dieulafoy relates the case of a woman aged fifty-seven, the subject of Bright's disease, who had been overtaken by convulsions followed by coma, and in whom there had been an absolute intolerance of milk, into whom he injected, by means of his transfuser, 120 grammes of blood, with the effect of a complete clearing away of the uræmic symptoms, and of a subsequent great improvement, as indicated by diminished albumen, improved general nutrition, and increased body weight. Six weeks after leaving the hospital she was again overtaken with coma. A second transfusion was again followed by a speedy return of consciousness and by a copious urination, but on this occasion by no diminution of the albumen. The respite, however, was short, pulmonary oedema, double hydrothorax, and death soon following.¹⁴ It is by no means easy, however, to procure blood for purposes of transfusion. I have on two occasions, though not in uræmics, injected freshly drawn goat's milk by means of Higginson's transfusion apparatus, and in cases where neither of these can be procured, it would be well to inject the solution of chloride, phosphate, and carbonate of sodium, sometimes used in the coma of diabetes.

The practical value of purgation and diaphoresis in warding off the severer symptoms of uræmia seemed to have been so firmly established that it would not have been necessary to insist on it, if Bouchard had not spoken in somewhat doubtful terms of it. He critically examines the effects of purgation, for example; compares the small amount of urea drafted off in the intestinal fluid with that eliminated in the urine; speaks of the alternate dehydration by purgatives, and subsequent hydration by means of imbibed liquids, as a "dangerous game," but at the same time admits that diarrhoea must abstract poison from the blood, founding the admission on the reduced toxicity of the urine of a healthy person secreted during the four hours of a medicinally induced purgation. But we have better evidence than this, for we see constantly headache, and even more alarming symptoms rise and fall in the Brightic, according as diarrhoea is suppressed or established. An empirically established fact of this kind is quite as valuable in practical medicine as any other, and would remain as valuable if it could be proved that no poison at all were eliminated by the bowel. In this instance it is somewhat difficult to see the force of Bouchard's criticism. Urea is not the poison which causes the symptoms. Whether it is or is not discharged by the bowel is not, therefore, of much consequence. What the true poisons are—except the potassium salts and colouring matter—is unknown. It must be possible, therefore, that they may be discharged from the intestine even if it were established—which I do not admit to be the case—that urea in large amount cannot be. The following case, admitted to hospital in September of last year, showed, in a striking manner, the value of purgation and the danger of its suspension. It is one to which allusion has already been made. Its features were constant diarrhoea, subnormal temperature, dilated pupils, frequent and severe headache and vomiting, inactive skin, and urine of low specific gravity, not very abundant, deficient in urea, but with abundance of albumen. The symptoms, with a general tendency to improvement, lasted for many weeks; but in the middle of December the bowels became suddenly inactive, while the urine, instead of increasing in quantity, fell to less than half. Coincidentally with this change, the patient became very drowsy, lost his sight, and then was paralysed in the left hand and forearm, this paralysis pass-

¹⁴ Archives Générales de Médecine, vol. 1. 1880.

ing off during the day. At 10 P.M. general convulsions supervened, and for two days he remained very stupid. The aperient which had been given to him at the outset then acted freely, and all the threatening symptoms cleared away; but once subsequently, on the occasion of temporary constipation, general convulsions again occurred. After this, great care being taken to secure daily free action of the bowels, no further uræmic symptoms were manifested during the seven weeks of his stay in hospital.

Some twenty years ago physiologists learnt from Dr. Parkes that severe bodily labour had but slight and sometimes no effect in increasing the amount of nitrogen eliminated, a fact confirmed by all subsequent observers, not even excepting Mr. North.¹⁵ Muscular exertion and muscular waste, muscular waste and increased nitrogen discharge, had been so long considered as necessarily associated causes and effects that nothing but the rigidity of the proof advanced by Parkes dispelled the belief. The old superstition still clings, for it certainly was somewhat of a surprise to be assured that the urine of one working hard in the open air was less toxic to others, and that the urinary constituents, while still existing in the blood, were therefore less toxic to himself than that of the same man when resting at home. Another experience gives the explanation. "I have seen a sojourn in compressed air diminish the urinary toxicity by more than one-half," says Bonchard. The only factor common to the two conditions of hard work in the open air and no work in compressed air is increased oxygen consumption. On such facts as these Jaccoud founds his treatment of Bright's disease. He gives inhalations of oxygen, ten litres three times a day; allows only the simplest possible food; and promotes tissue exchange with the inhaled oxygen by a systematic application of douches, followed by frictions. That this method of treatment is as useful in practice as it is rational in theory I feel convinced, and the readiness with which pure oxygen can now be obtained in a condensed form, and the ease with which, by means of a gasometer and inhaler, it can be administered in exactly measured quantities, and with any required degree of dilution with atmospheric air, ought to ensure its utility being extensively tested. My own daily increasing experience of it serves but to confirm my belief in its advantage, and I have certainly seen headache and vomiting disappear under its use. It is more difficult to decide on the utility of antagonisers of uræmic poisons. Morphia, for example, though much extolled by Drs. Loomis¹⁶ and Davis¹⁷ of New York as the most efficient agent when hypodermically injected for controlling uræmic convulsions, requires to be used with very great caution when it is used at all, as cases are mentioned by Dr. Wood¹⁸ of Philadelphia where its employment was shortly followed by death in coma. I feel quite sure that the agents which give most relief in uræmic asthma are those which relax vascular spasm, and of them the most generally useful is ozonic ether. From half a fluid drachm to a drachm of this will nearly always mitigate the severity of the dyspnoea, and sometimes entirely remove it. In one case an ounce of whisky in hot water gave sleep every night and prevented the spasm. Another patient, though relieved by similar means, found most benefit from free friction of the chest and arms, and by having them then wrapped up in hot cotton wool. When we know the exact nature of the poisons which produce this and other symptoms our remedies will be less empirical.

¹⁵ Proceedings of the Royal Society, 1887.

¹⁶ New York Medical Review, 1873.

¹⁷ American Medical Journal, July 1874.

¹⁸ Wood's Therapeutics, pp. 218 et seq.

MIDLAND VOLUNTEER MEDICAL ASSOCIATION.—

A meeting of the members of this Association was recently held, to receive the report of the deputation to the Volunteer Medical Association, and to discuss the Royal Warrant for Medical Reserve. After a good deal of discussion, affiliation with the Volunteer Medical Association was recommended, provided satisfactory terms of subscription could be arranged with the council of that body. With regard to the second question on the agenda, it was resolved that, "Taking into consideration the anomalous position of the Volunteer Medical Service, and also that the Royal Warrant might be used as a lever to dictate terms to our comrades of the medical staff,—without wishing to interfere with individual action, this Association does not at present recommend its members to join the Army Medical Reserve."

MEDICAL NOTES ON THE SPANISH PENINSULA AND MOROCCO.

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HAVING recently returned from a tour in the Spanish peninsula and Morocco, undertaken expressly for the purpose of investigating the climatic and other characteristics of those districts in their relation to diseases affecting the human race, it may perhaps interest some of your readers to know the conclusions arrived at after careful consideration.

Andalusia, the southern province of Spain, has long had a reputation second to none in Europe for excellence of climate and loveliness of features; and were it not for the enormous drawbacks in the shape of bad sanitation, impure water supply, and difficulty of approach, the legion of invalids who are now in the habit of rushing to the Riviera each autumn to escape the rigour of the home climate would long ago have turned their attention seriously to this part of the world. Unfortunately, however, the towns of Andalusia, as also of all parts of Spain, are greatly neglected as regards sanitation, and badly supplied with water; and these two factors should operate strongly in preventing invalids, or even healthy people, from residing for any length of time anywhere in the peninsula, with the exception of a few places to be presently named. All along the coast line nearly, from the mouth of the Guadalquivir to the cape of Gata, there are numerous valleys and gently sloping hills, entirely protected from the north and east winds by the high range of mountains which run in a zigzag course from east to west across the province, and on which are pretty and sheltered towns and villages, capable of being converted into health stations of even greater excellence than those on the Riviera. In spite of the disadvantages to be met with in the Andalusian towns, there are many eminent physicians who have spoken in the highest terms of them, maintaining that invalids who are incapable of withstanding the trying winter climate of England may safely venture to take up their residence there for the winter. The place most in favour is Malaga, though some authors have recommended Almeria, Cadiz, and Seville, while a few even have gone so far as to include Gibraltar in the list of Andalusian health resorts.

To begin with the inland town Seville, it may be safely said that a more unsuitable residence for invalids during the summer months could hardly be found, while during the winter it is far from presenting the requisite inducements for tempting any but the most robust to make the journey from England. Of all the Spanish towns Seville is perhaps the most interesting and beautiful, its public squares and promenades, thickly planted with orange trees and lovely flowering shrubs, giving it a most pleasing appearance, while its public buildings, replete with historic lore, provide ample food for the mind. The cathedral is in itself a wonder of art, being of colossal proportions, second only in point of size and magnificence to St. Peter's at Rome, and contains sufficient of interest, both in its history and its appointments, to occupy one's leisure moments for weeks; while the Alcazar, the splendid palace of the ancient Moorish monarchs, another monument of the past, is scarcely less interesting. The streets, though narrow, are well attended to, the hotels are excellently fitted up with every convenience, the shops and cafés are of the very first order, and the beautiful Paseo on the left bank of the Guadalquivir is as fine a promenade as one can desire. Yet, in spite of all this, Seville is not a desirable residence for invalids. The winter climate, notwithstanding the beautiful brilliancy of the sky and the purity of the atmosphere, is nothing like so equable as that on the sea coast, being, perhaps more than in any other Andalusian town, subject to sudden variations of temperature, causing catarrhs, influenzas, and bronchitis, and sometimes also severe pulmonary affections. In summer the heat during the day is so intense that in many of the streets awnings are spread across from one side to the other to protect the people from the sun's rays, while at night the atmosphere suddenly cools to such an extent as to necessitate the wearing of cloaks, the result being that epidemics of catarrhal and rheumatic affections, continued and intermittent fevers, and choleraic diarrhoea frequently sweep over the city like pests. As to the sanitary

condition of Seville, it is very far from perfect, the stench in some of the hotels and houses, otherwise so well appointed, being to an Englishman simply abominable. At one hotel I noticed in the centre of the beautifully tiled floor of the *patio* or central hall a grating, which I discovered was in open communication with the main sewer, and was no doubt used as an outlet for the water when the floor was washed. Through this grating escaped a dangerous and disgusting odour, which mixed with the delicious scent from the orange and other trees with which the *patio* was furnished. This open grating, I ascertained, forms a regular feature in the Spanish hotels and houses.

Cádiz, as a residence for invalids, is not one whit better than Seville. Situated on a narrow strip of land jutting out from the peninsula at the mouth of the Guadalquivir, one would expect, from its almost insular position, to find there an equable and agreeable climate; but although the mean annual temperature is 62°, that of winter 52°, and that of summer 70°, the variations caused by the exposure of the town to the east or *levante* wind, are so frequent and sudden as to render the climate anything but desirable to an invalid. The sanitary condition of the place, moreover, is as bad as if not worse than at Seville.

Almería might quickly be made into a charming health resort with a little expenditure of money, whereas now it is a small and dirty town, with absolutely no sanitation and very little accommodation for visitors. It is situated at the foot of the southern slopes of the Sierra Nevada, a little to the west of Cape Gata, is well protected from the dreaded *levante* or east wind from the Mediterranean, has a bracing, dry, and equable climate, and is subject to very slight variations of temperature. The drawbacks to the place, in addition to those already named, are the hardness of the water and the bareness of the country behind and above the town; but time and money might remedy these evils.

Gibraltar is a very delightful place, the town being built on the western slopes of an immense rock which rises out of the sea, and is connected with the mainland of Spain by a narrow and low strip of land. In the spring this is a delightful residence for an invalid, but in summer and autumn it is a place to be strictly avoided, owing to the influence of the terrible *levante*, which blows with fury and brings with it distressing diseases. The mean temperature is 62°, the maximum heat in July being 92° and the minimum in February being 32°. The heat, however, in summer is far more oppressive than the thermometer would indicate, owing to the want of free circulation of air. The prevailing winds are the west in winter and the *levante* or east in summer, which latter is most unwholesome, being usually accompanied by masses of dark cloud, which hang over the rock and produce a clammy and unhealthy moisture. The effects of this visitation are speedily manifested in the health of the inhabitants, who suffer from dull aching pains in the bones, parched tongues, and an oppressive languor that paralyses both mind and body, terminating in a low kind of lingering fever. The town is well drained, lighted, paved, and attended to, and has a fairly good supply of water, stored in reservoirs and filtered well before being consumed, and in comparison with the towns on the mainland of Spain it is the pink of perfection in all these respects.

Malaga is the only Andalusian town which can be recommended as a residence for invalids, and there is no doubt that its climate ranks among the very best in Europe, although it is not perfect by any means in its sanitary condition. As a winter residence for consumptives it is specially indicated, the climate being warm, dry, and tonic. The town is situated on a lovely bay at the foot of the Sierra Nevada, by which range it is perfectly protected on the north, east, and west, being open to the sea only on the south; the country around is a perfect garden of tropical and subtropical vegetation; and the hotels in the new part of the town are reasonable and good. As a rule the mean daily variation of temperature is very slight, although at night there is often a sudden fall of temperature with sometimes heavy dew, which prevents visitors venturing out of doors much after dusk. The mean annual temperature is 65°, that of winter being 55°, spring 68°, summer 78°, and autumn 60°; while the annual rainfall is very small indeed, the number of rainy days during the year being about twenty-nine. Besides the *levante*, which sometimes influences the climate of Malaga, there is another and more dreaded wind, the

terral, which blows from the Sierra Nevada on the north-west, bringing with it a fine impalpable sand, which irritates the lungs and eyes, and often produces bronchitis and ophthalmia. The old town is a place to be avoided by invalids, the smells being anything but pleasant; but the new town is not at all disagreeable, and in comparison with other Spanish towns may be termed clean. Were the hygienic conditions of the place improved on modern principles, Malaga would have no rival in Europe as a health resort for invalids, and especially as a winter residence for consumptives. So much for Andalusia.

Before writing of Morocco, a few lines may be devoted to beautiful Lisbon, although it is hardly necessary to seriously sing its praises as a salubrious city, since it is so well known as such. With that loveliest of lovely places, Cintra, Lisbon affords the invalid all that may be required: salubrity of climate, perfection of sanitation, abundance of good water, exquisite scenery, plenty of gaiety, and to those who prefer solitude and quiet the most lovely retreats. The city is, as regards width and cleanliness of streets, lighting, water supply, and hygienic condition, as a rose amongst thorns in comparison with Spanish towns. The climate is warm, slightly humid and rather variable, but always exhilarating, the mean annual temperature being 61°, that of winter 54°, spring 59°, summer 68°, and autumn 59°. Rain falls, as a rule, in heavy showers of brief duration, the number of rainy days in the year being about sixty-three. For those suffering from chronic winter cough and irritable condition of the bronchial mucous membrane, a winter residence in Lisbon or Cintra will be found very beneficial.

The northern and western parts of the empire of Morocco have been recommended by some authors as suitable for invalids during the winter months, and no doubt a sojourn at some of the coast towns would prove highly beneficial in many diseases, if they were but put into a proper hygienic condition. The fact is, however, that there is no sanitation whatever in any part of Morocco, the refuse and filth of the cities being simply thrown into the narrow streets to putrefy and fill the air with the most abominable stench. Even were the towns kept decently clean and free from pernicious smells, there are only three that could be recommended as suitable places for invalids, owing to the dangers attending a residence in any part of the empire except the extreme north. Tangier, Tetuan, and El-Araish are the only places where a visitor can feel comfortably safe, the towns further south not being nearly so much under European influence. As to Tetuan, which is an inland town not far from the north-east coast, and the chief military centre of the country, although its climate is exceptionally invigorating, it is for many good reasons quite unsuitable as a residence for invalids; the sanitary condition of the place and the accommodation for Europeans are very bad. El-Araish has a beautiful climate, the heat of summer being always tempered by the cool Atlantic breezes, and the winter atmosphere being warm and rather humid, though generally invigorating. For irritable conditions of the mucous membrane of the lungs and spasmodic affections this is a very suitable climate, but the place suffers from the same two drawbacks as at Tetuan—want of proper accommodation and an entire absence of sanitation.

Tangier, of all the towns in Morocco, is most suitable as a residence for invalids, having several very good hotels and being easily approached. To describe this town is to describe the other Moorish towns round the coast; but it must always be recollected that Tangier is a hundred years in advance of the others in every respect. The town lies on the slope of a hill at the western side of a beautiful bay, looking east towards the beautiful mountain called *Ape's Hill*, the *Mons Abyla* of the ancients; through its centre, from the sea-shore at the bottom to the *soko* or outer market at the top, runs a street about twelve feet wide, which divides the town into two halves, and from which branch off innumerable smaller streets or passages, most of them not more than three or four feet wide, which wind about in the most puzzling fashion in every part of the town, crossing and recrossing each other in such a manner as to render it utterly impossible to find one's way along them, while round the town extends an old crumbling wall, through the gates of which one must pass in order to enter or leave the place. The whole town is alive with Arabs, Moors, and Jews, who glide about silently in and out of the streets in yellow slippers and *gellabs*, apparently quite indifferent as to where they place their feet in walking; for the streets

are paved with rough cobble stones and gravel, over which are strewn the dead carcasses of dogs, cats, and rats, and all kinds of filthy debris, the stench arising from which is appalling, and moreover perpetual. Sometimes an ass or a mule will be led down a street by a half-naked Arab, and then it is necessary, owing to the narrowness of the way, to squeeze one's body against the wall so as to avoid collision with the beast, care being at the same time taken not to step into some horrible mess. From this description it would seem that Tangier could hardly be recommended as a residence for invalids; and yet numbers of delicate ladies winter there every year, and derive great benefit from their visit. I travelled from Lisbon to London with two ladies who were returning from Tangier after having wintered there, and they assured me they had derived considerable benefit from the visit; and when in Tangier I met with several invalids who managed to take long country walks almost every day during the winter—a thing they could not have done in England. The fact is, the climate is so exceptionally salubrious that the smells of the place are not so harmful as they otherwise might be, especially as the hotels are situated near the upper end of the town, so that visitors can take as much country exercise as they like without even entering the streets. The country for some distance round about Tangier is very inviting, being clothed with perpetual spring—orange, lemon, fig, palm, and other trees being continually in leaf; while a few miles away are some charming places for making short excursions to—Mount Washington, a lovely sloping hill covered with the villa residences of the consuls and native magnates, being within walking distance, and Cape Spartel being within an easy ride. The climate is remarkably equable, though rather humid, the breezes from the Atlantic tempering the heat of the atmosphere, and the Atlas range of mountains protecting the town from the hot blasts from the Sahara Desert. The rainy season is from October to January, and the annual rainfall is about thirty inches. It rarely happens that the temperature falls below 40° in winter or rises above 86° in summer. Visitors to Tangier should be provided with a pair of coloured spectacles, as the glare of the sun on the white houses often produces ophthalmia, a rather common complaint there. There are several distressing diseases prevalent in Morocco, but these need not interfere with the comfort of Europeans, for there is no instance recorded of any European having ever become afflicted with any of the national diseases whilst visiting the country. At every turn one meets with batches of beggars, deformed, diseased, and loathsome—some with their noses eaten away by syphilis, others with their hands or feet missing, some with frightful forms of elephantiasis arabum, and others covered with large blotches of leprosy, or *murd jeddem*, as the Arabs call it. I had several opportunities of examining natives suffering from these diseases, which appear to be very prevalent in Morocco, and was much struck by the accounts given of the cures sometimes effected with native remedies.

On the whole, it may be said that Lisbon, Malaga, and Tangier offer very great advantages to invalids who cannot withstand the home climate in winter, although as regards the last two the want of good sanitation renders it necessary to keep as much as possible out of the narrow streets. All these places are now easily reached from London or Liverpool by sea, thus avoiding a tedious overland journey, and the hotel accommodation is as good as need be. As to the other Spanish towns, they cannot honestly be recommended at present, although possibly before long Almeria, and perhaps some of the little towns between that place and Gibraltar, may suddenly develop into first-class health resorts. They have all the natural requirements, enterprise and money being only wanted to render them celebrated.

Sheffield.

LYTHAM COTTAGE HOSPITAL.—In 1882 the Lytham Cottage Hospital and Convalescent Home was enlarged at a cost of about £700. The committee, it appears, relied upon considerable outside support to recoup them for the additional advantages thus afforded. In this expectation they have been disappointed. The past year's balance sheet shows a deficit of £117, and the committee, in their recent report, indicate that without some special effort the utility of the charity is likely to be seriously curtailed by want of funds.

ELECTROLYSIS IN THE TREATMENT OF UTERINE AND OTHER PELVIC DISEASES.

By A. W. MAYO-ROBSON, F.R.C.S.,
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IN the treatment of uterine fibroids by electrolysis my results have been somewhat variable; for whilst in some cases cure has followed, in others only relief has been given, and in certain cases, although the treatment has been fully carried out, little or no benefit has ensued. Nevertheless, as the result of my experience in this class of cases, I certainly feel that I shall not operate, either by removal of the appendages or by hysterectomy, until I have given electrolysis a fair trial; for, although it may not cure every case, I believe it will so materially relieve the greater number of those that are not cured as to enable the patients to tide over the time of menstrual life, when the menopause will effect the cure.

Dr. Apostoli, besides using electrolysis for fibroids, has employed and advocated its use for polypi, uterine hypertrophy, subinvolution, acute and chronic metritis, endometritis, ulceration of cervix, perimetritis, parametritis, ovarialgia, ovaritis, salpingitis, ovarian and tubular cysts, atresia, hæmatocele, &c. The present treatment of several of these diseases is so very satisfactory that, even if electrolysis should prove curative, it becomes a question whether it would be worth while spreading the treatment over the period required for its cure by Dr. Apostoli's method, when the disease can be immediately and safely removed. These remarks would apply especially to polypi and ovarian and tubular cysts.

I have very distinct proof in one case that electrolysis is incapable of curing, or even relieving, ovarian cystoma; since I had the opportunity only a fortnight ago of removing a double multilocular ovarian cyst to which electrolysis had been applied nineteen times during the previous three months, in strengths varying from 100 to 300 milliampères, the current passing from a clay electrode covering the abdomen to a platinum electrode passed into the uterine cavity. The tumour had increased steadily during the treatment, and at the operation extremely firm adhesions to the uterus and rectum were found. The patient has, however, made a good recovery. Now, if it had no effect on this large tumour, is it likely that it would prove curative on a tumour of a similar nature, though smaller? I think not.

Dr. Aveling strongly advocates the treatment of extra-uterine gestation by electricity, but unfortunately the condition is usually only recognised at the time of rupture, when it would be criminal to do anything short of abdominal section to save the life of the patient. Should, however, the state be recognised sufficiently early, it may be possible to kill the fetus by the faradaic current; but, for my own part, I should infinitely prefer to perform abdominal section, as being both more certain and, to my mind, safer.

In cases of menorrhagia, whether dependent on endometritis or on a granular condition of the lining of the uterus, I have found very great benefit to ensue from the application of the positive pole in the uterus, and I conclude that its action is that of a cauterising agent to the mucous membrane, although possibly there may be some specific effect not fully understood.

In one case of dysmenorrhœa, with menorrhagia, depending apparently on salpingitis and ovaritis, several applications of a current varying from 50 to 120 milliampères proved of great service, and three "periods" have since passed unaccompanied by the excessive loss and the pain previously felt.

In the following case given in detail, which was apparently one of gonorrhœal endometritis, with salpingitis, the results of treatment were most marked.

Mrs. A—, a tall, handsome, anæmic woman, called to see me on Feb. 7th on account of excessive menorrhagia, which, she said, had continued since August, 1886, up to which time she had enjoyed good health. Her menses lasted ten days, but sometimes she would not thoroughly cease before another period occurred. For some months she had seldom used less than fifty diapers at each period. Her legs were swollen towards evening, she had bearing down

and backache, and had a severe pain in the left ovarian region for nearly a week before the "period" occurred. She had pain after micturition, and, if constipated, pain on defecation. On examination with the speculum, I found a patent os uteri, from which exuded a glairy sanguineous discharge. Bimanually, the uterus was found to be slightly enlarged, and at the left side could be felt an extremely tender and swollen tube and ovary; the right appendages seemed to be unaffected. The uterine sound passed half an inch too far. She had been married four years, and had only had one child, fifteen months after the marriage. Beyond rather free menstruation during suckling, she had no other discomfort following the confinement. Her husband called to see me separately from his wife, and communicated to me the fact that he had had gonorrhoea early in 1885, and that within a month of the attack he had had coitus with his wife, after which she had itching at the vulva and a free discharge. Diagnosis: Gonorrhoeal endometritis with left salpingitis. I prescribed rest, the hot antiseptic douche &c., and applied iodised phenol to the interior of the uterus. She saw me again on Feb. 23rd, and told me that she had just passed a period which had been as profuse and as painful as ever. On Feb. 28th a current of 150 milliampères was passed for eight minutes, the positive pole being in the uterus. The uterine cavity was found to be half an inch too long, and bled freely on being touched by the probe. On March 5th electrolysis was again applied, a current of 160 milliampères being passed for ten minutes, with the positive pole in the uterus. On the 13th she called to see me, expressing herself as feeling better, and saying that she had had no pain, and expected her menstrual period on the following day. On the 22nd she reported that the period had returned two days beyond the month, and had continued only four days, only necessitating the use of fourteen diapers instead of fifty, as for many months previously; she had no pain, and since the period had had very little leucorrhœa. On the 27th electrolysis was again applied, 150 milliampères being passed for seven minutes. On April 10th she stated she felt quite well, had no mucous discharge from the vagina and very little leucorrhœa. She expected her period in a few days. On May 8th she called to say she felt quite well in every respect; she had no pain, no discharge, and was able to work and to look after her household duties as well as ever. On examination, the uterus felt normal in size, and the tenderness and swelling of the left tube and ovary had quite disappeared.

My experience of the uses of electrolysis in dysmenorrhœa dependent on stenosis or on neuralgia is too limited for me to be able to give an opinion, although I am at present trying it in cases which have failed to yield to anything but the strongest sedatives, which of course only give temporary relief.

In conclusion, I believe that electrolysis has already assumed a permanent position in the treatment of uterine fibroids, and that in the treatment of many of the chronic and often tedious cases of uterine diseases, such as sub-involution, endometritis, and chronic metritis, it will take a place among the other means at our disposal. From cases of tedious and persistent menorrhagia in which I have applied electrolysis with marked benefit, I feel that we have another addition made to the therapeutics of such cases. In salpingitis, chronic ovaritis, and other painful and neuralgic conditions, where no tumour could be felt, I have applied electrolysis with benefit, and I think it will be worth bearing in mind in such cases as a possible means of cure and of saving operation; but my experience would lead me to say that it is only beneficial in some of the cases, others apparently similar not being benefited in the least. In carrying out the treatment, I have endeavoured to follow Dr. Apostoli's directions exactly, and have always been careful to asepticise the vagina, instruments, and hands. Of several batteries that I have employed, I prefer, and now always use, one composed of fifty large Leclanché cells, which are placed in a cellar beneath my consulting room, the wires coming through the floor to a double collector connected in couples. Exactitude in dosage is obtained by a Gaiffe's galvanometer, and shocks are absolutely prevented by the employment of a water rheostat.

Leeds.

FOOTBALL CASUALTY.—William Maclure, a Glasgow football player, while playing in the Clyde team against the Celtic Club on Saturday last, had his collar-bone broken.

THE APPLICATION OF THE THEORY OF EVOLUTION TO PATHOLOGY.

By ALBERT GRESSWELL, M.B., B.A. OXON., &c.

(Concluded from p. 311.)

NEXT we come to the rhythm presented by the different seasons. Now it is clear that summer and winter differ, in some degree, as day and night do, and they likewise merge into each other imperceptibly. In summer there are more light, more heat, and more food, and also greater activity of the vital processes. In spring and summer, as compared with winter, the pulse of an animal is quicker, the temperature higher, and, in short, metabolism is more active. With each recurrence of spring, life, comparatively dormant during the winter, bursts into renewed activity, and the hibernating animal comes out of its quarters, and again revives into its pristine state of activity. Reproduction of all kinds of animals takes place at this season of the year, and there is also a great increase in peripheral growth—for instance, of hair and nail—and in the shedding of hair and of cuticle in moulting. We concluded above that increased vital activity had been for such a long time associated with day as to explain the fact that organisms exhibit a rhythm corresponding to the alternation of day and night. Now there is also some evidence to show that organisms exhibit another rhythm corresponding with the alternation of summer and winter. According to the Rev. J. G. Wood, some Australian plants set in the suburbs of London made an attempt to blossom just as our winter came on; but in the course of a few years they were gradually later in blossoming until they had found the proper season, and thenceforward they put forth their leaves and flowers at the same time as our indigenous plants do. When animals are first introduced into a fresh environment, they sooner or later enter into competition with one another. At any time many of them may be called upon to fight or to make good their escape. In either case the associates of work are evoked, since, in fighting, anger and rage and redoubled energy are displayed, and oftentimes pain is inflicted. Now, the question of pain in its relation to disease on the one hand and to the injuries received in fighting on the other is one of great importance.

Speaking generally, and bearing in mind that there cannot but fail to be very important exceptions, which, however, are for the greater part merely apparent and not real ones, pain may be said to be one of the most valuable aids, or rather incitements, to self-preservation, wherewith animals are endowed. The more we consider this point, the more clearly shall we see that the tendency of measures which are in the general way naturally taken to relieve pain must be usually such as are more or less directly and more or less markedly productive of advantage to the animal which manifests them. Now, pain may be said to consist of disagreeable and irritating sensations, and in response to them an animal may, and often does, put out its best endeavours to remove itself with all speed from the particular source of injury or danger which may be the cause of the pain. Or, again, its movements may be determined with the view of satisfying the pangs of hunger or those of thirst, or of supplying some other want or wants which entail suffering. As a matter of fact, pain is among animals very generally associated with the excitement and furious rage aroused in fighting with competitors or combatants—that is, in direct struggles for self-preservation. This, of course, is the simplest source of pain, and it is naturally most clearly illustrative of the point we are laying stress upon. Among animals which are at any time liable to be called upon to exert their best efforts in fighting, the excitement aroused by pain resulting from bodily injury is especially of incalculable benefit, in so far as it leads to the redoubling of physical effort, exerted with the purpose of overcoming an antagonist.

In an animal suffering from pain the associates of work are exhibited. The heart's action is increased, as also is that of those muscles which in fighting would be more or less directly concerned. Even the muscles of the ears, eyes, and lips may be in some degree brought into action. Likewise, when an animal is undergoing pain, there are exhibited more or less intense excitement, perspiration, and perhaps

screaming. Hence these associated functions concur in animals, including man, not only when they are consciously and suitably directed to the removal of a pain-giving agent, but also when the pain cannot be thus removed, being due, as in disease, to causes of quite a different nature. In the former case the reactions are directed to measures of self-preservation, leading as they do to redoubled efforts at defence; while in the latter case they may be not only not beneficial but even of a very harmful and even fatal character. When the pain results from morbid processes, the harm done by the reactions of the organisms is oftentimes excessive, while the benefit is reduced to a minimum, or may be entirely absent. Thus, as in the case of ordinary physiological processes, so also in those which are called abnormal, certain remnants of "antique customs" still remain to clog the wheels of more highly developed processes. Just as certain rudimentary structures, not only useless but even harmful, remain in higher animals to interfere with the working of newly constituted organs, so, too, organisms may be said to make, now and again, great and sometimes even fatal mistakes in the processes by which they attempt to throw off the results of injuries, or to atone for damaging changes. The conditions, though similar, are really different, and hence the ordinary reaction, when put forth, cannot be a successful one. In an acute attack of gout, the manifestations of the febrile disturbance, which is supposed to be secondary to the joint affections, are acute pain, rapid pulse, some rise of temperature, perspiration, great restlessness and excitement, and possibly screaming. Further, it is a most noteworthy fact that the pulse of an animal suffering from pain is almost invariably accelerated, and the beat itself is also strong in character. Restlessness and vigorous action of the muscles are likewise manifested by animals which are in pain. The leg of a frog contracts when the toes are irritated by an acid or in other ways. Indeed, that movement accompanies the infliction of pain is well known. We are, in fact, so accustomed to the invariable connexion which subsists between these two vital manifestations, pain and movement, that we are in the habit of inferring the presence or absence of pain according as we do or do not observe its correlative signs. Indeed, it is quite possible we may sometimes be mistaken; for, on the one hand, a cry of anguish may not in all cases denote pain, while, on the other, the absence of signs of pain, as in calm resignation, may not be inconsistent with great suffering. Speaking generally, however, we find that groaning, screaming, perhaps sobbing and weeping, grinding of the teeth, clenching of the hands, and violent paroxysms of convulsive movements, are seen in most of the higher animals when suffering from pain, and it seems that these and the like phenomena can be ascribed to their association in the past with pain resulting from direct struggles with a foe. In the fight all the muscles and organs of the body receive an intense impetus. The brain is quick to see in advance the tactics likely to be used by the opponent. The heart must be accelerated, in order that supplies of blood may be sent to any and every portion of the body. The eyes and ears also must be more sharp than usual, and hence the muscles connected with these sense organs must be on the alert, and ready to set them to the best advantage for hearing and seeing, and also to protect them, or at least the eyes, from injuries, as far as may be possible. In short, nearly all the muscles of the body are liable to be called into action. The wild and piercing cries uttered by a creature almost worsted in the deadly strife, as they re-echo far and wide, may avert a threatened defeat by frightening the antagonist perhaps, or at any rate by attracting comrades to help. Again, the quickened action of the heart raises the external temperature, raises the body temperature as a whole, since it leads to quicker oxidation. In pain, likewise, the temperature often rises measurably, and it falls when, as by the influence of morphine or otherwise, the suffering is subdued. In this relation it is well to bear in mind that peripheral increase of heat may occur, though the oral temperature is not altered. The augmented action of muscles and organs gives rise to an increased amount of waste products. There may be also during pain, as also during excitement, an additional sensibility to cold.

Dilatation of the pupils takes place during pain. Dr. D. Astley Gresswell recently noticed that the pupils of a lad suffering from peliosis rheumatica dilated whenever an elbow which was exquisitely tender was accidentally pressed. He has also observed dilatation of the pupils in vigorous children undergoing tracheotomy, in cases when an

anæsthetic could not be administered. The pupil also frequently dilates in cases of locomotor ataxy when an attack of pain comes on. On the other hand, during sleep, when the centres of sensation are dulled, the pupil contracts, as also, in opium stupor, in the stupor of typhus and typhoid fever, and also in that of relapsing fever, as well as in the anæsthesia produced by chloroform, notwithstanding that in the stage of profound narcosis which supervenes they dilate. Some animals—for instance, the cat—when preparing for action show dilatation of the pupil: and also in human beings the pupil dilates if the sensory nerves be strongly irritated, or as a result of excitement, or during severe muscular exertion. The endocarditis of chronic Bright's disease is attributed to the extra blood pressure, which, indeed, is one of the earliest manifestations of inflammation of the kidney. Hence, the value of the subjugation of pain in cases of endocarditis and of the pericarditis of rheumatic fever may be to some extent due to the coincident soothing of the heart. We see, then, that the occurrence of pain, due to whatsoever cause, arouses the associates of work, not only in health, but also in disease, though, of course, we must not forget that the sufferer may become exhausted, and therefore no longer able to manifest the processes referred to. Now, the constitutional unrest which is set up by the pain consequent upon an injury must and does work harm.

For the sake of example, suppose we consider for a moment the case of an animal which has just gained the victory over an opponent, and let us further suppose that the ultimate vanquishing of the foe was the result of the redoubled efforts which were made owing to the reception of an injury, which stimulated, or rather evoked, the closing energetic and successful struggles. Now, it is clear that the pain still continuing would be of further value, perhaps, only in so far as it would dictate rest of the parts injured, while, on the contrary, at the same time, in very many cases, it would undoubtedly be productive of harm by reason of the general disturbance and unrest still kept up, although probably it might no longer be necessary for purposes of protection from the foe. Hence, we find that a dog or a deer (for instance) which has met with a fracture of the leg or any other similar injury seeks quietude and dark seclusion. At each movement of the fragments pain ensues, and consequently the poor creature tries to avoid suffering by calm and repose. The resting of the leg, the general motionlessness of the body as a whole, the fasting, the absence of disturbing influences, the darkness,—all these factors lead to a diminution of the constitutional excitement. Similarly, it is almost invariably the case among oxen that when one member of a herd is taken ill, the first, or one of the first, signs of disorder is that that particular animal departs from the rest of the herd in order to bear its sufferings in solitary seclusion.

Irritation of the conjunctiva causes contraction of the lids; that of the nasal mucous membrane evokes sneezing; that of the throat causes attempts at swallowing; that of the rectum causes tenesmus both in animals and in man. These reactions are suitable and conservative ones. Inflammation of these structures, however, has the same effect, yet more pronounced, and then the result is by no means a conservative, but, on the contrary, a damaging one. Similarly, an animal suffering pain from internal causes frequently bites, or kicks savagely at the corresponding side of the body, and also in a part which has apparently a relation through the medium of nerves with the internal part which is affected. The relief which follows the application of one or more leeches or of a small blister to a painful part on the surface of the body, in cases when internal structures are inflamed, is possibly to be in part explained by this connexion through the channel afforded by the nervous system.

Again, if a nauseous and irritating substance be swallowed, vomiting may ensue. In fact, if an irritant be present in any portion of the digestive tract, either vomiting or defecation may occur. Now in most instances there is no doubt that it is best that substances which are nauseous or irritating should be thus rejected. This reflex action, however, which is in these cases of such supreme importance, persists under pathological conditions when it works harm. So alive are the intestines to the reflex effect caused by irritation that vomiting may occur in enteritis, or owing to compression of a portion of gut in a hernia. Vomiting may also occur if structures in close relation with the intestines are injured—for instance, in peritonitis, in compression of a mesentery in a hernia, in biliary colic, and also

when tenesmus is excited by irritation and inflammation of the lower part of the intestines, and even in irritation of the fauces. In many of these cases the reflex effect is productive of harm. There is reason to believe that the irritation of the throat is partly a cause of the vomiting which occurs at an early stage in cases of scarlet fever; and since vomiting also occurs at the onset of diphtheria and small-pox, in which the fauces are attacked, and likewise closely follows the onset of inflammation of the fauces, it seems as if in all these cases the irritation is the cause of the vomiting. Similarly, violent coughing may bring on retching, which is apparently due to the irritation of a pellet of mucus which has been coughed up into the throat.

We may say, then, that the alimentary tract is peculiarly sensitive, and that, while this sensibility in many cases does good, it may in others work a vast amount of harm. We may also conclude that irritation, in like manner with pain, brings about, to a greater or less extent, the associates of work, and this not only in healthy animals, but also in those which are suffering from the abnormal processes of disease. Hence it may probably turn out to be the case that, of our therapeutic measures, those which excite to action on the one hand, and those which induce rest on the other, are the most important. Among the former we may include physical work, external light and heat, noise, food, out-door scenery, stimulants, and tonics; while among the latter we may mention sedatives, venesection, reduction of work, of external light and heat, of noise, of food, of irritation, of pain, and of excitement, not only that of pleasure, but, of course, far more especially that produced by fear. Tales of success excite and stimulate, those of happiness produce happiness, those of failure depress; and it must be remembered that in some cases of disease, excitement is more easily produced than it is in health. Dr. D. A. Gresswell recently attended a boy in the convalescent stage of pneumonia, who was so excited by a noisy delirious patient in the next bed that his temperature rose from the normal point straightway to 104.4°F. About an hour and a half later, his temperature had fallen 1.8°, so as to be 102.6°; and next morning at 8 A.M. it was 98.2°. It then oscillated up and down for seven days, after which it remained at the normal. Similarly, a patient convalescing from enteric fever, if excited by pleasure or by fear, almost always expresses the excitement by a rise of temperature.

And now, in conclusion, let me for a brief moment cast a swift glance backwards at the glorious history of science. How clearly does it appear, when we do so, even most cursorily, that its gradual but sure growth in accordance with all the co-operating factors, and also in most intimate correspondence with all those various involved conditions to which man's intellectual powers have been and are being subjected, furnishes in itself one of the very best of all those innumerable examples which we can adduce in illustration of the general process of evolution. With exceptional force does this statement apply to the science of comparative pathology, a science even yet in its earliest infancy. Indeed, it is only most recently that the gradually increasing firmness of the establishment of the doctrine of evolution as a relatively true, real, and indispensable fundamental basis of thought and fact has led men to inaugurate their initial attempts to unravel by its aid the intricate clues to the varied, and, at first sight, most mysterious phenomena of disease. The discovery of modern microscopic methods has concurred to help the tide of progress in medicine to a marvellous and well-nigh incredible extent. Indeed, in the field of pathology the advances made during this present century, now about to close, have been truly wonderful in magnitude and far-reaching importance. Yet, wondrous and great as they have indubitably been, these discoveries are probably almost as nothing when compared with the new developments of our knowledge which we may expect to be made ere long. Probably the most important epoch of all epochs, so far as the world of medicine is concerned, may be said to be this present one, which has been marked by the promulgation of the germ theory of disease, and by its subsequent elaboration, which still proceeds, and will continue to proceed with yet more rapid strides. Indeed, it would be quite impossible to exaggerate the importance of the influence exerted by recent discoveries, both in reference to preventive medicine and to our knowledge of the best modes of treating the different disorders to which human flesh is heir. Day follows day, the years roll on, and, as the wheel of time revolves, it brings with it more and still more accurate

information, which is furnishing an entirely new basis for the sciences of medicine and surgery as pursued by our predecessors. The discovery of the efficacy of vaccination; the recent establishment of the germ theory of disease and of its numerous and weighty implications in regard to actual treatment, the employment of antiseptic measures, the inoculatory methods which have been proved to be so highly successful in the hands of M. Pasteur and his co-workers and others, and certain most valuable new lines of medical treatment,—all these initiations of quite modern times are very intimately connected, one with another, and they open up quite a vista of unexplored regions.

Louth, Lincolnshire.

THE LOCAL TREATMENT OF EMPYEMA OF THE MAXILLARY SINUS.¹

By ADOLPH BRONNER, M.D.,
SURGEON TO THE BRADFORD EYE AND EAR HOSPITAL.

THE maxillary sinus is a cavity of the shape of a triangular pyramid, with the base towards the nose and apex towards the malar bone. In children it is very small, and in adults it varies much in size, even in the same person. It can contain from one to eight drachms of fluid. The sinus communicates with the nasal cavity in the middle meatus—that is, between the middle and lower turbinated bones. The maxillary foramen, as we will call it, together with the frontal foramen or opening of the frontal sinus, form the so-called infundibulum. This is an oval aperture, of about the size of a small lentil, in the mucous membrane of the middle meatus, just under the centre of the middle turbinated bone. It lies between the uncinate process and the ethmoidal bone. The osseous aperture—that is, the opening formed by bony structures alone—is much larger, and partly covered by mucous membrane. Behind the infundibulum, and lower down, there is very often another opening, just over the middle of the lower turbinated bone, often called the accessory foramen. It is situated between the uncinate process and palate bone, and is, like the maxillary foramen, much larger in the bony skeleton. In nine cases out of ten it is quite covered with mucous membrane. We thus see that the wall between the middle meatus and maxillary sinus is in two places composed only of mucous membrane. To this important fact we shall refer when discussing the various methods of opening the sinus.

There is great difference of opinion as to the common cause of empyema of the sinus. Heath, in his Jacksonian prize essay on Injuries and Diseases of the Jaw, 1867, and again in the *British Medical Journal* of June, 1887, says: "Suppuration in the antrum is ordinarily the result of inflammation, extending from the teeth to the lining membrane of the cavity. Other causes besides diseases of the teeth have been known to induce suppuration in the antrum, such as a violent blow on the face. It is possible also that the disease may result from catarrhal or other inflammation of the lining membrane, and it has been excited by the entrance of foreign bodies." No doubt, in some cases, especially in the acute cases, the disease may spread from the teeth, but in the majority of cases it seems to me that the empyema is caused by the inflammatory processes, which pass directly from the mucous membrane of the nose to that of the maxillary sinus. This inflammation of the sinus often spreads to the alveolar process and causes disease of the teeth. This fact has given rise to the general and erroneous idea that the diseased teeth cause the disease of the sinus. In four cases of empyema which I have had the opportunity of seeing and treating in the last few months, there was in every case a distinct history of previous affection of the mucous membrane of the nose, and in not a single case was the empyema caused by diseased teeth. In two cases there was no history of diseased teeth whatever. In one case there were several diseased teeth and much toothache. The latter was relieved after treatment of the empyema, but not by removal of the teeth. In one case there was atrophy of the alveolar process, the teeth became loose, and dropped out without the least pain. The symptoms of empyema are in acute cases very evident and easy to recognise. In chronic cases, however,

¹ Paper read at the February meeting of the Leeds and West Riding Medico-Chirurgical Society, 1888.

the symptoms are often very obscure indeed, and the disease is very frequently overlooked. Generally, the patients complain of dull aching pain over the cheek, often of toothache (this is a very common complaint), of negrim, and of an offensive discharge which passes from the nose, especially if the head is bent down, or from the posterior nares into the mouth and throat. Sometimes there are no definite symptoms whatever, and we simply have a chronic purulent or hypertrophic rhinitis. If these affections often recur in spite of treatment, and especially if they are unilateral, there is sure to be some disease of the maxillary sinus, or more rarely of the ethmoidal cells. Just as in cases of one-sided recurrent conjunctivitis we ought always to look out for an affection of the lacrymal sac, so ought we in cases of one-sided recurrent rhinitis to look out for an affection of the maxillary sinus.

As regards treatment, there is, from a surgical point of view, only one method: to let out the pus, and syringe and drain the sinus till there is no more abnormal secretion there. If the pus should point at any place, of course let it out there. In ordinary cases, the sinus can, roughly speaking, be opened from the nose (middle or lower meatus) or from the mouth (canine fossa or alveolar process). The former method—i.e., to open the sinus from the interior of the nose—seems to me to be vastly superior to any other. Hartmann of Berlin, and Stoerck of Vienna, advocate the method of syringing out the sinus from either of the natural foramina in the middle meatus, and, if these be not large enough, to enlarge them. We have seen that the wall separating the middle meatus from the sinus is very thin and partly composed of mucous membrane only, which in many cases of diseases of the nose is often absent, thus leaving a large and free opening between the nose and the sinus. For syringing out the sinus a common Eustachian catheter or small silver bent tube can be employed. The patient feels the fluid passing into the sinus, so that one can be sure when the proper opening has been reached. The advantages of this method are—that (1) it is the most natural way of syringing the cavity, as no new opening has to be made; (2) it is very simple, and (3) not at all painful. The disadvantages are that (1) the opening is high up in the sinus, and it is therefore rather difficult to drain and syringe out properly; and (2) the nostril is often very narrow, so that it is difficult to introduce an instrument. Mikulicz, of Krakau, proposes to open the sinus by perforating the bony wall between it and the lower meatus, just under the middle of the lower turbinated bone.² He uses a special instrument for the purpose. He holds this method to be superior to the method advocated by Hartmann and Stoerck for the following reasons: (1) The opening is lower down in the sinus than the natural opening, and it is therefore easier to drain the cavity through this opening; and (2) there is not so much danger of wounding the orbit. In opening the sinus from the alveolar process, the first or second molar tooth is removed, if necessary, and a thick trocar or probe is passed through the alveolar into the sinus. The advantages of this method are: (1) The sinus is opened at its lowest part, and can therefore be drained and syringed very efficiently; (2) the field of operation can be overlooked. The disadvantages are (and these seem to me to be very great): (1) The pus &c. pass out into the mouth, giving rise to much nausea, sickness, &c.; (2) the opening readily closes up; (3) foreign bodies, especially particles of food, easily get into the sinus and keep up the suppuration; (4) the alveolar process is often very thick and hard to pierce; (5) there is danger of wounding the orbit; (6) a sound tooth has often to be removed; (7) a cavity is made to communicate with the mouth, which nature intends to communicate with the nose only; and (8) the operation is very painful, and an anæsthetic is generally necessary. The mode of treatment I should propose would be: (1) If pus points anywhere, open the sinus at that place; (2) in all other cases try and make use of or enlarge the normal opening in the middle meatus; (3) if this cannot be done, operate as proposed by Mikulicz. The alveolar process should, I think, be perforated only (1) in very acute and painful cases; (2) if the nostril be narrow and there be not room enough to introduce an instrument; and (3) if the first or second molar tooth be loose, and pus flows freely from the socket &c. on its removal.

Subjoined are the notes of a few cases which have lately come under my observation:—

CASE 1.—Miss M—, aged twenty-five, consulted me last year for “a disagreeable smell and discharge from the right nostril.” Both nostrils had been “closed up” for between four and five years, and in the first year there had been a copious watery discharge. A few months previously several polypi had been removed from both nostrils. Anterior rhinoscopy showed several small polypi on the middle turbinated bones and the mucous membrane, swollen and of greyish colour. When the patient held her head down there was a copious discharge of foul pus from the nostril. She had had much toothache on the left side. Two teeth had been extracted, but the pain still continued. I removed the polypi, and treated the swollen mucous membrane with the galvano-cautery. The foul discharge from the left nostril still continued, and there was a remarkably rapid recurrence of polypi on that side. On March 8th I opened the maxillary sinus. As the left nostril was very narrow, the septum being much bent, and as the first molar tooth was loose, I did not operate from the nose, but removed the loose tooth and pierced the alveolar process with Krause's bent trocar. A large quantity of foul pus escaped. A small drainage tube was inserted into the opening and attached to the second molar with wire. Through this tube the sinus was daily washed out with a warm solution of boric acid and sublimate. There was no more discharge from the nostril and no recurrence of the polypi. On March 18th there was no more discharge from the sinus, and in two weeks the alveolus had completely closed up.

CASE 2.—This was a case of bilateral empyema of the maxillary sinus, causing ozæna and consequent loss of smell and taste for fifteen years, from which the patient ultimately recovered. Miss F— consulted me in May 1887, for “a disagreeable smell and discharge from both nostrils and loss of smell and taste.” About twenty years ago both nostrils were frequently “closed up,” and there was for several months a copious watery discharge. The patient noticed that she could not smell or taste so well. This gradually got worse, and for fifteen years she had not been able to smell or taste anything. At the same time, it was noticed that her “breath smelt very badly.” She herself was not aware of the fact. For the last two or three years she had often had dull aching pain over both cheeks, the eyelids were often “puffy,” and there was frequently a copious discharge from the nose, especially on bending her head. She never had any toothache, but the upper teeth had “dropped out,” as she says, without any pain. Anterior rhinoscopy showed the typical signs of chronic atrophic rhinitis. I treated the mucous membrane with the galvano-cautery, scraped it, used Gottstein's tampons and nasal douches, but could not get rid of the ozæna or discharge. There seemed to me no doubt that there was empyema of both maxillary sinuses, and that this was keeping up the ozæna. On June 14th I opened the right maxillary sinus from the alveolar process. Much foul pus escaped. On June 19th I opened the left maxillary sinus from the lower meatus, as proposed by Mikulicz. On the 22nd there was no more ozæna. On July 24th the patient could smell and taste a little, and on Aug. 24th she could taste and smell fairly well. There was a slight return of ozæna on the right side. The opening in the alveolar process had closed up. I enlarged the natural opening in the middle meatus, and syringed out the sinus through this.

CASE 3.—Miss K— consulted me in November last for “a disagreeable smell from the right nostril.” Several years ago she had had some polypi removed from both nostrils, and since then she had noticed the disagreeable smell. She had never had toothache. Anterior rhinoscopy showed on the right side swelling and polypoid degeneration of the middle turbinated bone. This was treated with the galvano-cautery. There was a rapid recurrence of small polypi, and I noticed that there was always a small accumulation of pus at the same place—i.e., just under the middle of the turbinated bone. Although there were no other symptoms of empyema, no swelling or pain over the cheek, no discharge from the nostril when the head was bent, &c., I nevertheless decided to open the sinus. On Dec. 4th, I pushed a thick galvano-cautery point into the place where the pus accumulated, thinking rightly that this must be the opening of the sinus. The point readily passed into the sinus. I enlarged the opening and syringed out the sinus. In a few days the “disagreeable smell” had disappeared, and there was no recurrence of the polypi.

² Archiv für Klinische Chirurgie, xlv., 8, p. 626.

CASE 4.—Mr. H— saw me in August last for “obstruction in the left nostril.” Several polypi had been removed from both nostrils two years ago. The right side had “kept open,” but the left side soon “closed up again.” He had had polypi removed from the left side three times in the last two years. On bending his head, he had noticed that there was often a copious foul discharge from the left nostril. He never had much toothache. The left middle turbinate bone was swollen and covered with numerous small polypi. These were removed with the galvano-cautery snare several times. I found that the natural opening of the sinus in the middle meatus was easily accessible. It was enlarged with the galvano-cautery and the sinus washed out. There has up to the present time been no recurrence of the polypi.

The points to which I have endeavoured to draw attention, and which are illustrated by the history of these few detailed cases, are—1. That the chronic form of empyema of the maxillary sinus is much more common than is generally supposed. 2. That in many cases there are no typical symptoms whatever. 3. That empyema is very frequently the cause of chronic and recurrent rhinitis, especially unilateral. 4. That empyema can give rise to the typical symptoms of *ozæna*. 5. That it is in most cases caused by disease of the mucous membrane of the nose, and not by diseased teeth. 6. That in most cases the easiest and simplest method of treatment is to open the sinus from the interior of the nose, and not from the alveolar process.

Bradford.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF CEREBELLAR ABSCESS FOLLOWING MASTOID DISEASE.

By W. R. H. STEWART,

AURAL SURGEON TO THE GREAT NORTHERN CENTRAL HOSPITAL, SURGEON TO THE LONDON THROAT HOSPITAL, ETC.

A. P—, aged ten, a delicate-looking boy, came to the aural department of the Great Northern Central Hospital on Friday, May 11th, 1888, with the following history:—Three years previously the right ear began to discharge. He had attended as an out-patient from August, 1887, to February, 1888; the discharge had then ceased, and he appeared quite well. Mother healthy; father phthisical. On Friday, May 4th, he began to complain of pain in the ear, and the mother at the same time noticed a swelling behind it.

On admission there was great pain in the right ear. The meatus was much swollen and very tender, rendering examination of the membrane impossible. A good deal of swelling and redness existed over the mastoid, with tenderness on pressure, but no fluctuation. Watch heard on contact. Temperature 98° 8'. Six leeches were applied to the front of the tragus, and the meatus was ordered to be constantly fomented with warm boracic lotion.—May 12th: The leeches had relieved the pain. At 2 P.M., the temperature having risen to 104°, a free incision was made over the mastoid down to the bone. A small quantity of pus escaped, and bare bone was felt. The wound was poulticed, and the temperature towards evening fell to normal.—13th: Free discharge from wound. At 7 P.M. the patient had a rigor; the temperature ran up to 104° 2', but fell again to 100° towards midnight. There was some slight facial paralysis. No change in the retina.—14th: The facial paralysis had disappeared. Discharge on poultice slight. Takes nourishment well. Appears cheerful. Pulse steady. At 8 P.M. the temperature was 102°, but for the rest of the day did not rise above 100°.—15th: Had a good night. Some pain behind the ear. Very comfortable until 1 P.M., when he had a bad rigor. The temperature rose to 105° 4'. Eyes examined by Dr. Beevor, who found no evidence of brain mischief. Opened mastoid cells with Hinton's perforator. No pus found. Very faint after the operation. The temperature at 4.30 was 105° 2', but at midnight had fallen to normal.—16th: Had a good night; discharge from wound scanty. On the whole, looks much better. The temperature at

4 A.M. was 103°, but, with the exception of a slight rise at noon, was normal all day.—17th: Had a fairly good night until 3 A.M., when there was a good deal of pain at the back of the head. Became fretful. Pulse irregular. He lay with his head thrown back. Passed urine involuntarily. No facial paralysis. Pupils equal. At 12.25 he suddenly became faint, cold, and collapsed. No paralysis or twitching. Was roused with difficulty. Passed a motion in bed. Hot bottles were applied, brandy given, and ether administered hypodermically; but he rapidly sank, and died at 2.30 P.M.

Necropsy, twenty-six hours after death.—Meninges and surfaces of brain normal. Vessels full. Brain removed. Nearly the whole of the right hemisphere of the cerebellum was occupied by an abscess, in which was a small clot. On opening the right lateral sinus, a small quantity of pus escaped. There was caries of the mastoid and petrous portion of the temporal bone.

Remarks.—Dr. Gowers, in his Lectures on Diseases of the Brain, p. 180, says: “Diseases of the cerebellum, away from the middle peduncle, cause *per se* no definite symptoms of diagnostic significance. As Nothnagel first pointed out, the unsteadiness of movement does not result from disease of the hemisphere, unless it is of such a character as to compress the middle lobes, and it is on this compression that the symptoms depend.” The above case, I think, from the absence of brain symptoms until the last few hours, notwithstanding the size of the abscess in the cerebellum, well illustrates these facts. The boy was free from pain, took nourishment well, was cheerful, and able to sit up and move about the bed until the morning on which he died, when brain symptoms set in and he rapidly sank. The case also points out that in chronic suppurative otitis media danger exists where there is a perforated drumhead, even when the discharge has been to all appearances cured.

Devonshire-street, W.

A TROUBLESOME CASE OF LAND SCURVY.

By THOMAS DUNCAN SMYTH, M.D. (R.U.I.),

RESIDENT PHYSICIAN, JEFFERY HALE'S HOSPITAL, QUEBEC, CANADA.

MISS B—, aged about twenty-seven years, applied at the hospital on July 2nd, 1888, as an out-door patient. She was suffering from great weakness, and had a sallow, emaciated appearance. The gums were inflamed and gangrenous, and formed small lobulated masses, which partially obscured the teeth. A very fetid smell proceeded from the mouth, and several ecchymoses were present in the mucous membrane of the palate. She complained of spitting of blood. Her legs were covered with minute purple spots. On the right thigh was an ecchymosis of about the size of a shilling, which was becoming ulcerated and gangrenous, as was also the outer side of the great toe of the left foot, which was suffering from an ingrowing nail. Slight swelling existed about the ankles. She complained of a variety of pains about the body and limbs, and greatly also of menorrhagia. She was a farmer's daughter, and lived in the country. I could get no history of diet or of habits. The present symptoms had lasted no less than three years. She had been to four or five doctors, but had obtained no relief. Although one of them had told her she was suffering from scurvy, and treated her for some time, he finally informed her he could do nothing for her. I prescribed eight or ten lemons daily, with a plentiful supply of fresh fruit and vegetables and a gargle of Condy's fluid. I removed entirely the outer half of the toenail and all the gangrenous masses, dressing the raw surfaces with iodoform. The patient's condition began to improve immediately, so that within three weeks she seemed another woman. I am now treating the symptoms by iron, ergot, &c., and the patient had almost entirely recovered by Aug. 7th.

What I want to point out in this case is that the patient had no doubt been treated by plentiful doses of lime-juice before coming to me, but it was the *lime-juice of the shops*, not the natural juice of the fruit, for it is well known that the former is usually merely a solution of citric acid. In other words, the life of the patient was almost lost by the adulteration of the medicine used for her recovery. Such cases should warn us to hesitate before pronouncing a case hopeless. Before doing so we should make sure that we have given a fair trial to the medicines placed at our dis-

posals by the Pharmacopœia, by giving good drugs in full doses. The cases in which we can do nothing are numerous enough, without increasing their number by indifference to the manner in which our prescriptions are compounded.

Quebec.

CASE OF UNUNITED FRACTURE OF THE PATELLA TREATED BY SIR J. LISTER'S OPERATION.

BY ALBERT WILSON, M.D.

THE points of interest in this case are the age of the patient (sixty-three years), and the long period which elapsed between the accident and the operation.

E—, aged sixty-three, fell on Feb. 14th, 1887, in the City, and fractured his patella. He was conveyed to one of the hospitals. He remained in the hospital about fourteen weeks. When I saw him in June the whole limb was encased in an apparatus, and there was fibrous union of the patella, the groove between the fragments measuring three-quarters of an inch. On July 10th I operated in the manner introduced by Sir Joseph Lister. The limb never having been flexed since the accident, as soon as the patient was under the influence of chloroform I forcibly flexed the limb, thereby breaking dense adhesions with a loud report, and the patella breaking right across through the band of fibrous union. I exposed the patella by a longitudinal incision, and found it split into three pieces, two in the lower and one in the upper part. There were dense adhesions binding the margins of the lines of fracture to the condyles of the femur; these I divided with a knife, causing a good deal of oozing. It struck me as very peculiar for the cartilaginous surfaces to be united by fibrous bands. The fragments were wired together with soft, thick, silver wire, the loose ends of the wire being flattened down on the surface of the patella. Antiseptic precautions, of course, were taken, and the temperature never rose above normal, nor was there at any time pain. It was dressed on the 11th, 14th, and 20th, and finally on Aug. 2nd, when all was healed. Gentle passive movements were begun, and on the 16th the patient went out on crutches. His condition improved, and about two months afterwards I saw him, when he could bend the knee about half way. I bent it forcibly and made some adhesions give way inside the joint, as the bony union of the patella was complete. I left the wire sutures in at the patient's request, and after this he went to his usual employment, occasionally using a walking-stick.

Leytonstone.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

HYDATID CYST OF THE TRANSVERSE MESO-COLON; ABDOMINAL SECTION; REMOVAL; CURE.

(Under the care of Mr. SYDNEY JONES.)

THE difficulty in diagnosis presented by the tumour in the following case was unusually great. The tumour was evidently of a simple character, but presented no evidence of the presence of fluid, and the length of time and slow growth made the diagnosis of hydatid doubtful. The history of severe injury to the abdomen made it possible that the swelling was caused by localised peritonitis and adhesions resulting from it, or possibly the presence of extravasated blood which had not undergone absorption. In connexion with the case Mr. Jones referred to a similar one which was under his care in 1884. In that instance he removed a painful tumour from the abdomen of a woman aged thirty-eight; it presented characters similar to this, and had been

also noticed for two years. It was in the left hypochondrium, and complete recovery followed its removal. It was probably of dermoid origin, and was closely attached to the wall of the intestine. In that case the tumour was noticed after a long illness, and presented equally obscure signs.¹ When the patient was first admitted, Mr. Jones was not inclined to submit the man to operation, as the severity of the symptoms &c. did not appear to indicate the necessity, and it was decided to watch. But on his return, although the tumour did not appear much larger, it was painful, prevented his working, and caused much mental anxiety, making the man anxious to get rid of it. The progress after the operation was most satisfactory, the chief complaint being a craving for tea, the patient having been accustomed to take it five times in the day. It will be noted that glycerine was used for enemata; this is now being largely used at St. Thomas's Hospital, and with most satisfactory results. The notes of the case were taken by Mr. Abbott, dresser.

J. S—, aged forty-seven, a plasterer, living in Mansfield, was admitted into the Albert Ward, under the care of Mr. S. Jones, on June 22nd, and left cured on August 7th, 1888. The patient complained of a lump in the stomach, and gave the following history. He was always healthy until an accident two years ago, and dated the trouble from this. He fell down from some scaffolding, and a plank fell on his abdomen. He was very ill and in bed afterwards for two months, with great pain in the abdomen and vomiting. Six months after the accident he first noticed a tumour in the abdomen, smaller than it is now when first perceived, but not very markedly so. He was first under the care of Mr. Jones from Dec. 8th, 1886, to Jan. 8th, 1887, but it was not considered advisable to do anything, as he appeared to be suffering no inconvenience from it. Since that time, although the tumour has not grown much, it has been painful, and has prevented his following any employment.

On examination of the abdomen, there was found to be a rounded tumour the size and shape of a small orange and of firm consistence, a little to the right and below the level of the umbilicus. The tumour was evidently not connected with the abdominal wall, and could be moved easily within a limited area. On percussion the tumour was not found to be dull, but the resonance was diminished; the rest of the abdomen was normal. On manipulation pain was caused, and the patient afterwards complained of a feeling of sickness. There was slight constipation, and the urine was of specific gravity 1010, acid, without any albumen, and the patient appeared in good health.

The man was anxious to have the tumour removed, and, as it evidently caused serious inconvenience, Mr. Jones operated on July 10th. Ether and chloroform having been administered and the bladder emptied, a median vertical incision of about four inches in length, commencing just below the umbilicus, was made. The peritoneum having been reached and opened after the arrest of hæmorrhage, a large fold of omentum which presented was turned to one side, and a hard rounded mass was felt to the right of the incision, just above the transverse colon and embedded amongst the layers of the meso-colon. This was drawn into view and gradually separated, with only slight hæmorrhage, double ligatures of catgut being placed on all vessels passing to it before their division. There were adhesions all round the tumour. All bleeding points were arrested, the peritoneum in the neighbourhood carefully cleansed, and the wound closed with deep silk and superficial catgut sutures. Iodoform dressings were employed, kept in position by a many-tailed flannel bandage. The carbolic spray was kept going in the room during the operation. There was no shock after the operation. The tumour, which was smooth and round, was found on section to be a hydatid cyst, crowded with daughter cysts from the size of a pin's head to the size of a large grape.

July 11th.—The patient has had a fairly good night after the injection of a quarter of a grain of morphia, and is not complaining of pain, but says that he feels comfortable, excepting for slight thirst. Tongue moist; pulse good. At 8 P.M. yesterday the temperature was 97° 6', rising to 100° at 4 A.M. to-day, and falling to 99° at noon. Allowed a little ice to suck, and a teaspoonful of milk every half-hour.

¹ See THE LANCET, vol. i. 1886, p. 750; also, Transactions of the Pathological Society.

12th.—Has slept well, and is without pain. Temperature normal. Allowed two teaspoonfuls of milk every half-hour.

14th.—Did not sleep so well last night. Complaints of slight aching pains in the back and limbs, but has none in the abdomen. Temperature at midnight 99° 2'; now 98° 4'. Was allowed as much milk as he wished, and also half a pint of tea.

16th.—Slept without morphia. Still complains of general aching pains. Pulse 80.

17th.—Complains of slight discomfort about the wound, but of no pain. Takes about three or four pints of liquid food daily. Bowels acted after the injection of two teaspoonfuls of glycerine as an enema. In the afternoon the wound was dressed under the spray; it was perfectly healed, and all the sutures were removed, the wound being supported by long strips of strapping. Allowed solid food.

21st.—Progress entirely satisfactory. Bowels acted again after a glycerine enema. He is allowed full diet.

24th.—Patient feels well, though somewhat weak. Temperature 96° 6' this morning. Dressing again changed; wound in perfect apposition; covered with dry salicylic wool, and flannel roller applied.

Aug. 1st.—The man is now gradually recovering strength, and gets up during the day. The bowels act naturally. The wound is still covered with a pad, and supported by a flannel roller. This was replaced by an abdominal belt before the patient went home on Aug. 7th.

LIVERPOOL ROYAL INFIRMARY.

SOME ABDOMINAL OPERATIONS; REMARKS.

(Under the care of Professor WALLACE.)

WE are indebted to Dr. Gemmell for the notes of the following cases:—

CASE 1. *Purulent ascites from ruptured ovarian cyst: ovariectomy.*—Mrs. E. M.—, aged fifty-seven, was admitted on June 22nd, with urgent dyspnoea dependent upon great ascites, with an ovarian tumour occupying the left iliac, lumbar, and hypochondriac regions. Abdominal section was performed, and two gallons of purulent ascitic fluid drawn off. The tumour was partially cystic and solid, and was removed, the pedicle being ligatured in three pieces. The intestines were adherent to the tumour, matted together, and covered with plastic lymph. The abdomen was washed out and drained. The patient was discharged on July 8th, quite well, and went to a convalescent home.

CASE 2. *Disease of appendages; adhesions from old pelvic peritonitis; abdominal section and excision of diseased organs; cure.*—L. A.—, aged twenty-nine, when admitted, complained of constant pain in the right side, dysuria, pain on walking, and total unfitness for work. She had an attack of pelvic inflammation six years ago; has never been well since. On vaginal examination, the right ovary and tube, matted together, were felt in the right fornix, and were very tender. The left ovary, enlarged, was easily felt through the left fornix, and was also tender. Abdominal section was performed on June 28th. The left ovary was enlarged and cystic, and was removed. The right ovary and tube were firmly bound down to the plane of the ischium by old inflammatory bands, and, on being freed, the right Fallopian tube was found to be nothing more than a fibrous cord. The tube being quite obliterated and hard, it was removed. The abdomen was drained, and the patient did well, the wound having healed up in fourteen days.

CASE 3. *Abdominal section for adhesions and fixation of appendages; cure.*—A. M.—, aged twenty-four, on admission, complained of great pain in the left side and bearing-down feeling, the pain being much worse at the menstrual period. She had been suffering for five years. The first attack commenced with pelvic peritonitis. On vaginal examination, the uterus was found to be retroverted and to the right side, and fixed. A round hard mass, the size of a small orange, was felt in the left lateral fornix; it was not movable. Abdominal section was performed on July 3rd. The left ovary was completely surrounded by inflammatory tissue and fixed; it was separated from its adhesions and found to be healthy. The right ovary, which was fixed to the pelvic wall, was loosened, and the uterine adhesions were broken down. The abdomen was

washed out and drained. The wound healed, and the patient got quite well.

CASE 4. *Ovariectomy; recovery.*—C. McG.—, aged sixty, when seen, complained of distension of the abdomen, which had only been noticed nine weeks previously. On examination an ovarian tumour was found. Abdominal section was performed on July 4th. On being exposed, the cyst was tapped, and half a gallon of ovarian fluid withdrawn. The cyst was multilocular, was adherent to the peritoneum, and was dissected free. The pedicle was very broad, and, containing large vessels, was ligatured in three pieces, and the abdomen washed and drained. The patient had great trouble with the bowels, which became distended and had no movement for eight days, when they were moved naturally, and she has gone on well; wound healed.

CASE 5. *Ventral hernia following ovariectomy; cure.*—J. W.—, aged twenty-six, was operated on in October, 1887, and an ovarian tumour was removed. The patient went home in two weeks, and four weeks later, whilst lifting a heavy coal-box felt something give way, and came to the hospital again with a small ventral hernia through the cicatrix. The cicatrix was re-divided, and the abdominal wall brought together with deep sutures of relaxation and superficial sutures. The incision has almost healed up, and all the stitches are out. The patient has not been out of bed yet.

Remarks.—Dr. Wallace pointed out that these five cases have been all convalescent in the Thornton ward at the same time. In Case 1 the washing out of the abdomen with warm water—a practice followed out by him for twelve years—was the chief feature of importance. A drainage-tube was employed, and the patient put in the prone position for an hour, by which speedy drainage was secured. Cases 2 and 3 exemplify the principles taught and practised in this clinique: only to remove diseased organs, and to break down adhesions and restore mobility to healthy organs. Both cases are cured. The operation in Case 5 was quite justifiable when the course of increasing ventral hernia is remembered, and the cure has been accomplished with a strong cicatrix not likely to give way again.

Notices of Books.

The Treatment of Acute Rheumatism, with special reference to the use of the Salicylates. By DONALD W. C. HOOD, M.D. Cantab. London: Harrison and Sons, 1888.—This is a reprint of a paper read during last session before the Medical Society of London, and published in abstract form in THE LANCET of April 14th last. It is based upon records of more than 2000 cases treated at Guy's and St. Bartholomew's Hospitals, 850 being cases treated at the first-named hospital before the introduction of salicylates. The analysis of so large a group of cases must have involved great labour and patience, but whether the result can be said to have thrown any material light upon either the nature of acute rheumatism or the *modus operandi* of the salicylates is doubtful. The main contention of the writer is that these drugs have no specific action, and that their prescription should be guided by the type of case before the practitioner; nevertheless, throughout, in speaking of them, he uses freely the terms "specific" and "anti-rheumatic." He especially warns against their too ready employment in cases where there is a neurotic tendency, and in the presence of hyperpyrexia (which he shows to occur notwithstanding the administration of salicylates) he counsels their immediate abandonment. Whatever may be the true explanation of the action of the salicyl compounds in this disease, their efficacy can no longer admit of any doubt. At the same time Dr. Hood has done some service in pointing out the class of cases in which they are most suitable—although, to our thinking, he rather needlessly restricts their employment,—and deserves commendation for his industry in the accumulation of facts. The brochure is disfigured by certain clerical errors—e.g., "Wunderlick," "Ziemssen," "Bristow," "prodroma are (sic) very slight," "hyperpyrexia"; and it is surely by over-

sight that the author's name appears on the title-page with the prefix "Dr." as well as the affix "M.D."

The Demon of Dyspepsia. By ADOLPHUS E. BRIDGER, B.A., M.D., F.R.C.P. Ed. London: Swan Sonnenschein, Lowrey, and Co. 1888.—This is a cleverly written and readable book. The physiology of digestion in all its stages is treated with accuracy and clearness, and the same may be said of such pathological details as come under consideration. Among special subjects which receive careful treatment is the action of bacteria, though we cannot entirely follow the author in his resolution to encourage, by imitating, nature's efforts to remove these mischievous parasites. The directions as to infant feeding are generally good, and we may say the same of the remarks on inflammatory and atonic dyspepsia, rheumatism, gout, diabetes, and especially on diet. The discussion of this latter topic includes perhaps the best writing in the book. So far, we have spoken favourably of Dr. Bridger's work, but we cannot but refer to its leading characteristic, which is also its one great error and a fatal weakness. This is the attempt to clothe what is really a contribution to professional literature in a popular garb, and on a necessarily imperfect basis of preliminary training to rear a card house of medical self-treatment within which a patient may combine all the resources of his imagination and the Pharmacopœia in efforts to diagnose his illness and apply its means of cure. The book is professedly "intended mainly for the laity," and, in spite of occasional reminders that certain things in treatment must be committed to "wise hands" (p. 149), "to the skilled practitioner" (p. 163), or must be "made up by a chemist" (p. 108), it bristles with detailed prescriptions expressed in popular form and containing some of the strongest drugs used in medicine. This kind of writing is obviously unsafe, and therefore injudicious, and we have nothing to say in its favour. In our opinion, the author cannot do better than recast his work and bring it out as a contribution to the bookshelves of avowedly medical literature.

Beiträge zur Pathologischen Anatomie und Physiologie. Herausgegeben von Dr. ERNST ZIEGLER und Dr. C. NAUWERCK. Zweiter Band, Heft 3. Jena: G. Fischer. 1888.—With this issue terminates the second volume and the first series of this important pathological serial. In future it is to consist of "Arbeiten" from the pathological institutes of Germany, Austria, Italy, Holland, Sweden, and Russia. Hitherto a large proportion of the work published in the "Beiträge" has proceeded from the University of Tübingen, to which the editors belong. The present number contains the following articles: "Experimental Researches on the Action of Arsenic and Phosphorus on the Liver and Kidneys," by E. Ziegler and N. Obolonsky; "Changes in the Pacinian Bodies in Lepa Arabum," by J. Sudakewitsch (Kiew); "On Infantile Osteomalacia," by A. Hermann (Munich); "On Tumours of the Breast," by E. Leser; "Experiments on the Entrance of Pathogenic Micro-organisms into the Body from the Air-passages and Lungs," by G. Hildebrandt; and "A Report upon Twenty Theses from the Pathological Institute of Tübingen during the years 1882-1887," by E. Ziegler and C. Nauwerck.

The Passage of Air and Faeces from the Urethra. By HARRISON CRIPPS, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital. London: J. & A. Churchill. 1888.—The title of this work is unfortunate; first, because "air," strictly speaking, is never passed from the urethra, and, secondly, because it connotes a symptom rather than the morbid condition underlying it. The paper itself is an analysis of a series of cases of communication between the intestines and the bladder collected by the author, and which are briefly narrated in an appendix. The general outcome is twofold: first, that such communication is far more often due to inflammatory lesions than to cancer; and, secondly, that the

intestinal lesion is much more frequent in the rectum and sigmoid flexure than elsewhere. From these facts two deductions follow: that these cases are not hopeless, and, that a left lumbar colotomy will prevent the passage of the faeces and flatus into the bladder in the majority of cases. There are two curious omissions in the pathological part of the paper. No mention is made of congenital communications between the intestine and the urinary apparatus, and yet these form a very interesting and important group of cases; and we do not find any mention of the liability of typhoid ulcers of the ileum to perforate into the bladder.

Medical Diagnosis: a Manual of Clinical Methods. By J. GRAHAM BROWN, M.D., F.R.C.P., F.R.S. Edin., &c. Third Edition. Edinburgh: Bell and Bradfute. London: Simpkin, Marshall, and Co.—The fact of this book having reached a third edition is the best proof of its supplying a want. It is a very good piece of work. From a clinical point of view it is open to criticism for not giving symptoms in their proper connexion and grouping. It does not pretend to do so, but rather to give an estimate of the diagnostic value of particular symptoms as they occur most prominently in connexion with the different systems—as the alimentary system, the hæmopoietic system, the circulatory system, the nervous system, &c. Considerable additions have been made to former editions—e.g., descriptions of the use of the laryngoscope, the ophthalmoscope, and the diagnostic use of electricity. It is an admirable book for the student and the practitioner, teaching them precision in observation and aiding them in the estimation of symptoms.

BRITISH MEDICAL ASSOCIATION.

FIFTY-SIXTH ANNUAL MEETING.

Held in Glasgow on August 7th, 8th, 9th, 10th, and 11th.

THE SECTIONS.

PATHOLOGY.

ON Thursday, the 9th inst., the proceedings commenced with a discussion on certain forms of Heart Disease. There was a large attendance of members.

Professor ROY (Cambridge) opened the discussion by communicating a paper on Heart Failure from Overstrain, by himself and Dr. T. A. ADAMI, in which were reported a series of experimental investigations. The work of the heart being measured by the product of the quantity of blood expelled from it, and the pressure against which it is expelled, the question had been studied from these two points of view. And first as regards the pressure: The recording instrument was attached to the heart by a cannula which could be inserted into any chamber, the animal being necessarily under the influence of an anæsthetic and oureare, and the heart being approached through a window in the chest wall. Pressure was increased by temporarily narrowing the aorta. If this narrowing be kept up for some time, the maximum falls from fatigue, and there will also be produced a regurgitation through the auriculo-ventricular valves. Variations in the quantity of blood are more difficult to investigate. The apparatus devised for the experiments records graphically. The heart is enclosed at subatmospheric pressure in a tightly-fitting box, and, by differences in its volume, differences in the quantity of blood are recorded. The amount of blood varies very greatly in a given time, and the variation in amount of work of the heart is more influenced by this than by differences of pressure. When the pressure is increased, there is less contraction of the heart and more expansion—that is to say, that, other things being equal, there is diminished contraction in systole. When the quantity of blood in the heart is increased, whether by increase of the quantity in the vascular system, or by narrowing of the veins, there is similar diminution of

the systole. The diastole at the same time undergoes a very much greater increase, so as to allow of the passage of the increased quantity of blood. In either case of increase of work there is thus expansion or dilatation of the heart caused. Still, in spite of increased pressure, blood continues to be thrown out of the heart as it reaches it until failure occurs, when there is a sudden fall in the blood pressure in the carotid, and the animal dies. This point of failure occurs when regurgitation is established. Referring to the various pathological conditions illustrated by the above experimental results, Professor Roy enumerated the following:—1. The heart in plethora, whose hypertrophy is probably due to the increase in quantity of blood. 2. Acute overstrain of the heart, first described by Dr. Clifford Allbutt as occurring in climbing. 3. Chlorosis, whether from increased pressure or from the quality of blood being diminished while the quantity remains the same is not yet determined. 4. Valvular disease. In regard to the last mentioned, particular interest is attached to the anatomical changes in the experiments. When the ascending aorta was clamped there occurred œdema of the lines of contact of the mitral flaps and of the lines of insertion of the aortic. As this was possibly due to lymphatic outflow being prevented by the ligature, it was placed in other cases higher up, and œdema was then less constant, but there were frequently small ecchymoses and small roughenings due to the distension of lymphatics with lymph. These changes are therefore comparable to those occurring in the heart in Bright's disease, where, on exactly the same parts of the valves, there is chronic induration. Induration of the valves in the right heart is known to occur in chlorosis.—Sir WILLIAM AITKEN spoke of the illustration the paper afforded of the necessity of medical men being well instructed in the laws of physics, as insisted upon by Dr. Gairdner in his presidential address.—This latter point was further referred to by Dr. C. ALLBUTT, who followed. He considered the anæmic murmur, heard best at the auriculo-ventricular point, as interesting in connexion with the paper, especially in regard to its disappearance under treatment. He had had much opportunity of studying the chronic form of undue pressure as resulting in aortic disease, and he had found the chronic degenerative inflammation to begin in the spots indicated by Professor Roy.—Surgeon-General McLEAN had seen a large number of men compelled to leave the service because of heart failure. He had investigated the effects of the accoutrements worn, and found the heart failure due in great part to pressure of the chest in drill. A commission had been appointed, and certain changes in the accoutrements resulted, with a diminution by one-half of such cases in hospital. Still, there is one powerful factor in operation—the “setting-up” of the recruit by the drill sergeant. The most constant symptom of such heart failure he had found to be persistent palpitation; a murmur very seldom occurred.—Dr. WILLIAM HUNTER, of Cambridge, discussed the question of hypertrophy and dilatation of different chambers of the heart in different valvular lesions, as influenced by variation of pressure or quantity of blood sent.—Dr. BOYES-SMITH (Netley) spoke upon the importance of the question on the efficiency of the British army. He hoped the systems of drill might soon be rectified. In such cases as Surgeon-General McLean referred to, the speaker had found murmur frequently to occur, but to be fugitive, coming back, however, upon the recurrence of the slightest strain. It was not mitral, not being conveyed to the back or associated with accentuation of the second pulmonary sound.—Dr. GORDON HARDIE had found functional palpitation to come on very often in hospital, whatever be the illness for which the patient was admitted—for example, where the only previous illness had been ague.—Dr. JAMES FINLAYSON referred to the disturbance of the heart's action in severe whooping-cough as involving strain on the right side, and explaining subsequent symptoms called “asthma” &c.—Dr. JOSEPH COATS referred to the symptoms of overstrain. Why should it manifest itself in palpitation? and why should palpitation come on immediately when a few steps have to be ascended when the patient can walk as long as he likes on a level road? Men seemed to differ very much in the ability of their hearts, and perhaps this would explain differences in longevity.—Dr. WILLIAM RUSSELL, of Edinburgh, would confine himself to one or two points of the paper. Dr. Roy, in his experiments, had shown that the quantity of blood thrown out by the ventricles did not vary; this from a physiological standpoint was of great interest, but practically it

had to be remembered that in pathological conditions this did not hold, for there could be little doubt, he thought, that in them there was not the complete emptying of the ventricle. This led, along with the impoverished condition of the muscle, to dilatation of the mitral orifice, and to regurgitation, so well known to clinicians. A point which he did not understand was that the tension in the carotid beyond the clamp was unmodified by its presence.—Dr. LINDSAY STEVEN had found cases of overstrain of the heart among Glasgow labourers. He had made a post-mortem examination on a sergeant, who had died after an illness characterised by extreme cardiac distress. There was enormous enlargement of the heart and incompetency of the tricuspid and mitral valves, but no pronounced lesion of the valvular structures except some thickening of the aortic curtains.—Professor ROY, in replying, referred to the fact that in muscular exertion there is increased blood pressure and also interference with the venous circulation, so that the work of the heart is thus increased from both factors. This was interesting in connexion with some of the cases which has been mentioned. With regard to “pulmonary” murmurs, he mentioned that when the pulmonary artery was constricted in his experiments he got a murmur and a thrill; he thinks it probable that chlorotic murmurs are sometimes of similar origin. The occurrence of aortic regurgitation in soldiers might be due to vascular changes dependent on syphilis. In reference to Dr. Coats' question, he had only to say that palpitation being so subjective, he had not touched the question of it. He thought that the “margin of reserve” theory would explain the variety of cardiac ability in different men and at different times. With regard to Dr. Russell's criticism, Professor Roy regretted that he had failed in clearness in his desire to be brief. When the systole is lessened residual blood must be left, as Dr. Russell had pointed out.

Dr. RUSSELL (Edinburgh) read a paper upon Malignant Fibrosis, in illustration of which microscopic sections were laid out in the Pathological Section of the Museum. He mentioned three cases altogether, two of which he held to be properly designated as above, while the third was one of cancer, though showing points of resemblance to the others, and illustrating particularly the importance of the fibrous tissue element in scirrhus. In Case 1 there was a large hard mass in the abdomen, cutting like cartilage. The stomach, large intestine, supra-renal capsules, surface of diaphragm and pleura, and mesenteric glands were all involved. The microscopic appearances were those of fibrosis, but the case was evidently one of “infective” disease and malignant, as indicated by its extent and the extension to the pleura. In Case 2 the supra-renal capsules were specially involved, the superficial parts of the glands being transformed, but the adipose tissue was invaded and the individual fat cells surrounded by fibrous elements and dwarfed by pressure. There was no epithelial new growth. In Case 3 (one of cancer of the liver) the chief interest was attached to the changes which Dr. Russell had observed in the hepatic elements. The connective tissue between the rows of liver cells he saw to have increased in the usual way, and to have surrounded groups of cells, and thus given the appearance of a malignant mass. In the malignant nodules, too, he could recognise the shape of the original hepatic lobules. The hepatic cells had increased enormously in size, as if stimulated to growth, though not to reproduction. Their shape, too, is modified, and they may be seen as spindles. The ultimate result is fatty degeneration and dissolution.—The paper was criticised by Dr. Joseph Coats and others, and Dr. Russell replied.

Papers on the Pathology of a case of Pseudo-hypertrophic Paralysis, by Dr. E. Hyla Greves of Bournemouth, and on a few Uncommon Forms of Sarcoma, by Mr. Sheridan Délépine were, in the absence of these gentlemen, held as read.

Dr. CHARLES KENNEDY reported a case of Cystic Disease of Liver and Kidney. It had been under his care for two years, and for a year before death he had regarded it as one of cystic disease of the kidneys. Ill health began after attacks of cystitis. The general appearance of the liver at the post-mortem was to the naked eye normal, except that in parts it showed a mild degree of chronic congestion, and that spread throughout were little cysts, most of them quite small and about the size of a pea, but one as large as an orange. With the microscope there were discovered here and there interlobular small-cell growth, apparently the

origin of new bile ducts. Dilated bile ducts with endothelial cells and secretion enclosed could also be readily found. One cyst was procured complete in section, and lay between artery and vein. It had evidently originated from the junction of several spaces at first separate from one another. These spaces, from the examination of specimens, appeared to be portal spaces. In one part of the wall of a duct, in front of a dilatation, fibrous thickening was discovered, and offered a possible explanation of the genesis of the dilatations or little cysts. The cysts were lined with cubical—not squamous—epithelium. The presumption from the above-mentioned facts was that the cysts in this liver arose from dilatation of bile ducts; the cause of this was yet unexplained, the fibrous band above referred to being, however, suggestive. The concurrence of cystic disease of the liver with that of the kidneys, although rare, had been reported in at least a dozen cases.—Professor ROY spoke of a case recently seen at Cambridge where hepatic cysts had evidently arisen from distension of bile ducts even before these began to be lined with endothelium.—Professor Greenfield and others took part in the short discussion which followed the reading of the paper.

The Section met on Friday, August 10th, Sir William Aitken, President, in the chair.

Dr. JOSEPH COATS read a paper on Two Cases of Lipæmia in Diabetea. In both cases the patient was a young girl; the illnesses had lasted sixteen and nine months respectively. In both cases was the onset of fatal symptoms sudden, and in both dyspnoea was the most urgent symptom, succeeded rapidly by coma. At the post-mortem examinations the blood in every part of the body contained a large amount of fat, and, where this could, it had floated up and made a cream-like upper layer. On microscopic examination oil was found in the bloodvessels in every part. In the first case there was a relative scantiness of fat in the lungs, but some was found in the pulmonary vessels, both arteries and capillaries. In the second case, so great was the amount of fat in the vessels of the lungs that no red blood corpuscles could be seen, and the specimens illustrated well the vascular distribution from the presence of the contained fat. In both cases there was a very large amount of fat in the liver, spleen, and brain. In one case the spleen was pale and opaque (like salmon roe), and appeared as if there were a large accumulation of fat in the vessels; but this was not so, and the paleness was seen due to the presence of very large epithelial-like cells, granular and fatty. Dr. Coats said that, whether these were the endothelial lining of the spaces or not it is not clear, but it is possible that in them we have a hint of the source of the fat in fatty degeneration of endothelium. Fat in certain cases of ague has been found in the blood, and traced to such fatty degeneration of endothelium. Such an origin of the fat in such cases as the present does not appear to Dr. Coats at all probable, as the quantity of fat was here much too great to have such an origin, or even to have its source from leucocytes; and in no part of the body was there found the slightest trace of fatty degeneration in leucocytes or red blood corpuscles. The fat, too, was everywhere homogeneous, and nowhere in clumps, as it would probably be if from leucocytes. In all situations the fat was in the finest stage of division, just as occurs in fatty degeneration. In diabetes we have to explain an enormous production of sugar, and not merely transformation of glycogen. Similarly we must explain here the enormous production of fat, and the history of the cases makes one think the occurrence of the fat a very acute process. Thus it probably arises from the sudden conversion of one of the constituents of blood plasma. In opposition to the theory that the albumen is the constituent in question, Dr. Coats agrees with those who find the source of the fat in the sugar in the blood.

Two papers were read on the subject of the Pathology of Pernicious Anæmia. The first was by Dr. WM. RUSSELL of Edinburgh. He began by stating, as the question to be solved, whether the anæmia is the result of diminished production or of increased destruction of red blood corpuscles, for the percentage falls to 10 or 12, the percentage of hæmoglobin remaining relatively high. The question of diminished production involves the question of origin of the red blood corpuscles. The red marrow of bones is admitted to be one of the most important seats of blood formation. In pernicious anæmia red marrow replaces the ordinary yellow marrow. Is this because of increased demand for red blood corpuscles? The alteration occurs in other cases too—

e.g., in metrorrhagia. Diminished production does not, thus, seem a probable cause. On the other hand, the liver is regarded as the important seat of destruction, and occurrence of destruction of red blood corpuscles can be proved by chemical tests for hæmoglobin. In pernicious anæmia there is very marked evidence in the liver of such destruction. It is brownish in colour, and, on suitable reagents being used, blue reaction is obtained in the liver cells of the outer and middle zones of the lobules. Similar deposit is demonstrated for the spleen and kidneys. Is, then, increased blood destruction the essential factor, and is it due to the action of the liver, to an "over-hunger" on the part of the liver, or due to a diseased state of red blood corpuscles in which the normal action of the liver destroys them? Dr. Russell has recently been making a series of check experiments, examining micro-chemically livers from a variety of cases. Of forty-four livers tested, he has found seven to give marked reaction for iron, and in the seven cases there was nothing of peculiarity. In all seven the spleens were similarly affected—i.e., contained deposit of iron; and in three cases the kidneys, too, gave the reaction. Dr. Russell holds increased destruction of red blood corpuscles to be the essential fact in pernicious anæmia, and he does not consider this to be due to any primary hepatic disorder, but to be dependent upon the condition of the blood, in view of the fact that the spleen also is involved. What is this blood condition has still to be determined.

The second paper was by Dr. WM. HUNTER (Cambridge), which will be published in *extenso* in a future number of THE LANCET.

Dr. BEAVER RAKE (Trinidad) read a paper on the Percentage of Fibrin in the Blood of Lepers. The inquiry had been suggested by a case already published in the Pathological Society's Transactions, in which a cured aneurysm of the ascending aorta was found after death in a leper. He had also been struck with the rapid healing power in lepers after operation. He had therefore estimated the fibrin in fifty lepers, and had found the percentage to be as follows: in seventeen tuberculated cases it was '78 per cent.; in twenty anæsthetic cases it was '79; and in thirteen mixed cases it was '72; mean percentage, '76. In only two of the cases was the percentage below '2—that usually given for normal blood. His analyses agreed fairly well with those made by Daniëlszen, Boeck, and Bidentkap.

A discussion then took place upon the preceding four papers.—Professor ROY asked as regards the mesenteric glands in Dr. Coats' cases, and spoke in support of Dr. Hunter's views on pernicious anæmia.—Dr. LINDSAY STEVEN criticised the papers on pernicious anæmia, holding that the distinctions between this disease and paroxysmal hæmatinuria had not been fully drawn.—Dr. RAKE stated that the anæmia due to *ankylostoma duodenale* was indistinguishable clinically (apart from the examination of the stools for ova) from pernicious anæmia, and that in all cases in which he had found these parasites in the intestine after death he had also found anæmia.—Dr. ABRAHAM had recently returned from visiting lepers' hospitals in Norway, and confirmed Dr. Rake's observations as to the quick healing after operations on lepers.—Dr. LOGAN agreed with Dr. Coats that the fat must be produced quickly, but believed it to originate from the albumen of the blood—drawing an analogy from the great amount of fat suddenly produced from the albumen of the hepatic and renal cells in acute yellow atrophy.—Dr. COATS protested against the idea that in pernicious anæmia the red marrow undergoes a hyperplasia; and, in reply to Professor Roy, stated that in his cases the mesenteric glands were enlarged, but beyond that were not diseased.—Dr. HUNTER also replied.

"An Anomalous form of Eczema" was the title of a paper read by Dr. E. D. MAPOTHER of London. Three cases were detailed in which a florid oozing surface had developed over the tragus and the hairless skin in front of it, in females, strikingly like Paget's disease of the mammary areola. The patients were of the diverse ages of forty-five, forty, and twelve. The great size of the sebaceous glands and other analogies of the two sites were set forth. No malignant tendency was manifested, and after some months the open surface healed, having been treated with an ointment of carbolic acid, mercurial ointment, and lanolin. A slightly depressed and unpigmented cicatrix resulted in all cases.

Brigade-Surgeon SIBTHORPE recorded a case of *Filaria Sanguinis Hominis*, in which he had obtained the cephalic

end of a female and the caudal end of a male mature worm wriggling on the cut surface of a scrotal tumour just removed from a native Christian cook of intemperate habits. The man was forty-seven years of age, and had enjoyed good health till four years previously, when he became subject to attacks of fever coming on once a month, with painful swelling of the scrotum. Elephantiasis was common among the people in his neighbourhood (in India). His blood had been examined the night before operation, and embryos found.—Dr. COATS spoke of the difference between elephantiasis and “lymph scrotum.”—Dr. RAKE stated that he had failed to find filaria in cases of elephantiasis and chyluria examined by him in Trinidad.—Professor BOYES SMITH, referring to the nocturnal habits of the parasite, stated that he knew of cases in which the host became nocturnal in its habits, and then the embryos were found in his blood during day. He regarded lymph scrotum and elephantiasis as the same disease.—Dr. SIBTHORPE recognised a difference between lymph scrotum and elephantiasis. He had failed to find embryos in the blood of those suffering from hard elephantiasis.

Dr. ROBERT WILSON showed the specimens from a case in which a large number of Foreign Bodies were removed from the Duodenum of a Lunatic, and shortly detailed its history. The patient had been under observation and in bed for six months, so that all the articles must have been during that interval in his bowel. The pylorus was covered with gastric polypi. The duodenum was dilated. Shortly before death he vomited a large nail. Other twenty-five foreign bodies were found in the duodenum, weighing together half a pound.

A magic-lantern demonstration of the Tracts and System Diseases of the Spinal Cord was thereafter given by Dr. ALEXANDER BRUCE of Edinburgh.

OTOLOGY.

The Otological Section commenced its sittings on Wednesday, the 8th inst.

The PRESIDENT (Dr. Barr), in his introductory remarks, dwelt on the importance of the study of otology. He spoke of the meagre attention which in times past had been given to this subject, and complained of the way in which even now it was treated in the curriculum. Of the many advances which have been made in the elucidation and treatment of aural affections, he claimed for British surgeons many of the most important. At the close of his remarks he showed two cases where Dr. William Macewen successfully trephined the skull for the evacuation and cure of cerebral abscess. One, a boy, was operated upon eighteen months ago. He had been the subject of otorrhœa for a considerable time, and this latterly resulted in abscess in the temporal region. The second patient was a young man who had purulent discharge from one ear during eight years, and this ended in symptoms pointing directly to intra-cranial abscess. He was operated upon three months ago, and, save a very insignificant quantity of purulent discharge, is now well, the perforation in the skull being filled with firm bone.

Dr. MCBRIDE (Edinburgh) followed with a paper on the Conditions calling for Perforation of the Mastoid Portion of the Temporal Bone and the best Methods of Operating. Opening the mastoid should not, in his opinion, be delayed when serious symptoms threaten. Pain, which he considers the most important of the symptoms, is usually proportionate to the emergency of the case. In performing the operation he makes use of the chisel and mallet.—Dr. MACEWEN (Glasgow), in speaking of the cases where such operative measures should be resorted to, said that, where there is a discharge from the ear which persists notwithstanding the efforts of a specialist under whose care such a case should be, the mastoid should be drilled. Such a patient is constantly liable to develop cerebral abscess or septic pneumonia from absorption of the septic material which burrows from the mastoids round the lateral sinus. Such a case he detailed in illustration. In this operation Dr. Macewen would not use the chisel and mallet, but prefers a burr—a dental burr—by which no shocks are produced in its use. He also stated that cerebral abscess was of very much more common occurrence than was generally supposed.—Dr. STEWART (Nottingham), who followed, spoke less of the conditions calling for the operation, than of the method of performing it. This, he thought, was much more difficult than one was usually led to understand, and

he detailed two cases where he had failed to “strike” the antrum.—Dr. WARDEN (Birmingham) detailed two cases, one of congenital affection of the ear (inflammation of the auditory passage followed by cerebral abscess), and one of cerebral abscess from ear disease ending fatally.—Dr. LAURENCE TURNBULL (Philadelphia, U.S.) spoke of the use of boric acid in the treatment of otorrhœa and as a preventive of mastoid abscess. He had used it largely during the last ten years, and, though frequently “packed in,” had had no bad results. But there were precautions to be taken in its use. It should be very finely powdered, and it should be heated to destroy impurities, especially of a fungoid nature. Constitutional treatment was often of great value in masked cases, and all polypoid growths should be entirely removed, as they were almost the evidences of dead bone.—Dr. LEWIS (Birmingham) spoke of five cases of cerebral abscess, one of which he considered as resulting from packing of boric acid. Free drainage he thought of the utmost importance in the treatment of mastoid abscess.—Dr. WALTON BROWNE (Belfast) stated that after opening the mastoid antrum he passes a tube in by the meatus, and out through the opening in the mastoid. He has all purulent secretion removed after opening by suction. In the treatment of cerebral abscess, of which he has had two cases, he has experienced great difficulty in keeping the drainage tube in position.—Dr. WALKER (Pollokshaws) spoke of suction in the removal of pus through the meatus, which he had seen successfully employed.—Dr. FARQUHARMATHESON (London) considered that in most cases occurring in young people the inflammation affects primarily the periosteum of the mastoid process, and if skilfully treated it goes no further. Generally simple treatment, cleanliness, and counter-irritation suffice.—Dr. JAMES BLACK (London) was glad that it should go forth from the meeting that patients, while under treatment by means of boric acid, should be under careful supervision by the surgeon. By means of a skull he showed that if the ordinary directions for opening the mastoid antrum were followed, the lateral sinus would be directly entered. He, like Dr. Stewart, detailed cases in which he failed to open the antrum.—Dr. MCFIE (Glasgow) spoke of the benefit to be derived from honestly detailing cases of failures as well as successful cases, and mentioned a case of a boy who was brought to hospital in an almost comatose condition, and where in attempting to reach the antrum he had opened the lateral sinus.—Dr. BARR complimented the speakers on the candour shown by those taking part in the discussion, and called on Dr. MCBRIDE, who, in replying, stated that notwithstanding what had been said to the contrary, he still preferred to use mallet and chisel; and in this he had the support of German authorities, who say that any other method is unjustifiable. If the lateral sinus be opened by chisel, the wound is a clean cut, and heals by first intention. The supposed injury by the shocks in using the mallet are purely theoretical. When perforation in membrane is small, anything which tends to close this, such as boric powder, is, in his opinion, dangerous.

On Thursday this Section resumed its work with a discussion on Adenoid Growths in the Naso-pharynx, their influence on the middle ear and their treatment, introduced by Dr. Lennox Browne (London). As regards the pathology of these growths, he thinks there is little to be distinguished between hypertrophy of the pharyngeal tonsil and adenoid growths. The exanthemata are sometimes followed by the appearance of these growths, and he spoke of some cases where diphtheria seemed to be the exciting cause. Enlarged tonsils and adenoid growths frequently coexist, and tinnitus is not uncommonly caused by the presence of these growths in the naso-pharynx. In some cases they not only affect the hearing seriously, but speech becomes thick, and in some few cases they produce stuttering. In their treatment, Dr. Browne considers the finger-nail the most useful instrument, even in cases where these growths are of an almost fibrous nature. With the finger-nail the whole space can be cleared out at one sitting, and without anaesthetics.

Dr. WM. HILL (London) then read a paper on the Role of the Pharyngeal Tonsil in Health and Disease, in which he discussed in detail the structure and function of the pharyngeal tonsil and its place as a factor in disease of the middle ear.

Dr. MCFIE read for Dr. A. BRONNER (Bradford) a few notes on Cases of Adenoid Growths removed by the finger-nail and Hartman's curette. He spoke of the frequency with which adenoid growths occur, and of the large proportion of cases of middle-ear deafness in which they are

present. After a large experience he considered Hartman's curette the best instrument for their removal.

Dr. FARQUHAR MATHESON (London) followed with a paper on the Symptomatic Relation between Stammering and Stuttering and Disease of the Nose and Naso-pharynx. He detailed several cases of stammering where, after careful treatment of various abnormal conditions of the nose and naso-pharynx, the stammering had been cured or improved.

In the discussion which followed, the point on which the greatest divergence of opinion took place was in regard to the best method of removing the growths, the finger-nail being specially objected to by the President, as likely to lead to serious results from the impossibility of having it absolutely clean. Hartman's curette, Löwenberg's forceps, and the use of the finger-nail were each lauded by different speakers.—Dr. LENNOX BROWNE, in replying, stated that with it the part could be *thoroughly* cleared at one sitting, and without use of anæsthetics; that the finger-nail could be made perfectly clean, and that he had never seen any bad result following its use. After removal of the growths in cases of middle-ear deafness, he delays the use of Politzer's bag for a few days.

On Friday, before beginning the ordinary business of the day, Dr. C. LEWIS (Birmingham) and Dr. PATRICK MAXWELL (Dublin) exhibited and explained their special modifications of chloride of ammonium inhalers. That of the former gentleman is after the pattern and of the same principle as Godfrey's inhalers, but made of thin glass, and thus less in price. Dr. Maxwell's, on the other hand, consists of a tube in which is placed powdered ammonium chloride, which, from application of heat by means of a spirit lamp, is volatilised. The fumes of this apparatus are perfectly neutral, and do not require to pass through water.

Notes of a Case of Severe Cellulitis of the Neck, with Partial Paralysis of the Right Arm, following Acute Otitis Media, caused by a blow on the ear at school, were then submitted by Dr. LEWIS of Birmingham. Dr. ERSKINE (Glasgow) showed (1) a Cochlea and other Sequestra, removed in a case of chronic otitis media, and (2) an unusually large Auricular Appendage.

A discussion followed, the subject being the True Value of those Aids to Hearing usually termed "Artificial Tympanic Membranes." This was introduced with a paper by Dr. LAIDLAW PURVES (London), read in his absence by Dr. McFIE. He spoke less of the forms of artificial membrana tympani than of the varying conditions of the middle ear, in which they are found to be useful. Even when there is no perforation, they may, and especially those made of cotton-wool, sometimes be found to so alter the calibre of the meatus as to permit vibrations to enter more freely and directly, and thus increase the hearing power of the patient.

This paper was followed by one from Dr. LAURENCE TURNBULL (Philadelphia), dealing largely with the history of the Artificial Tympanic Membrane, the various forms now in use, and the conditions in which they may prove helpful. In the course of the remarks which followed, the efficacy of the various forms was discussed by several speakers.—In addition to the more usual forms, Dr. WALKER DOWNIE (Glasgow) spoke of the employment of pellicle of egg in the closure of perforations of the membrana tympani after all suppuration had ceased. Before use it is dipped in a saturated solution of boric acid, and, if carefully applied, may remain *in situ* for several weeks.—Dr. LEWIS followed with some remarks on the fraudulent treatment of the deaf by impostors.—The President and others expressed the opinion that the so-called "ear-drums" so largely advertised, and which consist of a piece of india-rubber fixed to a metallic stem, often cause serious injury to persons already suffering from defective hearing. It was also stated that the number of deaf persons who may derive benefit from the use of such is small, probably not more than 2 per cent., and that this form—the rubber disc or stem—is the least useful form.

At the end of the discussion, on the motion of Dr. WARDEN, a hearty vote of thanks was awarded the President; after which the meeting (probably one of the most largely attended of the Otological Section) was brought to a close.

PSYCHOLOGY.

On Thursday, the 9th inst., Dr. A. CAMPBELL CLARK read a paper on the Sexual and Reproductive Functions—Normal and Perverted—in relation to Insanity. He divided his subject into three sections: (1) Menstruation—

its Commencement, Irregularities, and Cessation; (2) the Sexual Instinct and its Abuse; (3) Pregnancy, Parturition, the Puerperal Period, and Lactation.—Dr. SAVAGE discoursed on Mental Disorders associated with Engagements and Marriage.—The subjects of these two papers being closely related, they were discussed together.—Dr. CLOUSTON, in the course of some remarks, referred to the frequency of the presence of a septicæmic condition of the uterus in cases of puerperal mania.—Drs. Wigglesworth, Campbell, Savage, Turnbull, and Howden also took part in the discussion.

Dr. CLOUSTON initiated a discussion on the Principle of Construction of an Asylum for Private Patients of the Richer Classes—say for about 150. In the course of his remarks, he said any improvement which might be thought of in asylum construction would be to a great extent lost if we did not at the same time improve the accommodation of our attendants.—Drs. Urquhart, Campbell, Mould, Howden, and others took part in the discussion.

Dr. FRANCIS WARNER made some remarks on Methods of Examining Children in Schools as to the Development and Condition of the Brain. At the conclusion of his paper he moved the following resolution: "That the Section recommend to the Council that a committee be appointed to conduct an investigation with regard to the average development and the condition of brain function among children in primary schools." This was seconded by Dr. SHUTTLEWORTH, and agreed to by the meeting. The discussion on this paper was adjourned till Friday.

On the invitation of the directors of the Glasgow Royal Asylum, the members of the Section drove out to Gartnavel, where lunch was served. The wards were afterwards visited.

On Friday, the 10th inst., the discussion on Dr. Warner's paper on Methods of Examining Children in Schools as to the Development and Condition of Brain was resumed.—Dr. IRELAND, in the course of some remarks, referred to the evils of the system of payment by results, and said that while compulsory education might be of advantage in large towns, he believed the old Scotch system was better, on the whole, than that of the present day. To force children of five years of age to be sent to school he considered was a mistake, it being a well-known fact that children did not all come to maturity at the same age. He was of opinion that it would be necessary either to have an inquiry so as to eliminate backward children, or to give up the compulsory clauses of the Education Act in the first two or three years of school life.—Drs. HACK TUKE and FLETCHER BEACH pointed out the value of the auxiliary or intermediate schools that existed in some parts of the Continent for such children.—Dr. YELLOWLEES also supported Dr. Warner's proposal, and thought the scope of the inquiry should be widened so as not only to include weak-minded children, but all ranks and conditions of brain development.—Dr. WARNER again read his motion—"That a committee be appointed to conduct an investigation as to the average development and the condition of brain function among children in primary schools, and that their report be sent to the editor of the *Journal* for publication." This was seconded by Dr. SHUTTLEWORTH, and agreed to by the Section.

A committee was then formed, composed of the following gentlemen: Drs. Fletcher Beach, Brodie, Clouston, Ireland, Conolly Norman, Savage, Shuttleworth, Hack Tuke, Warner, and Yellowlees. This committee was empowered to communicate with the Council of the Association and request them to grant a sum to enable the inquiry to be carried out.

Dr. FLETCHER BEACH read a paper on Cases of Disease of the Brain in Imbeciles.

Professor BENEDIKT (Vienna) read a paper on the Clinical Results of Craniometry and Cephaloscopy in Diseases of the Mind and Brain.—Dr. GAIRDNER, in proposing a vote of thanks, expressed his wonder at the patience, accuracy, and clearness of aim shown by Professor Benedikt.

Dr. HACK TUKE read a paper on Hallucinations. His conclusions on this subject were as follows: 1. That the revival of a sensory impression in idea alone does not call into action any infra-cortical sensory organ or nerve. 2. That when this revival is so intense as to induce hallucinations, although they are not projected externally, there is still no reason to assume more than an internally vivid action of the cortical cells representing sensory impressions. 3. That even when those hallucinations are projected outwardly there may be in some instances no action of the peripheral sense organs and nerves, but there may be in such cases a

backward current as far as the sensorium. 4. That the proofs of the peripheral sense organs being sometimes involved, even when these hallucinations originate in the cortex, are very forcible; for example, in visual hallucinations, if the object seen follows the motions of the eyes, conceals real objects, and is projected, the presumption is in favour of this view. 5. That Brewster's test of the subjectivity of an object alleged to be visible is, in Dr. Tuke's experience, reliable.—Professor Ball (Paris) and Drs. Robertson, Mickle, Yellowlees, Ireland, and Savage took part in the discussion.

Papers were also read by Dr. OSCAR WOODS on a case of *Foie à Deux*, and by Dr. MICKLE on *Antifebrin*.

The business of the Section was concluded by awarding a vote of thanks to Dr. Howden (the President), and to Drs. Urquhart and Newington (the secretaries).

THE LUNACY COMMISSIONERS' REPORT.

THE report for the year 1887 made by the Lunacy Commissioners to the Lord Chancellor renders a somewhat less favourable account than on some recent occasions of the state of our lunatic asylums and of the patients under treatment. Among the unsatisfactory features disclosed is a very considerable increase this year in the total number of persons under restraint. This increase is actually of 1752 persons, and considerably larger than in any one of the three immediately preceding years. Coming as it does, moreover, at the end of a period of gradually retarded growth in the volume of these figures, it dashes hopes which had perhaps too readily been entertained that the history of mental disease in our midst had passed its worst period. We cannot, however, concur in some views that have been publicly expressed, and are based, as it seems to us, upon a mistaken reading of the statistical tables which the Commissioners have appended to their report. A gradual augmentation in the number of patients under treatment for mental disease is quite indisputable, and it would, indeed, be very strange were the fact other than it is; but we see nothing in the present report to justify the conclusion that this growth in the number of patients is not due, in some very considerable measure at least, to a more extended use of the facilities of treatment, rather than to a corresponding increase in the spread of disease. The difficulty of drawing any exact inference upon this point is well illustrated by the report, in which the Commissioners remark that "the recovery rate of 1887 is considerably below the average of the three preceding years, whilst its mortality has also been below that of 1886. This diminished recovery-rate," they add, "together with a reduced mortality, results in *accumulation*, and accounts to a considerable extent for the greater increase of insane persons under care and treatment on Jan. 1st last, as compared with Jan. 1st, 1887."

The reduction of the recovery-rate is itself an unfavourable feature of the year's experience, and, if it had coincided with an increased mortality, it would have most unpleasantly suggested that the disorders of the class with which we have at present to deal had become more virulently mischievous. The circumstance that this is not so is so far reassuring; but it must, nevertheless, be admitted that the death-rate is still slightly above the average of ten years past. We are glad to call in aid the statement of the Commissioners, founded as it is upon a large and very intimate acquaintance with the inmates of the asylums, that since the commencement of the Parliamentary grant-in-aid a larger proportion than formerly of patients suffering from senile and other "chronic and hopeless forms of insanity are now admitted into asylums and licensed houses." It would, we think, be a very useful addition to the statistical information of their report if the Commissioners would take an opportunity on some future occasion of collating the forms of madness reported for a sufficient series of years past to enable the reader to draw some definite conclusion upon this point. If the accumulation of chronic forms is the real explanation of some apparent want of success in the treatment of mental disease, this fact should be clearly brought out. There is, however, abundant reason to adopt all promising methods for the relief and cure of these disorders,

and we fully concur in the view expressed by the Commissioners that the passing of new patients through a course of lunatic hospital treatment as generally as possible is an experiment well worth trying. The difficulty as to expense ought not to be serious, for the system need not be universally applied until its utility has been proved by critical tests. We should be much surprised if it did not prove to be a measure equally productive of economy in the cost of the custody of the insane and improvement in their condition.

One or two passages in the present report call, we regret to say, for very grave comment. In particular, the case of G. T—, a patient in the — Asylum, admitted on Jan. 5th, who died on Feb. 22nd, 1887, in consequence of a fracture of *his sternum* and of *as many as sixteen ribs*, is one that cannot be suffered to pass into the oblivion which settles promptly down upon Parliamentary reports. The facts, so far as disclosed in the report, appear fully to justify the following serious conclusion which the Commissioners draw: "That the patient's death was due to the fractures of the ribs, caused probably by heavy pressure applied against a solid unresisting surface; that the injuries were not caused accidentally, nor by conflict with other patients, but by the violence of one or more of the attendants; and that some or one of them were fully cognisant of the way, the time, and the place in which the injuries were inflicted, and by whom." The report adds that "although the fractures occurred from six to nine days before death, the attention of the medical officers seemed only to have been drawn to the patient's state on the morning of the day of his death, when, besides the fractures of the ribs, inflammation and effusion of the pleura were discovered." In these circumstances, the suggestion that all the attendants belonging to the two wards where the patient had been kept should be dismissed unless the one or more guilty persons should be given up, or at least that they should all be treated as suspected persons until the actual culprit was identified, does not appear to us to have been too strong, and we should be glad to hear why the committee of the institution, after making a fruitless inquiry into the case, did not adopt the view of the Commissioners. Indeed, it seems to us that the case was one for the coroner, and it certainly is not characterised too strongly as the worst case that has occurred for many years in any asylum, public or private, in England or Wales. This is what the Commissioners say about it, and we think that we may add that the public will so far share their views, now that so much has been made public, as to demand a full explanation by the responsible authorities or an inquiry by a competent officer.

INFRINGEMENT OF THE DENTISTS ACT.

AT Worship-street Police Court on the 14th inst., Dr. Huntley and Dr. Coe, summoned as of the American Dental Institute, 44, Finsbury-square, appeared to answer a charge of having, on July 27th, taken and used the letters D.D.S., or some other name, title, or description that they were registered under the Dentists Act, 1878, as specially qualified to practise dentistry, whereas they were not registered under the said Act. Mr. Melsheimer, who supported the summonses, stated that the American Dental Institute advertised as of St. James's-square, Finsbury-square, and Thurloe-square. The principal was a Dr. Clifford, who was registered. In the pamphlet issued by the institute the names of Dr. Huntley and Dr. Coe appeared, followed by the letters D.D.S. (Pennsylvania University), and D.D.S. (Boston College) respectively; but neither of those qualifications was recognised by the General Council of the British Dental Association, which only recognised under the Act the degrees conferred by Harvard and Michigan Universities (U.S.A.).

Mr. Waddy, for the defence, admitted that the defendants were not registered, but said they could not be, although duly qualified. He thought the Act a most mischievous one, and that the exclusion of such colleges as those from which the defendants received their diplomas was never intended to have the effect of preventing their practising as qualified persons in this country. If the British Medical Council would recognise that fact, there would be more

sense than in their playing the part of the three tailors of Tooley-street. Mr. Waddy then proceeded to argue that the defendants had not offended against the legal intention of the Act by announcing themselves as D.D.S.'s, because that was not a recognised special qualification; and he said it would be as stupid to take it as meaning that as it would be to assume that a gentleman entitled to put D.D. after his name thereby announced himself as a capable theologian, or that one writing M.A. (often a purely honorary degree) after his name was capable of editing a Greek play.

Mr. Bushby, in subsequently delivering judgment, said: The question here is whether the defendants, by describing themselves as "Doctors of Dental Surgery" of Pennsylvania University and Boston College respectively, have used titles implying that they were registered under the Dentists Act, 1878, or that they were specially qualified to practise dentistry. In either case, since they were not, in fact, registered, they would be liable under the 3rd section to a penalty of £20. The Act seeks to protect the public against quacks and knaves by the following among other provisions:—"Persons styling themselves dentists must be on the Register, and are liable to be struck off for misconduct. Before being registered they must satisfy the general registrar that they have proper certificates of competency, and only such foreign certificates are admissible for the purpose as are recognised in the list published by the General Council." Now, certificates from Pennsylvania University and Boston College are not included in this list. I think, therefore, that the defendants cannot be said to have used titles which imply registration, and the only remaining point is whether the titles imply a special qualification to practise dentistry. It was urged for the defence that the words "specially qualified" must be restricted to recognised qualifications, such as "D.D.S. of Michigan," or "D.D.M. of Harvard." But this would go far to cripple the Act, for the only titles verbally specified in the 3rd section are "Dentist" and "Dental Practitioner," and if persons by merely substituting such equivalents as "Dental Surgeon" or "Doctor of Dentistry," or as the defendants have done here, "Doctor of Dental Surgery," could escape, the protection to the public would be slight indeed. On the other hand, if the Legislature meant to enforce registration on everyone using a title which implied that he was specially qualified to practise dentistry in any way whatever, that person would come within the Act as effectually as if he styled himself a "Dentist" or "Dental Practitioner." The latter seems to me the rational view, and I therefore convict the defendants. Mr. Waddy has dwelt on the hardships of their particular diplomas being unrecognised as titles to registration. But before practising here I do not see why they should not have qualified by the means open to English dentists. Taking into consideration, however, that the clause might have been more clearly expressed, and no question has been raised as to the genuineness of the diplomas assumed by the defendants, I think it will be sufficient to impose in each case a fine of £5 and 2s. costs. The solicitor for the defendants intimated that he would give notice of appeal.

Analytical Records.

SCHWEITZER'S COCOATINA—ANTI-DYSPEPTIC COCOA.

(H. SCHWEITZER, KING'S-ROAD, ST. PANCRAS.)

GENUINE COCOA with a large proportion of the fat removed. It contains no sugar and no starch or other adulteration, and is very soluble. We found on analysis 30·17 per cent. of fat and 6·20 per cent. of ash. It is therefore an excellent article.

PURE DUTCH MILK.

(W. H. F. BARBE & CO., AMSTERDAM.)

The problem of milk preservation without concentration and without sugar or other antiseptics seems to have been solved. The sample now under review was contained in a glass bottle, with stopper secured by a caoutchouc ring. It was perfectly fresh when opened

although, like ordinary milk, it soon became sour. Our analysis shows that it is an average though not a rich milk:

	Per cent.
Solids (not fat)	9·72
Fat	2·50
Ash	0·72

We are informed, and can well believe, that such milk has been to India and back without change, and that in its unopened condition it will last fresh for as long as three months.

PURE RICH THICK CREAM.

(F. ROTHWELL, MILFORD, SURREY.)

Analysis gave the following results in parts per cent:—

Water	28·45
Fat	61·02
Casein, &c.	9·60
Ash	0·93
	100·00

No adulterant of any kind was present, and the cream must be pronounced of excellent quality and unusually rich.

BURY'S SNOWDRIFT CAKE FLOUR.

(JOHN BURY, 63, CORPORATION-STREET, MANCHESTER.)

The microscope showed the presence of starch and cane sugar, the latter easily extracted by alcohol. The preparation is pure and good, but presents no features of novelty.

DAHL'S DYSPEPSIA CAKES FOR CHILDREN—THE CHILDREN'S BREAD.

(DAHL'S AGENCY, 41, EASTCHEAP.)

This preparation seems to differ only in form and size from one we noticed some months ago. The cakes are unsweetened, and are light and spongy, resembling oil cake in appearance. They act, of course, as mechanical stimulants, and are pleasant in flavour and highly nutritious. Doubtless they will be found useful in certain cases.

LOEFLUND'S ALPINE MILK BISCUIT (POWDERED) FOR CHILDREN.

(LOEFLUND & Co., 146, FENCHURCH-STREET.)

The results of analysis show that this is a pure preparation of milk and baked flour. Its sugar is the sugar of milk, and it may safely be recommended as a satisfactory infants' food.

COMPRESSED BEEF IN TABLETS (NUTRIMENTIN).

(H. & T. KIRBY & CO., NEWMAN-STREET, LONDON.)

These tablets, which are only an inch in diameter, represent about as concentrated a form of food as it is possible to obtain. They appear to consist of pure meat; they dissolve easily in the mouth, and two of them in a cup of hot water yield excellent soup. They are very agreeable in flavour, and will be invaluable to travellers and invalids.

UNIVERSAL DIGESTIVE TEA, PREPARED BY PATENTED PROCESS.

(THE UNIVERSAL DIGESTIVE TEA COMPANY, LIMITED, CORPORATION-STREET, MANCHESTER.)

This tea is free from foreign and spent leaves, and is good in character. Analysis gave ash 7·18, of which 4·44 was soluble in water, and alkalinity 2·4. It is stated that in the process of manufacture "the tannin is entirely neutralised, and the injurious oils extracted." We must confess that to us this statement is unintelligible.

THE AIR OF PUBLIC BUILDINGS.—The elaborate report on the air of twenty-six public buildings in Newcastle, published in the columns of the *Newcastle Daily Chronicle*, has been issued in a separate form by Mr. Walter Scott.

THE LANCET.

LONDON: SATURDAY, AUGUST 25, 1888.

No better illustration of the widening conceptions of medicine could be afforded than that of the history of ideas regarding the uræmic state; for both as regards the phenomena of uræmia and their pathogeny we may claim to a far greater breadth of view than was current twenty or even ten years ago. That much remains to be cleared up no one can doubt, but that we have a firmer grasp of the subject than then is also patent. This was plainly brought out in the most interesting and succinct account of the subject laid before the College of Physicians by Dr. W. CARTER in his Bradshaw Lecture of last week. The facts and arguments he adduced are such as must commend themselves to the mind, for they were coherent and rational. We can all admit that under the head of uræmia are to be included a great variety of manifestations, of which the cerebral symptoms only form a part. There are gastro-intestinal, hepatic, cutaneous, and respiratory derangements, which may complicate renal disease, that are equally entitled to the term "uræmic" from our modern standpoint. Varied, then, as are the effects, we are forced to conclude that the toxic agents at work are equally complex, and thus the "theory of uræmia" must expand beyond the narrow limits formerly imposed upon it. Not one agent, but many and diverse, must be at work to produce these symptoms, which are the result of the more or less entire suppression of the urinary function, of which perhaps the defective elimination of urea is the least important feature. No one has more boldly insisted on this than Professor BOUCHARD, who in his lectures on "auto-intoxication" has done a great deal towards widening our views on this subject; and it is plain that Dr. CARTER has very largely assimilated the doctrines enunciated by this philosophical physician.

Indeed, the insufficiency of such views as that of TRAUBE, referring the nerve symptoms of uræmia to cerebral anæmia, secondary to cerebral oedema, was shown by Dr. CARTER, who demonstrated the entire absence of such oedema in well-marked cases; and similarly his criticism of BARTELS' contention that renal dropsy is a conservative process, the exudation retaining urea and other obnoxious products, was equally justified. In fact, his whole point was that uræmia is a toxæmia, and that anything which increases the blood flow to the nerve centres in a case of renal disease would of necessity add to the danger of producing the toxic effects. The poison is not urea, nor is it carbonate of ammonia, nor any single substance. It varies in character and amount in different cases, and there are doubtless many collateral circumstances to be taken into account which influence the amount and quality of the toxic agents. Normal urine is toxic, and if its excretion be suppressed in an otherwise healthy subject toxic effects are produced, provided that the compensatory elimination by the vicarious organs (lungs, bowels, and skin), be insufficient. A great deal has been made of the difference between the uræmia of suppression from obstructed

outflow of urine and that from integral renal disease. But we question if there is any essential difference in the process in these two cases. Uræmia in renal disease is multiform in its symptomatology, and uræmia from suppression may differ only in the absence of the more striking nervous phenomena, which are probably produced by toxic agents that are more likely to be found in cases where the kidney is diseased than in those where the disease is not in the excretory organ itself but in its outlets. Again we fall back on BOUCHARD'S exposition. He has shown that the most toxic constituents of the urine are the potassic salts and the pigment; but he has also demonstrated how under certain conditions, especially connected with the intestinal tract, other poisons may be formed, which, if the kidneys be diseased, are retained in the circulation and produce their ill-effects. The merit of BOUCHARD'S work seems to us to be this, that he has differentiated (up to a certain point), by their physiological effects, the various kinds of poisons that are eliminated in the urine in health and disease without in all cases being able to actually isolate the toxic agent. With our growing knowledge of animal alkaloids formed within the body, we can conceive of a lengthening catalogue of agents, which may be developed and cause injurious or fatal effects if retained in the body. If this notion be fully grasped, uræmia becomes far from being the simple process we used to conceive it. We see even the possibility of attempting to throw into two categories the cases of so-called uræmia—viz., those in which the symptoms are due to the non-elimination of materials found in normal urine, and those in which the poisons developed in the body from abnormal processes cannot be naturally eliminated. There is a manifest objection, however, to any such artificial distinction, and that is the impossibility of determining what is and what is not a normal product of excretion. The kidney is the chief eliminating organ, and any results due to its failure to act might reasonably be held to be uræmic, whether the elimination be of natural or of abnormal materials. The only safeguard against a *reductio ad absurdum* would then rest upon the recognition that the materials in question, the toxic agents, should be formed within the body. Much as we dislike the term "auto-intoxication," it yet expresses what is meant by uræmia in this sense; but that the term "uræmia" should any longer be regarded in its old restrictive meaning is impossible. In the last edition of his Principles and Practice of Medicine, the late Dr. AUSTIN FLINT truly says: "The uræmic symptoms are the result of the retention in the system of excrementitious materials. It is the entire mass of waste products and not any single element which is the source of the trouble. The nature of these waste materials is very imperfectly known." Practically this comprises the modern definition of uræmia, save that the "waste materials" must be also held to include all poisons, alkaloidal or other, which may be formed in the body, healthy or deranged, and which have to be eliminated by the kidney. It is only by taking this wide view of the subject that we can satisfactorily explain the varied phenomena of the "uræmic state," which, by the way, ought by no means to be limited to the acute, more striking, and more fatal manifestations usually associated with the term "uræmia."

On the all-important question of treatment, Dr. CARTER proved how, in great measure, the lines most usually followed, which have been found empirically of use, are adapted to the new views of the condition sought to be relieved. The wider conception of the sources and nature of the multifarious poisons point to a more extended area of treatment, and, again following BOUCHARD, Dr. CARTER showed how we should aim at preventing the accumulation of these toxic materials, how aid their elimination or effect their dilution, how destroy them by oxidation, or, finally, how antagonise or neutralise them. His exposition of the practical application of these principles forms not the least useful part of a valuable and instructive address.

A GREAT misfortune and indignity are impending over not a few of our readers. Some of them may not know of it, but this is not a case where ignorance is bliss. Others see the danger, and ask how they may save themselves. Last week we directed the attention of our readers to an illustration of the portentous development of specialism, in the title of an association to meet soon in Washington under the name of "Genito-urinary Surgeons." This group of gentlemen, including, we notice, some of the most honoured names in the history of American medicine, have, it is true, as we showed, with a delightful innocence, appropriated a somewhat large field for their special preserve, including diseases so widely apart as syphiloma of the vulva and interstitial nephritis. If the system of specialisation is to go on unchecked, there will not be many more September Congresses at Washington before the Association of "Genito-urinary Surgeons" will be broken into a hundred fragments, and we shall have yet more undignified uses of specialisation. The man who thinks he has a special knack of curing gonorrhoea will speedily dub himself a specialist, and find some way of announcing the fact to those whom it may concern. Two or three others will certainly arise, and they will want to form themselves into an association, which, to be distinctive, must have a still more unsavoury name than that of the Association of the "Genito-urinary Surgeons." Such a clique of surgeons might develop a great business, but we deny that they would advance either the science or the dignity of surgery. In the name of surgery we enter our protest—a protest in which we shall have the concurrence of the profession—against this disposition to label practitioners in groups, and to narrow their conceptions of disease. But it will be said that this is a distant matter, about which we need not concern ourselves in this country. We wish we could think so, but human nature is very much the same on both sides of the Atlantic. There are unpleasant indications in the profession in Great Britain of this very weakness. If anybody can be got to accept the responsibility of advertising the fact for a public that demands information on the specialty of a doctor as it might on the quality of a horse, and will tell it exactly who is to be trusted for brain, and who for chest, and who for less mentionable parts, the temptation will be great. Nothing will save us but reflection on the strong men who have built up medicine in its entirety, and on the tendency to degeneration which appears whenever men allow themselves to be labelled by small hands and petty distinctions.

We have before us a very startling proposal—viz., the publication of what it is proposed to call "The Dictionary of Medical Specialists." We are glad to think that the editor is not a member of the medical profession. Had he had those opportunities which medical men have of seeing the evils of specialism, we do not doubt he would have hesitated to give recognition to such evils. He really proposes to stimulate their growth. He has issued circulars to the profession, or to certain members of it, asking for information from them, which is to be a sort of trade mark, and which is to constitute a Directory of Specialists. He asks for the following particulars to be supplied by each gentleman to whom he sends his circular: "Name; address; qualifications; educated at —; specialist in —; appointments held; time of attendance; appointments formerly held; author of —; minor literary contributions; inventor of —; at home for consultation —." This last is a most business-like particular, but it is explained to be benevolently intended for the benefit of country practitioners. Full particulars are invited, and the editor trusts for co-operation in making the Dictionary complete. An alarmed correspondent sends us the circular of inquiry, with his name inserted, as it has reached him, and asks our opinion as to the means of preventing himself from appearing in any shape or form in the proposed medical advertiser. We heartily sympathise with our correspondent, and trust that his solicitude not to appear will be shared by all members of the profession. His best course will be to advise the editor that insertion in his Directory will be regarded as an injury about which he will have to consult his lawyer. This is the right view to take of such a Dictionary, and the one that is literally sound. A Medical Register exists, and it is now impossible for a man to be admitted into it without giving proofs that he is fully qualified to pursue all branches of practice. Here is an attempt to advertise that he is fully qualified only to practise one branch, or rather a bit of one. It is a derogation from the dignity of full qualification, and it is a reversal of the spirit of our law, that a man shall be deemed qualified in every branch of duty. It would, of course, be affectation not to admit that there is a specialisation of work in the medical profession, and that different men do different parts of medical duty with different degrees of skill; but the discovery of this specialisation is the work of the public and of the profession combined. It is not to be got out of the proposed Dictionary, and any man who helps in the construction of such a book will give evidence not so much of special skill as of special want of modesty and respect for the dignity of his calling and the breadth of his art. To supply data for such a Dictionary, or rather Directory, will be to advertise in an unblushing way, and to invite professional censure and distrust.

WHEN undertaken in a reverent spirit, ready to give all possible credit for earnest and sound work, nothing can be more salutary than an occasional retrospective account of the laborious stages by which we have attained our present knowledge. Careful investigation shows how frequently the onward wave of science has been retarded, and the results of experiment misunderstood or wrongly construed; but, as a whole, every historical survey must tend to increase our respect for the cheerful, hopeful spirit which prompted our

scientific forefathers in their work. A very large portion of Professor MCKENDRICK's recent address at Glasgow was devoted to a critical history of the successive steps by which we have come to our knowledge of the changes taking place during respiration. The chief difference in the work of the present age as compared with that of our forefathers lies, he holds, in the latter having been engaged in observing and explaining the "more *obvious* phenomena, whilst the modern physiologists are pushing their researches further, and are endeavouring to study the *hidden* phenomena, which, like a second order, lie behind these." (The italics are ours.) It may be worth while reminding Professor MCKENDRICK, or any who are disposed to think slightly of the ease of researches into the *obvious*, that in the dawning growth of chemistry and physics the obvious things of the past were infinitely more hard to appreciate than the *hidden* things of to-day. Respiratory or circulatory movements and other physiological changes could be recognised with the same ease that the symptoms of a disease might be observed, but their interpretation was a matter of extreme difficulty in the absence of a fixed basis formed by well-ascertained chemical data.

In reading Professor MCKENDRICK's history in the brighter light of modern science, the mystery which once enveloped the simple question of the cause or need for respiration seems surprising. In fact, it is almost difficult to realise that before the work of PRIESTLEY and LAVOISIER, towards the end of the last century, a clear conception of respiration was an impossibility. The bare fact of rhythmical movements of the thorax with an ingoing and outgoing current of air had been noted, but scientific investigators were wholly at a loss to find any satisfactory explanation of this fact. Guesses at truth were frequently made, and although the secret would appear to have been many times on the very verge of being discovered, yet from one cause or another the light became again dimmed, and the clue was lost in the tangle of confusion surrounding the gradual growth of chemistry and physics. The sciences walked hand in hand, readily lending and borrowing to strengthen their position. The history of physiology, more especially the physiology of respiration, demonstrates the ready facility of adaptation and application of new laws from kindred studies. Meanwhile the human race persisted in breathing, in defiance of the apparently irrational waste of labour involved in a process for which no definite cause or result could be found. Theories of explanation were suggested, but regarded as unsatisfying, and investigators continued their work in their various fields, keeping a keen observation upon each other's labours, and ever watchful for fresh physical or chemical discoveries which might throw light upon this function of respiration. In Professor MCKENDRICK's address the greatest interest lies in the way in which he traces the gradual growth of the lengthening chain of evidence of facts, which are now so familiar that we are apt to lose sight of the labour involved in their discovery. It is in no spirit of depreciation of the value or the difficulties of modern research that we venture to draw attention to the number of crystallised truths to be found lurking in so many of the neglected medical classics—truths, or half-truths, often clad in antiquated phraseology, often surrounded by an atmosphere of misty theory, and

yet showing considerable knowledge and foresight when tested by modern science. The true metal often lies loosely entangled in the débris cast aside by former workers. Many valuable germs of thought still lurk in forgotten treatises, waiting for the master mind to give them fresh vitality. The restless activity of to-day is ever calling for new work, and yet Professor MCKENDRICK, unconsciously perhaps, furnishes proof of the doctrine that all that is new is not necessarily true. The most recent contribution quoted by him, that of Professor ERNST FLEISCHL VON MARXOW, is carefully tested and finally rejected as untenable, although the author is complimented upon having produced "a work distinguished alike by the power of applying a profound knowledge of physics to physiological problems, and by a keen and subtle dialectic." The theory which is thus rejected seems to be as fantastic as novel, and challenges comparison with the downright force of BOYLE's conclusion that "the depuration of the blood is not only one of the ordinary, but one of the principal, uses of respiration"; and this conclusion, it is worth remembering, preceded the discovery of oxygen and of carbonic acid by nearly a hundred years. It was mere guesswork, perhaps, but the guess was the more remarkable in being fortified by a correct interpretation of the mechanism by which air entered the lung. Before his time there had been much controversy, as Professor MCKENDRICK happily expresses it, "as to whether the chest, with the contained lungs, resembled a pair of bellows, which was filled because it was dilated, or whether the lungs resembled a bladder, which is dilated because it is filled." To compensate apparently for the absence of instruments of precision, earlier investigators seem to have been granted a prophetic second sight, which, like the divining rod, frequently led to brilliant results incapable of explanation. They thought more and observed less, and while modern workers disprove many cherished notions of the past, they cannot but marvel at the frequency with which their own results have been foretold.

This very interesting address may well cause a feeling of justifiable pride in noting the enormous additions to our knowledge which we owe to the work of the last fifty years, but it cannot fail to increase our veneration and respect for those giants of science who had clearly foreseen much that has been only recently capable of proof. The historical method should also furnish a healthful stimulus in showing that the greatest results of the older investigators were obtained, not by keeping rigidly to one groove, but by judicious watchfulness directed to physico-chemical discoveries.

A REPORT by Mr. J. SPEAR has been issued by the Local Government Board, which tells the story of an extensive and interesting epidemic of enteric fever in the Local Board district of Mountain Ash, Glamorganshire. During the first half of 1887 only twelve cases of that disease came under the notice of the sanitary officials, but towards the end of July there was an enormous access of such cases; indeed, in two or three days no less than thirty cases were heard of by one medical practitioner in the Miskin district of the urban area. Close examination of statistics obtained later on showed that there was a defined epidemic area about the neighbourhood of Oxford-street, Mountain Ash, and it further appeared that sufferers outside that area

had contracted the infection within the epidemic area. An elaborate investigation was then made as to the conditions which had led to this outbreak, and which, even if generally diffused, must have acted with enormously greater force in the epidemic area. The sewers, which were locally suspected, were carefully examined in this respect, but their influence was soon set aside by a process of exclusion, and this the more easily because some groups of dwellings, even within the epidemic area, and which suffered severely, were altogether beyond their reach. Questions of age, sex, occupation, conditions of dwelling, &c., were likewise looked into. Milk infection seemed at first more than probable as a cause, for nearly 70 per cent. of the infected families dealt with one milk purveyor. But it was afterwards ascertained, amongst other things, that the infected area practically coincided with his milk "preserve," and that the conjunction of the two circumstances was accidental. Water supply was next investigated in much detail. At the onset an excess of fever was found to have occurred amongst those who took the public water supply, and it next transpired that just before the epidemic certain changes, which are minutely described, took place in the distribution of the water, suspicion attaching itself especially to the Oxford-street main. Thus, of houses newly supplied from that main, 70·3 per cent. were invaded; whereas of houses, even in the epidemic area, supplied from other sources throughout the epidemic, 3 per cent. only were invaded. Facts next became obvious to the effect that the water, in its passage through the Oxford-street main, had for some time past on various occasions been contaminated with the specific poison of enteric fever; and within a certain portion of its course there appeared to be a place at which, if fever infection could gain access to it, the conditions which resulted would naturally have been produced. Then comes a detailed account of the circumstances of this main and branches; of the custom adopted to close a certain valve, by which the water supply was temporarily cut off; and in the end it is shown that under the circumstances of an intermittent water supply, such as existed at the epidemic period, special danger attached to the consumption of water from branch mains and dead-end pipes. One special bifurcation of the main seemed to be the point where the mischief must have occurred, and this was at Henry-street. The Henry-street pipe was laid twenty-five years ago, and the Oxford-street main from which it passes, and which was relaid in 1885, seems to have been the subject of some work which was "very carelessly, not to say recklessly, done." Indeed, the main was carried, without any special precaution, immediately above, alongside, and even through old rubble drains; and, together with these circumstances, leakages were discovered within a short distance of the branching of the Henry-street pipe. Here we have the old story of an intermittent water service, suction of foul matters into water mains, and the distribution, through water as a vehicle, of some of the filthiest stuff that can possibly be delivered to unsuspecting and defenceless consumers. It is the story of Caius College, Cambridge, of Lewes, and of a number of other places told over again, producing in this instance 518 cases of enteric fever between July and October, with a mortality equal to 6 per cent. And the circumstances do not stand alone, even in Mountain Ash, for

it was only in 1885 that an outbreak of a diarrhoeal character occurred there, which suddenly attacked no less than between 800 and 900 people. The water supply was suspected as the cause, but it is stated that this view was proved to be wrong, because on chemical analysis it was ascertained that the water was of good quality and free from impurities. Whatever the cause really was, it is quite obvious that the results of an analysis of a given sample of water can have had but little bearing on the question whether filth had during an intermission in the service found its way into the supply that was delivered to the inhabitants a day or two beforehand. Up to 1887 the water supply of Mountain Ash was in the hands of a private company; since then it has been taken over by the sanitary authority, who will fully realise the imperative necessity of taking such steps as will free the service from such risk of accidental pollution as has been referred to.

But Mr. SPEAR's report contains one sentence that conveys a warning which is based on other experience than that obtained at Mountain Ash. It is common enough to accept it as proved that suction into water-mains takes place during intermissions; but it is not generally accepted that a very powerful insuction of external matters can take place into a water-pipe running full. It is only a few weeks since Mr. SPEAR brought this matter under the notice of the Epidemiological Society, when he showed by experiment that, given a fully charged but faulty pipe, insuction can and does take place, and that the insuction increases with the velocity of the current in the water pipe. In the discussion which followed the paper, Mr. BALDWIN LATHAM and Mr. ROGERS FIELD stated that the occurrence was one well known to engineers. We assume that they are correct, but we are bound to say that it is not one generally admitted by some who have concern with water services. And yet the fact is one of primary importance in connexion with the discovery of the causes of outbreaks such as those we have here considered; and the occurrence should be carefully borne in mind by all who have to do with the investigation of epidemics. Mr. SPEAR's report is most elaborate in its details, and it is supplemented by a considerable amount of tabular matter, and by some lithographic plates; it is an excellent example of a complete piece of etiological research; and we are glad to see that it is placed on sale as a public document.

THAT the late Mr. RIDLEY took his own life whilst labouring under an attack of temporary insanity there can be no shadow of doubt, but considering the extraordinarily conflicting testimony given at the recent inquest, it is extremely difficult, if not impossible, to arrive at a certain and just conclusion as to the causes underlying his insanity. Mr. RIDLEY was medical officer to the Tullamore Gaol, and in his public capacity had to attend medically to the political as well as other prisoners incarcerated in that prison. Amongst other prisoners of note, he had to supervise the health of the late Mr. MANDEVILLE, and Messrs. O'BRIEN, LANE, and HOOPER, members of Parliament. It was alleged, on the one hand, that Mr. RIDLEY was guilty of duplicity, inasmuch as whilst acting as medical adviser to the Tullamore Prisons Board, whose servant he was, he yet sympathised

with the political prisoners, and endeavoured to make their sojourn in prison less distasteful and painful to a greater extent than he was wont to do with "ordinary criminals." On the part of the authorities some letters have been published which were addressed to the Prisons Board, together with one to the Lord Chancellor. In these letters respectively he avowed his determination to deal loyally by the Board, in spite of the derogatory reports which appeared against him in the Nationalist press, and besought the Lord Chancellor to protect him from the aspersions cast upon his professional conduct and upon his humanity.

Mr. RIDLEY had undoubtedly a difficult post to fill, one in which it was impossible to give satisfaction to all parties, deeply stirred as they were by political strife. If the evidence tendered by Mr. MURPHY, the representative of the Prisons Board, be correct, Mr. RIDLEY acquiesced in the visits, examinations, and reports of Dr. BARR, the special medical visitor on behalf of the Government. But against this must be set the statements on the other side—viz., that Mr. RIDLEY differed from Dr. BARR most materially as regards the latter gentleman's recommendations concerning the treatment of the political prisoners, and that he did not hesitate to give expression to his opinion and belief. Again, it was argued at the inquest that the cause of Mr. RIDLEY's rash and fatal act was prompted by the mental depression consequent on his loss of practice and public credit owing to the reports of Mr. MOORHEAD, a medical man and a Nationalist, who, acting in his capacity as a magistrate, visited Tullamore Gaol expressly for the purpose of seeing the political prisoners. It is only fair, however, to say that Mr. MOORHEAD traversed the contention that his practice had increased at Mr. RIDLEY's expense, and, moreover, stated that, in his (Mr. MOORHEAD's) opinion, Mr. RIDLEY performed his official duties as a kind and humane man. The evidence "dragged" by cross-examination from a priest, that he believed Mr. RIDLEY a religious hypocrite and guilty of social offences, was not, to our minds, sufficiently substantiated to form ground for serious comment; nor does it seem to have been proved to have stood in causative relation to Mr. RIDLEY's insanity and consequent death.

Mr. RONAYNE, another medical man who visited Tullamore prison, is alleged to have written draft reports of visits before they were made, and to have amended and corrected them by the results of his observations. Unless Mr. RONAYNE be gifted with singular prescience, his method does not commend itself to persons accustomed to comport themselves with official exactitude. Reading between the lines, it is not difficult to see that Mr. RIDLEY had a somewhat thankless and unpleasant task to perform. If he acted loyally to the prison executive, he was sure to incur the obloquy, nay, even hatred, of Mr. BALFOUR's detractors and opponents. If, on the other hand, he allowed a sympathy with the political prisoners, his patients, to unduly influence his professional conduct, he would meet with the disapprobation and censure of the prison executive. It is but natural to suppose that, being of kindly heart and disposition, he allowed himself to be swayed first in one direction and then in another, committing perhaps "a pious fraud" on each party he strove to propitiate. Little acts of irregularity and words of equivocation that might not

have disturbed his mental quietude so long as they were not made to glare and clash in public became a host of terrors when brought into the fierce light of the anticipated inquisition. It was this, we opine, that drove him to despair and suicide, a victim to party strife and a martyr to a noble calling.

Annotations.

"Ne quid nimis."

THE HEALTH-CONDITION OF MANCHESTER.

THE Manchester and Salford Sanitary Association is to be congratulated on the success which has attended their efforts to arouse public interest in the terribly high death-rate in Manchester, which has so long discredited that city. There has been not a little discussion as to what has recently been the death-rate of Manchester, for at the threshold of the inquiry lies the question, What is the present population of the city? Fortunately, however, in this case the amount of population in dispute is not large, and while the medical officer of health claims for the city a population larger by 10,000 than is estimated by the Registrar-General, he admits that the two estimates are "sufficiently near to each other to give reasonable confidence of their general accuracy." He bases his estimate upon returns of inhabited houses, and applies to these rate-book houses the proportion of enumerated population to enumerated houses at the time of the last census. It is well known, however, that a census house and a rate-book house are not equivalent terms; this invalidates the method adopted by the local medical officer of health. The population of the city of Manchester, within the boundaries existing before their recent extension, showed a decline of 10,000 between 1871 and 1881, and it therefore seems improbable that the large increase estimated by the medical officer of health has taken place since the last census. Assuming, therefore, that the Registrar-General's estimate is in this instance approximately correct, we are faced with the fact that the mean annual death-rate in the city of Manchester during the seven years 1881-87 was equal to 26·8 per 1000, while the rate in the aggregate of the twenty-eight great towns dealt with in the Registrar-General's Weekly Return did not exceed 21·4 during the same seven years. Allowing full force to the argument that the Manchester death-rate is very unfavourably affected by the comparatively small and arbitrary boundaries of the municipal city and sanitary district, and the consequent density of population within its area, it should still be pointed out that Liverpool, with its still greater density, does not suffer from nearly so high a death-rate. The estimated number of persons to an acre in Manchester last year was 87·9, while in Liverpool it was 113·8; and yet, while the mean death-rate in the past seven years was equal to 26·8 in Manchester, it did not exceed 25·2 in Liverpool. There is, moreover, still stronger ground for saying that this high death-rate in Manchester is in great measure due to defective and inefficient sanitation. It is well known that since the passing of the Public Health Acts of 1872 and 1875 the national death-rate has shown a marked and continuous decline, which can only be attributed to the sanitary progress stimulated by those Acts. It is also well known that this decline of mortality has been far more strongly marked in urban than in rural districts, and that, generally speaking, the decline has borne a definite relation to the efficiency of the sanitary organisation controlled by the various authorities. Let us, therefore, compare the recent reduction in the death-rate of Manchester with the reduction in other and neighbouring towns. The mean annual death-rate in Manchester during

the ten years 1871-80 was 29.6 per 1000, and in the following seven years fell to 26.8, the decrease being equal to 9.5 per cent. In Liverpool the death-rates in the two corresponding periods were 28.5 and 25.2 per 1000, the decrease being 11.9 per cent. In that part of Manchester proper which constitutes the borough of Salford, the death-rate declined from 28.0 in 1871-80 to 22.3 in 1881-87, showing a decline of 20.4 per cent. Thus the decline in the recent death-rate of Manchester has been considerably smaller than in Liverpool or in Salford, although, as the Manchester rate in 1871-80 was higher than that in either of the other towns, there was obviously the largest scope for the operation of measures of sanitary reform. The recent deputation from the Manchester Sanitary Association asking the city magistrates to "exercise more efficient control over the drink traffic" may answer a useful purpose, as the effect of intemperance on the mortality and on general well-being is beyond all question. We fail, however, to see that the Association adduced any evidence to prove that the evils arising from the want of efficient control over the drink traffic were greater in Manchester than in other towns—in Salford, for instance,—great as it undoubtedly is. There is, however, an unquestionable connexion between neglected and insanitary dwellings and the evils arising from intemperance; and, if Manchester be in earnest in seeking for the cause of its terribly high death-rate, we recommend to its serious consideration the statement of its medical officer of health, in his recent report, to the effect that Manchester has expended nothing upon the improvement of the dwellings of its working classes, while Glasgow, for instance, has invested more than six millions of money for this purpose. It should also be stated that the death-rate in Glasgow declined from 30.7 in 1870-1-2 to 23.2 in 1880-1-2; the decrease being equal to 17.9 per cent.

INOCULATION FOR CHOLERA.

DR. GAMALEIA, of Odessa, who has studied the prophylaxis of hydrophobia in Paris under M. Pasteur, and under whose direction several institutions for the treatment of that disease have been founded in Russia, has communicated to the Paris Academy of Sciences (through M. Pasteur) a paper on the cure of cholera by inoculation. The procedure is similar to that adopted by M. Pasteur in hydrophobia, and experiments with the choleraic virus upon animals have been successful. As M. Pasteur himself has apparently concurred in the value of the results obtained by Dr. Gamaleia, the procedure in question may be assumed to be more firmly supported by rigid scientific facts than were the inoculations with which a few years ago Dr. Ferran's name was associated. It will be remembered that, although Dr. Ferran averred that his method was based on Pasteurian principles, M. Pasteur himself did not concur in his practice; nor had any practical result followed from the investigations pursued in Egypt by the French commission, one of whose members, Dr. Thuillier, lost his life from cholera during the inquiry. Moreover, in course of time it was abundantly proved that Ferran's inoculations were untrustworthy. Dr. Gamaleia's method is based on his discovery that pigeons inoculated with the blood of guinea-pigs which have been inoculated with cholera virus die from "dry cholera," with detachment of the intestinal mucosa; and that, moreover, the virus which has thus passed through the pigeon gains in intensity, so that it will kill pigeons in from eight to ten hours, and even destroy guinea-pigs. But when a pigeon was inoculated with the uncultured virus in the breast and in the abdomen, it became refractory to the cultivated virus of the highest intensity of virulence. By heating the culture broth to 120° C., and inoculating pigeons on successive days with small quantities, they became refractory to cholera. "The vaccine is sure and inoffensive when given in small doses and successively, and it is to be hoped that whole

populations may be saved by this method from Asiatic cholera." *The Times* correspondent (Aug. 21st), in forwarding an abstract of Dr. Gamaleia's paper, adds the following interesting details: "M. Pasteur, after reading the note, stated that Dr. Gamaleia had expressed his readiness to repeat the experiments at Paris, in presence of a committee of the Academy of Sciences, and to try on himself the inoffensive and sufficient dose for human vaccination. He is ready to undertake a journey into countries where cholera prevails to prove the efficacy of his method. M. Pasteur added that he need scarcely say that he accepted, with the greatest satisfaction, the offers to conduct the experiments in his laboratory made by Dr. Gamaleia. The letter was referred to the committee, which has a prize of 100,000*fr.* in its hands for a cure for cholera, and it was arranged that the experiments should be postponed till November." It will be interesting to hear what Professor Koch has to say upon these experiments, and the sanguine anticipations based on them.

THE NATIONAL PENSION FUND FOR NURSES.

A NEW prospectus of the National Pension Fund for Nurses has been issued, in which an attempt has apparently been made to disguise some of the defects in the scheme to which we have drawn attention. Thus, the "regulations under which nurses are invited to join the fund" have been remodelled, and the objectionable announcement that no one is "to be permitted to join the sickness fund without at the same time contributing at least three times as much per annum to the annuity fund" has been withdrawn. But we look in vain among the printed tables for one which will actually enable a nurse to arrange her benefits in such a form as best suits her own convenience, and the difficulty, though kept out of view, is still put in the nurse's way, who must take exactly what is prescribed or nothing. On one point a tardy admission is at length unreservedly made. The new prospectus contains the following reference to its rates:—"The Council of the National Pension Fund, as men of business, have considered it desirable to state not the highest but the *lowest possible pensions* nurses can receive for the contributions specified. These may be slightly lower than the pensions offered by one or two assurance offices for similar contributions, but *as the fund is a mutual fund*," &c. We pointed this out when the first prospectus appeared, and were met with the most extraordinary contradiction. We do not wish, however, to recur to that now closed controversy. We accept the admission, but we cannot acknowledge that there is any merit in the practice of which we have complained. The fund can pay a great deal more than the prospectus promises, and this is well known. It is no merit to misrepresent to the nurse what is the amount of the provision which she is making for her after-years, even though the misrepresentation takes the form of an under-statement. The proper course, as we have already pointed out, would be to promise the utmost that could be safely promised, and then to give what could be given beyond. The first prospectus contained a promise, conditionally expressed, of an advance upon the tabular scale amounting in some circumstances to as much as 60 per cent. In deference presumably to our comments upon the manifest absurdity of this, these estimates have been withdrawn, and the new prospectus gives only vague promises of bonus additions. But the facts remain, though we fear the emendation makes the statement more misleading than it was before. But the very worst blunder in the new prospectus is one that it is impossible to grow indignant about, it is so absurd in its extravagance. The tables have all been recalculated and a monthly premium inserted instead of quarterly, the rate of

premium being practically unaltered. This is so far good: monthly payments are better adapted than quarterly ones to the circumstances of a nurse. But the tables have been filled out in such an indiscriminating way that we find scores of quotations absolutely ludicrous if considered as serious suggestions of the possibilities of business. For example, we quote from Table A. This is introduced with a page of explanations, in the course of which the writer remarks: "This table offers large pensions for small contributions. On account of the low rate of contribution for pension secured, this table is suitable for nurses of forty and upwards." We turn to the table, and consult it at age forty-nine. We find that a pension of £15 a year, commencing at age fifty, may be secured by a *monthly payment of £20 18s. 8d.* It may be that in a mathematical sense £250 a year, payable by monthly instalments, is a "low rate of contribution" for securing an annuity of £15, but be that as it may, it is such a rate as only utter heedlessness could explain anybody's proposing for payment by a nurse making provision for old age. Even as a matter of mere calculation these quotations are ridiculous. Thus we have one monthly rate of premium quoted for all contributors of the age of forty-nine next birthday. This includes one who has just passed her forty-eighth birthday, and one who is just about celebrating her forty-ninth. The former would make twenty-four monthly payments to the fund before becoming entitled to benefit, the latter would make thirteen. Thus, for the self-same benefit two policyholders would be charged the one £502 8s. and the other £272 2s. 8d., and the one who delayed longer to entrust her savings to the fund would fare better. For the purposes of our illustration we have selected an extreme case, but the faults indicated run through the whole length and breadth of the prospectus, and the real significance of it all is this—that those to whose hands the administration of this fund has in practice been committed seem to be unable to appreciate even the most obvious conditions of the problem which they have undertaken to solve. That is why, speaking on behalf of the nursing community, we cannot accept their proffered good offices, notwithstanding that we should greatly like to see the fund which the liberality of the donors has provided turned to good account, in accordance with the givers' intentions.

THE TREATMENT OF PULMONARY ABSCESS.

In a paper in the *Revue de Médecine* (August), Drs. Spillmann and Haushalter discuss the subject of abscess of the lung following acute pneumonia—a somewhat rare event. They reproduce abstracts of nine recorded cases where pneumotomy was had recourse to—in seven with success. All these cases were operated upon long after the pneumonia had subsided, in two after the lapse of two and five years respectively. Surgical intervention should, in their opinion, not be delayed so long, owing to the risks involved both locally and generally in leaving an abscess in this situation unrelieved. The diagnosis is therefore all-important, and is based upon the supervention of hectic after pneumonic deferescence, of purulent or gangrenous expectoration containing shreds of lung tissue, fatty crystals, &c., and the physical signs of excavation. Recognising the frequent insufficiency of these latter signs, they urge the use of exploratory puncture, which was adopted in most of the cases referred to. Pleuritic adhesions may have resulted from the previous pneumonia, but in some cases they are lacking, and may have to be artificially produced, either by resection of a rib and suture of the pleural layers, as suggested by Rüneberg, or by exciting pleurisy by means of the cautery, as Cernville did. Rüneberg, however, does not think the absence of such adhesion contra-indicates the operation. The authors record a case of their own where signs of abscess at the right base appeared on

the fifteenth day of pneumonia, and where the diagnosis was confirmed by exploration. Glycerine and iodoform were injected into the abscess, but the patient died on the following day from collapse. The paper concludes as follows: "1. Before having recourse to operative intervention, one must be quite certain of the existence and site of the abscess by every method of diagnosis, and especially by exploratory puncture. 2. When an abscess is diagnosed in the course of pneumonia, intervention should, as a rule, not be entertained; but if the pneumonia is cured and the abscess persist, then intervention may bring about rapid recovery, or at least prevent serious accidents resulting from the opening of the abscess into neighbouring organs or externally. 3. Before opening the abscess, it is useful to provoke pleural adhesions, if these do not exist. 4. To reach the abscess, the best procedure seems to be resection of rib and piercing the lung by the thermo-cautery. 5. The complete escape of septic fluids must be effected by drainage; antiseptic injections are to be avoided, and dry dressings to be preferred."

RATIONAL EDUCATION.

It appears, and it probably is, inevitable that a certain degree of degeneration must accompany the progress of civilisation. This, indeed, is natural to any phase of life, just as friction is a property of mechanical action. There is in social life, however, a further and avoidable waste which is due to mismanagement of its machinery, and which acts through many different causes. Indolent luxury, petty and fretful social emulation, misplaced and untempered ambition, over-work, and other like sources of weakness contribute their several shares. What will be the effect of one or other influence must largely depend on the individual. Thanks to habit and to circumstances, however, our national error has been rather the misuse of energy than the abuse of ease. In our desire severally to accomplish our utmost we have not always remembered the might of method. In arriving at a rapid result we have, often too little regarded that order and discipline which are needful for a general advance. It is the business of education to implant a respect for this helpful discipline; yet we find that school itself has often been justly condemned as a sphere of disorderly pressure where the brain is made to labour in forced forgetfulness of the body's need of rest or training. We do not say that this is a rule unvaried by exceptions, but that it has been a common practice in every populous district we cannot doubt. Particularly does this become evident if we extend the meaning of the term "school" to the later studentship of adult life. The absorption of the physical into the mental has also a tendency to show itself more strikingly in the training of girls and women than of the male sex, and this point was carefully examined and treated in a lecture by Miss Chreiman delivered at the Parkes Museum a few months ago. Her observations were inspired by the very rational principle that it is necessary to develop the energies of mind and body together by suitable and sufficient exercise of both. For this purpose a variety of appropriate methods are employed. All asceticism or wire-drawn intellectuality is foreign to her doctrine, but it cannot be said that her plea for the culture of bone and muscle as well as nerve is contrary to gentle womanhood. Her system, though she refuses the term, is one that seeks to avoid all violence in application, and to adapt itself in its methods as far as possible to personal needs. The remarks on errors of refraction in the eye, the necessity for their early treatment, the influence upon them of light, posture, and the text of school-books, on unmerited punishments, and on distortions due to bad positions of the body are worth remembering. The general purport of this

lecture, since published, is, in short, healthy. It stands, happily not alone, as a reminder that refinement, which has brought us the evil of over-culture, affords also many means of subduing it by wholesome recreation.

PHYSICIANS' FEES.

FEW things are, in a small way, more annoying than the uncertainty with regard to physicians' fees. We feel sure that the annoyance is reciprocal, as well as the uncertainty. The patient does not know how to give; the physician was never, in the embryonic stage, taught how to receive. The very impecuniosity of the majority of our hospitals shows that the art cannot well be acquired within their walls. There can be no doubt that the old custom of wrapping up the fee neatly is dying out; in fact, it is bound to vanish when experience teaches the public that there may be something to gain by pausing to inquire "What is your fee?" The whole notion of the honorarium disappears before the idea that the physician is to assess the value of his services, and to name his price, instead of receiving the voluntary and grateful recognition of his skill. Notwithstanding the amount of gratuitous work performed in hospitals, the public cling fondly to the idea that charity begins at home, and seem to be ever on the watch to profit by notions of philanthropy. This idea is fostered by the sliding scale generously adopted by so many of the younger men, and this begets the uncertainty as to the amount. It has been suggested that cheques should replace coins. In consultations with the medical man who introduces the patient, or in recognition of advice given at the bedside, cheques would be preferable; but they might be regarded with suspicion if proffered by the casual unknown visitor. Even if everybody possessed banking accounts, cheques too are sometimes awkward; for instance, a few years back we heard of a patient who objected to drawing a cheque on Sunday, and preferred hunting up all his cash, so that the fee consisted very largely of silver, much to the discomfiture of the consultant. The most business-like way is undoubtedly to let the fee be made known to the patient before he enters the consulting-room. In what form he is to give it, or where he is to put it, must obviously be a matter entirely beyond control. It has been fairly earned, and there need be no false delicacy about receiving it in any way which the patient sees fit to present it.

EXPERIMENTAL NEUROLOGY.

THE influence of simple and epileptogenic excitation of the brain on the circulatory apparatus has been restudied by M. Francois-Franck. The divergence of opinion set forth on the effect of cerebral excitation on the heart and vessels is assigned as the reason for fresh experimentation. In the complete attack of convulsions commencing with tonic and going on to clonic spasms, the heart is first slowed during the tonic phase, and is accelerated during the clonic stage in proportion as the intervals between the shocks become more pronounced, but it persists most often in a marked degree after the end of the attack. In incomplete attacks of exclusively clonic spasms, either generalised or localised, the heart undergoes an excitement just as in the clonic phase of the perfect convulsion. Abnormal attacks characterised by the intercalation of a tonic period between the clonic phases also verify the belief that a tonic phase is attended with a retardation and a clonic phase with an acceleration of the heart's action. Next, the phenomena of internal epilepsy are studied, or rather the cardiac disorders of epileptic attacks masked by curarisation. Numerous experiments have established the correctness of the view that the majority of cardiac derangements produced by excitation of the brain in curarised animals are of epileptic order. In experimenting

on subjects of which a limb had been preserved as a witness of the attack, and preserved from curarisation by compression of the arteries or by an artificial circulation of normal serum, or in operating on animals curarised to a certain degree, it was observed that the heart slowed at first, and then became accelerated, if the access artificially circumscribed were successively tonic and clonic in nature. Cardiac acceleration was only observed if the attack was purely and simply clonic. When complete curarisation was the order, the same circulatory troubles were noted. The arterial pressure always tends to be elevated during epileptic attacks, as much by the mechanical effect of the convulsions as by the influence of respiratory troubles. But the principal cause of this elevation is owing to the energetic spasm of the vessels due to vaso-motor tonic action. This vaso-motor effect may be demonstrated in a great variety of ways—e.g., by section of the vagi, by atropine, by the coexistence of high pressure with retardation of the heart's action, by complete curarisation, and so forth. But the following result is most significant. When a vascular organ like the kidney or foot of an animal diminishes in volume and is retracted to the point of scarcely admitting arterial blood into its tissue, whilst, on the other hand, the general blood-pressure is elevated, the vaso-motor cause of the high tension cannot be questioned. Effects may be produced on the circulation by cortical alterations independently of the epileptic condition.

INDUSTRIAL CO-OPERATION.

THE first National Festival of the Co-operative Societies, held on Saturday at the Crystal Palace, is to be regarded as marking an epoch of happy omen in the annals of industry, and as affording a ground of hope that many of the evils attending production in large manufacturing towns, such as those we have recently exposed in connexion with sweating, may by and by become extinct. The principle which is understood to inspire the co-operative movement is familiar to most of our readers, and so doubtless is the fact that in many cases this principle has not as yet been satisfactorily reduced to practice. A system by which a workman or salesman is in a fixed proportion interested in the profits of his work is, on the face of it, a fair one, alike for the employed and the employer of labour. If carried out in sensible recognition of the duties and the dues of all concerned, it cannot fail materially to soften the harsh differences which have hitherto existed between masters and men. As one of the speakers at the late festival expressed it, the movement seeks to establish, by a process of social evolution, a desirable balance of profit in respect of any work between employers and employed, a balance which otherwise might only be attained by a social revolution. This rational form of communism can already claim to have created 1281 co-operative societies, with a membership of 833,811, business transactions which last year amounted to £31,233,322, with profits during the same period of £2,961,601. These figures are certainly encouraging, notwithstanding that their apparent meaning must in some degree be discounted because of departures from the ideal co-operative method. Necessity has forced the societies in many cases to act after the manner of the capitalist employer, and to pay their *employés* a fixed wage; especially has this custom prevailed among the producing industries. There have certainly been instances in which workers in workshops have reaped a proportionate harvest from the proceeds of their work, but, as a rule, this principle has taken effect in practice chiefly among the class of shop salesmen. It must also be admitted, however, that many of these latter continue in the position of wage-earners. The co-operative enterprise therefore is obviously not yet strong enough to discard the older, if more faulty, usages of business custom. It has nevertheless done good

work, and its prospects for the future are far from discouraging. The success of last Saturday's celebration will do something to enlist popular sympathy in its favour, and may well stimulate its promoters to labour with redoubled energy in a work so worthy of their exertions.

ELECTRICITY IN THE VOMITING OF PREGNANCY.

DR. GUNTHER of Montreux mentions, in a gynecological journal, five cases of the vomiting of pregnancy in which he found electricity of the greatest service. In none of the cases could any pathological condition of the uterus or its appendages be detected. Four of the cases were primiparæ. The remaining case was that of a woman who had had two confinements previously; in her first pregnancy she had suffered from sickness, but not in her second; in the earlier months of the latter, however, she had suffered from severe pruritus of the thighs. Some improvement only was obtainable by regulating the diet, but this was not of any long duration. Narcotics, too, had only a temporary effect. In the absence of pathological indications, we must seek for the explanation of the vomiting in the reflex action between the uterine and gastric nervous supplies, just as the tonsils are enlarged in asthma because of the relation between the cranial and gastric nerves. The female genital organs may be considered as related to other parts of the body from a vaso-motor point of view, and the occurrence of vomiting is probably sometimes to be explained from a consideration of that circumstance. In severe cases a definite degree of sensitiveness is present, and Dr. Günther believes that there is a functional neuralgia of a reflex nature. He applied the anode of a constant current in the form of a sponge, in a metal case covered with rubber, to the cervix. The cathode was a plate about four inches by five inches. This was applied over the spine, between the eighth and twelfth dorsal vertebrae. It is important to see that the current is not intermittent, and to use only one of a low strength. He commenced with two and a half to three milliampères, and never increased the strength higher than five milliampères. Each sitting lasted from seven to ten minutes. The vomiting ceased in four days, at the most, in all the cases. As some degree of nausea remained, the treatment was continued for some weeks.

SANITARY CONFERENCE AT ALNWICK.

A VERY lengthened conference has taken place at Alnwick between Dr. Page and Mr. Gordon Smith (of the Local Government Board) and the urban sanitary authority of the district, as to the adoption of new bye-laws for the town. In 1885 an official report was issued as to the sanitary state of Alnwick, from which it appeared that the place contained crowded courts and alleys, in which stables had been converted into additional dwellings; and that as regards crowding of dwellings on area matters were getting worse instead of better. Details as to this showed that in the lines of houses in the general thoroughfares there exist at every few paces narrow (often covered) entries, leading to courts and alleys, where the dwellings are so cramped together that free circulation of air is impossible; and, to make matters worse, stables, cowsheds, large middens, and pigsties contribute to increase the general unwholesomeness of the atmosphere. The case is obviously one for bye-laws regulating the provision of such amount of open space to the front and rear of dwellings as is necessary for the maintenance of health; but unfortunately it is against this very provision that a number of members of the sanitary authority have declared themselves. One said that such a requirement would prejudicially affect Alnwick; and another declared there was not a better ven-

tilated or a more sanitary place in the world than Alnwick. Such an attitude is deeply to be regretted, and it is to be hoped that a majority of the Local Board will decide wisely that a beginning of amendment must be made some day, and that the occasion for a new code of bye-laws should be utilised for this purpose. A bad code will mar the future of Alnwick; a good one will tend to improve conditions that ought never to have come into existence, and will in the end add to the prosperity of the place. The reconstruction of new and expensive dwellings on bad and crowded sites is the most effectual way of closing the door against improvement, and all who value the future sanitary interests of the town should endeavour to ensure by means of their bye-laws that new dwellings shall have such a reasonable amount of open space about them as shall secure their proper ventilation.

SMOKING.

MOST commonly, writers upon this subject have exhibited almost as much energy as is displayed in questions connected with alcohol. While some do not hesitate to describe it as a filthy habit, and to regard its votaries as addicted to a senseless form of degradation, others venture to raise their voice in favour of its soothing or even narcotic properties. A well-known writer lately gave his personal experience of smoking for twenty years, and advised young men never to smoke until the evening, after the day's work was over. He held that tobacco soothed or irritated according to the manner of its use; indeed, we would add that in many cases the habit is commenced far too early, and carried on injuriously when there is any weakness of the circulation. This applies to all forms of tobacco smoking; but an anonymous writer in a morning contemporary, dating from the Middlesex Hospital, has carried the discussion a stage further in asserting that the cigarette imported from Egypt or Turkey is mixed with some insidious poison. He alleges that he has found a large proportion of opium and of an unclassified alkaloid in samples of foreign manufacture, and he is convinced that a marked increase in cases of malignant throat diseases is to be attributed to this cause. The value of his remarks is considerably discounted by a subsequent official statement that the writer is unknown to the authorities of the hospital, and that he is neither a member of the medical or teaching staff, nor employed by the lecturer on chemistry. Is there really an increased frequency of malignant disease affecting the throat, or is the apparent increase merely the result of improved diagnostic powers? These are questions which would seem worth solving before speculating on the irritative action of opium or the unclassified alkaloid. We should hardly have expected Turkish or Egyptian cigarettes to be responsible for disease among out-patients of a hospital.

KISSING THE BOOK.

AN American contemporary in a recent issue alludes to the objection made by a certain physician to kiss a very dirty-looking Bible, which was presented to him for that purpose on the administration of the oath. His objection being overruled, he complied with the legal requirements under protest. Our contemporary considers the doctor's dislike to touch with his lips a book which may have come in contact with the lips of a number of dirty or diseased persons as quite natural. But, as another contemporary observes, no case of disease being communicated in this way has ever been recorded, and this is the most difficult point in the way of making any change in the manner of oath administration. Should a well-authenticated case occur, witnesses would then have a perfectly valid objection to kissing the book. Meanwhile, our American contemporary suggests that the Bible used in law courts might be bound in some

material which could be washed clean after being used. We reproduce the suggestion for what it may be worth, but would prefer to see the form of administration changed to that used in Scotland, with uplifted right hand—a form quite as solemn, and perfectly free from any objection.

RAILWAY CARRIAGE ACCOMMODATION.

NONE of us can afford to be indifferent to the controversy which is now being carried on with reference to the developments of railway travelling and the accommodation provided for passengers. One effect of the increased rate of speed, which is not entirely limited to the Anglo-Scottish lines, is an increased demand for lavatories in connexion with the carriages. In opposition to this demand, it has been said that the time spent between halting stations is no greater than before. This may be true, but the difficulty is not therefore to be regarded as settled. We have also to remember that the halts at stations are less frequent and of shorter duration than formerly. Again, it is objected that lavatories in sufficient number to be of general use cannot be supplied at the present cost of carriage. This objection is not difficult to comprehend, and it furnishes an argument in favour of the system of communication between carriages approved in America. For more reasons than one this arrangement has not been very favourably received either by the British public or the railway companies. Possibly present conditions may bring a change, and John Bull become willing to forego his habit of seclusion in order to do away with a substantial inconvenience. Another matter well worthy of attention at all times, and especially in the event of any long continuance of the racing mania, is the question of food supply on railway trains. Where is the traveller who has not over and over again supped or dined miserably at a railway station, amid the din of traffic, the worry and uncertainty of shuntings and changes of train, and while enduring the cruel comfort of indifferent fare consumed in haste and purchased at a round cost? Of the class of Pullman cars, those which afford refreshments are said to have proved most successful in this country. It might be worth while for the railway companies to try the experiment of catering for the wants of passengers on a more extensive scale. This arrangement, however, in order to work properly, would require the adoption of the system of inter-communication. If, as we are led to believe, the future construction of a train will consist in its division into only two classes of carriages, it may yet be found feasible to provide in a given train two refreshment cars, one for each of these main divisions. The requisite communication between carriages might not improbably be found to agree with the views of a majority of travellers. At all events, the experiment deserves a trial.

THE ABUSE OF HOSPITALS.

THERE is much reasonableness in Mr. Kesteven's letter to *The Times* on the abuse of hospitals. We are glad to see that he does not argue for the accuracy of the famous, or-fabulous, million said to be relieved every year in the London hospitals, and is even willing to accept *the half* of this number as the true one, and yet maintain that there is abuse. One sentence of his letter we cordially endorse: "Hospitals"—i.e., the ordinary hospitals—"never were intended for patients who can afford to pay for medical attendance, and by receiving such as patients they are simply prostituting the noble reputation to which such institutions lay claim." We cannot expel the poor from the hospitals and admit those who can pay without injustice and inhumanity to the poor. Of course, poverty is a thing of comparison. A man might be poor in relation to the calamity of stone in the bladder or cataract, and

well enough off in regard to all the common medical and surgical incidents of life. It is necessary not to be too absolute in our propositions. Mr. Kesteven would exclude all paupers from the benefits of our hospitals. We are sure that he does not mean this absolutely. Can the advantages of a pauper with a grave or obscure disease in a workhouse under one medical man, however able, be compared with those of the inmate of a general hospital with its whole staff of physicians and surgeons available for purposes of consultation? or would it be right to deny the pauper the benefits enjoyed by one who is equally unable to pay for what he is receiving? Mr. Kesteven urges with much force that a man seeking hospital relief should adduce evidence that he is a fit recipient for such relief as he claims. Our hospitals should bestir themselves to exclude unworthy recipients. No action on their part would so conciliate a critical public.

MORTUARIES.

THE duty of providing public mortuaries for the reception of dead bodies found exposed, or under other circumstances demanding a coroner's inquest, was the subject of remarks at two recent inquests. The first was before the deputy coroner for South West Lancashire, and was on a body cast up by the river Mersey, in a district where there was no public mortuary. A very strong opinion was expressed, both by coroner and jury, that the authorities were greatly to blame for not providing one, the present practice of depositing bodies within the premises of public-houses being most objectionable. The second inquest was held by the high bailiff of Douglas, Isle of Man, on the bodies of several tourists, who had been drowned in the sea, just outside the bay off Douglas Head. These were conveyed to the mortuary of the Isle of Man General Hospital, which, as in other hospitals, is only intended for the bodies of patients who have died in the hospital, and is not a public mortuary. It was found impossible to deposit them here, and they were placed in a position which exposed them to the view of passers by, a scandalous state of things which the high bailiff stopped by directing that they should be placed in shells. It may be well to direct the attention of local authorities to the provisions of the Public Health Act, 1875. For the purposes of this Act, the "local authority" means the "urban sanitary authority" and "rural sanitary authority." Clause 141 provides that "any local authority may, and if required by the Local Government Board shall, provide and fit up a proper place for the reception of dead bodies before interment (in this Act called a mortuary), and may make bye-laws" &c. It has been argued by some persons that this applies to infectious diseases only, but this is at variance with the plain words of the Act, and also with the fact that in the next clause (142) special provision is made for the removal of the body of one who has died of any infectious disease, or which is in such a state as to endanger the health of the inmates of the house, to any mortuary provided by such authority. Clause 143 gives local authorities power to provide a proper place for the reception of bodies during the making of post-mortem examinations ordered by a coroner. Such being the provisions of this Act, there is literally no excuse for those health authorities who persistently evade this very important part of their duties. Another Act provides for the interment of all bodies cast up on the banks of a tidal river, just as if they had been cast up by the sea. It must be remembered that every body found exposed is the property of the coroner till the conclusion of the inquest; and it follows naturally that a suitable place should be provided in order that the coroner and jury may view the body, and also for a post-mortem examination should this be considered necessary. But mortuaries are

also required for the reception of bodies which would otherwise be retained in rooms occupied by the living, where the death has not been from infectious disease, and where an inquest is unnecessary. In short, a public mortuary in every sanitary district is a necessity, not a luxury, and local authorities will do well to recognise this before being compelled to do so by the Local Government Board.

MEDICAL MISSION IN MANCHURIA.

FROM the report issued by Mr. Dugald Christie, L.R.C.S., L.R.C.P. Ed., the medical missionary of the United Presbyterian Church of Scotland stationed in Moukden, Manchuria, we learn that he has recently succeeded in getting a hospital erected with accommodation for fifty in-door patients, besides an out-door department. The medical mission has now been carried on for four years and a half, and though it has had many difficulties and much prejudice to contend against, it has now won its way to the hearts of the people, a number of important Chinese officials supporting it, and helping to supply funds for its maintenance. The term "family doctor" is unknown in Manchuria, and however famous the physician, if the first dose of the medicine administered does not give relief, his prescription is set aside as unsuitable or disapproved of by the gods, and another called in whose chances of success are as slender as his predecessor's. Of this Mr. Christie had an example recently in the case of a mandarin of important office and possessed of the highest literary degree. His child, who had previously been cured of an acute abscess which threatened its life, became seriously ill. The doctor was at once sent for, but the medicine not having the immediate desired effect, a native was called in. The foreign and native drugs were placed before the family deity, who was called on to direct as to which should be given. The climate of Moukden is in the main a good one; the temperature ranges from 95° to -17° F.; but though the cold is so extreme, the dryness of the atmosphere prevents its being felt. The poor suffer a good deal in the winter from pulmonary and rheumatic affections, also from frost-bite. Several cases of stricture of the œsophagus came under observation, caused in almost every instance by the immoderate use of native spirits, their irritating properties setting up inflammatory and other changes in the mucous surfaces. A large quantity of alcohol is consumed in the province, and several confirmed drunkards have applied for help in endeavouring to give up the habit. The evil effects of drinking, however, are not so manifest as in the West, as the stimulant is seldom indulged in on an empty stomach, but sipped out of tiny little cups during the meal. The quality is bad, containing a large amount of fusel oil and other impurities. Goitre is occasionally seen, and is said to be endemic in the hill country farther east. Cretinism is unknown. Opium smoking is very prevalent.

MR. PARTRIDGE AGAIN.

MR. PARTRIDGE is a persistent man. He is not easily turned aside from his purposes or the use of his once acquired titles. We might have thought that a man who cared to rely on advertising would care little about mere academic titles. But this does not seem to be Mr. Partridge's case. After his diploma of L.D.S. from the Royal College of Surgeons of Ireland had been removed—not so much for advertising, as one of our contemporaries says, but for breaking his promise not to advertise,—and after the Medical Council had, on due consideration of his case and the remarks of the judge to whom he successfully appealed against the removal of his name for the first time from the register, removed it a second time, he still continued to call himself dentist and to use the letters of his former title.

He has been summoned before Mr. D'Eyncourt for continuing to use titles which imply that he is still registered. Mr. D'Eyncourt fined Mr. Partridge £5, and three guineas costs. It remains to be seen whether this judgment will have any restraining effect. The contention of his counsel that his breach of the law was only technical is not correct. Mr. Partridge should take his choice. He should rely either on his advertisement or his skill as testified by his L.D.S. He has no right to enjoy the advantages of a professional qualification, and then drag it into the mire. Besides, it is more than a technical offence to advertise the possession of that which you do not possess. It is said that Mr. Partridge intends to ask for a writ of mandamus compelling the authorities to restore his name to the Dental Register. If so, we shall see whether the law recognises the right of the Medical Council to compel a man to keep his word, or regards his conduct as not disgraceful in a professional respect.

KREMIANSKI'S ANILINE TREATMENT OF PHTHISIS.

DR. M. P. SESLAVIN reports (*Protocol of the Caucasian Medical Society*, No. 23, 1888) that he has made trial of Professor Kremianski's system of aniline inhalations on some cases of phthisis in the military hospital at Tiflis, taking care that the surrounding conditions should also be as favourable as possible; a good cubic space was allowed for each patient. A spray of a solution of carbolic acid (1 in 20) was used daily, the floors were rubbed with kerosene, ozonisation was practised with oil of turpentine, and the wards were supplied with ventilating fireplaces. Highly strengthening diet was given. From 100 to 300 inhalations of aniline were taken daily; also from five to fifteen grains of acetanilide or antifebrin. In no case was any improvement observed; the number of bacilli in the sputum did not diminish; the disease, on the contrary, made further advances. The cough did not always diminish, and very frequently signs of the toxic action of the aniline on the heart's action were present.

DOUBLE SUICIDE.

An inquest was recently held at Fisherton Delamere, by the coroner for South Wilts, touching the death of Albert Sparey and Elizabeth Ann Yeates. The bodies of the deceased persons were found in a mill stream, secured together by a belt and two pocket handkerchiefs. On the bank of the stream letters were found addressed to their parents, stating that they "had lived and loved together, and both wished a watery bed. They fully intended to do it, for nothing could part them, and they died in a good cause." It is quite true, as the coroner remarked, that there was evidence of premeditation, and that they acted wilfully or under conscious motive; but, for all that, we fail to see that the deceased were not temporarily insane. Had each committed suicide independently of the other, we doubt if the jury would have returned a verdict of *felo-de-se*, as they did here, even though premeditation were proved. It is well known that undoubted lunatics frequently plan events with the greatest precision, and carry them out with well-defined motive; but this does not show that the motive was not founded on a delusion, or that the wilful act was not performed under an uncontrollable impulse. Although all the relations of the deceased one to the other and to other people were not fully disclosed at the inquest, it seems certain that no adequate motive existed to explain the suicidal act except on the theory of mental aberration. The joint determination to end their lives in so romantic a manner is to our minds evidence of insanity, and clearly, even if we start with the assumption that the disorder was only just beyond the frontier of sanity at

the beginning, the reaction of one disordered brain upon another was the means best calculated to develop it in both. There seems to have been a strong affection between the deceased, an affection perhaps expressed by the phrase "sad, unsatisfied longings." To the want of realisation of their hopes and desires there arose in their minds the image of an embodied cause of evil influence. Women break their hearts and die, and men risk their health, wealth, and existence, all for love; but, though there was "method in the madness," it was madness still which correctly denoted the last state of mind of Albert Sparey and Elizabeth Yeates.

THE TOXICITY OF ALBUMINOUS URINE.

IN pursuing researches similar to those of Bouchard upon the "toxicity" of urine, MM. J. Teissier and G. Roque have communicated a paper to the Paris Academy of Sciences upon the character of albuminous urine in this respect. They point out that the determination of the toxicity of the urine is of great value in the prognosis of a case of albuminuria, but that the degree of this toxicity may vary at intervals, so that more than one estimation is needed. It does not matter whether there be much or little albumen in the urine if renal elimination be imperfect. They characterise albuminuria as a symptom of secondary importance in renal disease. The injection of albuminous urine into animals produces different effects from the injection of normal urine, and the most highly toxic specimens are those which contain most nitrogen; whilst in some the toxic effect is proportionate to the amount of albumen. The value of these laboratory researches is minimised by the fact that at present we do not know of any clinical indications of the degree of toxicity of the urine.

A CHILDREN'S GRIEVANCE.

THE frequent misuse of children for the purpose of turning a more or less dishonest penny has long been a fertile source of complaint. The subject is happily about to receive active treatment at the hands of the Society for the Prevention of Cruelty to Children, and a Bill prepared by this body contains the following practical propositions—viz., that no child under fourteen years of age may be taken out to beg, to accompany beggars, or to sing or play on any instrument; nor any child under ten be employed to perform in a place of public entertainment. There is also a provision to authorise the immediate removal by warrant of any cruelly-treated child to a place of safety. These clauses, if passed into law, will do much to abate the evils against which they are directed. The first, though judicious in so far as it is intended to act as a check upon a shameful form of vagrancy, will probably require some regulation to prevent its acting with too repressive rigour. The question what to do with the children of those who daily patrol the street in search of alms is not altogether easy of settlement. We may separate them from their parents, but in that case what becomes of them? They will probably wander elsewhere and beg or pilfer for themselves, entirely freed from what little authority or supervision they formerly acknowledged. The case of these elder children is not the same as that of the infants in arms whose helpless misery when exposed on our cold-bitten thoroughfares has often excited as much indignation as pity. For these latter, a shelter such as the begging "guardian" has not to give is the first consideration. Compulsory removal is a necessity, and is justified when there is the prospect of a temporary home. Where the child is older the matter is less urgent. Health is not, on the whole, so much imperilled; and though the street life is certainly conducive to no good, it is hardly less needful than the child prevented from begging.

should be guaranteed some sort of home and a better occupation, such as that supplied by industrial schools. The clause which aims at the rescue of ill-used children recognises this necessity in the cases with which it has to do. That which deals with the employment of children in theatres and the like is founded on a true idea of mental and physical requirements, and ought to prove useful in its application. Whatever the attractions of childish acting, the infantile performers have nothing to gain from the late hours, close air, and excitement.

"HABIT CHOREA."

"SOME movements closely imitate purposive acts" is an expression not uncommon amongst neurologists. Closely examined, there is not much real meaning in such a statement. The nervous system is a complete society of minute mechanisms. Stimulation of any mechanism produces, *ceteris paribus*, always the same result. The nature of the stimulus does not appear to matter in the least, provided its quantity is sufficient to set the process in action. A purposive movement can only be regarded as fulfilled by will and desire by inference, and by the context, so to speak, of other movements preceding and following the so-called purposive one. A trick of gesture constantly repeated—a local chorea, if such it may be termed—is not purposive, because each trick is like its antecedent. Dr. de Schweinitz, in the *Polyclinic*, No. 12, believes that habit chorea is frequently and considerably due to errors of refraction and other local conditions of the eyes. Seven cases of habit chorea are recorded to show what part the correction of the errors of refraction played in the treatment of this disorder. In three cases the "habit" spasm had existed for a long time; judicious internal medication and proper hygiene had failed to achieve the desired result. In one case the eyes were emmetropic, but some spasm of accommodation and phlyctenular conjunctivitis existed; when by the use of atropine these conditions were removed, recovery from the spasm ensued. The author speaks of the value of closely observing the condition of the conjunctiva, especially of the retro-tarsal folds.

THE FRENCH MILITARY MEDICAL SERVICE.

THE French medical press contains complaints of the way in which the military medical service is usually snubbed, its members being always apparently treated as though they were worthy of less consideration than those of other services. According to recent regulations, though a student of the Polytechnic or of the School of Forestry has only to serve a year as an officer of reserve, regaining then his liberty, a military medical student is forced to serve as a medical officer for six years before he can return to civil life, unless, indeed, he prefers being an ordinary soldier for three years. It appears that a considerable number of military medical officers who at first, perhaps, were fired with some enthusiasm for military life, as well as for professional work, soon get disillusioned and become anxious to leave the service. This is now not permitted, except in the case of men who possess a certain amount of political influence, and the consequence is that the military medical officer finds that he has got into a kind of prison whence there is no escape. Of course it may be said that his education—that part of it, at least, which was conducted under military auspices—has cost the State a large sum of money, and that therefore it is only right that the State should claim his services for a few years. The expense is estimated at about 2300 francs, or less than £100, and is said to be rather less than the cost to the State of a Polytechnic cadet, so that there is no pecuniary reason for favouring the latter. It seems rather hard that a boy of seventeen or eighteen should be made to commit himself for

so many years to a career which he may find very distasteful. One of the Paris medical journals points out that before 1870 some seventy senior students used to be admitted annually to the Military Medical School at Val-de-Grâce, whereas now, though the service has been increased by nearly a third, the number admitted is only about forty-five,—a number which is really insufficient to keep the service up to its full strength. This is of course done in the interests of economy; but if more students were admitted, and those who wanted to retire were allowed to do so on more reasonable conditions if they repaid the State its disbursements on their account, there would no longer be played the *triste comédie* of the *médecin militaire malgré lui*. Again, it seems that M. de Freycinet is bringing forward a proposal to "unify" the scale of pay in the army, in the sense of paying all non-combatants at a lower rate than the combatants, the non-combatants including the medical officers. This is certainly very hard, and would look as if the French Government was disposed to mistake the medical officers for the barber surgeons of former days.

THE ASSOCIATION OF GERMAN NATURALISTS AND PHYSICIANS.

THE programme of the sixty-first annual meeting of the Association of German Naturalists and Physicians has been published. The meeting takes place at Cologne during the week commencing Monday, Sept. 17th. At the general meetings addresses will be delivered by Professors Binswanger (Jena), Weismann (Freiburg), Waldeyer (Berlin), Meynert (Vienna), Exner (Vienna), and Dr. von Steynen (Düsseldorf). There are thirty Sections, including almost every branch of physical and natural science, as well as of medicine. In the Section of General Pathology, papers are promised by Drs. Baumgarten, Beneke, Ribbert, Birch-Hirschfeld, and Anton. Bam; in that of Medicine, by Drs. Naunyn, Leichtenstern, H. Wette, and Ewich; in that of Surgery, by Drs. Witzel, Rosenberger, Tillmanns, and Schimmelbusch; in that of Pædiatrics, by Drs. von Jaksch, Paltauf, and Hagenbach, who take part in a discussion on the Forms of Nephritis following on Acute Infective Diseases; by Drs. Pott and Thomas, on Antipyresis in Infective Diseases; by Drs. Sprengel and Kempermann, on the Operative Treatment of Tubercular Disease of Bones and Joints; by Dr. Unruh, on Post-diphtherial Nervous Diseases; and many other papers. There are also Sections on Gynecology, Neurology, Ophthalmology, Otology, Laryngology, Dermatology and Syphilis, Hygiene, Forensic Medicine, &c.

ENTERIC FEVER AT FLINT.

ENTERIC FEVER has broken out in Flint, and, according to the medical officer of health, Mr. A. Hughes, the sanitary state of the place with respect to the removal of filth and refuse is disgraceful; and unless adequate arrangements are made to deal with the matter, the recurrence of the disease must be expected. A resolution was adopted to the effect that notices should be issued to owners and occupiers to abate the nuisances on their premises. This is not the way to deal with the evil, for in a town such as Flint it is impossible for owners and occupiers to secure such frequency of removal of filth as to avoid nuisance; and at this time of the year, when farmers are busy with field operations, it is, of all others, most difficult. Directly a place becomes populous or at all thickly inhabited, the sanitary authority should themselves undertake this duty, and see that it is efficiently carried out. We trust that the decision to spend a certain sum in procuring a corporation cart implies that in the future the faulty system of imposing an impossible duty on occupiers will be abandoned.

AN INFECTIOUS HOSPITAL FOR NOTTINGHAM.

A CORRESPONDENT writes:—"It appears that the Town Council of Nottingham has not yet finally settled the question of a permanent infectious hospital for the town and neighbourhood. It is possessed of powers requiring the notification of infectious diseases, and it has obtained an excellent site for a hospital, but as yet it has not committed itself to the erection of a building, such as is essential for the control of infectious fevers in so large a town. This hesitation may be accounted for by the fact that the Council is beset by the suggestions of amateur and unpractical sanitarians. One of these suggestions, which is said to come from a well-known medical writer, has been brought to notice by means of a letter signed 'Economist,' which appeared in the *Nottingham Daily Guardian* and also in the *Nottingham Daily Express* of August 1st. This letter is evidently meant to be satirical, but, judging from other communications to the same journals, it seems to have been taken seriously. It might have been thought that the proposition to run an iron hospital with plates of an inch thick, capable of accommodating twenty-five persons, about the town on wheels (so that it might be available in parts where it was most wanted at the time) was so manifestly absurd, that it did not need the further suggestion that the hospital should be disinfected by firing town refuse in its interior to make its farcical nature apparent to all. The Town Council of Nottingham is advised by an able medical officer of health. It will no doubt be guided by his practical knowledge, and will estimate the suggestion which we have noticed here at its proper value."

URINE SECRETED UNDER PRESSURE.

MM. LÉPINE and PÉTERET have recently ascertained the modifications of the urine secreted under a certain degree of pressure caused by ligature of the ureter, and they find: (1) That there is no correlation between the quantity of urine discharged and the degree of counter-pressure employed; (2) that in the case of feeble counter-pressure the quantity of urea excreted is more diminished than is the quantity of water, whilst the contrary is the case with strong pressure. In a general manner, with feeble or powerful counter-pressure the relation of the salts does not appreciably differ from that of the quantity of urine. In the case of weak pressure the relation of the chlorides is superior to that of the other salts, but the opposite holds good when the pressure is great. Phosphates as a rule are less easily discharged under pressure than salts generally. In some experiments where a solution of cane sugar had been injected into the veins, in order to favour the secretion of urine, the relation of the sugar has not notably differed from that of the quantity of urine.

THE TELEPHONE FOR DOMESTIC USE.

UP to the present time the telephone has hardly made all the progress that might have been expected in England generally and the metropolis in particular; but the day is probably not very far distant when the facilities of inter-communication which it affords will be felt to be second only in importance to those of the penny post. An important step in the direction of familiarising Londoners with its use and advantages is in contemplation. It is intended by the United Telephone Company to establish a local exchange for the district comprising Kensington, Earl's-court, Brompton, and Chelsea, which will practically demonstrate these advantages in the West-end of the town. Residences within the radius of the system may in this way be connected with all the leading local houses of business, including cab-stands, fire and police stations, and the like; and thus all the ordinary, and much of the extraordinary,

business of housekeeping may be transacted within doors. The great importance, in cases of sudden illness, of facilities for rapid intercommunication is well set out in the prospectus that has been issued, and we have little doubt that the number of subscribers necessary to float the undertaking will soon be forthcoming.

PREVENTABLE DISEASE IN PADDINGTON.

ON the motion of Mr. Mark Judge, the following resolution has been passed at a meeting of the Paddington Sanitary Committee: "That several cases of death from preventable disease having been reported to this committee, under circumstances which suggest that the cause has been defective sanitary arrangements, this committee is of opinion that in all such cases application should be made to the coroner to hold an inquest into the cause of death." With the principle here involved we are in entire concurrence, for it should be regarded just as wrong to leave unremedied such conditions as are referred to as being dangerous to health, as it is to leave other sources of danger to life undealt with. But whether action should be taken, as suggested, in all cases is a different matter. The public need educating in this respect, and the first cases brought under the coroner's notice should be carefully selected ones, and if possible they should be cases in which the individual responsible for the defective sanitary circumstances which have induced fatal disease can be shown to have known that they existed, and to have had knowledge as to their possible or probable effect. In other words, failure at the outset should, in the interests of the health of the public, be as far as possible avoided.

DEATH OF PROFESSOR JAMES OF BRUSSELS.

THE death is announced of Professor James of Brussels, who will be remembered by all candidates for the M.D. of that university as the interpreter of the questions and answers in cases where the examiners and candidates did not fully understand one another. Though not a medical man, Professor James seems to have had a wonderful capacity for understanding and translating medical expressions, and the successes of English candidates have been largely due to the never-failing courtesy and kindness of the deceased gentleman, combined with his skilful and accurate interpretation of their answers. He was in his sixty-ninth year. His funeral was largely attended, and numerous eloquent discourses pronounced at the grave, the most noteworthy being those of M. Depaire, the rector, and Professor Tiberghien.

SWALLOWING ARTIFICIAL TEETH.

CASES of swallowing artificial teeth with a fatal result are frequently reported, and one happened in Birmingham a few days ago. The kind of artificial denture most liable to be concerned in this accident is one consisting of four or five teeth mounted on a metal frame, and having clasps or bands which in the mouth fasten round molars or lucuspids. If these, when first made, are not properly adjusted by the dentist, they may be so loose as to fall into the mouth during sleep or when eating. But more commonly the cause of the so-called "swallowing" of teeth is the loss from decay of the teeth to which the frame is attached, so that it is only kept in place by the tongue and what little suction there may be. All persons wearing artificial teeth, especially small cases, should be warned of the danger arising from possible looseness or ill-fitting; but, as an instance of how little heed some persons take of advice, we may mention a case which came under our notice, where a gentleman in less than six months swallowed the same set of teeth twice.

EXTRA-UTERINE FETATION.

ON Aug. 16th at St. Thomas's Hospital, Dr. Cullingworth removed a foetus weighing 2lb. 13oz., and measuring 17 in. in length, through an incision in the anterior abdominal wall. The sac in which this was contained was very thin, and formed by the greatly dilated left Fallopian tube. The duration of the pregnancy was sixteen months, and the foetus, which was well preserved, had the appearance of fully eight months' development. The foetus was very adherent to the interior of the sac, whilst outside it the intestines, omentum, and uterus were adherent. Portions of the sac were removed, and the remainder was stitched to the margins of the abdominal incision. The placenta, which was in the front wall of the sac, was removed with very little hæmorrhage. The patient is progressing favourably.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE Secretary to the Metropolitan Hospital Sunday Fund informs us that the collections for the present year have now reached the sum of £39,904, and that by Oct. 31st the amount may be estimated to reach £41,000, if not more. Last year, by Oct. 31st the total was £40,607, inclusive of the £1000 legacy of the late Dr. Wakley.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Fausti Buzzi has been appointed Scientific Assistant in the Dermatological Clinic in the Charité.

Buda Pesth.—Dr. Toth has been appointed to undertake the duties of the deceased Professor Balogh.

Graz.—Dr. Gottlieb Harberland, Extraordinary Professor of Botany in Munich, has been appointed to the chair of Botany.

Madrid.—Don Amalio Jimeno, Professor of Therapeutics in the University of Valencia, has been appointed to the chair of Hygiene. Dr. Don Laureano Calderon of y Arana, Professor of Chemical-organic Pharmacy in the University of Santiago, has been appointed to the chair of Biological Chemistry in the Faculty of Pharmacy.

Vienna.—Dr. Kratschmer has been granted the title of Professor.

Würzburg.—Scanzone's Chair has at last been accepted by Professor Hofmeier of Giessen.

ON the 16th inst., Mr. William Eassie, C.E., F.L.S., F.G.S., &c., died at his residence at South Hampstead. Mr. Eassie's early life was chiefly devoted to engineering pursuits, when he became a favourite assistant to the late Sir I. K. Brunel, and along with the late Dr. Parkes he superintended, during the Crimean War, the sanitary arrangements of Renkioi Hospital. He was for some time lecturer on Hygiene at Charing-cross Hospital, and was one of the founders of the London Cremation Society, and the author of several works on Sanitation and Hygiene.

A FRENCH medical man recently prescribed one gramme of sulphate of atropine instead of a centigramme, the error resulting in the death of his unfortunate patient. The doctor and the chemist who dispensed the prescription have been found guilty of homicide through imprudence, and the former was condemned to pay 600 francs as compensation, and the latter to five days' imprisonment and the payment of 400 francs.

THE Spanish and Portuguese medical journals have in some unexplained manner published a notice of the death—fortunately apocryphal—of Dr. Macewen of Glasgow. Some of them have discovered their error; and are correcting it.

TIFFIELD, a village in the rural sanitary district of Towcester, is the seat of a sharp outbreak of enteric fever. The cause is stated to be the soakage from a cesspool into the village well. If this be correct, some efforts should be made to ascertain how far the existence of such an obvious source of danger was known beforehand, and why it was not dealt with before disease was induced.

DIPHTHERIA is reported to be somewhat widely prevalent at Devonport; but as yet no account has been published showing that the cause has been traced. Measures are, however, stated to be in progress towards this end, and to prevent its spread. Up to the middle of the month some forty cases and six deaths had been heard of.

THE occurrence of fatal cholera on board Her Majesty's ship *Imperieuse*, the flag-ship of the China station, is announced; and the Japanese authorities have put Hong Kong and other China ports in quarantine. The occurrence will doubtless be reported on in detail to the Admiralty.

GEORGE BERNARD HOFFMEISTER, M.A., M.B. Cantab., B.Sc. Lond., M.R.C.S. Eng., has been associated with his father (Sir William Hoffmeister) and brother as surgeon at Osborne, as well as to the Royal Yacht Squadron, Cowes.

THE Lisbon medical journal, *O Correio Medico*, is about to follow the example of English medical journals, and to publish a "Students' Number."

THE panic at Florida caused by the epidemic of yellow fever appears to be subsiding. The reports of the ravages of the disease seem to have been exaggerated.

Pharmacology and Therapeutics.

THALLIN IN GONORRHOEA.

DR. IRMINGER having been induced to try thallin in gonorrhoea by Professor Goll's successful use of it in Zurich, writes (in *Der Fortschritt*) an account of five cases in which he employed it. He gave the drug internally simultaneously with local treatment by means of injections or bougies containing it, and had great reason to be satisfied with the results, the pain disappearing almost immediately and the discharge ceasing before long. In one case which had been entirely neglected and had become a chronic gleet when Dr. Irmingier first saw it, which was nearly three months from its commencement, the penis was swollen and the mucous membrane thickened and bloody, the secretion being serous and sanguinolent. After having reduced the inflammation by the application of ice for a few days, he inserted a bougie three times a day containing three grains and a half of sulphate of thallin, the passage being previously opened up each time by the introduction of a sound. The bougies were soon diminished to two, and finally to one per diem, the patient being cured in less than a month.

HYPODERMIC INJECTION OF SODA SALTS IN UTERINE HÆMORRHAGE.

Dr. L. J. Osherski, having a case of a large uterine fibroid which gave rise to frequent violent hæmorrhages, tried all ordinary remedies without success. At last he determined to inject soda salts under the skin. For this purpose he employed a mixture containing a drachm and a half of crystallised phosphate of soda with an equal quantity of sulphate of sodium in four ounces of distilled water, a drachm of the mixture being injected at a time. The hæmorrhage immediately diminished to half the quantity, and in five days' time ceased almost entirely.

OUABAIN AND STROPHANTINE.

Ouabaine and strophantine are extracts from the wood of ouabaïo and from the seeds of strophanthus, two plants of the family of Apocynæ. M. Gley has made many experiments on frogs, guinea-pigs, rabbits, and dogs, in order to compare the action of these two allied substances. Ouabaine and strophantine, which have also identical chemical properties, are homologous, and have the same physiological properties. They are both heart poisons. The most rapid mode of action is by intravenous injection, then by subcutaneous injection. Given by the stomach, the toxic effects are merely delayed, but the poisonous action is equally marked. Ouabaine is more toxic than strophantine; it is twice as toxic on the frog and rabbit, thrice as poisonous on the dog, and four times on the guinea-pig. Death occurs in from six minutes to one hour.

ALKALOIDS IN COD-LIVER OIL.

Among the six alkaloids extracted from cod-liver oil by MM. Gautier and Mourgues the following bases have been studied: Butylamine, whose salts produce in animals an acceleration of the functions of the skin and kidneys, and in large doses fatigue, stupor, and vomiting; amylamine, which in small doses excites the reflexes and the urinary secretion, and in large doses causes general tremors, then well-defined convulsions followed by death; hexylamine, whose action is similar, but less toxic; dihydrolutidine, which is moderately poisonous. In minute doses the latter diminishes general sensibility, and in large doses causes local tremors, especially about the head; the animals fall into a state of profound depression, with intervening periods of extreme excitement, and terminating in death, with paralysis of the posterior extremities.

ANAGYRINE.

Anagyris foetida is a legume growing in the south of France and all along the Mediterranean shores. Anagyrine is its active principle, and is very poisonous. MM. Hardy and Gallois find that hydrochlorate of anagyrine causes in warm-blooded animals vomiting, chills with tremors, slowing of the respiratory movements, and finally asphyxia and arrest of the heart's action. In the frog the phenomena are less marked, paralysis of muscular movement being most obvious. The cardiac action persists after all other movements have ceased.

ANILINE IN SKIN DISEASES.

Aniline has been used by Dr. N. J. Neumin as an external application in eighteen cases of skin disease due to various parasites—ringworm, favus, Pendergore, pediculosis, itch, &c. He found that it exercised a more or less beneficial effect on the last two, but that when more than about twenty minims were used toxic symptoms began to show themselves, and when small quantities were used repeatedly chronic poisoning was set up.

HEALTH OF THE ARMY IN 1886.

No. I.

IN the annual volume of the Army Medical Department Reports which has just been published, an important alteration has been made in the arrangement of the tables, consequent upon the adoption of the revised nomenclature of diseases prepared by a committee of the Royal College of Physicians. This makes it impossible to compare the data relating to the prevalence of, and mortality caused by, various diseases with those of preceding periods. This is to be regretted from a scientific and sanitary point of view, but is a result for which the Army Medical Department cannot be held responsible. When the annual reports were commenced, on the creation of a statistical branch in 1859, detailed abstracts were published of the diseases by which the sickness, mortality, and invaliding were caused. After this system had been in operation some thirteen or fourteen years, the Treasury, in a fit of economy, ordered the tables to be cut down, and the results given by classes only, instead of the diseases being stated separately. The consequence of this unwise reduction has been to deprive the returns of much of their professional value in affording the means for the comparison of the prevalence of various diseases in different climates and under varying circumstances at

different periods. In the present volume every care seems to have been taken to bring the general results of sickness and mortality into comparison with those of previous periods, as far as the returns will permit, but we must express our regret at the unsatisfactory results, in many respects, arising from the injudicious action of the Treasury.

The average strength of the army at home and abroad in 1888, exclusive of colonial corps, was 188,739 warrant officers, non-commissioned officers, and men. The admissions into hospital during the year were in the ratio of 1085, the deaths of 11·48, the discharges by invaliding of 15·03, and the constantly non-effective from sickness of 57·69 per 1000 of strength. There was an increase of 0·32 per 1000 in the deaths, but a decrease in all the other particulars compared with the results for the preceding year. The ratios correspond closely with the average of the last ten years, except that there has been a decrease of about 6 per 1000 in the discharges by invaliding, and an increase of 5 per 1000 in the mean daily sick.

In the United Kingdom, an average force of 92,601 gave 843 admissions, 6·68 deaths, 17·64 discharges by invaliding, and 47·08 constantly sick per 1000. Compared with 1885, there has been a reduction in the admissions and in the invaliding, but the other ratios are almost identical in the two years. Of eruptive fevers, the only form which prevailed to any extent was measles, of which 286 cases occurred, with 2 deaths. The stations which furnished the greatest number of cases were—Portsmouth and Gosport 51, of which 1 proved fatal; Cork 38; Woolwich 31, with 1 death; London 24; Aldershot 24; Canterbury 22; Colchester 21; and Bury St. Edmunds 10. In none of the other stations could it be said to have prevailed as an epidemic among the troops. There were 145 cases, with 43 deaths, of enteric fever, being almost identical with the numbers of the preceding year, but above the average of the decennial period. Chatham, the Channel Islands, and Belfast were the only military districts in which there was no case. Of the forty-eight stations at which cases occurred, Dublin furnished the highest number—18 cases and 10 deaths,—of which one-half came from the Royal Barracks. In Cork there were 12 cases, with 4 deaths, and at Queenstown 5, with 1 death. Aldershot had 12 cases, with only 1 death; Portsmouth 10, with 7 deaths, but 4 of the cases came from on shipboard; Portland and Weymouth had 12 cases, with 2 deaths, all in men of the Dorset Regiment recently arrived from Egypt; and Dover had 6 cases, with 2 deaths, in the 2nd East Kent Regiment, also recently returned from Egypt; London furnished 8 cases, all of which recovered; Exeter 4, with 2 deaths; and York 4, with 1 death. At no other station did more than three cases occur during the year. At none of the stations could the disease be distinctly traced to local insanitary conditions. At Spike Island and Pirbright it was believed to have been caused by the use of impure water; and at Piershill, Fleetwood, and Yarmouth the drainage was suspected. Of Dublin it is stated that "it has not been possible for medical officers to trace the origin of all these cases to local sanitary defects in barracks; still it is believed that in some cases it has been so, as many of the barracks are old and badly constructed as regards drainage, particularly the Royal Barracks, on which an exhaustive inquiry has been held; at the same time, it must not be forgotten that sanitation in the city itself is far from perfect, and that some of the cases may have been contracted out of barracks." There were 14 cases of cerebro-spinal fever reported, of which 8 died; 13 of the cases and all the deaths occurred at Devonport. "The medical officer in charge remarks that the epidemic began in January and lasted until May; the disease chiefly attacked young soldiers, and, although no definite source could be traced, there was strong presumptive evidence that it might be exposure to cold, impure air, want of sufficient food and clothing prior to enlistment, and, possibly, want of proper ventilation, which laid the foundation of the disease." None of the other cases of continued fever proved fatal. There were 246 cases of erysipelas, being in the proportion of 2·6 per 1000 of strength; Aldershot furnished the highest ratio; it is stated that at Aldershot "their origin was not satisfactorily determined, although generally attributed to exposure to the influences of the weather in men of intemperate habits." Portsmouth and Gosport, Shorncliffe and London, had a high proportion of cases, but in none of them is any special reason assigned for its occurrence. There was a slight decrease in the prevalence of venereal diseases, which still furnished the very high proportion of 267 admissions and

19·3 constantly non-effective per 1000 of strength. Primary syphilis was the cause of 89 per 1000 of the cases, and 7·75 per 1000 of the daily sick. The highest ratio of primary venereal sores was at Aldershot, and the lowest in the Cork district. The change in the nomenclature and classification of the diseases makes it very difficult to institute a perfectly accurate comparison of the death-rate by consumption in 1886 and previous periods, but the proportion of deaths by tubercular diseases and pneumonic phthisis combined corresponds exactly with that returned under tubercular diseases in 1885, and 0·51 per 1000 under the average of the preceding decade. Among the cases admitted under the head of "poisons," two of an unusual nature are entered. "Two cases of poisoning by arseniuretted hydrogen occurred. The men were employed in compressing hydrogen gas for balloons, and it is supposed the sulphuric acid used in making the gas was impure and impregnated with arsenic; both cases recovered after treatment." Under the class of "injuries" 34 deaths are entered, and of these 24 were by drowning, 20 of which were accidental. There is apparently good reason for the introduction of swimming into the course of instruction, through which recruits have to pass when they join the army. One man lost his life in a snow drift near Warley, and two markers were accidentally killed on the rifle range. The suicidal deaths were nearly identical with the number in the preceding year, being 29, or in the ratio of 31 per 1000 of strength; 20 were by gunshot wounds.

From the table showing the relative sickness and mortality of the different arms of the service, it appears that the lowest ratio of admissions was from the Royal Engineers and the highest from the Foot Guards, being respectively 601 and 994 per 1000. The lowest death-rate was 4·71 in the Household Cavalry, and the highest 9·13 in the garrison staff and departments. The regimental depôts had a ratio of 8·98 and the Royal Artillery of 8·82 deaths per 1000. In none of the other arms did it amount to 6 per 1000. The Foot Guards had the highest proportion constantly sick, 62·31, and the regimental depôts the lowest, 31·04, per 1000. On the average of the preceding ten years the garrison staff and departments have the lowest and the Foot Guards the highest ratio of admissions, the Household Cavalry the lowest and the regimental depôts the highest proportion of deaths, and the Royal Engineers the lowest and the Foot Guards the highest proportion constantly non-effective from sickness. In all of them, except the regimental depôts, the mean daily sick in 1888 was above the decennial average.

The average strength of the officers was 3644; the cases among them were in the ratio of 323 and the deaths of 6·31 per 1000—the former greatly, the latter only 0·37, under that of the troops generally. Diseases of the respiratory and digestive systems gave rise to half the deaths, and 4 were the result of Bright's disease. There were 16 cases of enteric fever, but only 1 death; 10 of the cases occurred in Ireland and 6 in England.

The average strength of the troops at Gibraltar was 4307; the admissions into hospital were 844, the deaths 9·51, the mean sick 40·07, and the invalids sent to England 26·93 per 1000 of strength. This shows a very considerable reduction in the admissions, mean sick, and invaliding, but an increase of 1·47 per 1000 in the death-rate compared with the preceding year. Except the invaliding, however, they were all above the decennial average. The high death-rate was entirely due to an outbreak of enteric fever, which caused two-thirds of the whole mortality. There were 158 admissions and 26 deaths by this disease. It prevailed as an epidemic during June, July, and August in the Royal Engineers and the Royal West Kent and South Staffordshire Regiments, the other corps in the garrison being remarkably free from fever. The Royal West Kent arrived from Egypt in June, and cases were admitted daily up to the middle of July, when the disease ceased in the corps. It was evidently contracted in Egypt. The cases in the South Staffordshire Regiment, which arrived from Ramleh in the end of June, all occurred in two and a half companies at Buena Vista, while three companies quartered at Windmill Hill had not a single case. Its occurrence at Buena Vista Barracks was attributed to "certain serious sanitary defects which existed in them, which is borne out by the fact that the disease ceased when the barracks were vacated; and when they were re-occupied, after the defects had been remedied, there was no recurrence of the disease." We cannot but think that there must have been reprehensible neglect of sanitary supervision in

this case. Three cases, of which two terminated fatally, occurred among the officers; the disease was contracted in Egypt, and all the cases were of a severe type.

The admissions from all forms of venereal disease amounted to 365 per 1000 of the strength, and the proportion constantly non-effective from this cause to 21·85, being slightly lower than in 1865, but considerably above the decennial average. A case of attempted suicide by opium was admitted, in which 22 grains of the drug were said to have been taken; "recovery was due to subcutaneous injection of half a grain of sulphate of atropine and to galvanism." A death from accidental gunshot was that of a sergeant who was shot while painting a target on the rifle range.

In an average strength of 176 officers, the cases amounted to 68 and the deaths to 2, being in the ratio of 386 and 11·36 per 1000. The deaths were those already noticed as caused by enteric fever. The admissions among the women were 587 and the deaths 3·79 per 1000; and among the children they were 493 and 42·94 respectively. The most fatal diseases of the children were diarrhoea, convulsions, and enteritis.

At Malta the average strength of the troops was 4736, exclusive of the Royal Malta Fencible Artillery. The admissions were in the ratio of 725, the deaths of 7·17, the invaliding to England of 16·25, and the mean daily sick of 46·62 per 1000, all very much lower than in 1885, and also considerably under the average of the last decade. Of enteric fever there were 34 cases and 8 deaths, being respectively 7·2 and 1·69 per 1000 of strength; 30 of the cases and 7 deaths occurred at Cottonera: "the cause seems to have been the insanitary condition of the low public-houses frequented by the men, and not any defect in sanitation in the barracks themselves, which are all reported to be in good order as regard drainage, latrines, &c., and to have, as a rule, water supply of good quality." Three cases, 1 fatal, were admitted at Valetta, and 1 at Citta Vecchia. Two cases, neither of them fatal, occurred among the officers, and 2, of which 1 died, among the women, but it is not stated where they were quartered. There has been a diminution in the prevalence of venereal diseases during the year, the admissions having been only 98·7 and the constantly sick from that cause 6·67, as against 126·7 and 8·99 in the preceding year. There was nothing in the prevalence of other diseases which seems to call for remark. There does not appear to have been any case of suicide.

The cases among the officers were in the ratio of 707 per 1000, but there was no death. Among the women the admissions were 739 per 1000, and the deaths 10·71; among the children, 708 and 49·38 per 1000. The satisfactory state of health of the troops is attributed to the improved drainage, the sewage being now discharged into the sea at a considerable distance from the harbours, to an abundant supply of pure water being provided, to cleanliness being enforced, and to the notification and isolation of cases of infectious disease among the civil population.

The Royal Malta Fencible Artillery, 359 strong, had 707 cases per 1000, without a death, and a mean sick of 24·84 per 1000. No cases of enteric fever were admitted, and there was nothing in the sickness requiring notice. Of 85 recruits inspected, 37 were rejected, or 435 per 1000, chiefly for under chest measurement, defective vision, and heart disease.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5834 births and 2954 deaths were registered during the week ending August 18th. The annual rate of mortality in these towns, which had been 16·0 and 17·6 per 1000 in the preceding two weeks, declined again last week to 16·4. During the first seven weeks of the current quarter the death-rate in these towns averaged but 16·1 per 1000, and was 5·2 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12·9 in Nottingham and in Bolton, 13·0 in Birkenhead and in Birmingham, and 13·4 in Bristol and in Sunderland. The rates in the other towns ranged upwards to 20·1 in Plymouth, 20·6 in Sheffield and in Derby, and 22·8 in Manchester. The deaths referred to the principal zymotic diseases, which had increased in the preceding four weeks

from 311 to 477, further rose last week to 496; they included 301 from diarrhoea, 56 from whooping-cough, 51 from measles, 31 from scarlet fever, 23 from diphtheria, 2 from "fever" (principally enteric), and only 1 from small-pox. The deaths from these principal zymotic diseases caused the lowest death-rates last week in Hull and Sunderland, and the highest rates in Salford, Leicester, and Sheffield. The greatest mortality from diarrhoea occurred in London, Preston, Salford, Leeds, Plymouth, Leicester, and Sheffield from whooping-cough in Huddersfield and Wolverhampton; from measles in Bradford; from scarlet fever in Blackburn; and from "fever" in Nottingham. The 23 deaths from diphtheria included 13 in London, 3 in Manchester, and 2 in Salford. Small-pox caused 1 death in Oldham, but not 1 in London or in any of the twenty-six other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 3 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 774 at the end of the week, against numbers declining in the preceding six weeks from 924 to 821; 66 cases were admitted during the week, against numbers declining from 105 to 67 in the four previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 160, 167, and 183 in the preceding three weeks, declined again last week to 167, and were 19 below the corrected average. The causes of 64, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bradford, Preston, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Huddersfield, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been but 15·3, 15·9, and 15·6 per 1000 in the preceding three weeks, rose to 17·3 in the week ending Aug. 18th; this rate exceeded by 0·9 the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 10·1 and 11·2 in Greenock and Perth, to 20·1 in Glasgow and 24·5 in Paisley. The 438 deaths in the eight towns showed an increase of 43 upon the low number in the previous week, and included 20 which were referred to diarrhoea, 6 to measles, 6 to scarlet fever, 5 to whooping-cough, 3 to "fever" (principally enteric), 3 to diphtheria, and not one to small-pox; in all, 43 deaths resulted from these principal zymotic diseases, against 38 and 44 in the preceding two weeks. These 43 deaths were equal to an annual rate of 1·7 per 1000, which was 1·0 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 22 and 18 in the preceding two weeks, rose again last week to 20, but were 24 below the number returned in the corresponding week of last year; they included 10 in Glasgow, 3 in Edinburgh, and 3 in Paisley. The 6 fatal cases of measles corresponded with the number in the previous week; 3 occurred in Paisley and 2 in Glasgow. The 6 deaths from scarlet fever, including 2 in Glasgow, exceeded the numbers in any recent week. Four of the 5 deaths from whooping-cough, and 2 of the 3 from diphtheria, occurred in Glasgow. The 3 fatal cases of "fever" were fewer by 3 than those in the previous week. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 55 and 45 in the preceding two weeks, rose again last week to 55, but were 12 below the number in the corresponding week of last year. The causes of 49, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 21·1 and 19·4 per 1000 in the preceding two weeks, further declined to 18·2 in the week ending August 18th. During the first seven weeks of the current quarter the death-rate in the city averaged 19·8 per 1000, the mean rate during the same period being 16·0 in London and 15·6 in Edinburgh. The 123 deaths in Dublin showed a further decline of 8 from the number in the previous week; they included 5 which were referred to diarrhoea, 3 to "fever" (typhus, enteric, or ill-defined), 3 to whooping-cough, 1 to

scarlet fever, 1 to diphtheria, and not one either to small-pox or measles. Thus 13 deaths resulted from these principal zymotic diseases, against 21 and 12 in the preceding two weeks; these were equal to an annual rate of 1.9 per 1000, the rate from the same diseases being 3.0 in London and 1.4 in Edinburgh. The deaths from diarrhoea and from "fever" exceeded the numbers in the previous week, whereas the mortality from scarlet fever was smaller than in any week since the middle of May. The death from diphtheria was the first that has been registered in the city since the end of April. Ten inquest cases and 5 deaths from violence were registered; and 30, or nearly a quarter, of the deaths occurred in public institutions. The causes of 17, or nearly 14 per cent., of the deaths in the city were not certified.

WHAT IS THE PRESENT POPULATION OF BRADFORD?

The Registrar-General estimates in his Weekly Return that the population of the municipal borough of Bradford in the middle of the present year is 229,721 persons. This estimate is based upon the hypothesis that the population of the borough has increased since the last census in 1881 at the same rate that prevailed between the last two enumerations in 1871 and 1881. It is, however, stated in a note to each Weekly Return that from returns of the numbers of houses on the rate-books of the borough, with which he has been favoured by the local authorities, there are grounds for believing that the present population of that borough is over-estimated, in which case the death-rate of the borough is understated. As Bradford is a typical case of the grave difficulty placed in the way of trustworthy vital statistics by the want of more frequent census enumerations, it may be useful to note a few facts throwing light upon the probable present population of Bradford. In the year 1881, when the census afforded trustworthy information of the population of the borough, the birth-rate was equal to 33.0 per 1000 of the population; but if the population has increased since that date at the rate calculated on the Registrar-General's hypothesis, the birth-rate has since fallen steadily year by year until, in 1887, it was only 27.7 per 1000; so low a birth-rate in a manufacturing town like Bradford is, at any rate, suggestive of fallacy. It is true that the calculated birth-rate in England and Wales fell from 33.9 in 1881 to 31.4 in 1887; but if we admit that the birth-rate in Bradford may have fallen in the same proportion (which seems improbable), it would not have fallen below 30.6 per 1000. If the true birth-rate in Bradford last year was therefore 30.6 per 1000, the population of the borough was not more than 202,712, instead of 224,507, as published by the Registrar-General. It is worth noting that the registered births in Bradford in the last four years 1884-87 were actually fewer than those recorded in the four years 1874-77, although the boundaries of the borough were extended in 1882 by the addition of a suburban area, which had in 1881 a population exceeding 11,000 persons. The mean population of the borough in the four years 1874-77 was estimated at 170,000, and the Registrar-General's hypothesis raises the estimated increase in the four years 1884-87 to 210,000. That this latter estimate is trustworthy it is impossible to believe in the face of the fact that the registered number of births in the last four years was considerably less than the number in the corresponding period ten years ago. If we assume that the population of the borough of Bradford in the middle of last year was not greater than 202,712, and was more than 20,000 below the Registrar-General's hypothetical estimate, it necessarily follows that the death-rate in 1887, instead of being 19.9 per 1000, as published by the Registrar-General, was 22.0 per 1000, exceeding by 1.4 the mean rate in the twenty-eight English towns. The death-rate from the principal zymotic diseases, moreover, instead of being 2.86, would be raised to 3.16, all but corresponding with the rate in the aggregate of the twenty-eight towns. While it should be pointed out that even these corrected death-rates show a marked decline from those prevailing in the borough ten years ago, it cannot be denied that the unquestionable over-estimate of the present population of Bradford throws considerable light upon the apparent contradiction involved in the reported low death-rate in this borough in recent years in spite of the sanitary shortcomings of the district, which the late medical officer of health (Dr. Hime) incurred so much odium in pointing out. The bare possibility of an error of 10 per cent. in the official estimate of the population of one of our largest towns affords the strongest proof that the require-

ments of our system of public health statistics urgently need a census enumeration of the population more frequently than once in ten years.

THE SERVICES.

ADMIRALTY.—Staff Surgeon Richard Samuel Purnell Griffiths has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Aug. 10th, 1888).

VOLUNTEER CORPS.—*Engineer*: 1st Newcastle-on-Tyne and Durham: Robert Torrance, Gent., to be Acting Surgeon (dated Aug. 22nd, 1888).—*Rifle*: 1st Volunteer Battalion, the Prince of Wales's Volunteers (South Lancashire Regiment): Surgeon and Honorary Surgeon-Major J. W. Watkins, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated Aug. 22nd, 1888).—1st Cinque Ports: Surgeon S. A. Julius is granted the honorary rank of Surgeon-Major (dated Aug. 18th, 1888).—3rd Volunteer Battalion, the Essex Regiment: Surgeon J. W. Danaher is granted the honorary rank of Surgeon-Major (dated Aug. 22nd, 1888).—2nd Volunteer Battalion, the Queen's (Royal West Surrey Regiment): James Percy Alwyne Gabb, M.D., to be Acting Surgeon (dated Aug. 22nd, 1888).

Correspondence.

"Audi alteram partem."

IN WHAT DOES CANCER CONSIST?

To the Editors of THE LANCET.

SIRS,—Dr. Braithwaite is entitled to the thanks of the readers of THE LANCET for his recent articles on Cancer, as affording an opportunity for discussion, if he has failed to establish conviction. Recent events, no less than a wholesome tendency to bring philosophical doctrines and methods to bear upon pathology, mark the occasion as opportune for such discussion. The old dogma of the "heterology" of malignant growths has been so qualified, restricted, and modified to meet modern requirements that it is practically ruled out of court. It is now recognised that there is no morphological unit component of a malignant growth which has not its exact prototype in normal tissue at some stage or other of organic development. The hard-and-fast line which once, in the minds of pathologists, though never in the methods of nature, sharply divided, upon a morphological basis, the benign from the malignant has been wiped out; myomata have been known to occasion metastatic dissemination, and myeloid sarcomata are rarely repetitive. Chronic inflammation, too, has been slowly accorded a more and more recognised place as, at any rate, a part-cause of cancerous degeneration. Again, a recent distinguished monographist on cancer regrets, with a feeling of pathological compunction, "the tendency of sarcomas to exhibit an alveolar structure," the hitherto morphological prerogative of the carcinomata. The same writer not unnaturally rejects a structural *fundamentum divisionis* of malignant growths, and, with charming naïveté, adds that "he is in no way personally responsible for the eccentricity of their structure." Epithelioma, it is true, has always been permitted considerable latitude in its wilful departure from proper alveolar habits; but where we find "much development of the epithelium, with cell nuclei in process of division, in some places nests of epithelial cells, here and there marked epithelial proliferation, the cells being enlarged, cloudy, and in part containing vacuoles enclosing cells," many would be staggered to learn that this was a case of *pachydermia verrucosa*, a disease not included in the official list, comprising 1212 varieties, drawn up by the College of Physicians. The above, however, were the appearances described in a recent fatal case of laryngeal disease. Surely, the only possible conclusion to be drawn from these facts is that there is no absolutely distinctive morphological test of, at any rate, many forms of malignant disease; that we must learn here, as I have attempted to show, evolution has taught us elsewhere, to rub out some of the hard-and-fast lines imposed by dogmatists and emphasised by text-books;

but of which nature knows nothing. Are we, then, to conclude that the clinical distinction of benign and malign is to fade from our minds as the baseless fabric of a dream? Shade of Hunter forbid! Does evolution, which indicates the links which bind the mammal to the ascidian and the amoeba, cause us to confound their substance? On the contrary, while it enables us to connect them in thought, it assists us in dividing the persons. So must philosophic pathology ever succour rather than impede the clinical student and bedside practitioner.

If, then, we believe that in her wildest vagaries of pathological neoplasm nature makes no jumps; if we recognise a transition between the simple and the specific, the innocent and the malign, chronic inflammation and cancerous infiltration, sarcoma and carcinoma,—in what, then, does cancer consist? In generation, in inflammation, in repair, in carcinomata and sarcomata, the individual factor is morphologically apparently identical; what differences there may be are latent, not expressed. In inflammation, repair, and in malignant growths, then, there is a reversion to embryonal cell type. In the two former processes there is either organisation of embryonal cells into tissue or liquefaction into pus. In the neoplasms, on the other hand, there is an indisposition of the component cells either to differentiate into tissue or to suppurate. They lack the influence which makes for organisation; their instincts are of the lowest—are amoeboid, in fact. They possess the fecundity of cells unfitted for "colonial" life, and share their vagabond propensities. Herein lie the factors of malignancy, the causes alike of the rapid growth and the infectivity of cancer. It may also be, as Dr. Creighton with acumen and felicity has put it, that these cells possess a veritable "seminal" influence; that is, by their contact they cause other cells to generate, and make the offspring like themselves; witness a sarcoma of the ciliary body infecting the very lens substance itself. The recent asserted discovery in cancer cells of nuclear structure akin to such as is only found in spermatoblasts may possibly afford a morphological peg on which this theory may be suspended. If it be inquired whence this influence is which makes for malignancy, and what determines its initiation, it can only be replied that we are "the heirs of all the ages" of the lowly amoeba no less than of our parents. That as we believe with von Baer that the history of the individual repeats the history of the race, so we carry within us (happily not all in the same degree) the idiosyncrasies which pertained to the life history of our earliest progenitors. That, while in the processes of repair and of organising inflammation we see a survival of tendencies inherited from a later generation, a generation which had acquired colonial habits and a lower grade of fecundity, and which we regard as beneficent, in the life history and tendencies of the cancer cell we see occasional persistence of (Cohnheim), or reversions to, that still earlier type of a structureless cell, inapt at specialisation, indisposed to colonial collaboration, and multiplying by fission with that terrific rapidity characteristic of the lowliest of living things.

I am, Sirs, yours faithfully,

W. J. COLLINS, M.S., D.P.H. Lond.

Junior Athenæum Club, Piccadilly, W., Aug. 18th, 1888.

TENOTOMY IN CLUB-FOOT.

To the Editors of THE LANCET.

SIRS,—In your report of the proceedings of the Surgical Section of the Glasgow meeting of the British Medical Association (THE LANCET, Aug. 18th, p. 317), I am reported to have said that "tenotomy was never called for." This is so evidently a mistake, that in a less influential journal than THE LANCET the statement, under the circumstances, might be allowed to pass uncorrected. As it is, I shall be obliged if you will permit me to state what I really did say on this point. After describing the anatomy of club-foot, and pointing out the physiological differences between muscles and ligaments as to their extensibility, I went on to say that, as regarded the long slender tendons of the two tibial muscles, "tenotomy as an independent operation" might almost be given up, and that when they required division it was better to divide them together with and at the same time as the ligaments with which they become blended at their insertion. Tenotomy of the Achilles tendon is, I believe, necessary in all cases of equino-varus.

I remain, Sirs, yours faithfully,

London, Aug. 20th, 1888.

R. W. PARKER.

COLOUR AND VISION TESTS FOR SEAMEN.

To the Editors of THE LANCET.

SIRS,—In your issue of the 18th inst., an annotation on the very important subject of testing seamen's sight says:—"In the mercantile marine, as far as we can learn, the tests for near and distant sight are not insisted on by the controlling board, and a knowledge of those for colour is required of officers only." Permit me to say that in the Cunard Steamship Company, in whose service I act as surgeon, there is a printed rule supplied to every surgeon stating that before each voyage he is to test the officers and crew for long and short sight and colour-blindness. He is also reminded of the same at headquarters. I have on several occasions rejected sailors. All new officers joining the service are examined by an oculist in Liverpool, and again by the ship's surgeon on each voyage. I think it would be wise to establish insurance benefits for officers rejected through deficiency of vision. I may also remark that the present system of four hours on and off duty, with its broken sleep, adopted both in the Royal Navy and the Mercantile Marine, is not a system calculated to ensure the best vision on turning out or generally. I am, Sirs, yours faithfully,

August, 1888.

A CUNARD SURGEON.

THE BOWER AND KEATES INDEMNITY FUND.

To the Editors of THE LANCET.

SIRS,—We shall be obliged if you will kindly insert the enclosed letter in your next issue, if possible. Thanking you in anticipation,

We are, Sirs, your obedient servants,

BOWER AND KEATES.

East Dulwich-road, S.E., August 22nd, 1888.

"To the Subscribers of the Bower and Keates Indemnity Fund.

"GENTLEMEN,—After four years' legal delay, we are glad to say our troubles are at an end, and we hasten to take the earliest opportunity afforded us to express to the subscribers of the above fund our sincere and grateful thanks for the very great sympathy and support extended to us by our professional brothers during a period of exceptional trial and anxiety. Amongst so many friends who have given valuable time and advice, it would be almost invidious to make distinctions, but we shall always hold in grateful memory the names of the late Drs. Moxon and Mahomed: the former, from the very commencement of our trouble, although not personally known to us, was ever ready to cheer and support us with his advice; and the latter, as joint hon. secretary, worked hard in our cause. To Dr. Burnet also our special thanks are due for the kindly and able manner in which he has voluntarily and solely borne the arduous duties of honorary secretary since Dr. Mahomed's death. To the Committee we have already privately expressed our gratitude, but we are glad now to be able to give public expression of our thanks to them for all their kind exertions on our behalf.

"We are, Gentlemen, yours very gratefully,

"BOWER AND KEATES.

"Tredegar Villas, East Dulwich-road, S.E."

LIVERPOOL.

(From our own Correspondent.)

HYDROPHOBIA.

ANOTHER death has recently occurred from hydrophobia, making the third which has taken place in the vicinity of Liverpool within the last two months. In all three inquests were held, the symptoms were the same, the interval between the infliction of the bite and death was short though variable, and in each case there was at least some evidence of the rabidity of the animal, and it was destroyed. Steps will have to be taken, if the disease continues to spread, for controlling the large number of stray dogs which are seen in our streets. That prevention is in this case better than cure must be evident to all who have studied the subject.

POISONING BY CARBOLIC ACID.

A fatal case of poisoning by carbolic acid formed the subject of an inquiry before the city coroner on the 18th inst. The deceased was a domestic servant of in-

temperate habits, and there appears to have been some doubt as to whether it had been taken suicidally or by accident. So many cases of death from this poison have recently occurred here that some restriction upon its sale is becoming necessary, and there appears to be no reason why so virulent a poison should not be sold under the same restrictions as other deadly poisons. The substitution of some less dangerous disinfectant would tend to limit the number of these fatalities. In another case the victim was a married woman who had been addicted to intemperance for some time past, and who took it with a suicidal intent. Dr. Telford, who was sent for, found her dead on his arrival, and in his evidence at the inquest he strongly condemned the use of so deadly a poison as a disinfectant, preferring the use of sanitas, though it was more expensive.

SALE OF INDECENT PHOTOGRAPHS AND PRINTS.

At the recent assizes held here, Mr. Justice Stephen tried three young men, brothers, for selling indecent photographs and publications. It appeared that the prisoners were doing a very large and profitable business when detected, and that the photos and prints came principally from Paris. The judge condemned the printing of such literature and the taking of such photographs in the strongest terms, and was informed by the prosecuting counsel that, as it was contrary to the law of France, the authorities in Paris had been communicated with in the hopes of this vile trade being suppressed. The prisoners were all convicted and sentenced to two years' hard labour. They will also have to pay fines and find sureties to such an extent as to make their imprisonment practically one for life. It is to be regretted that similar proceedings are not taken against the proprietors of the so-called museums and galleries of anatomy.

POSTING INDECENT BILLS.

The police authorities have recently made most laudable efforts to suppress the very serious nuisance caused by the posting up of the indecent bills issued by quack doctors in urinals and on walls, as well as distributed in the streets. On two different occasions a man charged with this offence has been fined forty shillings, or in default a month's imprisonment. It is to be hoped that the principal offenders may be reached and punished. The nuisance caused by these bills has attained most serious proportions, mainly in consequence of the apathy and indifference of the public and the authorities. The law, moreover, was defective, and a more stringent local Act had to be passed before the evil could be effectually dealt with.

Liverpool, Aug. 22nd.

MANCHESTER.

(From our own Correspondent.)

THE OUTBREAK OF SMALL-POX IN ST. JOSEPH'S INDUSTRIAL SCHOOL.

THE alarming outbreak of small-pox in the above school has not unnaturally excited much interest, not only here, but in other parts of the country. The total number of cases up to the present date has been seventy-three; seven more patients having been removed to hospital last week. Of the whole number, seven are stated not to have been vaccinated, all of whom suffered from a severe attack, three dying; no deaths have occurred amongst the other patients, the majority of whom are but little affected. As already stated in these columns, the supposed origin of the disease was a child, brought to the school from York; but this statement has been challenged by the York officials, and the town clerk of York, as well as Dr. North, the officer of health (the latter having been to Manchester to investigate the matter), have published letters attempting to show that it is by no means certain that this was the true origin of the outbreak. A report has been published by the chief inspector of our Health Department setting forth all the details from the date of the outbreak, the means adopted to prevent its spread, together with particulars of the condition of the child who is thought to have brought the disease with her. Questions have been asked in the House of Commons about the matter, and Dr. Page has been down from the Local Government Board to make full inquiry into it, together with Dr. E. Seaton, so that ere long we may look for an official statement

unbiased by any local feeling. Hitherto our own medical officer of health (Mr. Leigh) has said but little publicly; his report as a skilled expert in such diseases should be of much value in deciding upon the disputed points.

"THE LANCET" AND INSANITARY WORKSHOPS.

THE LANCET report on our "sweating dens" is producing further good results. At the last meeting of the City Council a discussion arose respecting some proposed sanitary improvements to be made at workshops in the city, and it came out that these insanitary workshops were those of which complaint was made by your commissioner when examining the rooms and buildings where tailors' work was carried on. It is satisfactory to find that the special committee appointed to consider and deal with unhealthy dwellings are attempting to remedy some of the more glaring defects, so common in much of the poorer property of the city.

HOSPITALS.

The Clinical Hospital has lately been enlarged by the building of a new wing, which will provide accommodation for the nursing staff, beside several new wards. The space formerly occupied by the nurses is now utilised for patients, thus largely increasing the number of beds. This extension has cost upwards of £2000. The committee of the Ancoats Hospital, where extensions are also being made to a considerable extent, hopes to secure the services of H.R.H. Prince Albert Victor to lay the chief corner-stone of the new buildings, when he comes to open a new club for poor lads recently established in the same part of the town. Prince Albert Victor promises to be as useful at these social functions as his father had been before him. It is hoped that at the same time he may open the new recreation ground in Rusholme.

THE HIGH DEATH-RATE.

The Manchester and Salford Sanitary Association is still endeavouring to give some practical issue to the prominence and agitation which have been made regarding our exceedingly high death-rate. Last week a deputation waited upon the magistrates, and asked them to give what assistance they could in preventing drunkenness by dealing severely with all cases brought before them of publicans and others supplying drink to persons who were already under the influence of alcohol; also to assist the Association in combating and abating the smoke nuisance by inflicting heavy fines on the offenders. The authorities have certainly been more active of late, and fines varying from £1 to £5 were recently inflicted on a large batch of persons who were summoned. This smoke nuisance is one of the most urgent matters to be dealt with, for until this is abated it is idle to talk about a pure and healthy atmosphere. Yesterday yet another deputation was made by the Association to the School Board authorities urging them to encourage the teaching of the elementary laws of health and hygiene among the children under their care.

MANCHESTER CREMATION SOCIETY.

Public attention was a few months since directed to the subject of cremation, at a public meeting over which the Bishop of Salford presided. A committee was then appointed to organise the movement, and, as the result, a local society has been formed, which promises to make progress, many influential persons having joined it, including clergymen, doctors, and numerous ladies. At present it is only among the educated classes that the movement can be expected to make much progress, prejudice and sentiment being too deeply rooted amongst the masses of the people for them to view with complacency any change in the present mode of burial of the dead.

Aug. 21st.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

SUNDERLAND.

MR. A. E. HARRIS, the medical officer of health for Sunderland, has just issued his report on the health and sanitary condition of the borough for the past year. The population is stated to be 129,607. In 1887 there were 4471 births registered, a decrease on the previous year of 150. The birth-rate for the year was 34.42, the lowest registered

since 1870; but in 1887 the marriages contracted numbered 1186, being an increase of 104 on the previous year. The last quarter was the most favourable for marriages, 323 taking place. The deaths amounted to 2549, being equal to 19·67 per 1000, against 19·45 in 1886. The difference is accounted for by the epidemic of measles which prevailed at the beginning of the year. These deaths, Mr. Harris mentioned, were in excess of those registered in 1886, but were considerably below the average number from 1870. There were no deaths from small-pox, but there were 168 from measles and 61 from other zymotic diseases. The medical officer is to be congratulated on the improved health of his town, the death-rate of Sunderland last week having fallen to 13·1; it is pointed out that very few of the twenty-seven large towns can show so low an average.—At Sunderland last week an interesting cricket match was witnessed of Law *versus* Physic, when the Sunderland lawyers and doctors had a friendly game for the benefit of the Infirmary. The lawyers scored 234 and the doctors 155 for three wickets. It is satisfactory to note that had the game been finished appearances pointed to a victory of physio over the law.

SOUTH SHIELDS.

The annual meeting of the Ingham Infirmary, South Shields, showed that the affairs of the institution were in a very satisfactory state, due in a great measure to the increase of subscriptions received from the workmen in the borough; but the committee point out that, with a population of 65,000, 144 annual subscribers is a very small list, and ought to be increased.—Dr. Monro, the medical officer of health for South Shields, has issued his annual report, from which I give you a few extracts. Dr. Monro says that the birth-rate, calculated on a population at mid-year to amount to 68,000, was 40·9. The death-rate amounted to 21·3 per 1000. As regards infantile mortality, Dr. Monro says that the "rate in the case of illegitimate children was exactly double the mean rate of the borough. The deaths of 669 children under five years of age, or 46 per cent. of the total deaths, were registered." As to the hospital work during the year, he shows that 244 patients were admitted into the Borough Infectious Diseases Hospital, being the highest of any year. As regards the cost per patient—viz., £3 10s. 5d.,—"he does not know of any other hospital of the sort in the country maintained at so low a rate."

MIDDLESBROUGH.

Dr. Ballard, of the Local Government Board, who was sent down to Middlesbrough some three months ago to inquire into the causes of the serious epidemic of pneumonia which had prevailed previously to his arrival, has concluded his investigations, and before leaving the town he had an informal interview with the Sanitary Committee, and suggested various improvements in the sanitary arrangements. The report, however (as is usual with official documents), will not be made public for some time, probably not until the close of the year.—The members of the Middlesbrough and Cleveland centre of the St. John Ambulance Association had a public demonstration last week in the grounds of Upleatham Hall, when the Countess of Zetland presented the certificates to the successful candidates. The Earl of Zetland spoke in very warm terms of the value of ambulance work.

FOUL AIR IN PUBLIC BUILDINGS.

A scheme has been matured by a local engineer for mechanically ventilating public buildings, manufactories, Board schools, sewers, &c., so that the foul air will be drawn off by an exhaust blast; the exhausted air will be replaced from the atmosphere, heated to a temperature of 60° to 65° F.

SERIOUS ACCIDENT IN THE NORTH.

A very serious accident occurred last Wednesday at Kirbymoorside. Mrs. Ringer was about to drive a visitor to the Hall, who was going to meet the London train, to the station. The party had just waved adieu to Dr. S. Ringer, when the horse, a spirited animal, started off, frightened, and upset the vehicle. All the occupants were thrown out, but only Mrs. Ringer was injured. I regret to say that the newspaper accounts state that she was seriously injured about the face and head. Great sympathy is felt for Mrs. and Dr. S. Ringer. Only a few days ago they commemorated their wedding, and extended hospitality to over a thousand visitors.

Newcastle-on-Tyne, August 22nd.

DUBLIN.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The President and Council have forwarded a memorial to the Secretary of State for War, on behalf of their Fellows and Licentiates who are army surgeons, in reference to the injustice which they suffer by the dating of their commissions at a later period than those of the medical officers of the Indian and Naval Medical Service of equal standing. The memorialists ask that the promotion of the army medical officers—which otherwise would take place on the 4th of next February—may be granted at the same date as that of the Indian and Naval medical officers—viz., on Sept. 30th.

QUEEN'S COLLEGE, CORK.

The President, in his annual report, points out that under the Queen's University the matriculation examination of the College counted as a University examination, and that all students who passed it were deemed matriculated students of the Queen's University. The Royal University, however, recognises only its own examinations, so that all students who propose to graduate in that University must pass its matriculation examination, which the College accepts in lieu of their own. The room set apart as a preparation-room for the Anatomical and Pathological Museum has been fitted up so as to serve also as a pathological laboratory, the chief appliances and apparatus being provided for making chemical and histological investigations of pathological substances and bacteriological studies. The physiological laboratory is not large enough for the class; but if a special place for histology were built, so as to allow the present laboratory to be devoted exclusively to experimental physiology, the want could be remedied. Since the biological laboratory was built practical biology has been introduced into the curriculum of the Royal University, so that, instead of a class of four students for which the place was constructed, during the past session there were twenty students working in the laboratory.

CASTLEBAR DISTRICT LUNATIC ASYLUM.

Dr. Nugent, the inspector of lunatics in Ireland, has recently investigated the existing accommodation of this asylum. He found, according to his report, the institution overcrowded by fully eighty patients, so far as legitimate dormitory provision is concerned, and by still more as regards day-rooms. This repletion gradually progresses, and he is of opinion that the estimate, as sanctioned by the Board of Governors some months since, would now require to be doubled. It is understood that plans are being prepared for an extension of the building on a very large scale, and when these are ready every effort will be made to commence the work as soon as possible.

BRITISH DENTAL ASSOCIATION.

The annual meeting of this Association will be held here on the last three days of the present week. It was only last year that a branch of the British Dental Association was founded in Dublin, its formation being principally due to Messrs. Theodore Stack and W. B. Pearsall. Mr. Corbett has been selected as President, and Mr. Robert Moore, F.R.C.S.I., as Vice-President. The Honorary Secretary of the Dublin branch is Mr. W. Booth Pearsall, F.R.C.S.I.

ROYAL UNIVERSITY OF IRELAND.

The annual meeting of Convocation has been fixed for Oct. 30th, and on the following day a public meeting of the University will be held for conferring the degrees obtained at the recent examinations.

THE CASE OF DR. MAGNER.

The Local Government Board have sanctioned the appointment of Dr. Magner as medical officer of Timoleague Dispensary District.

Dublin, Aug. 21st.

PRESENTATION.—Mr. W. W. Brereton has been presented with an illuminated address and a purse of sovereigns on the occasion of his leaving Oughterard to occupy the position of Professor of Surgery in Queen's College, Galway.

BELFAST.

(From our own Correspondent.)

QUEEN'S COLLEGE: REPORT OF THE PRESIDENT.

FROM the report of the President, which has just been published, I learn that during the session 1887-88 the condition and progress of Queen's College, Belfast, has been most satisfactory. Never before, during one academic year, have the students gained so many and such high honours in the Royal University, and, further, a number of senior students, who received a chief part of their training at Queen's College, have been equally successful at Oxford, Cambridge, and Dublin. In the University of Cambridge, an old Belfast student, Mr. Orr, has obtained first place in the Mathematical Tripos, this being the third occasion within ten years in which a student of Queen's College, Belfast, has become senior wrangler. In the Royal University, during the past year, 133 students of Queen's College have obtained degrees—53 in arts, 74 in medicine, 4 in law, and 2 in engineering. Out of a total of 73 exhibitions and prizes awarded, the students of Belfast College have gained 24. Referring to the difficulties and wants of the College, the President calls attention to the insufficient laboratories and defective apparatus, owing to the fact that the number of students, combined with the requirements of modern education, has far outgrown the capacity of the buildings. The physical, histological, and biological laboratories are miserably insufficient; this defect, however, could be remedied by a comparatively small grant. The number of students who entered the Belfast College for the first time during the session was 109, and the total number on the books in each department during the session was as follows:—Medicine, 227; arts, 180; law, 21; engineering, 9. But as nine of these attended in more than one department, the total number of individuals was 428, being a slight increase on the previous year. Nine ladies have also been enrolled, but owing to existing statutes they are prevented competing for prizes. Though the College continues to prosper, it is useless to deny the fact that it sustained a very severe blow when in 1882 the old Queen's University was dissolved. At that time there were 567 students at the Belfast Queen's College; now the number has fallen to 428. By the destruction of the Queen's University their former status and privileges were taken from the students, and an entirely new educational system was forced upon the youth of the country, the Royal University being simply an examining board without any teaching functions, and without any affiliated colleges. In his able report the President refers to certain reforms which he thinks might be effected in the Royal University. In the first place, the students complain of the frequent changes made in the courses for examination, more especially in the department of medicine. New arrangements are introduced as to the mode and time of attendance in hospitals, as to the precise order in which College lectures are to be delivered, and as to the exact period during which alone certain subjects are to be studied. These new regulations interfere with the order which has been successfully followed in this College for forty years, and they are harassing to both professors and students. Again, it is now required that every candidate for a medical degree should pass, first, the matriculation examination; then, after the lapse of a year, the first University examination in arts; and then only can he enter on his medical studies. The subjects for both these examinations are the same, the latter, of course, being somewhat more advanced; but it often happens that a youth comes up for matriculation so well prepared that he could at once pass the other examination; as, however, he is not permitted to do so, a whole year must elapse before he can begin his proper professional work, and to him this year is practically lost; he must wait until inferior men, by the aid of private grinding or reading, are able to pass the first University examination, and then only is he permitted to go forward. A much better arrangement would be to enlarge the matriculation course of the Royal University to the extent of the present course for honours or for the first University pass; let this examination be thoroughly testing, and then permit those who pass to go forward, and proceed at once with their professional studies. In this way, as in other places, the

candidate could take his degree in four years after matriculation. In conclusion, the President speaks of the conduct of the students during the session as being highly satisfactory. Belfast, Aug. 21st.

PARIS.

(From our own Correspondent.)

PROFESSOR BABES ON GLANDERS.

AT a recent meeting of the Academy of Medicine, Prof. Babès, of the Faculty of Medicine of Bucharest, communicated the result of his researches on glanders, an affection rather common in Roumania in man as well as in the horse. He had an opportunity of examining three persons, who had died with all the symptoms characteristic of this malady. The infection was the result of their contact with horses affected with glanders. At the necropsy, masses of bacilli were found in the blood. He also observed, by the aid of numerous experiments, that the bacillus of glanders may penetrate into the skin, without any solution of continuity in the latter, in following the hairy follicles where it multiplies. It then traverses the epithelial cells and produces infiltrations of the embryonic cells under the form of patches and of papulae, which constitute the origin of ulcerations of the skin.

AORTIC ANEURYSM.

At the same meeting of the Academy of Medicine, Dr. Constantin Paul read a paper on the Treatment of Aneurysms of the Aorta. He does not defend the method that bears the name of Moore, but he believes it to be useful in certain cases to introduce a foreign body into the aneurysmal sac. He shows the defects of the electro-puncture, which produces around the needle a deposit of coagulated albumen, without adhesion to the parietes of the sac; it is movable, friable, and forms a veritable grain of emboli. The procedure of Constantin Paul consists in the introduction of a certain number of Japanese needles, which are long and extremely fine, so fine that, to make them penetrate the skin, it is necessary to employ a conductor, which keeps them straight. The needles are left in the sac only a few minutes; they produce a slight degree of adhesive inflammation of the aneurysmal sac. After a few days the same operation is recommenced, and a new access of inflammation takes place. In a short time the parietes of the sac become thickened, and the needles cannot be introduced into the points where it appeared that the aneurysmal sac was about to open. In these special conditions, this form of surgical intervention, always inoffensive when it is practised as indicated by Constantin Paul, renders real service. Dr. Dujardin Beaumetz thinks that until some absolutely certain method can be found, all surgical procedures in the treatment of aneurysms of the aorta should be abandoned, and particularly that of Moore. More benefit may be expected from the administration of the iodide of potassium, especially when given in beer or black coffee, or even in milk, as it is then better tolerated, the elimination of the iodide rapidly takes place, and the inconveniences of iodism are prevented.

THE AIR OF HOSPITAL WARDS.

Dr. Le Fort, Professor of Clinical Surgery at the Necker Hospital, believes that the prevailing theories respecting the pernicious influence of the microbes contained in the air, particularly in the air of hospital wards, are unsound. To demonstrate this view, he undertook his former experiments of many years ago of leaving the wounds of the patients on whom he had operated in immediate and permanent contact with the atmospheric air. He has now in his wards at the Necker Hospital three cases of amputation of the leg, one of the thigh, one case of resection of the elbow, a case of amputation of nine toes, &c., all of which have been cured, or are being cured, without suppuration and by first intention.

Dr. Duclaux read a note at the Société de Biologie for Dr. Chibret of Clermont-Ferrand, from which it results that in the point of view of antiseptics, the oxycyanide of mercury might with advantage be substituted for the bichloride of mercury. This salt is not only more antiseptic than the

bichloride, but it is less irritating to the tissues, and it does not affect instruments.

The *Journal Officiel* has announced that during the Universal Exhibition of 1889 international congresses will be held on the following subjects:—1. Dermatology and Syphilography. 2. Hydrology and Climatology. 3. Hygiene. 4. Physiology. 5. Therapeutics.

Paris, August 21st.

EGYPT.

(From our own Correspondent.)

THE HYGIENE OF GOVERNMENT SCHOOLS.

FROM the report for 1887 just issued by the Ministry of Public Instruction, it appears that there are eleven schools dependent entirely on the Egyptian Government; these contain 1779 scholars, and the cases of illness during the year have amounted to 2480. The percentage of the sick list, when analysed, is found to resolve itself into—diseases of the eye, 27; dengue, 26; diseases of digestion, 15; bronchitis, 12; catarrh of intestine, 11; tonsillitis, 4; rheumatic pains, 2; and hæmaturia, 1. Ophthalmic diseases are more carefully treated since a good native oculist was placed in charge of the schools. Dengue did not occur between 1880 and 1887, and it is hoped will not visit us again. Digestive diseases have improved from the 22 per cent. of the previous year, and this is partly due to a diminution in overcrowding in day-rooms and dormitories, and to the holidays being made to correspond with the hottest summer months. But another useful change has been the substitution at breakfast of milk, eggs, and jam with the bread instead of olives and sour cheese. The schools have now been supplied with filters for drinking-water, and it is hoped that this will diminish the cases of hæmaturia. Unfortunately the Egyptian loves his Nile water thick and unfiltered, and is not deterred by the risks of bilharzia. Besides these Government schools, there are twenty-eight for 3222 pupils, under the direction of the Wakfs or Ecclesiastical Commissioners; also three mosque colleges, with 8326 students, and 7142 elementary schools in the provinces, where 120,121 children are instructed in the Koran. Lastly, there are no less than 191 schools established by foreigners on a charitable or religious basis, and these are attended by 7634 European and 15,130 Oriental boys and girls, the boys, however, being nearly three times as numerous as the girls. Among these 191 free schools, fifty-three are American, forty-eight are Coptic, and thirteen are under Franciscans, and their pupils are drawn from seventeen nations and six different religions.

THE MEASLES EPIDEMIC.

The weekly deaths from measles in Cairo during July rose to 42, 41, 36, 31, and 29, but they have now fallen again to only 4. Nearly all the fatal cases occurred in native children under five years of age, and the disease has not spread beyond the native quarters. There is, however, a very high diarrhoea mortality among Egyptian children under three years of age.

SURGERY AT KASR-EL-AINI.

The following operations have been performed by an English surgeon among the female patients during July: Extirpation of cervical glands, 6 cases; axillary glands, 2; amputation of breast, 4; lupus of face and nose, 2; amputation of fingers, 3; excision of eye, 1; extraction of cataract, 1; 6 cases of necrosis in rib, sternum, metatarsus, metacarpus, os calcis, and radius and ulna; and 2 cases of fistula in ano. Of the twelve operations performed on glands and breasts, the wounds all healed by first intention, excepting one half-starved old woman, who arrived with an ulcerated breast already gangrenous. In consequence of the heat of the weather, it is found necessary to change the dressings every two or three days.

Cairo, August 10th.

A MEDICAL MISSIONARY HOSPITAL, MADAGASCAR.

It is stated that the Government of Madagascar has given a site for a hospital that is to be built near the capital of the island by the Foreign Missionary Association of the Society of Friends. A medical missionary from Lancashire is going out.

Obituary.

EDMUND JOHN BARKER, M.D.

It is with much regret we record the death of Dr. Edmund John Barker, which occurred at Aldershot on Friday July 27th, in his seventy-first year. Dr. Barker came home feeling ill from paying, with his accustomed energy and conscientiousness, an early visit on the morning of July 23rd to one of his patients. His family, soon becoming aware that he was seriously ill, summoned Dr. Bristowe, but all that human skill could do was unavailing to prolong his valued life.

Dr. Barker commenced practice in Staffordshire some forty years back. He afterwards moved to Alderley Edge, where he had a large practice, and enjoyed very great respect. It is more than a quarter of a century since he removed to Aldershot, where he soon made for himself a large and successful family practice, and fully enjoyed the confidence of all classes of his patients, not only as a skilful medical attendant, but as a true and faithful friend and wise family adviser. In 1887 he was elected to the presidency of the South-Eastern Branch of the British Medical Association, and while attending its last annual meeting at Rochester he caught a cold, from the effects of which, it is believed, he never fully recovered. Dr. Barker will long be missed by his patients and friends in Aldershot, where he was not only the leading medical practitioner, but also active and public-spirited, and always ready to take his part in the promotion of any measure for the good of the town. The respect in which he was held was manifested on the day of his funeral by the general public who attended, and also the members of the Army and Navy Masonic Lodge, of which he was the treasurer; and there was scarcely a shop window in Aldershot that had not its blinds down or its shutters closed. In his own family, however, the trial has fallen most heavily, occurring as it did only two days after the marriage of his only son, Surgeon F. R. Barker, M.B.

Medical News.

BATHS FOR WORKPEOPLE.—A worthy example has just been set by the principals of the Leeds Monkbridge Iron Works, in gratuitously providing a swimming bath on the premises for the use of their workpeople, where between 500 and 600 men and boys are employed; a boon which has already obtained their high appreciation and has encouraged the art of learning to swim.

NEW LUNATIC ASYLUM FOR PLYMOUTH.—The foundation stone of a new hospital for the insane for the borough of Plymouth was laid on the 14th inst. by the Mayor. The site is more than seventy acres in extent, and the building is planned to accommodate 200 patients. The contract sum is £34,544.

BURIAL REFORM.—At a meeting of the Council of the Burial, Funeral, and Mourning Reform Association held on Monday last at York, the Rev. H. Vyvyan, rector of St. Mary, Castlegate, York, in the chair, it was resolved to submit to burial boards that if the exigencies of society require the burial of many bodies near large populations, it is extremely desirable, in the interests of public health, that improvements be introduced into the mode of burial by which a more speedy dissolution may be effected, and that earth-to-earth burial fulfils these conditions.

ISLE OF DOGS AND POPLAR FLOODS.—At a meeting of the committee of the Mansion House Fund on Tuesday, at Poplar Town Hall, Mr. Sydney Buxton, M.P., presiding, the survey committee, appointed to carry out the work of disinfection and to do what was necessary to prevent an epidemic, reported that, in pursuance of the resolutions of the committee of Aug. 10th, they had, with the assistance in many cases of owners of houses in the flooded districts, removed flooring and applied disinfectants in over 500 houses, and that now, the consent of most of the owners having been obtained, the work was being expeditiously

proceeded with, and would probably be almost completed by the end of the week; and, in the opinion of the committee and of local medical men, the means adopted would effectually counteract the probability of disease arising from the floodings. Sewage water remaining on vacant land had been pumped into the sewers and the ground thoroughly disinfected. In cases where owners had refused to allow the work to be done by the committee, the local sanitary authority would exercise their compulsory powers. Large quantities of coals for drying the houses have been distributed, also disinfectants, soap, and bedding, clothing, tools, &c., to replace those destroyed by the flood. Floor-cloth and mats are being supplied, and so far as the now limited funds at the disposal of the committee will allow, the still large number of necessitous cases will be adequately relieved. The Lord Mayor's Fund is open until Saturday for subscriptions.

OPHTHALMIA AT HANWELL SCHOOLS.—The managers of the London Central School District have been informed that Dr. Bridges (inspector) and the Board's architect will officially visit the Hanwell Schools for a conference with the managers on the subject of ophthalmia in connexion with certain alleged defects in administration and structure.

THE SEWERAGE OF MACCLESFIELD.—The local board of the borough has decided to adopt irrigation for the sewerage and sewage disposal of the town. The scheme comprises the laying out of 150 acres of land for sewage disposal, and the putting down six miles of outfall sewers to intercept and deliver the sewage. The estimated cost is £23,750.

MEDICAL MAGISTRATES.—Mr. Henry Wright, M.R.C.S., has been placed on the Commission of the Peace for Scarborough.—Mr. John Wm. Davies, F.R.C.P. Lond., M.R.C.S., of Ebbw Vale, Monmouth, and Mr. Edward Shearman Vachell, M.R.C.S., L.S.A., of Victoria, Ebbw Vale, have been put on the Commission of the Peace for the county of Monmouth.

PROVINCIAL HOSPITAL SUNDAY AND SATURDAY COLLECTIONS.—On the 19th inst., the Barnsley Feast Hospital Sunday and the annual musical festival, in aid of the funds of the Beckett Hospital and Dispensary, was held, and produced £47 4s. The Hospital Saturday collection at Ilfracombe, on the 19th inst., in aid of the Tyrrell Cottage Hospital, amounted to £126, an increase of £49 13s. on last year.

CONDEMNED TINNED MEAT.—On Monday, between 1300 and 1400 tins of meat, consisting of beef, mutton, and rabbit, which had been selected from cargoes brought to London from New Zealand, were conveyed within the precincts of the West Ham Police Court by an inspector of nuisances of the sanitary authority of the Port of London; about 20 per cent. being found to be unwholesome, the putrid tins were all ordered to be destroyed.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. Capel Carter, formerly of Woodford, Essex, but lately of Bath, has bequeathed, free of legacy duty, £3000 each to the London Hospital and the Charing-cross Hospital, and £2000 to the Dental Hospital, Leicester-square.—The Northern Co-operative Company, Limited, Aberdeen, has granted the following donations: Royal Infirmary, £50; Sick Children's Hospital, £20; Dispensary, £10; Eye Institution, £5; and Blind Asylum, £5.

LEWES DISPENSARY AND INFIRMARY (VICTORIA HOSPITAL).—From the report presented to the governors and subscribers of this institution at the recent annual meeting, it appears there are now fourteen beds instead of three. The income for the year was £674 7s. 4d., which, with the balance of £251 5s. from last year, brought the available total up to £925 12s. 4d. The expenditure had amounted to £736 6s. 2d., leaving a credit balance of £190 6s. 2d.

PUBLIC BATHS FOR OPENSHAW.—A special meeting of the Openshaw Local Board was held on Monday last, to consider an offer from the legatees of the late Sir Joseph Whitworth to erect in the township, and fully equip, public baths for the use of the inhabitants. It was, moreover, stated that the legatees were willing to make a substantial contribution towards the expense of providing recreation grounds for the township. The board unanimously accepted the offer.

LONG HOURS OF RAILWAY SERVANTS.—An agitation is at present proceeding amongst certain of the guards of the Great Western Railway Company with respect to grievances said to exist as to the long hours they have to work.—The engine-drivers and firemen of the London, Chatham, and Dover Railway, who are said to be kept at work for twelve, fifteen, sixteen, and seventeen hours per day, are also agitating to get their condition ameliorated.

OPENING OF WATERWORKS AT ZEAL, NORTH DEVON.—This prettily situated village in the highlands of Devon has recently gained the advantages of a good supply of fresh water. The inhabitants suffered severely from the cholera in 1866, and from the occasional yet recurrent presence of epidemic fevers. There are several wells in the village, but most of them are contaminated by reason of their close proximity to the churchyard, or from their being below the level of the churchyard on the watershed slope. The new supply is gained from a shaft sunk 50 ft. deep on high ground at the eastern side of the village; from the shaft the water is carried by socket pipes to a reservoir 40 ft. by 16 ft., by 6 ft. deep (stone and cement), with a cubic capacity of 16,000 gallons. From the reservoir, branches are laid on to the village, terminating at chosen spots in cast iron ornamental wall fountains fitted with taps, sluice valves, flush pipes, &c. Mr. John Wreford, J.P., of Clannaborough, formally opened the waterworks on August 14th. The total cost has been defrayed by Mr. Richard Davy, of Burstone House, surgeon to the Westminster Hospital.

HYDROPHOBIA.—A case of hydrophobia, which terminated fatally in a few hours, was admitted into St. Thomas's Hospital on Saturday last. The patient, aged thirty-two years, was quite well up to the 13th inst., when he complained of pain in the legs and was very restless. The next day he was better, but on the 15th he became more restless and went to the French Hospital, where he was given an ice bath, without any relief. On Friday morning, the 17th, he was able to take his food well, but in the evening he was exceedingly restless, could not swallow, and his wife thought he was going mad. On Saturday a doctor advised his removal to the hospital. On arrival at St. Thomas's in the afternoon, he was in a state of great emotional excitement, moving incessantly, and expectorating frothy mucus. He looked up when spoken to with a look of great terror, with eyes widely open; he kept crying out that he was very nervous, and begged for morphia, but he answered questions quite rationally. When offered water, he had the characteristic spasms, putting his head forwards first, and then suddenly drawing back with violent shuddering. One-third of a grain of morphia was at first given, without any effect. Three-quarters of an hour afterwards chloroform was administered, and the patient was kept slightly under it for two hours, during which time the spasms were mitigated. He suddenly became much worse, his respiration being Cheyne-Stokes'. The chloroform was stopped and brandy given, but he did not rally, his breathing ceasing about half an hour afterwards, without any obvious spasm. There was no history of any bite or scratch, nor were there any signs of such on the body, except one or two abrasions on the legs not accounted for.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BARCLAY, W. M., M.R.C.S., L.R.C.P., has been appointed Assistant Surgeon to the Bristol General Hospital, vice W. J. Penny, resigned.
HASTINGS, E. B., M.R.C.S., L.R.C.P., has been appointed Resident Clinical Assistant to the South-Eastern Fever Hospital, New Cross, S.E.

JONES, J. T., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Whitford District of the Holywell Union.

LANGDON, T. C., L.R.C.S. Eng., M. and L.M., L.S.A., has been re-appointed Medical Officer of Health, Winchester Urban District.

LUMLEY, B., M.R.C.S., L.M., L.S.A., has been reappointed Medical Officer of Health for Northallerton District and Workhouse, Northallerton Union.

LUND, HERBERT, M.A., M.B., B.C. Camb., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Hulme Dispensary, Manchester, vice John Broadbent, M.R.C.S., resigned.

MACKENZIE, W. S., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for Normanton Urban Sanitary District.

MELLER, C. B., L.R.C.P. and L.M. Edin., M.R.C.S., has been appointed Medical Officer of Cowbridge District of Bridgend and Cowbridge Union.

MILNER, JAMES, M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Shipdham District of the Mitford and Launditch Union, and for the Bradenham District of the Swaffham Union, vice J. K. Milne, deceased.

NEALE, G., L.R.C.P., L.M., L.R.C.S. Edin., has been appointed Medical Officer of Health of the Barry and Cadroxton Local Board, and Urban Sanitary Authority, Glamorganshire.

RUTHERFORD, HENRY T., B.A., M.B. Cantab., M.R.C.P. Lond., has been appointed Physician to the Out-Patients' Samaritan Free Hospital, vice R. Boxall, M.D. Brux., resigned.

SEQUEIRA, H. L., M.R.C.S., L.S.A., has been appointed Medical Officer for District No. 1 City of London Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

EDINBURGH CITY POORHOUSE, Craiglockhart. — Resident Medical Officer. Salary £80 per annum, with board.

GENERAL HOSPITAL, Cheltenham. — Resident Surgeon for the Branch Dispensary. Salary £180 per annum, with partly furnished house, coal, and gas.

GENERAL INFIRMARY, Leeds. — Resident Medical Officer and Pathologist. Salary £100 per annum, with board, residence, and washing.

LIVERPOOL NORTHERN HOSPITAL. — Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

NATIONAL LYING-IN HOSPITAL, Dublin. — Assistant to the Master.

ROTHERHAM HOSPITAL. — Assistant House Surgeon. In lieu of salary, rooms, commons, and washing provided in the hospital.

ST. MARK'S HOSPITAL FOR FISTULA, &c., City-road, London. — House Surgeon. Salary £50, with board and residence in the hospital.

WINCHOMB UNION. — Medical Officer. Salary £86 per annum, and in addition, midwifery, surgical, and vaccination fees.

Births, Marriages, and Deaths.

BIRTHS.

ADENEY. — On the 21st inst., at Tunbridge Wells, the wife of Edwin Leonard Adeney, M.D. Lond., of a son.

ARMSTRONG. — On the 15th inst., at Rodney-street, Liverpool, the wife of Dr. Armstrong, of a daughter.

FRASER. — On the 15th inst., at Devon House, Mostyn-road, Brixton, the wife of E. Fraser, M.D., of a daughter.

HOUGHTON. — On the 16th inst., at Whitwick, Leicester, the wife of Lambert Houghton, L.R.C.P., L.R.C.S., of a daughter.

RANDALL. — On the 15th inst., at Station-hill, Bridgend, the wife of Wyndham Randall, M.R.C.S., of a son.

STEELE-PERKINS. — On the 18th inst., at Wintersbourne, Coventry Park, Streatham, S.W., the wife of Geo. Steele-Perkins, L.R.C.P. Ed., of a daughter.

MARRIAGES.

CLAY—HESTER. — At Kimo, Gundagai, N.S.W., on June 28th, by the Rev. R. J. R. Edwards, William Rudolph Clay, M.R.C.S., L.R.C.P. Lond., of Rockdale, eldest son of the Rev. W. French Clay, M.A., M.D., late of the Indian Medical Service, to Rosa Catherine, eldest daughter of the late James Hester, M.D., Indian Medical Service, and stepdaughter of T. F. Waller, Esq., Sydney.

GULLAND—MASSON. — On the 15th inst., at Great King-street, Edinburgh, George Lovell Gulland, M.B., of Randolph-place, Edinburgh, to Helen Orme, second daughter of Professor Masson, University of Edinburgh.

HUDSON—BLAND. — On the 21st inst., at St. Martin's Church, Leeds, by the Rev. T. S. Fleming, Vicar of St. Clement's, assisted by the Rev. E. B. Bland, B.A., Curate of Revesby, Lincolnshire, cousin of the bride, Theodore Joseph Hudson, M.D., L.R.C.P. Lond., of 110, North-street, Leeds, and Skidby Vicarage, Hull, to Clara Bland, younger daughter of the late S. Y. Bland, Esq., Burnhall-in-Craven, and of Mrs. Bland, Newton-grove, Chapel Allerton, Leeds.

MILEY—BOYS. — On the 15th inst., at Wing, Rutland, Miles Miley, M.A., M.B. Camb., only son of Miles Miley, of Belsize-avenue, Hampstead, and Woodlands, in the county of Herts, to Lucy, youngest daughter of the Rev. Charles Boys, Rector of Wing.

WITHERS—OLIVER. — On the 18th inst., at St. Andrew's Church, Nottingham, John Sheldon Withers, M.R.C.S., L.R.C.P., of The Grove, Sale, Cheshire, to Hannah Mary, daughter of the late Thos. Oliver, of Fern Lodge, Sherwood-rise, Nottingham.

DEATH.

TOWNSON. — On the 21st inst., at his residence, Waterloo, Liverpool, Benjamin Townson, M.R.C.S.L., aged 74. (No cards.)

N.B.—A fee of 6s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 23rd, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Mercurial Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Aug. 17	30.14	E.	55	51	89	61	51	..	Overcast
" 18	30.24	N.E.	54	51	106	64	50	..	Overcast
" 19	30.23	W.	60	55	112	69	51	..	Cloudy
" 20	30.01	S.W.	61	57	66	66	56	..	Cloudy
" 21	29.64	W.	60	59	107	70	56	.23	Cloudy
" 22	29.75	W.	61	57	117	73	53	.02	Cloudy
" 23	29.93	S.W.	61	59	97	66	54	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER OF "THE LANCET"

will be published on Saturday, September 8th. Those gentlemen holding official situations connected with medical institutions in the United Kingdom who have not yet forwarded the necessary information to our Office for publication in that number are earnestly requested to send it *without the delay of a single post.*

THE CLIMATE OF TENERIFFE.

PROFESSOR PIAZZI SMYTH, whose retirement from the post of Astronomer Royal for Scotland and Professor of Practical Astronomy in the University of Edinburgh after an incumbency of forty-three years is the theme of general regret, made in 1856 an astronomical experiment above the clouds on the Peak of Teneriffe. "For a number of years," he says in the report with which he closes his official career, "no visible effect followed, and the island remained strangely unvisited by, and almost unknown to, the English public." But within the last three or four years it has suddenly become extremely popular, and is found to be "the very perfection of all winter residences for recruiting the health of northern invalids."

B. B. B. — A little work by J. Millar, L.R.C.P. Ed., entitled "Hints on Insanity," published by Benshaw, Strand, may be consulted.

H. de B. — Yes, a diploma is required. Consult article in Students Number of THE LANCET.

An L.S.A. cannot legally carry on business as a pharmaceutical chemist, and vice versa.

An Old Subscriber has not enclosed his card.

LIBRARY BOOKS AND INFECTION.

To the Editors of THE LANCET.

SIRS, — The paragraph in your last issue respecting the experimental investigations in the Dresden libraries will indirectly be of invaluable service to the free library movement. Many leading citizens have held aloof from the movement from the fear that infection might be spread by means of the books, and not a few medical men have made it the ground of active opposition to the spread of these institutions. It is not generally known that in the Dundee and other free libraries a disinfecting apparatus for books is in use. This consists of a sort of closed cupboard made of ordinary tinsplate, with a lid at the top, a wire shelf half way up, and a little door at the foot. By an arrangement with the sanitary inspector, all cases of infectious diseases are immediately reported to the library, and a notice is at once sent forbidding readers residing in such houses to return books until these houses are certified free of disease.

I am, Sirs, yours truly,

THOMAS GREENWOOD,
Author of "Free Public Libraries."

August, 1888.

AMPUTATION OF PENIS UNDER COCAINE.

DR. CHRISTIE, having a case of epithelioma of the penis in a Tartar patient, and finding that after a few inhalations of chloroform the man was a bad subject for a general anæsthetic, decided to try cocaine. Twenty minims of a 5 per cent. solution of the hydrochlorate were injected in five-minim doses at short intervals round the seat of incision, and a quarter of an hour after the last injection the operation was performed without the patient giving the slightest evidence of pain. Another point of interest is that, except from the larger blood-vessels, there was hardly any hæmorrhage, doubtless due to the constricting effect of the drug on the capillaries. No bad effects followed. The anæsthesia produced lasted over a day; indeed, the patient made no complaint of pain after the operation. He is stated to have recovered without a bad symptom, and now to enjoy excellent health.

A Subscriber and Reader of THE LANCET for more than Forty Years.—

1. Such diplomas carry no legal title to the use of the prefix.—2. A person using the Boston U.S.A. degree in medicine acquired by purchase may legally use it if he is candid as to the origin and nature of his degree. If not, he comes near violating the 40th Clause of the Medical Act, which forbids the use of a title which implies registration and the right to practise.—3. It is open to any person to challenge the use of false titles. Unfortunately, what is everybody's business is nobody's.

Mr. M. Palmer (Newbury).—Coffeine and opaliba might be tried.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Can any reader of THE LANCET suggest a cause and the remedy for the following case, which has been under the writer's care for some time, and has been treated in various ways but without success.

A. B.—, aged forty, in good general health, complains of severe pain across the right and left lumbar and umbilical regions coming on every morning about 4 or 5 A.M. and lasting until he gets up. The pain always comes a few minutes after rising, and does not come on again until the same time the next morning. The pain is increased by pressure; the abdomen at other times is not at all tender, and to all appearance quite normal. Bowels regular, appetite good, not subject to rheumatism, thoracic organs normal. The patient sleeps well until 4 or 5 A.M.; the stomach acts well; has never had any serious illness in his life; urine normal.

August, 1888.

I am, Sirs, yours faithfully,
M.D.

BREACH OF THE DENTISTS' ACT.

A Looker-on.—A person falsely using titles which imply that he is registered in the Dentists' Register is liable to a fine of £20 on summary conviction.

Justice.—1. The University of Philadelphia is the university whose Charter was withdrawn for disgraceful sales of medical degrees. Such degrees are not registrable. The Medical Council has no jurisdiction over persons who are not on the Register. If the person in question practises as an apothecary, the Society of Apothecaries might have a case against him. Our correspondent might state the facts to the Society.—2. A legally qualified man employing a person pretending to have the degree of a non-existent university and placing him in charge of a branch practice would act very reprehensibly, and lay himself open to the censure of the Medical Council, and possibly to removal from the Medical Register. A legally qualified medical man employing such a person as an assistant could not legally claim payment for the services of such a person.—3. None in particular. They are the business of the Registrar, and to be registered on such information as he can get. If an undue number of uncertified deaths occurred in a district, the medical officer of health should communicate with the Registrar-General and the sanitary authorities.—4. We do not think so.—5. We cannot imagine medical officers of health acting on such motives.

W. T. B.—We know of no work in which the subject is specially discussed. Either Taylor's work, edited by Stevenson, or Guy and Ferriar's manual would answer the purpose of our correspondent.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—I have just seen to-day's LANCET, which, in reference to a paper read by me at the recent meeting of the British Medical Association at Glasgow, on "Headaches of Pelvic Origin," states that I showed "that in flexion of the uterus the use of an intra-uterine stem completely cured the disease." This was not at all the purport of my paper, which was intended to show that certain pelvic conditions may produce certain varieties of head symptoms, and I expressly stated, with cases in point, that flexions *per se*—i.e., apart from prolapsus—did not produce such symptoms. The intra-uterine stem was used in one case to cure a stenosis, not a flexion.

I am, Sirs, yours faithfully,
Upper Montagu-st., W., Aug. 11th, 1888. AMAND ROUTH.

PUBLIC APOLOGY TO A MEDICAL MAN.

THE *Buxton Chronicle* contains a public apology by Sarah Tomkinson for certain slanderous statements respecting Mr. Jas. Dewar, F.R.C.S. Ed., of Buxton. The lady encloses £5 ss. to Mr. Dewar as a contribution to the funds of the Manchester Royal Infirmary, and pays his solicitor's charges in the matter.

A. Y.—In the case submitted to us nothing would be gained by any attempt to decide whether it was chicken-pox or small-pox, the two diseases, owing to the modified character which small-pox acquires after vaccination, being at times all but indistinguishable. As regards the action of the medical officer of health, we are of opinion that if he examined the child without conference with the medical practitioner in attendance, and informed the parents that the case was not one of small-pox, as had been alleged, but one of chicken-pox, he was distinctly wrong in his method of procedure. As a rule, the diagnosis of a registered medical practitioner who reports a case to a medical officer of health is at once accepted by him. There may be occasions where his duty may require him to form a diagnosis of his own, and under these exceptional circumstances it may be necessary for him to see the patient; but if he does so, his visit should be paid together with, or after conference with, the medical practitioner in attendance. This is the general practice of medical officers of health, and it is very important that it should be adhered to. Had this been done in the case referred to us, there is every reason to believe that the unfortunate circumstances which resulted from the needless publicity given to the difference of opinion as to the character of the disease would not have arisen.

Lex.—If a man uses a foreign medical degree without candour, so as to lead the public to think that it is recognised and registrable in this country, he would lay himself open to a charge of having violated the 40th Clause of the Medical Act.

BROMO SODA IN EPILEPSY.

To the Editors of THE LANCET.

SIRS,—I should like to be allowed to ask if any English practitioner has ever used the preparation of bromo soda (combination of the bromide of sodium and hydrobromate of caffeine) in cases of epilepsy. If so, with what effect? Also his experience.

I am, Sirs, yours faithfully,

Aug. 17th, 1888.

A. V. SWINNERTON-DYER.

* The drug has been tried with varying results.—ED. L.

FEMALE CHEMISTS.

Physician and Surgeon.—Females, as well as males, are legally prohibited from selling poisons or using the title of chemist without being registered under the Pharmacy Acts. Our correspondent should ask the Secretary of the Pharmaceutical Society for advice.

Mr. B. Ringer.—The scheme in London is still in the clouds. Our correspondent should inquire of the authorities in the University of Durham and St. Andrews.

S.—The Wenham Lake Ice Company, Limited, 107, Strand, will give all information.

THE CLIMATE OF TEXAS.

To the Editors of THE LANCET.

SIRS,—In answer to the question asked by M.K. & Q.C.P.I., I beg through you to inform him that I should consider the climate of Chouco co., Texas, a fairly good one for a patient such as he describes, if he were able to guard against occasional sudden changes of temperature which accompany storms from the north. I have seen the thermometer rise from 60° to 90° within twenty-four hours.

I am, Sirs, yours faithfully,

Charles-street, W., Aug. 15th, 1888.

SKENE KEITH.

M.R.C.P.—Our correspondent's statement is very surprising. Assuming its accuracy and that he has exhausted friendly remonstrances, our opinion is that B's conduct in this case is not to be defended; but we cannot advise on the legal question.

AN EASY METHOD FOR PRODUCING LARGE ANATOMICAL DIAGRAMS.

To the Editors of THE LANCET.

SIRS,—Since writing my previous letter (June 10th), at Prof. Mitchell Banks' suggestion I have been using sheet gelatine—as noticed by Dr. Jacob in your last issue—for ordinary diagrams; but for those requiring very fine tracing I much prefer the varnished mica.

I am, Sirs, yours truly,

Liverpool, Aug. 21st, 1888.

W. THRELWALL THOMAS.

Enquirer.—The address of the Secretary of the Medical Alliance Association is No. 4, Portland-place, Peckham-road, S.E.

Mr. S. Snell (Sheffield).—Yes, soon.

G. E. B.—No.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. F. A. A. Smith, Cheltenham; Sir M. Mackenzie, London; Sir W. Mac Cormac, London; Dr. Auld, Glasgow; Sir W. C. Hoffmeister; Dr. W. White, Venice; Dr. Mears, Newcastle-on-Tyne; Dr. S. Phillips, London; Dr. T. B. Adam, Foo-Chow; Mr. E. T. Freer, Birmingham; Mr. A. de Watterville, London; Surg.-Major R. D. Murray, Bengal; Messrs. Lea and Nightingale, Liverpool; Dr. Yule, Guildford; Mr. Leach, Great Yarmouth; Mr. Meadows, Hastings; Dr. Ernesto, Turin; Mr. Bailey Denton, London; Mr. Martin, Box; Mr. Tallack; Messrs. Christy and Co., London; Dr. A. Wilson, Leytonstone; Dr. Wharry, Great Malvern; Mr. B. S. Binger, London; Mr. Gordon, London; Dr. Lillies, Cludloigh; Mr. Pease, Darlington; Dr. Smyth, Quebec; Mr. A. S. Dyer; Mr. F. E. Cane, Leeds; Mr. Dewar, Brixton; Dr. W. J. Collins, London; Mr. T. Cook, London; Dr. Fisher, Lytham; Dr. W. Carter, Liverpool; Mr. E. Ward, Leeds; Mr. Davies, Snainton; Mr. W. S. Manning, London; Mr. Colson; Dr. Spicer, London; Mr. Benthall, Southsea; Mr. W. T. Thomas, Liverpool; Mrs. Nixon, Manchester; Mr. T. Greenwood, London; Mr. C. J. Smith, London; Dr. Burford, Leicester; Mr. W. Clark, Poplar; Dr. Bronner, Bradford; Mr. Row, Oakham; Mrs. Turner, Pinsbury-park; Dr. Roe, Dublin; Dr. Saville, London; Mr. Struthers, Rothsay; Mr. Heywood; Mr. Cameron, Glasgow; Mr. McNicol, Stirling; Dr. Bonfield, London; Mr. Hodgkin, London; Mr. Ainsworth, London; Dr. W. Hunter; Mr. (Gurnell, London; Enquirer; G. E. B.; A Medical Nurse; Harrogate Cottage Hospital; H. de B.; M.R.C.P.; B. B. B.; A Subscriber for Forty Years; F. H., London; Alpha, Killin; Matron, Leeds; Victoria University, Leeds; Matron, Bury; Bedford General Infirmary; the Director-General of the Army Medical Department; M.D.

LETTERS, each with enclosure, are also acknowledged from—Mr. Neume, Birkenhead; Mr. Lewis, Wingham; Mr. Todd, Yorks; Messrs. Read and Co., Bristol; Mr. Jeffery, Eastbourne; Mr. Adney, Tunbridge Wells; Mr. Robertson, Houghton-le-Spring; Messrs. Robertson and Scott, Edinburgh; Mr. Sworn, Holloway-road; Mr. Bowman, South Shields; Mr. Ross, London; Mr. Wilson, Dublin; Messrs. Savory and Moore, London; Mr. Atkinson, Ripponden; Messrs. Hewlett and Son, London; Mr. Taylor, Yorks; Mr. Blair, Leeds; Messrs. Humber and Co., Watford; Mr. Pinder, Manchester; Mr. Newman, London; Mr. Forbes, Stonehaven; Mr. Johnson, Leicester; Mr. Heywood, Manchester; Mr. Grier, Aberdare; Mr. Breach, Newbury; Mr. Child, Leeds; Mr. Anderson, London; Mr. Dixey, Southsea; Mr. Twyford, Hanley; Messrs. Clayton Bros., London; Mr. Ransom, Liverpool; Mr. Robinson, Leeds; Mr. Griffin, Padstow; Mr. Wornald, Manchester; Mr. Hatch, Meath; Mr. Adams, Ipswich; Dr. Norris, Southport; Mr. Fry, Swindon; Dr. Cope, Hackney; Medicus, Somerset; F. B., London; M.B., London; Kennington, London; Confidential, Somerset; Assistant, London; Medicus, Brighton; Central Medical Association, Manchester; M. Devon; Matron, Windsor; Particeps, Edinburgh; A. E., London; R. A., London; S. G., London; Vulcan, London; Alpha, Edinburgh; D. N., Edinburgh; General Apothecaries' Co., London; C. D., London; P. P., London; M.B., C.M., Marlboro; Uttoxeter, Brighton; Nelson, London; M.D., Huddersfield; Mens, London; Medicus, London; J. B., Crewe; L.A.C., Bury St. Edmunds; W. D., Bristol; C. M., London; L. M., London; Lady Superintendent, Worcester; Student, London; Smedley Hydropathic Establishment, Derbyshire; Forceps, London; Harriars, London; Artichoke, London; Rusticus, London; Patella, London; Excelsior, London; Aidan, York; W. L. B., London; Miss L., London; Donus, London; C. J. S., London.

From *Woman's Journal*, *New Zealand Herald*, *Reading Mercury*, *Herald and Weekly Free Press*, *East London Observer*, *Windsor and Eton Express*, *Financial World*, *Wine Trade Review*, *Evening News* (Portsmouth), &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, August 28.

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 Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, August 29.

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 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

Thursday, August 30.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, August 31.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 1.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Lecture

ON

CRANIAL AND INTRACRANIAL INJURIES.

Delivered at the Royal College of Surgeons of England,

BY THOMAS BRYANT, F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY, ROYAL COLLEGE OF SURGEONS.

LECTURE III.

MR. PRESIDENT AND GENTLEMEN,—The subject of Tension, to which my two former lectures were devoted, leads in no unnatural way up to the consideration of Cranial and Intracranial Injuries, for most, if not all, surgeons will be ready to admit that in such cases the evil effects of tension are notably manifested, and that operations undertaken with the object of evacuating either effused blood or inflammatory fluids pent up within a closed cavity such as the skull—that is, for the relief of tension—are of especial service. It is not my intention, however, to dwell at any length upon this aspect of the question, for I have thought it well to use my present opportunity to bring before you some general considerations on the subject of cranial injuries, which I have good reason to believe are neither sufficiently recognised nor generally taught,—and more particularly since these considerations have no important influence on surgical treatment.

As a preliminary reflection, I would emphasise a point which the surgeon should ever bear in mind in all head injuries—viz., that the effects of a force applied to the skull are much influenced by its thickness, and that in this matter there is in cranial bones great diversity. Under these circumstances, a slight blow on a thin skull may bring about a fracture, and no general cerebral injury, since the vibrations originated by the force of impact are expended locally upon the part struck, and are not carried along the bony basal ridges so as to vibrate in the brain structure and bring about mischief. Whereas, whilst a severe external force may fail to cause a fracture of a thick skull, it may start such intense vibrations within the cranium as to cause bruising or laceration of the brain, either of its surface or of its substance, at a point remote from the seat of impact, and even at times produce laceration of the venous sinuses or of the middle meningeal artery. In the former case the injury on the face of it looks severe; whereas it may be comparatively trivial, since there is no cerebral injury. In the latter instance the injury may appear slight, although in reality it is one which bodes death from cerebral mischief.

To say that injuries of the head should always be estimated *primarily* with reference to the amount of damage the cranial contents have sustained, and *secondarily* with reference to the risk of their becoming involved, is to say what all sound surgeons of experience believe and make the basis of their treatment. And yet students are taught to think that scalp wounds, fractures of the skull, hæmorrhage beneath the bone, concussion and compression of the brain, and inflammation of the brain are separate and independent affections, with diagnostic symptoms which can be tabulated. The surgeon, however, who goes to the post-mortem room for information, knows too well that in every case of cranial injury of any importance there are certain brain changes common to most, if not all, which should be fully recognised and taken into account in its diagnosis, prognosis, or treatment; and that, should either a fracture, with or without depressed bone or intracranial hæmorrhage, coexist in the same case, such a condition had better be regarded as a complication of the common factor rather than as one which stands alone. For example, a man falls or receives a blow upon the head, and is for a time “stunned”—that is, rendered more or less senseless from paralysis of brain function; he is said to be suffering from “concussion of the brain,” whatever that term may mean. Another man, as a result of the same kind of accident, receives in addition to the “stunning” a scalp wound, with a fissure either in the vertex or base of his cranium; and he is described as one who is suffering from a

compound fracture of the skull, either of the vertex, base, or of both. A third man comes under observation in the same state of so-called concussion, but with a depressed fracture of bone, complicated or not with a scalp wound, and as a result of this depression there may or may not be other symptoms, or those present may be intensified. Under either circumstance, however, his case is described as one of depressed fracture of the skull, giving rise to compression of the brain. Yet in all these different classes of cases there is one common injury, one common source of danger, present or remote—viz., the condition of the brain which is associated with the injury, and which has been brought about by the “stunning” force. If the general cerebral injury be trivial, the local complication of a scalp wound, or even of a fissured or depressed fracture, is, although serious, comparatively unimportant; if it be of a grave nature, the local complication must, however great, sink into insignificance.

What, then, it may be asked, is the condition of a brain in a state of so-called concussion? Let us inquire. Concussion of the brain means, in a physiological sense, a sudden and more or less complete arrest of the brain's mental and physical functions, brought about by external violence. The brain in its bony case has been made to vibrate more or less roughly either by some general shake of the whole frame, or by some local violence applied directly or conveyed indirectly to the cranium as a localised or diffused force, the effects of this force upon the brain being of necessity proportional to its concentration and intensity, and in a degree to the age and healthiness of the brain structure and the thickness of the cranial wall. Thus, a concentrated blow with a blunt or edged instrument, probably, and in a thin skull certainly, spends its force in producing a local cranial or cerebral injury; whereas, any force of a diffused nature, directly or indirectly applied, and whether causing a fracture of the cranium or not, more likely brings about some structural change in the cerebral tissue, remote from, rather than at, the seat of impact. And should the brain or its vessels, in either case, have undergone senile or any morbid change, it is more prone to suffer seriously from such external violence than a healthy organ. In every case, therefore, of injury to the head, the brain is made to vibrate more or less forcibly; when the vibrations are feeble, the injury to the brain structure resulting therefrom is but slight; when they are severe, the mischief may be great. The complication of a fissure or fracture of the skull does not of itself, of necessity, tend to aggravate the cerebral mischief; although its presence may be regarded as a measure of the force which has brought it about. In all cases of cranial injury, therefore, the conclusion is clear that the cerebral mischief is the common factor, and the one important point to be taken into account.

This conclusion consequently leads to the important question, What are the changes found in the brain after so-called concussion of its substance, or rather shaking of its structure? What are the structural changes, if any, which can be made out on the post-mortem table? For, of course, an answer to these questions can only be given from the observation of cases which have proved fatal, either directly from the injury, or at some remote period after the injury from other causes. Happily, the answer to this question is neither difficult nor uncertain. For I may say that at Guy's Hospital for at least a quarter of a century there was no case of head injury examined—and such includes every case—in which there was not some coarse brain lesion found, readily visible to the naked eye; in which there was not some contusion of the brain surface, laceration of the brain either upon the surface or within its substance; or more or less hæmorrhage upon or into the brain. In fact, concussion, in a pathological sense, has been, in my experience, synonymous with contusion or laceration of the brain. Other surgeons have expressed the same opinion from this chair. Sir Prescott Hewett, thirty years ago, said: “In every case in which I have seen death occur shortly after, and in consequence of, an injury to the head, I have invariably found ample evidence of the damage done to the cranial contents.” Mr. Hilton, who followed him, wrote: “We ought to consider a brain which has been subjected to concussion as a bruised brain.” And Mr. Le Gros Clark, who lectured later, stated: “I have never made or witnessed a post-mortem after speedy death from a blow on the head where there was not palpable

physical lesion of the brain." Neudorfer, of the Austrian army, declares that he has never seen concussion, as so-called, since in all cases he has examined cerebral injury was found to exist. And Fano, a celebrated French surgeon, has also come to the conclusion "that the symptoms generally attributed to concussion are due, not to the concussion itself, but to contusion of the brain or to extravasation of blood." In fact, all authorities now agree that, when death follows a severe shaking or concussion of the brain, contusion, bruising, or laceration of the brain is invariably present, and that when this is not found, the death is probably to be ascribed to some other than a cerebral cause; and I shall be able, later on, to show that when death does not take place as an early result of the damage, and the patient either dies of some other affection or of some remote consequence of the injury, the same evidence of cerebral contusion is generally present. When extravasation of blood upon or into the substance of the brain follows "concussion," or rather vibrating injury, it is to be explained in the same way—that is, by some injury done to the vessels of the brain itself, or to the venous sinuses within its membranes. When due to the bruising of the brain itself, the seat of injury is probably found on the side of the brain opposite to that of the cranium which received the blow; the bruising being brought about by what is rightly termed "contrecoup." A fall or blow upon the occiput is, as a rule, followed by some bruising of the anterior cerebral lobes; one upon the frontal region, by a bruising of the posterior parts of the brain; whilst lateral or vertical blows are felt more by the middle lobes. In severe vertical blows the base of the brain itself is bruised. The amount of extravasated blood depends upon the degree of force applied and the healthiness of the vessels in the injured part, diseased vessels easily giving way under a vibrating force to which the healthy would not yield. When the extravasation of blood is upon the surface of the brain, it is either within the cavity of the arachnoid or the meshes of the pia mater; and under each condition the blood gravitates to the base. When the extravasation of blood takes place into the structure of the brain, it may be found in any part of the cerebrum, cerebellum, pons Varolii, or even in the ventricles, the extravasation rarely showing itself in the form of one large clot, but commonly in small and numerous spots of extravasation, which cannot be wiped away, as if from small vessels.

Thus I found in one case of so-called concussion, in which the fatal result took place sixty hours after the injury, from changes brought about by the severe shaking of the brain, unassociated with fracture, that the brain was bruised all over, and blood was effused at the injured spots; the fluid in the ventricles was blood-stained, and the ventricles themselves ecchymosed.

In another case of death from "concussion," without fracture, the result of a fall, in a man aged thirty-one, on the fifteenth day after the injury, in whom convulsions and coma supervened, a layer of blood was found universally diffused over both hemispheres, dipping between the convolutions, and passing downwards towards the base. The clot, which was shreddy and of a dull reddish-black colour, had evidently been effused for some days. The surface of the brain beneath the seat of injury was softened; and at the base, where it had been damaged by contrecoup, similar changes had taken place. The vessels were healthy.

In a third case, where death followed from "concussion," and the vessels were diseased, multiple extravasations were detected after death throughout the substance of the brain.

A fourth case was that of a man (C. K.—) aged sixty-five, who came under my care with a scalp wound over the left half of the occipital bone and noisy delirium, having just previously fallen out of a truck on to his head. He had no paralysis or special head symptoms. The pupils were natural; the pulse was 70, and the temperature 99.2°. He became rational in twenty-four hours, but only remained so for a day, when noisy delirium returned, with refusal to take food. This condition lasted for fourteen days, when he sank, although food was regularly and carefully given by the esophageal tube. After his death on the sixteenth day from the fall, the anterior lobes of the brain, with the fore parts of the middle lobes, were found much bruised and covered with extravasated blood.

And in a fifth case—that of a man aged thirty-five, who came to Guy's on March 31st, and died on April 1st, 1882, about fifteen hours after the accident—blood was found

extravasated over the whole surface of the brain beneath the membranes, and the brain itself was much ecchymosed in fine points. The third and fourth ventricles were full of blood clot. There was laceration of the fornix and right optic thalamus, and no other lesion. The man had fallen on his head when jumping off a van, and given himself a scalp wound, exposing the bone, to the left of the occipital protuberance. He walked into Guy's, and complained only of headache and a feeling of sickness. He refused to stay in the hospital, and left. Having walked 200 yards, he vomited, and his friends gave him a "small soda." He then vomited again, and being unable to stand he was brought back to Guy's, where he was admitted insensible and comatose, and died, as already stated, fifteen hours after his fall.

When fissured fractures of the cranium complicate brain injuries, and these fractures are the result of some diffused force, the cerebral mischief is not likely to differ from that which has been just described, although, as the force to produce a fracture may presumably be greater than that which fails to do so, the intracranial injuries may be greater from the cerebral vibration. In some cases the brain itself may, in addition, be bruised at the seat of impact. On the other hand, where the force which produced the fracture is concentrated or the brain-case thin, there may be more of local brain injury at the seat of fracture, and less of distant mischief from brain vibration. And with the fracture there may be certain special complications, such as depression of bone with or without compression of the brain, injury to the dura mater, membranes, or brain from the fractured bone or external force, and extravasation of blood between the dura mater and the bone from rupture of the middle meningeal artery or some venous sinus. But all these are complications of, and additions to, the general injury. It must not be forgotten, however, that in exceptional cases a fracture of the skull may take place from a concentrated local violence without producing any cerebral disturbance, particularly over the frontal region.

To prove still more conclusively that "concussion" of the brain means bruising or laceration of the brain, with more or less hæmorrhage, I propose to bring before you the particulars of some cases which have been examined at Guy's Hospital after death, at more or less remote periods after the receipt of the head injury; and which died from either an independent affection or some remote results of the injury. Such cases are not numerous, but they are valuable, at any rate, for my present purpose. I trust I shall not, therefore, prove wearisome in reading brief abstracts of some of them.

CASE 1. Cerebral injury; marked evidence of old bruising of the brain found.—A powerful middle-aged man was found by a policeman in the Borough Market sitting down in a fainting condition. The policeman gave the patient some brandy-and-water, and brought him to Guy's, where he soon became comatose and died. One of his friends said that he had received an injury to his head some weeks (?) previously. After death no external signs of injury could be made out, and there was no fracture of the skull. The anterior and middle lobes of the left hemisphere of the brain were adherent to the base of the skull. The base of the anterior lobe showed brown discolouration from old bruising, and the middle lobe was so firmly adherent to the bone that it tore away. "These changes," wrote Moxon, who made the examination, "could not have been less than several weeks old, probably at least three months." There was a large effusion of recent blood clot (two ounces) over the right side of the brain. There was no blood in the brain, and no lesion of its membranes. The viscera were healthy.

CASE 2. Cerebral injury complicated with fractured base of cranium thirty-eight days before death; bruising of the brain.—David E.—, aged nineteen, came under my care on June 24th, 1874, having fallen off an omnibus on to his head. He was admitted into the hospital, partly unconscious, with profuse bleeding from his left ear, which lasted for two days, and was followed for another eight days by the escape of a clear fluid (cerebro-spinal). On the second day after the accident the facial nerve became paralysed. The man died on the thirty-eighth day from broncho-pneumonia, having lost all his brain symptoms, except the facial paralysis. On examination of the body, a fracture was found in the skull, across the petrous portion of the left temporal bone, from the turn of the lateral sinus groove behind into the middle fossa, laying open the tympanic cavity. There was no trace of repair in the fracture.

The olfactory bulb on the left side was gone, and the brain about it was bruised. The central parts of the brain were soft.

CASE 3. Cerebral injury complicated with fracture of the base of the skull twelve weeks before death; evidence of bruised brain (Preparation in Guy's Museum, 1084⁵⁵).—William B—, aged forty-six, came under the care of Dr. Hilton Fagge in 1873, with vomiting after food and pain over the pylorus, which proved to be due to abdominal cancer. He had been an epileptic for four years, and during that time had been growing darker. Five weeks before admission, after a fall on the head from a ladder, he became insensible for a brief period, and blood oozed from his right ear, mixed with some watery fluid, which continued to flow for two days. All head symptoms disappeared, although he occasionally lost himself during his illness. He died from abdominal cancer. After death, a fracture of the base of the skull, crossing the petrous portion of the right temporal bone, and running the whole length of the meatus auditorius externus, was found. The under surface of the two anterior lobes and of the points of the left middle lobe of the brain presented a tawny yellow discolouration, clearly the result of blood effusion at the time of the injury, and, as usual, it was more marked on the side opposite to that of the fracture. There was also a little superficial softening of the cineritious substance.

CASE 4. Cerebral injury six weeks before death, followed by abscess.—William D—, aged thirty, was admitted into Guy's with pleuro-pneumonia, in a condition which soon ended in death, in March, 1873. Six weeks before his admission a beam had fallen upon his head, hurting him, but not producing any marked head symptoms or any bleeding from the ears or nose. Indeed, he had not given up work, but continued as an engineer's labourer for four weeks—that is, up to two weeks before admission, when he felt ill, shivered, and had severe headache; he also soon lost his taste for sweet things. When admitted he had no paralysis, only headache and drowsiness. His temperature was normal. He had no convulsions. After death the brain was found, on removal of the skull-cap, to be flattened, so that it appeared to have no convolutions. Its surface was discoloured in parts from what proved to be abscesses. A large and rather old abscess had burst into the hinder part of the right lateral ventricle, filling it with pus.

CASE 5. Cerebral injury complicated with fractured skull and spine, &c.; death ninety-one days later (Preparation in Guy's Museum, 1084⁵⁶).—George G—, aged twenty-seven, came into Guy's Hospital, under the care of Mr. Forster, in July, 1882, having fallen or been thrown out of a third-floor window. He was conscious, and complained of pain in his back. He had a scalp wound over the occiput, and evidently a fracture of the occipital bone. His lower limbs were paralysed from a fractured spine. The patient died of pleurisy. At the necropsy a fissure was found in the right half of the occipital bone, which extended vertically across the root of the petrous portion of the right temporal bone towards the lesser wing of the sphenoid. In the posterior cerebellar fossa there were two offsets, one of which ran down to the foramen magnum. There were but feeble signs of repair in the fracture. The brain at the right anterior lobe was much bruised. There was blood between the bone and the dura mater, and on the inside of the dura mater there was much brown pigment. The eleventh dorsal vertebra was fractured.

CASE 6. Cerebral injury six months before death, brought about by meningeal apoplexy; marked evidence of old cerebral injury.—Patrick H—, aged forty-one, was admitted into Guy's Hospital, under Dr. Pavy, in March, 1874, in a comatose condition, and soon died. He had been drinking for some days before, and had had a fit. Six months before, or thereabouts, after a fall down some stone steps, he was brought into the accident ward with a bruise over the right mastoid process and discharge of blood from the right ear. He was partially insensible for ten days, and was stupid for some time after. His pulse ranged from 40 to 50. He left convalescent and returned to his work, at which he continued until he had the fit for which he was readmitted just before his death. At the necropsy no injury of the cerebral bones could be discovered. The dura mater over both sides of the brain presented on its inner surface a tawny red colour, apparently stained with old extravasated blood. That covering the left hemisphere was smooth, but that over the right was in part lined with adherent coagulum which in

some parts was of a brownish colour, in others black. Some of it was evidently old. This was part of a large mass of coagulum which lay between the dura mater and the brain, on this side flattening the brain. The surface of the brain was so discoloured from staining with blood that the amount of clot was difficult of determination. The brain had evidently been deeply bruised at the time of injury at the inferior surfaces of both anterior lobes and the summit of the right middle lobe, particularly towards the back of the lateral surface of the right hemisphere, where there was an irregular fissure, with much tawny discolouration of the tissue. The lateral ventricles were healthy. The large effusion of blood clearly came from the rupture of the vessels of the softened part, and was probably in part due to alcoholic stimulants.

CASE 7. Cerebral injury thirteen months before death; marked evidence of brain injury.—George L—, aged twenty-two, was admitted into Guy's Hospital under Dr. Habershon in February, 1871, in a semi-torpid condition, having been found by a policeman in a fit after a day or more of drunkenness. He could be roused with difficulty, and when roused moved all his limbs. He had right facial paralysis. His pulse was 44; the pupils were contracted. He gradually sank. He had had a severe injury of his head thirteen months previously, from which it was supposed he had recovered. After death no signs of injury of the cranial bones were discovered. The brain was flattened, and the anterior and middle lobes were adherent to the dura mater at the base, and the brain tore away when an attempt was made to remove it. The membranes of the brain at the base were very thick, and partly opaque white, partly of an ochre-yellow colour; this appearance was confined to the membranes. The aperture into the fourth from the third ventricle was closed by some recent lymph, and the brain bordering the channel was soft. The lateral ventricles were greatly dilated, the descending cornu on the left side projecting like a blister at the base of the brain. The left middle lobe was diffident.

CASE 8. Cerebral injury two years before death from phthisis; marked evidence of bruised brain.—Wm. C—, aged fifty, came into Guy's Hospital with phthisis, under the care of Dr. Moxon, in 1874, and died within a few days. He was a sailor, and had enjoyed good health up to two years previously, when he had a high fall, and was stunned and bled from his left ear. The next day hot fluid came from the ear. He was laid up for three weeks, and when he left his bed he was giddy for nearly one year. He returned to his work, although deaf in his left ear. Five weeks before his admission he "caught a cold and cough," and died of acute phthisis. At the post-mortem examination no clear indication of fracture of the petrous portion of the left temporal bone could be made out, although there was a slight transverse line across the bone. There was an old bruise of the anterior lobe of the brain on the left side and slightly of the base of the middle lobe. That on the anterior formed an irregular hollow the size of a shilling. The grey substance was quite destroyed, and microscopically was found to present hæmatoidin crystals and compound granular masses.

CASE 9. Cerebral injury complicated with fracture of the base of the skull on the right side eight years before admission, followed by fits, chronic hydrocephalus, spinal curvature, emphysema, and hydrothorax; marked evidence of old bruising of the brain. (Preparation in Guy's Hospital Museum, 1084⁵⁷).—David W—, aged thirty, was healthy until eight years before admission, when he fell off a ladder and hurt his head. Since then he had not been able to do hard work, and his memory had failed him. Five years ago he had a fit, and others had followed. He was admitted under Dr. Wilks in 1876, in a fit, comatose, and passing urine under him; but he gradually recovered sensibility in a few days. In the hospital he had a fit, and both sides of his body were convulsed; when consciousness returned, it was found that the left side of his body had diminished sensation, but he said this had existed for eight years, and was gradually growing worse. He was fairly intelligent, and answered questions readily. His pulse was slow, 38 to 40. He died of bronchitis. At the necropsy the brain was found to be flaccid. At the base of the right middle fossa, and over the roof of the orbit there was a layer of brown pigment; also in the posterior fossa. The same pigment existed in patches over the base of the brain. There were fourteen ounces of fluid in the ventricles. The brain substance was healthy. The foramen magnum was

altered in shape, and narrowed antero-posteriorly, the transverse diameter being much larger than the other. There was fracture of the right side of the base of the skull. The spine was curved at the sixth dorsal vertebra towards the right. The cord was healthy. The lungs were emphysematous; fluid existed in the left chest.

CASE 10. *Cerebral injury complicated with fracture of the skull nine years before death; evidence of old as well as of recent brain injury.*—Michael L—, aged fifty, came under Mr. Cock's care on Dec. 29th, 1867, and died on Jan. 7th, 1868. He had fallen twenty feet on to the side of his head, and was admitted with a scalp wound and depressed fracture to the left of the vertex. He was unconscious on admission, but not paralysed, and was never clear enough to give a history of his accident. One of his friends stated that he had had an injury to his head nine years previously. After death the cranial bones were found to be thin. On the occipital base about the left part of the groove for the torcular Herophili were fine rough elevations, and here the dura mater was very adherent. About this part there was an old depressed irregular fracture of the bone, the bone being now united to the rest. Within the skull there was an elevation corresponding to the external depression, and its edges were bevelled off. There was no sign of any old external wound over the fracture, or of blood between the bone and dura mater; but on opening the latter about an ounce of liquid clotted blood was found effused over the left vertex, corresponding to the recent scalp wound. The right anterior lobe of the brain was adherent over the orbit, and the brain here was discoloured brownish yellow, as from old hæmatoma, this part corresponding to the spot of contrecoup from a blow on the left back of the head.

CASE 11. *Cerebral injury complicated with fracture; evidence of brain bruising, recent and old.*—Michael W—, aged fifty-three, came into Guy's Hospital, under Mr. Cock, in February, 1867, and died in two days. He was found in the street insensible, with a wound on the back of his head and bleeding from both ears, but chiefly the left. He died comatose. At the necropsy there was clear evidence of a heavy blow having been given over the right mastoid process, the bone at this part being fractured. There was no blood between the bone and dura mater at this part, but there were about two ounces between the dura mater and the brain. There were recent contusions on the anterior and middle cerebral lobes, and old yellow discolouration of both middle lobes. The right one was firmly adherent to the middle fossa outside the foramen ovale. Lining the dura mater of the right middle fossa of the base of the skull, there was a thin membrane, easily separable; and this was thickest where the brain was adherent. The right middle lobe was more deeply bruised than other parts, where it was fixed to the fossa.

CASE 12. *Compound fracture of the cranium, with marked brain symptoms, occurring three years and a quarter previously; necrosis of the inner table of the skull; removal of the bone by trephining; death from phthisis; evidence of bruised brain and extravasation of blood.*—Conrad H—, aged forty-five, came under my care in January, 1879, with a discharging sinus on the right side of the occipital protuberance, communicating with the interior of the cranium, which had been the result of a compound fracture of the skull he had sustained three and a quarter years previously. The injury was brought about by a blow from a large stone, which stunned him, and he remained unconscious for seventeen days. He was abroad at the time, and had no treatment. About one year afterwards some pieces of necrosed bone were taken from a second fracture on the vertex of the skull he had received at the same time. He had then some slight weakness of his left side. For the last year the sinus had discharged freely, and he had had much headache. Finding on examination that some necrosed bone could be felt within the cranium in the direction of the internal occipital protuberance, I trephined the bone with an inch trephine, and enlarged the opening with Hoffmann's forceps. Having done this, I removed numerous fragments of the inner table of the skull, corresponding with the lateral and longitudinal sinuses. The dura mater within was thickened, and covered with granulations. The operation gave much relief to his head symptoms; but his lung trouble slowly extended, and destroyed life five months subsequently. After death the repair of the base of the skull was found to be complete, but the bone was thick and irregular. The opening in the cerebellar fossa was only partially closed.

The dura mater corresponding thereto was thick. The torcular Herophili and sinuses were healthy. The dura mater covering both cerebral hemispheres was tawny with old extravasated blood; indeed, a thin membranous film could be stripped off its inner surface. The summits of the middle lobes of the brain at its base showed some tawny erosion, evidently the result of former bruising. The lungs were extensively diseased.

The evidence I have thus laid before you of the pathological conditions of the brains of those who have suffered from what has been so long known as "concussion of the brain" will, I trust, be deemed sufficient to convince such as may be in doubt that they are really examples of cerebral injury; that term meaning cerebral bruising or laceration, with more or less hæmorrhage upon and into the substance of the brain or its ventricles, the amount of injury of every kind varying in degree in each case. In some it may be very slight, and in others severe.

You will likewise have probably observed—what the details of the cases I have brought before you so forcibly demonstrate—the lasting character of the changes which the brain may have undergone as a result of injury, and the evident slowness with which nature performs in this organ her reparative work; for, in some of the cases quoted, years had passed after the injury had been received, and yet marked evidence of its former existence was still present. Indeed, such evidence as I have laid before you of necessity draws out the question, Is a bruised brain ever thoroughly repaired? and are not the changes which the injury may have brought about fixed and permanent? It is to be regretted that an answer to these questions can only be given in an unfavourable form; and that, whilst we may be hopeful as to this complete repair and recovery from a slight injury or bruise, we are bound to regard graver cases in a more serious light, and to deal with them accordingly, since what evidence we possess seems to show that, when any portion of the brain has been severely or moderately bruised, it has been permanently injured. This evidence also dovetails in with the general experience, which tells us not only of the presence of physical head symptoms, but that the mental and moral characters of men are often permanently altered by a head injury.

With these facts and conclusions before us, am I, therefore, wrong in assuming with some confidence that you will see with me the expediency of combining with the term "concussion" that of "injury," and of describing such cases in the future as those of injury of the brain from concussion? The term "concussion" by itself is vague and delusive, whilst that of "injury" is clear and true, and conveys at once a meaning the force of which cannot be misunderstood. The word "concussion" later on may be dropped, and the simple term "injury" retained. With this starting-point, it would naturally follow that fractures of the skull in all their varieties, hæmorrhage into the cranium in all its forms, and compression of the brain, however brought about, will be regarded as complications of the one common and essential factor, cerebral injury, and not, as now, be regarded as separate and individual troubles to be dealt with independently. And even scalp wounds, the result of external violence, would assume a position in the surgeon's mind they ought to have, but have not yet attained; and consequently receive the attention to which they are entitled, not so much perhaps on their own individual account as simple wounds, but as wounds mostly brought about by direct violence applied to the cranium, and consequently liable to be complicated with some contusion of the cranial bone or intracranial injury.

(To be concluded.)

NORTH DEVON INFIRMARY.—Earl Fortescue presided at the annual meeting of this institution, held at Barnstaple on the 21st ult. The report showed that the income during the year amounted to £1551 19s. With reference to the insanitary condition of the house, detailed reports had been received from two London firms. The report of the committee was adopted. A motion that the proposed improvements in the ventilation, heating, and drainage be referred to the House Committee, with power to take such steps as they might deem advisable, was agreed to. The convalescent home, instituted and endowed by two generous donors for the benefit of North Devon, in connexion with the infirmary, is nearly completed.

Lecture

ON A

CASE OF RUPTURED TUBAL PREGNANCY.

Delivered at Queen's College, Birmingham,

By LAWSON TAIT, F.R.C.S.,

PROFESSOR OF GYNECOLOGY.

GENTLEMEN.—The preparation which I now pass round was removed by abdominal section this morning from a patient, aged twenty-seven, residing at Ilfracombe, and it illustrates a new point in the pathology of ruptured tubal pregnancy, most of the facts of which, as known to me, have already been brought under your notice. The patient in question was twenty-seven years of age, had been married six years, and had never been, so far as she knew, pregnant, this being not unfrequently a leading feature of these cases. She had menstruated with perfect regularity until Christmas, then she had missed till March, and during the whole of that time she had been confined to bed with what was called inflammation of the womb, and was attended during that illness by a well-known practitioner in Liverpool. At the beginning of March she had so far recovered as to be able to get up for a short time, but on the second day of her getting out of bed she was suddenly seized with acute violent pain, and was kept in bed again for three weeks with what she said to be, and what clearly was from her description, an attack of acute peritonitis. Early in April she returned home to Ilfracombe, and was then seen by Dr. Slade King, who recognised the fact that there was a tumour on the left side of the uterus. In April she had an attack which she described as being very like a recurrence of the peritonitis that she had in the previous month, and there have been two or three attacks since then more or less severe. She has menstruated twice for a fortnight each time, the loss being very profuse and the pain extremely severe. When I saw her on July 4th, she was emaciated, in constant pain, quite unable to get about, and evidently suffering from the presence of pus in the pelvis. Examination revealed a tumour quite as large as a foetal head on the left side of the pelvis, fixed and extremely tender to touch. Such a history gave no clue whatever to what proved to be the real nature of the case; for even the suspension of the menstrual flow from January till March was precisely what might have occurred in a case of hæmatocele of the broad ligament, or in several other conditions which might have been referred to as an explanation of this case. Certainly, in the minds of those who gave the history the suspicion of pregnancy had never been entertained, and my own diagnosis did not include a differential suggestion in the direction of tubal pregnancy; it was given as that of suppuration of the left Fallopian tube. That diagnosis proved to be perfectly correct so far as it went; but, to be complete, it ought to have been extended to include suppuration as the result of ruptured tubal pregnancy. Such an extension, however, with the facts before me, did not occur to me.

The state of the patient was such as to demand immediate interference, and therefore I opened the abdomen and found a state of matters the details of which were easily ascertained, and were as follows. The omentum was glued over the contents of the pelvis, and I had a little difficulty in detaching its fringe from the base of the bladder. After I had done so I found several coils of intestine adherent below it, and on removing these I at once opened up a cavity, from which escaped a quantity of extremely fetid purulent fluid. This cavity was as large as a Jaffa orange, and the first thing that I came in contact with was a large mass of easily detached substance, recognised at once by my fingers as a piece of placenta. I removed it, and the naked-eye appearances confirmed what I had uttered about it before I removed it. I then easily recognised that the cavity from which I had taken it was formed of the dilated and distended Fallopian tube, forming the anterior, posterior, and lower walls of the cavity, whilst the upper part was composed of the coils of intestine and omentum, which I had partly detached. All round the cavity I could feel a number of sharp, hard points, and these I easily recognised

as foetal bones embedded in the walls of the cyst. I removed as many of them as I could, and found that they were what I had believed them to be, for included in what I removed were a number of foetal ribs and flat bones. I then proceeded carefully to detach that part of the cyst formed by the Fallopian tube, and when I had done so I tied the pedicle and removed what you now see before you. The presence of fimbriae proved conclusively the accuracy of my supposition.

We have here, then, a case of the greatest possible interest, for it proves what certainly has not been completely established up to the present time, that rupture of a tubal pregnancy into the peritoneal cavity may not be fatal at the time of rupture by reason of recurrent hæmorrhage. There is one case quoted by Campbell, and originally narrated by the late Mr. Samuel Hey of Leeds, in which I think it is possible to accept this conclusion as very nearly proved; but the difficulties of a certain diagnosis of ruptured tubal pregnancy are so great that without the complete proof, which can be obtained only from a post-mortem examination or an abdominal section, it is very easy to throw doubt upon any such record. Here, however, we have absolute proof of the occurrence of tubal rupture into the peritoneal cavity, not only without a fatal issue at the time, but apparently without the occurrence of hæmorrhage. It is probable, however, that such cases are very rare. Without this fatal incident of hæmorrhage it is not difficult to believe that the whole contents of the tube may be absorbed by the peritoneum, as the fœtus was in process of being absorbed in this instance; and but for the occurrence of suppuration, it probably would have been so completely absorbed in a few months that no trace of its existence could have been recognised. The facts, however, that in nature's own process of cure an interruption by suppuration occurred, leading to such extreme peril that the patient escaped narrowly at least three times from peritonitis, and that if she had been left alone long her death from the recurrence of this trouble would have been absolutely certain, shows completely that it is not safe to leave these cases to a natural termination.

It is impossible to imagine that the Fallopian tube could ever have resumed its functions after being submitted to such an accident as this, and it is not difficult to believe that for months after, if not for years, it would have continued liable at any moment to the suppurative process which you see here had taken place. The patient has made an easy recovery, and under these circumstances, and with a growing experience of the small fatality resulting from this operation, I unhesitatingly recommend the removal of the Fallopian tube, together with the remains of the pregnancy, in every instance. The further interest of the case is that I am bound now to add another subdivision to the scheme of ectopic gestation which I have already submitted to you, and therefore I give you the amended table, as follows:—

Scheme of Ectopic Gestations in Tubo-ovarian Tract.

1. Ovarian; possible, but not yet proved.
2. Tubal, in free part of tube; and is—
 - (a) Contained in tube up to the fourteenth week, at or before which time primary rupture occurs, and then the progress of the gestation is directed into—
 - (b) Abdominal or intra-peritoneal gestation, uniformly fatal, unless relieved by abdominal section, primarily by hæmorrhage, secondarily by suppuration of the ruptured sac and peritonitis.
 - (c) Broad ligament or extra-peritoneal gestation.
 - (d) May develop in broad ligament to full time, and be removed at viable period as a living child.
 - (e) May die and be absorbed as extra-peritoneal hæmatocele.
 - (f) May die, and the suppurating ovum may be discharged at or near the umbilicus, or through the bladder, vagina, or intestinal tract.
 - (g) May remain quiescent as lithopedion.
 - (h) May become abdominal or intra-peritoneal gestation by secondary rupture.
3. Tubo-uterine or interstitial is (a) contained in the part of the tube embraced by uterine tissue, and, so far as is known, is uniformly fatal by intra-peritoneal rupture (as b) before the fifth month.

The above scheme gives a complete consistent story of the pathology of ectopic gestation, so far as I know it, and it certainly removes an enormous amount of the confusion which has hitherto existed concerning it, and many of the difficulties encountered in the treatment.

ON A GROUP OF CASES OF LIVER DISEASE.¹

By R. W. BURNET, M.D., M.R.C.P.,
PHYSICIAN TO THE GREAT NORTHERN CENTRAL HOSPITAL.

CASE 1. Abscess of liver opening through the right lung; tapping, followed by temporary relief.—J. G.—, a sailor, aged forty, was admitted into hospital, complaining of pain in the right side, and a general feeling of illness, with loss of appetite, of flesh, and of strength. His family history was exceptionally good. He had been at sea for twenty-seven years, and his health had been good; but ten years before his present illness commenced he had had fever in Calcutta, and did not fully recover until his return to England. His general health remained satisfactory after that until six months before his admission, when he became ill on a voyage from Calcutta to Natal; the symptoms were malaise, pain in the right side, and swelling of that side. He was admitted to hospital at Durban, when, in addition to the symptoms mentioned above, distinct enlargement of liver was found. There was no jaundice.

On admission his condition was as follows. A thin wasted man, with bad colour, but no jaundice. Temperature 102°; pulse small and quick; respiration slightly hurried; appetite very bad, but no pain after food; breath slightly foul, and bowels constipated; occasional rigors and frequent chilly feelings, with perspirations. On examination, there was apparent bulging of the right side (not actual by measurement), and the intercostal spaces were not so well marked as on the left. No pain on pressure over the hepatic region, except just at the margin of the ribs or slightly below, where pressure gave rise to pain; over the small area of the liver there was slight crepitation. Examination of the lungs elicited no marked symptoms, except a little creaking leathery sound heard near the spine on the level of the ninth dorsal vertebra. A few days later all these symptoms had increased; the patient was weaker; the right side full, measuring an inch and a quarter more than the left; the area of liver dullness increased, and the extent over which friction was present was also greater than before. At the base of the right lung there was friction, and crepitations were also heard. A small aspirator needle was inserted in the nipple line between the fifth and sixth ribs. About half a pint of thick purulent matter was slowly drawn off. The effect of this was to relieve the patient to some extent. The pain disappeared and the temperature fell, but he remained very weak and took food badly. During the weeks succeeding this the patient barely held his ground as regards strength; the lung symptoms increased, and the temperature oscillated between 99.5° and 103.8°. The base of the right lung became dull to just above the angle of the scapula, and breath sounds in the dull area were inaudible. The temperature rose frequently to 103°, and there was much sweating. A troublesome cough came on, with some expectoration. On microscopic examination of the sputum, it was found to consist of pus cells and mucus, decomposing matter, pieces of elastic tissue, probably from the larger tubes, but some few curved pieces also. The odour was very offensive. A few days later aspiration was again resorted to. Two punctures were made, one in the nipple line four inches below the nipple, and the other more to the outside. Only a small quantity of blood came away. The patient gradually sank, and died a week after this.

Necropsy.—Body emaciated; cadaveric rigidity disappearing; no deformity or unsymmetrical swelling visible; muscles red and healthy, though small; some costal cartilages calcified. On opening the chest and abdomen, the liver, stomach, and intestines were seen lying in their natural position. A white, slightly raised spot was found within an inch of the extreme left of the liver, and near its margin. On passing the hand round into the right axillary region, adhesions were found corresponding to the axillary line, but between this and the longitudinal fissure the surface of the liver was somewhat roughened by what appeared to be thin lymphatic exudations. Whilst the lungs and diaphragm were being removed *en masse* it was observed that about a quarter of a pint of fluid lay in the

upper part of the right pleural cavity, the lower part being obliterated by close adhesions of the lung to the chest wall. An incision was then made straight through the right lung and liver; this brought into view an enormous abscess filled with greenish tenacious pus. The abscess cavity was about the size of two hands hollowed out and placed together. Except that the left lung, the spleen, and the kidneys were congested, there were no marked changes in other organs. Hardly any traces of the track of the needles could be found; no inflammation was set up by them.

CASE 2. Abscess of liver; recovery; second abscess, complicated with gall-stones; death.—A. L.—, aged fifty-two, a sailor, had been in the navy for forty years, and had served a great deal on foreign stations. In 1852-3, during the Burmese war, he was six weeks in open boats, severely exposed and without proper food. He had an attack of fever then, but no dysentery. During the Crimean war he was in the Sea of Azof, and again had fever. He served up country during the Indian mutiny, when he had fever and dysentery. Five years later he had an illness which was called congestion of liver, brain, and lungs. He recovered, and subsequently served for a year in the Gulf of Mexico, where he had frequent attacks of fever. On his return home it was thought that he had abscess of liver, but the symptoms passed off. A month later, however, they returned, and at the crisis of that illness he passed some curious sand and matter, but no gall-stone was found. When seen by me eight years later, the symptoms pointed very clearly to hepatic abscess, but there were also strong suspicions of gall-stone. No operative interference was permitted, and the patient gradually sank. A limited post-mortem examination was all that could be obtained, and a large abscess was found in the upper and back part of the liver.

CASE 3. Diffuse suppuration in liver; blocking of bile ducts; hypertrophic cirrhosis; growth surrounding opening of common duct into duodenum.—W. P.—, aged forty-seven, was admitted into the Great Northern Central Hospital under my care on Jan. 27th, 1888. He stated that he had been healthy up till Christmas, 1886, when he began to feel out of health, and in September, 1887, he was admitted into this hospital with jaundice, which had been coming on for about nine months previously. He had been a beer drinker, but not to excess. Had been a baker by trade, and never lived abroad. The notes state that when in hospital at that time he was jaundiced; his liver was enlarged, smooth, and uniform, with no tenderness on pressure; the temperature was usually normal, but on one occasion reached 102°. He had no rigors and no perspirations. He improved very much in health, and on leaving the hospital he returned to work, at which he was able to continue till the beginning of January, a few weeks before his readmission. He then began to suffer from headaches, loss of appetite, sickness, and a return of jaundice.

On admission, he complained of pain in the right hypochondrium, want of appetite, with nausea, vomiting, and great weakness. A week previously he had had a rigor, and a daily return of this symptom. The patient was very thin, intensely jaundiced, and very weak. While undressing in the ward, a rigor came on, and the temperature rose to 104°. On examination, the abdomen appeared somewhat fuller in the right hypochondrium than in the left, but there was no fluctuation. The edge of the liver could be felt half an inch above the umbilicus. There was slight tenderness on pressure, and the most tender spot was at the edge of the right rectus, an inch from the umbilicus. He had several shivering fits, but no rigor for some days after his admission, and it was then noticed that there was a tender spot just below and to the right of the umbilicus, where there was also a suspicion of deep fluctuation; this tenderness became more marked, especially towards the right side, and the temperature continued to oscillate between 99° and 103° or 104°. It was decided to puncture with the needle of an aspirator. Gas and ether were administered, but, as the patient did not take either well, chloroform was given, and the needle inserted about two fingers' breadths below the ribs inside the nipple line, in the directions of backwards, outwards, and slightly upwards, the place of greatest prominence being chosen. At first no fluid was found, but on withdrawing the needle to almost three inches from the surface, blood passed into the receiver, and about six ounces of dark and very rapidly coagulating blood were withdrawn. This seemed to give the patient relief, and the tenderness on pressure disappeared.

¹ A Paper read before the Lillington Medical Society, May 22nd, 1888.

Shortly after this the patients had to be removed from the old hospital, and the man went home. He was attended to by a district nurse and readmitted to the new hospital on April 7th, when his condition was as follows. He seemed rather weaker than before; his tongue coated; his temperature 99° in the morning and 102° and 103° in the evening. He had daily feelings of chilliness, but had had only two rigors, one on April 3rd and another on the 5th, lasting three-quarters of an hour, followed by profuse perspiration; no pain in the hepatic region, but some deep tenderness on pressure in the epigastrium and right hypochondrium; motions quite pale, clay-coloured; bowels constipated. There followed a sharp attack of diarrhoea, the skin became of a dark, dusky brown colour, and the patient gradually sank, dying on April 23rd.

Necropsy.—Lungs both rather cedematous and collapsed; very tough. The right side of the heart was slightly dilated and flabby, but otherwise normal. Liver somewhat enlarged, the left lobe more so in proportion than the right, of a dark-green colour, presenting several opaque white spots beneath the capsule. These on section proved to be mainly dilated bile ducts. The ducts throughout were dilated, but more so in some places than in others, being here and there expanded into small abscess sacs, containing thick muco-pus, slightly bile-stained. The liver itself and all other parts of the body were deeply stained with bile. The gall-bladder was dilated, half full of watery bile, and adherent to adjacent parts. On following the common bile duct to its opening, it was found widely dilated; but just at its connexion with the duodenum, and obstructing its opening, was a soft swelling covered with mucous membrane slightly ulcerated on the surface. This growth was about three-quarters of an inch long by half an inch wide, firmly attached to the submucous tissue by well-organised matter. Under considerable pressure the duct was pervious. Examined under the microscope, the contents of the dilated bile ducts and of the sacs were found to consist of pus, broken-down tissue epithelium, and fat. Considerable changes were found in the liver tissue, notably a large increase in the connective tissue; in fact, all the features of hypertrophic or biliary cirrhosis were well marked. The growth at the duodenal end of the bile duct was also very fibrous, but in parts presented a decidedly carcinomatous structure.

CASE 4. Hydatid tumour of liver; tapping; recovery.—This patient (G. C—) came as an out-patient to the hospital, and was admitted under my care. The following note was made at the time of admission: "There is a distinct swelling in the epigastrium to the right of the median line, extending for about three inches downwards from the margin of the ribs, and about four inches in transverse diameter. It is regular, uniform, and elastic to the finger; fluctuation can be made out. The patient's right side measures an inch and a half more than the left. His general health is fair, and there are no other symptoms worthy of note. Diagnosis: a hydatid tumour." The needle of an aspirator was inserted into the tumour, two inches below the last rib and one inch on the inner side of the nipple line. The fluid drawn off was slightly alkaline; specific gravity 1004; it contained large quantities of chlorides and some albumen; under the microscope, cholesterol plates and hooklets. As the tumour enlarged again, the tapping was repeated, forty-six ounces being drawn off. A second time the cyst filled, and a third tapping was done, and happily with the result that the tumour gradually shrank, and the patient left the hospital shortly afterwards. He has since shown himself at intervals of several months, and remains quite well.

CASE 5. Hydatids of liver, opening into right lung; excision of whole lower lobe.—Another case of hydatid tumour I shall merely allude to, as it is published in vol. xix. of the Clinical Society's Transactions. When this patient was admitted under my care at the Great Northern Hospital, there was tenderness on pressure all over the right hypochondriac, epigastric, and left hypochondriac regions; fulness of the right side; increase in the area of hepatic dulness; feeble breathing at the base of the right lung, and dulness extending up to the fourth rib; high temperature and a teasing cough, with little or no expectoration. An exploratory puncture with a fine needle was made in the right axilla between the eighth and ninth ribs, and a little clear serum was withdrawn; further exploration did not seem warranted. The symptoms as above noted continued without marked change for several weeks, when after a violent attack of coughing the patient expectorated a quantity of muco-purulent stuff and a number of

undoubted hydatid cysts. Under the microscope, pus, cholesterol crystals, and hooklets were seen. The progress was steadily downward, and the patient gradually sank and died.

At the post-mortem examination strong adhesions were found in the right pleural cavity, firmly uniting the whole lower lobe of the right lung to the chest wall and to the diaphragm. The whole lower lobe of the right lung was converted into an abscess cavity, having free communication with the main bronchus. The lower part of this cavity was in close relation with the diaphragm and the upper surface of the right lobe of the liver, and the cavity extended through the diaphragm into the liver substance. From its appearance this lower part was clearly the original site of the mischief.

In my remarks at the time, I asked the question, amongst others, "What operative interference should have been adopted?" I believed then, and I believe more firmly now, that free opening of the cavity, if it did not actually save the patient's life, would have materially prolonged it, and would have greatly added to her comfort by giving free exit to the hydatid cysts.

Remarks.—I have brought together these five cases because they form a group possessed of some features in common, and yet differing widely in many respects, in order that we may observe them mainly in view of the all-important question of treatment. The first and second are cases of tropical abscess: in one aspiration was practised, but the matter in the end made its way through the lung and into a bronchus; in the other the course was into the bowel at first; both ultimately died. The third, a case of diffuse suppuration, I place there in contrast to the former two. The fourth and fifth—cases of hydatids of liver—are taken as opposites; the former is a type of the simple uncomplicated hydatid cyst; the latter is interesting because of its resemblance in many points to the first case, and because it represents those obscure cases where the mischief, of whatever kind it be, begins in the thick part of the liver, usually high up and far back, and slowly makes its way into the chest, though it is not often that such wholesale destruction of lung tissue takes place as in this instance.

In those comparatively easily diagnosed and straightforward cases where we have a fluctuating tumour in the region of the liver, presumably not an enlarged gall-bladder, I suppose we shall all be agreed that to make an exploratory puncture with a fine needle, just as we should do in the case of fluid in the pleural cavity, is a safe and wise proceeding to aid or confirm diagnosis. If ordinary care is exercised, no harm can come of this, and the nature of the tumour may thereby be at once settled. If the case be one of simple hydatid, and we follow this up by the insertion of a larger needle and withdraw a considerable quantity of the fluid, we may very fairly expect shrinkage of the cyst and the death of its contents without more trouble to the patient. In the instance I have briefly given the cyst refilled twice, but the results above mentioned were obtained after the third tapping, and the patient remained perfectly well.

In another case that came under my care at the Great Northern Hospital several years ago, the patient had been sent up from the country to a special hospital for diseases of women, and, the true nature of the case being recognised, she was transferred to me. The history of the tumour went back some twenty years, and latterly its great size gave her much inconvenience, though she did not suffer very seriously in her general health. Palpation gave one the idea of a hard-walled cyst, and from its age we anticipated some trouble in penetrating the walls. A moderately fine needle could not be introduced, and was felt to grate upon calcareous matter in the substance of the walls, but a larger and stronger one was inserted, and a great quantity of undoubted hydatid fluid was withdrawn. A pad and bandage were applied, and no refilling of the cyst took place. The patient made an excellent and rapid recovery, without a single bad symptom. She left the hospital shortly afterwards, and I have every reason to believe that she has remained well, as she arranged to come back should the symptoms return.

So much for the simple, straightforward cases. But take Case 5. In it we had at first increase in the area of hepatic dulness, but all that could be made out was that the liver was uniformly enlarged or pushed down, and, as the sequel proved, the latter supposition was the correct one. There was here,

then, no indication warranting an exploratory puncture until signs began to show themselves at the base of the lung. A fine needle was then introduced between the eighth and ninth ribs, but only a little clear serum was found. If we had tried again a little later and with a little more boldness, I believe we should have entered the cavity and have been able much earlier to recognise its true nature. A free opening would then have given great relief, and probably the patient's life might have been saved.

We come now to the cases of abscess of liver. In Case 1 the fulness and bulging gave one confidence in aspirating in front, but, considering the distance that the needle had to traverse before reaching the pus, the fact that it did not reach it at all the second time, and the further fact that hepatic abscesses are far more common in the upper and back part of the liver than in any other situation, I should be inclined, in treating another similar case, to enter the aspirator needle from the side or from behind. Unless we have very definite evidences of the tumour making its way to the surface in front, we have a far better chance of striking it from the postero-lateral aspect in obscure and doubtful cases.

His showed that a considerable part of the liver surface—not only what formerly was described as posterior border, but a great part of the so-called under surface—is really posterior. He also demonstrated that part of the left lobe, and the whole of the Spigelian lobe, looks altogether backward, and may, therefore, truly be described as forming a posterior surface. The part of the right lobe lying posterior is from two and one-half to three inches broad, and is non-peritoneal, lying between the folds of the coronary ligament. We may take it that the liver lies behind the cartilages of the sixth, seventh, eighth, and ninth ribs in front, and partly also behind the ensiform, while at the side it is covered by the seventh, eighth, ninth, tenth, and eleventh ribs. Referring again to Case 1, if a puncture had been made in the eighth or ninth interspace, in a direction inwards and backwards, we should, in all probability, have emptied the abscess a second time, adding greatly to the patient's comfort and giving him a vastly increased chance of recovery.

As to any danger from the insertion of a needle, the records of large numbers of cases prove that under ordinary precautions of perfect cleanliness it is a perfectly justifiable and safe proceeding, both in pleural and hepatic cases. I have already drawn attention to the fact that in Case 1 no inflammatory action was set up by repeated punctures, and that at the necropsy hardly any traces of the track of the needles could be found. The same may be said of Case 3. There not only no harm but even temporarily relief followed the punctures, and as a means of diagnosis it helped to prove to us that we were not dealing with a large localised collection of matter.

Upper Wimpole-street, W.

ON THE PREVENTION OF BLINDNESS BY THE OPHTHALMIA OF THE NEW-BORN.¹

By SIMEON SNELL,

OPHTHALMIC SURGEON TO THE SHEFFIELD GENERAL INFIRMARY.

THE census of 1881 gave the number of blind persons in England and Wales as 22,832, being in the proportion of one blind person in every 1138. It is satisfactory to note that the census of 1881 showed a marked improvement in the ratio of blindness to that of 1851. In the latter year one in every 979 was returned as blind, and if the proportions had remained the same at the last census the number of blind persons would have been 26,523, instead of 22,832, as the census return gives it. This may be fairly considered to have resulted in a great measure from our increased knowledge of eye diseases and improved means of treatment. When, however, it is remembered that a large proportion of these cases of blindness are caused by the ophthalmia of the new-born, which, if properly treated, is curable, and that it is from ignorance and neglect that loss of eyesight has resulted, we should look forward to attaining a greatly reduced proportion of blind people. Somewhere about

30 per cent. of all cases of blindness are estimated as due to this one cause alone. This would give a number of about 7000 out of the total 22,832 returned as blind in the census of 1881 whose blindness is attributable to ophthalmia neonatorum. This is by no means a high proportion. Some authorities give a larger percentage. My own statistics are higher, and I will briefly refer to them.

Since the opening of the Sheffield School for the Blind I have kept records of all the children admitted. In a report on the causes of blindness of the inmates of this institution, as well as the blind *employees* at the workshops,² I gave the number of children then at the Blind School as seventy-six. Three were excluded from calculation as not having been seen by me or for some other cause, and the number was thus reduced to seventy-three. In no fewer than twenty-seven of these could the blindness with tolerable certainty be assigned to ophthalmia neonatorum as the cause, and one additional case in all probability so, making a total of twenty-eight, or 38·3 per cent. Since this time up to the close of 1887 twenty new cases have been admitted into the school; in nine of these the blindness is clearly traceable to the same cause. This makes a total of ninety-three children, with one or two exceptions all under fifteen years of age, and no fewer than thirty-seven owe their blindness to ophthalmia neonatorum, or 39·7 per cent. At the time of my report, forty-six blind people were employed at the workshops. Eight of these were already accounted for at the Blind School, reducing the number to thirty-eight. Ten of these became blind through ophthalmia neonatorum, or 26·3 per cent. The smaller percentage in the adults is to be readily accounted for. There were twenty-nine men and nine women. Both sexes would include instances of blindness from causes which more or less only have effect after childhood. But men are much more exposed to accidents—which accounts for several cases of blindness in those now under consideration, and other causes—than are women. The statistics mentioned only refer to those unfortunates who have lost the sight of both eyes. What means have we of calculating the larger numbers of those who are blinded in one eye only, or who have had one or both organs more or less damaged by the disease? The object of this paper is not to discuss the treatment of the disease, but rather to refer to the means by which the ravages caused by it may be lessened, if not obviated.

1. Can the disease be prevented, and by what means? Cr  d   showed in 1881 how the affection was rare among the upper classes, but common among the poor, and was the scourge of lying-in institutions. He entertained no doubt that it resulted during delivery by inoculation with the maternal secretions. Vaginal injections of carbolic or salicylic acid were used before and at the time of delivery; but this served only to diminish, not abolish, the disease. Attention was then directed to cleansing the eyes, and, after employing borax, a 2 per cent. solution of nitrate of silver dropped into the eyes immediately after birth was arrived at as the most satisfactory application. The results were as good without as with vaginal injections, and these were therefore discontinued as unnecessary. Cr  d   gives statistics: 13 per cent. before fell to 1 per cent. after the adoption of the method described, and better results have, I believe, since been obtained. Others also have lent support to the efficacy of this method, showing that it is practically an absolute preventive of ophthalmia. The nitrate of silver acts as a specific against the gonococcus.

I was made aware some little time since of a simple preventive plan which has been carried out in the midwifery department of the Jessop Hospital for Women, Sheffield, with signal success. I am indebted to Mr. J. M. Willey, the house surgeon, for kindly supplying me with the following particulars. The patients are among the poorest; some are inmates of the hospital, but the great majority are confined at their own homes. The midwives have received instructions that immediately the head of the child is born attention must be directed to the baby's eyes. Then, with little pieces of lint moistened in clean tepid water, the eyes are carefully washed, as well as the eyelids and parts close adjoining. Subsequently, in washing the child, care is taken to guard against re-infection. During the last three years there have been 2242 labours among the in-patients and out-patients. In the first 200 there were a few cases of purulent ophthalmia, but in the last 2000, since the method

¹ Read before the Yorkshire Branch of the British Medical Association, at Wakefield, Feb. 22nd, 1888.

² Brit. Med. Jour., vol. i. 1886, p. 387.

has been systematically adopted, not a single case has occurred. Directions were also given to the nurses that if a child's eyes looked in any way red, it was to be taken at once to the hospital for a drop of nitrate of silver solution (five grains to the ounce), to be dropped into the eye. This has very seldom been required, and, as stated, in no instance in the last 2000 labours has a case of ophthalmia occurred. This plan is remarkably simple, and the absence of any application, such as nitrate of silver, to the eyes renders it very easy of adoption by nurses and midwives. The success which has attended its use at the Jessop Hospital renders it worthy of more extended employment. Its success clearly depends on washing away secretions from and near the eyes before the child has opened them, and before infection has taken place. Strong evidence is thus afforded against the opinion often held, that it is whilst in the maternal passages that infection occurs. This is a point of much moment in the adoption of preventive means against the disease. A recent article by Dr. Ludwig Korn,³ "On the Prevention of the Blennorrhœa of the Newly Born," is very interesting, because he discusses this question, but especially as he was led to adopt very similar preventive measures to those I have described as being in use at the Jessop Hospital. His experience was gained at the Dresden Clinic for Women. "The method employed was the following. Every woman in labour was carefully cleansed. When possible they were put into a warm bath. After the hair on the genital organs had been clipped, the external parts were washed with soap and irrigated with a solution of bichloride of mercury, 1 in 1000. The vagina was washed out according to Kaltenbach's method with a solution of bichloride, 1 in 3000. In every case which appeared to be suspicious of blennorrhœa I rubbed the mucous membrane of the vagina and cervix with my finger, while the irrigation was made as Cohn recommended. During parturition these irrigations were repeated several times, before and after every digital examination. As soon as the head was born, the eyelids and the portions surrounding the eyes were scrupulously cleansed by means of cotton soaked in hydrant water. And especially all the smegma was removed. We rubbed the cotton from the outer to the inner canthus, continually using fresh pledgets of cotton until the lids were perfectly clean. We particularly tried to prevent any opening of the eyes before this cleansing process was finished." The results were very good. He thought it seemed evident that thus the eyes could not be infected while the child passed through the vagina. The sublimate solution for cleansing the vagina was reduced in strength, and it was only used before and after digital examination. When no examination was made, no sublimate solution was used. In such cases as this, nitrate of silver was formerly dropped into the eye. But, since it was supposed that infection did not take place during the passage of the child, it was no longer used. In all cases, however, every baby born in the institution was washed with simple water as described, without paying any regard to the previous cleansing of the parturient mother. The results were excellent. Three cases of ophthalmia only occurred in 1000 cases; one in the last 700, and not one in the last 420.

2. Cannot something be done to diffuse information as to the curability of the disease, and to enforce the necessity for immediate treatment in those cases in which it has occurred? Dr. David McKeown brought before the Ophthalmological Society, in 1884, a very well elaborated scheme with such an object. He proposed to utilise the Poor-law and birth-registration organisations. The Society adopted with slight modifications these suggestions, and communications were opened with the authorities, and, leading to no result, a deputation waited on the Local Government Board. I am not aware that in England any steps have been taken by the authorities. In Ireland, however, the importance of the matter was brought before the Poor-law medical officers, and also the midwives. But in the absence of such an elaborate scheme much can be done in simpler ways. The Society for the Prevention of Blindness has issued a leaflet entitled "Advice to Mothers who do not wish their Children to be Blind." Other societies have done something as well. To the parents or friends of babies brought to the Sheffield General Infirmary we are not only now giving directions as to the serious nature of the disease, the need for the early treatment which

has been too often neglected, and the safety of eyes imperilled or sight lost; but we give them a card which enforces these points, and which they are desired to preserve. The card has very similar but somewhat more brief directions to those suggested by the committee of the Ophthalmological Society (Dr. McKeown's), and it reads as follows: "If a baby's eyes run with matter and look red a few days after birth, take it *at once* to a doctor. *Delay is dangerous*, and one or both eyes may be destroyed if *not treated immediately*." Dr. Bell has succeeded in securing the voluntary assistance of the registration officers in Bradford, and in this way a slip with somewhat similar instructions to those just mentioned is given attached to the certificate when a birth is registered. This excellent plan may well be imitated. I tried, moreover, some little time since, to obtain the assistance of the St. John Ambulance Association, with its extensive organisation, for the diffusion of knowledge respecting the gravity of this affection. I am sorry I did not succeed; perhaps someone else may do so. There are other ways in which by degrees information may be scattered, and in the end bear fruit; but, in conclusion, I would point out the great help which teachers of obstetrics can render by enforcing on their classes the two lessons this paper has attempted to set forth—viz., (1) That the disease is preventable by the adoption of simple measures; and (2) when it does occur, it yields to treatment if not delayed. To writers of text-books the opportunity and duty are equally great, if not greater, as are also those pertaining to the teaching of midwives.

Sheffield.

THE COLOSTRUM CORPUSCLE OF HUMAN MILK.

By EDGAR BECKIT TRUMAN, M.D., F.C.S.,

SURGEON TO THE SAMARITAN HOSPITAL FOR WOMEN, TO THE NOTTINGHAM AND MIDLAND EYE INFIRMARY, AND BOROUGH ANALYST.

IN November, 1886, I was consulted with respect to the following case.

E. F—, a single woman of twenty-three, had admittedly been confined at full term eighteen months previously. On a day of August, 1886, after a time during which she asserted herself to be pregnant, she showed to those about her a child of whom she declared herself to have been confined in the night. In November she attempted to affiliate this (or another) baby on a gentleman of good social position. She had milk in both breasts, and said that she was suckling the child. The gentleman prosecuted the girl for an attempt to extort money; and I was asked to examine the breast milk microscopically, one of the medical men in the case believing that the presence of colostrum corpuscles in the milk would prove "recent" delivery. The word "recent" being so exceedingly vague, I was asked whether I could furnish any proof that there had been a full-time or nearly full-time labour in the previous three months, this period only bearing on the case. The breasts were somewhat full, the nipples pointing downwards and outwards. By very gentle pressure, milk exuded on either side. This was not like the thin, opaque white milk of a suckling woman, but consisted of two portions: a thick, opaque white curd or cream, and a nearly transparent colourless serum. On microscopical examination there were to be seen numerous colostrum corpuscles, measuring '0014 of an inch in diameter, surrounded by close-lying multitudes of fat globules measuring '001 of an inch in diameter, as a maximum. On examining this same slide a few days afterwards, the colostrum corpuscles had disappeared, having fulfilled their life history by their normal termination—viz., bursting,—the burst envelopes being visible.

The inquiry resolved itself into two parts: firstly, to ascertain the significance of the colostrum corpuscle; secondly, to ascertain the usual condition of the breast milk three months after confinement. The literature of the subject is exceedingly scanty. Most medico-legists mention the presence of colostrum in milk as characteristic of "recent" delivery, but dismiss the subject in a few words. Taylor refers to Donnè's observations on this point. I have been unable to obtain the original memoir, but have found

³ Archiv f. Gynæcologie. Translation in American Journal of Ophthalmology for November, 1887.

a large critique¹ in English, from which I shall proceed to quote. In the course of his article,² Donn  says that normal milk is a fluid in which spherical globules of fat, and no other particles, are suspended. In colostrum there are some milk globules, but they are irregular and disproportioned; some are large oil drops, and cannot be termed globules; this is imperfectly elaborated butter. The majority of other globules in colostrum are very small, look like dust in the midst of the fluid, and are mostly connected together by viscid matter. In addition to these, colostrum contains particles, some being very small, about one-hundredth of a millimetre ( 0004 of an inch) and others many times larger. These are slightly transparent, of a yellowish colour and granular appearance, and are made up of a multitude of small grains enclosed in a transparent envelope. They are not soluble in alkalies, but disappear in ether. This condition of milk is almost unchanged till the termination of the milk febricula; then occurs a gradual change. The number of granular bodies diminishes day by day; the lactic globules acquire a more regular and definite form, and, without all being of the same size, differ less in this respect than was the case previously. These globules also, having previously been united, separate and move independently of each other. This change does not always occur at the same period. There are some traces of the primitive condition of milk twenty-four days after delivery, as a rule, to which there are exceptions. Sometimes the milk retains the character of colostrum far beyond the ordinary period, occasionally for months, or during the whole of lactation. Agglomeration of milk globules (fat) and presence of granular bodies are signs of milk either imperfectly formed or not of good quality. This modification takes place either in consequence of a lesion of the gland or of a change in the milk due to general disturbance of the health. A young mother eight days after labour had metro-peritonitis. As long as this continued the milk was full of granular bodies. The application of leeches relieved her, and from that moment the granular bodies ceased to appear. Pus may be found in milk; this is not dissolved by ether, as the colostrum corpuscle is. The diameter of the milk globule (fat) increases the longer the time after delivery, but this sign is of no use to ascertain the age of the milk.

Taking them in the chronological order of their works, other authors write as follows. Beck³ says nothing on the subject. Guy⁴ makes no mention of it. Funke⁵ gives an exceedingly good plate, figuring the colostrum corpuscle. Montgomery⁶ says: Donn  states that the colostrum corpuscles occur in woman until the twentieth day, but that Simon never detected them after the eighth or tenth; and, according to D'Outrepoint, they usually disappear on the third day. Peddie says that changes in respect of the colostrum bodies go on in general until the tenth day, but sometimes it is three weeks before they cease. The conclusion is that we cannot lay much stress upon them in a judicial examination. Taylor⁷ does not mention this subject. Casper⁸ says that from six to eight days subsequently to labour the milk exhibits the colostrum corpuscle (a conglomerate of small fat particles held together by an albuminoid substance). Taylor⁹ gives a figure of the colostrum corpuscle, mentioning the fact that it is found in the first milk secreted after delivery, but says nothing as to its being any proof of recent delivery. Guy and Ferrier¹⁰ also give a figure, and say that the corpuscles are found in milk for the first five or six days, being of practical value only then. Ogston¹¹ says that a microscopic examination of the milk, when they are present, may sometimes contribute to prove the recent occurrence of parturition. This solved all doubt in a case reported by Mr. Mercer Adam. The body of a new-born child, much decomposed, was found in a moor in the south of Scotland; it appeared to have been dead four or five weeks. Suspicion having fallen on a young woman who was supposed to have been delivered secretly about that time, she was arrested, and acknowledged that she had borne a child about a year and a half before, which she had nursed until within three months of her apprehension, but she firmly

denied having been recently delivered. No feasible plan of deciding the question appearing, someone suggested that her milk should be examined by the microscope. This was accordingly done, and it was found to abound in colostrum globules, showing that parturition had lately occurred. (As we shall see, this was an unwarrantable deduction, even although, as happened, the girl then confessed that she had recently given birth to a still-born child.) It should be remembered, however, that colostrum has been met with in the milk of the human female so late as the seventh month after delivery. Barnes¹² says that the "colostrum corpuscles are the still coherent globules which result from the fatty metamorphosis of epithelial cells." They are characteristic of the first milk, and after a few days generally disappear. Donn  states that they are present in mammitis during lactation, also when menstruation occurs during lactation. This latter fact has been verified by Barnes, who found that they were reproduced at every period, lasted for seven days or more, and then disappeared during the interval. Lehmann states that they are found in the course of any acute affection occurring during lactation. When these fat-containing globules follow their normal course and rupture, setting free their contents, the cell wall disappears in the galactophorous ducts, since they are not seen in the milk. A figure is given.

The value of this sign being so uncertain, I made a number of microscopical examinations of human milk myself. These were twenty-three in number; four of them were re-examinations at different periods of two cases, and in another case the milk differed in the two breasts, each examination being recorded; so that, in all, eighteen women were the subject of observation. The colostrum corpuscles vary in size, in my cases measuring from  0032 to  0005 of an inch in diameter. They are generally of circular outline, but are sometimes irregular in shape; the border is finely indented, the colour is a light yellowish red, and the contents are finely granular. The fat globules, on the contrary, vary in diameter from  0013 to  0001 of an inch as maxima, and are met with of all sizes below this until they become invisible to a low power (  objective and No. 1 eye-piece). They are always circular in shape when the milk is recent; the border is perfectly unbroken in outline, the colour is a dead white, and the contents are transparent and homogeneous.

I will now proceed to narrate briefly, firstly, the cases in which I found colostrum corpuscles, and, secondly, those in which they were absent.

1. *Cases in which colostrum corpuscles were present.*—No. 1: Primipara; premature labour; had scarcely been free from coloured discharge for a day during the six and a half months of her pregnancy; child died at birth. There were numerous colostrum corpuscles; fat globules very small and wide apart.—No. 8: Same case, two weeks after (when the cavity of the uterus was normal in size).—No. 12: Three weeks after. I measured a colostrum corpuscle and found it to be  0011 of an inch.—No. 14:—Same case, four weeks after the labour. The microscopical appearances were much the same in all the four examinations; at the last examination the milk absolutely swarmed with the corpuscles.—No. 7: Patient pregnant five months of her first child; corpuscles small, being  0007 of an inch.—No. 11: A week later. The corpuscles were larger; the measurement of one was  0014 of an inch.—No. 13: Multipara; last baby born twenty-six months ago, and weaned ten months. Patient has retroflexed uterus, and is not pregnant. In the breast milk were numerous colostrum corpuscles, measuring from  0015 to  0029 of an inch; fat globules  0007 of an inch and under.—No. 15: Suckling her four months' baby; colostrum corpuscles were very few.—No. 17: Married three years and a half, and has never been pregnant. Ever since marriage, for a week before the period the breast fills with milk, which passes away on the first day of the period. In this fluid there were several colostrum corpuscles. This patient had ovarian prolapse, dysmenorrhoea, and dyspareunia, for which I subsequently removed the appendages.—No. 18: The right breast of No. 19. Suckling her baby of twelve months old, but not with this breast, which she has never been able to use for any of her six children. Is now menstruating. Milk thick and opaque; fat globules very small; colostrum corpuscles numerous, one of them measuring  0014 of an inch.—No. 21: Case of chronic ovaritis. Twenty-three months since last labour, and eleven since weaning. Swarms of corpuscles, measuring

¹ British and Foreign Medical Review, 1838, vol. vi., p. 181.

² Considerations on Milk, especially that of Nurses. By W. A. Donn .

³ Elements of Jurisprudence, 1838. ⁴ Forensic Medicine, 1844.

⁵ Atlas of Physiological Chemistry, Cavendish Society, 1868, Plate 11, figure 2.

⁶ Signs and Symptoms of Pregnancy, 1856.

⁷ Principles and Practice of Medical Jurisprudence, 1863.

⁸ Medical Jurisprudence, New Sydenham Society, 1864.

⁹ Principles and Practice of Medical Jurisprudence, 1878, vol. ii., p. 375.

¹⁰ Forensic Medicine, 1875.

¹¹ Lectures on Medical Jurisprudence, 1878, p. 159.

¹² Obstetric Medicine and Surgery, 1886, vol. i., p. 197.

about .001 of an inch; and fat globules of all sizes.—No. 22: Aged fifty-seven. Five months since last period, but had a slight show two days ago, due to mental emotion on account of approaching operation. Pelvis not examined. Breast was removed for carcinoma; on incising it afterwards a teaspoonful of milk was found in the ducts about the nipple, which contained well-formed fat globules measuring .0005 of an inch, and numerous colostrum corpuscles measuring from .0009 to .0016 of an inch. Last child eight years old.—No. 23: Labour four years ago; lactation for nine months; has never been pregnant since, but has always had milk in the breast. This was a case of lacerated cervix and perineum, with dyspareunia.

1. *Cases in which colostrum corpuscles were absent.*—No. 2: Three weeks after miscarriage at four months.—No. 3: Three and a half months after labour at full term; suckling.—No. 4: Two months and a half after labour at full term; suckling.—No. 5: Ditto.—No. 6: Ditto.—No. 9: Two months after labour at full term; suckling.—No. 10: Is suckling her baby of ten months. Came into hospital for ruptured extra-uterine foetation, for which I operated.—No. 16: Two months and a half after labour at full term; suckling.—No. 19: The left breast of No. 18. The milk of this the only breast ever used was most carefully examined for colostrum corpuscles, with a negative result. Baby twelve months old.—No. 20: Baby twelve months old; weaned three weeks; mother suffering from acute nephritis and albuminuria.

Thus in six cases (Nos. 3, 4, 5, 6, 9, and 16), which were suckling at or about three months, no colostrum corpuscles were found. They were also absent in three cases (Nos. 10, 19, and 20) suckling from ten to twelve months, and in one (No. 2) three weeks after premature confinement at four months. The colostrum corpuscles were present (excluding the case in question and not reckoning re-examinations) in one case (No. 7) five months advanced in her first pregnancy; in one (No. 2) a week after premature labour at six months and a half; in one (No. 15) four months after labour at term, suckling going on (corpuscles very few in number); in three (Nos. 13, 21, and 23) at twenty-six months, twenty-three months, and four years after labour, and ten months, eleven months, and three years and a quarter after weaning; in one (No. 18) twelve months after labour, in the breast that was never used; in one (No. 22) after the menopause; and in one (No. 17) where there had never been a pregnancy. Thus, excluding Nos. 1 and 15, the confinement had taken place in all these cases some considerable period previously, in one being eight years; one patient had never been confined, and one had never been pregnant.

It is evident, therefore, that the colostrum corpuscle is no proof of recent delivery, or of delivery, say, within the previous three months. It is a sign of incomplete development of the products of the mammary gland, and in this way we get it with retroflexion of the uterus (No. 13), prolapse of the ovary (No. 17), incomplete action of the gland (No. 18), chronic ovaritis (No. 21), cancer of the breast (No. 22), and dyspareunia with laceration (No. 23), in all which cases we get the irritative action of disease, instead of the normal healthy activity of the reproductive organs. In fact, the presence of the corpuscle would tend to negative the supposition of a delivery followed by three months' suckling, as was the contention of the defendant in the case in point. In this case, if there were no other explanation of the presence of milk of the quality described in her breast, such as ovarian disorder &c., we see that no improbability is incurred in supposing her milk supply to be the result of the confinement eighteen months previously; or she may have been confined three months before, the baby dying and the breast not being used. As a matter of fact, the child she produced was afterwards claimed in court by the parents, who swore that E. F.—had paid them a sum of money to hire it for a time; the ultimate result being that she was sentenced by Mr. Justice Field to several months' imprisonment.

Nottingham.

BRADFORD HORSE AMBULANCE.—The presentation to the Corporation of the horse ambulance provided by the workpeople of that town took place on Saturday last. In the absence of the Mayor, Alderman W. W. Wood (chairman of the Watch Committee) officiated as president during the ceremony, and on behalf of the Watch Committee and Corporation received the ambulance. The subscriptions amounted £146 4s. 3d.

CASE OF MEDIASTINAL CANCER.

By R. WHITTINGTON-LOWE, M.D.

ON Sept. 30th last I received a message requesting me to call and see a patient who had come to Brighton about an hour before I saw him. He was a big, wide-chested man, aged sixty, whom I had attended a year ago for a rather severe attack of lumbago. He told me that he had been ill for three weeks, during which time he had lost flesh and strength. He had been complaining of pain across the epigastrium. He had seen two physicians in London, who informed him that he was suffering from rheumatism of the diaphragm. His pulse at this time was about 140; temperature (mid-day) normal. The patient went into Norfolk for change, and consulted a doctor there, who confessed that the case puzzled him. His pulse kept about 140; and his temperature, when taken at about 12 mid-day was normal. At this time there were severe pains about the epigastric region, and as he did not find himself improving he determined to come to Brighton. I found him considerably thinner than when I attended him last year. Complexion sallow; tongue inclined to be dry, and considerable thirst; pulse 144. He informed me that there had been no rise of temperature. This, however, I found was incorrect, as at my visit on Sept. 30th, at 6 P.M. the thermometer registered 101°; respiration 30. Complete examination was postponed till the forenoon of the following day. The subjoined notes are extracted from my case-book, having been written at the dates stated, thus giving an additional interest to the case, and presenting the salient points as they occurred.

Oct. 1st.—Made careful examination of chest and abdomen. Unable to detect any well-marked departure from health beyond the rapid heart action and increased rapidity of respiration. There is a difference of vocal resonance and thrill, both being greater on the right side. Pulse at 11 A.M. 134, temperature 99°, and respiration 26. Ordered a mixture containing tincture of strophanthus to be taken every third hour. At evening visit, pulse 140, temperature 100.3°, and respiration 28. Patient looks very ill, with an expression of consciousness of impending danger.

2nd (Sunday).—Patient much the same. I think badly of him. Proposed to patient that I should ask a brother physician to see him with me, which was agreed to. My colleague's examination did not elicit anything further; he is inclined to attribute the vague symptoms to rheumatic origin. Strophanthus to be continued, and a mixture containing paraldehyde given at night. Pulse, respiration, and temperature much as before, rising in the afternoon and falling in the morning.

5th.—Patient does not improve. This morning I think I can detect just a suspicion of fine crepitation over middle of left lung. No catching of breath or pain on deep inspiration. No expectoration. Patient looks very ill. Great thirst. Liver, kidneys, &c., all apparently healthy. Urine acid; sp. gr. 1030; deposits urates, and crystals of uric acid are seen under the microscope. Telegraphed to one of our leading consultants in London, who came down by the afternoon train and made a searching examination of the patient. Arrived at the conclusion that there was "a low sneaking inflammation of the base of the left lung about to develop"; at the same time confesses the case to be a most peculiar and obscure one. Ordered strophanthus to be continued, and an effervescent mixture with citric acid to be given. Patient to stay in bed, with poultices on.

7th.—This morning slight crepitation over base and middle of left lung still heard. Slight irritative cough; no expectoration. Other symptoms as before. Pulse 140; temperature 100°; respiration 30. Ordered two grains of quinine to be given three times a day. Patient disliked the paraldehyde so much that I have substituted bromide of ammonia and small doses of liq. mur. morph. at night, and it has a capital effect. We have now to do with some slight inflammation of the left lung, but is this the primary disease or a symptom of something not detected? I think so. Was it this inflammation only now developing that caused the pulse to be 140 nearly a month ago? I think not. There was a little pure blood coughed up yesterday (not pneumonic sputa). Is it cancer affecting the lung?

15th.—Patient has been going on with very little change

of any kind since last report on the 7th. Pulse has been about 140, this morning 146; temperature nearly normal; respiration 30 or 32. The lung symptoms have undergone no development. Slight irritative cough, not pneumonic; no expectoration. Vague pains about the chest, not severe. On the evening of the 13th I was sent for in a hurry, the patient having had a sharp pain running from the abdomen into the chest, which he described as "agonising," but lasting only about a minute. My colleague in Brighton saw the case with me again this forenoon. Does not make out any very well marked change. Thinks perhaps there is slight pleuritic effusion, and suggests an iodide of potassium ointment made with lanoline to be rubbed into the side. I have stopped the strophanthus for the last few days, and been giving an iodide of potassium mixture. Patient's appetite has been good throughout, and he takes plenty of nourishment in the form of milk, eggs, beef-tea, puddings, and small portions of mutton or chicken as he feels inclined. He has a couple of glasses of sound claret.

17th.—Patient much the same. Cough disappeared. Front of chest very resonant. A good deal of distension of transverse colon. Patient is a director of one of the large insurance offices, and the board, at their meeting yesterday, requested their consulting physician to proceed to Brighton to report on their sick friend. He was again submitted to a thorough overhauling, but with the old negative result. I asked this fresh consultant what he thought of the idea of cancer affecting the left lung, more especially as I have now a history of a sister of the patient having died of cancer of the liver; and he replied that while he "did not say it was not cancer, there was really no actual sign of it being so." He thinks badly of the case. No change in treatment.

22nd.—During the week the respirations have been less frequent—28, 26, and 22; pulse 122, 129, and 132; temperature normal and subnormal. Pulse up again to-day, weak and difficult to count, 140; respiration 30. There has been a little difficulty with constipation, and we have used castor oil, hydrarg. subchlor., and enemata. There is a good deal of tympanites. The stools are very large; healthy in colour. Urine normal in quantity and appearance. Turpentine stupes applied to abdomen. Tongue very dry. Great thirst.

23rd.—Patient does not seem so well this morning, and expresses some anxiety about being unable to pass urine, a complaint from which, it appears, his father suffered, and this seems to have put the idea into his head. He passed urine three or four times during the night in fair quantity, and last at 7 A.M. Great distension of abdomen from flatus. Pulse 140; temperature 98°; respiration 30. Sent for at 3 o'clock this afternoon, and requested to bring catheter. Patient has not passed urine since 7 A.M. Cannot make out any dullness from distended bladder. Passed catheter; bladder empty! Turpentine stupe ordered, and half an ounce of castor oil. Saw patient again at 7.30 P.M. Looks much worse. Pulse 158; respiration very hurried. No urine has been passed. The oil had not acted. Great nervousness and discomfort from distension of abdomen. Ordered enema, and sent a request to my medical friend asking him to come and see the patient. On his arrival, we carefully talked over the case with its new symptoms of great tympanites and the non-passage of urine. Saw the patient, and determined to pass catheter in case of retention being present. Ordered carminative mixture, and a dessert-spoonful of brandy every hour. On passing catheter I found the bladder empty, and it is therefore clear we have suppression as suspected. Patient looks as badly as he can, is covered with cold clammy perspiration, and appears to be sinking.

24th.—Was rung up at 1.30 A.M., and arrived at patient's house just in time to see him die at 2 A.M. Was informed there had been some sickness, causing great distress.

Necropsy thirty hours after death.—Having obtained the sanction of the son and brother, I made an examination at 7 A.M., Oct. 25th. The seat of disease was found in the chest, at the root of the left lung. Here, on passing my hand down into the left pleural cavity, an abnormal mass, about the size of an ordinary apple, was felt, close to the middle line. On removal, this was found to be mostly composed of a pinky-white brain-like substance, which had infiltrated the bronchial glands, and, in a tangled mass, compressed and constricted the left bronchus. The substance of the lung itself also contained this encephaloid matter, mixed with black patches. The milky juice of this sub-

stance, under the microscope, presented the appearance of a highly molecular and cellular fluid, and was of a malignant character. There were signs of some recent pleurisy, and a small quantity (four ounces) of fluid was present. The posterior and inferior portion of the lung was solid. The right lung was emphysematous, otherwise healthy. Heart flabby. A small amount of fluid in pericardium. On one of the cusps of the aortic valve was a large earthy concretion, like a piece of white coral, which branched. This gave rise to no sound during life; and, had it done so, all attention might have been diverted from the lung, where but little evidence of disease could be detected. Liver, spleen, kidneys, pancreas, stomach, and intestines healthy, with the exception of being all rather flabby. The examination having taken place in a private house and semi-secret manner, a perfectly complete examination was impossible, as great quiet and expedition were required; enough, however, was elicited to clear up an otherwise most obscure case, and it stands now as one of carcinoma (medullary) implicating the bronchial glands and root of the left lung. The heart in front with its rapid action masked any abnormal sound that might have been present.

These notes I have extracted from my case-book just as they stand. They were entered from day to day as records of a case that greatly interested me and caused me no little anxiety and thought. They were never intended for publication, nor are they now, perhaps, fit for dissection by a severe critic, but I have purposely avoided dressing the original notes for appearance in THE LANCET, as I think more than half the benefit to be derived from their perusal will be gained by the reader finding himself, as it were, at the bedside of the patient and seeing the case as others saw it.

Brighton.

PERFORATIVE PERITONITIS CAUSED BY ROUND WORMS (ASCARIDES LUMBRICOIDES).

BY SURGEON-MAJOR R. D. MURRAY, M.B.,

FIRST RESIDENT SURGEON, PRESIDENCY GENERAL HOSPITAL, CALCUTTA;
AND SUPERINTENDENT OF ASYLUMS AT THE PRESIDENCY.

My reasons for publishing the following cases are their extreme rarity, and the fact that the possibility of their occurrence has been doubted by several eminent authorities.

CASE 1.—Baboor Ali S—, a Mahomedan, aged sixteen, was admitted to the Dullunda Lunatic Asylum on March 17th, 1883, suffering from acute mania. On Oct. 4th, 1884, he was admitted to hospital, and I find the following notes in the case-book:—"Refuses food; restless; makes no complaint of pain; no diarrhoea; no vomiting; passed several round worms. In the evening very ill; pulse failing; fever; vomiting; some round worms thrown up; abdomen tympanitic. On Oct. 5th he sank, and died suddenly at 7 P.M. A post-mortem examination was held at 8 A.M. on Oct. 6th, and an ulcer the size of a four-anna bit (sixpence) was found about the middle of the jejunum, with ragged margins and some thickening and congestion around it. About two inches higher up there was a second smaller ulcer, extending through the mucous coat only. The contents of the intestine and five round worms had escaped into the peritoneal cavity. Cause of death: Perforation of intestine by round worms." These notes were made by Surgeon-Major E. G. Russell, who was then in charge.

CASE 2.—Netai D—, a Hindu, aged forty-three, was admitted to the Dullunda Asylum with dementia, in October, 1870. On the morning of Sept. 29th, 1887, he was brought to the hospital with colic, became rapidly collapsed, and died at 7.30 the same evening. On post-mortem examination next morning, there was found to be an ulcer of the small intestine, perforating the walls, through which seventeen round worms had made their way into the peritoneum. The other organs were not apparently diseased. Surgeon-Major G. Bomford made the above record.

CASE 3.—A Burman prisoner, aged forty, died suddenly in the Chittagong Gaol, in 1876, in a state of collapse, supervening on vomiting, diarrhoea, and intense abdominal pain. Post-mortem examination revealed recent peritonitis. A dead round worm five inches long lay in the peritoneal cavity. There was an aperture about as large as a three-

penny piece, with clean cut punched-out-looking edges in the lower third of the ileum. The tissues immediately around the opening were deeply congested. Two large round worms were found alive in the small intestine, and one in the stomach. The perforation was not the result of ulcerative disease. The hole in the gut was circular and ring-like, and quite unlike any solution of continuity from disease. The mucous membrane of the alimentary canal was throughout healthy, and presented no trace of tubercular or other disease. I believe, then, that death was undoubtedly caused by the worm perforating the bowel.

This last case I reported soon after its occurrence in the *Indian Medical Gazette* for December, 1878, and it is alluded to by the late Dr. Norman Chevers in his last publication, "A Commentary on the Diseases of India." He also cites a similar case reported by Dr. Edward Birch in the same gazette for July, 1878, when a lunatic died suddenly in the Hazaribagh Asylum, and it was found on post-mortem examination that ascarides had escaped through an ulcerated opening in the jejunum into the peritoneum. Dr. Chevers says: "It appears questionable whether the worms perforated the intestine in either of the above cases." Dr. Bristowe, in the latest edition of his "Practice of Medicine," says with reference to this entozoon: "It has been asserted that it occasionally perforates the wall of the bowel, and thus finds its way into the peritoneum or some sinus or abscess. It is now, however, generally held that when found in such situations it has simply passed thither through an accidental perforation." Dr. Cobbold says: "In severe cases..... deathly enteritis or perforation of the intestine has been known to occur." As a result of my own observations in this country, I have no doubt whatever that the round worm is capable of causing perforation of the bowel, and actually boring its way into the peritoneum. Considering the great prevalence of these entozoa in Eastern countries and among the dark races generally, the mortality caused by them is, in all probability, greater than is usually supposed. In cholera times they are frequently a predisposing cause of the disease.

Calcutta.

AN OBSCURE CASE OF KIDNEY DISEASE.

BY HERBERT J. CAPON, M.D.

ON the evening of May 16th, 1888, I was summoned to see J. M. R.—, aged twenty-six, a young lady who had arrived from abroad six days previously. She gave the following history: Three years ago last Christmas she was confined to her bed with pain in her left side and vomiting. This recurred acutely at her catamenial periods, and was regarded as of liver origin. Her urine, of which from time to time, and generally at the periods of catamenia, she had passed large quantities, was not examined. She suffered at intervals from sickness, and was not considered to be of a strong constitution. On the voyage to England, when the ship was extra "rocky," she was always sick, but this was generally relieved by champagne and rest. She took her food as usual, and drank claret with her meals. She entered into the general amusements during the voyage, and danced frequently. There was nothing particularly noticeable in her general state of health. At Gibraltar she suffered from an influenza cold, which she fancied "had struck inwardly." She arrived in England on May 10th. On the morning of the 16th, on returning from the City in a hansom cab, she complained after dinner of pain in her right iliac and lumbar regions, which was so acute as to necessitate her taking to bed. She was usually constipated, for which she generally found citrate of magnesia an excellent remedy.

On first seeing the patient, she was lying on her back, perspiring profusely; respiration 24, attended with pain at the base of the right lung posteriorly; pulse 108, of good volume, regular; temperature 100.4°; slight cough, occasionally raising sputum of a rusty colour with considerable effort, but not in any large quantity. The bowels were moved on the day previously. There was no urine to examine. Examination of the chest revealed absolute dulness at the right base up to within three inches of the inferior angle of the scapula. The respiratory sounds were absent over the dull portion, but tubular at the upper

margin of dulness; no egophony; vocal fremitus increased; lungs in other parts normal; heart sounds normal. There was much tenderness over the ascending colon, extending backwards, accompanied by some noticeable swelling. Her catamenia were then expected, and, as there was a history of dysmenorrhœa, I prescribed the following mixture: Liq. ammon. acet. conc., 3 dr.; tinct. ferri perchlor., 1 dr.; potass. bromid., 1½ dr.; syr. simplici, 6 dr.; aquam ad 6 oz.: a sixth part to be taken every four hours, with ½-gr. morphia pill when in pain. I also had linseed and mustard poultices applied to the back and right flank, and put her upon fluid diet.

May 17th.—The patient had slept fairly well, but perspired profusely. Temperature 101°; pulse 108; respiration 24. Had taken nourishment fairly well. Still complained of great pain in the same regions. Ordered to follow the same treatment.

18th.—Condition much the same. Dulness slightly increased upwards. Sputum scanty, and of same character. Catamenia commenced. She stated that she had not micturated for twenty-four hours. No distension of bladder could be made out by percussion. A hot hip bath was ordered, and a mixture prescribed as follows:—Tinct. opii, ½ dr.; tinct. senegæ and tinct. scillæ, of each 2 dr.; sp. ammon. aromat., 2 dr.; syr. aurantii, 6 dr.; aquam ad 6 oz.; a sixth part to be taken every four hours. In the evening she was not sure whether she had micturated in the bath.

19th.—Had slept well, but rambled at times. Had taken nourishment fairly well. Perspiration still profuse. Easier lying on the left side. Temperature normal, probably owing to the perspiration. Aspect dull, somewhat livid. Passed no urine. Catamenia offensive. The catheter was used, but the bladder was found to be empty. Bowels moved after enema and dose of castor oil.

20th.—Aspect somewhat livid. Perspiration still profuse. Passed no urine. Pain less, owing to morphia. The dulness at the base of the right lung had increased, with similar auscultatory sounds as on the 17th. Slept well through the night, and seemed very drowsy. Perfectly conscious. Had taken nourishment fairly well. Tongue coated with moist white fur. Bowels open after enema.

21st.—Slept heavily through the night. Temperature 101°; pulse 120; respiration 28. Lividity continues. There is now marked dulness at the base of the left lung also, extending to within three inches of the inferior angle of the scapula. Still no urine passed. Quite clear in intellect. Her condition being extremely grave, I requested a consultation with Sir William Jenner, who saw her at 7.30 P.M. with me, and prescribed the following mixture:—Potass. citratis, 2 dr.; ammon. chloridi, 1 dr.; tinct. senegæ, 2 dr.; sp. etheris, 1 dr.; ammon. carb., 20 gr.; aquam ad 6 oz.; one-sixth part to be taken every four hours.

22nd.—She slept fairly well through the night, but gradually sank, dying about 7.30 A.M.

Inspection made twenty-four hours after death.—Body well nourished. Post-mortem lividity in patches on the face, around the mouth, and on the dependent parts of the flanks. Abdomen only opened, and about a pint of serous fluid removed. Without disturbance of organs the appearance was as follows:—Cæcum slightly hyperæmic, about two feet of the lower end of the ileum more so, and ascending colon very much so, particularly advancing towards its mesenteric attachment. These portions of intestine were dilated with flatus; no collection in them. On drawing these organs to the left side, an intensely inflamed condition of all structures over the right kidney was observed, with much serous infiltration of areolar tissue. On removing the kidney, this condition was found to involve the muscles of the back and the diaphragm, and to extend upwards to the base of the right lung. These parts were softened and sodden. The under and posterior surface of the liver was also darker than normal. The right kidney was enlarged, softened, acutely inflamed, and on removal was found distended with urinary secretion. One sacculus was ruptured, from which escaped six or eight ounces of fluid. The left kidney was found enormously dilated, sacculated, and full of fluid. The pelvis was dilated to the size of a hen's egg, and the ureter was as large as one's thumb, being plugged at its point of crossing the psoas muscle and common iliac vein with a calculus slightly larger than a rifle bullet, and of the same shape. This condition had undoubtedly existed for some considerable time, as the adhesions were old and tough, and required much care in dissecting the ureter away. The right kidney weighed 15½ oz. Its substance was softened

and disintegrated. The capsule was adherent all over, but stripped off with tearing away of kidney structure, leaving the surface granular and soft. At the upper part was an abscess apparently as large as a hen's egg, which was ruptured in removal, and constituted the "sac" above named. The infundibula were much dilated, and contained one large irregular calculus, weighing nearly $\frac{1}{2}$ oz., with about 140 others varying in size from a horse-bean to a millet-seed. In the ureter, about two inches below the kidney, were three calculi, one completely blocking the lumen. The left kidney weighed, with ureter, fluid, and plugging calculus, 17 oz.; without the last two, 6 $\frac{1}{2}$ oz. The calculus weighed 52 gr. The difference consisted simply of clear straw-coloured fluid. There was not the slightest trace of kidney substance left, being simply one large fibro-capsular, multilocular cyst. The right ovary weighed a little over 1 oz., was irregularly cystic, and had applied to it the finfriated extremity of that Fallopian tube (catamenia present). The left ovary weighed $\frac{3}{4}$ oz., and was also cystic. There was no rupture of a Graafian vesicle on either. The ovarian capsules seemed somewhat thickened and tougher than natural. On the fundus of the uterus was a small subperitoneal fibroid as large as a pea. The spleen, intestines (beyond the inflamed part), and other organs were apparently normal. The bladder was empty and contracted.

In the family history, one finds that the mother died two years ago of uterine tumour, stated to be fibroid and of rapid growth, nine months after its existence had been discovered. The father is living, but has had two attacks of gout. One brother died, aged four, of stone in the bladder, thirty years ago, unrelieved. Two children died of diphtheria and croup during infancy, and one of scarlatina. An elder sister is at present suffering from uterine tumour, and is to undergo treatment at the hands of Sir Spencer Wells, Bart.

Edgware-road, W.

A NEW AND RATIONAL TREATMENT FOR GONORRHOEA.

By CHARLES J. SMITH,
FORMERLY SURGEON TO THE FARRINGTON DISPENSARY.

FROM causes, not far to seek perhaps, urethral affections of a specific character have been sorely neglected by the general body of surgeons, and left almost entirely in the hands of a few specialists, who probably have become such by the accident of their obtaining appointments at institutions of a special character, rather than by any choice or predilection for the class of cases which there fall to their lot. It cannot, therefore, be wondered at that so little has been done to reduce the treatment of an affection such as gonorrhoea to something like an exact science. An approach to a better line has been made of late in the use of medicated bougies; but the objections to these are the time requisite for their proper application, and the difficulty of thoroughly carrying out the necessary details to ensure the absolute disinfection of the affected tract. It was, however, starting from this point that I concluded there must be a way of dealing with gonorrhoea which should be at once effective and effectual. It occurred to me then that if remedies were made up in the form of an ointment and introduced by a proper instrument the difficulties would in all probability be overcome. Taking Allingham's rectal ointment-introducer as the key, I had made for me, by Messrs. Arnold and Son, an instrument which has proved perfectly efficient. I am now able to treat my cases with marked success; and, indeed, the average duration of the attacks is so short as to appear open to question—an average of five days,—but even in this I feel convinced that the best point is not reached. I shall be both astonished and disappointed if gonorrhoea, as such, will not be absolutely killed in a couple of days. Gonorrhoea is a specific inflammation; it is to be attacked by means that will disinfect and destroy its special virus, or perhaps I shall be more correct in saying that will kill its special micrococci. A thorough disinfection of the pus-generating, or micrococci-breeding area may, I believe, be obtained by two applications, and there will be left at most a simple and very mild inflammation to be dealt with. In the cases I have already treated by this new method I have had only

a thin watery discharge left in exchange for the purulent one after two or three days, and I question whether it really will prove necessary to make use of the weak astringent injection which, for the present, I prescribe for safety's sake. The accompanying woodcut shows the instrument. Each ointment-container—an oblong box with a long broad screw to expel its contents—has stems made in various sizes, all of which fit the ointment-container; so that, as with catheters, the size proper for each patient may be chosen; and this is one point of prime importance in the treatment which I would enforce. The urethra must be stretched by as large a stem as can be introduced; the object of this is that the whole of the surface may be made as tense as possible, and the ointment spread fairly and well over every portion. The bladder should be emptied immediately before the instru-



ment is used, so that the urethra is well washed out *from behind*. The stem is to be well oiled before introduction. I use a mixture of eucalyptus and olive oils. When the stem is as far in as appears necessary, the ointment is pressed out, and the whole instrument rotated as it is withdrawn, in order that the canal may be thoroughly wiped over. A little cotton wool and the usual dressing are employed to collect the discharge; and after three hours a mild injection is given, which is repeated four or five times during the day. A second use of the ointment is made on the following morning, and the injection repeated. The only medicine given is a saline aperient. I have found no need for copaiba, or the almost equally disagreeable sandal wood.

Before leaving this subject I desire to put on record a firm conviction which I have formed from a fairly long experience in practice. It is that a very considerable number of cases of gonorrhoea in the male are never really cured. The treatment apparently succeeds, and the patients are either discharged as cured, or, considering themselves well, cease further treatment. I believe that in these cases an attenuated form of gonorrhoea remains, and may remain for years. A man under these circumstances marries, and infects his wife; the wife possibly complains of irritation and "whites," although examination of the discharge will almost invariably show it to be yellow. Now the husband has attained his tolerance, and therefore is not necessarily, in his turn, greatly affected by the wife's condition. Over and over again I have met with these cases, and no better illustration of what I mean can be given than the case of a gentleman who recently came under my care. He was married about a year ago. He offered for my inspection a mild sample of what was undoubtedly gonorrhoea, saying that he had derived the discharge from his wife soon after marriage, owing to her having "come on unwell during connexion"; and, mark, this is the most common cause assigned in these cases. Doubting this, I pressed him, but he firmly, and I believe truthfully, avowed that he had been faithful. He acknowledged gonorrhoea prior to marriage, but considered he had quite got rid of it. His wife had always complained of irritation and "whites." She had lately been confined. I immediately asked as to the child's eyes after birth. The reply was just what I expected: "there was great discharge," but, thanks to a good and experienced nurse, this had ceased after due and careful treatment.

In all cases of married women who complain to me of leucorrhoea, I invariably prescribe the use of a uterine douche, with a disinfectant and astringent, night and morning. It is of course unnecessary to alarm them in any way, but I have grown to consider it a duty to take this view of every case of the kind which comes under my notice, so strongly am I persuaded that this conviction of mine is only too well founded.

Great St. Helens, E.C.

PROVINCIAL HOSPITAL SATURDAY COLLECTIONS.—The annual Hospital Saturday collection at Leamington, on behalf of the local hospital, was made on the 18th ult., and about £85 were collected at the street stands. The total amount of the collection is not yet known. The recent Hospital Saturday street collection at Portsmouth amounted to £27 16s. 3d., an increase of £10 on last year.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

IS TETANUS CONTAGIOUS?

BY THOS. B. ADAM, M.D.

IN a review of the more recent investigations into the pathology of tetanus, Mr. Wm. Anderson states (THE LANCET, Feb. 4th, 1888): "It is certain that although tetanus may be induced by the inoculation of a specific micro-organism or of a specific ptomaine, its occurrence as the result of direct transmission from one subject to another has yet to be demonstrated by clinical experience." As a note on the above statement, I wish to record the following cases.

Chai S—, farmer, aged thirty-one, was admitted to the Foochow Native Hospital on Sept. 28th, 1887, suffering from a crushed toe. The accident had occurred three or four days before admission, and our native assistant, finding the toe gangrenous, amputated it. Symptoms of tetanus appeared on the following morning. The patient was removed to a little private room, carefully fed, and put on full doses of chloral and bromide of potassium. Severe opisthotonos developed, and death from exhaustion occurred on Oct. 1st.

Sin T—, preacher, aged thirty-one, was admitted to the hospital on Oct. 8th, suffering from internal bleeding piles. The bowel was cleared out with castor oil, and on Oct. 10th the piles were ligatured. After operation the patient was placed in the little room in which the man Chai S— had died ten days previously. Opium was given, and the bowels kept at rest till the piles dropped off. Recovery was rapid and uninterrupted. Nine days after the operation, considering himself perfectly well, the patient returned to his home, some three miles distant. On the following morning, Oct. 20th, he reappeared at the hospital, complaining of stiffness in the jaw and muscles of the back. Placed in a different ward, he was at once put on full doses of chloral and bromide of potassium. The rectum was washed out with warm carbolised water. The anal wound looked perfectly clean. Opisthotonos soon developed, but under the chloral the spasms were limited to two or three an hour. The urine was drawn off every six hours under chloroform. Nourishment was taken well, and good hopes were entertained of recovery. On the fifth day of his illness, however, influenced by some foolish friends, he took a gloomy view of his own case, gave up hope, refused nourishment, and died of exhaustion on Oct. 26th.

Remarks.—The coincidence of the two cases was striking, and strongly suggestive of contagion. Tetanus is not common in Southern China. In eight years of hospital practice I had previously met with but one case. Our present hospital was built a year ago, is thoroughly ventilated, and occupies a healthy site. The room which the two patients occupied is 10 ft. by 8 ft., and has a wooden floor raised 2 ft. above the level of the ground. Though it appeared clean, the room had neither been swept nor washed since the first patient had died therein. Is it possible that our second patient was inoculated through the anal wound by dust containing specific micro-organisms generated by our first patient, and tetanus produced? The necessity for the thorough cleansing of a ward in which a case of tetanus has occurred is clearly indicated.

Foochow, China.

CASE OF MALFORMATION OF THE RECTUM.

BY DR. W. T. HARTSHORN.

AT Junction City, Kansas, United States, I was called to examine a case of malformation of the rectum of a female child aged six months, and found, as stated by the parents, that the feces passed through the vagina, and had done so from birth. There was no orifice externally. The child had been operated upon superficially several times previously by other physicians, but unsuccessfully. When the bowels

were about to move the child suffered great pain, and strained to such a degree that she became nearly black in the face and was convulsed. The bowels did not move unless medicine had been given. I examined the child, using a small silver catheter, and, having passed it into the vagina, found an opening leading into the gut, through which the feces were discharged. The parents having given their consent, an operation was decided upon as the only means of affording relief. The next day, the child being placed in the lithotomy position, the catheter was passed through the opening from the vagina into the gut, and, the catheter being held by Dr. Black, I cut down with a straight bistoury more than an inch deep upon the catheter, afterwards making as free an incision in extent through the gut as was deemed necessary; then passed the catheter through the opening made in the bowel, and through the incision made in the perineum, and so brought the catheter out externally. The child was teething, and although the bowels had previously been much constipated, diarrhoea now set in, which had to be relieved by medicine, and this continued throughout the case. Having passed the catheter, we next took a piece of tape saturated with olive oil, and drew it through the incision and through the opening into the vagina by means of the catheter. I gave directions to the mother to draw some of the tape through the incision when the bowels were about to be moved. The result was that, from the first, part of the feces followed the tape, whilst the remainder still continued to pass through the vagina; but by perseverance in this way the discharge through the vagina became less daily, and more passed by the opening made. A good external orifice having been established, the tape was withdrawn. The result was perfectly satisfactory: the operations of the bowels took place naturally, all pain ceased, and the opening from the gut into the vagina closed, the child suffering thereafter no inconvenience whatever, but being in all respects the same as if no malformation had ever existed. A complete recovery was effected within six weeks from the date of operation.

Junction City, Kansas.

A CASE OF POISONING BY BELLADONNA.

BY F. A. A. SMITH, M.D.

A FEW days ago a child, aged four, was brought to me in a state of complete insensibility, foaming at the mouth, and suffering from tetanic spasms and spasmodic breathing. The history of the case, as told me by the father, was to the effect that the child had swallowed some liniment, the bottle containing which was handed to me. I was unable to say at the moment what the contents of the bottle might have been, but finding the child's pupils fully dilated, I came to the conclusion that at least one of the ingredients was belladonna. The child, being insensible, could not swallow, so I injected into its right arm a quarter of a grain of sulphate of morphia, and into the left one-tenth of a grain of pilocarpine; these were in tablets sold for the purpose. In about ten minutes the foaming at the mouth ceased, and shortly afterwards the tetanic spasms; the breathing also became quiet and normal in character. The pupils soon began to contract, and to all appearances the child seemed in a quiet natural sleep, which lasted from 7 P.M. till 3 A.M., when it sat up and vomited. A small quantity of brandy-and-water was administered, and the child sent home out of danger. Next day it seemed quite well. I noticed that no sweating ensued from the injections, owing, I believe, to the belladonna taken. I heard afterwards that it was a belladonna and soap liniment which had been prescribed for the child's mother.

Cheltenham.

CASE OF ABSCESS OF LUNG.

BY H. HAVELock DAVIES, M.B. EDIN.

R. P—, aged twenty-one years, farm labourer, in March, 1885, got cold and suffered from congestion and bronchitis for three or four weeks. He got better and went out. In July he had a relapse and suffered from pneumonia of the left side, of a subacute type, which in the third stage became chronic, and he had expectoration of pus all the following winter, during which he was confined to bed. He

recovered from this in the spring of 1886, but in a few weeks the right side became consolidated, and he soon again began to expectorate pus, which he continued to do in great quantities, often about a quart at a time, up to June, 1887, when the expectoration became extremely fetid. In the last week of March, 1888, up to which time he had been able to walk out in the open air, he became much worse, and on the 31st appeared to be sinking. On April 1st, having located the cavity, I explored with an aspirating needle in the fifth intercostal space in the anterior axillary line, and, having found pus, I made an incision on the upper edge of the rib, and introduced a large trocar and cannula, and removed about a quart of very fetid pus. Subsequently the cavity was washed out with carbolised water twice a day until April 21st, when the cannula was changed for an india-rubber drainage tube, and washing out the cavity was given up. On May 17th, having gradually shortened the drainage tube, it having been constantly pushed out, and there being no cavity found on probing, it was removed altogether and the external opening dressed antiseptically. By August 20th he was at work and fairly strong.

Snainton, York.

CASCARA SAGRADA IN RHEUMATISM.

By JAMES P. MARTIN, L.R.C.P.L. &c.

A FEW months ago, I believe, there appeared in the columns of THE LANCET a communication from a gentleman who found that cascara sagrada succeeded in subduing the pain of rheumatism after salicylate of soda had failed. Recently, in making up medicine for a case in which great pain, constipation, and a foul tongue were very prominent, I tried mixing the two drugs together, and was very pleased to find that not only did the patient rapidly improve, but that the mixture was perfectly clear, and not at all unpleasant to the taste. Many practitioners do not care to use the liquid extract of cascara sagrada on account of the nauseous taste and the thick deposit which forms when water is added, but the above facts may interest them, and are not, I think, generally known. I give, as a rule, fifteen grains of the salt and ten minims of the extract in orange-flower water every three or four hours.

Box, Wilts.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

TWO CASES OF PYEMIA; DEATH; REMARKS.

(Under the care of Dr. SIDNEY COUPLAND.)

CASES of pyæmia are not unfrequently admitted into the medical wards of hospitals. In some the source of infection is quite obscure; in others, as in the subjoined instances, it is more or less apparent. Amongst the diseases for which it is liable to be mistaken may be mentioned enteric fever, ulcerative endocarditis, and acute rheumatism—the last named when, as here, arthritis predominates.

CASE 1. *Otitis media purulenta; arthritic pyæmia; no visceral abscesses.*—Charlotte F., aged sixty, a nurse, married, was admitted on Nov. 7th, 1887, suffering from deafness, painful swelling of both knees, and fever. Seven years before she was first attacked with deafness and discharge from the right ear. She has been subject to rheumatism, especially in the winter, and the present illness, which commenced, three weeks before admission, with pains in the limbs and shivering, was regarded as of the same nature. But at the same time she again became deaf, and on two occasions there was severe bleeding from the right ear, with pain. In addition to the pains in the limbs and deafness, she had suffered from frequent attacks of shivering once or twice a day.

Condition on admission.—The patient is a stout woman, with iron-grey hair, and lies on her back with knees flexed. Temperature 102°; pulse 116. She is very deaf, but there is at present no discharge from either ear. There is slight lividity of the lips, and considerable tremor of the hands on movement. Both knee joints are swollen, and very hot, tender, and painful. There is much effusion in the joints, and much swelling around them, the popliteal spaces, especially the right, being full and tense. Both legs are œdematous. Chest emphysematous; no adventitious sounds. At apex of heart is a localised bruit, systolic in time (? exocardial). The tongue is dry and coated. In the evening the temperature rose to 103·6°.

Nov. 8th.—Morning temperature 100°; evening 103°. Pulse 116.

9th.—Restless, often crying out with pain. Tongue dry, thickly coated with brown fur. More swelling of knee joints. Pain, tenderness, and swelling in region of left sterno-clavicular articulation. The systolic murmur more widely diffused. At midnight the temperature was 103·4°, and two grains of antifebrin were given. At 6 A.M. the temperature was 100°, at 2 P.M. 102·6°, and at 10 P.M. 101°. Pulse 120.

10th.—Delirious during the night. Left ankle now swollen in addition to other joints. The temperature varied between 100° and 98·4°.

11th.—Again much muttering delirium. Knee joints still much distended, and ankle more swollen. Less œdema of left leg; more of the right. Less redness about sterno-clavicular joint. She feels cold, but has no rigor. The temperature to-day did not rise above 99°, and was often below normal. Urine free from albumen. She has been taking salicylate of soda; and three five-grain doses of urethane produced sleep.

12th.—Although there is no obvious change in the joint condition, she is free from pain and cheerful. Temperature 99° to 100·6°; pulse 104.

13th.—Slept well without draught. Less swelling of knees, and sterno-clavicular joint no longer tender. Temperature 101·4° to 103·4°, when two grains of antifebrin were given.

14th.—Tongue less dry. Deafness less.

16th.—In right ear the external meatus is congested, membrana tympani wanting, and slight serous discharge. In left ear the membrane is entire, but coated with serous discharge. Seems better.

For many days the pyrexia was now mild, the temperature seldom reaching 101°.

21st.—After several quiet nights she again became delirious. Is now very flushed and sweating freely. Tongue very dry. More pain in knee joints, which are still distended. The swelling in the region of the left sterno-clavicular articulation pulsates with the cardiac beat. Temperature 79·2° to 101·8°.

23rd.—Right ankle joint much swollen, and right leg very œdematous.

25th.—The sterno-clavicular swelling, which has considerably increased, was explored by a hypodermic syringe, and some thick creamy pus withdrawn. Grating could be obtained in the joint. Temperature 99° to 101·4°.

28th.—At 5 A.M. the patient had a rigor, the temperature rising to 103·8°. Two grains of antifebrin were given, and at 6 A.M. the temperature was 102·2°. At 7 A.M. it rose to 104·8°, and the antifebrin was repeated. At 8 A.M. the temperature was 102·8°, and at 2 P.M. 105·2°; antifebrin repeated. At 6 P.M. the temperature was 101·8°. Pulse 144 to 120.

29th.—Face dusky. Pulse irregular and intermittent. Tongue very dry. Temperature 99·4° to 100·2°.

30th.—To-day diarrhœa set in, but was easily controlled.

Dec. 1st.—Has become very somnolent; breathing also becoming difficult. Signs of pulmonary congestion. Pulse weaker.

3rd.—The patient, who had sunk into a semi-comatose state, died this morning, the temperature rising to 104·8° just before death.

Post-mortem examination. (Abstract from report by Mr. L. Hudson.)—Body fairly nourished. There is an abscess communicating with the left sterno-clavicular joint containing three drachms of yellow pus. Sternal end of clavicle bare and rough; inter-articular cartilage partially destroyed and loose; sternal facet somewhat eroded. Six ounces of clear fluid in the left pleura, three ounces in the right. Cretaceous nodule at apex of each lung, with fibrous cicatrix

in the right. Hypostatic congestion and œdema of lungs. Atheromatous patch on the aortic cusp of mitral valve; fibroid contraction of anterior segment of tricuspid; slight thickening of aortic valve. Liver normal. Spleen very large, weighing ten and a quarter ounces; much engorged; contained an old infarct. Kidneys: small cyst in the right, and fibrous nodule in the left. Intestines normal. Hip and ankle joints normal. Both knee joints distended with pus, which on the right side had burst through the capsule at its upper part, and formed a large abscess between the anterior femoral muscles. In each joint cartilages partially detached, the bone in places bare and rough. In the right ear the tympanum contained pus; membrane perforated; ossicles bare and necrosed; no affection of dura or sinuses. Left ear normal. A small arachnoid cyst occurred in the brain between the marginal and first frontal gyri, an inch and a half anterior to the fissure of Rolando.

CASE 2. Pyæmia following ulcerative tonsillitis; pleurisy. Arthur C—, aged twenty-four, a carpenter, unmarried, was admitted on Aug. 16th, 1882, complaining of pains "all over" him, but especially in the right elbow joint, which was swollen, red, and tender, and was kept in a flexed position. No other joint was affected. The heart sounds were low-pitched and soft. Pulmonary signs normal. Tongue coated. The urine contained a trace of albumen. The patient, who was a well-nourished, muscular young man, was unable to give a very clear account of himself, but it was ascertained that he had always hitherto enjoyed good health, was of temperate habits, and had never contracted syphilis. On Aug. 5th he was attacked with a sore throat, which became ulcerated. He was treated for this, and by the date of his admission all throat trouble had passed away. On the 10th he first complained of joint pains—in the shoulders and in the right elbow; but he kept at his work until the 12th. On the 13th he had pain across the chest, and on the 15th was delirious.

The temperature on admission was 102.4°. The case was regarded as one of acute rheumatism, and salicylate of soda was prescribed.

17th.—The patient has passed a restless night. Temperature 101.2°; pulse 108. On examination of chest, some fine crepitation heard at right base, with whiffling breathing. Dulness over left lung behind, from angle of scapula to extreme base, where the breath sounds are suppressed.

18th.—Morning temperature 98.6°; evening 101.6°. One-sixth albumen in urine.

19th.—Temperature 101°; pulse 120; respiration 30. Swelling around right elbow slightly less. Evidence of effusion in left pleura more marked. There is visible pulsation in third and fourth interspaces to right of sternum, as well as to left in fifth space. Normal area of cardiac dulness obscured by lung resonance. The salicylate mixture was omitted, and one containing bromide of ammonium ordered.

20th.—Passed a restless night. Temperature 101.4°. At noon had a prolonged rigor, followed by profuse sweating, the temperature rising to 104.8°. Two red and painful swellings have appeared—one behind left thigh, the other in front of right ankle. In the afternoon he was attacked with violent hiccough. Coarse friction, synchronous with heart beat, heard over præcordia. Dulness and absence of breathing still at left base posteriorly. At 7 P.M. the temperature was 100.2°; at midnight, 102°.

21st.—The hiccough returned in the night and became very distressing. Tongue dry and tremulous. Involuntary micturition. Marked cardiac pulsation to right of sternum; the friction over præcordia more intense. Swellings in left thigh and over right ankle have increased. Temperature 100° to 103.2°.

22nd.—Very restless during night. Face dusky. Tongue moist. The friction last heard midway between sternum and left nipple; is diminished when the patient holds his breath. Temperature 102.4°; pulse 120; respiration 44. The swelling at the back of the left thigh has become more diffuse. At 6 P.M. the temperature was 103.8°, and the patient became very exhausted. At 7 P.M. he vomited a small quantity of coffee-ground matter. Temperature at 8 P.M. 104.8°; at 9 P.M. 105.6°. Vomiting repeated. Attacked with convulsions, followed by tetanic rigidity of trunk and limbs. Died at 10 P.M.

Post-mortem examination.—The swelling in the left thigh had subsided; on incision, the tissues appeared sodden, but there was no purulent infiltration. The right elbow and right ankle joints contained thick curdy pus. The left pleura contained about a pint of serum, and its membrane was through-

out covered by a thick layer of lymph. Right pleura and pericardium natural. Lower lobe of left lung carnified and congested. No abscesses. Right lung congested. The cavities of the heart were full of fluid blood, only a few thin clots occurring in the right ventricle. The myocardium was softened; valves normal. Liver swollen and soft; spleen large, very soft, and contained numerous hæmorrhages. Both kidneys were much swollen.

Remarks.—These cases are examples of that form of pyæmia which most closely simulates acute rheumatism; in the one, indeed, the arthritis was the chief feature; in the other, there was, in addition, left pleurisy, which was *not* purulent. In Case 1 the implication of the sterno-clavicular articulation in the arthritis practically determined the diagnosis in favour of pyæmia, which the resistance to salicylate treatment and the history of rigors had already suggested. In this case plainly the pyæmia supervened on otitis, but not (as usual in such cases) through thrombosis of the lateral sinus. In Case 2 the pyæmia must be referred to the sore throat for which the patient was treated before admission.

LEEDS GENERAL INFIRMARY.

VILLOUS TUMOUR OF BLADDER; SUPRAPUBIC CYSTOTOMY; RECOVERY; REMARKS.

(Under the care of Mr. WARD.)

THE report of the case, from which the following account is extracted, was taken by Mr. A. S. Barling.

W. N. J—, aged forty-four, engineer, was admitted on Jan. 24th, 1888, suffering from severe hæmaturia. He was first seen by Mr. Ward on Dec. 8th, 1887, when the subjoined notes were made:—

"The man has led a somewhat irregular life, and has been much addicted to drink; but up to three years ago he had always had remarkably good health. At that time, after a period of more than usually heavy drinking, he noticed that his urine was of a brilliant uniform red colour, which he thought was due to blood, but he had no pain or discomfort of any kind, and there was no increased frequency of micturition. This condition of the urine, so far as he can remember, persisted for a few days only, and he remained free from symptoms until last July, when, after a day of severe over-exertion in the hot weather, he drove home in an open vehicle at night, got severely chilled, and on the following day the urine was again of a bright-red colour. This attack lasted for three weeks, with one or two short intermissions, during which the urine was perfectly clear. Since then he has had several attacks, lasting for a day or two, the attacks always following—and, in his opinion, being determined by—spirit-drinking, usually whisky or gin. The present seizure has lasted without intermission for three weeks. Except on one or two occasions, when he has passed clots, there has not been any pain, difficulty, or increase in frequency of micturition. There is sometimes a slight chilly feeling when the hæmorrhage is copious, but no distinct rigor. He has maintained weight and appetite, and has absolutely no complaint except the loss of blood, which he 'thinks must be bad for him.' No shortness of breath upon exertion..... There is a most striking, ghastly, waxy pallor of the whole of the body surface, which, however, he says, is not different, so far as he knows, from what it has always been. The mucous membranes are also markedly bloodless. Lungs and heart normal; no bruit. Pulse 96, jerky, and of poor volume. Abdomen negative: no pain or tenderness; no irregular masses or unusual resistance either in the lumbar regions or elsewhere. Rectum normal. Urine of a bright, uniform red colour, with one large clot; acid; sp. gr. 1010; much albumen. The microscope shows nothing but red blood corpuscles and a few leucocytes. It has not been noticed whether the colour of the stream is uniform from beginning to end of micturition."

Owing to the strong probability of vesical tumour, the bladder was not subjected to any instrumental exploration, as the patient lived at some distance and could not remain in Leeds.

"Dec. 20th.—No better. He says that the stream is invariably bright red at the beginning, and pales to a straw colour or faint pink tinge at the end. He is beginning to suffer from breathlessness on exertion. He absolutely declines to entertain the idea of an operation.

"Jan. 20th.—Very ill. Four days ago, after passing with

difficulty some large clots, complete retention of urine supervened, and he required catheterism, which, he says, was performed with a metal instrument, and since which he has been in constant pain, irritability, and distress. A No. 10 silver catheter was passed and twelve ounces of urine withdrawn. The catheter passed easily, and there was no limitation of its movement in the bladder. Rectal examination negative, as before. The urine was dark red, alkaline, and offensive, and contained many clots. Microscopic examination revealed only red blood cells and large masses of triple phosphate crystals. On washing the catheter, a small fragment of soft, pale pink, fleshy-looking material was found engaged in its eye, and this on examination proved to be a typical fimbriated papilloma, many of the fimbriae being very long and slender and quite perfect."

Between Dec. 8th and Jan. 20th the man has taken various styptics and astringents internally, but there has been no local treatment attempted owing to his living so far away. He has been unable to take complete rest from his work, except on one occasion for three days, and there has not been the slightest improvement at any time during that period.

Jan. 24th (day of admission).—During the last four days the patient has had retention three times, which was relieved by the catheter. His present condition corresponds fairly closely with the above description, except that he is now too feeble to walk without assistance, and the pallor has assumed a quite distinct greenish tint. Temperature normal; pulse 100, weak, soft, and jerky. He now passes urine nine or ten times only during twenty-four hours, and is only troubled occasionally by difficulty with clots. Urine bright red; sp. gr. 1022; alkaline; much albumen; microscopically, numerous blood cells and a few epithelial scales. The bladder was washed out with boracic solution.

25th.—Urine much the same. Haemorrhage certainly not less. Bladder irrigated with a solution containing 25 per cent. of tincture of hamamelis, one ounce being left in the bladder.

26th.—Since having the bladder irrigated the haemorrhage has practically ceased. Only two or three red corpuscles in the field of the microscope.

27th.—Blood reappeared in urine last night. This morning the urine is again bright red. Bladder irrigated as before.

28th.—Urine clear. Patient feels much better.

29th.—Urine clear, and acid in reaction. The irrigation has been carried out twice a day.

30th.—This morning Mr. Ward opened the bladder by the suprapubic incision (details of the operation are omitted). On introducing the finger, the bladder appeared to be filled with a delicate, filmy, friable growth, which, however, as the bladder emptied, seemed to collapse and assume the size and general outline of an average strawberry, which was attached about three-quarters of an inch above the orifice of the right ureter by a long pedicle of extreme tenuity. The growth was twisted off with forceps, and the pedicle, which was left rather long, was afterwards cut close with curved scissors. There was considerable haemorrhage, which the injection of a hot boracic solution failed to arrest, but which ceased almost immediately upon the application of the hamamelis tincture. The wound was partly closed by suture, a large drainage tube inserted, and a dressing of sublimate gauze and salicylic wool applied.

The subsequent history of the case may be briefly summarised. There was no haemorrhage after the operation; some ounces of urine passed by the urethra on the second day; the tube was removed on the fifth day; on the eleventh day a double truss was applied to the edges of the small wound; on Feb. 13th all the urine passed per urethram; and on Feb. 18th the patient was discharged well.

Remarks by Mr. WARD.—The case presents no unusual features, being a fairly typical one of its class. The only irregularity in the symptoms was the fact (which has been noticed in other cases) that the largest amount of blood was passed at the beginning of micturition, the urine gradually paling towards the end of the act. The case well illustrates the contingent risks of catheterism in these cases, and especially the risks of using an inflexible or unclean instrument. When I saw the patient on Jan. 20th he was in a most pitiable condition, and had such a nervous dread of being left unrelieved for any length of time during one of the attacks of retention that I instructed him how to use a soft catheter. The absolute uselessness of internal styptics and astringents was also well demonstrated, most drugs

that have achieved any reputation being tried between Dec. 8th and Jan. 20th. After the patient was admitted into the infirmary, I was so completely satisfied with the effect of the injections of hamamelis that I did not try anything else. I saw him on March 8th, when he had gained 11 lb. in weight, felt quite strong, and was doing heavy, active work; though, probably as a result of undertaking this at too early a period, there was a distinct tendency to the protrusion of ventral hernia, which has required support.

LIVERPOOL INFIRMARY FOR CHILDREN.

CEREBRAL HÆMORRHAGE IN A CHILD AGED NINETEEN MONTHS.

(Under the care of Mr. R. W. MURRAY.)

THE following case, from its rarity alone, is perhaps worthy of record.

Ethel E.—, aged nineteen months, was admitted on April 17th, 1888, for a subcutaneous nævus over the upper part of the right lumbar region. She was a well-developed, healthy-looking child, and never had any previous illness. There was no history of syphilis.

On April 17th the nævus was incised, and two days later she contracted scarlet fever. During convalescence from scarlet fever (May 6th), there was a sudden rise of temperature (104·8°); no convulsions; in fact, there was nothing definite to account for the rise. A few days afterwards there were symptoms of peritonitis, with a rapid respiration, swollen and tender abdomen, and knees drawn up. The temperature remained high, and the symptoms of peritonitis continued. The child gradually sank, and died on May 25th. At 3 A.M. on the morning of death she had a sudden attack of right-sided convulsions.

A post-mortem examination was made on May 27th. The lungs and heart were found to be normal. Abdominal viscera healthy, and no trace of peritonitis, old or recent. Brain: There was venous congestion of the anterior one-third of the outer and under surface on the left side, and on examining the under surface a clot was seen occupying the anterior part of the left temporo-sphenoidal lobe, but not quite coming to the surface. On making sections through the clot, it was found to be firm, of a dark-red colour, of the same consistence throughout, and about the size of a walnut, occupying the fore part of the middle and superior temporo-sphenoidal convolutions; the limitation of the clot was very distinct, and the brain substance around was firm. It was apparently of recent origin. The left lateral sinus was filled in the posterior two-thirds by an organised clot, obviously of some date; a recent post-mortem clot occupied the rest of the sinus. The right lateral sinus was much dilated.

Remarks by Mr. MURRAY.—The symptoms in the above case were entirely misleading and quite unaccountable, for, apart from the convulsions on the morning of death, they pointed strongly to peritonitis, and there was nothing even to suggest brain disease. The above conditions might perhaps be explained in one of three ways:—1. Haemorrhage into an abscess cavity; and with thrombosis of the lateral sinus one certainly expected to find some evidence of old ear mischief, but after a very careful examination everything was found to be perfectly normal, besides which there was no history of any ear trouble. 2. It is just possible it might have been due to an embolus, but, as the heart was healthy, this would have to come from the nævus wound (which had not quite healed) and travel through the lungs, which, to say the least, is unlikely. 3. That on account of the bad drainage (the lateral sinus being blocked), together with the increased blood pressure (for there was marked albuminuria), a vessel gave way. This to my mind, is the most probable explanation, and most in accordance with the condition of the parts as seen at the inspection.

NATIONAL REGISTRATION OF PLUMBERS.—On Aug. 18th, in Gordon College, Aberdeen, Mr. Sheriff Brown presented the diplomas earned by members in the district of the Plumbers' Company. Dr. Matthew Hay presided. According to a statement by the secretary, 3000 plumbers had already been enrolled by the Plumbers' Company, and seventy-nine of them belonged to Aberdeen. Dr. Matthew Hay said that almost the majority of plumbers in Aberdeen and district had now become registered, and that majority included most of the best workmen.

Reviews and Notices of Books.

The Principles and Practice of Medicine. Edited and completed from the manuscript of the late CHARLES HILTON FAGGE, M.D., F.R.C.P., by PHILIP HENRY PYE-SMITH, M.D., F.R.S. Second Edition. London: J. & A. Churchill. 1888.

A Handbook of the Theory and Practice of Medicine. By FREDERICK T. ROBERTS, M.D., B.Sc., F.R.C.P. Seventh Edition. London: H. K. Lewis. 1888.

THE appearance, within a few weeks of each other, of new editions of these admirable text-books is well-timed, and will doubtless be gratefully appreciated by the large body of students who will flock to the schools in October. In including them under one notice, we must disclaim any intention of instituting a comparison between works which are, except for their subject, dissimilar in almost every respect. Yet they are both equally to be commended, and each is, in its sphere, of great utility. The high estimation in which Dr. Fagge's work is held is sufficiently shown by the rapid appearance of a second edition, which, in the case of a book that appeals rather to the "advanced" student and to the practitioner and hospital physician is remarkable. In truth, the profession soon found out the sterling qualities of the work, and regarded it—as it deserves—as the expression of the personal experience and thought of a highly trained and cultured physician. Indeed, no one who enters upon the perusal of Fagge's "Medicine" will care to leave a single page unread, and the task will be found considerably lightened by the attractive way in which the book is written. The author speaks throughout from his own knowledge, and discusses moot points in pathology with rare independence. It will be remembered that Dr. Fagge did not live to complete the work upon which he had expended the labour and thought of years; and that Dr. Pye-Smith, who edited the volumes, himself added the sections upon Diseases of the Skin, and entrusted to Dr. Wilks those upon Diseases of the Heart. In this second edition the section on Insanity has been contributed by Dr. Savage. Dr. Pye-Smith has submitted the whole work to the most careful revision, with the result that it is not only brought fully up to date, but is far more complete and "finished" than it was originally. Evidences of the editor's painstaking and care are to be found in every part of the two bulky volumes, sometimes in the form of foot-notes containing definitions or historical references, again in excellent discussions upon the principles of nosology, and mainly in additions to or alterations in the text. Amongst the more important of such changes may be mentioned the sections on Pyæmia, Febricula, and Vaccinia; the rewriting of the chapter on Rubeola; extensive additions to those on Cholera, Malarial Fever, and Diphtheria; the introduction of articles on Actinomycosis, Peripheral Neuritis, and Friedreich's and Thomsen's Diseases; and considerable expansions of those on Anæmia and Arthritic Affections. But this bare enumeration by no means includes all that Dr. Pye-Smith has done. It is clear, from the abundant references to literature of the past three years, that he has spared no pains to make the book thoroughly abreast of advancing knowledge; whilst there are frequent citations of facts which have come under his own notice, and the records of Guy's Hospital are largely drawn upon. In all this it will be seen that the editor has continued the work in the spirit of its author, who desired to write a book which should embody in large measure the fruits of observation in the wards of that great institution. We trust that the accomplished physician, who has so faithfully and judiciously edited it in the spirit of his lamented colleague may long enjoy the satisfaction of seeing many more editions of a like character through the press. Of

the scientific character of a work on medicine thus produced it would be superfluous to speak, but perhaps the following excerpt from the first of the editor's foot-notes may be cited as testimony of this. After speaking of a definition of disease, he adds: "It is clear that if disease is not a single state, nor the result of a single cause, it cannot be removed by any single method or on any universal principle. Hence all 'systems' of medicine, like all 'universal remedies,' are of necessity false. Iatro-mechanical and iatro-chemical schools, Brunonian and Antiphlogistic theories, Allopathy and Homœopathy, are all equally unreasonable; not wrong solutions of a scientific problem, but ignorant answers to an absurd question." Here we have the judgment, not of a dogmatist, but of the man of science, who, in medicine as in other departments, has overturned many a doctrine based on insufficient data. Before leaving this book, the study of which we cannot too highly commend, it may be as well to mention that in this edition the typography has been vastly improved without unduly adding to the size of the volumes. Those who are acquainted with the close printing of the first edition will be grateful for this change. There has also been considerable, but not quite sufficient, improvement in the bibliographical index.

When a text-book reaches its seventh edition there is little left to be said upon it. This is the case with the Handbook of Dr. Frederick Roberts—one of the most popular text-books of the day. The merit of the work consists in the very systematic and orderly grouping of facts, and in the clear and terse descriptions of disease and its treatment, which make it so useful to the student. The author has submitted it to thorough revision, and he is to be congratulated upon the success which has attended his labours.

OUR LIBRARY TABLE.

On Transfusion of Blood and Saline Fluids. By C. EGERTON JENNINGS, F.R.C.S. &c. Third Edition. Pp. 133. London: Baillière, Tindall, and Cox. 1888.—This edition presents evidence in support of the author's original view of the practicability of directly transfusing human blood, and of repairing the loss by the intravenous injection of saline fluid. In the autumn of 1884, Mr. Egerton Jennings performed numerous experiments at Ghent, of which he published an account in our columns; he found that if depletion and intravenous injection were performed quickly after apparent death, cardiac pulsation was restored. These researches, and their important bearing upon the treatment of chloroform poisoning and asphyxia, form an interesting appendix to the work as originally published. The circumstances under which transfusion is commonly required are of such urgency that this attempt to minimise the dangers and difficulties should be warmly welcomed and widely read.

La Digitale. By HENRI HUCHARD. Pp. 136. Paris: O. Berthier. 1888.—This is an inquiry as to when and how digitalis should be prescribed. An attempt to deduce conclusions from physiological experiments leads the author to consider that it is incorrect to regard this drug as the *opium of the heart* or the *cardiac quinine*, since it will act as sedative or tonic according to the circumstances of its employment. He prefers to regard it as a *regulator* of the whole circulatory system, looking rather to the general evidence of cardiac failure than to the special valvular lesion. He believes that all considerations of the orifice affected occupy a very secondary position as indications for digitalis. The indications he considers most important are the following: enfeeblement of cardiac contraction, lowering of arterial tension with increase of venous tension, and diminished renal excretion coexisting with dropsy and with signs of congestion of the viscera. The author expresses his views strongly, but perhaps with an over-tendency to make

a sombre picture of the conditions in which digitalis is injurious, useless, or of doubtful efficacy. In common with most French therapeutists, he believes in the ill effects of the continuous employment of moderate doses, fearing cumulative action. He thinks it should be used for four or five days, and then discontinued for at least ten or fifteen days. The matter is regarded almost solely from a therapeutic point of view, and therefore suffers from the comparative absence of illustrative cases, their place being taken by rather wide generalisations. As a fairly representative exposition of French ideas of the actions, uses, and dangers of digitalis, this little book will doubtless prove interesting.

The Student's Handbook of the Practice of Medicine. By H. AUBREY HUSBAND, M.B., C.M., &c. Fourth Edition. Pp. 510. Edinburgh: E. & S. Livingstone. 1888. — The fourth edition of this little handbook will be welcomed by those who like their information in compact form. The author has endeavoured to bring the book up to date by considerable additions and alterations of the section devoted to diseases of the nervous system. Several new tables have been added which will facilitate the work of the student, even though they occasionally give a greater appearance of precision than is entirely warranted. Some illustrations have also been added to this edition, but it is to be regretted that in three instances their well-known source is mentioned in a barely recognisable misprint. Although the author claims to have adopted the nomenclature of the Royal College of Physicians, he has disregarded the work of the last Pharmacopœia in the half-dozen pages of prescriptions at the end of the book.

A Practical Decimal System for Great Britain and her Colonies. By R. T. ROHDE. London: Easingham Wilson. — Mr. Rohde has devoted much time and energy to the very useful, but withal somewhat disheartening, task of advocating the adoption of a decimal system of money weights and measures for use in Great Britain and her colonies. It is quite unnecessary to say that he succeeds in making abundantly clear the great advantages which would accrue in many ways from the reform that he advocates. Everybody who takes up the theme at all succeeds to that extent. Indeed, so far as we are aware, there is not to be found outside the very narrow circle of those who have a superstitious veneration for our existing system, or rather aggregate, of measures, any man who seriously argues for the superiority of the present over the decimal method of subdivision. The difficulty does not lie there. The real trouble is that we are all supplied with measuring instruments of one kind and another graduated to existing scales. These instruments are ready to hand, and familiar by long acquaintance to our imagination. We grudge the trouble and expense of making a change. For instance, one part of Mr. Rohde's scheme is to subdivide the foot into ten decimal inches, and then again into ten still smaller subdivisions. Now, it is plain that the introduction of such a scale would mean a very serious outlay upon new "two-foot rules" on the part of the working population, and would result in an amount of immediate confusion between old-fashioned and new-fashioned inches not at all pleasant to contemplate. On the other hand, the benefits to be gained from the change would in this instance be reduced to a minimum. It is comparatively seldom that inches are brought into arithmetical operations. Let any reader, for example, ask himself how often within recollection he has required to add or subtract, to multiply or divide, a quantity expressed in inches. Very rarely, we will undertake to say. They are almost always employed for the purposes of description only—purposes which the duodecimal inch subserves quite as well as any other. In other parts of Mr. Rohde's scheme,

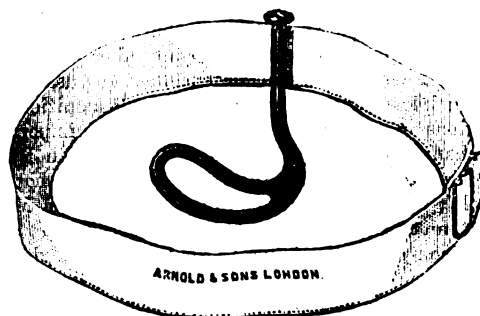
however, these conditions are reversed. Thus the change of the monetary scale involves the disadvantages only at their minimum, and would confer upon the community the maximum of benefit. No one has any private "plant" of money that would be depreciated by the proposed alteration, whereas the constant employment of money terms in the arithmetic of accounts renders their simplification a matter of the greatest importance. With this part of his subject Mr. Rohde has dealt, as we think, quite satisfactorily, and we highly commend his little pamphlet to those who can understand and appreciate the importance of his theme.

A Practical Manual of Venereal Diseases, including Disorders of Generation, Spermatorrhœa, Prostatorrhœa, Impotence, and Sterility in both Sexes. By M. K. HARGREAVES, M.D. London: R. Kimpton. — "This book has been written with the primary intention of bringing in a practical and concise form before the senior student and general practitioner information on a most important branch of medical science, which unfortunately receives far too little attention and study during the usual curriculum." It is, however, difficult to see what a "senior student or general practitioner" who has read the ordinary manuals of surgery and diseases of women has to learn from Dr. Hargreaves' little book. One is tempted to ask, What advantage can there be in multiplying treatises on such subjects?

New Inventions.

PESSARY FOR PROLAPSE OF THE BLADDER.

BEING dissatisfied with other instruments, I had made the specimen figured in the accompanying woodcut. It was originally constructed for a special case, in which it succeeded admirably, and it has been used successfully in several cases since. The material is vulcanite. It consists of a horse-collar shaped loop, to the small end of which is attached the stem, bent about two inches from the loop, so that the stem is at about 90° with it. The loop (with or without crossbars) is passed into the vagina, and when the instrument is fixed supports the anterior wall of the vagina, and prevents it descending. The stem passes up over the pubes, where it is fixed by a broad band passing



round the pelvis in the position of an ordinary truss. It is so fixed in the band that the instrument is unable to descend, and the broadness of the band prevents the instrument being forced out of the vagina. On the other hand, it does not exert any injurious pressure, but acts purely as a support, preventing the bladder from descending rather than exerting any lifting force upon it. It is stated to be quite comfortable to wear, and it successfully keeps the parts from prolapse. It is very essential that the stem passing up over the pubes be fixed in a band at least two inches in width. Messrs. Arnold and Sons, of West Smithfield, have well carried out my instructions.

T. FREDERICK PEARSE, M.D., F.R.C.S.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 1, 1888.

THE recent Congress on Tuberculosis, held at Paris under the presidency of M. CHAUVEAU, affords a striking illustration of the widespread interest that is taken in, as well as of the importance of, an accurate study of this disease. The keynote of the proceedings was contained in the affirmation by M. CHAUVEAU that now, thanks to the observations of the past twenty years—from VILLEMEN to KOCH,—we have been awakened out of the false security of believing in the innocuity of tubercle, and recognise the grave possibilities of its transmission from animals to man. Throughout the whole of the discussion there was hardly a dissentient voice against the contagiousness of tuberculosis. One speaker after another rose to affirm his belief in the dangers to the human race arising from the consumption of the milk and flesh of tuberculous animals—and this, too, from various countries,—so that it is not surprising that the Congress should have adopted resolutions aimed especially at the hygienic precautions to be taken in this respect. It recommends the inclusion of tuberculosis in the list of contagious diseases of animals, and the seizure and destruction of the flesh of every tubercular beast, no matter what may be its appearance. It declared that such resolutions were applicable to all lands, since in every part the question of tuberculosis presents the same problems. Moreover, the Congress urged the spread of popular instruction, especially in country districts, respecting the precautionary methods for preventing tubercular contagion, the risks which are run by the infection of meat and milk coming from tuberculous cattle, and the measures to be taken for the disinfection of materials derived from phthisical patients. Lastly, the Congress held it imperative that dairies and dairy farms should be rigidly inspected.

Thus, then, we have it categorically affirmed that tuberculosis is not only a contagious disease, but that one of its chief means of prevalence in mankind is by communication from animals of the bovine species. Yet, in spite of the evidence in favour of this view, the question is one which has not been absolutely proved. Experimentation has demonstrated without cavil that animals fed upon tubercular flesh, or inoculated with the virus or the lacillary cultures in every possible way, become victims to the disease. Morbid anatomy long since proved that within the body tubercle may spread from part to part by a process of infection. There are isolated cases of the accidental inoculation of human beings, with the resulting development of local tubercular lesions; and, lastly, there are a few instances where the disease has every appearance of having been directly transmitted from one individual to another. Nevertheless, the vast amount of tubercular disease, in one form or another, in which there is absolutely no evidence of its acquisition by infection, may well make us pause before assenting to propositions which of necessity imply that everywhere and in all circumstances the disease is transmissible by contagion.

At the same time, while recognising to the full the great lack of unimpeachable clinical evidence in support of the transference of tubercular disease from man to man, together with the grave obstacles in the way of measures to prevent contagion among the community, to say nothing of the inhumanity which would follow their adoption, it does seem highly rational to check the consumption of articles of food which are proved to be derived from tuberculous animals. It has been pointed out that thorough cooking would be a sufficient safeguard; but obviously legislation cannot super-vise this process, it can only strike at the root of the evil. Several members of the Congress expressed the opinion that the State should indemnify farmers for the losses they would sustain by the adoption of the stamping-out method in a disease so common as bovine tuberculosis, and in equity this ought to be done. It is impossible to foretell what would be the effect of the adoption of such rigid measures as were urged so vehemently by the scientists. What, for instance, would be the influence of such legislation carried on for a generation upon the mortality from tubercular disease? Who can tell? It would be a gigantic scientific experiment, and the result would be eagerly watched for. It is possible that the measure would not be so successful in exterminating the scourge as might be wished, and this for the simple reasons that tubercular disease—and especially the most common of all, pulmonary phthisis—in man seems undoubtedly to require the presence of other factors than that of mere contagion, and that, even if all sources of contamination from animals were entirely shut off, there would yet be ample supplies of the tubercular virus to keep up the amount of phthisis in the world. Nor will there be wanting, we imagine, in view of all that was said at the Paris Congress respecting the harmfulness of consumption of flesh and milk, a claim for the universal adoption of vegetarianism as the simplest solution of the problem! Nevertheless, we regard the meeting of this Congress as very important. It has given an impetus to the study of tubercular diseases which must bear fruitful result. It has demonstrated how great is the change that has taken place in our conception of this class of disease, and we do not doubt that from every point of view—hygienic, therapeutic, surgical as well as medical, and pathological—much gain will accrue; whilst we may look forward to 1890, when the next meeting will take place under the presidency of M. VILLEMEN, in the hope that in all these respects a distinct advance will have been assured.

IN the August number of the *Nineteenth Century* Dr. CONAN DOYLE endeavours to determine the relative productivity in intellect of the different portions of the British islands. Taking as the standard of eminence such names as would be found in "Men of our Time" or a good biographical dictionary, he proceeds to ascertain their place of birth and descent, and the results of this novel inquiry are sufficiently interesting and important to engage the attention of our readers. The author of the article would, no doubt, be the first to admit that his method affords no sure basis for investigation and bristles with possibilities of fallacy; but, when his results are compared with one another and all possible corrections made, the conclusions may be granted a certain limited amount of probability.

The roll of honour finally selected for investigation, after eliminating mere local celebrities, is found to contain 1151 names, of whom 824 are English born, 157 Scottish, and 121 Irish, while 49 were born abroad. Of those included under the head of English, many were "of immediate Irish or Scottish extraction." Comparing these figures with the relative populations of the three kingdoms, it would appear that 1 in 31,000 Englishmen, 1 in 22,000 Scotchmen, and 1 in 49,000 Irishmen rise to distinction. If Wales be reckoned separately, the ratio of eminent men in the principality is 1 to 58,000. We need hardly point out that, in estimating the significance of these figures, race is only one, and possibly not the most influential, factor to be taken into account. Wealth, education, inherited facilities for attaining distinction—these are potent considerations influencing the output of great men.

When we come to consider the relative productivity of smaller areas in these islands, the results are curious and surprising. The lead is taken by the lowlands of Scotland, which have produced a long roll of illustrious men, with THOMAS CARLYLE at their head, the ratio of distinguished names to population being 1 in 18,500. Aberdeenshire comes next, and then the city of Dublin, which in proportion to population has produced more eminent men than London, although the metropolis also stands high. The most eminent of the Dublin names are BALFE, LECKY, and Lord WOLSELEY. The London roll of honour contains no less than 235 names, art and poetry being specially well represented; but it would appear that in nearly all the great departments of intellectual activity the provinces hold the premier place. "In science, the very weightiest names of the later Victorian era are DARWIN of Shrewsbury, OWEN of Lancaster, HOOKER of Suffolk, and TYNDALL of county Carlow. In art, LEIGHTON of Scarborough and MILLAIS from Southampton are second to none. HERBERT SPENCER of Derby stands a head and shoulders above his brother philosophers. TENNYSON of Lincolnshire leads the poets, as CARLYLE of Ecclefechan did the historians. In fiction, no one has yet arisen to dispute the pre-eminence of DICKENS of Portsmouth, GEORGE ELIOT of Warwickshire, and of THACKERAY, who was born at Calcutta." Yet the London list contains names of the highest rank. HUXLEY, BROWNING, RUSKIN, TURNER, LANDSEER, HOLMAN HUNT, TENNIEL, Cardinal NEWMAN, FREDERICK HARRISON, WILLIAM MORRIS, MACFARREN, Sir H. BISHOP, Sir ARTHUR SULLIVAN, and many other illustrious men, attest the claim of the metropolis to be reckoned a fertile nursing mother of genius and learning.

In the muster-roll of the counties the southern districts take the lead, the list being headed, somewhat unexpectedly, by Hampshire. Devonshire, Berkshire, and Sussex stand well; while Cornwall has a very low average—viz., one distinguished man to 45,000 of population. Next to the south, the eastern counties stand highest, Suffolk having a particularly brilliant record, being second only to Hampshire. The midland counties are remarkably sterile in famous men, their ratio being only 1 to 41,000, as compared with 1 to 23,000 for the southern counties. Hertfordshire, Worcestershire, and Staffordshire are the best of this division, Derbyshire being at the bottom of the list. It is very remarkable that both Oxfordshire and Cambridgeshire

exhibit quite a low average of merit. The northern counties have an even poorer record than the midlands, their productivity in intellect being in the ratio of 1 to 43,000. Some of the northern names are, however, of quite first-rate excellence, the chief of them being ROBERT STEPHENSON and ELIZABETH BARRETT BROWNING.

We have already alluded to the commanding position taken by Scotland in this intellectual "march past." This is hardly surprising when we remember the wide diffusion of education north of the Tweed, and the love of knowledge and resolute perseverance which honourably characterise the people. It is worthy of note that the Scottish roll of honour is characterised by no special predominance in any one department, but furnishes us with names famous in every branch of human activity. Literature, art, science, exploration, and military life, all present names worthy of being held in everlasting remembrance. The city of Edinburgh alone has produced no less than forty-six worthies, which, in proportion to population, gives a ratio of famous men nearly three times as high as that of London.

Ireland falls below either of the sister kingdoms, but the high position occupied by Dublin shows that the Irish people are in no way deficient in intellect, and are capable of great achievements where the necessary educational opportunities are afforded. Munster falls slightly short of the average of the northern English counties; Ulster follows with a somewhat lower ratio of merit; while Connaught is hopelessly in the rear, forming, as Dr. DOYLE puts it, "the mental nadir" of these islands.

To generalise from the interesting array of facts thus presented would, we feel sure, be premature, if not entirely misleading, but some conclusions seem at least highly probable. We may conclude that Scotland holds the palm of intellect, that the southern and eastern districts of England take precedence of the midland and northern districts, and that the worst records are afforded by Cornwall and Connaught. It would appear that "the towns have a higher intellectual activity than the country, and that agricultural districts are usually richer in great men than manufacturing or mining parts."

It should be clearly understood that Dr. DOYLE'S figures relate solely to the output of distinguished men, and tell us nothing (except by inference) of the general average of education among the people in the various portions of this country. It would be interesting to inquire whether, in general, the productivity of any district in great men is in direct relation to the diffusion of knowledge among its population. Many of Dr. DOYLE'S facts would strongly support this view. It would also be important to determine how far wealth and leisure affect the output of talent, and what part is played by racial influence. We must leave these questions for the present.

THE discussion at Glasgow upon the value of inhalations in the treatment of pulmonary disease may be expected to do something towards crystallising the views of the profession on this important subject. Inhalations, though one of the most ancient of remedies, had fallen somewhat into disuse until the discoveries of KOCH gave a great impetus to their employment in phthisis. It is time for us to generalise

from the evidence gathered during the past few years, and to take stock of our present position.

Dr. THEODORE WILLIAMS, in his lucid and able opening address, pointed out that the general adoption of remedies administered *per primam viam* in the treatment of pulmonary disease was presumptive proof that inhalations—the most obvious and natural method of medication in such cases—had proved at all events insufficient. He proceeded to show that this method depended for its theoretical justification upon the amount of absorption which could be effected by the pulmonary area, and that some of the modes at present most popular were demonstrably ineffectual. Drugs volatile at low temperatures, such as chloroform and ether, are quickly absorbed by the lungs and produce their full physiological effect; but where steam, watery vapour, or spray is the vehicle of inhalation, absorption is very slow and imperfect. Dr. WILLIAMS failed to find any evidence of the absorption of iodine, one of the most favourite remedies in this department, but was more successful with turpentine. His general conclusion was that inhalations are valuable in affections of the upper air passages and larger bronchi, but that their utility in such deep-seated affections as capillary bronchitis and phthisis is at least very problematical. There were two objections to their use in phthisis: first, that hæmoptysis was rather frequently excited; and secondly, that the use of respirators impeded that freedom of respiration so essential to the consumptive, and, as Dr. WILLIAMS pithily expressed it, “made the patient feel like a muzzled dog.”

The discussion which followed brought out considerable divergence of view, but, in bringing the proceedings to a close, Dr. WILLIAMS was able to claim that his conclusions had been substantially upheld. There was general agreement regarding the value of inhalations in pharyngeal, laryngeal, and bronchial affections, but a warm and vigorous debate arose around the question whether inhalations are of any service at all in phthisis, and whether their use is not fraught with grave disadvantages. Dr. COGHILL of Ventnor, whose name has been associated with this line of treatment, was still hopeful of discovering some agent capable of easy absorption by the lungs and effectual in phthisis, but he admitted that recent results had not justified his earlier hopes. His view was more or less endorsed by Dr. SMART of Edinburgh, Dr. SMITH of Netley, and others. On the other hand, inhalations in phthisis were wholly repudiated by Dr. DENISON of Colorado and Dr. LINDSAY of Belfast, upon grounds that go to the very root of the question. Dr. DENISON argued that, as reparation of the lung in phthisis was brought about by the development of fibroid material, it was highly probable that inhalations went to the open alveoli—i.e., to the healthy portions of the lung. Dr. LINDSAY urged that we have no satisfactory evidence of the power of any of our inhalations as at present administered to destroy the bacillus of tubercle; that, even if the bacillus could be thus destroyed, nothing would be thereby gained if the receptivity of the patient to fresh infection remained the same; and that the use of inhalations, inhaling chambers, &c., was likely to do harm, by rendering the patient indisposed for that course of vigorous hygiene admittedly so useful in phthisis.

Such discrepancies of opinion will not surprise those who

have followed the rather remarkable history of the so-called antiseptic treatment of phthisis. That this treatment should receive a full trial was rendered imperative alike by the success of Listerism in surgery and by the general adoption of KOCH's views upon the nature of tubercle. At first results were reported from the Continent and America so far exceeding the most sanguine expectations, that even cautious observers might have been excused for concluding that a new era in the treatment of tuberculosis had at length dawned. BERGEON's treatment by rectal injection of sulphuretted hydrogen and carbonic acid made a great temporary impression, but it never had any success in this country, where it was received from the first with an amount of scepticism which seems now to have been amply justified. Antisepsis in phthisis is still upon its trial, and the most recent results are not encouraging to those who hoped great things from it. We are beginning to see that, even if its advantages were more certain than they can be fairly reckoned, it has certain unquestionable drawbacks which must be taken into account. If the consumptive patient learns to pin his faith to his inhaler or his antiseptic respirator, and neglects diet, exercise, and pulmonary discipline, it is not difficult to predict that his gain will bear but a small proportion to his loss. Amidst much confusion and uncertainty upon the subject, it seems hardly open to doubt that the consumptive needs, above all things, first, regular and vigorous expansion of the chest to improve the quality of the pulmonary tissue and to assist in the expulsion of morbid products, and, secondly, perfect purity of air to mitigate the local lesion and strengthen the constitutional condition. Whether any more efficient agent than those now in use may yet be discovered for administration by inhalation must be left to the future to decide, but we think the fundamental principles of treatment just enunciated are not likely to be overthrown by any advance in therapeutics that the future has in store for us.

THE Society or Association of Sanitary Inspectors is a body which has come into notice within the past five years, and which has risen into importance so rapidly, and yet so quietly, that it comes upon us as a fact almost before we have had the opportunity of knowing of its existence. Its membership, putting aside its honorary members, who do not strictly count, is confined to those who are, by profession or calling, the sanitary inspectors of the kingdom, acting under the direction of the medical officers of health. At one time these gentlemen were a more disconnected uneducated body, serving simply as the servants, in sanitary work, of the medical officers. They had no examining board before which they could appear to prove their fitness for the duties they had to perform, and they held their positions in a manner that indicated nothing like organisation or the order that shows an approach to that unity out of which the professional spirit emanates. Now, however, an entire change has been introduced, and the inspectors have become, as we have said, a numerous and influential body of men. It is but fair to the Sanitary Institute of Great Britain to say that the foundation of this change was laid, by it, when it undertook to organise proper examinations for inspectors and surveyors, and to give a certificate or diploma to those who could pass its

examining board. It is true that the diploma conferred no legal licence, no corporate privilege; neither does it to this hour; but it has had an effect, which it maintains, of stimulating the candidates for it to work out of the ordinary sphere of their labour, and to seek a distinction which gives position, honour, and respect to those who possess it. In time a further advanced movement followed in a design for union for the common interests; and, under the influence of a few of the more enterprising members of the body, the Association has come into its present healthy and useful existence.

The Association was singularly fortunate at its beginning in securing for its President so distinguished and able a man as Mr. EDWIN CHADWICK, the veteran leader of the sanitary science of this century. There are not many men of eighty-four years of age who would have undertaken the task, and there are not many men of that advanced age who would have been invited to undertake it. But Mr. CHADWICK, on being invited, accepted the labour with positive alacrity, and for the past five years has been unceasing in his efforts on behalf of the Society. He has delivered each year at least one address remarkable for freshness of treatment and grasp of subject. At the meeting at Brighton, held on Saturday last, he was, it is true, absent in person in consequence of a temporary illness; but his address, read in his absence by Dr. RICHARDSON, was perhaps the most important of all he has ever delivered, sweeping over a field of observation as wide as sanitation itself. He opened with the question of the death-rates of England and Wales, and illustrated the great reduction in the death-rates that has resulted from sanitary measures. He showed upon this the money gain from the reduced mortality, putting the saving in the year 1887 at £7,635,000. Dealing analytically with these tremendous facts and figures, he was, however, careful enough to guard his enthusiasm. The results named were not all due to the sanitary work of man. In London some part of it was due to the sanitary work of nature and to climatic influences, which of themselves were potent agencies for good. "On the occurrence of a great thunderstorm, immediately after it has cleared away, there is an experience of a new and fresh atmosphere. It has done for a time what must be the constant work of good sanitation." But—and here came the practical inference—"good sanitation will do more than that permanently"—that is to say, when it has become permanently good.

From this point the theme of Mr. CHADWICK'S discourse was on "Good Sanitation," what it is, what it means, and what it can do. It is, when carried out as it should be, a system including the mastery of all the elements that lead to a healthy life in and through all classes of society. It means a permanent reduction of the death-rates of communities to such a figure that in large communities like London itself the mortality shall not exceed 15, and in favoured communities like Brighton 12, in 1000 annually. It means that under this reduced rate of deaths there shall be a proportionate reduction in the days of sickness; and it means a notable addition to the duration of human life. "A contractor," he said, "with enlarged and comprehensive powers might be employed for the reduction of the excessive death-rate of Manchester, from 27 per 1000,

to 16 per 1000, and this reduction, as shown in the manufacturing town of Leek, will be attended with an augmentation of five years of the average duration of life and working ability. And at what cost? At a cost not above one-third of the insurance charges of the twenty-four millions of money annually paid by the wage classes of England to provide against excessive sickness and premature mortality; perhaps not above one-third of the insurance charges against sickness and mortality enforced by a special executive machinery invented by Prince BISMARCK in Germany." As to that which sanitation *can do*, on the principles laid down for it by the Nestor of sanitary science, we must pause before we speak. In one such article as this we could not touch the fringe of the subject with any satisfactory effect. We leave it therefore for to-day in order to dwell on two special points in the address which are undoubtedly practical. Speaking of the Malthusian doctrine, that great epidemics reduce populations, Mr. CHADWICK declares the whole argument to be an egregious error. Pestilence, he affirms, is, on demonstrable evidence, attended by a rapid augmentation of births, does not reduce the number of populations, but only weakens them, and augments the proportions of dependent pauperism. The second point relates to mortalities pertaining to different classes of the communities of cities and towns. Amongst the few well-to-do persons in Brighton, for example, the death-rate of children under five years of age is 8.93 per 1000; but amongst the many not well-to-do, the death-rate of children under five is 45.44, or over five times more. For the few, the well-to-do, in the same place, the mean age of all who die—men, women, and children—is sixty-three years, a very high average; but amongst the many, the not well-to-do, the mean age is only 28.8 years. Dr. RICHARDSON made useful reference to these remarkable comparisons in his speech later on upon Dr. EWART'S paper on the Health of Brighton, and if no other fact had come out of the learned and venerable President's address, this would alone have signalised it. As a whole, it ranks as an effort that must remain like a light always burning in the temple of health.

THE most pressing public health questions in the kingdom of Hawaii are those relating to the prevalence and possible extension of leprosy and of syphilis. According to Dr. N. B. EMERSON, President of the Board of Health, leprosy was first ascertained to exist in that country about the year 1840, in the person of a messenger of the chiefs, who had the disease for about ten years before his death in 1852. In 1863 a minister ascertained, through the deacons of his church, the existence of fifty people who were affected with the disease; in 1868 a report was presented to the Government as to 274 known cases; and it is stated that since that date the disease has made fearful strides in the various islands making up the kingdom. Some 1500 cases are now known to the Government. The need for segregation of the affected ones led to the establishment of the leper settlements, but, notwithstanding this, it was estimated on March 31st, 1888, that over 640 lepers still remained at large. Indeed, the difficulties attendant on the compulsory removal of lepers from their families, and the miserable prospect which those thus removed have before them, have

doubtless operated to retard compulsory measures, and to prevent the discovery of the disease amongst those who are only slightly affected. But the need for absolute and maintained isolation is strongly insisted on as a necessary means of ridding the kingdom of the terrible scourge; indeed, there is in Hawaii the strongest conviction that the disease is capable of communication from the body of an affected person to those who come in more or less intimate contact with him. Dr. EMERSON says that no physician who has carefully studied the natural history of leprosy in the Hawaiian Islands can offer any other satisfactory explanation of its spread among the people than that involved in the communicability of the infection.

One great obstacle in carrying out the law as to segregation is the persistent opposition met with on the part of the Hawaiians themselves, who cannot be induced to see that a leper should be shunned as the bearer of a deadly disease. A fatal sentimentality exists in them, according to Dr. EMERSON, which bids defiance to every attempt at prevention. Marriages between leprosy and non-leprosy persons are freely contracted, and the most reprehensible intimacies are not prevented by the fact of patent evidences of the disease; and unless the instinct of self-preservation can in some way be awakened in these people, it is, under present circumstances, difficult to see how the race is to be rescued from the increasing power of a loathsome and fatal malady.

As to a remedy, it is held that none is known. But the Government are extremely anxious to put every properly substantiated profession as to cure to the test, and communications were at the commencement of the year in progress with a view of securing the services of a physician who is conversant with, and who will supervise, the method of treatment advocated by Dr. P. G. UNNA of Hamburg. It is also felt that any attempt at cure must be carried out under the most favourable circumstances, and it is proposed that a thoroughly efficient establishment for the purpose should be erected in one of the most salubrious localities in the islands.

As bearing upon the lethargic attitude of the population in the face of leprosy, and upon the indifference with which the hitherto healthy contract marriages with lepers, the state of the Hawaiian kingdom in the matter of syphilis and the moral tone of the natives deserves some consideration. These points have been reported on by several of the Government physicians in connexion with the subject of the lack of proper increase in the population; and whilst there is much difference of opinion as to whether syphilis is increasing or has undergone some diminution within recent years, yet it seems evident that some of its effects, such as weakened vitality and sterility, are commonly prevalent. Then, again, there is a great predominance in the number of male inhabitants, and particularly of male Chinese, a large amount of promiscuous sexual intercourse, and a condition of general licentiousness amongst the women, which, together with an attitude of indolence, make it extremely difficult to raise the tone of the people to a standard which will secure a personal interest in withstanding the onset of communicable or hereditary disease. One physician has also reported that amongst the causes tending to prevent an increase of population in Hawaii

feticide must be regarded as holding a prominent position. He states that very few children of unmixed Hawaiian blood, are born alive, and scarcely more of the half-castes. Abortions are, he fears, most common; and he adds that the first lesson learned from her elders by the young girl on arriving at the age of puberty is how to avoid conception, and, if unsuccessful in accomplishing that object, how to "expel the fruit of her womb in its unripe state." It is fair to these people to recall the fact that outside influence must have largely contributed to a condition of things which in some parts of the kingdom has admittedly reached a stage of demoralisation associated with disease and early death. In such localities the Hawaiians are surrounded on all sides by large sugar plantations where the labour of all nationalities is employed, and to which men who bring no wives with them tend to flock; and it is prominently urged that syphilis was not indigenous to the country, but that "it entered as a white man's disease."

The task which the Board of Health have before them in respect to the eradication of leprosy is rendered all the more difficult by reason of these conditions and of the social influences which they have already exercised on the natives of the kingdom. But it is impossible to read the health reports submitted to the Hawaiian Legislature without feeling convinced that those who are responsible for advising that Government as to the measures which should be adopted in order to control the spread of leprosy, and generally to raise the standard of public health in the kingdom, are in real earnest; and that whilst they are fully convinced that strong measures are necessary in the direction of the segregation of lepers, they desire so to mature their plans as to avoid all unnecessary hardship, and to bring to bear upon the population the benefit of any such remedial measures as give any reasonable chance of ultimate success.

Annotations.

"Ne quid nimis."

THE PUBLIC HEALTH IN IRELAND.

It appears from the last quarterly return recently issued by the Registrar-General of Ireland that during the three months ending June last the annual birth-rate was equal to 24.1 and the death-rate to 19.2 per 1000 of the estimated population. The birth-rate was 7.3 below, while the death-rate exceeded by 1.7, the rates that prevailed during the same period in England and Wales. Thus, while the natural increase of population by excess of births over deaths was 13.4 per 1000 in England and Wales, it did not exceed 4.9 in Ireland. It appears, indeed, that, if emigration be taken into account, there was in the second quarter of this year an actual decrease of population amounting to 37,047. The birth-rate in Ireland was 1.9 and the death-rate 0.8 below the mean rate in the two preceding corresponding quarters. It is satisfactory to learn that the amount both of in-door and of out-door pauperism also showed a decline; the proportion of the population in receipt of in-door and out-door pauper relief during the three months ending with June was 23.4 per 1000 in Ireland, against 25.5 in England and Wales. The annual death-rate in Ireland last quarter, which was, as above stated, 19.2 per 1000, varied in the different provinces from 13.7 in Connaught to 20.2 in Leinster; and the county rates ranged from 12.9 and 13.4 in Donegal and Galway to 21.6 in Wexford and 22.9 in Antrim. It is ex-

plained, however, in the return before us, that, whereas the population for the whole of Ireland is estimated from the excess of births over deaths and the emigration returns, the rates for the provinces and counties are calculated upon the populations enumerated in 1881, and, as the population of Ireland has continuously declined since 1881, all these rates are consequently understated. The annual rate of mortality from the principal zymotic diseases in Ireland in the second quarter of this year was equal to 1.5 per 1000 living, and was considerably below the average, although it was 0.2 in excess of the English rate. This excess would appear much larger if due correction were made for the exceptionally small proportion of children in the Irish population. The deaths from the principal zymotic diseases in Ireland last quarter were not only below the average for the corresponding quarter, but also showed a considerable decline from the numbers in the first quarter of the year. Compared with the mortality in England, that from measles, scarlet fever, and "fever" showed an excess, while that from whooping-cough, diarrhoea, and diphtheria was lower. The excess of "fever" mortality was mainly due to the fact that 135 deaths from typhus were registered, whereas the disease is rapidly becoming extinct in England. No death from small-pox was registered during the quarter. Perhaps the most satisfactory feature of the mortality statistics of Ireland is the low rate of infant mortality. The deaths of infants aged under one year were equal to 99 per 1000 of the registered births, against 121 in England and Wales; this low rate is, probably mainly due to the small proportion of urban population in Ireland, for we find that the rate was equal to 134 in Dublin, 125 in Belfast, and 129 in all the urban sanitary districts, and only 88 in the rural sanitary districts. The abnormal age-constitution of the Irish population, due to the long-continued exodus of the young adults and the consequent small proportion of young children, is well exemplified by the fact that in the second quarter of this year 40 per cent. of the deaths in Ireland were of persons aged upwards of sixty years, while in England and Wales the proportion did not exceed 29 per cent. It must not be assumed from this that the duration of life is longer in Ireland than in England, although it supplies a good reason for not attempting a thorough comparison of mortality statistics in these two parts of the United Kingdom without making due correction for the different age-distribution of the two populations.

A QUINQUENNIAL CENSUS.

It is satisfactory to find that our long-continued advocacy of the increasing necessity for a quinquennial census in this country at last shows signs of securing public support. We are glad to see the importance of the subject enforced by letters from medical officers of health, who labour under serious practical disabilities from the impossibility of estimating satisfactorily the population of their districts under present circumstances; whilst the recognition by the lay press of the necessity for a quinquennial enumeration may be regarded as a good augury of its being eventually carried out. While, however, we hail with satisfaction all the support that the intrinsic merits of the proposal deserves, we would warn its advocates to be moderate in their requisition for a large extension of the field of census inquiry, lest the injudicious demands of "crotchets-mongers" should fatally injure the prospect of the census reform. The desires of people "wanting to know" may be legitimate enough, but it is inevitable that the authority responsible for the success of the census operation should seriously consider rather what is practicable under the English system of census-taking than what it may be desirable to know. In the first place, it should be remembered that in England the filling up of census schedules is left to householders (a large majority of whom are at best

very imperfectly educated), who, in a country like this, are apt to resent as impertinent any but the simplest inquiries; hence inquiries probing too closely the question of social status, for instance, would probably meet with the same opposition that has always met the proposition for a religious census, or with the failure resulting from inquiries concerning idiocy and deaf-mutism. In the second place, it must not be forgotten that the collection of an English census is begun and ended in one day, and that any serious extension of the field of inquiry would either necessitate the surrender of this feature of our enumeration or would imperatively demand a very serious increase of the army of enumerators, which at recent censuses numbered from 30,000 to 40,000. In countries under imperial régime the census operation is not confined to a single day; the information is, moreover, effected by police organisation, the people being more or less accustomed to have information of an inquisitorial nature officially demanded. Hence the possibility of fuller detail in the census inquiry under despotic governments. Those who demand a similar extension in this country must be prepared to face both popular opposition and the necessity for an entire change of census machinery. Moreover, we would take this opportunity to urge that the true value of statistics must always depend much more upon the trustworthiness of the facts upon which they are based, than on the multitude of detail with which they profess to deal. There can be no question about the value of a quinquennial census, and we should much regret that any chance there may be of effecting this desirable reform should be imperilled by a simultaneous demand for an unlimited extension of the scope of the inquiry, in order to meet the desires of persons "wanting to know," or rather wishing for, "figures," without sufficient regard to the possibility of securing that such figures may be really trustworthy.

CHLORATE OF POTASH IN EPITHELIOMA.

M. RECLUS has recently revived an old plan, somewhat in vogue forty years ago, of treating epithelioma of the skin by means of chlorate of potash, and is disposed to think that while this plan cannot be recommended wholesale as a substitute for excision, there are cases which, operative measures being, for one reason or another, inadvisable or impossible, may be satisfactorily treated in this way. One main point to be taken into consideration is the rapidity of growth. In order that chlorate of potash may have any chance of success, it must be employed for a considerable time. It is therefore only suitable in cases where the growth of the tumour is slow. Dr. Lemoine of Lille also has reported two cases of epithelioma, or canceroid, as he calls it, where chlorate of potash was employed with eminent success. In one case the tumour occurred in an old woman, occupying a large part of the left cheek, there being three enlarged glands at the angle of the jaw, and the skin around the ulcerated growth being tense, shining, and of a purple colour. Half a drachm of chlorate of potash was given daily, compresses soaked in a solution being also applied to the cheek, and a large pinch of the powdered salt being sprinkled over the surface of the tumour twice daily. The discharge of ichor, which had been abundant, soon began to diminish, and in about three weeks signs of improvement began to show themselves round the edges of the ulcer; in six weeks' time the diameter of the ulcer had diminished from 8 centim. to 4 centim., the surface having become hard and dry, like that of a scirrhous, and the epidermis spreading over it a little more each day. The glands had become smaller; in eight weeks the surface had completely healed over. The internal administration was continued for a fortnight longer; since that time—some nine months before the report was made—no return of the

signs of the disease had occurred. The second case was an epithelioma of the great toe, which had lasted about two years. This was treated by the internal administration of chlorate of potash and by its local application for about ten weeks, at the end of which time complete recovery is stated to have taken place. Unlike Dr. Lemoine, M. Reclus confines himself to the external application of the chlorate of potash. He finds that this is not suitable for cases where the growth affects the mucous membrane, because of the greater depth to which it generally penetrates under these circumstances. It acts best where the tumour is confined to the skin; but it may be employed where the junction of the mucous membrane with the skin is affected.

PRIVATE BILL LEGISLATION.

It is much to be hoped that the report of the Committee upon Private Bill Legislation will lead to some improvements in the mode of carrying through Parliamentary measures of such a class as take the form of local Acts. The burdensome nature of the expense and litigation involved in the existing methods has been made abundantly clear, and received not only the most striking illustration in the evidence submitted, but also the emphatic testimony of the Commissioners in the report which they have drawn up. "The expense," they say, "incurred by promoters and opponents of schemes in Parliament is undoubtedly great. Many statements from Scotland and from Ireland have been laid before the Committee illustrating the actual cost of private Bill legislation, particularly of municipal legislation, and the items into which it may be resolved. It is asserted that it has the effect not only of preventing poor opponents from coming forward, but also of suppressing proposals for small undertakings." Having regard to the figures to which reference is here made, one cannot doubt that many "small undertakings" are indeed most effectually suppressed. Thus we have it on the authority of Mr. F. W. Pine, a representative of the Dublin Chamber of Commerce, that the cost to a company in that city of passing a small Act consisting of a single clause, which, moreover, was unopposed, was approximately £1800, and that subsequent Acts necessary to make this one available cost a further sum of £1200. In another instance, the city of Cork, having obtained parliamentary powers to erect a bridge, spent £500 more than the authorised sum, and were compelled, therefore, to come to Parliament for the additional powers; and, said the witness, "they had to spend £450 for a Bill to get leave to spend that £500." The great advances which have been made in recent years, and which will be made in the near future, in sanitary science, render this question one of very special importance. Recourse to Parliament for the purpose of getting parliamentary powers to carry out sanitary improvements ought to be possible to the smallest township in the land. But this is clearly out of the question while the scale of expenditure on private Bills remains what it is at present. The Committee does not appear to be very sanguine of achieving any great success in the direction of cheapening this procedure. For our part, we fully share the opinion suggested in the report, that the time has come when "some more comprehensive reform of private business than any that has been adopted since the introduction of the present system of committees in 1837" should be undertaken. But we doubt whether the committee has been bold enough in the steps which it has been prepared to advise. A permanent tribunal would no doubt have many advantages over committees constituted as occasion arises, but it would have *les défauts de ses qualités*, and not the least of these would be that tendency to run into a groove to which, as illustrated in the case of the Police and Sanitary Committee, Lord Grimthorpe bore striking testimony. The story which

he told was so apt, and, notwithstanding the deep disguise in which he veiled it, so pointed, that it may well be reproduced: "At the end of the case the chairman made a longish speech, and another member of the committee also made a speech. The chairman stated his views very strongly in favour of a certain thing which they had put into the Bill against the wishes of a body of doctors. . . . The body of doctors were not called, but the chairman treated their objection as entirely absurd and contrary to what he called 'his experience.' . . . Another member of the committee said that he knew a certain town where this thing had been going on for some time and had answered perfectly. Now, according to the papers sent to me, that member was entirely wrong. In that town, of which I have the statistics, the system was entirely different in that point which the doctors were contending for. And the statistics about diseases from a great number of towns rather contradict than support the chairman's theory which he calls experience. That shows what is the consequence of having a standing body to act in a matter not of law but of discretion. The chairman is probably and rightly a strong man, and very likely that means that he has strong views. Upon a man of this kind you may pour in sufficient evidence to fill sixteen Blue-books, and you would make no impression upon him, especially if he has any professional knowledge or position. . . . That, practically, does not happen in other committees of either the House of Lords or the House of Commons. Sometimes it may happen that the chairman will endeavour to act upon his own views, but by degrees this gets corrected by his having a fluctuating set of colleagues. But if you have a standing committee with a strong chairman the world is obliged to swallow his dose, and that is a system I greatly object to." "About the 'certain thing' and its merits we have no information, and therefore can form no opinion, but we are glad to find ourselves, as to the general proposition, in agreement with Lord Grimthorpe, and to avail ourselves of his trenchant statement of an important aspect of the question under discussion.

ACUTE PHTHISIS IN A YOUNG CHILD.

THE ways of tuberculosis in children are strange, and demand a much more careful clinical exposition than they have yet received. We want in medicine generally, and in this branch of it especially, to imitate the lawyers more, and to produce a literature of "cases." The late Dr. Hillier's book is an admirable illustration of the kind of book we need, in which general remarks are fortified by an abundant admixture of histories of actual cases. We give below, from the Reports of the New York Pathological Society, the particulars of an interesting case of acute phthisis in a female child, thirteen months old, a foundling treated in the New York Foundling Asylum, on April 22nd, for severe indigestion and diarrhoea of three days' standing, which soon yielded to treatment. On May 17th the child returned with motor paralysis of the entire left side, including the face; dilatation of the left pupil; no paralysis of sensation; moderate diarrhoea; left otorrhoea; temperature 100° F. Six days later the left hemiplegia continued, and there was in addition loss of power of the right leg. During the next ten days motion slowly returned to the left arm and leg. On the 30th the child was admitted. The cervical, epitrochlear, and inguinal glands were enlarged; there was ptosis of the left lid, and the child refused food. On the 8th of June it was much worse; respiration rapid and laboured. There was dullness on percussion, anteriorly and posteriorly, on the right side; and the respiratory sounds were absent over the whole lung. There was no retraction of intercostal spaces, but diminution on movement of the chest wall. The left side was tympanitic on percussion, and bronchial breathing, and coarse bronchial râles were heard; there was marked retrac-

tion of the intercostal spaces; temperature 104° F. For four days she remained unchanged, and died in a state of collapse on June 12th. We give the necropsy, made two hours after death, in the words of the report: "Child fairly well nourished. The brain was markedly anæmic, but otherwise normal. There was a small amount of bloody serum in the pleural cavity. On the right side the superior portion was collapsed and the inferior portion entirely occupied by a large tuberculous deposit, which at several points had broken down into small cavities. Costal pleura normal; pulmonary pleura thickly studded with miliary tubercles. On the left side there were abundant pleuritic adhesions over the anterior and lateral surfaces of the lung, binding it closely to the chest wall. In the substance of the entire lung were many deposits of yellow, caseous, tuberculous material, varying in size and consistency. The lymphatic system was largely involved. The cervical, bronchial, retro-peritoneal, inguinal, and epitrochlear glands were all much enlarged and caseous, and many were diffuent at their centres. The liver was anæmic and fatty." The author, Dr. J. J. Griffiths, thought the chief points of interest were—(1) the absence of cerebral lesions; (2) the fact that such extensive tubercular deposits were entirely confined to the lungs and lymphatic system; and (3) that in this case the epitrochlear enlargement was due to tubercle, and not to syphilis. A fourth point appears to us of much interest: the disappearance of the motor paralysis of the left arm and leg.

A CORONER ON CHEMISTS PRESCRIBING FOR CHILDREN.

MR. A. BRAXTON HICKS did his duty as coroner at the inquest on the child of Frank Ernest Rands, in denouncing the way in which sick children are often treated by their parents. First, the chemist is consulted when the child is dangerously ill or dying; and, as in this case, after death the doctor is sent for. Finally, the coroner has to be sent for, and he and the jury often find that death has been caused by some want of proper treatment, or for want of good advice as to diet. This poor child, always delicate, was taken ill on Sunday. The mother took him to a chemist, who prescribed a bottle of medicine and two powders. She found him dead on Tuesday morning, and then called in the doctor. All that remained was to make a post-mortem examination. He found great distension of the stomach, which he thought had caused syncope and death. "The child had been improperly fed on corn-flour. The chemist who prescribed was unqualified even as a chemist, and was acting for his brother. The coroner's words should be put on record: "No doubt it is a great advantage to poor people to be able to run into a chemist's to get something in a hurry, but if a chemist prescribes wrongly he must take the risk of it. If a grown person chooses to commit suicide, so to speak, by going to a chemist instead of a doctor, that is his own look out, but I do not think that chemists have any right to interfere in the case of children at all. The sooner the practice is stopped the better. While a child is alive parents go to chemists, and to a doctor after it is dead, the consequence being that the coroner has to intervene." The chemist promised to be very particular in future. Let us hope all chemists will come to the same wholesome resolution. The detection of children's diseases is a matter of much difficulty. It may be said that infantile diarrhoea is a simple thing to consult a doctor about. But it killed this child; and a large number of the deaths in any given week of the summer are from this cause. They require the very best medical advice that can be obtained. If chemists cannot be expected to understand disease, they might at any rate be expected to know the gravity of infantile diarrhoea, which is one of the deadliest

diseases we have now to cope with. Mr. Braxton Hicks deserves the thanks of the public for speaking plainly on this subject and resolving to have such cases investigated. It is monstrous, of course, that a coroner's time and that of a jury should need to be so used, and Mr. Hicks seemed to feel this. It is equally monstrous that medical men should be called on, not to avert death, but only in time to make a post-mortem examination.

ACETIC ACID AS A DISINFECTANT IN MIDWIFERY.

DR. F. ENGELMANN, being much impressed by the numerous fatal cases which are constantly occurring from the employment of intra-uterine injections in obstetrical practice, and feeling that there is doubt whether they ought not to be given up, brings before the profession another antiseptic which he has used for the last two years in a large number of cases, and which has given him excellent results—acetic acid. Some years ago he was led to use and to recommend the employment of acetic acid in diphtheria, and he is convinced that it possesses antiseptic properties in as high a degree as carbolic acid itself, and has at the same time the great advantage of being non-injurious, even when used in a tolerably concentrated form; besides, it has a decidedly styptic effect, and this is an additional advantage in obstetric practice. Again, acetic acid is very diffusible, thus penetrating the tissues to a much greater extent than most other antiseptics. Corrosive sublimate, as is well known, forms insoluble albuminoid compounds on the surface, and thus does not act upon the deeper parts of the tissues. In one respect acetic acid is similar to corrosive sublimate—viz., in its action on instruments; but the latter is the more prejudicial of the two. The forceps may remain for a quarter of an hour in a 3 per cent. solution of acetic acid without being injured. The irrigator is, however, liable to be affected by the prolonged use of acetic acid solutions. It should be remarked that the hands must be washed twice after using acetic acid, as of course soap will not dissolve where this is present. The skin is rendered peculiarly soft and pleasant to the feel. As to the strength to be used, Dr. Engelmann as a rule employs a 3 per cent. solution, but he has sometimes employed a solution as strong as 5 per cent.; this, however, is apt to cause a smarting sensation in any spot where the surface is broken. All the cases in which acetic acid was used recovered without abnormal rise of temperature.

AMBULANCES.

THE jury at an inquest recently held appear to have expressed surprise that no ambulance was kept at the hospital (King's College) at which the inquiry took place. We believe that this hospital is not alone in this respect; in fact, with the exception of St. Mary's and Charing-cross (at which institution an ambulance is provided for accidents), no general London hospital undertakes to fetch patients, however ready it may be to receive and treat them. There is a very great tendency on the part of the public in the present day to hold hospitals responsible for the care of the sick and injured even before they apply for relief, and that without reference to the question of expense. To keep an ambulance would involve extra expense, even though the carriage were only a manual one, for it would be necessary to send a man with it, and also supply his place whilst absent. This expense would of course be much increased if a horse ambulance were kept, as the horse must be hired if not owned. But, apart from this question of cost, the ambulances would be much better in the hands of the police, and this for several reasons. At every police station there is already an ambulance as part of the

equipment of the station, and this is available for use under certain conditions in cases of illness, always in the event of accident. The police are early on the spot in cases of accidents, and can readily communicate with the station. There are several of these stations in the area around the various hospitals, and in many instances an ambulance kept at a hospital would be quite unable to meet the numerous calls which would be made upon it. There are, however, occasions on which something more comfortable than the police ambulance is required, and we do not think that the hospitals will any of them refuse to keep such an ambulance if the public think it advisable; but let the public supply the carriage, and maintain it when supplied. Another way would be to make the various parishes, who are responsible for the poor, responsible also for the safe conveyance of the poor in illness when seeking relief in institutions where they are treated without cost to the ratepayers. For the use of the well-to-do, various companies are willing to supply ambulances or invalid carriages on moderate terms.

EQUINIA IN SWITZERLAND.

A CORRESPONDENT writes from Geneva:—"The rural district of Vandœuvres has been thrown into consternation by cases of glanders (*morve chevaline*, as the local physicians call it) in the human subject, two of them having already terminated fatally. The facts are these. A prominent landed proprietor had, a year or two ago, purchased a horse which, to all appearance, was sound in wind and limb, and up to within the last few weeks betrayed no sign of any malady. In June, however, one of the grooms (Bouvier by name) was taken ill, and had to go to the hospital, where he was pronounced to be suffering from severe whitlow. Instead of getting well, he rapidly became worse; but, probably from his exceptionally good constitution, he is regarded as not unlikely to recover. His successor (one Dupuis) was little more than a fortnight in service when he too sickened, and, after fourteen days' acute suffering, died. By this time suspicion was aroused as to the horse—the general opinion being that it was glandered. Presently Dupuis' father, who, from occasionally helping in the stables, took his son's place, became ill also. The physician, who had been struck with the unusual symptoms in Dupuis *filis*, as to which he could not make up his mind, on recognising the same presenting themselves in the father, called in two colleagues in consultation. The opinion arrived at was that father as well as son had contracted the contagion of *morve chevaline* in its most malignant and rarely curable form; and, indeed, Dupuis *père* soon succumbed, after some days of great suffering. Bouvier, the first attacked, still struggles with the malady, but, as already said, is considered as in a not quite hopeless condition. At the instance of its owner the horse was slaughtered, and the post-mortem examination placed the fact of its suffering from glanders beyond doubt. What adds to the popular alarm is the existence of the same symptoms, though of a less pronounced kind, in other horses of the neighbourhood."

SNAKE-BITE AND YELLOW FEVER.

DR. URIAS DA SILVEIRA has sent to the Medico-Chirurgical Society of Rio de Janeiro a quantity of a vegetable substance which is very common in the provinces—Minas geraes and Barra mansa,—and which, he says, he has used with great advantage in the bites of cobras, especially during the period in which the most serious symptoms—hæmorrhages and ataxo-dynamic phenomena—appeared. He points out analogies between the effects of snake-bite and of yellow fever, both of a symptomatic and pathological nature, and suggests that the drug he sent should be tried in cases of yellow fever.

THE SANITARY STATE OF ELEMENTARY SCHOOLS.

THE Secretary to the State Board of Health of the State of Maine occupied himself largely during the past year in making an inspection of the sanitary state of school-houses. The buildings visited are described by Dr. A. G. Young in much detail, and a few rules bearing on the construction and use of schools may be deduced from the report. He regards the best shape for a school-room to be that of a parallelogram, the width of which is as three is to four, with the teacher's desk at one end; the ceiling to be at least 12 feet above the floor. Each scholar should, in his opinion, have at least 20 square feet of floor space, and 240 cubic feet of area. In this respect we may refer to the very mild demands which are made of school authorities in this country, for the Education Department of the Privy Council, in dealing with a requirement that the school premises must be "healthy," add: "In administering this article, the department will endeavour to secure at least 80 cubic feet of internal space and 8 square feet of internal area for each unit of average attendance." Dr. Young further asks that the window surface shall be at least one-sixth as great as the floor space, that the window-sills shall be some three and a half to four feet from the floor, and that the tops of the windows shall extend to the ceiling; and, in the matter of lighting, he holds that the light should come preferably from the left and back of the scholars, or, where the room is not too wide, from the left only. Lighting from both the right and left sides is, in his opinion, at times permissible, but it should never be effected by windows from the front. The black boards should always be placed opposite the windows, and never between them. As to ventilation of a school-room, he regards it as desirable to supply from 30 to 35 cubic feet of fresh air per minute for each scholar.

POISONING BY ICE-CREAM.

EVERY summer the medical practitioner is brought in contact with cases of enteric disease occurring in children, and presenting some of the symptoms of typhoid fever, but lacking other characteristic features. Some error of diet is usually assigned as the active cause, but in what this error consists is often very uncertain. One such cause was lately exposed at an inquest held in St. Pancras Coroner's Court. The facts of the case were as follows. A child aged three years and a half was sent by her mother to buy ice-cream from a street stall. She, her mother, and two other children partook of the dainty, and shortly afterwards all, with the exception of the mother, who presumably took less than the children, were seized with signs of illness. Speedy vomiting relieved the two other children, but the subject of the inquest, who was not taken ill till the next day, passed through the stages of a fatal enteritis. In her case there were also paralytic signs resembling those of lead poisoning. What was here the precise element of mischief cannot now be clearly ascertained, but, with due allowance for other possible causes, there can be no reasonable doubt that the ice-cream was in some way accountable for the fatal result. A suggestion by one of the jury on the present occasion, that the leaden or pewter pot in which the mixture sold as penny ices is commonly kept might have had a hurtful effect, is worthy of note. The formation of a poisonous lead salt would be the more probable if the pot were not regularly cleansed, or if sour milk had been used in making the ice. Either or both of these conditions might easily have existed, and certainly the evidence of a typhoid or pseudo-typhoid state is enough to suggest a fermentative action in the material of the ice itself. This occurrence teaches its obvious lessons. It conveys a needed warning to parents that cheap ices are as unreliable as they are unfortunately

popular. We reported some years ago (THE LANCET, Oct. 18th, 1879) the results of an investigation by our Commissioner into the conditions under which these street luxuries were manufactured, and the dirty and unwholesome habits and dwelling-places of the persons, mostly foreigners, engaged in their preparation. We may here reproduce the concluding sentence of that report: "Finally, the milk, the eggs, the corn-flour mixtures, &c., used to make the penny ices, are left standing in the foulest dens, where they must absorb the noxious gases that infect the atmosphere, and where they are boiled and mixed in the same sauce-pans and cauldrons in which the Italians scald and wash their dirty linen."

PUBLIC HEALTH IN AUSTRALIA.

WE learn from Melbourne that the Government, impressed with the growing importance of the adoption of sound principles of public health in the future, have appointed a Sanitary Commission, and have in prospect an Amending Health Bill. The *Australian Medical Journal*, whilst noting these measures with satisfaction, urges that it will be essential to the success of this action on the part of the Government that steps should be taken to bring home to the people themselves the first principles of public health, such education being necessary to a proper apprehension of the subject; and they propose that lectures should be delivered in different parts of the colony by teachers who are capable of imparting the needed information in a form which would lead to practical results; and in support of their contention they point to the advantages which have resulted from the discussion of questions of public health by voluntary associations and societies in this country.

PHLOGOGEN SECRETED BY GERMS.

M. ARLOING has made observations on a phlogogenic matter secreted by certain microbes, especially those of contagious peri-pneumonia cultivated on bouillon of sterilised beef and on potato. In cultures on gelatine at 45° C. this microbe secretes a substance which, injected into the connective tissue, excites inflammation and fever, often followed by death. In the exudation this phlogogen is found again in abundance. The liquid has the appearance of a citrine-like serosity, and, treated with absolute alcohol, gives a white clot-like precipitate which is easily redissolved in water. Obtained in a state of purity, it presents a yellowish aspect in the dry state and a viscons consistence if still liquid. The chemical characters of this substance are similar to those of the diastatic ferment, pepsin. In contact with cane sugar, it gives a precipitate with the cupro-potassic solution. Animals do not secure protection by injections of this phlogogen, since the same series of events occur in the same animal, no matter how many times the material may be injected. But some animals—e.g., rabbits and guinea-pigs—enjoy a specific immunity from its effects.

QUACKERY IN NEW SOUTH WALES.

WE have been favoured with a letter on this subject by Mr. John S. Wilson, of Kiama, New South Wales. He complains particularly of the extent to which unqualified assistants are employed and "covered" by qualified medical men, and of some of the methods by which qualified medical men court practice and seek to ingratiate themselves with the public. One bad practice he thinks peculiar to Australia—that of tendering for clubs. There is also an absence of rules excluding the well-to-do from medical clubs, which tends to demoralise and pauperise the members. They are extensively worked, our correspondent says, by unqualified assistants. The qualified and registered "cover"

is apt to advertise largely in all the local and district papers, uses most letters of the alphabet as titles in such advertisements, and leaves it to be inferred that those he does not use will apply to his unqualified assistant. Mr. Wilson's letter is too long for insertion, but we have given its principal points. The evils he laments are unfortunately not confined to Australia. The profession must face them, and discourage and discountenance all those who practise them. The Medical Council in England has condemned strongly, as Mr. Wilson points out, the use of unqualified assistants in responsible positions. They have not yet removed a "cover" from the Register; but, if the evil be not corrected, it is quite possible that they may do so.

FEES AND THE SERVICES OF UNQUALIFIED ASSISTANTS.

AT a recent inquest in Jarrow, which we should have noticed sooner, the coroner, Mr. Graham, disallowed the fee for medical evidence under the following circumstances. The child whose death was the subject of the inquest had been attended by the unqualified assistant of Mr. McCleish—Mr. Thompson. He certified that the child died of bronchitis, and signed himself "Dr." Thompson "because he was in the habit of doing so." So the report reads in the *Newcastle Daily Leader*. The coroner refused to take the certificate because of Mr. Thompson being unqualified. Mr. McCleish stated that he had not seen the child till after death. The coroner said that if Mr. McCleish employed an unqualified assistant, he at least ought to supervise his work. He said that, to mark the irregularity, he would not allow the fee; Mr. McCleish said he had better give up altogether. The coroner said, "You can please yourself about that." This is a rather brusque way of putting it, and we are sorry for the position in which Mr. McCleish placed himself. But it is difficult to see what other view the coroner could have taken.

AMBLYOPIA FROM SYMMETRICAL LESIONS.

PROFOUND AMBLYOPIA without ocular lesions, and with voluminous hæmatomata compressing the whole of the occipital lobes, has been observed by M. Audry, and the case is detailed by him in the *Lyon Medical*, No. 33. The patient was a coachman, aged forty-five, whose illness began, three months before August, 1886, with headache, at first intermittent, but afterwards continuous. One month before admission, walking became difficult and titubation well marked. Considerable loss of sight occurred about the same time, also noises in the ears, obstinate constipation, and vomiting. The movements of the eyes and of the lids were normal; the pupils were equal; he could not read; diplopia was not present, nor did he see fogs. There was weakness of the upper limbs; the knee jerks were absent; there was much swaying on attempts at walking, and a tendency to fall backwards; the pulse was 56, and regular; no albuminuria or glycosuria. Later on, the pupils did not react to light, and were constantly dilated. At the necropsy the calvaria was found to be very thick, with osseous irregularities. Many clots and much fluid blood existed in the hæmatomata over both occipital regions, and the effusion was situated between the dura mater and the arachnoid; the brain had been pressed upon, but was itself in a healthy state. Fürstner and Huguenin have recorded cases of double "choked disc," without extravasation in the sheath of the optic nerve, in cases of hæmatomata compressing the brain. Knapp, Manz, and Fürstner have reported cases of double choked disc with sanguineous effusion into the sheaths of the optic nerves. Fürstner states that every time he had examined cases of meningeal hæmorrhage which

had caused unilateral or bilateral choked disc, he had noted unilateral or bilateral hemorrhages into the anterior or middle fossæ of the skull, the clots meeting mostly towards the optic chiasma. Huguenin has observed an extravasation into an optic nerve sheath without any choked disc. Retinal apoplexy of limited areas has been noted in similar cases unaccompanied by real strangulation of the circulation or extravasation into the sheath. M. Robin has admitted the possibility of the occurrence of apoplectic foci between the optic nerve and its sheath in cases of chronic hemorrhagic meningitis. Gubler observed choked discs in a case of subpontine meningeal hemorrhage, and Strumpell has recorded papillary oedema in such cases.

THE SENSATION OF LIGHT.

NEW-BORN infants possess but feeble perception of light. Exposing a baby to the action of twilight five minutes after birth, Preyer observed the eyes to open and shut so that the palpebral fissure at times measured five millimetres, and a little later the eyes were noticed to be wide open and the forehead wrinkled. Before the end of the first day it was evident from the play of the features that a difference in the intensity of light was appreciated by the babe. On the second day the eyes rapidly closed on, bringing a candle flame near; and on the ninth day the head was energetically turned away from the flame, and the eyes tightly closed. The sensitiveness to light was greater in the waking state than immediately after sleep, so that the same object which at one time caused dislike at another excited pleasure. On the eleventh day, the infant showed signs of pleasure at the sight of a burning candle, and also from a bright curtain holder. On the tenth day, it was found that the throwing of a strong light on the eyes of the sleeping infant caused contraction of the orbicularis palpebrarum. The pupils of newborn infants soon react to light, but are apt to vary much in size: they may contract to the diameter of two millimetres soon after birth. At the age of two months bright objects excite signs indicative of mirth.

VISUAL CORTICAL CENTRES.

La France Médicale, No. 93, records a fresh series of experiments by M. Vitzon on the situation and extent of the cortical visual centres. Munk considers the occipital lobe to be the only cerebral cortical region concerned in visual perception; whilst Ferrier, Yeo, Luciani, and others include the angular gyrus. Vitzon has experimented on dogs of moderate size, and, using Pacquein's knife (*sic*), has removed the grey matter of Munk's visual zone on one side. Loss of sight in the opposite eye was noted after the operation. With the healthy eye bandaged the animal looked lost and hesitated in its movements, not being able to avoid obstacles. Simultaneous ablation of both occipital lobes caused permanent and complete blindness. In monkeys the facts appear to be exactly the same.

POISONING BY CARBOLIC ACID.

THE number of cases of poisoning by carbolic acid is notably on the increase, and this naturally provokes inquiry as to the cause, and also as to the possibility of control. This substance is very rarely taken with suicidal intent, although the ease with which it may be procured and the relatively low price might afford some temptation were it not for the peculiarly painful results produced by it. Mostly the poisoning is purely accidental. From its colour the acid is liable to be mistaken for beer, and this mistake is favoured by the carelessness ordinarily displayed in storing it in bottles of any and every kind. Carbolic acid is now so largely used that it is difficult

to suggest any measure likely to prevent these frequent accidents. Careful labelling is, of course, one essential; but it would be still better to discard the employment of old wine or beer bottles in favour of vessels of any peculiar form which would direct attention to the injurious properties of their contents. The value of carbolic acid as an antiseptic is sufficiently well known to render restrictions upon its sale undesirable; but something must certainly be done speedily to check the frequency of these fatal accidents.

EXCESSIVE HEAT IN THE MEDITERRANEAN.

WE learn that whilst we have been experiencing wet and cold weather in this country, so that our summer has been quite an exceptional one in these respects, the heat in the region in which the Mediterranean squadron has been situated has been excessive—indeed, almost intolerable—being alleged to have been about 140° in the dynamo-rooms, and 160° to 170° in the hydraulic pumping-rooms. The troopship *Tamar* is also said to have lately experienced such intense heat that it was impossible for the stokers to keep up steam. Many men were on the sick list, and two men died of heat exhaustion. A large stock of ice was laid in at Suez. There should be ample supplies of ice, as well as the means of making ice, on board ships under these circumstances, together with different therapeutical agents that have been found useful in hyperpyrexia, capable of prompt application. Ice, cold affusion, exposure to free ventilation, and the use of antipyretics are essential to the saving of life.

INDICANURIA.

AFTER having nourished a dog in a uniform manner during a certain time, M. G. Pisenti found that the urine yielded a quantity of indican that varied daily between 11.7 and 19.9 milligrammes. The canal of Wirsung was then ligatured. After a transitory augmentation the indican diminished, and finally was reduced to 4.34 milligrammes. If then the animal was fed with pancreatic peptones, a brisk rise in the amount of indican in the urine was observed, and lasted for several days, followed by a return to the normal state. These results have a certain clinical importance, because they appear to throw light on the reason why fever may be accompanied by the disappearance of indican from the urine in dogs with pancreatic fistula. Stolnikow has demonstrated that fever may cause the cessation of the flow of pancreatic juice. Pisenti goes further by showing that this absence of juice has as its natural result the absence of pancreatic peptones and of indol, and consequently the remarkable disappearance of indican from the urine.

CHOLERA ABROAD.

FURTHER details as to the outbreak of cholera on board the *Impérieuse*, which lately became the flag ship on the China station, show that the occurrence involved a number of men. Three fatal attacks occurred—two in Hong Kong, and a third after the vessel had left for Yokohama. Complaints are made as to the extreme heat between decks: even at Yokohama the ordinary temperature is stated to be 100° F., and the condition of the ship's company is in consequence one of constant discomfort. To this extreme heat some of the more serious consequences of the outbreak are attributed. The sick have now all recovered.

Cholera is reported to be widely prevalent in Tashkend. The city is placed in strict quarantine, the wealthier inhabitants having fled to the mountains. Correspondence with the city is suspended, and the governor and public authorities are in a camp on the hills.

Twenty-four fatal attacks are reported from Macao, viz. Lisbon, on board the transport ship *India*, among the troops embarked for Mozambique.

THE RIVER WEAR AT DURHAM.

EFFORTS are being made by the Dean and Chapter of Durham to raise the level of the museum weir, in connexion with some other alterations they are about to carry out. It is maintained by Mr. Wm. Fox, surveyor, amongst others, that the effect of such heightening will be a distinct benefit to the city. Thus, it appears that no less than forty-two sewers enter the river Wear within a very short course of the flow of the stream through the city, and that at times the mouths of these sewers become exposed. This is obviously a dangerous condition; and in many places where a similar state of things has obtained the result has been the forcing of sewer air up into streets and houses. Unless some very distinct evil can be shown to result from the proposed heightening of the weir, such an alteration as will keep the mouths of sewers below the water level and will have other advantages at the same time should certainly receive the support of the inhabitants. Durham has not stood high as a progressive city in matters relating to health, and the local sanitary authority were not long ago credited with "resting on their oars." They should now seek skilled advice as to the probable effects of the proposal, and if it is calculated to remedy some of the present conditions of the sewer outfalls, whilst doing no harm, they could not do better than co-operate heartily with the Dean and Chapter.

MEDICAL LEGISLATION IN NEW ZEALAND.

At the annual meeting of the New Zealand Medical Association the principal amendments of a proposed new Medical Act Amendment Bill for that country were discussed. They provide for the creation of a General Council of Medical Education and Registration of New Zealand, to consist of twelve persons. The members in the first instance to be appointed by the Governor-General in Council by proclamation in the *New Zealand Gazette*; all succeeding councils to be elected. The colony to be divided into four electoral districts, and each district to send three members. All persons registered in the Register of the United Kingdom are to be registrable in New Zealand. A pretty severe penal clause is proposed. Any person taking a title to which he is not entitled is to be liable to a penalty of £50. All persons representing themselves as registered, and not really so, to be liable to the same penalty. So with any person who is not a registered practitioner, and who practises in medicine, surgery, or midwifery, using the designation of, or representing himself to be, a physician, surgeon, doctor, apothecary, professor, specialist, or consultant in medicine, surgery, or midwifery. This clause does not prevent any person using the title of midwife or holding a licence in midwifery.

CARDIAC STRAIN.

EVERY year the vacation season claims its quota of victims. Many who have become somewhat enfeebled by long confinement and close attention to the calls of sedentary occupations, rush away for a short holiday, and endeavour by systematic over-exertion to make up for the inactivity of the past months. Every year brings its sad warnings of this folly in a record of fatalities, while the experience of most practitioners shows yet more clearly that this over-strain is followed by prolonged illness. The circulatory and respiratory systems work hand in hand, and rebel against any sudden disturbance of their ordinary routine. The danger is always greatest when, in the presence of any cardiac weakness, the exertion demands an arrest of respiration. In moments of intense nervous excitement the breathing is frequently unconsciously stopped, and the strain upon an enfeebled heart then becomes very severe. The sad death of Sir John Ross appears to have resulted from

this cause: he had already fired twice at a stag, and when aiming a third time suddenly expired. Emotional excitement necessarily produces palpitation, and the fixation of the thorax then adds to the difficulty at the moment when the heart is at its weakest.

DISPENSING POISONS.

It is now nearly a year since Dr. Sharkey recorded his belief that the employment of morphine was rapidly increasing among the better classes, and endeavoured to stem the torrent by calling attention to the evils resulting from the formation of the morphine habit. That this evil has been of yet more rapid growth in America is shown by an Act which was recently passed by the Legislative Assembly of the State of New York, forbidding any druggist to make up more than once any prescription containing more than one-fourth of a grain of opium or one-twentieth of a grain of morphine without a special order from the physician who originally prescribed the dose. In this country there is absolutely no control over the frequency with which a prescription may be made up. Rarely, a chemist may exercise his discretionary powers, and advise a fresh consultation, but that this is not often done is proved by the variety of addresses so often dotted all over an old prescription. This evidence of faith is touching, but a trifle irrational. A remedy which has once been useful may be highly dangerous in a later stage or under altered conditions, to say nothing of the risk of encouraging a morbid craving for narcotics.

SANITARY INSTITUTE OF GREAT BRITAIN.

THE much-desired amalgamation between the Sanitary Institute of Great Britain and the Parkes Museum has taken place, and articles of association of the Institute, which will in future carry on the objects of the two societies, have been framed. The memorandum of association has been signed by the Duke of Northumberland, the Duke of Westminster, Sir Douglas Galton, Dr. Poore, and other well-known sanitarians.

FOREIGN UNIVERSITY INTELLIGENCE.

Amiens.—M. Dhourdin has been appointed Professor of Anatomy.

Basle.—Dr. F. Siebenmann has qualified as *privat docent* in Otiatry, and Dr. Aarau as *privat docent* in Laryngology.

Berlin.—A large number of "vacation courses for practitioners" are advertised. They commence on Sept. 26th, and continue to the end of October. The fees vary from £1 to £3.

Bonn.—The names proposed for the chair of Special Pathology and Therapeutics in succession to Prof. Rühle, deceased, are Prof. Liebermeister of Tübingen, Prof. Kiegel of Giessen, and Prof. Quincke of Kiel. A bust of Prof. Rühle is to be erected by the students in the medical clinic.

Giessen.—Dr. Gaffky of Berlin has been appointed Professor of Hygiene.

Jena.—The names proposed for the chair of Physiology in succession to Prof. Preyer are Drs. Biedermann of Prague, von Frey of Leipsic, and Gad of Berlin.

Lausanne.—The establishment of a complete university here, which has been talked of for many years, seems at last likely to become an accomplished fact, the funds having now been guaranteed.

Montpellier.—The following have been selected for recommendation to fill the chair of Anatomy:—First, M. Paulet; second, M. Bimar. For the chair of Pathology the selections are—first, M. Carrié; second, M. Massé.

Nancy.—M. Tourdes, Professor of Forensic Medicine and Dean of the Faculty, having attained the limit of age, has

been allowed to retire, and has been nominated Honorary Dean.

Rouen.—M. Brunon has been appointed Professor of Internal Pathology.

Tomsk.—Dr. Malieff, *privat docent* in Kazan, has been appointed Professor of Anatomy. Dr. Deghel, also *privat docent* in Kazan, has been appointed Professor of Histology. Mr. E. Lemm of Kazan has been appointed to the Professorship of Pharmacy.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following foreign eminent medical men are announced:—Dr. Poirier, Professor of Internal Pathology in the University of Ghent.—Dr. Nekrashevich of St. Petersburg.

VACCINATION has been accused of giving rise to almost every disease, and dental caries has been ascribed to a great variety of causes; and now "Dentist," writing to an evening contemporary, gravely states that "vaccination is a great cause of premature decay of the teeth." A reference to a paper published many years ago in an American dental journal and his own conviction are the only arguments adduced by the writer in support of this view, which would not be worthy of notice save that it offers an opportunity to remark that such unsupported statements thrown broadcast are very misleading to the public.

A RATHER serious outbreak of scarlet fever has occurred in Old Aberdeen. Last week it was discovered that thirty individuals were suffering from scarlet fever or severe sore throat. The throat affection seems to be the most prominent symptom of this outbreak, and not a few of the individuals affected present this symptom alone, but in these cases there is a history of previous attack of scarlet fever. What looked like the beginning of an epidemic of typhoid fever was also reported last week.

IN Milan the small-pox epidemic seems to be dying out, though the daily number of cases is still considerable. Appeals to the citizens to submit themselves to vaccination are still put forth at the instance of the leading physicians, the Town Council, and the Municipal Sanitary Commission, all of whom lament the fact that a hygienic regulation of such vital importance to the community is not yet made compulsory.

AN extensive outbreak of enteric fever is reported from Loughborough. So far, no special report on its cause has been received, but there are strong grounds for believing that the disease is due to the use of water supplies liable to contamination by reason of filth. How far the town is still dependent on local and surface wells will doubtless shortly be made known.

A LOCAL PAPER announces the death of Mr. J. T. Hillier, M.R.C.S., L.S.A., at the South-Eastern Railway Station at Ramsgate. The deceased gentleman, who had been in practice in Ramsgate for many years, had, it appears, walked very hurriedly to the station, accompanied by his daughter, and whilst passing the barrier leading to the platform suddenly dropped down and expired.

THE yellow fever epidemic in Florida appears to be again on the increase. Advices from Jacksonville on Aug. 29th state that 15 new cases had occurred since the previous evening. Up to the date above mentioned, the total number of cases had been 146, with 21 deaths, 64 remaining under treatment.

AN ordinance has been adopted by the Board of Health of New York, requiring that at every hospital and dispensary in the city one or more rooms shall be provided for the reception and isolation of persons suffering from contagious disease.

THE death is announced of Mr. P. H. Gosse, F.R.S., the eminent naturalist, in his seventy-eighth year.

Pharmacology and Therapeutics.

QUILAYA BARK IN CATARRH.

DR. TRECHINSKI writes in the *Ejenedelnaya Klinicheskaya Gazeta* that he finds powdered quilaya bark of great service in both acute and chronic catarrhal rhinitis. It is put in a paper bag and the patient directed to shake it up and sniff up the dust from it every few minutes. At first the secretion is increased, and is of a brownish or yellowish colour from the admixture of pus cells. After a very short time, however, it diminishes in quantity, and becomes quite colourless. The nose then becomes dry, and the passage through it clear. If the use of the quilaya is prolonged the secretion is continued, but is quite colourless. The powder, when introduced into the nares and pharynx, appears to increase the secretion from the mucous membrane, but at the same time to remove all the pathogenic matter existing there.

OXYGEN IN THE CAPILLARY BRONCHITIS OF CHILDREN.

Dr. Sinainski gives in the *Russkaya Meditsina* some notes of a case of capillary bronchitis in a child a year and a half old, which seemed likely to prove fatal, where oxygen exerted a rapid and beneficial effect, resulting in complete recovery. Hot baths, ipecacuanha, and emetics of sulphate of zinc, sulphate of copper, and apomorphia had been tried, but the pulse was decreasing, and the child was growing more cyanotic and breathing with more and more difficulty. Three or four inspirations of oxygen produced a marked change, the breathing becoming easier and the cyanosis disappearing. The next day the child presented quite a different aspect. Tonics, expectorants, and stimulants were given, and in about four days' time the patient had quite recovered. Dr. Sinainski thinks that in apparently hopeless cases, where there are signs that the blood is not sufficiently oxygenated, the inhalation of oxygen presents us with a means of obviating the danger arising from that source, and in that way of perhaps saving the patient's life.

THALLIN IN GONORRHOEA AND GLEET.

Dr. Carlos Teixeira opened a somewhat important discussion at a recent meeting of the Rio de Janeiro Medico-Chirurgical Society on the treatment of gonorrhoea. For his own part, he had found surprisingly good results both in gonorrhoea and in gleet from the use of salts of thallin. He generally begins with injections of the strength of 1 per cent. of the sulphate. In acute cases this strength is increased to 2 per cent., in some cases even to 5 per cent., Ultzmann's catheter being employed with these strong solutions. He had never seen any symptoms of irritation follow the use of thallin; but, on the other hand, it usually cut the disease short in a few days. Some of the members present stated that they were in the habit of using permanganate in acute cases, and nitrate of silver in those that had become chronic. Dr. Teixeira had, of course, had experience of these methods of treatment, but had no hesitation in pronouncing thallin to be much more efficacious.

TANNIN IN PHTHISIS.

Dr. de Viti Demareo of Otranto has found that large doses of tannin will reduce the temperature of phthisis, and will sometimes produce a most beneficial effect on the course of the disease. He prescribes it in the form of a pill, to be taken every two hours. Each pill contains seven grains and a half of tannin, with a quarter of a drop of creasote. In one case, where there were cavities in the left apex, the whole of the lung being affected, the temperature rising as high as 40° C. at night, pyrexia was obtained in twelve days, and at the end of three months the general condition

was much improved, the cough and expectoration being greatly lessened, the weight having increased, and there being an entire absence of fever. Notwithstanding the prolonged use of the tannin, no unpleasant symptoms were produced by it.

BORIC ACID IN LEUCORRHOEA.

Some maintain that otorrhœa is best treated by filling the external ear with boric acid and plugging with a tampon of, preferably, salicylic wool. The drug is also useful in leucorrhœa. First irrigate the vagina with warm water, then introduce the speculum and dry with sponges and absorbent cotton wool; the vagina should next be packed with powdered boric acid at its upper part, and with absorbent salicylic wool at the lower part. Leave this dressing in place for three or four days, and then renew if necessary, which is not often the case, because, as M. Schwartz avers, the leucorrhœa has generally disappeared.

WHITE BRYONY.

M. Petresco of Bucharest has made many trials of white bryony as a styptic. He finds that it has decided vaso-constrictor action. Metrorrhagia has been arrested by the infusion made from 25 to 30 grammes of the root in 300 grammes of water. Breine is a glucoside, which has the same effects as the root. The aqueous or alcoholic extract may be employed in doses of from 1·5 to 3 grammes. Pneumonia is frequent in Roumania, and M. Petresco has treated 577 cases with infusion of digitalis in moderate doses with great success.

TYLOPHORA.

The leaves and roots of this plant are prescribed in the Indian Pharmacopœia. The leaves are emetic, diaphoretic, and expectorant. They are employed in gastric catarrh, dysentery, and as a substitute for ipecacuanha. The dose of the dried leaves is 1·5 gramme as an emetic; as a diaphoretic and expectorant, 20 to 30 centigrammes three or four times a day. The root in large doses is also emetic, and if repeated doses are given a cathartic effect is observed. It has been found very efficacious in dysentery.

PYRIDINE.

M. de Renzy has come to the following conclusions about pyridine. Internally administered, in doses of from 6 to 10 drops in water, it is well borne; it increases the strength of the cardiac contractions and diminishes the sensations of anxiety and oppression; it diminishes the number of cardiac pulsations and also the respirations; the blood pressure is raised. Pyridine has regulated an irregular pulse. It is very valuable in angina pectoris and in cases of cardiac failure.

HEALTH OF THE ARMY IN 1886.

No. II.

THE average strength of the troops in Cyprus during the year was 636; the admissions amounted to 1072, the deaths to 11·00, the invaliding home to 11·00, and the constantly sick to 50·81 per 1000 of strength. This, however, does not fairly represent the influence of the climate of Cyprus, for all the deaths, 7 in number, occurred among convalescents from Egypt, and none among the men of the corps forming the garrison. Among the latter, the admissions were in the ratio of 10·07 per 1000; there were no deaths, and the mean sick were 43·5 per 1000. There were 11 cases, and 5 deaths of enteric fever; 9 of the cases, including all the fatal ones, "occurred in men from Egypt shortly after their arrival, the disease evidently having been contracted in that country." The other cases were apparently contracted at Trosdos, but it was impossible to trace their origin. Venereal diseases were the most prevalent, the admissions amounting to 231 per 1000 of strength; and next to them were diseases of the digestive system, chiefly dyspepsia, diarrhœa, and hepatic affections.

The only station in the Dominion of Canada occupied by our troops is Halifax, where the average force in 1886 was 1283. The admissions were 585, the deaths 2·34, the invalids sent home 17·93, and the mean sick 30·22 per 1000 of the strength. Except the invaliding, these are the lowest

ratios in any of our military commands during the year, and are all under the decennial average. Of the three deaths which occurred, one was from pneumonia, one from pneumonic phthisis, and the third by asphyxia from plugging of the air passages when drunk. There was nothing connected with the health of the troops to call for special comment.

The strength of the troops in Bermuda was 1227; the ratio of admissions was 636, of deaths 12·22, of invaliding to England 16·29, and of constantly sick 34·47 per 1000. These results show an increase in the admissions and the mean sick, but a decrease in the mortality and invaliding compared with the preceding year; with the exception of the death-rate, which is 4·65 above the average, they correspond very closely with those of the decennial period. Diseases of the digestive system were the cause of the largest number of admissions, but without any fatal cases, and fevers that of the greatest number of deaths. There were 28 cases of enteric fever, with 4 deaths, being in the ratio of 22·8 and 3·26 per 1000 of strength; 24 of the cases and 3 of the deaths were at Prospect, and the remainder at St. George's. The principal medical officer states: "While there is no appreciable cause for this disease within military limits, the highly insanitary condition of the civil surroundings and the continued presence of the disease among the civil residents lead to the belief that it is contracted by the troops outside barracks." He adds: "This is apparently borne out by the infrequency of the disease among the women and children, who rarely leave the precincts of their quarters." This, however, is not supported by the figures given in the report, the cases among the women having been in the proportion of 33 per 1000, as against 23 among the men; but the numbers are too small to justify any deduction on the subject. The principal medical officer points out that "some radical measures are urgently called for in the direction of a systematic and persistent supervision of the residences of the civil population. At present it would seem that cesspits are seldom, if ever, emptied, tanks hardly ever cleaned out, and the due protection of tanks from overflow or percolation from cesspits indifferently looked to." These remarks are not applicable to the quarters occupied by the troops, which are reported to be in a satisfactory condition.

The average strength of white troops in the West Indies was 1020; the admissions into hospital were 1169, the deaths 14·70, the mean sick 55·09, and the invalids sent home 13·73 per 1000 of strength. The troops were quartered chiefly at Barbadoes, Jamaica, and Trinidad. No information is given respecting the relative health at each of these stations. The admissions, deaths, and mean sick were much higher, but the invaliding lower, than in 1885. There was only one case of enteric fever reported. It occurred at Barbadoes, and terminated fatally; its cause could not be traced. Two fatal cases of yellow fever occurred in Jamaica; the troops were "moved to the camp at Papine and the disease did not spread."

The strength of the black troops was 1120; the admissions were 1293, the deaths 19·64, the discharges by invaliding 16·07, and the mean sick 57·25 per 1000. The admissions and deaths were much higher, but the invaliding and mean sick lower, than in 1885, and also than the decennial average. The increase in the sickness was chiefly due to fevers in Jamaica and to the prevalence of diarrhœa and dyspepsia; no case of enteric fever was admitted. The high death-rate was in a great measure the result of remittent fever at Honduras, the deaths, 8 in number, being in the ratio of 7·14 per 1000; the deaths by consumption were 3·56 per 1000, or 1 per 1000 under the decennial average.

In Western Africa the strength of the black troops was 503, of which 343 were at Sierra Leone and 163 at Cape Coast Castle. The admissions were 2988, the deaths 19·88, and the mean sick 98·49 per 1000. The admissions were double, but the deaths only 1 per 1000 above the average. More than half the admissions and deaths were by malarial fevers. "The increase is attributable partly, it is said, to the unhealthy season, and partly to the effect of climate on the newly arrived troops," the head quarters of the 2nd West India Regiment having been replaced by those of the 1st in April. There was no death from phthisis during the year. The senior medical officer at Cape Coast Castle states that the sanitary condition is far from satisfactory, but that it is being slowly improved. No complaint is made of the condition of the barracks at Sierra Leone.

The average strength of the troops at the Cape of Good Hope, including a detachment of 213 men at St. Helena,

was 3971. The admissions were in the ratio of 809, the deaths of 4·28, the invaliding of 18·38, and the constantly sick of 49·09 per 1000, all considerably lower than in the preceding year. There were 14 cases of enteric fever, with 6 deaths, being in the ratio of 3·5 and 1·51 respectively. Seven of the cases, with 5 deaths, occurred at Pietermaritzburg, 2 with 1 death at Durban, 2 at Etshowe, and the rest at Cape Town; no definite cause could be traced, but at Cape Town they "were probably contracted in the lower parts of the town, the sanitary condition of which is very bad." Venereal diseases were the most frequent cause of the admissions, having amounted to 276 per 1000, or upwards of one-third of the whole. There was no other class of diseases of which the prevalence seems to call for remark. One fatal case of enteric fever occurred among the officers, and two cases, both of which recovered, among the women.

In the Island of Mauritius the strength was only 414, among whom the admissions were 1442, the deaths 21·73, the invaliding to England 38·64, and the mean sick 75·79 per 1000; the admissions and mean sick were lower, but the deaths were 5 per 1000 higher than in 1885, and the invaliding was nearly identical in the two years. The great reduction in the admissions took place in malarial fevers, which furnished only 396 cases, as against 1478 in the preceding year. This was due, in the opinion of the senior medical officer, to the transfer of the infantry detachment from the Line Barracks, Port Louis, to Curepipe, "a place 2000 feet above sea level, with a temperature at least 10 or 15 degrees lower than that of Port Louis at the hottest period of the day, and free from malaria and other insubstantial conditions prevalent at the former place." In the few cases of malarial fever which occurred at Curepipe, it had been previously contracted in Port Louis. There was an increase in the cases of dysentery, which may have been the result of "want of care in the colder climate of Curepipe, affecting men who had suffered at Port Louis." Two cases of enteric fever were admitted, both at Curepipe, and terminated fatally. No information is given as to their origin.

The white troops serving in Ceylon averaged 949, and had 1137 admissions, 10·53 deaths, 14·75 invalids sent home, and 61·68 constantly sick per 1000. Except the invalids, which show a considerable reduction, these results differ little from the preceding year; the mortality and invaliding were considerably under the decennial average. Venereal diseases were the most prevalent class, having been the cause of 347 admissions per 1000 of strength, and enteric fever was the most fatal disease. There were 10 admissions and 4 deaths by it, being in the proportion of 10·5 and 4·22 per 1000; 8 of the cases with 3 deaths occurred at Colombo, the others at Galle. The disease is endemic among the civil population of both places. Steps are being taken to improve the sanitary condition of Colombo by filling up the old moat at the fort, which was little better than an open sewer. The admissions by all forms of venereal disease were very high, amounting to 399 per 1000 of strength, and 94 per 1000 above the average of the five preceding years. The Asiatic troops were only 97 in number, and were very healthy; no death occurred among them during the year.

The strength of the troops in China and the Straits Settlements was 2269, of whom 1132 were at Hong Kong. The admissions at Hong Kong were 1198, the deaths 7·95, and the constantly sick 51·77 per 1000; in the Straits Settlements they were 1151, 14·95, and 47·06. These ratios, compared with those for 1885, show an increase in the admissions and mean sick, but a decrease in the deaths at Hong Kong; while there has been a decrease in the admissions, with a great increase in the mortality in the Straits Settlements, the mean sick there being nearly the same in the two years. The invaliding from the whole command was 9·69 per 1000, or only one-fourth of the decennial average. Malarial fevers were the most prevalent cause of admission, having amounted to 398 per 1000 of strength, or one-third of all the cases. Continued fevers were also very prevalent, the ratio being 119 per 1000. The greatest number of this type occurred at Tanglin in the Straits Settlements, where malarial fevers were also a cause of great sickness, the admissions by them having been as high as 694 per 1000 of strength. This has been attributed to the influence of a large swamp in the vicinity of the barracks. "At Tanglin there are on the south, east, and west of the barracks extensive fresh-water swamps, covering an area of about five square miles, with patches of jungle interspersed." "At

Hong Kong the increased prevalence of malarial fevers was attributable to two causes: first, disturbance of the soil; and, secondly, an unusually dry season. The extensive excavations, cuttings in the hill side, and upturning of earth that are at present going on in the making of new roads, digging foundations for houses, works for the construction of new forts, an aqueduct, &c., have caused a disturbance of the soil over the greater part of the limited area on which the town of Victoria is built." As on many previous occasions, this turning up of the soil seems to have given rise to a great amount of fever. Both at Hong Kong and Tanglin, Eucalyptus trees have been planted in the neighbourhood of the barracks. It will be interesting to see whether this has any effect in diminishing the prevalence of these fevers, as it certainly appears to have had in some of the malarious districts in which it has been tried in Europe. There were 4 cases of enteric fever, of which 2 died, all of them in the Straits Settlements; nothing is stated as to their origin. The admissions from all forms of venereal diseases were 166 per 1000, the relative prevalence in the two divisions of the command being 198 at Hong Kong and 146 in the Straits Settlements.

The Asiatic troops consist of gun lascars stationed at Hong Kong, with a small detachment at Singapore. The average strength was 189; the cases were in the ratio of 1333, the deaths of 5·29, and the mean sick of 34·18 per 1000; the most prevalent disease was malarial fever. The only death which occurred was from remittent fever.

The force employed in Egypt during the year averaged 11,062 men, of whom 7348 were in Lower Egypt, 3503 composed the Frontier force, and 211 were at Suakim. The following shows the sickness and mortality of these divisions, the period embraced in the Suakim returns being only until May 7th:—

	ANNUAL RATIO PER 1000 OF MEAN STRENGTH.			
	Admissions.	Deaths.	Invalided.	Constantly sick.
Lower Egypt ..	1336	19·73	83·03	81·84
Frontier force ..	1161	70·51		58·60
Suakim	886	23·70		65·09
Total force ..	1272	36·88	83·39	74·17

The admissions, invaliding, and mean sick were lower, but the death-rate 7·90 per 1000 higher, than in the preceding year, the increase of the latter being entirely in the Frontier Force. The great cause of the high death-rate was enteric fever, which amounted to 21·79 per 1000 of strength, or very nearly three-fifths of the total mortality. There were 52 cases and 4 deaths of small-pox, being in the ratio of 5·4 and 0·42 per 1000. Of the cases, 14 with 1 death occurred in the Frontier Force, and the others in Lower Egypt. Of enteric fever, 733 cases and 241 deaths occurred; of these, 250 with 69 deaths were in Lower Egypt, 467 with 170 deaths in the Frontier Field Force, and 16 with 2 deaths at Suakim. Next to enteric fever the highest death-rate—3·71 per 1000—was from general injuries, and dysentery was the cause of 3·16 deaths per 1000. No case of cholera was returned during the year. Diseases of the eyes furnished a ratio of 65·6 admissions; their prevalence was very nearly alike in Lower Egypt and the Frontier Force.

The cases of sickness among the officers amounted to 759, and the deaths to 21·68 per 1000. Of the 9 deaths, 4 were from enteric fever, 1 from dysentery, 1 from pneumonia, 1 from diaphragmatic hernia, and 2 from heat apoplexy.

POISONING BY MUSSELS.—A shipwright in Liverpool was taken a few days ago to the Northern Hospital in an unconscious condition, and soon afterwards a fellow workman was conveyed to that institution in a similar state. The symptoms were nearly identical in both cases, though somewhat less severe in the second. It transpired that the men had been tempted by the presence of some mussels clinging to the bottom of one of the flats in the dock to pick them off and eat them. The life of one of the men is said to be in danger.

SANITATION AT MARGATE.

EIGHT years ago we published a description of Margate, which certainly was but little to the credit of the inhabitants and municipality of that town. It was then our unpleasant duty to explain that the death-rate was higher than it was natural to expect, considering the marvellous climate which the town enjoys. These unfavourable statistics were probably due to bad sanitation, and notably to the prevalence of cesspools. Some of these cesspools were in dangerous proximity with the water supply derived from the Tivoli wells, and the inhabitants, to avoid the cost of emptying, sought to render them porous. The few sewers that existed in the older portions of the town were so built that they formed syphons and retained sewage. The old drain in Love-lane was three feet below its outfall! Further, when the tide rose, especially during the spring tides, it flooded these sewers, and sometimes forced the sewage up into the basements of badly situated houses. These statements caused considerable commotion at the time. Deputations came up to London and were received at the Local Government Board. Three years previously, in 1877, a report and scheme for draining the borough of Margate had been issued by the borough surveyor, and the Local Government Board gave its sanction to this project. Consequently we were under the impression, so far back as eight years ago, that the cesspools would soon be abolished, and that Margate, as a health resort, was no longer satisfied to remain so far behind the age in practical hygiene. This, however, was an illusion. Years were wasted in futile discussions. The admonitions of sanitary reformers, and the willingness of the Local Government Board to assent to any reasonable scheme and grant the necessary powers for raising the money, were all of no avail in breaking down the dead weight of blind opposition based on ignorance, prejudice, and the personal interests of those who could not take a broad view, and failed to realise that in the long run their personal advantage would be best secured by promoting general prosperity.

In due course, what had so often been prophesied at last occurred. An epidemic of typhoid fever broke out, and the scare which ensued has entailed more loss on the inhabitants of Margate than the cost which would have been incurred by the adoption of an energetic sanitary policy. The prevalence of typhoid fever awakened the attention of the Local Government Board, and Dr. Page was sent to report on the epidemic. The result was the publication in 1887, under the authority of the Local Government Board, of a report which confirmed, in every important particular, the complaints we had made in 1880. There had been sixty cases of typhoid fever, with the very high proportion of nineteen deaths, and the most probable cause was the contamination of the water supply, due, in a measure, to the cesspool system. Let us hasten to add that this very severe lesson has borne good fruit. Some important sanitary improvements have been realised.

First among these must be mentioned the new water supply. A fresh boring has been made at a considerable distance from town, in the Dane valley. Adits have been dug in the chalk, a powerful engine pumps up the water, and the yield (about 600,000 gallons per day) is enough for the entire town. There are no habitations near, and the water so far has proved to be as pure as it is possible to expect when derived from the chalk. Hardness is its only fault. Last year this new supply of water was only partially used, and yet there were but three deaths from typhoid fever, while nineteen persons had died the previous year from this cause. There is a theory current that the water from the old supply, known as the Tivoli wells, is only dangerous when it is almost exhausted. This would of course happen in the summer, precisely when the town is most crowded by visitors. Samples of the water have been taken at various periods, analysed, and found pure. On other occasions—and some of these are quoted in Dr. Page's report—the water was shown to be impure and dangerous. This unfavourable result, it is supposed, only ensues when it is necessary to pump very low down. It is, therefore, urged that, should the new water-supply run short, there would be no danger if a portion—just the upper or surface portion—of the old or Tivoli supply were

employed. For our part, we do not see that there is evidence sufficiently conclusive to prove this theory, however plausible it may seem. As the new water-supply is both ample and pure, we would urge the necessity of removing all doubt, all hesitation, from the minds of the public by definitely abandoning the old and guilty Tivoli wells. Their water is proved to be occasionally bad; it cannot be said how often it is bad. Why incur any risk by having anything to do with it?

The second great improvement accomplished has been the digging up and relaying the old and defective sewers in the low-lying part of the town. The old drain in Love-lane was not only found to be three feet below its outfall, but it was built in different sections. It has now been cleaned, filled up with concrete, and a new sewer laid. Altogether about 2000 feet of new sewers were built some two years ago. The outfall, which is near the jetty, was also relaid at a deeper level and carried farther out to sea. Then a disconnecting chamber, with penstock and cast-iron back flap, was built just in a line with the commencement of the jetty. Here sewage can accumulate, and, by raising the penstock, be used to flush out the pipe that runs into the sea. On the other hand, when the tide rises it presses against the back flap, which thus forms a hydraulic valve, and closes the sewer against the ingress of the sea. The abominations that used to occur through the flooding of the basements in the districts below high-water level are therefore rendered impossible, and this grievance is now buried with the past. All these alterations in the drains were accomplished two years ago, when Mr. Green, the ex-mayor, was chairman of the Drainage Committee. To this gentleman's energetic initiative the inhabitants of Margate are much indebted for the improved reputation of their town. Mr. Alderman Hermitage, against much opposition, carried out the new waterworks, and to him in a great measure may be attributed the saving of human life, which the most recent statistics seem to indicate. In all these undertakings the borough surveyor, Mr. Alfred Latham, has brought to bear his experience and technical skill, carrying out the new works with energy and precision. We are glad to note, among other innovations, that the borough surveyor is now relieved from the duties of sanitary inspector, and a special sanitary inspector, devoting his whole time to sanitary work, has been appointed. Acting under the instructions of the medical officer of health, Dr. Sealiffe, who has also been recently appointed, a house-to-house sanitary inspection was commenced before the present season, and will be resumed when the season is over. In some of the worst parts of the town 155 houses were inspected, which led to sanitary alterations in forty-five houses. Wells were filled up and the water-supply improved in six instances. Again, we must record that the scavenging is admirably performed in Margate. The household dust and refuse are removed every twenty-four hours; the dustbin nuisance is almost unknown.

In respect to the enjoyments provided for the visitors to Margate there is likewise remarkable progress. A sea wall and splendid promenade has been built between the old port and the Marine Parade, so that carriages and horses may now drive right round the bay. On the other side of the jetty, some land redeemed from the sea is now converted into a resort for pleasure seekers. Excellent tepid swimming-baths for both men and women are provided, so that bathing and swimming in sea water may still be continued when the weather outside is too boisterous or too cold. The ventilation of the Assembly Rooms and theatre have also been improved.

Unfortunately, there is also a dark side to the favourable picture we have drawn. Margate still labours under the stigma of the cesspool system. These cesspools, cut in the chalk, vary from twenty to forty feet in depth, are ten to twelve feet broad at the base, and three at the top. There is no attempt to make them watertight. On the contrary, the men by whom they are emptied make a boast of scraping the sides, so as to remove the grease which blocks up the pores of the pit and prevents the water oozing away. These cesspools, in spite of their porous nature, cost a large amount of money to empty. Estimating the number at 3000, and the cost at £3 or £4 each, we have an annual outlay of from £9000 to £13,000, equal to a rate of from 2s. 6d. to 3s. 6d. in the pound. The scheme now actually proposed for abolishing the cesspools and substituting sewers would, in order to pay the annual cost, the interest on loan, and gradual amortisation, only necessitate the imposition of a

rate of 8½d. in the pound. The householders of Margate would therefore realise a great saving if the town were properly drained. In fact, after many years of resistance, it is now admitted by the authorities that sewers must be built.

There is, however, one portion of the town—precisely the portion where sewers already exist, though with some exceptions they only carry surface or rain water—which cannot be drained, as at present, by gravitation. The actual outfall into the sea by the jetty between the bathing places could not be tolerated if the sewer received the sewage proper of the town. It is therefore desirable for the lower portion of Margate to drain away from the sea and to raise the sewage by some method of pumping. Margate is divided by the valley of the Dane. It is proposed to run on both sides of this valley intercepting main sewers, into which all the upper portions could drain by gravitation. These two mains would join in the rear of the town and be continued to a convenient spot several miles away and there discharge into the sea. The sewage gathered in the part lying below these intercepting mains must be raised up to their level by artificial means. It is in the use of these artificial means that the principal difficulty arises. Two methods have been proposed: hydraulic pumps similar to those which are now in use at Friern Barnet, or else the Shone ejectors. A fierce paper warfare has been raging between the advocates of these rival systems, and the problems involved are certainly of the greatest interest. As the matter now stands, we must confess that the Shone system, which, as we had recent occasion to notice, gives excellent results at Henley-on-Thames, has not received in Margate fair consideration. Should the authorities there now decide in favour of the hydraulic process, their example, it is said, will lose much of its weight and interest from the fact that they have only thoroughly investigated one side of the question. They are called upon to pronounce a verdict on the rival merits of compressed water as a motive power to work automatically a lifting pump, and a system for automatic lifting of sewage by a contrivance in which compressed air is the motive power. This is surely a very grave and important question. We are all, and in all parts of the country, interested in its solution. Yet while the engineer advocating the hydraulic automatic pump has been called upon to prepare a scheme and provided with every possible information and assistance, the engineer who urges, on the contrary, the superiority of the pneumatic ejector has not, we are informed, been consulted. This is all the more unfortunate, as in the pneumatic system we have not only a means, economical and efficacious, for lifting sewage, but also many important innovations in drainage generally that are well worth careful study. We do not ourselves wish to prejudge the question, but we think it only right to claim for both sides an equal hearing.

In any case, no time must be lost. Margate cannot retain its popularity as a health resort in the face of its many rivals if it continues to drain into cesspools. It is a notable fact that the cases of typhoid fever—with one exception, when the importation was clearly proved—all occurred in houses with cesspools. This in itself should suffice. The water supply, to the credit of the town be it said, is now altered. It remains to abolish the cesspools. This must be done without further delay.

ABERRANT FORMS OF LUPUS.

THE name of M. H. Leloir has long been associated with the investigation of the characters presented by the rarer forms of lupus, and he has recently produced an interesting monograph dealing with three of these varieties in their nosological aspect. To these he gives the names *variété colloïde*, *variété mucocœne* or *myxomatœuse*, and *variété scléreuse*. Of the first two varieties he gives the following description:—

"In the first variety the lupus tubercles have a somewhat glassy appearance, and are semi-transparent. They sometimes enclose small cysts arising from the colloid degeneration of parts of the constituents of the lupoid mass. On dissection these lupoid nodules are found to consist of masses which may be stained a yellow-orange colour by picrocarmin, having a glassy appearance, and presenting the characters of colloid degeneration. These masses are found in the central parts of the lupoid follicles. They

are rendered conspicuous by their yellow and glassy appearance in the mass of embryonic cells which surrounds them. They commonly enclose one or two giant cells difficult to distinguish, in which or in their neighbourhood may sometimes be discovered occasional tubercular bacilli, but usually after a long search and numerous sections. These lupoid nodules are almost entirely destitute of bloodvessels.

"In the second variety the lupus presents itself under the form of soft transparent tubercles, having a somewhat gelatinous appearance. These tubercles are usually traversed by minute bloodvessels, easily seen and easily isolated, and bear upon the surface a fine vascular network. Sometimes there are to be noticed on the surface of these tubercles small transparent points, which are nothing but minute cysts containing a mucous substance. These tubercles ulcerate only with great difficulty, and very rarely. In this variety the lupus infiltration is generally diffused. The embryonic cells which compose it are disseminated irregularly and comparatively sparsely through the skin. The connective tissue of the skin has lost its fasciculated appearance, and usually looks somewhat softened, coagulated, and more or less like gelatine. Elastic fibres have almost wholly disappeared. It is with difficulty only that here and there some remnants of the dermal connective tissue can be found. At these points one may often observe a mucous degeneration of the broad cells of the connective tissue. In sections stained with picrocarmin, the embryonic cells which compose the diffused lupoid infiltrate are rendered visible by their red tint upon the yellow-coloured skin tissue. Some of these embryonic cells have themselves undergone mucous degeneration. They have a tendency to group themselves about the dilated bloodvessels which abound in this lupoid tissue. It is only exceptionally that they form large masses or nodules constituting the characteristic follicle of lupus. Still more exceptional is it to find giant cells in these scanty lupoid follicles. The search for bacilli is exceedingly difficult. Commonly none are found. I have sometimes made as many as sixteen sections, and then only found one or two. The bacilli are always discovered in giant cells or their near neighbourhood. Unlike the former variety, these tubercles are traversed by numerous bloodvessels, in many cases dilated."

The writer then gives some account of his inoculation experiments, and draws the following conclusion: "The three preceding aberrant varieties, therefore, of *lupus vulgaris*—the colloid, the mucoid or myxomatous, and the sclerosed—are, like the classical form (i.e., *lupus vulgaris*), merely attenuated forms of tubercle of the integument. I say *attenuated*, because these forms contain only a small number of bacilli; because the animal experimented upon contracts the infection much more slowly than if true tubercle were employed; and because it sometimes happens, at least in inoculation with very large quantities of lupus, that the inoculation may be negative."

BRITISH DENTAL ASSOCIATION.

THE opening meeting of the Association was held on Thursday, Aug. 23rd, in the lecture theatre of the School of Physic, Trinity College, Dublin, presided over by Mr. J. R. Brownlie, the outgoing President. It was intimated that an invitation had been received from the Southern Counties Association to hold the meeting for 1889 in Brighton, which after some discussion was accepted.

Mr. Cunningham read a report by a special committee appointed by the Representative Board, in which they recommended that more attention should be paid to the teeth of recruits for the army and navy, and that some provision should be made for the purpose. The committee memorialised the navy authorities last April, and asked that dental practitioners should be allowed to examine the teeth of recruits for the navy, but the proposal was not accepted. A report was also read from a sub-committee recommending that attention to the teeth of school children should be made compulsory.

A motion was next adopted thanking the Provost and senior Fellows of Trinity College, the President and Council of the Royal College of Surgeons, and the Chancellor and Standing Committee of the Royal University, for their help in making the meeting in Dublin so great a success.

The outgoing President (Mr. J. R. Brownlie) then delivered a valedictory address, in the course of which he said that the passing year had witnessed a new departure in the development of the Association. It had for the first time met upon Irish soil, and on the invitation of an Irish branch. Certain it was that the welcome which their Irish brethren had prepared for them, and the arrangements entered into for the furtherance of the work of the Association, could not but inspire the most sanguine anticipation from the formation of an Irish branch.

A vote of thanks having been accorded to Mr. Brownlie, the chair was taken by the new President (Mr. D. Corbett), who delivered an inaugural address. He said that they saw in the Dental Museum the evidence of refined scientific investigation, skilled manual and digital dexterity, and mechanical contrivances of no ordinary merit. He referred to the means of instruction at his disposal when he commenced his professional education, and the laborious toil associated in those days with the construction of a set of artificial teeth, the time consumed, and the very defective result.

Mr. Theodore Stack read a paper on Dental Ethics. The public, he thought, having passed the Act of 1878, should, in their own interest, contribute to support dental hospitals, at least in all large centres. They should treat the dentist as an educated gentleman, and, recognising that he had expended a large amount of capital on his education, regard his opinion and his work as entitled to fair and cheerful remuneration.

Mr. Corley read a paper on Anæsthetics in Dental Surgery, and dwelt on the choice of anæsthetics, the methods and appliances for their use, and the need of proper precautions being taken.

Mr. A. Baker read a communication on the Annual Museum and its Contents, in which he directed attention to such objects as were of particular interest.

On Friday, August 24th, Mr. W. Booth Pearsall read a paper on the Use of the Imagination in the Design and Construction of Artificial Teeth; and other papers were read by Messrs. Murray, Amos Kirby, A. J. Watts, and George Cunningham.

At the termination of the meeting, Mr. Daniel Corbett intended to have entertained the members of the Association at a garden party in the Fellows' Garden, Trinity College, but the heavy showers of rain prevented this taking place. The same evening the annual dinner of the Association was held in the Royal University at Earlsfort-terrace, while later on a conversation took place at the College of Surgeons. The Dental Museum was divided into four sections—viz., Manufactures, Literature, Surgery, and the Work-room. The Surgical Department contained about 800 specimens of phenomenal development of teeth, and numerous plaster models of cleft palate and dental irregularities. There were some dental instruments exhibited which were used in the sixteenth century, and a rare example of a gorilla's jaw with a canine tooth implanted in the ramus, besides various specimens of comparative pathology. Mr. Howard Mummery exhibited a series of interesting photographs illustrative of the various forms of diseases of the teeth in human beings and in the lower animals.

Saturday was devoted to excursions, and the members visited various places of interest, including Guinness's Brewery, Howth, and Bailey Lighthouse.

DEATH UNDER CHLOROFORM.

WE are indebted to Mr. E. Caudwell, house physician to the Westminster Hospital, for the following particulars of the recent death of a patient whilst under chloroform at that institution.

H. L—, aged forty-six, came to the hospital on July 22nd, 1888, in order to undergo an operation for malignant growth at the back of the pharynx. The patient was fairly well nourished, and seemed a very healthy man, and had always been so until four months ago, when he began to complain of dysphagia, pains in the head, and fetid discharge from the mouth. He was informed that his disease was incurable, and that an operation could only relieve him for a short time. As he seemed very eager to undergo any operation that might afford him relief, it was resolved to remove as much of the growth

as possible by the galvano-cautery. While in hospital his more pressing symptoms were great dyspnoea at night, fetid discharge from the mouth, dysphagia, and pains in the head. On August 21st, 1888, he was taken into the room adjoining the theatre, where chloroform was administered by the house physician, Mr. E. Caudwell, Junker's inhaler being used. The patient took the anæsthetic well, and in about two and a half minutes was fully under its influence. The house physician then directed that he should be carried into the adjoining operating theatre. Before, however, the patient could be moved he suddenly stopped breathing and became livid in the face; the heart still continued to beat, the rate being about 60 to the minute. Efforts were made at once to restore respiration, but to no purpose, for the heart ceased to beat about two minutes after respiration had stopped. The amount of chloroform given was a drachm and a half.

The post-mortem examination was made twenty-four hours after death. The following are the notes made by Dr. Hebb:—Body fairly well nourished; rigor mortis persistent. Skin of face purplish. Brain: weight 51 oz.; dura mater adherent; pia mater and nervous tissue quite normal. Examination of mouth, palate, and pharynx shows a new growth about the size of a large turkey's egg. It is lobulated, white in colour, softish, but coherent in consistency. It grows from the right and upper part of the pharynx, involving the palate and right side as far as the uvula, and hangs down so as almost to touch the epiglottis. No enlarged glands. Right pleural surface adherent; left normal. Lungs emphysematous; certain amount of œdema; no marked congestion. Weight of heart 11 oz.; small amount of decolourised clot in right ventricle; blood slightly frothy in same. No enlargement of heart; endocardium normal and valves competent; heart-muscle firm and red. Pericardium adherent over an area equal to a sixpenny-piece, about the middle of the left ventricle; adhesion old. On opening the thorax there was a faint odour of chloroform. The rest of the organs were normal.

The patient died from sudden arrest of the respiratory function; and it was found at the necropsy that there was quite enough to show that this resulted from a mechanical cause—namely, the new growth suddenly occluding the aperture of the larynx.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

*Epidemic Diphtheria at Buxted and Maresfield, by Dr. AIRY.*¹—The two parishes dealt with in this report lie on the southern slopes of Ashdown forest in the northern part of Sussex, and are within the Uckfield rural sanitary district. They are believed to have been free from diphtheria for some years until September, 1886, when the disease appeared in Buxted, but no definite origin could be detected. The cases were not reported to the sanitary authority, and no proper disinfection was practised. Following on these attacks, and doubtless connected with them, came others at Hobbs' Farm, Hurstwood, Fiveash Down, Maresfield, and other hamlets and places; the sequence of the attacks being fully described by Dr. Airy. There were also during the early part of 1887 a number of cases of sore-throat recognised more or less certainly as diphtheria in the extreme western part of the area included in the inquiry, at Old Forge and Fairwarp, the maintained epidemic continuing until March 22nd of this year, when the last fatal attack occurred. At this stage the history ceases, probably to commence again with the present autumn. The story is an oft-repeated one, in which a large proportion of attacks could not be perfectly traced to any definite source; whereas, in other cases, personal infection, and this especially in connexion with school attendance, was the principal means of conveying the infection. In some cases, too, conveyance of the poison seems to have been due to clothing belonging to infected families;

¹ Eyre and Spottiswoode, East Harding-street, E.C.; Adam and Charles Black, Edinburgh; and Hodges, Figgis, and Co., Dublin.

and this although the garments were not worn by children who had been themselves attacked. Numerous sanitary defects were discovered during the course of the inquiry, and investigation was made as to the possible influence of milk supplies and other conditions in the distribution of the infection; but no sufficient explanation of the occurrence was forthcoming. The need of some means of isolating first attacks of diseases, such as diphtheria, is regarded by Dr. Airy as constituting the most serious defect in the sanitary administration of the district; and it is very certain that in such localities as were included in the inquiry the homes of the labouring classes can never afford a means for safely separating an infectious sick child or other person from the remainder of his family or from neighbours. Even a small cottage kept in readiness to receive such cases would be an invaluable addition to the sanitary defences of a rural village or of a group of hamlets.

High Rate of Mortality at Dolgelly, by Dr. Parsons.—This small town of nearly 2500 inhabitants has acquired some notoriety from a death-rate in excess of that which it ought to have; and hence investigation was made into its sanitary state. The town has been built with an entire absence of preconceived plan. It consists of an irregular network of narrow lanes, and the houses are often much cramped for space. Some are placed back-to-back; others are damp for want of eaves-spouting; and the interiors are, in many cases, miserably contrived. Bye-laws to secure some amendment of this in the future have been adopted, but they are entirely disregarded; and whether the maintenance in an efficient and wholesome condition of sewers and drains or other matters are considered, the outcome of the inquiry shows that a much closer attention to the sanitary condition of the place is needed at the hands of the Local Board. There is, however, a good water supply, a fair system of general sewerage, and no special excess of excremental nuisances. It is especially as regards its general mortality, and its death-rate from phthisis and other diseases of the respiratory organs, that Dolgelly compares so unfavourably with the corresponding rates for England and Wales; whereas the reverse is the case as regards the group known as that including the principal zymotic diseases. The housing of the people in cold, damp, ill-ventilated dwellings seems largely responsible for the excess of deaths, and to this the sanitary authority should address their efforts.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Giles District.—In this metropolitan district the birth-rate during 1887 was 26·7 per 1000 inhabitants, and the corrected death-rate was 23·0 per 1000, which is almost identical with that both for the preceding year and with the decennial average. The percentage of deaths under one year to births was high—namely 17·8, as opposed to 15·9 in the metropolis as a whole. Details are given by Mr. S. R. Lovett as to the zymotic diseases, which, as a group, caused a death-rate of 3·0 per 1000, against 2·6 for the preceding year; and also as to the action which has been taken in the district under the Artisans and Labourers' Dwellings Acts and under Cross's Act. The sanitary work is well maintained, and it is satisfactory to note that, although the demands made by the department often involve considerable expense, they are promptly obeyed.

South Shields Urban District.—In this borough the death-rate for 1887 was 21·3 per 1000, and the zymotic rate 2·69, some excess in the latter being mainly due to a prevalence of scarlatina and measles; and, in connexion with this circumstance, Dr. Campbell Munro says that, notwithstanding all the efforts made by his department, the action taken remains, to an important extent, ineffective and unremunerative for lack of a system of compulsory notification. No less than 244 patients were admitted during the year into the borough infectious hospital, the cost of maintenance per head reaching £3 10s. 5d., with an average stay of forty-one days. As to general sanitary work, reference is made to the value of regular and frequent inspection, a process that is impracticable in South Shields with an inspectorial staff of only one person for 68,000 inhabitants; and instances are given to show how advances in sanitary matters are rendered futile, by reason of the want of means for supervising the sanitary circumstances of the district. In concluding his report, Dr. Munro urges that at the west end of the town, where bricks and mortar are now making rapid encroachment, an effort should be made to retain some open space. The advice

is of the utmost importance, for nothing can possibly compensate in the future for the absence of adequate breathing spaces in the midst of our large and ever-growing towns and cities. Appended to the report is an interesting review of the vital statistics of the borough for seventeen years, which shows a considerable saving of life. Indeed, comparing 1871-80 with 1881-87, no less than 1855 lives have been saved in the latter period which would have been forfeited had the deaths been maintained at the rate of the previous period.

Tunbridge Wells Urban District.—This district has more than once been favoured with a low death-rate, and that for 1887 was only 13·4 per 1000; the zymotic rate was also only 0·4 per 1000, which is most satisfactory for a district of some 30,000 inhabitants. Fortunately the town possesses a sanatorium, which is made useful in preventing the spread of infection by reason of an early notification of the infectious fevers. There is also a summary of excellent current sanitary work in Mr. W. Samford's report, together with evidence that supervision of the conditions liable to affect health is well maintained.

Northampton Urban District.—Northampton had an excess of zymotic diseases last year, and scarlet fever was very generally prevalent, the greatest fatality occurring amongst the labouring classes, who have no means for securing isolation in their own homes. This town has so far failed to appreciate the need of an efficient sanitary hospital. It only possesses a shed, which is not worthy of the name of a hospital; and when scarlet fever or a similar disease comes, the aid of the Poor-law authority is sought, and, as the result of this pauperising tendency, the attempt at isolation is almost as ineffectual as if no means whatever existed for carrying it into effect. It seems time that the results in other towns should be taken to heart in Northampton, which contains so large a proportion of houses in which effectual isolation cannot possibly be maintained. Measures of disinfection seem to have been adopted on a fairly large scale; but these processes rarely succeed under the circumstances of a town, except as a part of a properly organised system for the prevention of infection. The general death-rate for 1887 was 18·8 per 1000 living.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5412 births and 3265 deaths were registered during the week ending August 25th. The annual rate of mortality in these towns, which had been 17·6 and 16·4 per 1000 in the preceding two weeks, rose again last week to 18·1. During the first eight weeks of the current quarter the death-rate in these towns averaged but 16·3 per 1000, and was 4·8 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 11·5 in Bristol, 13·0 in Brighton and in Derby, 13·1 in Sunderland, and 13·4 in Birmingham. The rates in the other towns ranged upwards to 24·1 in Leeds, 27·4 in Leicester, 28·7 in Wolverhampton, and 31·8 in Preston. The deaths referred to the principal zymotic diseases, which had increased in the preceding four weeks from 311 to 486, further rose last week to 639; they included 401 from diarrhoea, 71 from whooping-cough, 68 from measles, 49 from scarlet fever, 25 from diphtheria, 23 from "fever" (principally enteric), and only 2 from small-pox. No death from any of these principal zymotic diseases was recorded during the week, while they caused the highest death-rates in Leicester, Wolverhampton, Preston, and Leeds. The greatest mortality from diarrhoea occurred in Wolverhampton, Norwich, Salford, Liverpool, Preston, Leeds, and Leicester; from whooping-cough in Sheffield, Birkenhead, Manchester, and Wolverhampton; from measles in Bradford; from scarlet fever in Preston, Norwich, Derby, and Blackburn; and from "fever" in Birkenhead. The 25 deaths from diphtheria included 17 in London and 3 in Manchester. Small-pox caused 1 death in Nottingham and 1 in Oldham, but not one in London or in any of the twenty-five other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 4 small-pox patients at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 783 at the end of the week, against numbers declining in the pre-

ceding seven weeks from 924 to 774; 83 cases were admitted during the week, against numbers declining in the previous four weeks from 105 to 66. The deaths referred to diseases of the respiratory organs in London, which had been 183 and 167 in the preceding two weeks, were 172 last week, and were 7 below the corrected average. The causes of 78, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Sunderland, Portsmouth, Brighton, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Sheffield, Halifax, and Oldham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 15·6 and 17·3 per 1000 in the preceding two weeks, declined again to 16·7 in the week ending Aug. 25th; this rate was 1·4 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 13·5 in Aberdeen and 13·9 in Dundee, to 19·2 in Perth and 21·1 in Paisley. The 421 deaths in the eight towns showed a decline of 17 from the number in the previous week, and included 16 which were referred to diarrhoea, 10 to "fever" (principally enteric), 5 to measles, 4 to scarlet fever, 4 to whooping-cough, 3 to diphtheria, and not one to small-pox; in all, 42 deaths resulted from these principal zymotic diseases, against 44 and 43 in the preceding two weeks. These 42 deaths were equal to an annual rate of 1·7 per 1000, which was 1·9 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 22, 18, and 20 in the preceding three weeks, declined last week to 16, of which 11 occurred in Glasgow. The 10 deaths referred to "fever" showed a considerable increase upon the numbers returned in recent weeks, and included 3 in Glasgow, 3 in Edinburgh, and 2 in Greenock. The 5 fatal cases of measles, of which 4 occurred in Paisley, were within 1 of the number in the previous week; while the 4 of scarlet fever showed a decline of 2. The 4 deaths from whooping-cough were fewer than in any previous week of this year, and were all returned in Glasgow; and the 3 fatal cases of diphtheria corresponded with the number in the previous week. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 45 and 55 in the preceding two weeks, further rose last week to 70, and exceeded the number in the corresponding week of last year by 2. The causes of 62, or nearly 15 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 21·1, 19·4, and 18·2 per 1000 in the preceding three weeks, further declined to 17·9 in the week ending August 25th. During the first eight weeks of the current quarter the death-rate in the city averaged 19·6 per 1000, the mean rate during the same period being 16·2 in London and 15·5 in Edinburgh. The 121 deaths in Dublin showed a further decline of 2 from the numbers in recent weeks; they included 4 which were referred to diarrhoea, 3 to measles, 2 to "fever" (typhus, enteric, or ill-defined), 1 to scarlet fever, and not one either to small-pox, diphtheria, or whooping-cough. Thus 10 deaths resulted from these principal zymotic diseases, against 21, 12 and 13 in the preceding three weeks; these were equal to an annual rate of 1·5 per 1000, the rate from the same diseases being 3·8 in London and 1·2 in Edinburgh. The 3 fatal cases of measles were the first recorded in the city since the middle of July; while those of "fever" and diarrhoea showed a decline from the numbers in the previous week. Six inquest cases and 6 deaths from violence were registered; and 42, or more than a third, of the deaths occurred in public institutions. The causes of 12, or 10 per cent., of the deaths in the city were not certified.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for efficient vaccination in their respective districts: Mr. John Winnall George, public vaccinator of the Malvern and Leigh districts, Worcestershire (fourth time); Mr. John Hamilton, Swadlincote, Burton-on-Trent (sixth time).

Correspondence.

"Audi alteram partem."

IN WHAT DOES CANCER CONSIST?

To the Editors of THE LANCET.

SIRS,—No disease has a more extensive literature than cancer (I use the word in its older and more comprehensive sense), and such being the case, one is somewhat chary in adding to its unwieldy bulk; but I observe that you are liberal in allowing your readers to express their views on this dread disease, and therefore I venture to state what I conceive to be the true explanation of the case, and I am all the more willing to do this because my views, although largely in harmony with recent thought, were formed quite independently; I mean that they have been uninfluenced by the modern literature of the subject. I mention this fact simply and solely because it is of argumentative value. Cancer is a localised tissue dissolution. Of this there can be no doubt, for the process fulfils all the terms of Herbert Spencer's formula. The dissolution is however incomplete, for were it complete there would be death of the part. It is necessary to observe that such partial tissue dissolution may occur in two ways: (1) by a partial undoing of evolution, as in progressive muscular atrophy, in which the anterior ganglion cells undergo a process of inverted evolution; (2) by a more or less complete dissolution, followed by partial evolution, as in the production of an imperfect tissue after inflammation. Now it is evident that in both these cases the result is the same—namely, a falling away of the affected tissue from its previous evolutionary level; the process is, in fact, a dissolution. There is no need to state here the exact part taken by dissolution and partial evolution, respectively, in the several varieties of cancer: it is sufficient to observe that the sarcomatous process is almost entirely dissolutionary, but that partial evolution plays an important part in the carcinomata, for in them the affected tissue is first reduced to an embryonic form, and then subsequently undergoes an incomplete evolution. Inasmuch as cancer is a localised, incomplete dissolution, it follows that the process must be largely tinged with an element of reversion, for if an organic aggregate undergoes partial dissolution—becomes partially unbuilt, or what comes to the same thing, becomes partially rebuilt after having been previously unbuilt—it must tend to exhibit characters which it displayed at some one or other period of its evolutionary career.

Let us now seek for the cause of the cancerous dissolution. Let S represent the structure of an individual tissue cell and its connexion with other cells; let E represent the cell environment. Then the formula S + E will represent a set of material conditions, out of which the vital action issues. The behaviour of S will of course largely depend upon the nature of the E. If the E be normal, the S will run through its vital career in orderly fashion, subject of course to such vitiated hereditary tendencies as it may contain; but if the E be abnormal, the S will undergo change. Now, in cancer, the cell suddenly breaks away from its connexion with other cells, and subsequently undergoes a series of dissolutionary and partial-evolutionary changes. There is only one way in which this can be effected—namely, by an alteration in cell environment. Sudden dissolution can never occur in any aggregate without sudden alteration of environment. We may therefore say with *absolute certainty* that the cancerous process is due to alteration in the cell E. What is the nature of this E? I have no doubt that it consists of a parasite. The arguments in favour of this view are so obvious to anyone who will think over the matter that there is no need to mention them here. We have arrived thus far: cancer is a localised reversion due to a specific parasite. It is now necessary to add that the reversion is not true or exact; cancerous tissue was never at any evolutionary epoch normal. A mal-environment of sufficient virulence to cause cancerous dissolution cannot possibly lead to a true reversion. Let us suppose, for the sake of argument, that the affected tissue undergoes in the first place a true reversion; the parasitic irritation would very soon cause vitiation of the same—a natural variation, as it were, of the true ancestral state; for unless the cell environment be exactly like that which obtained during the particular evolutionary epoch to which the reversion belongs, we cannot possibly

get a true reversion. I have, for argument's sake, supposed the reversion to be true in the first place, but it is obvious that the process will be vitiated from the very beginning. We may therefore define a cancer as a *localised vitiated reversion due to parasitic irritation*.

An apparent difficulty here presents itself. The secondary tumours are more or less exact reproductions of the primary tumour. How, it may be asked, are we to account for the tissue secondarily affected undergoing the same process of reversion as that primarily affected, even although the evolutionary history of the two be quite different? I can only give one example—squamous epithelioma secondarily affecting the glands of the neck. How can lymphoid tissue and mucous membrane revert to the same epitheliomatous type? I pass by the spermatic theory as unworthy of mention; indeed, this theory involves a misconception of what true spermatic influence is. The explanation is as follows: *epithelial cells plus the specific parasites* are carried away from the primary growth to the seat of secondary affection, and in this situation these epithelial cells behave in exactly the same way, under the same form of irritation, as at the primary seat, the tissue secondarily affected only sharing in the process in so far as it may form the stroma of the tumour. The epithelioma parasite can probably only thrive in a certain kind of epithelium. If carried to a tissue containing the proper epithelium this tissue becomes actually transformed like the primary tissue; but if the parasite be carried to a tissue not containing the needful epithelium, the part will not become secondarily affected unless some epithelial cells are carried away from the seat of primary affection. Space will not allow me to give other examples.

Finally, the question has to be answered: On what does proclivity to cancer depend? In my view, every individual possesses the *potentiality of every form of cancer*. Given the specific cell mal-environment of a certain tissue, and the same form of dissolution or vitiated reversion will occur in all. If only the parasite can multiply in the body and manufacture the poison (which is probably the immediate cause of the dissolutionary process) malignant change will occur in all. The immunity from cancer depends upon the ability of the tissues to prevent this parasitic growth, and not upon their inability to take on malignant change if subjected to the necessary mal-environment; and, on the other hand, proclivity to cancer depends upon the inability of the tissues to prevent this parasitic growth.

I am, Sirs, yours faithfully,

August, 1888.

HARRY CAMPBELL, M.D.

THE BACTERIOLOGY OF YELLOW FEVER.

To the Editors of THE LANCET.

SIRS,—Since the publication, in your issue of July 21st, of your well-drawn abstract of the *résumé* given by Dr. Delgado and myself of our bacteriological investigations on yellow fever in Havana, we have obtained results confirmatory of our previous observations, and suggestive of a modification in the methods of cultivation which, if uniformly adopted, might avoid, it is hoped, future discrepancies between different observers.

Some of the criticism to which our "tetragenous microbe" has given rise might perhaps have been obviated by substituting some more comprehensive name, inasmuch as the characteristic feature of the *Meristère* (van Tieghem), consisting in the division of successive cocci in two perpendicular directions, does not always, in our case, culminate in the production of a pure tetrad. In drop cultures from pure colonies but a few days old, monococci and diplococci, and also chains mostly of four, but sometimes of three, five, or six, are seen oscillating and twisting about in the field. The monococci split into diplococci, and the latter into triangular groups of three and in tetrads. Many are seen as diplococci which in reality are perfect tetrads, as shown when, by twisting around, the four beads momentarily come into view, and also when, after drying and staining, the number of tetrads is found to be much greater than they appeared to be in the liquid drop. The chains are not usually straight, but more or less curved, or even bent at an angle; their formation may be due to some circumstance which has delayed the tendency to a lateral development. The cocci in these chains are apt to multiply *in situ* without dissociating from the others, whereby new beads appear at the sides or extremities, producing longer

irregular chains with; maybe, a tetrad in its course. During the "monococcus stage" the grouping, especially in dried preparations, may present all the characters of a "staphylococcus," and the chains might be called "streptococci"; but the fact that all these forms are found in the same culture, inoculated from a well-isolated colony in an agar Esmarch tube, shows that they are but phases of development of one and the same micro-organism. The property of liquefying gelatine might possibly appertain to one of these forms and not to the others. In the case of which Dr. Sternberg obtained "a micrococcus in tetrads, a streptococcus, and a liquefying staphylococcus" from a piece of preserved kidney, such an occurrence might be suggested; but the fact that a short bacillus was subsequently found in the same colonies would account for the liquefaction without recurring to that assumption. During the last six weeks I have endeavoured to clear up the two following questions:—

1. Whether the microbe in tetrads and short chains observed by us during the epidemic season of 1887 would again be obtained this year, when proper precautions would be taken to guard against the inclusion of germs previously lying on the surface of the skin.

2. Whether, in violent cases of yellow fever running such a rapid course as to exclude every likelihood of a "mixed infection" (which I believe occurs in most of the *melanic cases*), a technique could be devised to bring into evidence the primary germs of our micrococcus supposed to exist in the tissues.

The first point we have investigated by taking surface cultures according to Dr. Sternberg's method, after washing the patient's finger with soap and water and strong alcohol, and again after additional washing with 1 per cent. of bichloride and a second time with alcohol. The cultures, after the first washings (without bichloride), have sometimes shown the presence of surface germs and at other times not. Those after the bichloride application have hitherto remained sterile. In one case, in which both cultures remained sterile, the blood collected at the spot from which they had been taken produced colonies of our micrococcus in tetrads and short chains, and also a short bacillus, single or in chains, the latter resembling Babès' yellow fever *chainettes*. Blister serum, obtained with due precautions, likewise gave colonies of the same micrococcus and others of the bacillus in Babès' *chainettes*. This was a "melanic" case, with abundant black vomit, death occurring on the same day in which the serum was collected; it is possible, therefore, that the bacillus may have proceeded from a "mixed infection," originated in the gastro-intestinal tract.

For the purpose of investigating the second question we have been fortunate in obtaining a necropsy, three hours after death, in a case which proved fatal on the third day of illness, the diagnosis being founded on the usual symptoms: albuminuria, yellowness of the conjunctivæ (intensely marked after death), and congested mottled liver. No black matter or blood had been ejected during life, and only a grey-white semi-liquid mass was found in the stomach and intestines. We collected juices from the liver, kidney, and spleen in sterilised "bouillon bulbs," according to Dr. Sternberg's plan, every precaution being taken. Pieces of liver, kidney, and spleen were soaked in a 1 per cent. solution of bichloride, and wrapped in several layers of cloths steeped in the same solution. Some of the intestinal contents had been collected in dry bulbs. The technique which we adopted, as the result of previous experience, consisted in introducing the material to be examined in sterilised gelatine (15 to 20 per cent.), remaining semi-fluid between 30° and 32° C. (the prevailing temperature at the time), keeping the tubes in a slanting position, and preparing agar-agar Esmarch tubes from any sediment or film which might appear in the gelatine. The bouillon bulbs containing juices from the liver, kidney, and spleen, produced a whitish sediment after some forty-eight hours, which developed, in agar Esmarch tubes, round, pale straw-coloured, smooth-edged colonies, consisting of our micrococcus in tetrads and short chains. Those proceeding from the liver were larger and more developed, and those from the spleen the least so. The intestinal contents produced after a few hours a white film, which afterwards sank to the bottom, and gave in agar Esmarch tubes whitish colonies, round or with a notched border, consisting of a short bacillus, single, or in chains of two or three, with oscillatory movements, but not actively mobile. The preserved piece of kidney was

unwrapped after forty-eight hours; it looked quite fresh, and was free from smell. Direct preparations, with slides besmeared from the central portions and stained with Löffler's alkaline blue, showed micrococci in pairs and in short chains, with a few tetrads, each group being surrounded by a clear zone, as if enclosed in a capsule. A bouillon bulb was charged from the central portions, and gave a whitish sediment in the gelatine tube, which produced in the agar Esmarch tubes the same pale straw-coloured colonies of our micrococcus in tetrads and short chains. The preserved piece of spleen was found in equally fresh condition, but the slide besmeared from the cut central portion only showed a few groups of cocci. The bouillon bulb scarcely produced any sediment in the gelatine, from which no distinctly visible colonies were formed in the Esmarch tube, but only a few very small ones which never developed. The bichloride had probably diffused too freely through the substance of the organ. The piece of liver emitted a strong smell, and was therefore discarded. Stick cultures of all these colonies grew well in agar-agar jelly, subacid or neutral, those of the micrococcus forming a white or faintly yellow disc around the point of inoculation, whereas the bacillus produces a patch looking like paraffin wax.

In conclusion, it will be seen that our first question has been answered in the affirmative, and that our method of cultivation has proved, in this instance, remarkably successful. Our object in adopting it has been to place the primary germs in a less resisting medium than the hardened gelatine or agar-agar film of Esmarch tubes. After germination had once been started no further difficulty was to be expected. Perhaps with this method our former failures during the winter months may hereafter be avoided by providing a culture stove at 30° to 32° C.; but I am still of opinion that the primary micro-organism of yellow fever is apt to be destroyed, perhaps owing to a "mixed infection" in cases presenting suppression of urine, uræmic intoxication, or typhoid symptoms.

I am, Sirs, yours very respectfully,
Havana, Aug. 11th, 1888. CHARLES FINLAY, M.D.

POISONING BY HEMLOCK.

To the Editors of THE LANCET.

SIRS,—The following are the particulars of the cases of hemlock poisoning you mention in your issue of Aug. 25th.

On Aug. 6th I was hurriedly called at 2 P.M. to see a boy who was dying. On arrival, I found that a younger brother, aged five years and a half, had died an hour previously. The patient, eleven years of age, was partly unconscious, pupils dilated, and had a severe muscular spasm. I at once decided upon washing out his stomach, and with some difficulty got a large cork between his teeth, and passed the tube into his stomach. The fluid which came away at first was of a greenish-yellow colour, and had a strong odour of whisky, which he had previously taken. I continued the injections until the fluid which came away was quite clear. I then gave stimulants, ammonia, &c., and in a little time the boy was able to walk about. I ordered him to be put to bed, kept warm, and a mustard poultice to be applied over his heart. I then left the patient, and, on returning in less than an hour, I met Dr. MacIntyre, who attended the family, and who was first sent for. We decided the boy should have stimulants, and I handed the case over to Dr. MacIntyre. When driving by a few hours later I saw a crowd of people outside, and on making inquiries found the boy had died. The previous history of the case is as follows. On August 5th, B—, the oldest boy, went out to the Howas Gill Wood at 2 P.M. He came back at 4 P.M., and brought some hemlock stalk and green haws with him. The boys then commenced blowing the haws through the stem, and continued this game for about three hours, until at length they had a dispute about who should have the stem; and the mother, to settle matters, threw it in the fire. They went to bed as usual in good health. About 4 A.M. both the boys began to vomit. The youngest (J—) was very hot and thirsty. B— vomited again at 8 A.M., and complained of headache. At 9 o'clock they were given some senna-tea. J— lay "stupid" till 12 o'clock, when he was given a little whisky, shortly afterwards had a severe muscular spasm, and died at 1 P.M. B— remained conscious till 1 P.M., though very drowsy, when

he had a muscular spasm and became unconscious, and did not regain consciousness till after I had used the pump.

I made post-mortem examinations on the 7th inst. There was marked venous congestion of the brain in both cases. There was also slight redness of the upper portion of the intestinal canal. The intestines were very empty, and the boys appeared badly nourished. One point of great interest in the case is the length of time the poison took to act. The boy also seemed to be greatly benefited by the use of the stomach pump. Both varieties of hemlock grow in the neighbourhood, but I think in this case the plant used was the *Conium maculatum*.

I am, Sirs, yours faithfully,
ED. FRAZER, L.R.C.S.I., L.K.Q.C.P.

Consett, Aug. 25th, 1888.

SIRS,—My attention has been drawn to some remarks which appeared in your issue of August 18th, on the lamentable case of hemlock poisoning, by which two boys lost their lives recently at Consett, a few miles from Durham. You state therein that "it does not appear whether the plant was *Conium maculatum* or *Cicuta virosa*, or water hemlock or cowbane; probably the latter, because it is most common in the north of England." Kindly allow me to point out that this is a mistake, as the *Cicuta virosa* is not found at all in the county of Durham, and only very locally in Northumberland; indeed, it is scarce throughout the kingdom, as its census number 32 indicates. On the other hand, the true hemlock, *Conium maculatum*, is very common in the northern counties, as elsewhere; its census number is 101. There are about seventy species of umbellifere indigenous to Britain, and of these *Conium maculatum* and *Chærophyllyllum temulum*, the rough chervil, alone have the stems stained with purple maculae, so that this forms an excellent differential diagnosis in most cases.

I am, Sirs, yours faithfully,
Sunderland, Aug. 31st, 1888. W. S. HARRISON, M.A.

"A DICTIONARY OF MEDICAL SPECIALISTS."

To the Editors of THE LANCET.

SIRS,—In common, I would fain believe, with the majority of those members of the medical profession who, from taste or force of circumstances, are practising as "specialists" (the name is very distasteful to many of us); I am much indebted to you for the leading article in your issue of August 25th upon the circular which has been issued in reference to the above-mentioned "Dictionary." I found one of these circulars awaiting my return from a holiday two days ago, and I have been not a little distressed to think that even if I consign it to the waste-paper basket my name may appear in the first number of the "Dictionary," probably without any evidence that the data given were not supplied by me to the editor.

I hope you will, in the interests of true specialism, still further use your influence to prevent the publication of the proposed volume, which I am convinced will do much harm to our profession. Apart from the objections which you have raised to it, and which I cordially endorse, I think a serious breach might be opened between consultants and general practitioners if the public were put in possession of a "Dictionary" such as that proposed in the circular. I cannot help thinking that the editor has, before drawing up and sending out these circulars, omitted to obtain the opinion of members of his sister profession. I have written to him asking that he will not insert my name, and I hope he will get many similar letters. Should he think fit to do so in spite of this request, it will be necessary to ascertain what further steps can be taken in the matter by the aid of his brother lawyers. I sincerely hope that all specialists will act on your advice, and not only decline to supply data for the "Dictionary," but also record their emphatic protest against such a publication.

I remain, Sirs, yours &c.,
London, August 28th, 1888. OPHTHALMIC SURGEON.

CAVENDISH COLLEGE, CAMBRIDGE.—The following appointments have been made at this College:—Tutor, Mr. W. H. Whitfeld, M.A.; Tutor and Dean, Rev. A. E. Herrman, B.A.; Superintendent of Medical Studies, Mr. J. Griffiths, M.B., M.C., assistant to the Professor of Surgery.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

AMBULANCE WORK AMONGST NORTHERN MINERS.

THE report of accidents in the ironstone mines of Cleveland for the six months ending June 30th, 1888, has just been issued. It contains the names of no fewer than 423 miners who have sustained injuries whilst following their employment, of which number six were either killed outright or died afterwards from the effects. These figures compare with a total of 428 accidents, of which six were fatal, in the previous six months. The general secretary of the North Yorkshire and Cleveland Miners' Association very appropriately directs attention in the report to the importance of ambulance work, and states: "Since ambulance work commenced in Cleveland there has been a very serious exodus from the district, upwards of 2000 men and boys having left. Many of these were members of the ambulance corps at the mine in which they were employed, and during the past few years the number of those qualified to render 'first aid' to an injured person has been very considerably reduced." Mr. R. Rowland, the general secretary, then enumerates the various mines at which classes have been formed during the last six months to make up the loss, and shows that these have been joined by 262 members. Of that number, 204 presented themselves for examination, and 195 passed. He shows that probably the principal object, and certainly the most valuable feature, of ambulance work is that, when the men are at work, there are amongst themselves persons who can render immediate assistance in case of accident. Every flat siding or district of a mine ought to have among the miners at least 10 per cent. of trained ambulance men, and every foreman and deputy ought to be qualified to render "first aid"; for if when an accident occurs the members of the ambulance corps are to seek for help in another portion of the mine, the most serious results may follow the delay. He shows how to carry out this suggestion, which would of course necessitate the expenditure of a considerable amount of money. Up to the present the owners have paid the whole of the expense, but if the men would subscribe 3d. per year each towards this desirable object, 5 per cent. of those employed could be instructed. Mr. Rowland shows very clearly that until this is done the ambulance question cannot be considered as satisfactory, and he makes an earnest appeal to the workmen, which is to be hoped will be followed by fruitful results.

ICED SWEETS.

At the Leeds Town Hall, on Monday last, an inquest was held on the body of a little girl aged seven. The evidence showed that on the preceding Friday the child ate a pennyworth of the popular iced sweet known as "hokey-pokey," and became ill, dying on the following day after much suffering. Mr. W. H. Brown, surgeon, who made a post-mortem, said the death of the deceased was due to gastric irritation, brought on by eating the "hokey-pokey," which caused vomiting and diarrhoea, lasting twenty-four hours. Mr. Brown added that other deaths had occurred during the last two or three years through eating iced sweets. The jury returned a verdict in accordance with the medical evidence.

GATESHEAD.

Our sister borough, Gateshead, now enjoys the privilege of having one of the lowest death-rates (for towns of its population) in the whole kingdom—viz., about 12 per 1000. I have not heard the official estimate of the population of Gateshead just now, but it cannot be far from 80,000.

CARLISLE.

At the last meeting of the Carlisle Microscopical Society, Dr. Carlyle read a paper on the fungi of the district, illustrated by some hundreds of specimens from his own collection. He was requested by the Society to compile a list for the use of members and students. Dr. Carlyle has discovered several new genera, which have been named after him by the Kew officials.

DURHAM.

I have to record another sad case of poisoning by carbolic acid, near Durham, the victim being a little child two years of age, whose father was lying ill from typhoid fever. The

poison was left in the house for disinfecting purposes, and the child, getting up in the night for a drink, went to the jar containing the acid and took a draught of it, death ensuing in about three hours, after great suffering.

Newcastle-on-Tyne, August 27th.

DUBLIN.

(From our own Correspondent.)

ROYAL UNIVERSITY OF IRELAND.

THE sixth report of this University shows the steady progress which the institution has made during the past year. The total number of candidates at the various academical examinations of the University during 1887 was 3106, or an increase of 173 as contrasted with the previous year. The number of women students, it should be noted, is yearly increasing, and some of the female students have been awarded honours of a very distinguished character. The equipment of the laboratories has been proceeded with, and the arrangements are very complete. The Vice-Chancellor (Lord Emly) in his report refers to the endowment provided for the University as inadequate, in consequence of a very much larger number of candidates having entered for the various examinations than was anticipated. The University authorities had set down 2100 as the extreme limit of students that could be expected; but in 1885 it was 2890, in 1886 it was 2933, and last year 3106, or one-third more than had been estimated when the amount of the endowment was settled.

CORK DISTRICT LUNATIC ASYLUM.

This institution was originally constructed for 500 inmates, but since then has had large additions made to it from time to time, the more recent of them being finished about six years ago. It is overcrowded by at least eighty beds, and still more so in regard to an ordinary day-room provision. The structure is placed on a rapid acclivity, which primarily necessitated deep cuttings, and as the available flat in the rear is already covered by two apartments of large dimensions, no further additions should, in the opinion of the inspectors of asylums, be undertaken. The Poor-law guardians of the borough are desirous of an arrangement which would facilitate the removal of their imbecile and chronic insane from their union. Apart, however, from any outside consideration, the land attached to the asylum is ill adapted and much too small for the proposed scheme. It is suggested that any supplementary provision for the insane poor of the Cork district should be made in the West Riding, and at the conjoint expense of the whole district.

Dublin, Aug. 28th.

PARIS.

(From our own Correspondent.)

BROCA'S CONVOLUTION.

IN a work entitled "Study of Cerebral Morphology," Dr. G. Hervé, one of the most zealous disciples of Paul Broca, and himself a distinguished anthropologist, gives a very good description of the convolution of Broca, of which the following is an abstract:—The convolution of Broca extends to the orbital lobule, where it terminates in forming the frontal pole situated at the posterior extremity of the olfactory tract. The cerebral type of the primates is a type of two frontal floors, and the convolution of Broca only begins to appear in the anthropoids formed by the division of the second primary frontal floor. It constitutes in the anthropoids and in man a fourth frontal, the second frontal comprising in reality two convolutions. The development of the convolution of Broca in the fœtus reproduces it in the development in the series; that of the right side is nearly always more precocious. In the microcephales the centre for memory of words is either absent (first type), or rudimentary as in the anthropoids (second type), or constituted as in a normal individual (third type). Nearly always in idiots, imbeciles, and deaf-mutes, and often in the inferior races, the centre in question is more or less atrophied, rudimentary, or arrested in its development.

In intellectual individuals the morphological complexity of the centre of Broca's convolution is, in a general way, correlative to the power of the function.

TREATMENT OF ANEURYSM.

At a recent meeting of the Academy of Medicine, Dr. Dujardin-Beaumetz read a note for Professor Germain Sée, who was unavoidably absent. The note is composed of three parts: the first is relative to a curious coincidence of the presence of bacilli in aneurysms, and the others treat of the methods of internal treatment. This work is the result and the *résumé* of observations collected during a great number of years, and comprises twenty-four cases which were regularly followed during a long space of time; all the others have no value, as they were lost sight of. Professor Sée observes that there is a singular coincidence of aneurysm with pulmonary phthisis, and puts the question whether it is by the parietes of the aorta that the bacillus penetrates the aneurysm—a question which, he said, he was not in a position to answer satisfactorily. In any case, this interesting observation of the phthisis of aneurysmal subjects remains a scientific fact. In the second part of his work M. Sée deals with aneurysms, and their treatment by iodide of potassium and antipyrin, the good effects of which in these cases Dr. Dujardin-Beaumetz said he was able from his own experience to confirm. After having established the physiological action of iodine on data of the most positive clinical experience, M. Sée draws a curious parallel between the two iodides commonly in use. He demonstrates that iodide of sodium is a theoretical medicament, and is not equal to the iodide of potassium, which is manifestly superior to it in maladies of the heart and of the vessels, precisely because in small doses the salts of potash act, according to Traube, in the most distinct manner on the musculo-motor system, and even on the inhibitory nerves of arrest of the heart, whereas it is only toxic when employed in subcutaneous injections in strong doses. Iodide of potassium, when ingested, never becomes toxic, even in doses of ten or fifteen grammes per day; any toxic effects produced are to be attributed to the iodine, and not to the potassium. The third part of the work is relative to the simultaneous employment of antipyrin with iodide of potassium. According to Professor Sée, antipyrin, far from having, as believed by certain medical men, a pernicious influence on the heart, has, on the contrary, the most remarkable effects on the central organ of the circulation. It calms the impulsion of the heart, which is exaggerated in aneurysmal subjects, and permits the blood to complete its coagulation, which singularly favours the cure. But the most remarkable effect of antipyrin is this: the greater number of aneurysmal subjects experience at the arch of the aorta and in the region of the heart, sharp pains, painful cardiac oppression, and very often sensations of anguish, exactly as in angina pectoris; antipyrin dissipates all these painful and dangerous symptoms. Dr. Dujardin-Beaumetz concurs with Professor Sée as to the good effects of antipyrin, but he very much prefers phenacetine, as the former, when administered for any length of time, produces nearly always cutaneous eruptions, whereas this cannot be said of phenacetine, which never occasioned untoward symptoms, even when given for months in large doses. It is equally preferable to acetanilide, which produces cyanosis. In fine, phenacetine is not toxic. Dr. Dujardin-Beaumetz was able to administer to an animal as much as three and four grammes per kilogramme of its weight without observing any accident. The only inconvenience of phenacetine is its not being very soluble; it is necessary to administer it in wafers; but its analgesic effects are obtained with a dose of half the amount of that of antipyrin. Dr. Dujardin-Beaumetz, like Professor Sée, condemns all surgical interference in the treatment of aneurysms of the aorta.

M. PROUST'S REPORT ON VACCINATION AND REVACCINATION.

The important question of the utility of vaccination and of revaccination may now be considered a problem completely solved, if one may judge by the statistics given by M. Proust in his recent report to the Academy of Medicine on the subject. M. Proust observed that in Germany, where vaccination is compulsory, small-pox has been removed from the statistics of the causes of death. In Berlin the proportion of deaths from small-pox is $1\frac{1}{2}$ out of

100,000 inhabitants; at Paris it is 136—that is to say, 4000 per year!

M. CHEVREUL

completes to-day the 102nd year of his age, in honour of which the students had intended to organise a respectful "manifestation" to their venerable *doyen*; but this, unfortunately cannot take place, as he is too feeble to receive the deputation. Although M. Chevreul is not labouring under any special complaint, he has become so infirm that he is obliged to pass the greater part of his time in bed. For more than three months he has not been able to attend the meetings of the Institute, of which he has hitherto been one of the most active members.

Paris, August 25th.

THE SERVICES.

SOLDIERS' RATIONS.—In consequence of recent complaints as to the quality of rations supplied to troops quartered at home, authority has been given by the Horse Guards for the formation of classes in which officers may be instructed in the methods of judging the quality of all kinds of provisions, forage, &c., and facilities are to be given for the attendance of officers generally.

ADMIRALTY.—The following appointments have been made:—Surgeon William H. Norman, to Yarmouth Hospital, (dated Aug. 25th, 1888); Fleet Surgeon James D. Smith, to the *Canada*; Fleet Surgeon Edward W. Doyle, to the *Euphrates*; Staff Surgeon Alfred T. Corrie, to the *Rupert* (all dated Aug. 27th, 1888); Surgeon Horace Elliott, M.D., to the *Tyne*, and Surgeon Andrew D. Peyton, to the *Northumberland* (both dated Sept. 7th, 1888).

Obituary.

DR. FERDINAND WALTER.

THE University of Munich lost one of the most promising of its teaching staff when, on the night of August 23rd, Dr. Ferdinand Walter died.

He was born in 1862, the grandson of the famous law professor, Walter, in Bonn, and the son of a physician who left an honoured name behind him in the *Rhein-gau*, where he practised till his death in 1864. Like his father, Ferdinand Walter devoted himself to the medical career, and concluded a brilliant preparatory course by graduating with honours—his prize thesis (on the "Osteology and Muscular System of the Indigenous Amphibia and Reptilia homologically considered") attracting much attention on its publication in 1884. He now gave himself heart and soul to practice, and under the special tuition of Dr. Heinrich Ranke he qualified himself as physician in children's diseases. He speedily rose to success in this department, his pleasant address and amiable disposition co-operating effectively with his medical knowledge and discernment. As *privat-docent* in the Munich school, he was in the act of preparing a course of lectures when death—to the great grief of his colleagues and his numerous admirers, professional and lay—cut him off in his twenty-sixth year.

Medical News.

ROYAL COLLEGE OF SURGEONS.—We would again remind our readers that the library of the College will be closed during the month of September, for cleaning purposes.

AN infectious diseases hospital is about to be added to the County Lunatic Asylum at Devizes. The cost will be about £1900.

MEDICAL MAGISTRATE.—Adam Fletcher, M.D., L.R.C.P. Edin., M.R.C.S., L.S.A., of Bury, Lancashire, has been placed on the Commission of the Peace for that borough.

MORTLAKE INFECTIOUS HOSPITAL.—The Local Government Board have sanctioned the erection of the Infectious Diseases Hospital at Mortlake, respecting which a four days' inquiry was held during the first week in July.

ROYAL VETERINARY COLLEGE, EDINBURGH.—In the annual competition for the Fitzwygram Prizes, held during the summer, Mr. John A. Gold, of Ladywood, Birmingham, and Mr. J. G. Clayton, of Wilmslow, Cheshire, Graduates of the "Dick" Veterinary College, obtained respectively the first and second prizes of £50 and £30.

THE NORTH BIERLEY UNION JOINT HOSPITALS BOARDS.—A copy of a provisional order has been received by the Cleckheaton Local Board for the formation of Cleckheaton, North Bierley, Wyke, and Hunsworth into a joint hospital district, and the necessary steps are ordered to be taken for the appointment of the Cleckheaton representatives.

AN inquest was held on Tuesday at Chatham Convict Prison, on the body of William Turnbull, a surgeon, aged sixty-two years, who was convicted in January, 1886, at the Central Criminal Court, for manslaughter, and sentenced to ten years' penal servitude. The deceased had been in hospital at the prison since the day after admission. A verdict of "Death from natural causes" was returned.

OPEN SPACES.—The Drapers' Company has granted £105 to the fund which is being raised for the acquisition of the North Woolwich Gardens as a public park for the district near the Victoria and Royal Albert Docks and Beckton Gasworks. —The Bishop of Bath and Wells formally opened last week a public recreation ground at Wells. The larger part of the ground was formerly known as Bell Close, and the other part as Conygar Paddock.

ST. JOHN AMBULANCE ASSOCIATION.—H.R.H. the Duchess of Connaught has attended a St. John Ambulance class for ladies at Poona, and has been awarded a certificate after passing a very satisfactory examination. Two large classes have also been held for men of the 1st Royal Fusiliers and 2nd Durham Light Infantry, by the same lecturer, Dr. Kilkelly, Army Medical Staff, and the certificates, forty-one in number, were presented on the 27th ult., by the Commander-in-Chief, the Duke of Connaught. A few days afterwards one of the successful candidates, Private Bancroft, rendered most valuable aid to an officer who was kicked in the temple by a pony, and would probably have bled to death, in the opinion of the medical officer in charge, had not Bancroft stopped the profuse bleeding from the temporal artery with the aid of the puggaree off his helmet.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mrs. Sara Austen, late of Montague-place, Bedford-square, has bequeathed by her will £50 each to the Consumption Hospital, Brompton, the North London Hospital, and the Magdalen Hospital. —The late Mr. P. Gammie, of Stanhope-gardens, formerly Inspector-General of Army Hospitals, has left £1000 to the Army Medical Officers' Benevolent Society. —The executors of the late Mrs. Rachel Smith have sent to the managers of the British Home for Incurables £1205 4s. 3d., the residue of the estate. —The trustees of the late Mr. E. Boustead (of Clapham) have paid over to the committee of the Surgical Aid Society £1000. —The Roundhay Park Gala, held on the 6th ult. (the Workpeople's Hospital Fund in Leeds), on behalf of the medical charities of the town, realised £346. —The late Miss Annie Lowther, Moresby House, near Whitehaven, has left £1000 to the Whitehaven and West Cumberland Infirmary.

PRESENTATIONS.—Dr. J. J. de Zouche Marshall, on his leaving Lamberhurst, where he had resided for fourteen years, to practise at Hastings, has been presented by his friends and the inhabitants with a testimonial, as a token of their esteem and regard, consisting of an illuminated address on vellum, bearing the names of most of the principal inhabitants, and a purse containing £25 10s. Addresses have also been presented from the Lamberhurst Equitable Benefit Society and Court "St. Mary," A.O.F. —Dr. Scanes Spicer was on Tuesday last presented with a handsome testimonial of plate by the officers of the Fulham Infirmary, of which he has recently resigned the appointment of medical superintendent, after four years' service. —Dr. Stewart of Newport, Fifeshire, on completing twenty-five years' practice in that town and neighbourhood, has been presented by his patients and others with £500 and a drawing-room clock, bearing an appropriate inscription, as a testimonial of their confidence in him as their doctor and of regard as a friend.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BELL, R. F., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Workhouse, and the Amersham and Penn Districts, Amersham Union.
BROADBENT, JOHN, M.R.C.S., L.S.A. Lond., late Honorary Surgeon, has been appointed Consulting Surgeon to the Hulme Dispensary, Manchester.
BUCHANAN, J. H., M.D. St. And., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the Thirsk Rural Sanitary District, Yorkshire.
LANTON, T. P., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Second District of Bridgewater Union.
O'BRIEN, J. A., M.B. Glas., G.C.M., has been appointed Medical Superintendent of Sunbury Lunatic Asylum, Australia, vice Watkins.
RIDLEY, G. P., L.K.Q.C.P., L.M., L.R.C.S. Irel., has been appointed Surgeon of King's County Infirmary.
STEELE, H. O., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health of Cleckheaton, Hunsworth, and Gomersal.
TONKS, HENRY, F.R.C.S., L.R.C.P., L.S.A., formerly of the London Hospital, has been appointed Senior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road, W.C.
WARD, EDWD., M.A., M.B., and B.C. Camb., M.R.C.S., has been appointed one of the Divisional Surgeons of the Leeds Police Force.
WATKINS, W. L., L.K.Q.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Superintendent of Yarrow Bend Lunatic Asylum, Australia, vice T. T. Dick.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

COURT FORESTER'S, AND SOCIETIES, 18, York-street, West Cowes, Isle of Wight.—Medical practitioners to attend sick members of the above Societies.
EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E.—A Resident Clinical Assistantship. No salary, but board and lodging provided free.
GENERAL INFIRMARY, Hull.—House Surgeon. Salary 100 guineas per annum, with board and furnished apartments.
GENERAL INFIRMARY, Leeds.—Resident Medical Officer and Pathologist. Salary £100 per annum, with board, residence, and washing.
HOLLOWAY SANATORIUM FOR THE INSANE, Virginia Water.—Senior Assistant Medical Officer.
MANCHESTER ROYAL INFIRMARY, DISPENSARY, and Lunatic Hospital of Asylum.—Honorary Assistant Physician.
NEWPORT AND COUNTY INFIRMARY AND DISPENSARY, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence, and £5 5s. per annum allowance in lieu of stimulants.

Births, Marriages, and Deaths.

BIRTHS.

LAING.—On the 24th ult., at 12, Clapton-square, the wife of J. M. Laing, M.A., L.R.C.S.E., of a son.
RENDALL.—On the 26th ult., at Charlotte-square, Edinburgh, the wife of Stanley M. Rendall, M.D., of Aix-les-Bains and Mentone, of a daughter.
TWNING.—On the 26th ult., at The Knoll, Salcombe, South Devon, the wife of Alfred H. Twining, M.R.C.S., of a daughter.

MARRIAGE.

MCCONNELL-SOWERBY.—On the 23rd ult., at St. Mary's Parish Church, Teddington, Surgeon-Major J. F. P. McConnell, M.D., F.R.C.P., Bengal Medical Service, to G. E. Violet Sowerby, daughter of William Sowerby, Esq., M.I.C.E.

DEATHS.

FOAKES.—On the 22nd ult., at Adisham House, Gravesend, John W. Foakes, M.D. Giessen, L.S.A., of South-street, Park-lane.
JARDINE.—On the 24th ult., at Chatham, J. Bell Jardine, M.D., aged 80.
NESBITT.—On the 27th ult., near Virginia Water, Surrey, Pearce Rogers Nesbitt, M.D., aged 85.

IN MEMORIAM.

WAKLEY.—On August 30th, 1888, at Heathlands-park, Longcross, Chertsey, Surrey, James Goodchild Wakley, M.D., for twenty-five years Editor of THE LANCET, youngest son of the late Thos. Wakley, M.P.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 30th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Aug. 24	29.68	S.W.	65	60	121	76	57	.04	Cloudy
" 25	29.72	S.W.	63	59	119	73	59	.27	Cloudy
" 26	29.07	S.W.	65	58	115	71	56	.09	Cloudy
" 27	30.00	S.W.	62	57	101	71	55	..	Bright
" 28	29.68	S.W.	59	57	72	63	57	.05	Raining
" 29	29.91	S.W.	59	55	103	66	51	.72	Bright
" 30	29.99	S.W.	60	55	110	67	50	.11	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER OF "THE LANCET"

will be published on Saturday next, Sept. 8th. Those gentlemen holding official situations connected with medical institutions in the United Kingdom who have not yet forwarded the necessary information to our Office for publication in that number are earnestly requested to send it *without the delay of a single post.*

GERMANS IN PARAGUAY.

IN reference to a German colonisation company, which has recently been formed for the purpose of establishing a dozen German colonies along the rivers in Paraguay and Parana, and in the neighbourhood of the railway connecting Asuncion with Encarnacion, a German landowner, who has been settled in South America for some twenty-five years, writes to warn German agriculturists that the climate of Paraguay is very unpleasant on account of its heat. The country, too, abounds in sand fleas and other vermin, and the weeds grow at a most appalling rate. He suggests that there are plenty of places in South America without these disagreeable adjuncts, where the climate is really suitable enough for Germans who may wish to form agricultural colonies. As to medical men, who, it seems, have been urged to come out from Germany to Paraguay, the medical journal in which the letter referred to is published suggests that, under the circumstances, they cannot expect to flourish if German colonies cannot exist, or at all events cannot prosper. The writer suggests that, though Paraguay is in his opinion unsuitable for Germans, there is no reason why colonies from warmer and more southern lands—say from Italy—should not do well, the climate being very much more like their own.

Graduate of Brussels.—1. The address of the Secretary is Dr. Pocock, 20, Golborne-road, Upper Westbourne-park.—2. No.

X. Y. Z. asks for information as to the usual rate of remuneration of a locum tenens for a length of time in New Zealand—say one year.

COCOANUT AS A VERMIFUGE.

To the Editors of THE LANCET.

SIRS,—A reference to Section 939:2 of the Medical Digest will show that in vol. i. 1881, p. 638, the value of cocoanut was mentioned in THE LANCET.

Aug. 27th, 1888.

RICHD. NEALE, M.D. Lond.

THE GOOD SAMARITAN'S SURGERY.

THE necessity for a revised version of the New Testament is very apparent in the authorised translation of St. Luke's Gospel, x., 34, where the evangelist, himself a medical man and particularly careful (see Mr. Hobart's treatise on the subject) in his use of medical terms, describes the Good Samaritan's treatment of the traveller who had been wounded by thieves on the highway. According to St. Luke, the Samaritan came up to the man, bound fast his wounds, and poured on the bandage (that is, immediately over the seat of injury) the oil and wine which in combination were the recognised applications for such lesions at that time, and for centuries later, in the East. The authorised version is either unintelligible or it reflects on the good man's surgery. It makes him first bind up the wound, and then pour in the oil and wine; or it makes him pour in the oil and wine concurrently with his adjusting the bandage. The former rendering is unmeaning; the latter would make the practice more than questionable. The pouring oil and wine into an unclosed wound was certainly what the evangelist would not have approved or the Samaritan practised. The truth is, the authorised translators have not accurately rendered the Greek. St. Luke's expression, ἐπιχέων, does not mean pouring in, but pouring on. The Vulgate version, "infundens oleum et vinum," appears to have misled them, as well as Beza, who, in his excellent Latin translation, preserves "infundens." The proper Latin equivalent for ἐπιχέων should have been "superfundens," or, better, "superinfundens." And then the translation would have run intelligibly and secundum artem thus: "and bound up his wounds, pouring on oil and wine." The passage is well handled in Canon Humphry's admirable Companion to the Revised Version (Cassell and Co.). About a hundred and fifty years after our Lord's time Galen prescribed for a wound on the head a remedy similar to that of the Good Samaritan: "Having taken some quite fresh olive leaves and pounded them in a mortar, you add quantum sufficit of oil and black—i.e., full-bodied—wine, and knead the whole into a paste, which you may apply to the seat of injury." The bandage saturated with the oil and wine was the Good Samaritan's equivalent for the Galenic epithem.

Enquirer.—The question of etiquette does not arise in this matter, as a medical man is legally bound to attend and give evidence upon the coroner's warrant, even though another doctor may have seen the case beforehand.

Dr. Macdougall (Carlisle).—Yes; very shortly.

MEDICAL OFFICERS OF HEALTH AND THEIR DEPUTIES.

To the Editors of THE LANCET.

SIRS,—Can a medical officer of health legally appoint as his deputy his assistant, who only holds the old L.S.A. licence?

I am, Sirs, yours truly,
Aug. 26th, 1888. SANITAS.

. Where repayment is made out of the Parliamentary grant, no deputy medical officer of health is contemplated. In cases of sickness or other emergencies a "temporary substitute" can, however, be appointed; but he is required to hold the same qualifications in medicine and surgery as the principal medical officer of health, unless the Local Government Board, on the application of the sanitary authority, dispense with this requirement. Where no part of the salary of a medical officer of health is repaid, sanitary authorities act as they choose as to deputies; but such appointments are not, as a rule, encouraged, except in the case of very large cities, where an officer who already gives his whole time to the duties of his office requires further help.—ED. L.

N. B.—By Clause 35 of the Medical Act, 1858, all registered members of the medical profession are entitled to claim exemption from serving on juries. Notice of a desire to be exempted should be given to the overseers or vestry clerk of the district in which the claimant resides.

Ed. K.—Prosecutions under the Dentists Act are undertaken by the British Dental Association, the head-quarters of which are 40, Leicester-square, W.C.

Income Tax has not enclosed his card.

MEDICAL PRACTICE IN AUSTRALIA.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged for any information about medical practice in Australia. What part of the country would be most suitable for a phthisical surgeon? Can comfortable board and residence be had at the inland stations, and at what rate? Is the voyage by sailing vessel usually more beneficial than by steamer? Is the food suitable for consumptives during the whole of the voyage by sailing vessel? What is the fare saloon to Australia or Tasmania? Which are the best lines? Any other information about the climate of either country will much oblige.

August, 1888.

I am, Sirs, yours faithfully,

PORTACT.

DROWNING.

To the Editors of THE LANCET.

SIRS,—In the holiday season, when so many seek exemption from labour, to their advantage both mentally and bodily, and generally spend part of the time by the sea and enjoy the luxury of bathing, one feels sometimes, on lifting the morning paper, so pained and saddened as to have little relish for breakfast, having read the sad account of Mr. — or Miss — having been drowned while bathing. As our profession is eminently humane, and as you are deeply interested in this phase of it, these facts must be my apology for trespassing on your valuable space.

I would like to call attention to another method of treatment, in addition to those now employed in cases of drowning, for artificial respiration—viz., those of Howard, Hall, and Silvester,—in order, if possible, to secure its general use. This means is electro-cutaneous excitation of the precordial and dorsal regions. Although the mode of electric excitation to be preferred is faradisation of the phrenic nerves in the treatment of asphyxia, I am bound to notify the damage which attends its unskilful employment in the absence of a medical man. In these circumstances it is advisable to practise the former procedure, as it is a much more simple and safe method; and I claim for it great importance because, when applied to a certain zone of the precordial region, the points of the nervous centres are reacted upon which govern the innervation of the heart's action and of the breathing. And this form of excitation cannot be discarded if we are to do the best for the patient; for when respiration and the cardiac circulation have been re-established, and the patient exhibits symptoms of falling into a comatose state, thus indicating cerebral ischaemia due to carbonic oxide blood-poisoning, then this treatment is most valuable. I am satisfied electricity will modify or cure grave disorders of the cardiac circulation symptomatic of a paralytic condition of the vagus, also disorders of the respiration, such as paresis of the expiratory bronchial muscles. The therapeutic influence exerted by electro-cutaneous excitation of the back of the chest over paralysis of the power of expiration, and its power to remove secretions from the lungs in lung paresis caused by the poison of diphtheria, indicates its use in asphyxia caused by submersion; because death after submersion is sometimes caused by water remaining in the air cells, though the patient may have temporarily recovered. This treatment might be used in the absence of a medical man by any intelligent person who has a proper induction battery at hand, and has had a few lessons how to proceed in a practical manner; for practice and theory are two very different things. I would therefore suggest, seeing the invaluable power of electricity in asphyxia, that at every bathing-place there should be one person present capable, and at a moment's notice, of using the electro-therapeutic remedy. This arrangement could be completed at every bathing-place at a trifling cost to each. Would we not be guilty, then, if we ignored a potent means of saving life?

I am, Sirs, yours respectfully,

Belfast, Aug. 24th, 1888.

JOHN M. MACCORMAC, M.D.

In reference to a paragraph in our last issue concerning a report of the death of Dr. McEwen of Glasgow, Mr. Reginald H. Lucy, M.B., Asst. Med. Officer of the Post Office Medical Department, sends us the following explanation:—"In the early part of May, 1888, a Mr. McEwen, B.Sc. Glasg., M.B. Edin., and son of Mr. Wm. McEwen, late chairman of the Royal Infirmary, Glasgow, died of diphtheria. Being a close personal friend of the late Dr. Henry C. McEwen, I hasten to explain the probable source of the mistake."

Graduate.—We know of no book on the subject. So far as we are aware, the information can be obtained only from agents of the different steamship companies.

Mr. Macdonogh (Gravesend).—The suggestion has already been made in our columns.

"A QUERY."

To the Editors of THE LANCET.

SIRS,—In your last issue I notice a letter under the above heading, signed "M.D.," which reminds me of a similar case I had about a year ago. My patient, a man aged thirty, in good general health and with all his organs and functions normal, suffered from the very same symptoms as those described by your correspondent. He awoke with severe pain every morning at 6 A.M., and obtained relief only when he got out of bed. I tried various drugs, but without success, and finally advised him to discontinue smoking at night—a habit which he indulged in excessively after supper. He acted on my advice, and I am pleased to say that after the second night the pain was not experienced. I have every reason to believe that the excessive use of the weed was the sole cause of his pain, as its discontinuance was its cure.

I am, Sirs, yours truly,

Sunderland, August, 1888.

L.S.A., L.R.C.P.

Mr. Wm. Mangell.—No; a certificate of proficiency in compounding and dispensing medicines must be obtained from Apothecaries' Hall.

Dr. C. W. Hayward.—The report has been received, and will shortly be published.

A. E. F.—The work named is no doubt the most suitable one for the purpose.

MUSHROOMS: POISONOUS AND EDIBLE.

THE *Radical-Liberal* of Geneva warns the public, travelling as well as resident, in Switzerland against the incautious use of this esculent. *Colporteurs*, it seems, are in the habit of selling it to unwary innkeepers who, particularly in the more Alpine districts, are not sufficiently skilled to make the necessary distinction between the dangerous and the innocuous varieties. A very grave "accident," according to the *Radical-Liberal*, was averted the other day by the opportune intervention of a connoisseur, who enlightened the cook that the mushrooms he was preparing for the *table d'hôte* were the most poisonous of their species. The *Journal de Genève*, commenting on the incident, says that, at least in Geneva, the *colportage* of mushrooms is severely prohibited, and that the Rue de Commerce is the only quarter of the city where their sale is allowed. There no mushroom can be offered to the purchaser which has not previously passed the inspection of M. Perret-Gentil, the civic expert. The father of this officer was a distinguished student of cryptogamic botany, and the introducer of many much-prized kinds of mushrooms into Switzerland, and left behind him an elaborate series of coloured plates by which the edible and the non-edible varieties can be distinguished infallibly. M. Perret-Gentil fils inherits his father's knowledge, and, adds the *Journal de Genève*, is steadily adding to it. He recently delivered before the Horticultural Society of Geneva a lecture on the mushroom as food, which for the safety of the consumer in outlying Switzerland will, we hope, convey the much-needed discrimination beyond the special public it addressed.

Mr. David Gardner, M.B.—It is right to give particulars when they are required by the patient, and in a legal process they are properly required. Our correspondent's charges are very reasonable.

Dr. Ruata (Degagna).—We regret that we cannot at present extend our exchange list.

"PHYSICIANS' FEES."

To the Editors of THE LANCET.

SIRS,—An annotation in your issue of to-day in reference to medical fees suggests that there are other things in the profession of medicine which require seeing into besides giving to every member of the profession the unmeaning letters "M.D."

May I suggest through your columns that it would be more in consonance with the functions and dignity of the Royal College of Physicians of London, as also the Royal College of Surgeons of London, if they would form themselves into a body controlling and directing members of the medical profession in their life's work, rather than endeavouring to compete with minor and differing institutions, such as educating universities and schools of medicine. The profession of medicine is, in my opinion, in great want of a ruling body, and why should not the Colleges concern themselves in this matter? I should like to see the Colleges have the right of direct appointment of physician and surgeon respectively to the various hospitals; and in those hospitals where the committee would not grant this right to the Colleges, I should like the Colleges to be by law granted the power of refusing any candidate so elected by the committee the right of taking such an appointment, unless he be in the eyes of the Colleges "a fit and proper person to be appointed," so that every member of the profession, when once appointed physician, assistant physician, surgeon, or assistant surgeon, should be under the control of their respective Colleges. This would, I think give a much better standing to members of the medical profession; for I can conceive of nothing more derogatory to a profession than that its members should not be under the control of, or obligation to, any constituted ruling body, but merely the servant of a self-elected committee of a hospital, and in many instances the servant of a secretary. It would also be of much advantage to members of the profession, as also to the public, if the combined Colleges fixed the fees of their respective fellows, members, and licentiates.

I am, Sirs, your obedient servant,

Aug. 25th, 1888.

SPINOZA.

Cornice faustâ should refer to the Students' Number of THE LANCET for particulars. (a) Apply to the Director-General of the Army Medical Service, 2, Victoria-st., Westminster, S.W.; (b) to the Director-General of the Naval Medical Service, Northumberland-avenue; (c) to the Military Secretary, India Office. No book will furnish information such as that mentioned.

Constant Reader and Subscriber (Dublin) will find the address given in the article mentioned.

One who has seen better days.—Kimpton, Wardour-street, Soho, W.

MEDICAL PRACTICE IN QUEENSLAND.

To the Editors of THE LANCET.

SIRS,—I should feel greatly obliged if any of your correspondents would, through the columns of THE LANCET, give me any information as to the demand for medical men in Queensland, rate of fees, &c., and whether there would be a reasonable prospect of a doubly-qualified man doing well there.

August 24th, 1888.

I am, Sirs, yours obediently,

M.B.C.S. 1881.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Hunter, Cambridge; Dr. R. Neale, London; Dr. Ruata, Degagna; Dr. E. B. Truman, Nottingham; Sir E. Lechmere, London; Professor Walley; Dr. Finlay, Havana; Miss H. K. Brown, Buxton; Messrs. Jesurum and Co., Venice; Dr. J. M. MacCormac, Belfast; Messrs. Rowntree and Co.; Dr. Prowse, Clifton; Mr. E. Fraser, Consett; Messrs. Wood and Co., New York; Dr. Hayward, Liverpool; Messrs. Oetzmann and Co., London; Dr. Macdougall, Carlisle; Mr. Kane, Dublin; Mr. J. Exley, Hunslet; Mr. Ellis, Gloucester; Dr. C. F. K. Murray, Capetown; Mr. F. N. Williams, Brentford; Mr. Jackson, Sheffield; Mr. J. Munday, Bombay; Mr. W. H. Kesteven, Holloway; Mr. Duncan, Newcastle; Dr. H. Campbell, London; Mr. Wood, Leeds; Mr. Bellamy, London; Messrs. Livingstone, Edinburgh; Mr. Macadam, Edinburgh; Mr. Phillips, Egham; Dr. Skerritt, Bristol; Mr. Pearson; Mr. Stone, Newport; Mr. Alcan, Paris; Mr. Slater, Sheffield; Messrs. Rayner and Cassell, London; Dr. Gardner, Paisley; Dr. Anvade; Dr. H. W. Mackintosh, Dublin; Dr. Peregrine, London; Dr. Whittington-Lowe, Brighton; Mr. C. Truax, London; Dr. Davies, Snainton; Dr. F. A. A. Smith, Cheltenham; Mr. Collinette, Silverdale; Mr. W. S. Harrison, Sunderland; Dr. De Valcourt, Cannes; Mr. Flather, Cambridge; Mr. Lucy; H.D.Lond., London; Solent, London; L.S.A., L.R.C.P.; Sergeant, M.S.; M.R.C.S. 1881; Poylast; M. O'S.; Victoria Home for Nurses; Sanitas; Spinoza; Ed. K.; M., Haverstock-hill; Lady Superintendent, Northampton; Lecturer, London; Enquirer; Cornice fausta; Nurses' Home, Sheffield; X. Y. Z.; Amicus; Ophthalmic Surgeon; W. A., London; T. F. H. S.

LETTERS, each with enclosure, are also acknowledged from—Dr. Harding, Whittlesea; Mr. Grant, Cheshire; Miss Bell, Cheshire; Messrs. Giles and Co., Clifton; Mr. Bannatyne, Dorchester; Messrs. Richards and Co., London; Mr. St. Dalmas, Leicester; Mr. Wells, Barnard Castle; Mr. Laing, London; Mr. Kerr, Glasgow; Messrs. Cassell and Co., London; Mrs. Smith, Liverpool; Mr. Taylor, Yorks; Mr. Motion, Glasgow; Mr. Graham, Exeter; Mr. Moring, London; Mr. Lawson, London; Mr. Allan, Liverpool; Mr. Nicholls, Hartest; Mr. Breen, co. Cavan; Messrs. Grace, Bristol; Dr. Macdonald; Mr. Weymouth, London; Dr. Wright, Southsea; Mr. Lee, Leeds; Messrs. Roberts and Co., London; Mr. Duncan, Newcastle-on-Tyne; Mr. Edwards, Matlock Bank; Mr. Adams; Mr. Carmont, Dumfries; Mr. Stenhouse, Glasgow; Mr. Heywood, Manchester; Mr. Darby, Antrim; Mr. Tomkins, Bournemouth; Mr. Parker, Bristol; Mr. Royle, Guernsey; Mr. Newton, Liverpool; Mr. Kelvin, Manchester; Miss Dibben, Bournemouth; Edwards, London; Medicus, Birmingham; W., Leicester; Dewsbury and District Infirmary; P. W. S., Maldstone; B. M. T.; Worcester General Infirmary; Midwife, London; India, London; E. M.; J. K., London; Sister, London; B., Blackburn; Veritas, London; Delta, London; Durham, London; Dr. S., London; Epsomian; X. Y. Z., London; Hakim, London; Matron, Canterbury; M.R.C.S., London; Housekeeper, London; C. J. S., London; Chirurgus, London; Galen, London; Pathology, London; S. S., London; D. M., London; H. L., London; P., Sheerness; M.B., London; A. D. T., London; M. B. J., London; Epitome, London; R. S. V., London; Yorkshire, London; Box 14, Uttroter; W. B. B., London; A. B., Bristol.

Hastings and St. Leonards Observer, Indicator and West London News, Herald and Weekly Free Press, Surrey Advertiser, Gravesend and Dartford Reporter, Windsor and Eton Express, Hertfordshire Mercury, Thanet Chronicle, Reading Mercury, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 4.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, September 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 4.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.

Thursday, September 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARGING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, September 7.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 8.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 8, 1888.

ADDRESS TO MEDICAL STUDENTS.

IN an age of progress we can never cease to be students, and the present is essentially an age of progress as far as the healing art is concerned. Each year in our retrospect we have to record an advance of our knowledge in some possibly unsuspected direction. Frequently the immediate practical importance is not at once apparent, but may remain dormant for a time, waiting for subsequent workers to grapple with and apply the results of the labours of to-day. Still new theories and new discoveries in every branch of science are seized upon with avidity, and made, if possible, speedily to yield their fruit for the good of humanity. Hence we are all in the position of students, and hence the opening of the medical session pleasantly links together the students of the past, the present, and the future. In the opening addresses of the medical schools the records of the past are commonly examined, and bright examples of difficulties successfully overcome are detailed for the edification and stimulation of the students of the future, those who are at the very threshold of their work. The students of the present, qualified or unqualified, rally round their teachers (who are really fellow-students), and by their presence cheer them on their way. All join in good wishes for the welfare of those who, hopeful yet diffident, are at such a time about to turn over a new page in their lives.

In our annual address we have spoken in former years to medical students of every grade up to their time of qualification. We propose to-day to confine our remarks more particularly to those who are about to begin their studies, and we hope to give them some practical advice which shall facilitate their work, and enable them, not simply to qualify in the sense of passing certain examinations, but to qualify in the larger sense of the term—to become fitted morally and physically for their after-life.

The student's life is of necessity a period of training, readily divisible into four stages—the collegiate training, the hospital training, the home training, and, last but not least, the training which, in default of a better term, may be called recreative. We propose touching upon each of these divisions. They are distinct, and yet identical in their purport; they all have an important bearing upon the future well-being of the medical man. No single division can be safely trusted alone. No lasting success ever resulted from exclusive attention to any one of the four. Each is valuable only when cultivated in conjunction with the others.

By collegiate training we refer more particularly to the routine of attendance at lectures, and to the work which is performed outside the wards or the out-patient rooms. No unimportant part of this is afforded by the contact with fellow-students drawn from very different schools, and prepared by very various previous work. The young student will, in this phase, learn far better than even

in a public school the value of self-reliance, the need of definitely marking out for himself the class of friends whose intimacy he will cultivate, as well as the need of a somewhat broader view than the narrow limits of a school may have afforded. In attendance at lectures, he will do well to acquire the habit of taking notes; these are valuable not only for the assistance they give in enabling the student to follow the logical sequence by which the lecturer enforces certain propositions, or for providing a concise statement of facts in a convenient form, but they have a special value in teaching the process known as "separating the wheat from the chaff." There is mostly, and we venture to think there always should be, a certain amount of "chaff" in every lecture. It is the gilding of the pill which makes it easier to swallow, but attention must not be limited too closely to the gilding. A good joke, a quaint association of ideas, may serve to rouse flagging attention, while, perhaps, the fact which the lecturer desires to impress upon the memory will be more readily retained from being linked with some light word. Note-taking is often regarded as a waste of labour, even when it is not thought to interfere with the concentration of attention so frequently demanded; but it is distinctly an art worth cultivating, since it serves to train the student in the mental habit of rapidly and certainly separating essentials from gloss. In after-life he will have to listen to many a lengthy tale, during which an untrained mind is apt to wander, so that the grain of fact of vital importance is in danger of being overlooked. To be of real service the notes should be truly *notes*, and not aim at being *verbatim* reports. They should receive additions or corrections (but still in the briefest note form) from subsequent reading, but over-elaboration is a woful loss of time. One of the saddest things in a student's career is the weary labour so often undertaken in transcribing notes with clerk-like precision, or with the painful earnestness of a schoolboy who expects to be commended for the appearance of his note-book. No one can expect credit at examinations for facts which are possibly neatly inscribed in a note-book, but yet are not to be found in the candidate's answers. Nothing can well be more vexing during examination than to remember the exact appearance of the page upon which an answer to the question has been buried decently, but beyond recall, and yet to find that this is mere obstructive association of ideas, since the details elude the grasp. Note-books are not text-books. It is useless to deal with them as though they were intended for exhibition or publication. They should be simply records of all that seemed best worth remembering at the time the lectures were attended. They should but form the pegs upon which to suspend the facts derived from subsequent reading and observation. With regard to the lectures which enter into the work of the first winter, the student will find he has no choice. His course has been rigidly fixed by the regulations of the examining bodies; no matter what his previous training may have been, he has to attend lectures on Anatomy, Physiology, and Chemistry. Unless forewarned, he is likely to be perplexed and discouraged by the hard names so lavishly employed in these. He will feel not only in a new world in presence of unfamiliar facts, but as though he had

practically to learn two or three hybrid languages. Although it may appear so formidable, this strange vocabulary must be mastered at the outset or it will remain a constant source of trouble. Nearly all the terms employed have a definite meaning, a reason for their use; they do not serve merely as senseless labels affixed to different inanimate objects, but they often have some reference to the characters of the vital actions going on in the economy; hence very little care, with an occasional reference to a classical dictionary, will soon produce order out of chaos. The names must be committed to memory, and we are convinced they will be more readily retained when properly understood, instead of being repeated in parrot fashion as a mere senseless jargon. They will hold their own yet more firmly if constantly associated with a mental picture of the structures referred to, an image of the appearances presented by a dissection or a microscopic specimen. Beyond the lecture-room the young student will find that he has help provided for him by demonstrations and by the amount of practical work he is called upon to perform. He may, perhaps, at first find the lectures difficult to follow, especially if in the school of his adoption seniors and juniors are addressed collectively; but at the demonstrator's classes a more colloquial style is used by younger men, to whom he may look for more individual assistance in the removal of difficulties. Attention to demonstrations forms an important part of education. The student, if he has any real zest for his work, will probably first attract notice in these classes, and his industry will be certain to be rewarded, not only by his being allowed to dissect at an early date, but also by an amount of generous aid always afforded by senior students to those who are really intent upon study. Practical work of dissecting will at first repel, but it speedily entrances. The delight of verifying the descriptions of the manuals, the frequent surprises excited by the work, cannot fail to exert a powerful influence upon an ardent student. The constant training of the hands in neatness and precision in ready obedience to the impulses of the will, the gradual mastery acquired over natural repugnance to the work, the slow development of mental images which grow as the work proceeds, and lend a new life to much that hitherto seemed incapable of realisation,—all of these serve unconsciously to mould the character of the student, to supply him with facts and with self-control which will be invaluable. There is little need nowadays to dwell upon the importance of an accurate and careful study of Anatomy and Physiology by pointing out their bearing upon Surgery and Medicine. Modern students may, we believe, be trusted to realise for themselves that no useless details are ever introduced to hinder their work. Still, since many gladly turn aside to the hospital at an early date, as affording more variety of interest than is apparently derived from the scientific training they meet with in the schools, it may be well to urge the advisability of enjoying this luxury as little as possible until after the end of the second winter session, when, it is to be hoped, the field will be clear before them after they have passed the searching examination in these subjects, which demands all the attention and all the labour which the student has at command. Little can be learnt in the hospital, certainly on the medical side,

until a clear conception has been formed, not only of the minutiae of anatomy, but also of the intricate changes taking place in the normal or physiological state. It is useless to attempt to appreciate the changes in the sounds of the heart in a case of disease before the causes of the sounds ordinarily heard in health have been grasped.

The first visits to the Hospital will probably produce a sense of despair. The beginner will feel oppressed by the amount of detail, by the very different conditions which may find part of their expression in similar changes. For example, he may well be discouraged when he considers the amount of information which may be conveyed by alterations in the condition or appearance of the tongue, or when he hears a clinical lecture delivered upon some common symptom such as headache or backache. He will soon gain confidence, however, from seeing that these tangled skeins appear to present little difficulty to those whom he has seen working with him in the dissecting-room. They have carried on their work with steady persistence. They have brought to their aid the habits of observation which they have acquired in their earlier training. They have employed, and will continue to employ, every sense in the investigation of disease. It is not enough to have read much, to have pondered over text-books vainly hoping to find cases following the typical descriptions. Every case presents some deviations from the normal type, something to remind us that we are dealing with individuals, and therefore with beings endowed with special characteristics, which may at any time furnish surprises. Probably no patient is able to convey a clear logical account of himself or his ailments in terms which do not leave, to the beginner, a wide margin for speculation. We have to learn to be ever on the watch for stray indications which may confirm the patient's account of his sensations, or which may tend to point to some obscure underlying condition which does not readily attract attention. Frequently in the course of investigation pain is complained of, and the student is tempted to desist. While remembering that the patient is a human being, endowed with the capacity for mental and bodily suffering, yet it is obvious that, in its results, a fear of hurting may be as injurious as undue coarseness or roughness of manipulation. A mistaken diagnosis is certain to produce eventually more suffering than the experience of a momentary pang. The relative value of ward work and out-patient work can be seen at a glance in comparing the numbers of in-patients and out-patients annually treated at any hospital. This disproportion the practitioner will meet later, when, although he may be frequently called upon to treat serious cases comparable to those met with in the wards, the bulk of his time is likely to be occupied in dealing with ailments resembling those of the out-patient room. They are relatively slight, and yet they are very real in the discomfort they produce, and they demand even more patience, tact, and therapeutic skill than many cases of greater urgency. Students are apt to flock to the wards where they find the signs of disease writ large; but in their senior years it is better to watch carefully the progress of these minor ailments, and to note the measures adopted for their alleviation. Many common conditions, such as headache, diarrhoea, constipation, or the legion of vague, indefinite

neuragic pains, may defy one deeply skilled in ward work, even though they may depend upon some trifling but easily removable hygienic fault. A student will have to undergo many humiliations before learning to distrust the complacency prompting him to be satisfied with the first physical sign he discovers. It is well to work in conjunction with others of the same standing, comparing notes upon questions of diagnosis, or upon the presence or absence of signs of pathological import, carrying friendly differences of opinion to a senior for arbitration. Many men suffer from shyness, although this fact is likely to be derided by those who delight in speaking of the "general rowdiness" of the medical student. Shyness surely is the cause of the frequent remark, "No, I don't know him; he's not a man of my year." This division amongst men who belong to the same school is a great mistake. Most seniors are only too glad to help the juniors; the educational value of helping to remove difficulties is so great that many would echo the remark of the demonstrator who said, in a moment of candour, "I never knew anything until I began to teach." Still, the best teachers are the patients themselves, and it is only by the most unremitting attention that even part of their many lessons can be learnt. The student must see all that is to be seen, devote attention to every physical sign, handle every pathological specimen. Everything must be personally verified, even though similar conditions have already been frequently under notice.

It is difficult to advise how home trainings should be pursued. The majority of students have their own particular ways of absorbing knowledge, of marking their text-books, of making abstracts, or of reading over a certain set of pages twice or three times. Little that is useful can be said here, since the method which suits one might appear impossible for another. It is, however, advisable that the home reading should not be postponed indefinitely to a more convenient season. The attendance at lectures and demonstrations commences immediately after the opening address, and the home reading should not lag behind. The loss of the first week of the session leads to hurry and confusion in the later attempt to make up time. It is well to ascertain the work to be performed before the end of the session, and then to assign a certain task to each day, and thus acquire a habit of regularity of work, obviating the necessity for periods of spasmodic activity, which merely lead to artificial cram. In point of mental power or of concentration of effort, it cannot be asserted that those preparing for London University examinations are better men than their fellows, and yet it is a matter of common observation that during their student career, at least, they bear the palm. This advantage lies in the general training they have previously undergone, and it is of enormous value in enabling them more readily to systematise their work. The very breadth of scientific training, which many seem so much disposed to deplore, gives them a readier grasp of anatomy and physiology. They are provided with a greater number of links to which they can join new facts with greater facility. Anatomy and many of the other subjects of the curriculum are only capable of being studied in these early days; hence the importance of getting as perfect a knowledge as possible at the time when it is easiest to acquire. Each subject

should be studied as though with the object of rivalling the teacher—as though, for the time being, the student intended to devote his life to Anatomy, to Physiology, or to Chemistry. Each session brings its own burden of fresh subjects, and terrible confusion results to those who have to waste time in vain regrets over lost opportunities while preparing for an examination which has to be taken out of season.

The whole of a student's time should not be spent in work. Recreative training is not to be neglected. It relieves the monotony of work; it develops the frame; it strengthens the *esprit de corps* which should pervade the school. Many weedy youths grow into strong, well-knit men owing to the training of the various athletic clubs, and thus fit themselves for the physical strain which is demanded by every branch of their calling. The long rides and tedious vigils of country practice, the exposure and privations of the medical services in the army or navy, the constant movement and long hours of unremitting mental labour of the consultant, make great drafts upon physical endurance, for which due preparation should be made. Opponents of physical culture may point to such dangers as the risks of over-strain in racing, &c.; but these are the rare instances which point to athletic intemperance rather than to any baneful influence of well-directed athleticism. For those who cannot spare the time for football or cricket, lawn-tennis and boating will afford due relaxation and muscular activity. The milder recreations of whist, chess, or music are not to be disregarded, for they afford mental and social training. Everything which brightens the student's career and unites him in bonds of fellowship with other students at once strengthens those early friendships to which many look back so fondly, and helps to keep him from sinking to those lower temptations which beset his early life.

So far we have sketched the student's career in its varying but more obvious phases. We have yet to speak of the position of medicine among the sciences, and of the frame of mind in which its study should be approached. Medical art is essentially catholic in its adoption of other sciences as well as in its service to all sorts and conditions of men. The intimate association of the various subjects introduced in the course of medical training may not be at first sight apparent; it is only with increasing knowledge and experience that the bearings of many parts are realised. The use of Botany, of Chemistry, and of Physics can only be appreciated by one who looks back and attempts to imagine his woful plight if these subjects had been as sealed books to him. The opinion of medical men is often sought upon the value of every scrap of scientific information which finds its way into print, upon the merits of every new drug which for the moment finds favour; hence a certain catholicity of scientific interest forms an important element in the requirements of modern medicine; and this catholicity must be cultivated if we are to continue to hold our high position. We cannot all hope to emulate the leaders of original research, which now demands, not merely concentration of thought, but also comparative freedom from other occupations; but all can watch the progress of scientific investigations, and by an intelligent appreciation can cheer the labourers in their work. Medicine has no

finality: each atom of knowledge in advance paves the way for fresh inquiries and fresh hopes. In the race for existence all cannot reach the goal of professional competency. Some will fall disheartened by the way; some will be drawn aside by other attractions; some will practically cut themselves off from medicine by undertaking special scientific work. But those who remain as practitioners are to be congratulated upon having chosen an honourable calling, in which they will have endless opportunities of alleviating the sufferings of the sick and earning the esteem and gratitude of their fellow-men. They must be prepared to endure hardships, and to face danger and death; they must expect frequent vexation and annoyance from those who assail their motives or their treatment; they must submit to a great deal of foolish "chaff" from those in robust health; but they will have the satisfaction of knowing that they are the trusted advisers in many homes, and that their presence is always welcomed by the sick and the suffering. A character for purity and truth, for kindness and charity, for skill and trustworthiness, forms no mean heritage. This should be a sufficient stimulus and reward for labour, and it is a heirloom of priceless worth to be handed on intact, and, if possible, with value enhanced, to those who we hope will carry the science of medicine to yet higher perfection.

THE CURRICULUM OF MEDICAL EDUCATION.

THE various changes made during the past five or six years by the formation of Conjoint Boards in the different divisions of the kingdom, the institution of a new University in the north of England, and numerous alterations in the examinations of the older universities and the corporations, have so remodelled medical education and examinations, that it may be well for us to give a detailed account of them in their present position. In England, the Royal Colleges of Physicians and Surgeons have formed a Conjoint Examining Board; in Scotland, the Royal Colleges of Physicians and Surgeons have united with the Faculty of Physicians and Surgeons of Glasgow to form another; whilst in Ireland there are two Boards—one for the Royal College of Surgeons and the King and Queen's College of Physicians, and another for the Royal College of Surgeons and the Apothecaries' Hall of Ireland. To obtain a legal qualification in Medicine, Surgery, and Midwifery, the regulations of one of these Boards must be fulfilled and its examinations passed, unless the student chooses to obtain the diploma of the Apothecaries' Society of London, which is by itself a complete registrable qualification, or seeks a degree in Medicine and Surgery from one of the universities, for this also confers on its possessor a legal right to practise. In England, the Universities of Oxford, Cambridge, London, and Durham, and the Victoria University give medical degrees; in Scotland, the Universities of Aberdeen, Edinburgh, Glasgow, and St. Andrews; in Ireland, the University of Dublin (Trinity College) and the Royal University of Ireland have a similar privilege. As a consequence of the recent changes, the various examining bodies have come into a more general agreement, with some peculiarities of detail only, as to the lines on which the education of a medical student shall be pursued. This has resulted in a more uniform system of examinations and

a greater similarity in the subjects in which the student is tested, although the severity of different boards still varies very much, one body laying considerable stress on proficiency in some scientific or practical subject which is only considered of minor importance by another examining authority. The curriculum for the student is now fairly well defined, and its stages are sharply marked off from one another. These may be divided into Preliminary, Intermediate, and Final, and these three stages we shall proceed to describe *seriatim* for the benefit of the intending student and his parents and guardians.

Preliminary Education.—The General Medical Council very properly insists that everyone shall have passed an examination in the subjects of general education before he is permitted to be registered as a medical student; and no study or practice in medical subjects is allowed to reckon as any part of a medical education until this preliminary examination has been passed and the student duly registered. The preliminary subjects must comprise—English language; Latin; Elementary Mathematics—viz., (a) Arithmetic, including Vulgar and Decimal Fractions; (b) Algebra, including Simple Equations; (c) Geometry, including the first book of Euclid, with easy questions on the subject-matter of the same; Elementary Mechanics of Solids and Fluids, comprising the elements of Statics, Dynamics, and Hydrostatics; and one of the following optional subjects—Greek, French, German, Italian, any other modern language, Logic, Botany, Zoology, or Elementary Chemistry. These subjects may be passed at one or more examinations, but every one of them must be included in the certificates for registration, except that an allowance is made to students from Indian, colonial, and foreign Universities and Colleges, if they have passed an examination in general education which may be considered a fair equivalent. The various examinations of the Universities in the United Kingdom—such as Senior and Junior Local, Matriculation, and those for degrees in Arts; the Matriculation Examinations of the Queen's Colleges in Ireland; the Preliminary Examinations of the Apothecaries' Society of London; the Royal Colleges of Physicians and Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, the King and Queen's College of Physicians, and the Royal College of Surgeons in Ireland; the Junior Middle and Senior Grade Examinations of the Intermediate Education Board in Ireland; Responsions at Lampeter; the Preliminary Medical Examination of the Educational Institute of Scotland; and that for a first or second class certificate from the College of Preceptors in England—all fulfil the conditions of the Medical Council, as do also many examinations at Indian, colonial, and foreign universities and colleges, provided that all the specified subjects are embraced therein. At the examinations of the Apothecaries' Society the subjects may be passed singly, and the College of Preceptors now gives a separate examination and certificate in Mechanics, for this subject has only been made compulsory since 1885. The Royal Colleges of Physicians and Surgeons of England and the Apothecaries' Hall of Ireland have not held a preliminary examination for many years past, but recognise all those that are permitted by the General Medical Council. In selecting any of these examinations the pupil is generally guided by his teacher, but we must point out at once that most of these merely put the student

in a position to proceed for a *diploma*. If he intends to obtain a medical degree from a university, the special preliminary examinations in Arts required by that university must be passed. To a certain but limited extent, examinations at one university are accepted in lieu of corresponding examinations at another; thus Victoria University accepts the Matriculation Examinations of the University of London, the Previous Examination at Cambridge, Responsions and Moderations at Oxford, or the Leaving Certificate Examination of the Oxford and Cambridge Boards, in the place of their own entrance examination; and the Scotch Universities and the University of Durham not only accept the certificates of all universities in the United Kingdom, but also those of the other educational authorities above mentioned *pro tanto*, requiring the candidates to pass only in the extra subjects of their own matriculation examinations. The Universities of London, Cambridge, and Oxford, and the Royal University in Ireland, insist on every student passing their own specified examinations for matriculation. For medical degrees at the University of Dublin (Trinity College), every candidate must be a Bachelor in Arts of Dublin, Oxford, or Cambridge. It will therefore be readily understood how important it is for the student not only to make up his mind before passing his preliminary examination as to which division of the kingdom he will pursue his studies in, but from which university he will seek a degree, or with what qualifying diplomas he will be content to practise. He will find it very difficult, in many cases impossible, to change his career after commencing his strictly medical studies. Having passed the preliminary examination, he must next be registered as a student in medicine. Before this can be done, he must have commenced his medical studies at a medical school or hospital, or under the supervision of a duly registered practitioner, and application must at once be made to the Registrar of one of the branches of the General Medical Council for registration. A special form must be filled up by the student, and signed either by an official of the school or hospital, or by the master or teacher, and transmitted, with the certificate of having passed the Preliminary Examination, to the Registrar. The commencement of medical studies is reckoned from the date of registration, and, except under very special circumstances, any period of study passed before this is not recognised. A period of three years and nine months is the shortest possible time that can be spent in professional studies previously to obtaining a diploma; but the average period of study is at least nine or twelve months longer even for an ordinary qualification, and one or two years for a university degree, and this should be fairly taken into consideration before a medical career is finally determined on. A winter session and two summer sessions may be spent as a pupil of a legally qualified practitioner who has due opportunities for teaching, but three winter and two summer sessions at least must have been passed at a medical school or schools. The Preliminary Examination in Science, or First Professional Examination, which must next be passed, may be taken, and in many cases with the greatest advantage, before joining a medical school. In England this is permitted at every board, but in Scotland and Ireland it cannot be passed until the end of the first year of study. For the

qualifying diplomas, it embraces Chemistry and Physics, and sometimes Materia Medica and Pharmacy. At the end of the first year of study, Elementary Anatomy and Physiology are also included. In Scotland, Materia Medica and Pharmacy are postponed until after the second year of study, whilst under the Conjoint Examining Board in England they may be taken in either the first or second year. There is no Physiology so early in the curriculum of the Irish Boards, and the Apothecaries' Hall in Ireland includes Botany and Zoology. All candidates, therefore, at the end of their first year of study, should have passed in Chemistry, Physics, and Elementary Anatomy (Physiology and Pharmacy when required); for until these subjects be passed, the student cannot enter on his next year's work, inasmuch as every qualifying board puts an interval of a year's study between this examination and the next. For a university degree, the Preliminary Examination in Science is much more severe; it requires a year's special preparation, and is limited to scientific subjects exclusively,—viz., Physics, Chemistry, Botany, and Zoology. These examinations take place twice annually, and at the University of London the subjects may be taken altogether or at two examinations. There is no Zoology in the first examination at the University of Durham, but Elementary Anatomy and Physiology are included, as at the Conjoint Examining Board in England.

Professional Education.—The first strictly professional examination is called the Intermediate or Second Professional Examination, and should be passed at the end of the second winter or summer session. At all the examining boards it embraces Anatomy and Physiology, and Materia Medica is included, if this subject has not been passed at the previous examination. A further knowledge of Chemistry is demanded by the Irish Conjoint Boards, and a unique subject is introduced by them as Elementary Medical and Surgical Hospital Practice, but the extent and limits of the examination therein are carefully scheduled. At the other examining boards all clinical work at the hospital is postponed until after the examination in Anatomy and Physiology has been passed; but by these bodies nine months hospital practice and note-taking of at least six cases are required in addition to the usual certificates for attendance on lectures, a practical course of Physiology, and Dissections. Attendance on a winter course of Surgery is also required by these boards at this stage. At the universities, the Intermediate Examination in all cases is in Anatomy and Physiology. At Oxford, Materia Medica is postponed until the Final Examination; at Cambridge it is only recognised under the head of Therapeutics; but at all other universities it is taken into the Intermediate. The Victoria University, the Royal University of Ireland, and the Universities of Durham and Glasgow demand these three subjects only; whilst at London a further knowledge of Chemistry, at Edinburgh of Pathology, and at Aberdeen and St. Andrews of Surgery, is required at this period of study. In many cases, especially when four subjects are demanded, the examination, which is usually held twice a year, may be divided into two parts. At the Royal University of Ireland the examination is really a double one, with a year's interval, the additional part being in Anatomy and Physiology also, but of a much more advanced character.

The Final Examinations can only be passed after forty-five months have elapsed from the date of registration, or, in other words, not until the completion of four years' medical study. The Conjoint Board in England further insists on an interval of two years between the passing of the Intermediate and Final Examinations. No interval is required by the Conjoint Board in Scotland or by the Apothecaries' Society of London, whilst the Irish boards interpolate an examination in advanced Anatomy and Physiology, and in certain parts of Medicine and Surgery. A peculiar feature of the Anatomical examinations for diplomas in Ireland is the stress laid on actual dissection by the candidate. The various boards all require certificates of attendance on lectures on the subjects of examination and hospital practice, of having attended a certain number of cases of labour (thirty in Ireland, twenty in England, and six in Scotland), and of having had instruction in vaccination. By the Scotch Colleges, attendance for six months at a dispensary or as an assistant to a registered practitioner is specially insisted on, but no evidence is necessary of having held a clinical clerkship and dressership, whilst the Irish boards require a record of the daily observation of five cases of fever, a course of operative surgery, and a special attendance for three months on the ophthalmic and aural departments of a hospital, in addition to those named above. In every case the subjects of Medicine, Surgery, and Midwifery are the essential features of the examination, but some peculiarities require notice. Questions on Forensic Medicine and Public Health are included in the paper on Medicine by the Conjoint Board in England, but the other qualifying bodies make them an essential part of the examination; Insanity is specially mentioned by the Apothecaries' Society of London, whilst Operative Surgery, Ophthalmic and Aural Surgery, are raised into distinct sections under the scheme of the Irish Conjoint Boards. The first and second examinations of either Conjoint Board are held as equivalent to their own examinations by the Scotch and Irish boards, so that students can take the final examination only, if they have passed the others elsewhere; but the English board only exempts undergraduates of Universities from its first and second examinations. The total fees for the series of examinations by the various bodies are: Society of Apothecaries of London, 10 guineas; Conjoint Board of Scotland, including the Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, 25 guineas; Conjoint Board of Ireland No. 1—viz., the Royal College of Surgeons of Ireland and the Apothecaries' Hall in Ireland—33 guineas; Conjoint Board of England—viz., the Royal Colleges of Physicians and Surgeons—35 guineas; and the Conjoint Board of Ireland No. 2—viz., the Royal College of Surgeons and the King and Queen's College of Physicians—40 guineas. At the universities, as at the examining boards, Medicine, Surgery, and Midwifery (including Diseases of Women) are the prominent subjects in the final examinations; but in all cases Forensic Medicine is added as a main subject. In the English universities, General Pathology, Therapeutics, and Hygiene are all specially included; whilst in the Scotch, Pathology only is separately tested. In Edinburgh, Pathology is included in the second examination; at Oxford, *Materia Medica* is taken into

the final. In the Victoria University, separate papers on Diseases of Children and Mental Diseases are set, whilst Operative Surgery, Ophthalmology, and Otology are made distinct sections by the Royal University of Ireland as by the Irish Conjoint Boards, and at Cambridge a Thesis must be written and read in public. The Scotch universities, like the Scotch qualifying corporations, require attendance on six cases of labour only, and attendance for six months by apprenticeship or otherwise on the out-practice of a hospital, or on the practice of a dispensary, physician, surgeon, or apothecary is accepted, and there is no necessity for the candidate to have filled a clinical clerkship or dressership. The Irish universities require personal charge of ten fever cases. The fees vary at the different universities, but as a rule they are lower than those fixed by the corporations.

Having pointed out the curricula for the pass qualifications of the various examining bodies, we must shortly refer to the numerous honorary degrees and distinctions which may be obtained by extra work and a longer period of study. Every corporation gives higher qualifications than the licence to practise, but the conditions on which they are obtained are very variable. Fellowships of the Colleges of Surgeons and Memberships of the Colleges of Physicians are usually obtained by examination—generally of a somewhat stringent character; whilst Fellowships of the Colleges of Physicians are honorary distinctions conferred on the Members only. The Bachelorships of Medicine and Surgery of the universities are registrable qualifications, but their other degrees are merely higher distinctions, in no way necessary for a right to practise. For the Bachelorship of Surgery in the Universities of London, Durham, and Dublin an additional examination must be passed; but in these cases the M.B. is registrable as a qualification in both Medicine and Surgery. The Mastership in Surgery is given to every candidate in the Scotch universities who passes his examination for the Bachelorship of Medicine; in other universities it forms a separate honour. An additional examination, in many cases exceptionally severe, and (with the exception of the Royal University of Ireland) an interval varying from one to three years after obtaining the M.B. and B.S. degrees, are insisted on by the English and Irish universities. The conditions requisite for obtaining the Doctorate in Medicine also vary. In all universities a specified interval (one to five years) is interposed between the M.B. and the M.D. degrees. In every one, except the University of London, a Thesis must be written by the candidate, and at the Royal University of Ireland a Clinical Examination must also be passed. At the University of London there is a special examination, and Mental Physiology is added to the more strictly medical requirements. During the next year, however, the recommendations of the Senate by which the presentation of a Thesis will be optional, will come into force, and this, if accepted by the examiners, will exempt a candidate from the written and clinical portions of the examination in Medicine. In the University of Dublin there is a Bachelorship in Obstetrics, and in this University and the Royal University of Ireland, Masters of Obstetrics have special degrees, but there are no corresponding titles in England or Scotland.

The subject of Sanitary Science, Public Health, or State Medicine has now become of great importance, and it is evident, from the recent discussions in Parliament on the Local Government Act, that applicants for sanitary appointments will in future be expected to possess a licence or diploma showing special knowledge of this branch of medical science. Some of the corporations and universities have instituted examinations in the subjects included under this head, such as Hygiene, Sanitary Law, Sanitary Engineering, and Vital Statistics, with the requisite amount of Physics, Meteorology, Chemistry, and Microscopy which appertain thereto. The University of Cambridge, like the various Colleges of Physicians, makes the examination an open one for any registered medical practitioner. The Universities of Oxford and London, and the Royal University of Ireland, restrict it to their own graduates, whilst Edinburgh, Glasgow, and Durham require attendance on certain specified courses of lectures in those universities. In addition to other practical work, an actual survey and report on some building or locality is usually demanded at all these examinations. The Victoria University and the Universities of Aberdeen and Dublin do not give these diplomas. Dental licences are granted after regular courses of study and examination by all the Royal Colleges of Surgeons.

MEDICAL EDUCATION AT OXFORD.

SIGNS are not wanting that Oxford is seriously beginning to assert her influence and occupy her proper sphere in the training of men for the science and practice of medicine. Medical education in the present day is so essentially practical that the establishment of a proper course of medical education requires a great deal more than mere willingness or fitness on the part of individuals to instruct. Laboratories and other buildings in which practical instruction can be given are above all things essential, and as these essentials cost money, and as there are many claimants for the spare cash of the University, it has necessarily taken considerable time and discussion to procure adequate funds for equipping the Faculty of Medicine of the University of Oxford.

The Faculty of Medicine of the University of Oxford was constituted in 1886, the statute for regulating the medical examinations having been passed during the same year. The first step towards organising a medical school had already been taken in 1885 by the creation of a University Lectureship on Human Anatomy and the appointment of a lecturer. The system of instruction has been so arranged as to enable the student to complete all the subjects of the First Examination for the degree in Medicine, as well as those which are included in the First and Second Examinations of the Conjoint Board before leaving Oxford, and at the same time to profit by the opportunities afforded by the Radcliffe Infirmary of receiving his first lessons in Clinical Medicine and Surgery. Everyone who is admitted to the degree in Medicine in Oxford must have previously graduated in Arts. With this view, every student of Medicine has to pass certain preliminary examinations in Physics and Chemistry and Biology, after which he may obtain his Arts degree by passing a final examination in some scientific subject chosen by himself. His studies should be so planned as to

leave not less than three years for subjects immediately related to Medicine—viz.: Human Anatomy, Physiology, and Chemistry in its medical applications. The University has amply provided for the first two of these branches of instruction in the admirably organised departments of Anatomy and Physiology. Two practical courses of Chemistry, specially adapted for medical students, are given in successive summer terms. The first relates to those parts of organic chemistry which are necessary for the understanding of Physiology and Pathology, the other to the subjects of examination in *Materia Medica*. It will be understood that the work of the Oxford student during his last three years of residence, provided that he follows the course above suggested, relates as directly to his Final Examination in Science for the degree of B.A. as to his First Examination in Medicine, the lines of study being in great measure identical; the practical result being that he is in a position to pass both these examinations before leaving the University.

The following is a list of medical subjects as arranged for 1888-89, with the names of the teachers:—Anatomy (University Lecturer): Mr. ARTHUR THOMSON, M.A. Oxon., M.B. Edin. Physiology: Professor BURDON SANDERSON and Mr. FRANCIS GOTCH, Hon. M.A. Oxon, M.B., B.Sc. Lond. Physiological Chemistry: Mr. HALDANE, M.A., M.B. Edin. Histology: Mr. DIXEY, M.A., M.B. Oxon. Organic Chemistry for Medical Students, under the direction of Professor ODLING. Chemical Pharmacology: Mr. DUNSTAN, Hon. M.A. Oxon., Professor of Chemistry at the Pharmaceutical Society. Clinical Medicine and Surgery at the Radcliffe Infirmary by the Lichfield Lecturers, Dr. TYRRELL BROOKS and Mr. SYMONDS. In the subjects of the preliminary examinations—viz., Physics, Inorganic Chemistry, and Biology—instruction is given at the University Museum, the Botanical Gardens, and in certain college laboratories, particularly those of Christchurch, Balliol, and Trinity.

As far as the teaching of the Sciences is concerned, Oxford is certainly well provided. The range of buildings connected with the Museum, and especially the Museum itself, is mainly due to the initiative of Sir HENRY ACLAND. The Museum proper contains collections illustrative of Human and Comparative Anatomy, Zoology, Geology, and Palæontology. The most developed portion of the Museum is that devoted to Comparative Anatomy, which, under the care of the late Professor ROLLESTON, and his successor, Professor MOSELEY, has gradually grown into a really fine collection, which in some directions (human skulls, for instance) is probably unsurpassed. There are a number of first-rate preparations and wax models illustrative of Development. Adjoining the Museum are some capital workrooms for Zoological students, that for the elementary classes having accommodation for thirty men, and that for advanced students for six or eight. Provision is also made for the storing of zoological specimens, alive and dead, which are needed for purposes of demonstration and instruction; and there is a special lecture theatre for the zoological students. It is a matter of deep regret that the present Linacre Professor, Mr. MOSELEY, is, owing to indisposition, unable for the present to fulfil his duties at the University. During Professor MOSELEY'S enforced

absence the work of the chair is being carried on by Dr. HICKSON, and it is certain that the wants of the scientific students will be well cared for in his hands.

In the other department of Biology—i.e., Botany—the work is carried on in the Botanical Gardens, where a new laboratory has lately been constructed. The Museum is at present rather deficient in specimens for assisting the ordinary medical student to lessen the drudgery of his anatomical studies. It must not be forgotten, however, that the “dissecting-room” is, so to say, a new creation in Oxford, and we have no doubt that the deficiencies will in time be supplied. Morbid Anatomy and Pathology takes rather a back place in the Museum at present. The present collection, we believe, came bodily from Germany, and a catalogue in manuscript has been made by Dr. TUCKWELL; but it is evident that, if the Medical Faculty of Oxford is really to flourish, the important subject of Pathology will need to be better cared for than at present. It may be urged that at present the Oxford Medical Faculty does not seriously attempt to give students their entire education, and, indeed, it recommends that clinical studies should be pursued elsewhere than in Oxford. It is true that the students will certainly gain practical experience with greater facility in the large centres of population, and that Pathology is best studied alongside of disease. Pathology is fast taking rank, however, as a pure science, and for exactness is daily rivalling Physiology. The Radcliffe Infirmary is capable of affording a large amount of material for pathological work, and if to human pathology were added the pathology of the lower animals, and if a Pathological Institute were established analogous to the Brown Institution, where human and animal pathology could be studied, much support might be expected from the agriculturists of the neighbouring counties and the enormous number of country squires, who would willingly help to support an institution in their *alma mater* which would reciprocate by helping them. Again, to pathology belongs the study of microbes, but we believe that what may be called bacteriology is not at present seriously cultivated in the University. The study of physiology is exceptionally well provided for, and Professor BURDON SANDERSON'S laboratory may fearlessly challenge comparisons. This laboratory—erected and fitted at a cost of £15,000—contains more than everything which students need. Physiology proper, physiological chemistry, and histology are all provided for, and there is accommodation in the lecture-rooms and work-rooms for about sixty students. Chemistry, Physics, and Botany have long been taught in the University, and every reasonable facility is given to students. The “Clarendon” laboratory, devoted to Physics, and under the care of Professor CLIFTON, is one of the most complete laboratories of its kind. It was designed by the present distinguished professor, and has been gradually perfected. Here, the student may study all branches of physical science, in rooms specially designed and fitted to facilitate the acquirement of practical knowledge in each department. One of the recent additions is a powerful gas engine and a set of dynamos, designed for the scientific study of this department of electricity. These, valued at £750, were the gift of a munificent friend of Professor CLIFTON.

Although the Faculty of Medicine advises the student to finish his medical education away from Oxford, it is, nevertheless, highly advisable that he should have some insight into practical work while in residence at the University. In the Radcliffe Infirmary such opportunities are amply provided. During the past year there were over 1500 in-patients and 7000 out-patients relieved. There were 83 deaths with 66 post-mortems, and anæsthetics were administered 502 times. These figures prove conclusively that no small amount of experience can be picked up by a willing student in the Radcliffe Infirmary. The structure of the infirmary has been greatly improved of late years, and (thanks again to Sir H. ACLAND) some of the recent wards are models of what wards should be. In addition to practical experience, the University provides for a certain amount of systematic clinical instruction by the appointment of two “Lichfield Lecturers.” During the ensuing year, the Lichfield Lecturer in Clinical Medicine, Dr. BROOKS, will lecture on “Physical Diagnosis,” while his surgical colleague, Mr. H. P. SYMONDS, will take for his subject “Wounds and the Treatment of Wounds.”

THE CHOICE OF A TEXT-BOOK.

THE question which the student is always asking, and naturally, is what book will best serve his purpose in preparing for certain examinations. The answer to this question is one which becomes every year more difficult. The number of medical text-books of a high class is now very great; therefore to select a few from amongst them may seem invidious. At the same time, a list, which by no means pretends to be exhaustive, can be drawn up that may prove of value as a guide to the student in his choice. As representing all the various examining bodies, we may take for this purpose the Examining Board for England (Royal College of Physicians and Royal College of Surgeons) and the University of London.

THE EXAMINING BOARD FOR ENGLAND.

For the *First Examination* of this Board the student will be required to have gained a fair knowledge of Elementary Anatomy and Physiology, of Chemistry, *Materia Medica*, and Pharmacy; and if he be diligent he should be able to pass both parts of the examination by the close of his first year. In *Anatomy*, he may have recourse to GRAY'S Text-book, and to the works on *Osteology* by WARD, HOLDEN, and NORTON. In *Physiology*, the Elementary Text-book of HUXLEY might well be mastered first. In *Chemistry*, ROSCOE'S Elementary book and ATTFIELD'S work. In *Chemical Physics*, FOWNES' Inorganic Chemistry edited by WATTS, or BALFOUR STEWART'S Elementary Physics. In *Materia Medica*, the works of MITCHELL BRUCE, WHITLA, ROBERTS, GARROD'S Essentials (edited by TIRARD), and BRUNTON'S or OWEN'S Elements. For the *Second Examination* (corresponding to the Primary Membership at the College of Surgeons), the subject of *Anatomy* may be well studied in GRAY'S *Anatomy*, ELLIS'S Demonstrations, and HEATH'S Practical Anatomy. The anatomical plates of ELLIS and those of GODLEE, or the handier volume of MASSE, are very useful in supplementing practical work. In *Physiology*, the books most to be recommended are KIRKES' Handbook, G. YEO'S Text-book, H. POWER'S Elements, and MAPOTHER'S Manual; an

Histology, apart from the sections devoted to it in the works of GRAY and KIRKES, may be read in KLEIN'S *Elements* and SCHÄFER'S *Essentials*.

For the Third or Final Examination, in the subjects of *Surgery* and *Surgical Anatomy*, there are the Text-books of BRYANT, HOLMES, GANT, and ERICHSEN (ably edited by MARCUS BECK), the *System of Surgery* edited by TREVES, the *Practical Handbooks* of BERKELEY HILL, CHRISTOPHER HEATH, PEARCE GOULD, and TREVES' *Applied Surgical Anatomy*. For *Surgical Pathology*, PEPPER, BOWLBY, or BILLROTH may be recommended. In *Diseases of the Eye*, LAWSON or NETTLESHIP. In *Medicine*, the Text-books of ROBERTS and BRISTOWE, preceded by the smaller works of CARTER or CHARTERIS. *Clinical Medicine*: FENWICK, FINLAYSON, or GRAHAM BROWN. *Pathology*: GREEN, COATS, PAYNE, and ZIEGLER (MACALISTER'S translation), and WOODHEAD'S or STEVEN'S practical work. *Therapeutics*: BARTHOLOW, RINGER, NAPHEYS, and FARQUHARSON. *Medical Jurisprudence*: the Text-books of GUY and TAYLOR. *Public Health*: WILSON. *Midwifery*: PLAYFAIR or GALABIN.

COLLEGE OF SURGEONS.

In addition to the anatomical and physiological works abovementioned, there may be read for the Primary F.R.C.S. (especially its histological and embryological sections)—QUAIN'S *Anatomy*, FOSTER'S *Text-book of Physiology*, LANDOIS' work edited by STIRLING, and GEGENBAUR'S *Comparative Anatomy*. Professor FLOWER'S *Osteology of the Mammalia* might also be read. For the Pass Examination, ERICHSEN'S work may be supplemented by chapters in the *System of Surgery* edited by HOLMES and HULKE. In *Operative and Practical Surgery*, there are works by STIMSON, FERGUSSON, and S. SMITH and HEATH'S *Atlas*. PAGET'S or BILLROTH'S *Surgical Pathology* and ZIEGLER'S *Pathology* may be profitably read in connexion with works mentioned under the Conjoint Examination.

UNIVERSITY OF LONDON EXAMINATIONS.

For the Intermediate M.B. Examination of the University of London, the subject of *Organic Chemistry* may be studied in the Text-books of WILLIAMSON and of FOWNES. *Materia Medica*, besides the books above mentioned, is more fully treated in the works of BRUNTON, PHILLIPS, BARTHOLOW, and H. G. WOOD. *Physiology* as for the Primary F.R.C.S., with perhaps the addition of such books as that of POWER and HARRIS for practical work and of SCHÄFER for practical histology. The anatomical text-books are those recommended above. For the M.B. Examination, the subject of *Medicine* may profitably be further studied in NIEMEYER'S Text-book, in the exhaustive and scientific treatise of the late Dr. HILTON FAGGE, in that of AUSTIN FLINT, in the admirable work of STRUMPELL, in REYNOLDS' *System of Medicine*, and in TROUSSEAU'S *Lectures*. The large *System of Medicine* by American authors contains articles which may often be usefully consulted by those who are desirous of obtaining full and accurate information. Special monographs (see M.D. Exam.) may also be consulted. *Pathology*, which should be worked at practically, may be studied in GREEN'S, COATS', PAYNE'S, or ZIEGLER'S Text-books, and also in the works of WILKS and MOXON, and in those of CORNILL and RAVIÉRE; *Midwifery*, in the writings of PLAYFAIR,

GALABIN, LEISHMAN, LUSK, and BARNES; *Gynaecology*, in those of GALABIN, LOMBE ATTHILL, EDIS, M. JONES, and BARNES; *Dermatology*, in the Text-books of TILBURY FOX, LIVEING, DUHRING, and M. MORRIS; *Medical Electricity*, in DE WATTEVILLE or POORE; *Medical Ophthalmoscopy*, in GOWERS' Handbook. For the M.D. Examination, the candidate will do well to extend his reading to the better-known monographs, such as MURCHISON on Continued Fevers and on Diseases of the Liver; GOWERS, ROSS, CHARCOT, and WILKS on Diseases of the Nervous System; BALFOUR, BYROM BRAMWELL, and WALSHIE on Diseases of the Heart; POWELL and WALSHIE on Diseases of the Lungs; RALFE, W. ROBERTS, and DICKINSON on Diseases of the Kidney; E. SMITH, GOODHART, and A. MONEY on Diseases of Children.

In the foregoing lists we have mostly indicated more than one work upon a subject; for it is, of course, impossible to make a single selection from among so large a number of excellent works. A certain amount of choice must be left to the student himself, who will do well to be guided in this respect by the opinion of his teacher in the particular subject. Since it is impossible as well as undesirable for him to be too discursive in his reading during his student days, he may well resolve to devote such leisure as may happen to him in the future to making the acquaintance of works which will afford not only instruction but pleasure in their perusal.

THE STUDY OF MATERIA MEDICA.

PERHAPS no other subject in the whole medical curriculum is regarded by students with the yawning aversion ordinarily excited by the study of *Materia Medica*. It is the veritable *pons asinorum* of the medical course. Compared with other subjects, it is at a distinct disadvantage. The teacher of anatomy has his dissection before him; his walls are crowded with diagrams; he is able to give ocular demonstration to point his remarks. In physiology also diagrams afford valuable service, and experiments, of a restricted character, claim attention. In *materia medica* the case is widely different. Pharmacological action must be described, but can only be demonstrated in very exceptional cases. Therapeutic action must be touched upon; but, in speaking of therapeutics, strange unfamiliar terms must be employed, and a knowledge of the natural course of disease when not controlled by treatment must be assumed. The subject bristles with difficulties; and yet there is probably nothing to which students, before joining a medical school, are more instinctively drawn. Every tyro is well aware that the keenest diagnostic powers are of little value if they lead to no more tangible result than the bestowal of a learned name upon a group of symptoms. Patients do, it is true, frequently present themselves simply to know what is the matter with them, but the majority of those who come under notice are actuated by a far more cogent reason—the desire to get well. Morbid conditions may render us unable to satisfy this desire, or alleviation may be obtained by due observance of some hitherto neglected hygienic rule; but far more often remedial agents—drugs—must be employed, and to neglect using them would involve loss of confidence. The cause of distaste for the study of *materia medica* is not far to seek. It lies mainly, we believe, in the place which the subject occupies in the curriculum. The

difficulties attending its study are no doubt considerable, but they would sink into relative insignificance if students were not induced to attend lectures before they can understand them. The study should not be attempted before a firm foundation of physiology and chemistry has been laid. To a junior student *materia medica* is almost incomprehensible, and the attempt to master it frequently degenerates into "cramming" a host of unnecessary facts which present no rational idea. It suffers from the diffuse character of its details as much as from an apparently endless application of every remedy. Many students are apt to consider that they need not burden themselves with pharmaceutical processes; that when they are in practice they will merely have to send to the nearest chemist for what they require, forgetting that the art of knowing what they want depends entirely upon their knowledge of *materia medica*. They think all details of infusions, decoctions, and the like, may be ignored until they are surprised by having a prescription returned owing to the incompatibility of its ingredients. A young practitioner recently remarked that he had learnt far more of the use of drugs from his partner than from all his lectures and hospital work. And this is likely to be the experience of many who have been induced, under the present regulations, to study *materia medica* before the nice pharmacopœial distinctions of roots and rhizomes, fruits and seeds, have been rendered intelligible by a course of botany. If by any mischance success attends the students' efforts at the end of the first summer session, the probability is that systematic study of therapeutics is never resumed. Text-books on medicine deal with questions of treatment in a very general fashion, and this is deemed sufficient until the practical work of life begins. It is of little service to know that "tonics and alteratives" are indicated if these terms only suggest vaguely the names of a very few remedies whose official preparations and their doses are matters of speculation, rather than knowledge. Practical pharmacy at most examinations is treated as though merely a matter of being "signed up"; the work is frequently performed in a perfunctory manner, which leaves the haziest of notions around the reasons for the use of the various ingredients in a prescription, and paves the way for many subsequent difficulties with experienced dispensers. Students should themselves prepare examples of every pharmacopœial preparation, under the guidance of a teacher competent to explain chemical principles, and to give practical directions for the "sufficiency" so frequently mentioned in the Pharmacopœia. Chemical incompatibilities are mostly obvious enough; the association of acids with alkalis or with carbonates usually produces unmistakable results; but the mixture of physiological antagonists is not so readily to be avoided by those who possess an imperfect acquaintance with pharmacology. It is as much to be deprecated as the routine employment of remedies for diseases regardless of the special requirements of the moment.

Materia medica cannot now be acquired in the old way during a period of pupilage, which has become practically extinct, and was always wanting in the command of physiological data. It requires a place in the curriculum, but it should not be taken too early. The second summer seems to be the appropriate time for its study, since it then meets the advantages of the earlier work, while its application in

hospital practice, when the influence of therapeutic measures may be witnessed, and when, from constantly writing prescriptions from dictation, the doses of drugs are more readily fixed in the memory. It is frequently only a question of dosage which separates the ingredients of *materia medica* from poisons, or "medicinal materials," as they are termed in a recent novel. Pharmacopœial limits of dose can only be exceeded in exceptional cases. On the other hand, a hesitating fear which leads to an absurdly small dose must often provoke a smile of derision.

While paying careful attention to therapeutic progress, the constant search for new panaceas is to be distrusted. Accounts of the value of new remedies are to be gauged largely by the character for credibility attributed to the witness. Glowing accounts which are greeted with studied silence in medical journals are to be looked upon with suspicion. In dealing tentatively with any new remedy careful record of observations should be kept, although single results are of comparatively little worth; they are open to so many sources of fallacy, and might lead to erroneous deductions. Even with the drugs whose general effects are known with the greatest precision individual peculiarities of action are frequently observed; hence those whose knowledge of drugs is limited to a narrow range will be apt soon to find themselves at the end of their resources. After all, knowledge of *materia medica* is demanded for the good of the practitioner, as well as for that of the patient; and as the student, in all probability, has determined on his future sphere of work, he must fit himself for any eventuality by a thorough knowledge of pharmacology and prescribing. The tests of the various examining bodies are but precursors of the problems to be solved in the daily work of medical life.

CONDITIONS UNDER WHICH MEDICAL MEN WITH BRITISH QUALIFICATIONS ARE PERMITTED TO PRACTISE IN FOREIGN COUNTRIES.

IN this article we offer some general information concerning the conditions under which those who possess British qualifications can obtain permission to establish themselves in practice in various countries, which will probably be useful. As new laws are made these conditions are liable to change, and at the present time the regulations for the permission of foreigners to practise are in a transition state in several of the more important countries. There is probably no country in Europe where more liberty is enjoyed by foreign practitioners than in England; while other countries are gradually hedging themselves round, so that it is yearly becoming more and more difficult for a British practitioner to establish himself abroad unless he is prepared to undergo a tolerably complete examination in all the subjects of medical study in the language of the country in which he elects to live. A British diploma ought to hold good for all British possessions. In some colonies, however, local fees have to be paid, and in Malta we believe an examination is required, though by what right it is difficult to conjecture. The colony of Victoria has evinced a desire for the extension to it of the operation of Part II. of the Medical Act, 1866; and as a local Act which restricts practice to British subjects is regarded as a bar to such extension, it is pro-

posed to alter the Victorian Medical Practitioners Act so that it may no longer be out of harmony with the spirit of Imperial medical legislation.

In France there are two grades of practitioners—Officers of Health and Doctors of Medicine, the examinations for the former diploma being fewer and more simple than for the latter. It has been usual for British medical men to content themselves with the lower diploma, which, it should be remarked, gives only a right to practise in some one department of France. Now, however, a cry has been raised that foreigners ought to be obliged to undergo the whole of the five examinations for the Doctorate—if not, indeed, to pursue their studies over again in a French medical school. Discretion is given to the Minister of Public Instruction to decide whether a foreign medical man may be admitted to the examinations for the Officership or the Doctorate, as well as the amount of exemption that shall be accorded to him. This decision is based upon the value of his own diplomas.

The following memoranda are copied from a printed paper supplied to applicants for information at the British consulate:—

Foreign medical men can be authorised to practise in France in two different ways: either by decree, or by undergoing the necessary examinations at Paris or one of the provincial Faculties of Medicine. The cases in which the authorisation to practise is given by decree are of rare occurrence. The examinations are six in number, the final one being the public defence of a printed thesis. The subjects are as follows: (1) Anatomy and Physiology; (2) Internal and External Pathology; (3) Natural History, Natural Philosophy, Chemistry and Pharmacology; (4) Hygiene, Medical Jurisprudence, Materia Medica and Therapeutics; (5) Clinical Medicine and Surgery-Midwifery; (6) a Thesis. A minimum residence of four years is required in the case of students, during which time, besides following the regular curriculum at the Faculties, they must give proof of constant attendance at the hospitals. The total amount of the fees for the diploma, or for the authorisation by decree, or after examinations, is about 1260 francs. The preceding observations apply to the degree of Doctor of Medicine, which entitles the holder to practise the profession throughout the whole French Republic. There is a diploma of an inferior grade, that of *Officier de Santé*, which limits the practice to the department in which it is conferred, and the examinations are only three in number. When the candidates possess degrees obtained at universities or Faculties of a high order, such as London, Edinburgh, or Dublin, the four years' residence and six separate examinations are in some instances dispensed with, and the candidate is required to undergo only two practical examinations (one being in writing and the other oral in public on appointed cases in a hospital), and to defend a thesis. In some cases the degrees obtained in the above-named British Faculties are admitted by the French Council of Public Instruction as equivalent to the diploma of *Officier de Santé*; thus enabling the holders, without examination, to practise in the department where they reside, but not beyond. (Such cases have occurred in Boulogne, Nice, Cannes, Pau, &c.) The course the candidate should pursue is to address an application to the Minister of Public Instruction, forwarding

to him at the same time his diplomas and certificates. This application is referred by the Minister to the *Conseil d'Instruction Publique*, the medical section of which reports thereon to the Minister, who then either rejects the petition, informs the candidate that he must undergo the necessary examinations before he can obtain a licence to practise in France, or, in very exceptional cases, intimates that a decree will be issued giving him the right to practice without being required to pass any examinations. It must be added that French students, before they can take a degree of Doctor of Medicine, must have previously graduated at a French university as Bachelor of Letters and Bachelor of Sciences, but these two degrees are generally dispensed with in the case of foreigners admitted to pass medical examinations. Persons practising without legal authorisation are liable to fine and imprisonment.

In Germany the ordinary State examination must be passed, and as a condition of admission to it the maturity or matriculation examination must either be passed or exemption obtained from it on the strength of some degree or other Arts examination previously passed at home. Some account of the German and other continental examinations was given in the Students' Number of THE LANCET for 1886.

In Austria there is more difficulty about obtaining leave to practise than in almost any other country, it being necessary not only to take the Doctor's diploma at an Austrian university, but to become an Austrian citizen. This at least is the rule, but it is impossible to say what might or might not be done by influence at Court. A medical degree can be obtained by complying with such directions as to residence and examinations as are decided on by the Council of Professors of a university in each particular case. It is remarkable that when a foreigner is elected to a medical professorship in an Austrian university, he does not obtain the right to practise in virtue of his professorship or of his degree.

In Russia the State examination must, as a rule, be passed—in Russian at most of the universities, in German at Dorpat, or in Swedish at Helsingfors. The Helsingfors diploma, however, only holds good for Finland. Where a foreign M.D. of high value is held, the Minister may permit the examination to be confined to what is called in Cambridge "keeping an act"—i.e., reading and defending a thesis. Even this is a much more serious affair than it is generally looked upon with us.

In Switzerland English medical men are not allowed to practise, even amongst their own countrymen, without having first obtained a licence to practise by passing the State examination, which is a difficult one, and must be passed either in French or German. A good deal of jealousy is evinced by Swiss practitioners of Englishmen who attempt to practise in the country, and not long since some prosecutions were instituted against English medical men for practising, and fines imposed. The hotel-keepers, however, took fright, and, as they are a powerful body, they managed to get exceptions made in the cases where penalties had been incurred. Still, it must be remembered that any Englishman who attempts to practise in Switzerland without a Swiss qualification does so at his peril, even though all his patients may be English people who have been specially

sent by physicians in London to him. The question of reciprocity has been mooted, but our Swiss *confrères* will have none of it if they can help it, alleging that our diplomas are not nearly so good as theirs.

In Holland the State examination, which, we believe, corresponds somewhat with the German one, must be passed.

In Sweden, according to the regulations of the Sundhets Kollegii or Medical Council, issued in 1886, foreign medical men desirous of practising must pass the necessary examinations at the University of Upsala or at the Karolinska Institute of Medicine and Surgery at Stockholm.

In Norway the Royal permission may be granted to foreign practitioners who can show that they have passed examinations in their own country equivalent to those of the Universities of Upsala or Christiania. These, however, are of a very stringent character, and it is doubtful whether most of the qualifications obtainable in this country would be considered equivalent to them. Failing this, a foreigner can obtain permission to pass an examination at Christiania. There is no need to take the Doctorate; the Licentiate's diploma is sufficient, but this implies ordinarily about seven years' work for a native student.

In Denmark a foreign practitioner, before being allowed to practise, has to pass all the examinations that Danish medical men have to pass, the language of examination being Danish. In some cases, however, an exception is made on special application, when the permission is only required for the purpose of practising in the Danish West Indies, when the examination may be conducted in French or English. Under these circumstances, too, it is less stringent.

In Portugal, including of course Madeira, the regular State examination must be passed in the Portuguese language.

In Italy nobody is allowed to practise without a diploma from an Italian university, and all practitioners who settle in towns, for the purpose of practising there must present their diplomas for registration at the municipal office. To these rules exceptions are made in favour of foreign medical men who are qualified to practise in their own countries, and who limit their practice in Italy to foreigners. They must, however, produce their diplomas to the authorities whenever required to do so.

With regard to Spain, application must be made through the diplomatic agent to the Government, the diplomas, duly certified, being forwarded. The application is usually granted, but applicants must be prepared for protracted delay.

In Belgium a degree must be obtained either from Ghent or Liège (those of Brussels and Louvain not being recognised), or an examination of a more or less formal character must be passed, after which a "permit" is given by the Minister. Changes in the direction of increased stringency may here be expected shortly.

In Servia an examination must be passed in Belgrade, except by graduates of Paris or Vienna.

In Roumania a *privé-voc* examination is necessary.

In Turkey, medical men who have not obtained a diploma from the Constantinople Medical School must present themselves before the Director of the Medical School, marked

Pasha, with their foreign diplomas. They must then pass a short examination (*colloquium*). The licence is then granted, the fee payable for it being £4 10s. These are the regulations, but we understand that difficulties of various kinds have usually to be overcome, so that the obtaining of a licence to practise in Turkey is not always quite so simple a matter as it would appear to be from the official regulations.

In Greece an examination is necessary, which is held at Athens. It may be conducted in almost any language.

In Egypt and Morocco permission to practise may be obtained by the presentation of British diplomas.

In the United States the laws vary with the different States. In most of them British diplomas are recognised. In New York, however, a degree must be obtained from some local college.

Nearly all the South American States require examinations to be passed. Some of them are really difficult, and others are said to vary in stringency according to circumstances, the examiners, who are frequently Englishmen or Germans, not being particularly anxious to increase the already existing competition for practice amongst the more wealthy inhabitants.

THE ETHICS OF MEDICINE AND MEDICAL STUDENTS.

It is not too soon to let our young readers know that they are entering a profession in which much importance attaches to conduct and the principles which regulate conduct. The rush of students into the profession is, as we have often pointed out, somewhat serious. Last year there were 800 or 1000 more added to the profession by new registrations than were removed from it by death. The consequence is a crowded state of affairs, and one in which it is difficult for men, with the best dispositions in the world, to exercise those amenities which have always been the distinction and the honour of the profession. We can foresee no chance of any diminution of competition. There is only the more reason why new entrants should early realise that in its very nature medicine discourages all mean methods of success. The limitation of its resources is best known to those who best know the subject, and this limitation teaches modesty. The true physician cannot enter the lists with false pretenders whose ignorance enables them to promise the impossible. He must have that self-control which enables him to bear with equanimity the vaunting boasts of the quack. He will soon learn that his standing with the public depends not on what he promises so much as on what he achieves, and that questions of demeanour cannot be ignored by those who have the great problems of health and disease in their care. He will not fail, too, in personal sympathy with patients. The great mystery of sickness will not be lessened by his familiarity with it. Like the Good Physician, he will note it with pity, and with a deep desire to mitigate and remove it. Where pity calls for it, he will be ready to minister to the sick with slight reward or hope of reward. Where there is no such call for it, he will hold high the value of medical service, and insist on being duly recompensed. He will do this from respect not only to what is due to himself, but to the great art of which he happens in the particular case to be the representative. In

nothing is the tradition of medical conduct more particular than in reference to the treatment of medical brethren. There is to be more than courtesy, a feeling of consideration and even self-sacrifice towards those with whom we are in professional relations. No amount of competition can excuse us from the cultivation of this spirit. Not even the want of such a spirit in our neighbour, and perhaps our rival practitioner, can absolve us from the obligation of having and of fostering it. It may seem a hard doctrine that we are to be all that is generous even in dealing with a neighbour who is not generous at all, and who is not himself very scrupulous in his methods. But it is even so; and in the long run we venture to say that such ethics will have the advantage of the opposite ones.

We may be told that these are ethics for medical practitioners, not for medical students. But still we are not assigning to them the wrong place in putting them in the Students' Number of THE LANCET. The student cannot know too soon the high principles which are expected of him, or too early begin to cultivate them. They can be exercised towards fellow-students as well as towards fellow-practitioners, in the class-room and the dissecting-room as well as in the conflicts of practice. If any medical student should find that the "manner of spirit" which we have described is not his, let him try to make it his. If he fails after due labour and effort, let him reconsider his calling, and find one that will not be so exacting as this profession of HIPPOCRATES.

THE EXAMINATION FOR THE CERTIFICATE IN PSYCHOLOGICAL MEDICINE.

UPWARDS of forty qualified practitioners have availed themselves of the opportunity now offered by the Medico-Psychological Association to display their knowledge of mental disorders, with a view to treating them successfully either in private practice or as superintendents of public asylums. On the 6th of August, at a meeting of this Association held in Edinburgh, under the presidency of Dr. CLOUSTON, a resolution was adopted agreeing to petition the General Medical Council to recognise and register certificates of efficiency in psychological medicine granted by the Association. It may not be inappropriate here to remind our student readers that the conditions respecting this examination can be obtained on application, in England, to Dr. RAYNER, Hanwell; in Scotland, to Dr. URQUHART, Murray's Asylum, Perth; and in Ireland to Dr. COURTENAY, Limerick.

A lecturer on Insanity at one of the Metropolitan Hospitals has forwarded us a printed prospectus, on which are found the conditions for this examination, specimens of the questions set, and also a table of the classification of mental diseases adopted by the Royal College of Physicians, which is the only classification recognised by the Commissioners in Lunacy. This prospectus was distributed to the students of his class. It is an example we should like to see followed by all teachers of this important branch of medicine. We trust that by again drawing attention to the subject, the necessity for the study of mental diseases may be more generally acknowledged by the examining bodies.

SESSION 1888-89.

GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION OF THE UNITED KINGDOM.

Registration of Medical Students.—The following are the General Medical Council's Regulations in reference to the registration of students in medicine:—

Every medical student shall be registered in the manner prescribed by the General Medical Council. No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council,¹ and has produced evidence that he has commenced medical study. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration. The registration of medical students shall be placed under the charge of the branch registrars. Each of the branch registrars shall keep a register of medical students according to a prescribed form, and shall enter therein the name, the preliminary examination and date thereof, the date of registration, and the place and date of commencement of medical study, as certified by a master or a teacher, or an official in a medical school or hospital. Every person desirous of being registered as a medical student shall apply to the branch registrar of the division of the United Kingdom in which he is residing; and shall produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and evidence that he has commenced medical study. The branch registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration. Each of the branch registrars shall supply to the several qualifying bodies; medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students. The several Branch Councils—and in England the Executive Committee, if its meeting be more convenient and the case be urgent—have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory. A copy of the Register of Medical Students, prepared by each of the branch registrars, shall be transmitted on or before December 31st, in each year, to the registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule A to the Medical Act (1858), and through the branch registrars to the several medical schools and hospitals. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils—and in England the Executive Committee, if its meeting be more convenient and the case be urgent—have power to admit exceptions to this recommendation. The regulations for preliminary general education are as follows:—

No person shall be allowed to be registered as a medical student unless he shall have previously passed (at one or more examinations) a preliminary examination in the subjects of general education as specified in the following list:—1. English Language, including Grammar and Composition. 2. Latin, including Grammar, Translation from specified authors, and Translation of easy passages not taken from such authors. 3. Elements of Mathematics, comprising (a) Arithmetic, including Vulgar and Decimal Fractions; (b) Algebra, including Simple Equations; (c) Geometry, including the first book of Euclid, with easy questions on

¹ Exception may be made in the case of a student from any Indian, Colonial, or Foreign University or College, who shall have passed the matriculation or other equivalent examination of his University or College, provided such examination fairly represents a standard of general education equivalent to that required in this country.

the subject-matter of the same. 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics. 5. One of the following optional subjects:—(a) Greek, (b) French, (c) German, (d) Italian, (e) any other Modern Language, (f) Logic, (g) Botany, (h) Zoology, (i) Elementary Chemistry.²

W. J. C. Miller, B.A., Registrar of the General Council and of the Branch Council for England, 299, Oxford-street, London, W.—James Robertson, Registrar of the Branch Council for Scotland, 1, George-square, Edinburgh.—R. L. Heard, M.D., Registrar of the Branch Council for Ireland, 35, Dawson-street, Dublin.

REGULATIONS OF THE MEDICAL EXAMINING BOARDS IN THE UNITED KINGDOM.

UNIVERSITY OF OXFORD.

There are two degrees in Medicine, B.M. and D.M., and two degrees in Surgery, B.Ch., and M.Ch., and a diploma in Public Health.

The B.M. and B.Ch. degrees are granted to those members of the University who have passed the Second Examination. Graduates in Arts (B.A. or M.A.) are alone eligible for these two degrees. After the degree of B.A. is obtained, the degrees of B.M. and B.Ch. may be obtained by passing the following examinations:—1. Preliminary. 2. Professional. (a) First Examination: Subjects—Organic Chemistry, unless the candidate has obtained a first or second class in Chemistry in the Natural Science School; Human Physiology, unless he has obtained a first or second class in Animal Physiology in the Natural Science School; Human Anatomy. (b) Second Examination: Subjects—Medicine, Surgery, Midwifery, Pathology, Forensic Medicine with Hygiene, and Materia Medica with Pharmacy.

The degree of D.M. is granted to Bachelors of Medicine of the University—(1) who took the degree of B.M. previously to the end of Trinity Term, 1886, provided they have spent three years in the practice of Medicine after taking that degree, and have composed a dissertation on some medical subject approved by the Regius Professor of Medicine, before whom it must be read in public; (2) who took the degree of B.M. subsequently to the end of Trinity Term, 1886, provided they have entered their thirty-ninth term and have composed on some medical subject a dissertation which is approved by the professors in the Faculty of Medicine and examiners for the degree of B.M. whose subject is dealt with. A book published within two years of the candidate's application for the degree may be substituted for a dissertation. The degree of M.Ch. is granted to Bachelors of Surgery of the University who have entered their twenty-seventh term, who are members of the surgical staff of a recognised hospital, or have acted as Dresser or House Surgeon in such a hospital for six months, and who have passed an examination in Surgery, Surgical Anatomy, and Surgical Operations.

The diploma in Public Health is granted only to Bachelors of Medicine of the University who have passed an examination in Hygiene, Sanitary Law, Sanitary Engineering, and Vital Statistics.

The First Examination for the degrees of B.M. and B.Ch. and the Examination in Materia Medica and Pharmacy may be passed as soon as the Preliminary Examination in Medicine has been completed. Organic Chemistry may be taken on a separate occasion, but before Human Physiology and Anatomy. The two last-named subjects must be taken together. For exemptions see *ante*.

The Second Examination may be taken after the completion of the first. Materia Medica and Pharmacy, if not already passed, may be offered on a separate occasion, but before the remaining subjects, which must be taken together.

The Professional Examinations in Medicine are held once a year in Trinity Term, the second before the first.

Instruction in the subject-matter of Responses, Moderations, and the various literary schools is given by the tutors

² In the case of students in Universities with a prolonged curriculum, where the examination in Mechanics required for their degree is taken at a more advanced period of study than before commencing medical education, registration can be effected only on having passed the examination in Mechanics, but their registration may be then antedated to the period at which the Preliminary was passed.

and lecturers of the Colleges and Halls. In Natural Science, the professors of the University and their assistants deliver regular courses of lectures and conduct classes for practical instruction in the laboratories of the Museum and Botanic Garden in each term. In addition, several Colleges possess tutors in Science, and in two or three instances laboratories as well. In Medicine, instruction in Organic Chemistry is given once a year. Physiology, Physiological Chemistry, and Histology are taught by the Waynflete Professor of Physiology and his assistants; Human Anatomy by the University lecturer in that subject, under whose control is placed the department for dissection. Provision for the teaching of Materia Medica is being made. Instruction and demonstrations in Physical Diagnosis and Regional Anatomy are given in each term at the Radcliffe Infirmary. Clinical lectures in Medicine and Surgery are also delivered by the two Lichfield lecturers of the University, a physician and a surgeon of the infirmary respectively; but as full provision does not exist for the teaching of the subjects for the Second Professional Examination (except Materia Medica), it is necessary for a student to obtain his knowledge elsewhere. The Radcliffe Library at the Museum contains a vast collection of scientific and medical literature, available for study and consultation by students.

Scholarships, &c.—Scholarships in some branch of Natural Science (Chemistry, Physics, Biology) of the average annual value of £80 per annum, tenable for four years and renewable under certain conditions for a fifth year, as well as Exhibitions of a less annual value, are awarded after competitive examination, every year by some, from time to time by other, Colleges. Notices of vacancy &c. are published in the *University Gazette*. In February there is competed for annually, by those who have obtained a first class in any school (Moderations or Final), or a Scholarship or Prize open to general competition in the University, one Radcliffe Travelling Fellowship. It is tenable for three years, and is of the annual value of £200. The examination is partly scientific, partly medical. The holder must travel abroad for the purpose of medical study, and take the degree of B.M. Oxon. A Rolleston Memorial Prize is awarded once in two years to members of the Universities of Oxford or Cambridge of not more than ten years' standing for an original research in some Biological subject, including Physiology or Pathology.

More detailed information may be obtained from the University Calendar; the Examination Statutes, 1887, which contain the official schedules of the several subjects of examination in both Arts and Medicine; from the Student's Handbook to the University; from the Regius Professor of Medicine; from the Professors in the several departments; and from the Sub-Librarian in the Radcliffe Library at the Museum.

UNIVERSITY OF CAMBRIDGE.

The student must enter at one of the Colleges, or as a non-collegiate student, and keep terms for three years by residence in the University. He must pass the Previous Examination in Classics and Mathematics, which may, and should if possible, be done immediately on coming into residence in October, or, which is best, obtain exemption through the Oxford and Cambridge Schools Examination Board or the Local Examinations, before commencing residence. He may then devote himself to medical study in the University, attending the hospital and the medical lectures, dissecting, &c. Or he may proceed to take a degree in Arts, either continuing mathematical and classical study and passing the ordinary examinations for B.A., or going out in one of the Honour Triposes. The Natural Sciences Tripos is the most appropriate, as the subjects are practically the same as those for the first and second M.B. examinations.

For the degree of *Bachelor of Medicine (M.B.)* five years of medical study are required. This time may be spent in Cambridge or elsewhere. The first three or four years are usually spent in Cambridge, the student remaining in the University till he has passed (say) the examination for the Natural Sciences Tripos and the first and second examinations for M.B. Cambridge being now a complete School of Medicine, all the requisite lectures and hospital practice may be attended here, and many students remain to attend lectures and hospital practice until they have passed the first part of the third examination for M.B. The supply of subjects for Dissection and Practical Surgery is unusually abundant.

There are three examinations for M.B. The first in

Chemistry and other branches of Physics, and in Elementary Biology. These may be taken together or separately. The second in Human Anatomy and Physiology, and in Pharmaceutical Chemistry. These may be taken together or separately. The third may be also taken in two parts—viz., (1) Principles and Practice of Surgery (with Operative and Clinical Surgery) and Midwifery and Diseases of Women, and (2) Pathology, Principles and Practice of Medicine, Elements of Hygiene, and Medical Jurisprudence. The examinations are partly in writing, partly oral, and partly practical, in the hospital, in the dissecting-room, and in the laboratories.

Previously to the first examination, Lectures must have been attended on Chemistry (with manipulations). Previously to the second examination, the student must have attended Lectures on Human Anatomy and Physiology, have dissected for six months, and attended Hospital Practice six months. Previously to the first part of the third examination, he must have attended Lectures on Pathology, the Principles and Practice of Surgery and Midwifery, twenty cases of Midwifery, and produce a certificate of proficiency in Vaccination, and must also have acted as House Surgeon or Dresser for six months, and have gone through a course of instruction in Practical Surgery. Previously to the second part of the third examination, he must have attended Lectures on the Principles and Practice of Physic, the Physiological Action and Therapeutic Uses of Drugs, and Medical Jurisprudence; also the Medical and Surgical Practice of a Hospital, with Clinical Lectures for three years, and have been Clinical Clerk for six months. Before proceeding to the degree of M.B. the candidate must compose an original thesis on some one of the subjects prescribed for the several examinations, and defend the same in public in the Schools.

As Operative and Clinical Surgery now form parts of the third M.B. examination, candidates who have passed that examination are admitted to the degree of *Bachelor of Surgery (B.C.)* without separate examination, and without keeping an Act.

The degree of *Doctor in Medicine* may be taken three years after that of M.B. An Act has to be kept, consisting of an original Thesis sustained in the Public Schools, with *civâ-voce* examination; and an extempore Essay has to be written on some subject relating to Physiology, Pathology, the Practice of Medicine, or State Medicine.

For the degree of *Master in Surgery (M.C.)* the candidate must have passed all the examinations for B.C. two years. He is required to pass an examination in Surgical Anatomy and Surgical Operations, Pathology, and the Principles and Practice of Surgery, and to write an extempore Essay on a Surgical subject.

An abstract of the Regulations and Schedules of the range of the examinations in Chemistry, Physics, Biology, and Pharmacy may be obtained by sending a stamped directed envelope to the Assistant Registrar, Cambridge. Full information is contained in the *Cambridge University Calendar*.

UNIVERSITY OF LONDON.

The *Matriculation Examinations* take place on the second Monday in January and the third Monday in June. Candidates must be above sixteen years of age. The fee for the examination is £2. Provincial examinations are appointed by the Senate from time to time at specified centres. Several scholarships, exhibitions, and prizes are associated with these examinations.

The *Preliminary Scientific (M.B.) Examination* takes place twice in each year, once for Pass and Honours, commencing on the third Monday in July, and once for Pass candidates only on the third Monday in January.³ No candidate will be admitted to this examination until he shall have passed the Matriculation Examination, nor unless he have given notice of his intention to the registrar at least one calendar month before the commencement of the examination. Fee for this examination, £5.

Candidates are examined for a Pass or for Honours on Inorganic Chemistry and Experimental Physics; and for a Pass, on General Biology. Candidates for Honours, who

have entered for the whole examination, may also be examined in Botany and Zoology.

Bachelor of Medicine.—Every candidate for the degree of Bachelor of Medicine will be required—1. To have passed the Matriculation Examination in this University. 2. To have passed the Preliminary Scientific Examination. 3. To have been engaged in his professional studies during four years subsequently to passing the Preliminary Scientific Examination⁴ at one or more of the medical institutions or schools recognised by this University, one year at least of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom. 4. To pass two examinations in Medicine.

Intermediate Examination.—The Intermediate Examination in Medicine takes place twice in each year, once for Pass and Honours, commencing on the second Monday in July, and once for Pass candidates only, commencing on the third Monday in January. No candidate shall be admitted to this examination unless he have passed the Preliminary Scientific Examination at least two years previously, and have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having, subsequently to having passed the Matriculation Examination, been a student during two years at one or more of the medical institutions or schools recognised by this University, and of having attended a course of lectures on each of three of the subjects in the following list: Descriptive and Surgical Anatomy, Histology and Physiology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine. 3. Of having, subsequently to having passed the Preliminary Scientific Examination, dissected during two winter sessions. 4. Of having, subsequently to having passed the Preliminary Scientific Examination, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical chemistry, in applying tests for discovering the adulteration of articles of the materia medica and the presence and nature of poisons, and in the examination of mineral waters, animal secretions, urinary deposits, calculi, &c. 5. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines. These certificates (as is the case also with all the certificates hereinafter mentioned) must be transmitted to the registrar at least fourteen days before the commencement of the examination. Fee for this examination, £5.

Candidates will be examined in the following subjects: Anatomy, Physiology and Histology, Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry.

Every candidate for the July examination, on sending in his name for the examination, must state whether he intends to compete for honours in any subject or subjects; and, if he does so intend, must specify the subject or subjects. No candidate will be allowed to take both the Pass and the Honours Papers in the same subject; but every candidate must take the Pass Papers in those subjects in which he does not offer himself for Honours. A candidate who enters for, but fails to obtain, Honours in any subject, may be recommended by the examiners for a Pass in that subject if they are satisfied that he has shown such a competent knowledge thereof as is required by the regulations for the Pass Examination.

*M.B. Examination.*⁵—The M.B. Examination takes place once in each year, and commences on the last Monday in October. Each candidate, two academical years after passing the First Examination, must produce certificates to the following effect:—1. Of having passed the Intermediate Examination. 2. Of having, subsequently to having passed the Intermediate Examination, attended a course of lectures on each of two of the subjects enumerated in Section 2 of the regulations for that examination, and for which the candidate had not on that occasion presented certificates. 3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally qualified practitioner in medicine. 4. Of having attended the Surgical

⁴ Candidates who passed the Matriculation Examination in January, 1885, or previously, will be allowed to date the commencement of their professional studies, as heretofore, from that examination.

⁵ Any candidate for the M.B. Examination who has passed the Intermediate Examination under the former regulations will be required to have also passed the examination in Physiology at some previous Intermediate Examination carried on under the present regulations, at which examination he shall not be allowed to compete for Honours.

³ Candidates for the degree of M.B. are required by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies, and are recommended to devote a preliminary year to preparation for it, according to the following programme:—Winter Session: Experimental Physics, Chemistry (especially Inorganic), Zoology. Summer Session: Practical Chemistry (Inorganic), Botany.

Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery. 5. Of having attended the Medical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Medicine. 6. Of having, after having attended Surgical and Medical Hospital Practice for at least twelve months subsequently to passing the Intermediate Examination, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, or parochial union, during six months, such attendance not to be counted as part of either the Surgical or the Medical Hospital Practice prescribed in Clauses 4 and 5. 7. Of having acquired proficiency in Vaccination. Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council. The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. The fee for this examination is £5.

Candidates will be examined in the following subjects: General Pathology, General Therapeutics and Hygiene, Surgery, Medicine, Obstetric Medicine, Forensic Medicine. The examinations will include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry.

Any candidate who has passed the M.B. Examination may be examined at the Honours Examination next following the M.B. Examination at which he has passed for Honours in (1) Medicine, (2) Obstetric Medicine, and (3) Forensic Medicine. The examinations commence in the week following that in which the Pass Examination terminated. Except in the case of Forensic Medicine, they are conducted by means of printed papers, but the examiners will not be precluded from putting *visd-voce* questions upon the written answers of the candidates.

Bachelor of Surgery.—The examination for the degree of Bachelor of Surgery takes place once in each year, and commences on the Tuesday following the first Monday in December. Candidates must produce certificates to the following effect:—1. Of having passed the examination for the degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. Fee for this examination, £5.

Any candidate who has passed the B.S. Examination may be examined at the Honours Examination next following the B.S. Examination at which he has passed for Honours in Surgery. The examination takes place on Tuesday in the week following the Pass Examination, and is conducted by means of printed papers.

Master in Surgery.—The examination for the degree of Master in Surgery takes place once in each year, and commences on the first Monday in December.

Candidates must produce certificates to the following effect:—1. Of having taken the degree of Bachelor of Surgery in this University.⁶ 2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University, (a) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; or (b) to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession; or (c) of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability.

Fee for this degree, £5. The examination is conducted by means of printed papers and *visd-voce* interrogation.

Candidates will be examined in Mental Physiology and in Surgery.

Doctor of Medicine.—The examination for this degree takes place once in each year, and commences on the first Monday in December.

⁶ Candidates who have obtained the degree of Bachelor of Medicine previously to 1886 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and in the case of such candidates the attendance on surgical practice required by Regulation 3 may commence from the date of the M.B. degree.

Candidates must produce certificates to the following effect:—1. Of having passed the examination for the degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this University, (a) to Clinical or Practical Medicine during two years in a hospital or medical institution recognised by this University; or (b) to Clinical or Practical Medicine during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession; or (c) of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Medicine in this University. One year of attendance on Clinical or Practical Medicine or two years of practice will be dispensed with in the case of those candidates who at the M.B. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability.

Fee for this degree, £5.⁷ The examination is conducted by means of printed papers and *visd-voce* interrogation.

Candidates will be examined in Mental Physiology and in Medicine.

UNIVERSITY OF DURHAM.

Three Licences and four Degrees in Medicine are conferred—viz., Licences in Medicine, in Surgery, and in Sanitary Science; and the Degrees of Bachelor in Medicine, Bachelor in Surgery, Master in Surgery, and Doctor in Medicine.

For the degree of *Bachelor in Medicine (M.B.)* there are three professional examinations: the first being held in April (in 1889, commencing on the 15th) and September (in 1889, commencing on the 16th); the second in April (in 1889, commencing on the 22nd) and September (in 1889, commencing on the 23rd); and the third in December (in 1888, commencing on the 3rd) and in June (in 1889, commencing on the 17th).

The subjects for the first examination are—Elementary Anatomy and Elementary Physiology, Chemistry with Physics, and Botany. Candidates must produce the following certificates:—(1) Of registration as a medical student. (2) Of attendance on the following courses of lectures: Anatomy, Physiology, Chemistry with Physics, and Practical Anatomy (Dissections), each six months; Botany and Chemistry, each three months.

The subjects for the second examination are—Anatomy, Physiology, and Materia Medica with Pharmacy. For it the following certificates are necessary:—Lectures, &c.: Anatomy, Physiology, and Practical Anatomy (Dissections), second courses of six months each; Materia Medica, Practical Physiology, and Practical Pharmacy, courses of three months each. The candidate must also produce a certificate of his having passed the first examination for the M.B., or the first examination of the Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England, together with the extra examinations in Chemistry and Botany of the University of Durham.

The subjects for the third examination are—Medicine, Surgery, Pathology, Therapeutics, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Public Health. For it candidates must produce the following certificates—viz.: 1. Of being not less than twenty-one years of age. 2. Of good moral character. 3. Of having passed one of the following examinations in Arts: (a) The Examination for Graduation in Arts at one of the following universities—Oxford, Cambridge, Durham, Dublin, London, Queen's (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), Queen's College (Kingston), Victoria (Manchester), and Royal (Ireland). Or (b) the Preliminary or Extra-professional Examination for Graduation in Medicine at one of the following universities—Cambridge, London, Edinburgh, Glasgow, St. Andrews, Aberdeen, Queen's (Ireland), Victoria (Manchester), and Royal (Ireland), provided that the candidate in obtaining the certificate shall have satisfied the examiners in Greek. Candidates holding a certificate which does not include Greek may offer themselves for examination in that subject alone at the examination for the certificate for Proficiency in General Education at Durham, or at the Preliminary Examination in Arts for

⁷ This fee will continue to be £10 to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of £5 at the Preliminary Scientific Examination.

the degrees in Medicine above mentioned. This regulation will apply to all candidates entering for the degrees in Medicine on or after October 1st, 1888. Or (c) the Preliminary Examination in Arts qualifying for the Membership of the Royal College of Physicians of London or for the Fellowship of the Royal College of Surgeons of England. Or (d) the Preliminary Examination in Arts for the degrees in Medicine of the University of Durham (in 1888, commencing on March 19th and Sept. 17th). 4. Of attendance on the following course of lectures—viz.: Medicine and Surgery, each two courses of six months; Public Health, one course; Forensic Medicine, Midwifery and Diseases of Women and Children, and Pathology, each one course of three months; Clinical Medical and Clinical Surgical Lectures, each two winters and two summers; Medical Hospital Practice and Surgical Hospital Practice and Post-mortem Demonstrations, each three winters and two summers; Medical Clinical Clerking and Surgical Dressing, each six months; Clinical Obstetrics, three months; attendance on not less than twenty cases of Midwifery, and instruction in Vaccination.

N.B.—It is required that one of the four years of professional education shall be spent in attendance at the University College of Medicine, Newcastle-upon-Tyne. Candidates for the First Examination who have passed the First Examination of the Conjoint Board in England, and candidates who hold a qualification from a recognised Licensing Body in the United Kingdom, will be exempt from the First Examination of the University, except in the subjects of Chemistry with Physics and Botany. Candidates who have passed the First and Second Examinations of the University will be exempt from the First and Second Examinations of the Conjoint Board.

For the degree of *Bachelor in Surgery (B.S.)* every candidate must have passed the examination for the degree of Bachelor in Medicine of the University of Durham, and must have attended one course of lectures on Operative Surgery, and one course on Regional Anatomy. Candidates will be required to perform operations on the dead body, and to give proof of practical knowledge of the use of surgical instruments and appliances.

For the degree of *Master in Surgery (M.S.)* candidates must not be less than twenty-four years of age, must have obtained the degree of Bachelor in Surgery of the University of Durham, and must have been engaged for at least two years subsequently to the date of acquirement of the degree of Bachelor in Surgery in attendance on the practice of a recognised hospital, or in the naval or military services, or in medical or surgical practice. The subjects of examination are: Principles and Practice of Surgery, Surgical Pathology, Surgical Anatomy, Surgical Operations, and Clinical Surgery.

For the degree of *Doctor of Medicine (M.D.)* candidates must not be less than twenty-four years of age, must have obtained the degree of M.B. at least two years previously, and in the interim have been engaged in medical and surgical practice. Each candidate will be required to write an Essay on some Medical subject selected by himself and approved by the Professor of Medicine, and to pass an examination thereon.

Candidates for any of the above degrees must give at least twenty-eight days' notice to the registrar of the College.

VICTORIA UNIVERSITY.

Colleges of the University: Owens College, Manchester; University College, Liverpool; and Yorkshire College, Leeds.

Three degrees in Medicine and Surgery are conferred by the Victoria University—viz., Bachelor of Medicine and of Surgery (M.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.).

All candidates for degrees in Medicine and Surgery are required—(1) To have matriculated in the University; and (2) to pass (either before or after matriculation) an examination called the Entrance Examination in Arts, or to have passed such other examination as may be recognised by the University for this purpose.*

* The examinations at present recognised are:—1. The Preliminary Examination of the Victoria University, provided Latin and Mechanics have been taken up. 2. The Matriculation Examination of the University of London. 3. The Previous Examination of the University of Cambridge. 4. Responsions and Moderations of the University of Oxford. 5. The Leaving Certificate Examination of the Oxford and Cambridge Boards, provided that it include Latin, English, Mathematics, and Elementary Mechanics. 6. The Final Examination for Graduation in Arts of any University in Great Britain and Ireland.

Degree of Bachelor of Medicine.—Before admission to the degree of M.B. candidates are required to present certificates that they will have attained the age of twenty-one years on the day of graduation, and that they have pursued the courses of study required by the University Regulations during a period of not less than four years subsequently to the date of their registration by the General Medical Council, two of such years having been passed in a College of the University, and one year at least having been passed in a College of the University subsequently to the date of passing the Preliminary Examination in Science. All candidates for the degree of Bachelor of Medicine are required, after matriculating, to satisfy the examiners in the several subjects of the following examinations: the Preliminary Examination in Science, the Intermediate Examination for the degree of M.B., and the Final Examination for the degree of M.B.

The Preliminary Examination in Science.—The subjects of examination are as follows:—1. Chemistry. 2. Elementary Biology. 3. Physics. Candidates for the Preliminary Examination in Science must have attended during at least one year courses both of lectures and of laboratory work in each of the above-named subjects.

The Intermediate M.B. Examination.—The subjects of examination are as follows:—1. Anatomy. 2. Physiology (including Physiological Chemistry and Histology). 3. Materia Medica and Pharmacy. Candidates for the Intermediate M.B. Examination are required to have passed the Preliminary Examination in Science, and to have attended courses of instruction in Anatomy for one winter session, in Physiology for two winter sessions (but one session will be accepted provided that a full course has been attended by the candidate), and in Materia Medica and Pharmacy for one summer session. The certificates must show (1) that Dissection has been practised during two winter sessions and one summer session at least; (2) that laboratory instruction has been received in Physiology; (3) that practical instruction has been received in Materia Medica and Pharmacy.

The Final M.B. Examination.—The examination is divided into two parts, called the First Part and the Second Part respectively, which may be passed separately or on the same occasion, but the First Part cannot be taken before the end of the third year, and the Second Part cannot be taken before the end of the fourth year, of medical study, in accordance with the University Regulations. The subjects of examination are as follows:—Part I.: 1. Systematic Surgery. 2. Pharmacology and Therapeutics. 3. General Pathology. Part II.: 1. Systematic and Clinical Medicine, including Mental Diseases. 2. Practical and Clinical Surgery. 3. Obstetrics and Diseases of Women and Children. 4. Morbid Anatomy. 5. Forensic Medicine. 6. Hygiene.

Candidates, before presenting themselves for the Final Examination, are required to have passed the Intermediate Examination, and to furnish certificates—1. Of having attended the Medical and Surgical Practice of a hospital or hospitals, approved by the University, during at least three years, of which years two at least must be subsequently to the date of passing the Intermediate Examination, except when exemption has been granted by the General Board of Studies, after report from the Departmental Board of Medical Studies. 2. Of having attended during at least twelve months demonstrations in the post-mortem theatre of a hospital. 3. Of having attended, under proper supervision, at least twenty cases of labour. 4. Of having during at least three months received in either a general or a special hospital, approved by the University, such Clinical Instruction in the Diseases peculiar to Women as shall be approved by the University. 5. Of having acquired proficiency in Vaccination. 6. Of having attended courses of instruction, approved by the University, in a College of the University or in a College or Medical School recognised for this purpose by statute of the University, in the following subjects:—(a) Systematic Medicine, (b) Clinical Medicine, (c) Systematic Surgery, (d) Practical Surgery, (e) Clinical Surgery, (f) Obstetrics and Diseases of Women and Children, (g) Pharmacology and Therapeutics, (h) General Pathology and Morbid Anatomy, (i) Forensic Medicine, (j) Hygiene.

Degree of Doctor of Medicine.—Candidates are not eligible for the degree of Doctor of Medicine unless they have previously received the degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree. Candidates for the degree of Doctor of Medicine are required

to present a printed Dissertation embodying the results of personal observations or original research, either in some department of medicine or of some science directly relative to medicine. No candidate will be admitted to the degree unless his dissertation, after report from the Departmental Board of Medical Studies, shall have been recommended by the General Board of Studies to the Council for acceptance in that behalf. Candidates may be examined on any subject connected with their dissertations.

Degree of Master of Surgery.—Candidates are not eligible for the Degree of Master of Surgery unless they have previously received the degree of Bachelor of Medicine, and at least one year has elapsed since they passed the examination for that degree.

The subjects of examination are as follows: (1) Surgical Anatomy; (2) Surgical Pathology; (3) Practical Surgery, including the performance of operations on the dead body; (4) Clinical Surgery; (5) Ophthalmology.

UNIVERSITY OF EDINBURGH.

Three medical degrees are conferred by the University of Edinburgh—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the degree of Bachelor of Medicine.

No one is admitted to the degrees of Bachelor of Medicine and Master in Surgery who has not been engaged in medical and surgical study for four years—the medical session of each year, or *annus medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course and two courses of not less than fifty lectures each; with the exception of the clinical courses, in which lectures are to be given at least twice a week during the prescribed periods.⁹

Every candidate for the degree of M.B. and C.M. must give sufficient evidence by certificates—(a) That he has studied each of the following departments of medical science—namely, Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children, and General Pathology, each during courses including not less than one hundred lectures; Practical Anatomy, a course of the same duration as those of not less than one hundred lectures;¹⁰ Practical Chemistry, three months; Practical Midwifery—(1) that he has attended at least twelve cases of labour under the superintendence of a registered medical practitioner, or (2) that he has attended six such cases, and also has attended, for at least three months, the practice of a midwifery hospital in which practical instruction is regularly given; Clinical Medicine and Clinical Surgery,¹¹ courses of the same duration as those of not less than one hundred lectures, or two courses of three months' lectures, being given at least twice a week; Medical Jurisprudence, Botany, and Natural History (including Zoology), during courses including not less than fifty lectures. (b) That he has attended, for at least two years, the medical and surgical practice of a general hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons. (c) That he has attended, during a course of not less than fifty hours' instruction, the class of Practical Materia Medica in the University of Edinburgh, or a similar class conducted in a university or recognised school of medicine, or a similar class conducted at the laboratory of a hospital or dispensary, or elsewhere, by a teacher recognised by the University Court; or that he has been engaged by apprenticeship for not less than two years with a registered medical practitioner, or a member of the Pharmaceutical Society of Great Britain, or a member of the Pharmaceutical Society of Ireland, or a pharmaceutical chemist, or chemist and druggist,

⁹ No course of lectures will be allowed to qualify unless the lecturer certifies that it has embraced at least one hundred lectures, or fifty lectures, in conformity with the requirements of this section. Three months' courses on Materia Medica, Pathology, and Midwifery do not qualify.

¹⁰ Certificates of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the parts dissected, and the degree of care with which the dissections have been made. Students are recommended not to appear for an examination in Anatomy with a view to a degree until they have dissected the human body at least once.

¹¹ The Medical Faculty recommend that medical students should not attend Clinical Surgery during their first six months' attendance on Clinical Medicine.

registered under the provisions of the Act for Regulating the Qualifications of Pharmaceutical Chemists, 1852, the Pharmacy Act, 1868, or the Pharmacy Act (Ireland), 1875, in the *bona fide* compounding and dispensing of drugs, and the preparation of their official and other preparations under his superintendence. (d) That he has attended, for at least six months, by apprenticeship or otherwise, the outdoor practice of a hospital, or the practice of a dispensary physician, a surgeon, or a member of the London or Dublin Society of Apothecaries. (e) That he has attended, during courses of not less than fifty hours' instruction, classes of Practical Physiology and Practical Pathology in the University of Edinburgh, or in a recognised university or school of medicine, or upon classes thereof, conducted by a teacher recognised by the University Court.

Students of Medicine in the London Schools, and in the school of the College of Surgeons in Dublin, can obtain there two *anni medici* out of the four required for the Edinburgh degrees in Medicine. Courses of lectures in these schools, and the courses of the medical teachers and of the science teachers in King's College and in University College, London, in the subjects of graduation, are regarded as equivalent to lectures on the corresponding subjects in this University, except Materia Medica and Midwifery, which when only three months' courses are not received as equivalent. One *annus medicus* may be constituted by attendance on Practical Anatomy and Hospital Practice during the winter session. Another *annus medicus* by attending either (a) full winter courses on any two of the following subjects—Anatomy, Physiology, Chemistry, Pathology, Surgery, Medicine, Clinical Surgery, Clinical Medicine; or (b) on one such course and two three months' courses on any of the following subjects—Botany, Practical Chemistry, Natural History, Medical Jurisprudence. If the student selects the arrangement prescribed in (a), attendance on a third course, although unnecessary to constitute an *annus*, will also be accepted. The other subjects and the additional courses, not given in London or Dublin, necessary for the degrees of the University, require to be attended at this University. In provincial schools, where there are no lecturers recognised by the University Court, a candidate can only have one *annus medicus*, and this is constituted by attendance at a qualified hospital along with a course of Practical Anatomy. But in a provincial school where there are two or more lecturers recognised by this University, a second *annus medicus* may be made by attendance on at least two six months', or one six months' and two three months' recognised courses.

Every candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine, a declaration in his own handwriting that he has completed his twenty-first year, or that he will have done so on or before the day of graduation, and that he will not be on the day of graduation under articles of apprenticeship to any surgeon or other master. This declaration, along with a statement of studies, accompanied with proper certificates, is appended to the schedule for the Final Examination, and must be signed before the schedule is given in.

Each candidate is examined, both in writing and orally, on Chemistry, Botany, and Natural History; on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; clinically, on Medicine and on Surgery in a hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects placed before the candidates. Students who have passed their examination on the first division of these subjects may be admitted to examination on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *annus medicus*. Candidates may, if they choose, be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of their fourth year.

The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degrees of Bachelor of Medicine and Master in Surgery, and who is of the age of twenty-four years, and produces a certificate of having been engaged, subsequently to his having received the degrees of M.B. and C.M., for at least two years in attendance on a hospital, or in the military or naval medical service, or in medical and surgical practice. Provided

always that the degree of M.D. shall not be conferred on any person unless he be a graduate in Arts of one of the universities of England, Scotland, or Ireland, or of such other universities as are above specified, or unless he shall, before or at the time of his obtaining the degrees of M.B. and C.M., or thereafter, have passed a satisfactory examination on *three* of the subjects mentioned in Section II. of the statutes relative to preliminary examination. Two of these must be Greek and Logic or Moral Philosophy, and the third is to be one of the following subjects, at the option of the candidate—namely, French, German, Higher Mathematics, and Natural Philosophy. And provided also that the candidate for the degree of M.D. shall submit to the Medical Faculty a thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, or any branch of knowledge comprised in the professional examinations for the degrees of M.B. and C.M. which he may have made a subject of study after having received these degrees.

The fees for M.B. and C.M. are £22. Total fees and stamp for graduating as M.D. only, by regulations for students commencing before February, 1861, £25. The fees for examination must be paid at the secretary's office ten days before the dates thereof, and the fees for the degree of M.D. and the stamp duty for the latter must be paid on or before the 15th day of July in the year of graduation. In the event of the candidate not passing any one of the professional examinations, the fee is not returned; but he may appear at one subsequent examination without paying an extra fee, and at any future examination on paying one-half the fee.

UNIVERSITY OF GLASGOW.

Three degrees in Medicine are granted—viz., Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. The curricula of study and the examinations for the several degrees conferred are nearly the same as in the University of Edinburgh. The annual term for conferring medical and surgical degrees is the 1st of August. The Preliminary Examinations of medical students in branches of general education begin on the 3rd of October, 1888, and on the 27th of March, 1889.

The fees for the degrees are £21 for M.B. and C.M., which are obtained together, and £15 for M.D.

The regulations under which the above degrees are granted and the notices of the subjects of examination may be obtained by application to the assistant clerk, Matriculation Office, the University.

The first, second, and third Professional Examinations are held in April and in October each year, and the fourth or final examination is held annually in June and July.

UNIVERSITY OF ABERDEEN.

The curricula for the several degrees conferred are nearly the same as in the University of Edinburgh.

Professional Examinations will be held twice in each year—namely, in April and July, directly after the close of the winter and summer sessions.

The fees for graduation are the same as in the University of Edinburgh. Matriculation fee, including all dues, for the winter and summer sessions, £1; summer session alone, 10s.

Candidates who commenced their medical studies before November, 1861, are entitled to appear for examination for the degree of M.D. after four years' study, one of which must have been in the University of Aberdeen.

Besides the Royal Infirmary, students have the opportunity of attending the following institutions: Sick Children's Hospital; General Dispensary, and Lying-in and Vaccine Institutions, daily; Royal Lunatic Asylum; Eye Institution, in which is given clinical instruction on the Diseases of the Eye, and on the application of the Ophthalmoscope for their diagnosis.

Regulations for the Diploma in Public Health (D.P.H.).—Candidates for the diploma must have graduated in Medicine in the University before they receive the diploma; and they must give evidence of having attended a course of instruction in Analytical Chemistry or in Practical Hygiene. The diploma is conferred after an examination in Public Health, held in March and July of each year. Candidates desiring to appear for examination at either of these periods must send their names, with the necessary fee, to the Secretary of the Medical Faculty before the first day of the

month in which the examination takes place. The fee for the examination is £3 3s. In the event of a candidate failing to pass the examination, a fee of £1 1s. will be charged for each subsequent examination for which he may enter. The examination is conducted by the examiners for the medical degrees. The examination is written, oral, and practical. The subjects and scope of the examination are as follows:—1. Physics and Meteorology: The general principles of Physics in so far as they relate to Heat and Ventilation, Water Supply and Drainage; the elements of Meteorology and Climatology; practical exercises in the use of Meteorological Instruments. 2. Chemistry and Microscopy: The Composition and Analysis of Air, Water, and Sewage; the Composition and Adulterations of the more common Foods and Beverages; Diseased and Putrid Food; practical exercises in the Chemical and Microscopical examination of Air, Water, and Foods. 3. General Hygiene: Duties of Medical Officers of Health; Nature and Construction of Dietaries; Construction and Sanitary Arrangements of Houses, Hospitals, Workshops, Factories, Towns, &c., including interpretation of plans; Ventilation, Water Supply, Sewerage, Disposal of Dead; Etiology, Prophylaxis (including Vaccination), and Control of Infectious Diseases; Unhealthy Occupations; practical exercises in examining and reporting on the Construction and Sanitary Arrangements of Houses, &c. 4. Sanitary Law and Vital Statistics: Laws relating to the Public Health of Scotland, England, or Ireland, at the option of the candidate; Laws relating to Vaccination, and Registration of Births, Marriages, and Deaths; Methods and Data of Vital Statistics, mainly in so far as they relate to the birth, marriage, and death rate of communities.

Application for further information should be addressed to the Dean of the Medical Faculty.

A diploma in Public Health is granted by the University to its graduates in Medicine, after a special examination. The diploma can be entered on the Register of the General Medical Council. The Regulations can be obtained on application to the Dean.

UNIVERSITY OF ST. ANDREWS.

Two degrees in Medicine are granted—namely, Bachelor of Medicine and Master in Surgery (M.B., C.M.), and Doctor of Medicine (M.D.). The curricula for these degrees, and the regulations under which they are conferred differ from those of the University of Edinburgh only in the particulars noticed below.

The degree of *Doctor of Medicine* may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always that degrees will not be conferred under this section on a greater number than ten in any one year. The examinations are held yearly towards the end of April. Candidates must lodge with the Dean of the Medical Faculty the following certificates, along with application for admission to examination:—1. A certificate of age, being a baptismal certificate or an affidavit of age. 2. Holograph certificates from at least three medical men of acknowledged reputation in the medical profession or in the medical schools, recommending the candidate to the Senatus for the degree, and testifying to his professional skill and position. As only ten can graduate yearly, candidates will be selected whose service and certificates seem to the Medical Faculty to present the highest professional claims; and where these seem equal, preference will be given to age and priority of application. 3. A portion of the graduation fee (viz., £10 10s.), which shall be forfeited should the candidate fail to appear or to graduate at the time appointed. A satisfactory examination, written and *visd voce*, must be passed in the following departments—viz., *Materia Medica* and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, Midwifery and Diseases of Women and Children.

No one will be received as a candidate for the degree of *Bachelor of Medicine and Master in Surgery* unless two years at least of his four years of medical and surgical study shall have been in one or more of the following universities or colleges—viz., the Universities of St. Andrews, Glasgow, Aberdeen, Edinburgh, Oxford, and Cambridge; Trinity

College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

Subject always to the condition here specified, the studies for candidates for the degree of Bachelor of Medicine and Master in Surgery will be under the following regulations. The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specified, or in the hospital schools of London, or in the school of the College of Surgeons of Dublin, or under such private teachers of medicine as may from time to time receive recognition from the University Court. Attendance during at least six winter months on the Medical or Surgical practice of a general hospital which accommodates at least eighty patients, and during the same period on a course of Practical Anatomy, may be reckoned as one of such remaining years.

Every candidate for examination for the degree of M.B. and C.M. is required to lodge a declaration of age, a statement of his course of study, his inaugural dissertation, and all his certificates with the Dean of the Medical Faculty, on or before the 25th of March in each year.

UNIVERSITY OF DUBLIN (TRINITY COLLEGE).

Matriculation.—All students in the School of Physic intending to practise Physic must be matriculated, for which a fee of 5s. is payable. No student can be admitted for the winter course after Nov. 25th.

Previous Medical Examination.—Candidates for degrees and licences in Medicine, Surgery, and Midwifery are required to pass an examination in Physics, Chemistry, Botany, Comparative Anatomy, Descriptive Anatomy, and Institutes of Medicine (Practical Histology and Physiology), previously to their degree examination.

Bachelor in Medicine.—A candidate for this degree must be a graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same Commencements as that at which he receives his degree of B.A., or at any subsequent Commencements. The medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on a single course of each of the following lectures—Anatomy, Practical Anatomy, Chemistry, Materia Medica and Pharmacy, Physiology, Practice of Medicine, Botany, Medical Jurisprudence, Heat, Electricity, Magnetism, Comparative Anatomy; three courses of nine months' attendance on the Clinical Lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College; six months' instruction in Practical Midwifery, including Clinical Lectures; a certificate of personal attendance on Fever cases, with names and dates of cases. Six months' Dissections, three months' Laboratory Instruction in Chemistry, three months' Practical Histology, and one month's instruction in Vaccination are required. Any of the above-named courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows. Fee for the *Licent ad Examinandum*, £5; for the M.B. degree, £11.

Doctor in Medicine.—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must read a thesis or undergo an examination before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

Bachelor in Surgery.—A Bachelor in Surgery must be a Bachelor in Arts and in Medicine, and have spent four years in the study of Surgery and Anatomy. He must also pass a public examination in the Hall before the Professors of the School of Physic, having previously completed the prescribed curriculum of study, which includes the following additions to the courses named above for the M.B.: Theory of Surgery, Operative Surgery, Two Courses of Dissections, Ophthalmic Surgery.¹² Candidates are required to perform surgical operations on the dead subject. Fee for the *Licent ad Examinandum*, £5; for the degree of Bachelor in Surgery, £5.

Master in Surgery.—A Master in Surgery must be a Bachelor in Surgery of the University of Dublin, of not less than three years' standing, and must produce satisfactory evidence of having been engaged for not less than two years from the date of his registration in the study,

or study and practice, of his profession. He must then pass an examination in the following subjects:—1. Clinical Surgery; 2. Operative Surgery; 3. Surgical Pathology; 4. Surgery; 5. Surgical Anatomy (on the dead subject); and one of the following optional subjects:—1. Surgery, in one of its recognised branches—viz., Ophthalmic and Antral, Gynaecological, and Dental; 2. Mental Disease; 3. Medical Jurisprudence and Hygiene; 4. Advanced Anatomy and Physiology; 5. Comparative Anatomy. Fee for the degree of Master in Surgery, £11.

Bachelor in Obstetric Science.—The candidate for the B.A.O. Examination must be a Bachelor in Arts, and have passed the M.B. Examination, having previously completed the prescribed curriculum of study. He must also have lodged with the Medical Registrar his certificate of attendance on Practical Midwifery. The curriculum comprises the following, in addition to the complete course for the M.B.:—Theory and Practice of Midwifery, one course (winter); Practical Midwifery, including Clinical Lectures, six months. The candidate is then required to pass an examination in Practical Midwifery, Gynaecology, and Obstetrical Anatomy. Fee for the degree of Bachelor in Obstetric Science, £1. There is no Licent fee.

Master in Obstetric Science.—A Master in Obstetric Science must have passed the M.B. and B.Ch. examinations, and produce a certificate of having attended a summer course in Obstetric Medicine and Surgery.¹³ He is then required to pass an examination in the following subjects:—1. Practice of Midwifery. 2. Gynaecology. 3. Anatomy of Female Pelvis and Elementary Embryology. 4. Clinical Gynaecology. Fee for the degree of Master in Obstetric Science, £5.

University Diplomas.—Candidates for the Diplomas in Medicine, Surgery, or Obstetric Science must be matriculated in Medicine, and must have completed two years in Arts and four years in Medical Studies.

Diploma in Medicine.—The Medical Course and Examination necessary for the Diploma in Medicine are the same as for the degree of M.B., except that the candidate is not required to attend the Lectures on Botany and Comparative Anatomy, nor to pass the previous medical examination in those subjects. A Diplomate in Medicine, on completing his course in Arts, and proceeding to the degree of B.A., may become a Bachelor in Medicine by attending the Lectures on Botany and Comparative Anatomy, passing the previous medical examination in those subjects, and paying the degree fees. Fee for the *Licent ad Examinandum*, £5. Fee for the Diploma in Medicine, £5.

Diploma in Surgery.—The Surgical course and examination necessary for the Diploma in Surgery are the same as for the degree of Bachelor in Surgery. Fee for the *Licent ad Examinandum*, £5. Fee for the Diploma in Surgery, £5.

Diploma in Obstetric Science.—The course and examination for the Diploma in Obstetric Science are the same as that for the Bachelor in Obstetric Science. Fee for the Diploma in Obstetric Science, £1.

N.B.—Each candidate having completed the prescribed courses of study, passed the requisite qualifying examinations in Medicine, Surgery, and Midwifery, and had conferred on him the corresponding degrees, will obtain from the Senior Proctor a diploma entitling him to be entered on the Register of Medical Practitioners under the Medical Act, 1886.

ROYAL UNIVERSITY OF IRELAND.

All Degrees, Honours, Exhibitions, Prizes, and Scholarships in this University are open to students of either sex.

Candidates for any degree in this University must have passed the Matriculation Examination. Students from other Universities and Colleges are included in this rule.

The following degrees &c. are conferred by the University in this Faculty:—Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, Master of Surgery, Bachelor of Obstetrics, Master of Obstetrics; in Sanitary Science, a special diploma; in Mental Disease, a special diploma.

The Medical Examinations, except that for the diploma in Sanitary Science, will be held twice yearly—viz., in April and in October. The examination for the diploma in Sanitary Science will be held in July.

The course for degrees in Medicine &c. is of at least four years' duration. Students who have commenced their

¹² Students in the School of Physic who matriculated before June 22nd, 1872, may obtain the degree of Master in Surgery according to the regulations in force previously to the creation of the degree of Bachelor in Surgery.

¹³ Existing Graduates in Medicine, of the standing of M.D., are not required to attend this course.

medical studies since January 1st, 1884, must furnish evidence of having been registered by the Medical Council as students in Medicine for at least forty-five months before being admitted to the final examination for M.B. No one can be admitted to a degree in Medicine who is not fully twenty-one years of age. All candidates for these degrees are, in addition to attending the lectures and complying with the other conditions to be from time to time prescribed, required to pass the following examinations:—The Matriculation Examination, the First University Examination, the First Examination in Medicine, the Second Examination in Medicine, the Third Examination in Medicine, and the Examination for Primary Medical Degrees.

The First Examination in Medicine.—Students may not be admitted to this examination until the lapse of two academical years from the time of their matriculation. They must also have previously passed the First University Examination. The subjects of this examination are: Natural Philosophy, Chemistry, Zoology, and Botany. The examination in each subject will comprise two parts: (1) A written examination; (2) practical work and oral examination. Particular weight will be given to the practical part of the examination. Candidates at the First Examination in Medicine who at the First University Examination in Arts did not obtain 30 per cent. of the marks assigned to French or German will be required to present themselves for a qualifying examination in French or German. Failure to obtain 30 per cent. of the marks assigned to either of those languages will involve the loss of the examination.

The Second Examination in Medicine.—Students will be admitted to this examination after the lapse of one academical year from the time of passing the First Examination in Medicine, provided they have completed the first period of the course of medical studies. The subjects for this examination are Anatomy, Physiology, and *Materia Medica* (Pharmacology).

The Third Examination in Medicine.—Students will be admitted to this examination after the lapse of one academical year from the time of passing the Second Examination in Medicine, provided they have completed the third year of medical studies. The subjects for this examination will be Anatomy and Physiology.

The Examination for the Primary Medical Degrees.—Students will be admitted to this examination after the lapse of one academical year from the time of passing the Third Examination in Medicine, provided they have completed the course of medical studies prescribed for the fourth year. The examination consists of three parts or divisions:—(a) Medicine, including Therapeutics and Pathology; Mental Diseases; Medical Jurisprudence; and Hygiene. (b) Surgery, Theoretical, Clinical, Operative; Surgical Anatomy, with Ophthalmology and Otolaryngology. (c) Midwifery and Gynaecology, with Diseases of Children. Each part of this examination must be passed as a whole. Upon completing satisfactorily his examination in all three divisions, the candidate will, in addition to the parchment diplomas recording his admission to the Primary Medical Degrees of M.B., B.Ch., and B.A.O., receive a certificate of having passed a qualifying examination in the subjects of Medicine, Surgery, and Midwifery. The fee for this certificate is £10, which must be paid prior to the candidate's admission to the Primary Medical Degrees.

M.D. Degree.—Candidates may be admitted to this degree after the lapse of three academical years from the time of obtaining the degree of M.B. Provided, however, that all persons who were students in Medicine in the Queen's University at the date of its dissolution shall be entitled, if they so desire, to be admitted to the degree of M.D., instead of the degree of M.B., upon passing the examination herein prescribed for the M.B. degree. Every candidate will be examined at the bedside, and required to diagnose at least six cases, medical and surgical, and prescribe treatment, and to write detailed reports on at least two cases to be selected by the examiners, and to discuss all the questions arising thereon. Every candidate is required to submit to the medical examiners, for their approval, a thesis certified by him (or her) to have been composed by himself (or herself). No thesis will be approved which does not contain some original or personal observations in practical Medicine, Surgery, Midwifery, or in some of the sciences embraced in the curriculum, or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

The M.Ch. Degree.—This degree will be conferred only on graduates in Medicine of the University. The examination for this degree will comprise Surgical Diseases and Surgery, both theoretical and operative; Surgical Anatomy; Ophthalmology and Otolaryngology; and will include—(a) a written examination; (b) a clinical examination; (c) an examination on Surgical Instruments and Appliances; (d) an examination in Operative Surgery.

The Mastership in Obstetrics.—This degree will be conferred only on graduates in Medicine of the University. The examination will comprise the Theory and Practice of Midwifery and of Diseases of Women and Children, and the use of instruments and appliances; and will include—(a) a written examination; (b) a clinical examination as far as practicable; (c) an oral examination, with practical illustrations; (d) an examination on Instruments and Appliances.

The Diploma in Sanitary Science.—This diploma will be conferred only on graduates in Medicine of the University. The examination will include the following subjects:—Physics, Climatology, Chemistry, Geology, Sanitary Engineering, Hygiene, Sanitary Law, and Vital Statistics. Proficiency in practical work and an adequate acquaintance with the instruments and methods of research which may be employed for Hygienic investigations are indispensable conditions of passing the examination.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The licence of this College is a qualification to practise Medicine, Surgery, and Midwifery, and is recognised by the Local Government Board as a qualification in Surgery as well as in Medicine.¹⁴

Regulations.—Every candidate for the College licence (except when otherwise provided by the bye-laws) is required to produce satisfactory evidence to the following effect:—Of having attained the age of twenty-one years. Of moral character. Of having passed before the commencement of professional study an examination in the subjects of general education recognised by the General Medical Council. Of having been registered as a medical student in a manner prescribed by the General Medical Council. Of having been engaged in professional studies during at least forty-five months, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions in one or other of the following ways:—1. Attending the practice of a hospital or other institution recognised by the College for that purpose; 2. Receiving instruction as the pupil of a legally qualified practitioner having opportunities of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Of having attended, during three winter sessions and two summer sessions, the medical and surgical practice at a recognised hospital or hospitals.¹⁵ Of having discharged the duties of a medical Clinical Clerk during six months, and of a Surgical Dresser during other six months; and of having been engaged during six months in the Clinical Study of Diseases peculiar to Women. Of having received instruction in Chemistry, Practical Chemistry, *Materia Medica*, and Practical Pharmacy. Of having attended a course of lectures on the following subjects:—Anatomy (with dissections), during twelve months; Physiology; a practical course of General Anatomy during a winter or a summer session, consisting of not less than thirty meetings of the class; Pathological Anatomy; Principles and Practice of Medicine; Principles and Practice of Surgery; Midwifery and the Diseases peculiar to Women; Forensic Medicine. Of having attended Clinical Lectures on Medicine during nine months, and also Clinical Lectures on Surgery during nine months, and of having been engaged during a period of three months in the Clinical Study of Diseases peculiar to Women. Of having passed the professional examinations, of which there are three, each partly written, partly oral, and partly practical. The subjects of

¹⁴ Candidates for the Licence of this College who shall have commenced professional study on or after Oct. 1st, 1884, are required to comply with the Regulations of an Examining Board for England formed by the Royal College of Physicians of London and the Royal College of Surgeons of England. These Regulations may be obtained on applying to F. G. Hallett, Esq., Secretary, Examination Hall, Victoria Embankment, W.C.

¹⁵ A three months' course of clinical instruction in the wards of a recognised lunatic hospital or asylum may be substituted for the same period of attendance in the medical wards of a general hospital.

the first examination are: Chemistry, including Chemical Physics—viz., Heat, Light, and Electricity; Materia Medica and Pharmacy; and Osteology. The subjects of the second examination are Anatomy and Physiology. The subjects of the final examination are: Medical Anatomy and Pathology, including Morbid Anatomy; the Principles and Practice of Medicine; Surgical Anatomy and Pathology, including Morbid Anatomy; the Principles and Practice of Surgery; Midwifery and Diseases peculiar to Women; Forensic Medicine; Public Health and Therapeutics.

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by a university in the United Kingdom, in India, or in a British colony, or by the College of Surgeons in England, Scotland, or Ireland, or the Faculty of Physicians and Surgeons of Glasgow, shall be exempt from re-examination on those subjects. Any candidate who shall produce satisfactory evidence of having passed an examination on Chemistry and Materia Medica, required for a degree in Medicine at a university in the United Kingdom, in India, or in a British colony, will be exempted from re-examination on those subjects. Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RESPECTING THE EDUCATION AND EXAMINATIONS APPLICABLE TO CANDIDATES FOR THE DIPLOMA OF MEMBER OF THE COLLEGE.

Professional Examination.—The following are recognised modes of commencing professional education:—(1) Attendance on the practice of a hospital, or other public institution recognised by this College for that purpose. (2) Instruction as the pupil of a legally qualified surgeon, holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. (3) Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

Candidates, prior to their admission to the First or Primary Examination on Anatomy and Physiology, will be required to produce the following certificates—viz.: Of having, prior to the commencement of professional study, been registered by the General Medical Council. Of having attended lectures on Anatomy during two winter sessions. Of having performed dissections during not less than two winter sessions. Of having attended lectures on General Anatomy and Physiology¹⁶ during one winter session. Of having attended a practical course of General Anatomy and Physiology¹⁷ during another winter or summer session, consisting of not less than thirty meetings of the class.

Candidates who commenced their professional studies on or after October 1st, 1882, and shall have pursued those studies in recognised medical schools in England, will be required, before presenting themselves for the Primary or Anatomical and Physiological Examination for the diploma of Member of the College, to produce certificates of having passed an examination in Elementary Anatomy and Physiology, such examination to be conducted by their teachers at the several medical schools. (1) The periods at which the examinations shall be held will be determined by the teachers at the several medical schools, provided that an interval of not less than six months shall elapse between the date at which the candidates shall have passed the examination and the date of their presenting themselves for the

Primary Examination at the College. (2) It shall be left to the teachers at the several medical schools to determine the nature and extent of the examination in Elementary Anatomy and Physiology.

Candidates, prior to their admission to the Second or Pass Examination on Surgical Anatomy and the Principles and Practice of Surgery, Medicine, and Midwifery, will be required to produce the following certificates—viz.: Of being twenty-one years of age. Of having been engaged, subsequently to the date of registration by the General Medical Council, during four years, or during a period extending over not less than four winter and four summer sessions, in the acquirement of professional knowledge. Of having attended lectures on Surgery during one winter session. Of having attended a course of Practical Surgery during a period occupying not less than six months prior or subsequently to the course required by the preceding Clause 3.¹⁸ Of having attended one course of lectures on each of the following subjects—viz.: Chemistry,¹⁹ Materia Medica, Medicine, Forensic Medicine, Midwifery (with practical instruction), and a certificate of having personally conducted not less than ten labours, and Pathological Anatomy during not less than three months. Of having studied Practical Pharmacy during three months. Of having attended a three months' course of Practical Chemistry (with manipulations), in its application to medical study.²⁰ Of instruction and proficiency in the practice of Vaccination.²¹ Of having attended, at a recognised hospital or hospitals, the Practice of Surgery, during three winter²² and two summer²³ sessions. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months.²⁴ Of having, subsequently to the first winter session of attendance on Surgical Hospital Practice, attended, at a recognised hospital or hospitals, Clinical Lectures on Surgery, during two winter and two summer sessions. Of having been a Dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery. Of having attended during the whole period of attendance on Surgical Hospital Practice (see Clause 9) demonstrations in the post-mortem rooms of a recognised hospital. Of having attended, at a recognised hospital or hospitals, the Practice of Medicine, and Clinical Lectures on Medicine, during one winter and one summer session.

Special Notice.—Candidates commencing their professional education on or after the 1st of October, 1882, will not be admitted to the Second or Pass Examination until after the expiration of two years from the date of their passing the Primary or Anatomical and Physiological Examination for such diploma, except in the following cases:—When a candidate, before presenting himself for the Primary Examination, shall possess a recognised degree or diploma in Medicine or Surgery, or shall have completed the curriculum of professional education for the diploma. In the case of a candidate who, being desirous of obtaining the Fellowship,

¹⁸ The course of Practical Surgery referred to in Clause 4 is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to surgery, on the living person or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents on the living person or on the dead body; the performance, where practicable, of the operations of surgery on the dead body; the use of surgical apparatus; the examination of diseased structures as illustrated in the contents of a museum of morbid anatomy and otherwise.

¹⁹ The course of lectures on Chemistry included in Clause 5 will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

²⁰ The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

²¹ The certificate of instruction in vaccination must be such as will qualify its holder to contract as a Public Vaccinator under the Regulations at the time in force of the Local Government Board.

²² The winter session comprises a period of six months, and in England commences on the 1st of October and terminates on the 31st of March.

²³ The summer session comprises a period of three months, and, in England, commences on the 1st of May and terminates on the 31st of July.

²⁴ It is intended that the candidate should receive the instruction required by Clause 10 at an early period of his attendance at the hospital.

¹⁶ By the Practical Course referred to in Clause 5, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, &c.; but it is not hereby intended that the learners shall perform vivisections.

¹⁷ The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

shall fail to present himself for the Primary Examination for the Membership at the end of his second year of professional study, but who shall pass at the end of his third winter session the Primary Examination for the Fellowship, it being required in such case that not less than one year of attendance on the Surgical Practice of a recognised hospital shall intervene between the date of his passing the Primary Examination for the Fellowship and the date of his presenting himself for the Second or Pass Examination for the diploma of Member. In the case of a candidate who, having commenced his professional studies by attendance on the practice of a recognised provincial or colonial hospital, and having completed a year of such attendance, shall fail to pass the Primary Examination at the end of his second winter session of attendance at a recognised medical school, provided that in his case not less than one year shall elapse between the date of his passing the Primary Examination and the date of his presenting himself for the Second or Pass Examination for the diploma of Member. When a candidate, owing to illness, duly certified by one or more of the teachers of his medical school, shall be prevented from presenting himself for the Primary Examination on the completion of his second year of professional study. And in the case of a candidate who, from some unforeseen circumstances, shall fail to present himself for the Primary Examination on the completion of his second year of professional study, it being left to the Court of Examiners to determine whether in such case the candidate shall or shall not be required to comply with the regulation.

Certificates of attendance upon the practice of a recognised provincial or colonial hospital unconnected with, or not in convenient proximity to, a recognised medical school will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College. Those candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination on the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland from candidates for their diploma, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of registration by the General Medical Council, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge; and in the case of candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities, upon the production of the several certificates required for their degree by the authorities of such universities, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

Professional Examination.—This examination is divided into two parts. The First or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body. The Second or Pass Examination, on Surgical Anatomy and the Principles and Practice of Surgery, Medicine, and Midwifery,²⁵ is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients.

The Primary Examinations are held in the months of January, April, July, and October, and the Pass Examinations in the months of January, April, July, and October. Candidates will not be admitted to the Primary Examination until after the termination of the second winter session of their attendance at a recognised school or schools; nor to the Pass or Surgical Examination until after the termination of the fourth year of their professional education.

Candidates can claim exemption from examination in Medicine and Midwifery under the following conditions—viz.: The production by the candidate of a degree, diploma, or licence in Medicine and Midwifery entitling him to register under the Medical Act of 1858, or a degree, diploma, or licence in Medicine and Midwifery of a colonial or foreign university approved by the Council of the College. A declaration by the candidate, prior to his admission to the Pass Examination, that it is his intention to obtain either of the qualifications in Medicine and Midwifery mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said qualification, or proof of having passed the several examinations entitling him to receive the same.

The fee of £5 5s., paid prior to the first admission to the Primary Examination, is retained whether the candidate pass or fail to pass the examination, but is allowed as part of the whole fee of £21²⁶ payable for the diploma. A candidate, after failure at any Primary Examination, is required, on admission to any subsequent Primary Examination, to pay a further fee of £3 3s., which is retained, whether he pass or fail to pass the examination, and which further fee is not allowed as part of the whole fee of £21 for the diploma.

The fee of £15 15s. is payable prior to each admission to the Pass Examination; but on each occasion of failure the balance of £10 10s. is returned to the candidate. A candidate, having entered his name for either the Primary or Pass Examination, who shall fail to attend, will not be allowed to present himself for examination within the period of three months from the date at which he shall have failed so to attend. A candidate referred on the Pass Examination is required, unless the Court of Examiners shall otherwise determine, to produce, prior to his admission to re-examination, a certificate of at least six months' further attendance on the surgical practice of a recognised hospital, together with lectures on Clinical Surgery, subsequently to the date of his reference.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Regulations relating to the several Examinations applicable to Candidates who commenced their Professional Education on or after the 1st of October, 1884.

Any candidate who desires to obtain both the licence of the Royal College of Physicians of London and the diploma of Member of the Royal College of Surgeons of England is required to comply with the following regulations, and to pass the examinations hereinafter set forth. Every such candidate who shall commence professional study on or after Oct. 1st, 1884, will be required, at the times prescribed for the respective examinations, to produce satisfactory evidence—1. Of having been registered as a medical student by the General Medical Council. 2. Of having been engaged in professional studies at least forty-five months, during which not less than three winter sessions and two summer sessions shall have been passed at one or more of the medical schools recognised by the two Colleges. 3. Of having received instruction in the following subjects: (a) Chemistry, including Chemical Physics, meaning thereby Heat, Light, and Electricity; (b) Practical Chemistry; (c) Materia Medica; (d) Pharmacy. 4. Of having performed Dissections at a recognised medical school during not less than twelve months. 5. Of having attended at a recognised medical school—(a) a course of lectures on Anatomy during not less than six months, or one winter session; (b) a course of lectures on General Anatomy and Physiology during not less than six months, or one winter session; (c) a separate practical course of General Anatomy and Physiology during not less than three months. 6. Of having attended at a recognised medical school—(a) a course of lectures on Medicine during not less than six months, or one winter session; (b) a course of lectures on Surgery during not less than six months, or one winter session; (c) a course of lectures on Midwifery and Diseases peculiar to Women during not less than three months; (d) systematic practical instruction in Medicine, Surgery, and Midwifery; (e) a course of lectures on Pathological Anatomy during not less than three months; (f) demonstrations in the post-mortem room during the whole period of attendance on clinical lectures; (g) a course of lectures on Forensic Medicine during not less than three months. 7. Of having attended, at a recognised hospital or hospitals, the practice of Medicine and Surgery during three winter and two summer sessions. 8. Of having attended at a recognised hospital or hospitals during nine months Clinical Lectures on Medicine, and during nine months Clinical Lectures on Surgery, and of having been engaged during a period of three months in the Clinical Study of Diseases peculiar to Women. 9. Of having discharged, after he has passed the Second Examination, the duties of a Medical Clinical Clerk during six months, and of a Surgical Dresser during other six months. 10. Of having received instruction in the practice of Vaccination.

²⁶ The sum of £21 is exclusive of the fee of £2 paid for the Preliminary Examination.

Professional Examinations.—There are three Professional Examinations, called herein the First Examination, the Second Examination, and the Third or Final Examination, each being partly written, partly oral, and partly practical. These examinations will be held in the months of January, April, July, and October, unless otherwise appointed. Every candidate intending to present himself for examination is required to give notice in writing to Mr. F. G. Hallett, Secretary of the Examining Board, Examination Hall, Victoria Embankment, W.C., fourteen clear days before the day on which the examination commences, transmitting at the same time the required certificates.

The subjects of the First Examination are—Chemistry, Chemical Physics, Materia Medica, Pharmacy, Elementary Anatomy, and Elementary Physiology. A candidate may take this examination in three parts at different times, or he may present himself for the whole at one time. A candidate will be admitted to the examination on Chemistry and Chemical Physics, Materia Medica, and Pharmacy, on producing evidence of having been registered as a medical student by the General Medical Council, and of having received instruction in Chemistry, Materia Medica, and Pharmacy; or he may take Materia Medica and Pharmacy as part of the Second Examination; but he will not be admitted to the examination on Elementary Anatomy and Elementary Physiology earlier than the end of his first winter session at a medical school. A candidate rejected in one part or more of the First Examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and he will be re-examined in the subject or subjects in which he has been rejected.

The fees for admission to the First Examination are as follows: for the whole examination, £10 10s.; for re-examination after rejection in either of the parts, £3 3s.

The subjects of the Second Examination are Anatomy and Physiology. A candidate may present himself for examination in either of these subjects or parts separately, or in both at one time. A candidate will be admitted to the Second Examination after the lapse of not less than six months from the date of his passing the First Examination, on producing evidence of having completed, subsequently to registration as a medical student, eighteen months of professional study at a recognised medical school or schools, and of having complied with the regulations prescribed in Section I., Clauses 4 and 5. A candidate rejected in either part or in both parts of the Second Examination will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and will be re-examined in the subject or subjects in which he has been rejected.

The fees for admission to the Second Examination are as follows: for the whole examination, £10 10s.; for re-examination after rejection in either of the two parts, £3 3s.

The subjects of the Final Examination are: Medicine, including Therapeutics, Medical Anatomy, and Pathology; Surgery, including Surgical Anatomy and Pathology; Midwifery and Diseases peculiar to Women. A candidate may present himself for examination in these three subjects or parts separately or at one time. A candidate will be admitted to the Third or Final Examination on producing evidence—(1) of being twenty-one years of age; (2) of having passed the Second Examination; and (3) of having studied Medicine, Surgery, and Midwifery, in accordance with the regulations prescribed in Section I., Clauses 2 and 6 to 10. The Colleges do not admit to either part of the Third or Final Examination any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months, nor till the expiration of two years after his having passed the Second Examination. A candidate rejected in the Third or Final Examination, or in one or more of the three parts into which he may have divided it, will not be admitted to re-examination until after the lapse of a period of not less than six months from the date of rejection, and he will be re-examined in the subject or subjects in which he previously failed to pass. Any candidate who shall have obtained a colonial, Indian, or foreign qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and examination equivalent to those required by the Regulations of the two Colleges, shall, on production of satisfactory

evidence as to age and proficiency in Vaccination, be admissible to the Second and Third Examinations.

The fees for admission to the Third or Final Examination are as follows: for the whole examination, £15 15s.; for re-examination after rejection in Medicine, £5 5s.; for re-examination after rejection in Surgery, £5 5s.; for re-examination after rejection in Midwifery, £3 3s.

Notice.—A candidate referred at the Second Examination in either or both subjects is required, before being admitted to re-examination, to produce a certificate that he has pursued, to the satisfaction of his teacher, or teachers, in a recognised place of study, his Anatomical and Physiological Studies, or his Anatomical or Physiological Studies, as the case may be, during a period of not less than three months subsequently to the date of his reference.

A candidate referred on the Third or Final Examination, or on one or more of the three parts into which he may have divided it, will not be admitted to re-examination until after the lapse of a period of not less than three months from the date of rejection, and will be required, before being admitted to re-examination, to produce a certificate, in regard to Medicine and Surgery, of having attended the medical and surgical practice, or the medical or surgical practice, as the case may be, at a recognised hospital during the period of his reference; and, in regard to Midwifery, a certificate of having received, subsequently to the date of his reference, not less than three months' practical instruction in that subject by a recognised teacher.

Any candidate who withdraws from a part or parts of an examination for which he has sent in his name will not be admissible to such part or parts until the expiration of six months, without the special permission of the Committee of Management.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

These Colleges have made arrangements by which, after one series of examinations, held in Edinburgh or in Glasgow, or in Edinburgh and Glasgow, the student may obtain the diplomas of the three co-operating bodies.

The three co-operating bodies grant their single qualifications only to candidates who already possess another and opposite qualification in Medicine or Surgery, as the case may be. Copies of the Regulations for the single qualification of any of the bodies may be had on application to the respective secretaries.

Professional Education.—1. Candidates must have been engaged in professional study during forty-five months from the date of registration as medical students by the General Medical Council, which period shall include not less than four winter sessions' attendance at a recognised medical school. 2. The candidate must produce certificates or other satisfactory evidence of having attended the following separate and distinct courses of instruction:—The six months' courses delivered in Scotland, with the exception of Clinical Medicine and Clinical Surgery, must consist of not fewer than 100 lectures. The three months' courses must consist of not fewer than 50 lectures. The number of lectures certified as attended at any school not situated in Scotland should not be less than three-fourths of the total number of lectures delivered in a course. 3. The candidate must also produce the following certificates:—(a.) Of having attended not less than six cases of labour, three of these to be conducted personally under the direct superintendence of the practitioner who signs the certificate, who must be a registered medical practitioner. It is, however, strongly recommended that, where opportunity is given, the candidate should either attend for three months the in-door practice of a lying-in hospital, or attend personally not less than twenty cases of labour, and that at least the first six of these cases should be attended under the direct supervision of the practitioner. (b.) Of having attended, for three months, instruction in Practical Pharmacy; the certificate to be signed by the teacher, who must be a member of the Pharmaceutical Society of Great Britain, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicines to his patients, or a teacher of a class of Practical Pharmacy. (c.) Of having attended for twenty-four months the Medical and Surgical practice of a public general hospital containing on an average at least eighty patients, and possessing

distinct staffs of physicians and surgeons. (d) Of having attended for six months (or three months, with three months' hospital clerkship) the practice of a public dispensary specially recognised by any of the co-operating authorities; or the out-patient practice of a recognised general hospital, or of having acted for six months as pupil to a registered practitioner who either holds such a public appointment, or has such opportunities of imparting practical knowledge as shall be satisfactory to the co-operating authorities; this attendance should be made after the student has passed the First and Second Examinations. (e) Of having been instructed by a registered medical practitioner in the Theory and Practice of Vaccination, during a period of not less than six weeks.

Candidates will be subjected to three Professional Examinations, herein called the First Examination, the Second Examination, and the Final Examination, to be conducted at separate times, partly in writing and partly practically and orally.

First Examination.—The First Examination will embrace Chemistry,²⁷ Elementary Anatomy,²⁸ and Histology,²⁹ and will take place not sooner than the end of the first year, including the period of a winter and a summer session. The sum of £5 5s. must be paid to the inspector of certificates for this examination, not later than 4 P.M. of the Friday preceding it, after which no candidate will be entered. In the case of a candidate being unsuccessful at this examination, he will be re-admitted to examination after a prescribed interval on payment of £3 3s. if he has failed in all subjects, and £2 2s. if he has gained an absolute pass in one or more subjects at this board. This rule will also apply to any subsequent rejection. Any candidate who shall produce satisfactory evidence of having passed an equivalent examination in any of the subjects of the first examination before any of the boards specified in the Regulations will be exempt from examination in such subject or subjects.

Second Examination.—The Second Examination will embrace Anatomy, Physiology, Materia Medica, and Pharmacy, and will not take place before the termination of the summer session of the second year of study, including two winters and two summers. The sum of £5 5s. must be paid to the inspector of certificates for this examination, not later than one week before the day of examination, after which no candidate will be entered. In case of failure, the candidate will be readmitted to examination after the expiry of the prescribed period, on payment of £3 3s. if he has failed in all subjects, and £2 2s. if he has obtained credit for one or more subjects. Any candidate who shall produce satisfactory evidence of having passed in any of the subjects of the second examination before any of the boards specified in the Regulations will be exempt from examination in such subject or subjects; but no examination before such boards will be recognised as giving exemption unless it is coextensive in its scope with the equivalent examination of this board, and is the only or the final examination on the subject or subjects required by the board at which it was passed. When the candidate has not paid the fee of the first examination to this board, his fee payable in respect of the second examination shall be £10 10s.

Final Examination.—The Final Examination will embrace the Principles and Practice of Medicine (including Therapeutics, Medical Anatomy, and Pathology); Clinical Medicine; the Principles and Practice of Surgery (including Surgical Anatomy and Surgical Pathology); Clinical Surgery; Midwifery (with Gynaecology); Medical Jurisprudence; and Hygiene; and shall not take place before the termination of the full period of study. The fee payable for this examination, which in the case of candidates who have passed the First and Second Examinations

will be £15 15s., must be paid to the inspector at Edinburgh or Glasgow, as the case may be, not later than one week prior to the examination day, after which no candidate will be entered. In case of a candidate being unsuccessful at this examination, £10 10s. shall be returned to him, the remaining £5 5s. being retained to meet the expense of conducting the examination. This rule will also apply to any subsequent rejection. Any candidate admitted to the Final Examination, on the footing of having passed in the subjects of the First and Second Examinations at a recognised board, shall, on entering, pay the full fee of £26 5s.; and in the event of his being unsuccessful, £15 15s. will be returned to him at his first and £21 at every subsequent rejection. Candidates will not be exempted from examination in any of the subjects of the Final Examination, though some of them may have formed part of examinations passed before other boards.

KING AND QUEEN'S COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.

All information relative to the examinations under the Conjoint Scheme may be obtained from the Secretary of the Committee of Management, Mr. Greenwood Pim, M.A., 47, Dawson-street, Dublin, who will receive the applications of candidates for permission to be examined, and with whom the bank receipt for fees and all certificates &c. are to be lodged at least fourteen days prior to the day fixed for the commencement of the examination.

The examinations commence on the first Monday in April, July, and October of each year, unless otherwise appointed by the Committee of Management.

First Professional Examination.—Candidates are required, before admission to the First Professional Examination, to produce evidence—(1) of having passed a Preliminary Examination in General Education, and of having subsequently been registered by the General Medical Council as medical students at least nine months before the date of examination; (2) of having attended a course of lectures on Practical Anatomy, and one on Chemistry; (3) of having attended a course of Demonstrations and Dissections; (4) of having attended a summer course on Materia Medica, and one on Practical Chemistry; (5) of having studied Practical Pharmacy for three months in the Compounding Department of a Clinical Hospital, or in the Compounding Establishment of a Licentiate Apothecary or Member of the Pharmaceutical Society; or of having attended a course of Practical Pharmacy in a recognised Medical School. The fee for this examination is £15 15s.

Second Professional Examination.—Candidates are required, before admission to the Second Professional Examination, to produce evidence of having passed the First Professional Examination; also certificates of having subsequently attended a Medico-Chirurgical Hospital for nine months, together with evidence of having taken notes to the satisfaction of the physicians or surgeons in charge of the cases, and certified under their hands, of at least three Medical cases and three Surgical cases, in the wards of a recognised Medico-Chirurgical Hospital, and the following courses of Lectures:—Winter courses: Practical Anatomy, Demonstrations and Dissections, Physiology, Surgery. Summer course, three months: Practical Physiology, including Histology. The fee for this examination is £5 5s.

Third Professional Examination.—Candidates are required, before admission to the Third Professional Examination, to produce evidence of having passed the second examination; also certificates of having subsequently attended a Medico-Chirurgical Hospital for nine months, together with evidence of having taken notes to the satisfaction of the physicians and surgeons in charge of the cases, and certified under their hands, of at least three Medical cases and three Surgical cases in the wards of a recognised Medico-Chirurgical Hospital, and of the following courses of Lectures:—Winter courses: Demonstrations and Dissections, Medicine, Midwifery, if not deferred to the fourth year. Summer course, three months: Medical Jurisprudence. The fee for this examination is £5 5s.

Fourth or Final Professional Examination.—Candidates are required, before admission to the Final Examination, to produce evidence—(1) of having been registered as a medical student by the General Medical Council at least forty-five months previously; (2) of having passed the

²⁷ The examination in Chemistry will embrace the following particulars: Chemical Physics (meaning thereby Heat, Light, and Electricity); the principal Non-Metallic and Metallic Elements, and their more common combinations; also the leading Alcohols, Organic Acids, Ethers, Carbohydrates, and Alkaloids. The candidate will also be examined practically in Testing.

²⁸ Elementary Anatomy will embrace: Anatomy of the Bones and Joints of the whole body, and of the Muscles, chief Bloodvessels and Nerves of the Upper and Lower Extremities.

²⁹ Histology will be held to include a knowledge and recognition of the morphological elements and structure of Skin, Bone, Cartilage, Fibrous Tissue, Hair, Nails, Teeth, Blood, Muscle, Nervous Tissue, and the appearance and distribution of all the different forms of Epithelium, along with a general knowledge of the properties of cells. The examination on this subject will be oral and practical (no written paper being required).

Third Professional Examination; (3) of having subsequently attended a Medico-Chirurgical Hospital for nine months as extern pupil, or acted for six months as resident pupil, unless a certificate to that effect has been accepted in the third year, and of having attended the following course of lectures:—Winter course: Midwifery, unless taken in the third year. Certificates are also required—(1) of having attended a recognised midwifery hospital or maternity for six months in the winter or summer of either the third or the fourth year, with evidence of having been present at thirty labours; (2) of having for not less than three months studied fever in a recognised clinical hospital containing fever wards, and recorded from daily personal observation at least five cases of fever to the satisfaction of the attending clinical physician, as attested by his signature;³⁰ (3) of having attended a course of Operative Surgery in the summer session of either the third or fourth year; (4) of having attended, at a recognised ophthalmic and aural hospital, or at a recognised ophthalmic and aural department of a general hospital, clinical lectures in Ophthalmic and Aural Surgery during a period of three months. The fee for this examination is £15 15s.

SOCIETY OF APOTHECARIES OF LONDON.

Every student purposing to study Medicine must previously pass a public examination in Arts qualifying for registration as medical student. Such examination is held quarterly in the Hall of the Society on the first Friday and following day in March, June, September, and December, and is conducted by means of printed papers. Candidates will be examined in the English and Latin languages, Mathematics, Elementary Mechanics, and one of the following subjects at the option of the candidate: Greek, French, German, Logic, Botany, or Elementary Chemistry. The subjects may be passed at one or more examinations, and no re-examination is required in any subject in which a candidate has passed before any Examining Body recognised by the Medical Council.

The examinations to be passed for the Diploma in Medicine, Surgery, and Midwifery, which is registrable under the provisions of the Medical Act, 1886, are Primary and Final, each being written, oral, and practical. The Primary is held quarterly on the first Wednesday and on the Monday and Thursday of the same week in the months of January, April, July, and October. The Final is held monthly, and is divided into two parts:—1. The examination in Surgery on the second Wednesday and following days. 2. The examination in Medicine on the third Wednesday and on the Monday and Thursday of the same week. The course of medical study must extend over four years, and not less than three winter and two summer sessions must be passed at a recognised hospital and school of medicine. Candidates intending to present themselves for examination must give fourteen days' notice. A notice form for the purpose will be sent on application. The fee must be forwarded at the same time, with all required certificates, to the Secretary. The fee for the whole examination is £10 10s., of which £4 4s. are to be paid on entering for the Primary. In the event of failure the fee is not returned. A fee of £3 3s. is required for every re-examination.

The course of study required to qualify for the Primary examination is as follows:—Lectures on Chemistry and Elementary Physics, not less than six months; Practical Chemistry in a laboratory, three months; Materia Medica, three months; Practical Pharmacy and Dispensing, three months, instruction in which must be given by a registered medical practitioner, or in a public hospital, infirmary, or dispensary. Evidence of having received instruction in these subjects before registration as medical student will be received. This first part of the Primary Examination may be passed at any period after registration. The second part of the Primary Examination includes Anatomy, Physiology and Histology, with an examination on the living body, to qualify for which the candidate must have received instruction in Anatomy, not less than six months; Practical Anatomy with Demonstrations, twelve months; Physiology, six months. Candidates will be excused any or all the subjects of the Primary on producing evidence that they have passed equivalent examinations.

To qualify for the Final Examination the following course

of study must be observed: Hospital Practice, Surgical and Medical, with Post-mortem Examinations, not less than three winter and two summer sessions; Lectures on the Principles and Practice of Surgery, six months; Practical Surgery, three months; Clinical Surgical Lectures, nine months; Surgical Dresser, three months; Lectures on the Principles and Practice of Medicine, six months; Pathology, three months; Clinical Medical Lectures, nine months; Medical Clinical Clerk, three months; Forensic Medicine, Toxicology, Hygiene, and Insanity, three months; Lectures on Obstetric Medicine, including Gynaecology, three months; Clinical Instruction in the same, three months; a Course of Practical Midwifery: personally conducted Twenty Midwifery Cases. The offices of Dresser and Clinical Clerk may be discharged at a hospital, infirmary, or dispensary where sufficient opportunities are afforded for the acquirement of practical knowledge.

The above form the subjects of the Final Examination, which cannot be passed before the expiration of forty-five months after registration as medical student. There is no exemption from any portion of the Final Examination. The first part, besides the Principles and Practice of Surgery and a Clinical Examination of Surgical Cases, includes Surgical Pathology, Surgical Anatomy and Operative Manipulation, and Surgical Instruments and Appliances. The second part of the Final includes a Clinical Examination of Medical Cases, and, besides the subjects named, a Microscopic Examination of Morbid Structure and Obstetric Instruments and Appliances. Part II. may be taken before Part I. if desired. The following certificates must be produced prior to the Final Examination: 1. Certificate of birth. The candidate must be twenty-one. 2. Certificate of moral character. 3. Certificate of the Course of Medical Study, which must be signed by the Dean of the Medical School or other authority. A schedule for this purpose can be obtained at the Hall. 4. Certificate of Proficiency in Vaccination, signed by a Government Vaccinator.

ROYAL COLLEGE OF SURGEONS, IRELAND, AND THE APOTHECARIES HALL OF IRELAND.

Every candidate for the Conjoint Diplomas is required to pass a Preliminary Examination and four Professional Examinations.

First Professional Examination.—Candidates will be required, before admission to the First Professional Examination, to produce evidence—1. Of having been registered by the Medical Council as Medical Students at least nine months before examination. 2. Of having attended (a) Practical Anatomy, (b) Chemistry, (c) Demonstrations and Dissections, (d) Practical Chemistry, (e) Physics, (f) Practical Pharmacy for three months in the Compounding Department of a Clinical Hospital, or a School of Pharmacy, or in the Compounding Establishment of a Licentiate Apothecary. The fee for this examination is £12 12s. Candidates will be examined on Physics, Chemistry, and Anatomy (Osteology).

Second Professional Examination.—Candidates must produce evidence of having passed the First Professional Examination; also certificates of having subsequently attended—(a) a Medico-Chirurgical Hospital for nine months, and of having taken notes of at least three medical cases and three surgical cases, or a certificate of clinical clerkship; (b) the following courses of lectures: 1. Demonstrations and Dissections; (2) Physiology; (3) Surgery, winter courses, six months; (4) Materia Medica, (5) Practical Physiology, including Histology, summer courses, three months. The fee for this examination is £7 7s. Candidates will be examined in Anatomy, Physiology, Materia Medica and Pharmacy.

Third Professional Examination.—Candidates must produce evidence of having passed the Second Examination; also certificates of having subsequently attended—(a) a Medico-Chirurgical Hospital for six months as resident pupil, or for nine months as extern pupil, and, in the latter case, notes of at least three medical and three surgical cases, or of having acted as clinical clerk at any period; (b) the following courses of lectures: (1) Demonstrations and Dissections; (2) Medicine; (3) Midwifery, and Diseases peculiar to Women, in winter courses (may be deferred to the fourth year); (4) Pathology;³¹ (5) Medical Jurisprudence, Forensic Medicine, and Hygiene, in summer course. The fees for

³⁰ Attendance at a fever hospital will not be recognised if concurrent with that on Practical Midwifery.

³¹ The Certificate in Pathology will not be required until further notice.

this examination are £7 7s. Candidates will be examined in Anatomy, Surgery, Medicine, and Medical and Surgical Pathology.

Fourth Professional Examination.—The candidate must produce evidence—(1) of having been registered as a medical student by the Medical Council at least forty-five months previously; (2) of having passed the Third Professional Examination; (3) of having subsequently attended—(a) a Medico-Chirurgical Hospital for nine months as extern pupil, or six months as resident pupil; (b) Lectures on Midwifery, a winter course (unless taken in the third year); (c) a recognised Midwifery Hospital, or Maternity, for six months in the winter or summer of either the third or the fourth year, with evidence of having been present at thirty labours; (d) of three months' study of Fever in a Clinical Hospital containing fever wards, and of having taken notes of at least five cases of fever (attendance at a fever hospital will not be recognised if concurrent with that on Practical Midwifery); (e) Operative Surgery in the summer session of either the third or fourth year; (f) Clinical Lectures in Ophthalmic and Aural Surgery (three months) at a recognised Ophthalmic Hospital, or at an Ophthalmic Department of a General Hospital. The fee for this examination is £7 7s.

Candidates will be examined on Medicine, Therapeutics, Surgery, Midwifery and Diseases peculiar to Women, Ophthalmic and Aural Surgery, and Forensic Medicine and Hygiene.

COLLEGE OF STATE MEDICINE.

The objects of the College, which was founded in 1886 and incorporated in 1887, are—(a) to found, establish, and maintain in or near London an institution to aid the theoretical and practical investigation and study of sanitary science, and of all matters relating thereto; (b) to aid the theoretical and practical investigation and study of other branches of State Medicine; (c) with a view to effecting these objects to appoint professors to institute lectures and demonstrations, to issue publications of the Transactions of the Association, to found chemical and pathological laboratories, and a library; (d) to do all such other things as may from time to time be incidental or conducive to the attainment of the objects above set forth or any of them. The importance and necessity of such an institution have been forcibly impressed upon the notice of the Council:—(1) By the increasing demand for Public Health qualifications; (2) by the fact that possession of such a diploma is of great value to army medical officers, as it gives exemption to this subject in the qualifying examinations for promotion; (3) that in all probability the possession of such a diploma will—as is very right,—in accordance with the provisions of the County Government Bill, be compulsory in the future upon those seeking appointments as medical officers of health. Further particulars as to the courses of lectures &c. may be obtained from the hon. secretary, at the offices of the College, 26, King William-street, Strand, W.C.

THE ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

Admission into the Army and Indian Medical Services is gained as the result of competitive examination. Candidates for both services must, before being admitted to examination, possess the double qualification to practise Medicine and Surgery, and be registered under the Medical Act, and must also furnish satisfactory certificates of moral character. Candidates for the Army must be between the ages of twenty-one and twenty-eight, in good health, and both parents of unmixed European blood; for the Indian Service, between twenty-two and twenty-eight, of sound bodily health, and natural-born subjects of Her Majesty. Both are examined as to physical fitness by a Board of Medical officers. These conditions being satisfied, the candidate is admitted to the competitive examination, which is usually held in London twice a year, in the months of February and August. The subjects of examination are divided into *compulsory* and *voluntary*. The former comprise Anatomy and Physiology, Surgery, Medicine, including Therapeutics and the Diseases of Women and Children, Chemistry and Pharmacy, and a practical knowledge of Drugs. The eligibility of the candidate for admission into the service is determined by the results of this part of the

examination. The *voluntary* subjects are French, German, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with especial reference to Materia Medica, and for the Indian service Hindustani. Although the results of the examination on voluntary subjects do not affect the question of the eligibility of the candidate for a commission, they influence his position on the lists, which is determined by the numbers obtained under the two heads conjointly. After having passed this examination, the successful candidates for both services are sent to the Army Medical School at Netley as "surgeons on probation," with the rank of lieutenant and the daily pay of 8s. to go through a four months' course of special instruction in the duties required of them in the service. The staff of the school consists of four professors, all of them men of acknowledged ability and high standing in their special departments. Surgeon-General Sir T. Longmore, Kt., C.B., is Professor of Military Surgery; Deputy Surgeon-General D. B. Smith, M.D., of Military Medicine; Surgeon-Major J. L. Notter, M.D., of Military Hygiene; and Sir W. Aitken, F.R.S., of Pathology. To each of these an Army Medical Officer is attached as Assistant Professor. The lectures on Military Surgery include gunshot and other wounds, transport of sick and wounded, duties of army medical officers in the field, during sieges, and on board troopships and transports, &c. Those on Military Medicine treat of tropical and other diseases to which soldiers are exposed in the course of their service, the mortality and invaliding by disease, in peace and war, at home and abroad. The course of Hygiene comprises the examination of water and air, the general principles of diet, with the quality and adulterations of food and beverages, the sanitary requirements of barracks, hospitals, and camps, the clothing, duties, and exercises of the soldier, and the circumstances affecting his health with the best means of preventing disease, and instruction in the mode of preparing the various statistical and other returns required of the medical officer. The surgeons on probation are detailed for duty in the wards of the hospital, under the Professors and Assistant Professors of Medicine and Surgery, and receive practical instruction in the mode of examining recruits. The surgeons on probation are provided with quarters, and are members of the excellent mess established at Netley. After having passed through the course of instruction they are examined on the subjects taught in the school; and their position on the list recommended for commissions is determined by the combined results of the competitive and final examinations. At the close of each session five prizes are awarded: the Herbert Prize of £20 to the surgeon on probation who has obtained the highest number of marks at the London and Netley examinations conjointly; the Parkes Memorial Bronze Medal to the one who gains the highest number of marks in the examination on Hygiene at Netley, combined with those given for the answers to a special question set on the same subject; the Martin Memorial Gold Medal to the highest number of marks in the final examination on Military Medicine, with the addition of those gained for a special question connected with it; the Montefiore Gold Medal and twenty guineas, awarded in the same manner for Military Surgery; and the Montefiore Second Prize, consisting of works on Military Surgery, to the surgeon on probation who obtains the second highest numbers in this branch.

Surgeons are promoted to be Surgeons-Major on completing twelve years' full-pay service, of which three must have been abroad. Before being promoted they will be required to pass an examination intended to test their progress and proficiency in all those branches of knowledge which are essential to their continued efficiency as medical officers, which may be taken at any time between the fifth and tenth year of service. It will embrace the following subjects: a. Surgery, operative and practical, including field surgery and transport of sick and wounded. b. Medicine and Pathology, including practical pharmacy and modes of prescribing and administering remedial measures, food, drink, &c. c. Hygiene, within the limits treated of in "Parkes' Practical Hygiene." d. Duties of executive medical officers during peace and war at home and abroad; and at sea, as defined in the various codes of regulations issued for their guidance. Medical officers possessing the following qualifications will be exempted from examination in Medicine, Surgery, and Hygiene respectively: a. The Fellowship of any Royal College of Physicians or Surgeons of Great Britain or Ireland; granted under a higher standard of qualification than that

for Licentiate or Member, will be accepted in lieu of an examination in Medicine and Surgery. *b.* The diploma in Hygiene and State Medicine, or any corresponding diploma of any University in Great Britain or Ireland, such diploma being granted after examination, will be accepted in lieu of an examination in this subject. A certificate will be required from a recognised teacher of Surgery in any medical school at home or abroad in which operative surgery is taught, showing that the medical officer has gone satisfactorily through a complete course of operative surgery during the period within which the examination must be taken, and that he is a competent operator. A report on any subject of a practical professional character to be selected by the officer himself, and certified to be his own composition, and in his own handwriting, will also be required.

The selection of Surgeons-Major for advancement to the grade of Brigade Surgeon is made on the grounds of ability and merit, in determining which the following points will be considered:—The officer to be so selected must have been favourably reported on by the several military and departmental officers under whom he may have served, as set forth in their Annual Confidential Reports. He must be physically fit for general service, and have the necessary qualifying foreign and Indian service under existing rules. He must, before he can be selected for promotion to the grade of Brigade Surgeon, establish before an examining board, appointed for the purpose by the Director-General, his efficiency in the following subjects:—*a.* Hospital organisation and administration in peace and war. *b.* The administration, interior economy, command, and discipline of the Medical Staff Corps and bearer columns. *c.* The relations of the medical to all other departments and corps of the army, as defined by the various Codes of Regulations in force. *d.* Recruiting and invaliding. *e.* The management of sick and wounded in war. *f.* Field medical organisation. *g.* The transport of the sick and wounded by land and sea. *h.* The medical and surgical equipment and hospital arrangements for an army corps. *i.* The duties and responsibilities of medical officers, quartermasters, and non-commissioned officers and men of the Medical Staff Corps in regard to the charge and supervision of stores and equipments, and the nursing, dieting, and general management of the sick. *k.* The sanitary duties of medical officers in charge of camps and hospitals in the field and at the base of operations. *l.* The sanitary inspection and equipment of hospital ships and troop transports, and all other sanitary duties in camps, garrisons, and quarters. *m.* The origin, progress, and best methods of dealing with outbreaks of epidemic disease among troops under any given circumstance. *n.* The most approved methods of securing the sick, and especially the wounded, against pyæmia, septicæmia, and all other forms of blood poisoning, and the management and treatment of such outbreaks when they occur. *o.* Questions on Operative Surgery and Practical Medicine will also form part of this examination. A medico-topographical report will be required of any district or country in which British troops have been, or are likely to be, actively employed, as well as a sketch of the medical arrangements suitable for an army corps operating in such a district or country, compiled by the officer, and certified to be his own composition and in his own handwriting.

Brigade Surgeons, to be eligible for selection as Deputy Surgeons-General, must have served abroad at least ten years, of which three must have been in India. All officers under the rank of Deputy Surgeon-General are placed on the retired list at the age of fifty-five, and those of that rank and Surgeons-General at the age of sixty.

The regulations above noted respecting the promotion of Surgeons and Surgeons-Major are equally applicable to the Indian Medical Service.

The conditions of admission into the Naval Medical Service are the same as those for the Army; but the candidate is also required to declare his readiness to engage for general service, and to proceed on duty abroad whenever required to do so. After having passed the competitive examination in London the successful candidate will receive a commission as surgeon in the Royal Navy, "and will undergo a course of practical instruction in Naval Hygiene at Haslar Hospital."

Surgeons are promoted to Staff Surgeons after twelve years from date of entry, provided they pass the requisite examination; and Staff Surgeons to Fleet Surgeons after twenty years' service, if recommended by the Director-General. Deputy Inspectors-General are promoted by selec-

tion from the Fleet Surgeons, and Inspectors-General from the Deputy Inspectors-General having three years' foreign, four years' mixed, of which not less than two have been abroad, or five years' home service in such appointments as preclude foreign service, provided they have not refused to go abroad when called upon to do so. Inspectors and Deputy Inspectors-General are retired compulsorily at sixty, and other grades at fifty-five years of age, and all ranks at any time if they have not served for five years. In calculating service for retired pay, time on half-pay will be taken as equivalent to one-third service on full-pay.

The following tables, showing the rates of pay and half-pay of the three branches, will probably be acceptable to students who entertain any intention of entering the public service:—

ARMY.				
Rank.	Rates of Pay.	Gratuities.	Ranking with	
	Daily.			
Surgeon on probation ..	£0 8 0 ..	—		Lieutenant
	Annual.			
Surgeon ..	200 0 0 ..	—		Captain
" aft. 5 years' service ..	250 0 0 ..	—		
	Daily.			
Surgeon-Major ..	10 15 0 ..	£1250 ..		
" aft. 15 years' service ..	1 0 0 ..	—		Major
" 18 ..	1 2 6 ..	£1800 ..		
	—	£2500 ..		
	Half-pay.			
Surgeon-Major:				
" aft. 20 years' service ..	1 5 0 ..	£1 0 0 ..		Lieut.-Colonel
" 25 ..	1 7 6 ..	1 2 6 ..		
" 30 ..	—	1 5 0 ..		
Brigade Surgeon ..	1 10 0 ..	—		Lieut.-Colonel
" aft. 5 years in rank ..	1 13 0 ..	—		(but always senior to)
" aft. 20 years' service ..	—	1 7 6 ..		Surgeon-Major)
" 30 ..	—	1 10 0 ..		
Deputy Surgeon-General ..	2 0 0 ..	1 15 0 ..		Colonel
Surgeon-General ..	2 15 0 ..	2 0 0 ..		Major-General

ROYAL NAVY.				
Rank.	Daily pay.	Half-pay.	Gratuities and retired pay.	
			Rank.	Gratuity.
Surgeon	£ s. d.	£ s.	Surgeon and Staff	
aft. 2 years' f. p. in rank	0 11 6	0 6	Surgeon:	
4	0 13 6	0 8	aft. 8 years' f. p.	£1000
6	0 9	0 9	12	1500
8	0 15 6	0 10	16	2250
10	—	0 11		
Staff-Surgeon:				
on promotion ..	1 1 0	0 12		
aft. 2 years' f. p. in rank	—	0 13		
4	1 4 0	0 14		
6	—	0 15		
Fleet Surgeon:			Fleet-Surgeon.	Daily.
on promotion ..	1 7 0	0 17	aft. 20 years'	£1 0 0
aft. 2 years' f. p. in rank	—	0 18	24	1 2 6
4	1 10 0	0 19	27	1 5 0
6	—	1 0	30	1 10 0
8	1 13 0	—		
Deputy Inspector-General:				
on promotion ..	2 2 0	1 5		1 15 0
aft. 2 years' f. p. in rank	—	1 7		
4	—	1 9		2 0 0
Inspector-General ..	2 15 0	1 18		

INDIAN MEDICAL SERVICE.
From date of leaving Netley till embarkation, 10s. per diem.
Pay and allowances in India.

Rank.	Monthly pay.	If in charge of a Native Regiment.	Pension, annual.
	Rs. a. p.	Rs.	£
Surgeon under 5 years' service ..	286 10 0	450	—
" after 5 ..	304 14 2	600	—
" 6 ..	392 5 2	—	—
Surgeon-Major & Brigade-Surgeon:			
after 10 years' service ..	410 9 5	500	—
" 12 ..	640 14 6	—	—
" 15 ..	677 6 11	—	—
" 17 ..	—	—	292
" 20 ..	852 3 7	—	365
" 25 ..	888 12 0	1000	600
" 30 ..	—	—	700
Deputy Surgeon-General, 2 at ..	2250 0 0	(aft. 5 yrs. service)	250
" therest at ..	1800 0 0	in rank	—
Surgeon-General ..	2500 0 0	addnl.	—
" in Bengal ..	2700 0 0	to service pension.	350

The Medical Student's Class Guide.

TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS FOR THE SESSION 1888-89.

		ST. BARTHOL. HOSP. & COLL.			CHARING-CROSS HOSP. & COLL.			ST. GEORGE'S HOSPITAL.		
COURSE.	LECTURES, &c.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. One Session.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.
WINTER SESSION.										
ANATOMY AND PHYSIOLOGY	Dr. Klein	M. Tu. Th. 10	9 9	2 s.	Dr. Mott	Daily	7 7	Dr. Buckmaster	Daily, 12	7 7
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Marsh	Tu. W. Th. F. 9	7 7	3 s.	Mr. Boyd	M. W. F. 9	7 7	Ditto, Phys. Chem.	MTWTF 9	3 3
ANATOMICAL DEMONSTRATIONS	Messrs. Langton, Messrs. Clarke, Lockwood, and Jossop	Daily, 10 to 4	...	...	Mr. Boyd	Daily	7 7	Mr. Bennett	M. W. F. 9	7 7
CHEMISTRY	Dr. Russell	M. W. F. 9	6 16	...	Mr. Shield	Daily	7 7	Messrs. Ross & Allingham	Daily	...
MEDICINE	Dr. Andrew	M. Tu. Th. 3	6 16	...	Mr. Wainwright	M. W. F. 4	6 6	Ditto, Osteology	T. Th. S. 9	...
SURGERY	Dr. Gee	W. Th. F. 2	6 16	...	Mr. Heaton	M. W. F. 4	6 6	History	M. T. Th. F. 10	3 3
	Mr. Savory	W. Th. F. 2	6 16	...	Dr. Pollock	M. W. F. 4, Th. 3	7 7	Mr. Donkin	T. Th. S. 11	6 6
					Mr. Bellamy	Tu. Th. F. 4	7 7	Dr. Dickinson	T. Th. F. 3	7 7
HOSPITAL PRACTICE:	Dr. Andrew	Tu. Th. S.	6	...	Dr. Pollock	M. Th. W. S.	6	Mr. Pick	Tu. Th. S. 9	7 7
PHYSICIANS	Dr. Church	M. Tu. Th.	15 15	...	Dr. Green	Tu. F. 2	12	Dr. Dickinson	M. W. F. 1	12
	Dr. Gee	Tu. Th. S.	15 15	...	Dr. Bruce	Tu. F. 2	12	Dr. Whiphram	M. W. S. 1	10 10
	Dr. Duckworth	M. Tu. Th. F. S.	...	...			...	Dr. Cavafy	Tu. Th. S. 1	10 10
	Dr. M. Duncan (Obstet.)	Tu. F. 11	...	...	Dr. Abercrombie	Tu. F. 1.30	...	Dr. Ewart	Tu. Th. F. 1	...
ASSISTANT-PHYSICIANS	Dr. Brunton	W. S. 11	...	...	Dr. Lubbock	W. S. 1.30	...	Obst. Phys.	M. F. 2	...
	Dr. Norman Moore	M. Th. 11	...	...	Dr. Willcocks	M. Th. 1.30	...	Dr. Champneys	M. F. 12	...
	Dr. S. West	Daily	6	...	Dr. Murray	W. S. 1.30	...	Dr. Owen	T. S. 12	...
SURGEONS	Messrs. Savory, Willett, Smith, Langton, and Baker	Daily, 12	...	...	Mr. Bellamy	M. Th. 2	6	Mr. Rouse	M. W. Th. F. 1	12
			...	...	Mr. Bloxam	T. F. 10	7 7	Mr. Pick	M. W. Th. F. 1	10 10
ASSISTANT-SURGEONS	Messrs. Marsh, Butlin, Walsham, Cripps, and Bruce Clarke	Daily, 12	...	...	Mr. Morgan	W. S. 2	12	Mr. Haward	T. W. Th. S. 1	10 10
			...	...	Mr. Stanley	M. S. 1.30	10 10	Mr. Bennett	T. W. Th. S. 1	...
			...	...	Mr. Sheild	W. S. 1.30	...	Ophth. Surg.	T. Th. F. 2	...
			...	...	Mr. Wainwright	T. F. 1.30	...	Mr. B. Carter	T. S. 12	...
PRACTICAL SURGERY	Mr. Power	Tu. Th. S. 1	...	...			...	Mr. Dent	W. Th. 1	...
	Mr. Vernon	Tu. Th. S. 1	...	...	Mr. Bloxam	T. W. F. 3	...	Mr. Turner	Tu. S. 12, W. 1	...
			...	...			...	Assist. Ophth.	W. S. 2	...
CLINICAL MEDICINE	Drs. Andrew, Church, Gee, and Duckworth	F. 1	...	...	The Physicians and Assistant-Physicians	Weekly	...	The Physicians	M. 2	...
		
CLINICAL SURGERY	Messrs. Savory, Smith, Willett, Langton, and Baker	S. 12.45	...	...	The Surgeons and Assistant-Surgeons	Weekly	...	The Surgeons	Tu. 2	...
		
CLINICAL MIDWIFERY, &c.	Dr. Duncan	S. 10	...	...	Drs. Black & Routh	T. F. 1.30	...	Dr. Champneys	W. 2	...
DENTAL SURGERY	[Hygiene: Dr. Thorne M. 10]	Operations W. & S. 1 1/2 Post-mort. exam. daily at 12 & 2 1/2	...	...	Mr. Fairbank	M. W. F. 9	...	Mr. Winterbottom	Tu. 10	...
		
SUMMER SESSION.										
MATERIA MEDICA, &c.	Dr. Brunton	Tu. Th. S. 10, W. 9	6 10	...	Dr. Willcocks	M. W. F. 9	4 4	Dr. Gamgee (dem.)	M. W. F. 2	4 14
MIDWIFERY, &c.	Dr. M. Duncan	Daily, 9	5 5	...	Dr. Black	M. Tu. W. F. 3	4 4	Mr. J. Woodlame	M. W. F. 9	4 14
BOTANY	Rev. G. Henslow	M. W. F. 10	4 4	...			...	Dr. Champneys	M. W. F. 9	4 14
MEDICAL JURISPRUDENCE	Dr. Hensley	M. Tu. S. 9	4 4	...	Dr. Abercrombie	W. F. 9	4 4	Dr. Owen	Tu. Th. S. 9	4 14
			...	...	Mr. Henton (Tox.)	F. 12	...	Dr. Delapine	M. 4	...
PATHOLOGICAL ANATOMY	Dr. Norman Moore	F. 11, Tu. 3	2 12	...	Dr. Murray	Daily	...	Mr. Donkin	W. Th. F. 3	...
PRACTICAL CHEMISTRY	Dr. Russell	M. Tu. F. 11 to 1	3 3	...	Mr. Heaton	Daily	5 5	Dr. G. B. Howes	M. F. 4	4 4
			...	...	Mr. Vasey	M. Th. 2-4	...	Dr. Delapine	W. 3	3 3
COMPARATIVE ANATOMY	Dr. Shore	M. Th. 11	2 12	...	Dr. Garson	S. 9	3 3	(in Winter)	W. 3	3 3
PATHOLOGY & MORB. ANAT.	Dr. Shore	...	...	...	Dr. Murray	Tu. W. F. 4	...	Mr. B. Carter	T. Th. S. 9	4 4
OPHTHALMIC SURGERY	Mr. Power	Tu. W. 4	2 12	...	Staff of Royal West. Oph. Hosp.	Daily	...	Pract. Med.	T. Th. S. 9	4 4
	Mr. Vernon	M. 2	...	...			...	Dr. Whiphram	in Summer	...
PSYCHOLOGY	Dr. Clay Shaw	...	2 12	...	Mr. Fairbank	M. W. F. 9	...	Mr. Winterbottom	Tu. 10	...
DENTAL SURGERY		...	...	...			...	Mr. Dent	M. S. 3, T. 3 1/2	4 4
PRACTICAL SURGERY	Mr. Butlin	...	...	...	Messrs. Bloxam & Morgan	Tu. W. Th. F. 9	5 5	Hygiene: incl. in course on Med.	W. F. 3	...
	Mr. Walsham (and in Winter)	...	...	...			...	Dr. Buckmaster	T. 2	...
PRACTICAL PHYSIOLOGY	Dr. Harris (and in Winter)	...	7 7	...	Dr. Mott (& in Winter)	T. W. F. 2-4	6 6	Aural Surg.	T. 2	...
			...	...			...	Sir W. Dalby	M. W. F. 9	2 2
PRACTICAL PHARMACY	Pharm. Laborat.	...	...	...	Mr. Sandall	Daily	2 2	Mr. Turner	M. W. F. 9	2 2
OPERATIVE SURG. (DEMONST.)	Messrs. Clarke and Lockwood	...	5 5	...	Mr. Bloxam	T. W. Th. F. S. 9	...	Pract. Midw.	T. 2	...
			...	...			...	Dr. Champneys	W. 1	...
DISEASES OF THE EAR	Mr. Cumberbatch	Tu. F. 2	...	...	Mr. Sheild	F. 9.30	...	Sir W. Dalby	T. 2	...
DISEASES OF THE SKIN	Mr. Cripps	F. 2 1/2	...	...	Dr. Sangster	M. 2	...	Dr. Cavafy	W. 2	...
ORTHOPEDIC SURGERY	Mr. Walsham	F. 12 1/2	...	...			...	Mr. Bennett	W. 2	...
	[Diseases of Larynx: Mr. Butlin Th. 2 1/2]	...	...	...	Dis. Throat	...	...	Dis. Throat	Th. 2 1/2	...
Fees for all Lectures and Hosp. Med. and Surg. Practice				131 5	Dr. Willcocks	F. 9.30	...	Dr. Whiphram	Th. 2 1/2	41250

* Included in Materia Medica.

† Included in Practical Surgery fee.

‡ £94 10s. in one sum, or £105 in five instalments.

TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1888-89—(CONTINUED.)

LECTURES, &c.	GUY'S HOSPITAL.			KING'S COLLEGE AND HOSPITAL.		
	LECTURERS.	DAYS & HOURS.	FEES. One Course.	LECTURERS.	DAYS & HOURS.	FEES. One Course.
WINTER SESSION.						
PHYSIOLOGY	Mr. Golding-Bird	M. W. 1.45, S. 9½	7 7	Dr. Gerald Yeo	Daily, 12½	6 8
ANATOMY, DESCRIPTIVE & SURGICAL... ..	Dr. Wood Idge	Tu. Th. 1.30	7 7	Dr. Curnow	W. Th. 11½, F. 8.9	9 9
ANATOMICAL DEMONSTRATIONS	Mr. Davies-Colley	Tu. W. Th. F. 9	7 7	Dr. Curnow	M. Tu. W. Th. 9½	7 7
CHEMISTRY	& Mr. Clemens Lucas	Daily, 9 to 4	7 7	Mr. A. S. Kenny	Daily	8 8
MEDICINE	Mr. Poland, Mr. Dunn,	Tu. Th. S. 11	7 7	Mr. Thomson	M. W.	8 8
SURGERY	& Dr. Washbourn	M. W. F. 3	7 7	Mr. Johnson	Th. 10½	8 8
PRACTICAL SURGERY	Dr. Debus	Tu. Th. 3½	7 7	Mr. Jackson	M. F. 4, W. 5	8 8
HOSPITAL PRACTICE:	Dr. Stevenson	M. Tu. W. Th. 4	4 4	Messrs. Rose, Cheyne,	...	3 3
PHYSICIANS	Mr. Groves	Tu. Th. 3½	10 10	Barrow, & Penny	Tu. F. 2, W. S. 2	6 mths.
ASSISTANT-PHYSICIANS	Dr. Pye-Smith	Tu. F.	6 mths.	Dr. Beale, Dr. Duffin	Tu. Th. S. 2	...
SURGEONS	Dr. Taylor & Goodhart	M. Th. S.	15 15	Dr. Playfair (acc.)	Tu. F. 1½	...
ASSISTANT-SURGEONS	Dr. Hicks (cons. obst.)	M. Th. F.	1 year	Dr. Bursay Yeo	M. W. F. 12½	...
CLINICAL MEDICINE	Dr. Gabbie (obst.)	M. Tu. Th. F.	Perpet.	Dr. Hayes (accos.)	M. Th. 1½	...
CLINICAL SURGERY	Dr. Hale White,	M. Tu. Th. F.	38 16	Dr. Ferrier, & Dr. Curnow	Tu. F. 1½	...
CLINICAL MIDWIFERY	Pitt, Wooldridge,	M. Tu. Th. F.	...	Dr. Dalton	W. S. 1½	...
SUMMER SESSION.	& Perry	M. Tu. Th. F.	...	Mr. Wood	Tu. Th. S. 1½	...
MATERIA MEDICA & THERAPEUTICS ...	Horrocks (obst.)	M. Th. F.	...	Sir Joseph Lister, Bart.	M. W. F. 1½	...
MIDWIFERY &c.	Messrs. Cook, Bir-	W. S.	...	Mr. W. Rose	Tu. F. 10	...
POTANY	kett, Bryant (cons.),	M. Th.	...	Mr. S. H. Cartwright	M. W. Th. 1½	...
MEDICAL JURISPRUDENCE	Durham, Howse,	Tu. F.	...	Mr. McHardy	Alt. F. 3	...
DISEASES OF WOMEN	Davies-Colley, & Lucas	Th. F.	...	Dr. Duffin	Alt. Tu. 3	...
PRACTICAL CHEMISTRY	Mr. Higgins,	Tu. F.	...	Dr. Beale	Alt. Tu. 3½	...
PRACTICAL PHYSIOLOGY	Mr. Bradley (oph.),	Tu. F.	...	Dr. B. Yeo	Alt. M. 3	...
PRACTICAL BIOLOGY	Mr. Pedley (dent.),	Tu. F.	...	Dr. Ferrier	Alt. M. 3½	...
NATURAL PHILOSOPHY	Mr. L. Purves (aural)	Tu. F.	...	Dr. Curnow	...	...
COMPARATIVE ANATOMY	Mr. Golding-Bird	Tu. F.	...	...	...	...
PATHOLOGY AND MORBID ANATOMY...	Mr. Jacobson	Tu. F.	...	...	...	...
OPERATIVE SURGERY	Mr. Symonds	Tu. F.	...	...	...	...
MORBID HISTOLOGY	Mr. Lane	Tu. F.	...	...	...	...
OPHTHALMIC SURGERY	Dr. Pavy, Pye-Smith,	Tu. F.	...	...	...	...
PSYCHOLOGICAL MEDICINE	Taylor, & Goodhart	Tu. F.	...	...	...	...
DENTAL SURGERY	In Summer:	Tu. F.	...	...	...	...
DEMONST. OF CUTANEOUS DISEASES...	Drs. Hale White,	Tu. F.	...	...	...	...
VACCINATION	Pitt, Wooldridge,	Tu. F.	...	...	...	...
HYGIENE	& Perry	Tu. F.	...	...	...	...
PRACTICAL PHARMACY	Messrs. Durham,	Tu. F.	...	...	...	...
Fees for Lectures, and Hospital Medical and	Howse, Davies-Colley,	Tu. F.	...	...	...	...
Anatomical Practice	& Lucas	Tu. F.	...	...	...	...

* Elementary Course.

† Advanced Course.

‡ In summer.

§ In winter.

TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS, AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1888-89—(CONTINUED.)

LONDON HOSPITAL.				ST. MARY'S HOSPITAL.				MIDDLESEX HOSPITAL.			
LECTURES, &c.	LECTURERS.	DAYS AND HOURS.	Fees. One Session.	LECTURERS.	DAYS AND HOURS.	Fees. One Session.	LECTURERS.	DAYS AND HOURS.	Fees. One Session.		
WINTER SESSION.											
PHYSIOLOGY	Mr. McCarthy	M. W. 9 Tu. Th. S. 9	4 4	Dr. Waller	M. Tu. W. Th. 12	7 0	Mr. Lowne	M. W. F. 9	8 8		
EXPERIMENTAL PHYSIOL.	Mr. McCarthy	Daily	...	...	...	...	Messrs. Lowne & Karop (in Summer)	M. W. F. 9	5 5
PATHOL. & MORBID ANAT.	Dr. Sutton	...	3 3	Mr. Sileo & Dr. Maguire	M. W. 4	4 0	Dr. Fowler (in Summer)	Tu. Th. S. 9	4 4		
ANATOMY, DESCRIPTIVE & SURGICAL.	Dr. F. Treves	Tu. Th. 9 M. W. F. 9	5 5	Mr. L. Lane	M. Tu. Th. F. 9	8 0	Mr. Hensman	M. Tu. Th. F. 4	10 10		
ANATOMICAL DEMONSTRATIONS.	[Pract. Anat.: Mr. C. M. Moullin]	Daily, 10 to 5 (except S. aft.)	5 5	Mr. Hill	Daily 9-5	...	Messrs. Hensman, Sutton, Brodie, Vickers	Daily 9 till 4	6 6		
CHEMISTRY	Dr. Tidy	M. W. F. 10.30	7 7	Mr. Clarke Dr. Cagney	W. S. 10 & 11	6 0	Mr. W. Foster	M. W. Th. F. 3	6 6		
MEDICINE	Pract.: Mr. Page	M. W. 12 & 2	5 5	Dr. Wright	M. W. F.	8 0	Dr. Cayley	Tu. Th. S.	8 8		
SURGERY	Dr. Stephen Mackenzie	Tu. Th. 4 S. 10 A.M.	5 5	Dr. Choadle	M. Tu. Th.	8 0	Mr. H. Morris	M. W. Th. S.	8 8		
PRACTICAL SURGERY...	Mr. Rivington	Tu. Th. in summer	...	Mr. Owen	T. Th. 5	4 0	Mr. A. Clark	W. F. 9	6 0		
HOSPITAL PRACTICE:	Mr. Reeves	Daily, 2	6 mths	Mr. Papper	Tu. F. 11	6 mths	Dr. W. Cayley	Daily, 11	3 mths		
PHYSICIANS	Drs. Down, H. Jackson, Sutton, Fenwick, Mackenzie, Herman (obst.), Eanson, Turner, Smith Warner, Raffe	Daily, 2 Tu. F. 2	10 10	Mr. Pye	M. Th. 11	7 0	Dr. Coupland	Daily, 11	5 5		
ASSISTANT-PHYSICIANS ...	Dr. Anderson	Daily, 1.30	...	Dr. Broadbent	W. 11, S. 9	...	Dr. Dr. Fowler	Tu. F. 11	...		
SURGEONS	Mr. Couper Mr. Rivington Mr. W. Tay (Oph.) Mr. McCarthy Mr. F. Treves Dr. W. Jones & Mr. T. M. Howell (Aur.) Mr. Barrett (Dent.)	Daily, 2 W. S. 9 S. 9.30 Tu. 9	6 mths 10 10 10 10	Dr. Hicks (obst.) To Out-patients: Dr. Phillips Dr. Maguire Dr. Pearce Dr. M. Handfield Jones (obst.)	M. Th. 11 Tu. F. 11 W. S. 11 M. Th. 11	...	Dr. Edis (obst.) Dr. Pringle (skin)	Tu. F. 11 Tu. 4	...		
ASSISTANT-SURGEONS ...	Mr. Reeves Mr. C. Mansell Moullin Mr. Purry Fenwick Mr. Pye (Ophthal.)	Daily, 11	...	Mr. Norton Mr. Owen Mr. Page	M. Th. 11 Tu. F. 11 W. S. 11	6 mths 7 0	Dr. Duncanson (obst.) Mr. Hulke Mr. G. Lawson Mr. Morris Mr. Andrew Clark Mr. S. Bennett (dental) Mr. Lai g (oph.) Mr. Hendman (sural)	Tu. 3, F. 3 M. Th. 11 W. S. 11 M. Th. 11 M. Th. 11 Tu. F. 11 M. Th. 11 M. 9, W. 9	3 mths 5 5		
CLINICAL MEDICINE	The Physicians and Asst. Phys.	Twice week 2	...	Mr. Field (sur.) Mr. Morris (skin) Mr. Hayward (dental)	M. Th. 9 M. Th. 8 W. S. 11	...	Mr. Pearce Gould Mr. J. H. Sutton Mr. W. Hern (assist. dental)	Tu. F. 11 W. S. 9 W. 9, F. 9	6 6		
CLINICAL SURGERY	The Surgeons and Asst. Surg.	Twice week 2	...	Dr. Broadbent	Once a fortnight	...	The Physicians	F. 3	...		
SUMMER SESSION.				Mr. Norton	Once a fortnight	...	The Surgeons	Tu. 3	...		
MATERIA MEDICA... ..	Dr. James	Tu. Th. F. 3	3 3	[Orthopaedic Dep.: Mr. E. W. 10]	W. 11 P.M. ex. at 2 daily	4 0	Superintend. of P.M. exam.: Mr. Hudson	Operations W. S. at 1 P.M. at 2 daily	...		
THERAPEUTICS	Dr. Herman	M. W. F. 9	4 4	Dr. Phillips	T. Th. F. 10	4 0	Dr. Biss	M. W. F. 4	2 2		
MIDWIFERY, &c.	Dr. Warner	M. W. F. 12	3 3	Dr. Phil lips	Tu. W. Th. F. 9	5 0	Dr. Powell	M. Th. 3	...		
BOTANY	Dr. Sansom	M. Th. 3.30	3 3	Dr. Brax ou Hicks	M. W. F.	3 0	Dr. A. W. & dis	M. W. F. 9	5 5		
MEDICAL JURISPRUDENCE	Dr. Tidy	W. F. 10	...	Rev. J. M. Crombie	M. T. Th. 10	4 0	Dr. Blas	Th. 10	2 2		
TOXICOLOGY	Mr. Page	M. W. 12, 2 (M. W. 12, 2 in winter)	5 5	Mr. Luff	W. F. 8.	4 0	Dr. Finlay	Tu. Th. S. 10	4 4		
PRACTICAL CHEMISTRY ...	Mr. C. M. Moullin	Tu. Th. 9	3 3	Dr. C. R. A. Wright, F.R.S.	M. W. 10	3 0	Mr. W. Foster	M. W. F. 3	4 4		
COMPARATIVE ANATOMY...	Mr. Eve	Tu. F. 12.45	...	Mr. Bottomley	...	...	[Pract. Med.: Dr. Coupland]	S. 11	...
PATHOL. HISTOLOGY...	Dr. Sutton	Th. 12, S. 10	3 3	Mr. Sileo & Dr. Maguire	...	...	Mr. J. B. Sutton	Tu. Th. 4	2 2
PATHOLOGY AND MORBID ANATOMY.	Mr. Evington	...	3 3	Mr. Pepper	Tu. Th. 5	...	Dr. Fowler	Tu. Th. S. 9	4 4		
OPERATIVE SURGERY ...	Mr. McCarthy	Tu. Th. 9.15	3 3	Dr. Waller	Ta. W. F.	...	Mr. A				

* Med. Tutor, Dr. Pearson; Obst. do., Dr. H. Jones—throughout year three weekly.

TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS, FOR THE SESSION 1888-89—(CONTINUED.)

	ST. THOMAS'S HOSPITAL AND SCHOOL.		UNIVERSITY COLLEGE AND HOSPITAL.		WESTMINSTER HOSPITAL.			
LECTURES, &c.	LECTURERS.	DAYS AND HOURS.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.	LECTURERS.	DAYS AND HOURS.	FEES. One Course.
WINTER SESSION.								
ANATOMY AND PHYSIOLOGY ...	Dr. Sherrington	M. W. F. 9½ T. W. F. 4	*Professor E. A. Schafer	M. T. Th. 11	5 gs. £7 7s.	Dr. Abraham	M. W. Th. 1½	6 6
PRACTICAL PHYSIOLOGY AND HISTOLOGY	Dr. T. C. Charles (in Summer)	M. Tu. W. F. 2	*Professor E. A. Schafer	Daily (ex. F. & S.) 2	7 7	Dr. Abraham and in Summer	Th. 1½ M. W. Th. 1½	2 2 6 6
PHYS. DEMONSTRATIONS ...	Mr. Copeman	M. F. 10½ T. Th. 12	Dr. Halliburton	...	...	...	...	...
ANATOMY, DESCRIPTIVE AND SURGICAL	Mr. Reid	M. 11, T. 9½ S. 9½ & 11	Prof. Thane	Daily, 12	12 12	Mr. Black	Tu. W. Th. 7	7 7
ANATOMICAL DEMONSTRATIONS	Mr. Anderson Mr. Reid, Mr. Anderson, Dr. Taylor, & Mr. Makins	Daily, 10½ to 4½ S. 10½ to 1	Mr. P. Flemming Mr. E. H. Thane	...	...	Mr. Hebbert	Daily, 10 to 1	5 5
						[Morbidity Histology: Dr. Hebb, Tu. Th. 11, & 4½ in Summer]		
PATHOLOGICAL ANATOMY ...	Dr. Payne & Dr. Sharkey	S. 11½ M. 4, W. F. 9*	Prof. Horsley (Pract. Path.)	M. & Th. 4-6	2 2	...	...	...
CHEMISTRY ...	Dr. A. J. Bernays	T. Th. F. 10½	Drs. Ramsay and Plimpton	Daily, (ex. W.) 10	6 6	Dr. Dupré and Dr. Wilson Hake	M. Th. F. 3	6 6
MEDICINE ...	Dr. Bristowe Dr. Ord	M. Th. F. 4	Prof. H. C. Bastian	Daily, (ex. M. & S.) 9	9 9	Dr. Sturges Dr. Allen	M. W. Th. 4	6 6
SURGERY ...	Mr. S. Jones Sir W. MacCormac	M. Th. F. 9	Prof. Marcus Beck	M. & S. 9, W. 4	7 7	Mr. Cowell Mr. Macnamara	M. W. F. 9	6 6
GENERAL PATHOLOGY ...	Dr. Stone (with Physics)	S. 12	[Chem. Physics: Prof. Foster]	W. Th. 10	1 11	Dr. Alchin Dr. Ogilvie	...	3 3
NATURAL PHILOSOPHY ...	Dr. Bristowe	Daily,	Drs. Walshe, Key- nolds, Hewitt, Hare	Daily, 1 & 2	12	Drs. Sturges Alchin, Donkin, Potter (obst.), Fox	M. Th. 1½ Tu. F. 1½ W. S. 1½	12 mths. 11 11
HOSPITAL PRACTICE:	Dr. Ord Dr. Harley Dr. Payne Dr. Cullingworth (obst.)	Winter & Sum- mer, 2	Ringer, Bastian, Roberts, Gowers, Poore, Barlow, Williams (obst.), & Crocker (Skin)	twice weekly	21 0	[Near. & Alienism: Dr. Merrier, F. 4 £2 2s.]	Tu. F. 2 W. 1½	
PHYSICIANS ...	Drs. Sharkey, Gulliver, Hadden, and Acland Cory (obst.)	Daily, 1½	Drs. Money and Spencer (obst.)	...	...	Dr. Hall Dr. Bennett Dr. Murrell	M. Th. 1½ Tu. F. 1½ W. S. 1½	...
ASSISTANT-PHYSICIANS ...	Mr. S. Jones Mr. Croft Sir Wm. MacCormac	T. F. 1½ Daily, 2	Messrs. Erichsen, Marshall, Jones, Ibbertson, and Sir H. Thompson	Daily, 1 & 2	...	Dr. Grigg (Obst.) Dr. Hall (Throat)	Tu. F. 9 W. 9	12 mths.
	Mr. MacKellar Mr. Nettleship (ophthal.)		Prof. B. Hill & C. Heath Mr. Hutchinson (dent.)	Thrice weekly	...	Mr. Cowell Mr. Davy Mr. Macnamara Dr. Walker (dent.) Mr. M. Smale (dent.) [Ophth. Prac.: Mr. Cowell]	W. S. 1½ S. 9½ M. Th. 3	11 11
SURGEONS ...	Messrs. Clutton, Anderson, Pitts & Makins The Physicians	Daily, 1½	Prof. M. Beck Mr. A. E. Barker Mr. R. J. Godlee Prof. J. Tweedy Victor Horsley & Mr. Bilton Pollard	...	...	[Orthopaedic: Mr. Davy] [Aural: Mr. Black] Messrs. Cooke, Bond, Statham, & Spencer	F. 2½ M. 9 M. Th. 1½ Tu. F. 1½ W. S. 1½	
ASSISTANT-SURGEONS ...						Dr. Sturges Dr. Alchin Dr. Donkin Mr. Cowell Mr. Davy Mr. Macnamara Dr. Potter	M. Th. 1½ Tu. F. 1½ W. S. 1½ W. 9½ M. Th. 1½	
CLINICAL MEDICINE ...		After visits	The Physicians	Fortnly. & twice a week	...	Dr. Sturges Dr. Alchin Dr. Donkin Mr. Cowell Mr. Davy Mr. Macnamara Dr. Potter	Altern. F. 3 Post-mortem exam. 2 Operations, Tu. W. at 2	
CLINICAL SURGERY ...	The Surgeons in rotation Mr. Croft	After visits M. 9, T. 9	By the Surgeons	Once a week and Fortnly.	...	[Path. Dem.: Dr. Hebb, weekly] [Minor Surg. & Bandaging. in Summer]		
CLINICAL MIDWIFERY, &c. ...	Dr. Cullingworth	Tu. 4	Dr. Williams Dr. H. Spencer	Fortnly.	...			
	[Vac.: Dr. Cory, W. 11½]	Operations, W. S. 1½ oph. T. 4		Opera- tions, W. at 2	...			
SUMMER SESSION.								
MATERIA MEDICA, &c. ...	Dr. Stone and Mr. Plowman	M. W. F. 12 noon	Prof. Roberts	M. 9, Tu. W. Th. F. 10	6 6	Dr. Murrell	Tu. Th. S. 9	3 3
MIDWIFERY, &c. ...	Dr. Cullingworth	M. Tu. Th. F. 4	Prof. Williams	Daily, (ex. M.) 9	6 6	Dr. Potter	M. Tu. F. S. 9	4 4
BOTANY ...	Mr. A. W. Bennett	Tu. W. S. 10	Mr. Oliver	Daily, (ex. S.) 9	3 13	Mr. Worsley Benison	Tu. W. 3 3	
MEDICAL JURISPRUDENCE ...	Mr. Clutton, Drs. Bernays & Cory	Tu. Th. S. 9	Prof. G. V. Poore	Tu. W. Th. F. 10	5 5	Dr. Hall Dr. Dupré (Toz.)	Tu. W. F. 4	4 4
PRACTICAL CHEMISTRY ...	Dr. Bernays	M. Th. F. 10 to 12	Dr. Ramsay	S. 10	5 5	Dr. Wilson Hake	M. W. F. 11 to 12	4 4
STATE MEDICINE ...	Dr. E. Seaton	W. 10½	Prof. Corfield	W. 3	2 2	Dr. Sutherland	...	...
MENTAL DISEASES ...	Dr. Rayner	F. 12	Dr. Mickle Prof. Corfield	Tu. Th. 4	3 3	Dr. Hall As in Winter	...	...
HYGIENE AND PUBLIC HEALTH	The Physicians	After visits	As in Winter	...	...	
CLINICAL MEDICINE ...								
COMPARATIVE ANATOMY ...	Dr. Gulliver (with Zoology)	M. Th. 9	†Prof. Lankester	M. 4	6 6	...	...	...
PATHOLOGY & MORB. ANATOMY	Dr. Sharkey	Daily, 2	Prof. Horsley	T. Th. F. 4	6 6	Dr. Alchin	M. W. Th. 9	4 4
OPHTHALMIC SURGERY ...	Dr. Hadden	Tu. F. 5	†Prof. J. Tweedy	M. W. 4	2 2	Mr. Cowell	M. 2½	1 1
DENTAL SURGERY ...	Mr. Nettleship Mr. Lawford Mr. Truman	...	†Mr. S. J. Hut- chinson	W. 9½	...	Dr. Walker	W. 9½	2 2
PRACTICAL SURGERY ...	Messrs. MacKellar, Clutton, & Pitts	F. 9	†Mr. Bilton Pollard †Mr. E. J. Godlee	M. Th. 4	6 6	Mr. Davy	F. 4	3 3
OPERATIVE SURGERY ...	Mr. Clutton Mr. Pitts	...	Mr. Barker *Mr. R. J. Godlee	...	5 5	Mr. Davy	...	4 4
PRACTICAL PHARMACY ...	Mr. Plowman	...	Mr. Gerrard	...	3 3	Mr. Tanner	...	3 3
Fees for Lectures and Hospital Practice		125 Guineas. * In Summer			126 0	In 1 sum, £105. In 2, £110. In 5, £120.		

TABULAR LIST OF THE CLASSES, LECTURERS, ETC., AND FEES, AT THE PROVINCIAL SCHOOLS OF MEDICINE, FOR THE SESSION 1888-89.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.				UNIVERSITY COLLEGE, LIVERPOOL.				OWENS COLLEGE (VICTORIA UNIV.) SCHOOL OF MEDICINE.				SHEFFIELD SCHOOL OF MEDICINE.			
LECTURES, &c.	LECTURERS.	DAYS AND HOURS.	FEES.	LECTURERS.	DAYS AND HOURS.	FEES.	LECTURERS.	DAYS AND HOURS.	FEES.	LECTURERS.	DAYS AND HOURS.	FEES.	LECTURERS.	DAYS AND HOURS.	FEES.
PHYSIOLOGY	Mr. Williamson	M. W. F. 10	5 5	Dr. Caton	Tu. Th. F. 8-9	5 5	Prof. Wm. Sterling (with Histology)	M. Tu. W. Th. F. 11	2 5	Dr. Sinclair White	W. 12 F. 4	3 3	Dr. Sinclair White	W. 12 F. 4	3 3
PRACTICAL PHYSIOLOGY	Dr. Oliver (in Summer)	Tu. W. Th. 9	5 5	Dr. Larkin (Demonstrator)	M. W. 2 F. 9	...	Prof. Surling, Dr. Stewart, Mr. Kent	Daily, 10 to 5	...	Mr. Frank Harrison	...	3 3	Mr. Frank Harrison	...	3 3
ANATOMY, DESCRIPTIVE & SURGICAL	Dr. Mearns	Daily, ex. W. 9	5 5	Dr. Bess	Daily, 11	5 5	Prof. A. H. Young	Daily (ex. S.) 1	5 5	Mr. E. Skinner	M. W. F. 6	4 4	Mr. E. Skinner	M. W. F. 6	4 4
ANATOMICAL DEMONSTRATIONS	Prof. Bedson	Tu. Th. 11, W. 12	5 5	Dr. Brown	M. Tu. Th. F. 3	5 5	Dr. A. M. Paterson	...	1 1	Messrs. Atkin, Kilham, & Dr. S. Roberts	Tu. Th. 5 Daily	2 2	Messrs. Atkin, Kilham, & Dr. S. Roberts	Tu. Th. 5 Daily	2 2
CHEMISTRY	Prof. Philipson	Daily (ex. W. 12)	5 5	Dr. Glynn	Tu. Th. S. 9	5 5	Prof. Schorlemmer	Ta. Th. S. 9	3 10	At Fifth College	M. W. F. 5	4 4	At Fifth College	M. W. F. 5	4 4
MEDICINE	Dr. Heath	M. W. F. 5	5 5	Mr. Parker	M. W. Th. 3	5 5	Prof. Hays	M. W. F. 1	5 5	Dr. Bartolomé, Dyson & Porter	11	4 4	Dr. Bartolomé, Dyson & Porter	11	4 4
SURGERY	Dr. Arnison	M. W. F. 6	5 5	...	M. Th. 4	4 4	Mr. F. A. Southam	M. W. F. 1	5 5	Mr. A. Jackson	M. W. F. 8 A.M.	4 4	Mr. A. Jackson	M. W. F. 8 A.M.	4 4
PRACTICAL SURGERY	Dr. Drummond (in Summer)	...	5 5	Dr. Barron	Tu. F. 4	3 3	Prof. J. A. Ross (with Operat. Surg.)	Tu. 12	2 2	Mr. R. J. Pye-Smith	...	...	Mr. R. J. Pye-Smith	...	...
PATHOLOGY	Dr. Armstrong	M. W. F. 4	5 5	Dr. Lodge	Tu. F. 4	3 3	Prof. J. A. Ross	M. 2, Tu. Th. 1	4 4	Mr. Richardson	...	...	Mr. Richardson	...	...
EXPERIMENTAL PHYSICS	Mr. Armstrong	Tu. Th. 10	2 2	Dr. Hooper	4 times weekly	4 4	Mr. Young, Surg. Path.	Tu. 2	3 10	Mr. Ba. ham	...	...	Mr. Ba. ham	...	...
PUBLIC HEALTH	ROYAL INFIRMARY, NEWCASTLE.	T. 3	5 6	ROYAL INF.	...	1 1	Dr. A. M. Marshall	Tu. F. 2	2 2	...	...	...	...	...	...
HOSPITAL PRACTICE.	...	...	...	...	...	...	ROYAL INFIRMARY.	...	3 3	...	...	...	...	...	...
PHYSICIANS	Dr. Philipson, Drummond, Oliver & Limont	Each twice weekly, 11	6 months	Dr. Davidson	12 to 2	6 mon.	The Physicians	Daily, 8 1/2 to 12	6 mon.	GRAN INFIRMARY, Dr. Dyson	T. Th. S. 11 M. W. S. 11 M. W. Th. S. 11	12 months, £10 10	GRAN INFIRMARY, Dr. Dyson	T. Th. S. 11 M. W. S. 11 M. W. Th. S. 11	12 months, £10 10
SURGEONS	Dr. Armstrong, Dr. Hume, Mr. Page, Mr. T. A. Dodd, Mr. Williamson	Each twice weekly, 10	12 12	Mr. Bickerteth	12 to 2	7 7	The Surgeons	...	6 mon.	Messrs. Favell, A. Jackson, & Shaw	...	...	Messrs. Favell, A. Jackson, & Shaw	...	...
ASSISTANT-SURGEONS	...	Once weekly, 11	12 12	Mr. Hanks	...	10 0	(Dent. Anat. & Phys.)	Tu. 11, F. 12	12 mon.	Pun. Hosp. & Dr. Roberts	...	...	Pun. Hosp. & Dr. Roberts	...	...
MATERIA MEDICA	Mr. McBean	M. W. F. 5	5 5	Dr. Carter	Daily, 9 A.M.	4 4	(Dental Metallurgy: Mr. Paul, Dr. Burghardt, & 33)	...	...	Dr. Keeling	...	...	Dr. Keeling	...	...
MIDWIFERY, &c.	Dr. Nesham	Daily, 9 A.M.	5 5	Dr. Wallace	M. W. F. S. 4	5 5	(Mental Diseases: Mr. Mould)	Tu. Th. 4	1 11 6	Mr. Pye-Smith	...	...	Mr. Pye-Smith	...	...
BOTANY	Dr. Gibson	Tu. Th. F. 4	5 5	Dr. H. Gibson	M. W. F. 11	2 2	Prof. Sinclair	M. T. F. 1	4 4	[Medical Tutor: Mr. Lee]	...	...	[Medical Tutor: Mr. Lee]	...	...
MEDICAL JURISPRUDENCE	Mr. Page	M. Th. 8	5 5	Mr. Paul	M. W. F. 3	4 4	Dr. Ashby (Dis. Child.)	Daily (ex. S.) 2	2 2	Dr. Keeling, Messrs. R. Favell & Laver	...	...	Dr. Keeling, Messrs. R. Favell & Laver	...	...
PRACTICAL CHEMISTRY	Prof. Bedson	M. W. F. 10-11	5 5	Dr. Brown	M. W. F. 3	4 4	Dr. Dixon Main	M. W. Th. 2	4 4	Mr. Birks	Tu. 1b. 8	3 3	Mr. Birks	Tu. 1b. 8	3 3
COMPARATIVE ANATOMY	Prof. Brady	T. F. 4	2 2	Dr. Herdman	4 times weekly	3 3	Prof. Dixon	M. W. 10 1/2	4 4	Dr. S. M. P. Roberts	Tu. Th. 5	3 3	Dr. S. M. P. Roberts	Tu. Th. 5	3 3
PATHOLOGY & MORBID ANATOMY	Dr. Drummond	M. W. F. 4	5 5	Dr. Barron	Twice weekly	1 1	Dr. A. M. Marshall (with Embryology)	M. W. F. 10 1/2	2 12 6	At Fifth College	M. W. F. 11	3 3	At Fifth College	M. W. F. 11	3 3
OPHTHALMIC SURGERY	Mr. Williamson	M. 12, Th. 9	...	Dr. Barron (Path. Histol.)	...	3 3	Prof. Dreschfeld	M. 4, W. 1	2 2	Mr. Richardson	...	...	Mr. Richardson	...	...
DENTAL SURGERY & MECHANICS	Mr. Fothergill	Tu. F. 4	...	Mr. Phillips	...	3 3	G. G. Cumpson	W. F. 4	3 3	Mr. Ba. ham	W. 12	...	Mr. Ba. ham	W. 12	...
OPERATIVE SURGERY	Dr. Armstrong	7 A.M. & 3 P.M.	5 5	Mr. Council	...	4 4	Mr. Jones	M. 4	4 4	Mr. Snell	...	...	Mr. Snell	...	...
CLINICAL MEDICINE	...	...	...	Mr. Parker	...	...	(Physicians, and Surgeons of the Royal Infirmary)	...	...	...	...	...	...	...	...
CLINICAL SURGERY	...	...	...	Phys. and Surg. of Infir.	...	...	[Comp. fee]	...	...	...	...	...	...	...	...
Fees for all Lectures required by the College and Hall Ditto for Hospital Medical & Surgical Practice				...				...				...
In addition to the above, £2 2s. yearly up to three years.				...				...				...
Assistant-Physicians: Drs. Porter & C. King.				...				...				...
Assistant-Surgeons: Messrs. Ha. lam & Atkin.				...				...				...
In Winter, £57 15				...				...				...
In Summer, £43 0				...				...				...

	ABERDEEN UNIV.		EDINBURGH UNIV.		SCHOOL OF MEDICINE, EDINBURGH.		GLASGOW UNIV.		GLAS. ROY. INFIRM. SCHOOL OF MEDICINE.		GLASGOW, ANDERSON'S COLL. MED. SCHOOL.		GLASGOW WESTERN MEDICAL SCHOOL.	
	LECTURERS.	Fees. One Course.	LECTURERS.	Fees.	LECTURERS.	Fees. One Course.	PROFESSORS.	Fees. One Course.	LECTURERS.	Fees. One Course.	LECTURERS.	Fees. One Course.	LECTURERS.	Fees. One Course.
WINTER SESSION.														
ANATOMY (DEMONSTRATIONS, &c.)	Dr. Struthers, 9, 11	£ 5	Sir William Turner	£ 4	Messrs. Symington & M. Brown, 9, 10 & 11	£ 7 9	Dr. J. Cleland, 11, 2	£ 6	Mr. Clark, 4	£ 4	Dr. A. M. Buchanan, jun. 4, son, 12	£ 4	Mr. J. T. Carter, 11	£ 4
CHEMISTRY (PRACTICAL, &c.)	Prof. Brazier, 3 [Pract. Hyg.: Dr. Mathew Hay]	3 3	Dr. Crum Brown, 10 (Adv. Class in Sum.)	4 4	Messrs. King, Macadam, & Drinkwater, 10	3 5	Dr. J. Ferguson, 10	3 3	Dr. Milne, 10	2 2	Dr. Dittmar, 10	2 2	...	...
PHYSIOLOGY (INST. OF MED.)	Dr. Mac William, 2	3 3	Dr. Rutherford, 11	4 4	Dr. Noel Paton, 10	3 5	Dr. McKendrick, 12	3 3	Dr. Barlow, 3	1 16	Dr. Christie, 3	2 2	...	...
GENERAL PATHOLOGY, &c.	Dr. Hamilton, 9	3 3	Dr. Greenfield, 3	4 4	Mr. J. Hunter, 11	3 5	3 o'clock	3 3	Dr. Newman, 10	3 3	(In Infirmary)	2 2	Dr. McVail, 11	2 2
MEDICINE	Dr. Smith-Shand, 3	3 3	Dr. Grainger	4 4	Dr. Wyllie, Affleck, & Bramwell, & James	3 5	Dr. Gardner, 11	3 3	Dr. Anderson, 12	2 2	Dr. Gemmell, 5	2 2	...	...
SURGERY	Dr. Alex. Ogston, 10	3 3	Dr. Chiene, 10	4 4	Dr. MacGillivray, Messrs. Cathcart, Caird, Hodson, & Scott-Lane, 10	3 5	Sir G. H. R. Macleod, 1	3 3	Dr. Macewen, 11 [Public Health: Dr. Glaister, in Summer]	2 2	Dr. Dunlop, 11	2 2	Dr. Knox, 12 [Dis. of Ear, Throat, & Nose: W. 3, 4, 11]	2 2
MATERIA MEDICA, &c.	Dr. Cash, 4	3 3	Dr. T. R. Fraser, 2	4 4	Dr. Craig & Gibson, 2	3 5	Dr. Charles, 12	3 3	Dr. Douglas, 3	2 2	Dr. A. Napier, 4	2 2	...	...
MIDWIFERY, &c.	Dr. Stephenson, 4	3 3	Dr. Simpson, 10	4 4	Dr. Bell & Milne	3 5	Dr. Leishman, 2	3 3	Dr. Stirling, 3	2 2	Dr. A. Wallace, 1	2 2	Dr. Reid, 12	2 2
MED. JURISPRUDENCE, &c.	Dr. Hay, 9	3 3	(Dis. Wom. & Child.) (in Summer only)	4 4	Murray, 11	3 5	Dr. Simpson, 11	3 3	Dr. Glaister, 11 (in Summer)	2 2	Dr. Eben-Ducan, 11	2 2	...	...
NATURAL HISTORY	Dr. Nicholson, 2	3 3	Dr. Ewar, 2	4 4	Dr. Littlejohn, 2	3 5	Dr. Young, 9	3 3	...	...	Prof. Blyth	...	...	...
NATURAL PHILOSOPHY	...	...	...	...	...	...	...	...	...	...	...	...	...	...
HOSPITAL PRACTICE:	ABERDEEN R. INF. A. Fraser, and Blackie Smith Daily	...	EDIN. ROYAL INF. ...	...	EDIN. ROYAL INF. ...	...	GLASGOW ROY. INF. AND WEST. INF. ...	...	Dr. Robertson	...	Dr. J. W. Anderson	...	...	...
PHYSICAINS	Dr. Rodger	...	...	...	...	...	...	...	Dr. Gemmell	...	Gammell, Robert-son, & A. W. Smith	...	...	...
SURGEONS	Dr. Ogston, Ogilvie, Will, & Garden, Williamson (dentist) Daily	...	...	...	...	...	...	...	Dr. W. Anderson	...	Out-patients: Dr. Dougall	...	...	...
ASSISTANT-SURGEONS	Dr. McKenzie Booth	...	...	...	...	...	...	...	Dr. Dunlop	...	Dr. Knox, Dr. Macewen, Clark, Lothian, & Fleming, 9	...	...	...
CLINICAL MEDICINE ...	Dr. Smith-Shand, A. Fraser, and McKenzie Booth	3 3	Dr. G. Stewart, Fraser, & Greenfield, & Dr. Simpson, for Dis. of Wom.	4 4	Dr. Muirhead, Bakewell, & Wyllie, Affleck, & Halliday, 10	3 5	Dr. McCall Anderson & Gardner, 9 (and in Summer)	3 3	The Physicians	...	The Physicians, 9	...	...	...
CLINICAL SURGERY ...	Dr. Ogston, Ogilvie, Will, and Garden	3 3	Dr. Annandale, 4	4 4	Mr. Dox, 12	3 5	Dr. Buchanan & Sir G. H. B. Macleod, 9 (and in Summer)	3 3	Dr. Woodburn, 3	5 0	...	...	...	...
PRAC. ANAT. & DEMONS.	Dr. Struthers, 9 to 4	2 2	Sir Wm. Turner, 1, 4	3 3	Miller, M. Th. 12	2 2	Dr. Glaister and Demonstrators, 11	2 2	Mr. Clark, 11	1 11 6	Dr. Buchanan, 11	2 2	Mr. J. T. Carter, 2	1 11 6
BOTANY	Dr. Trail, 8	3 3	Dr. Bayley Balfour, 8	4 4	Messrs. Symington & M. Brown, 9 to 3	2 2	Dr. Bowser, 8	3 3	Dr. Barlow, 3	2 15	Mr. Wilson, 3	2 2	...	...
HISTOLOGY	Dr. Struthers, and Dr. Mac William	1 1	...	...	Mr. A. N. McAlpine & Mr. Noel Paton, 2	2 2	Dr. McKendrick, 12	3 3	Dr. Milne, 10 (in winter)	2 2	Dr. Christie, 1	2 2	...	...
COMPARATIVE ANATOMY	Mr. Brazier, 10	3 3	Dr. Crum Brown, 10, 11	3 3	Mr. James Hunter	3 3	Dr. Young, 12	3 3	Dr. Clark, Tu. F. 4	...	Dr. Wolfe, 12	Free	...	...
DISEASES OF THE EAR	Dr. Davidson	1 1	Dr. A. Robertson, 9	3 3	(As in Winter)	3 3	Dr. J. Ferguson, 9	3 3	Dr. Robertson, 12	1 1	(With Midwifery)	...	...	...
DISEASES OF THE EYE	Dr. Stephenson	3 3	Dr. Carmichael & Un-	1 1	Dr. Duncan	2 2	Dr. P. McBride	3 3	Dr. Stirling	2 2	(With Jurisprudence)	...	...	...
NATURAL HISTORY	Dr. Reid	1 1	Dr. Ewart, 12 (per ill)	4 4	Messrs. Bell & Playfair	2 2	Dr. Yellowies	2 2	Dr. A. Wallace, 1	2 2	(With Midwifery)	...	...	...
MED. PSYCHOL. & INSANITY	Dr. Simpson, 11	4 4	Dr. Clouston, F.M.W.F. 3	3 3	Dr. J. Tute, 2	1 1	Dr. Leishman	2 2	Dr. Stirling, 3	2 2	Dr. A. Wallace, 1	2 2	Dr. Reid, 12	2 2
GYNECOLOGY	Dr. Stephenson, 11	2 2	[Pr. M. Anat. Path.]	4 4	Croom, Bell, Young	3 5	Sir G. H. B. Macleod, 1	2 2	Dr. Macewen, 12	2 2	Dr. Christie, 4	Free	Dr. Reid, 12	2 2
MIDWIFERY, &c.	Dr. Greenfield, 11	4 4	Dr. Greenfield, 11	4 4	Hart, & Barbour	2 2	...	...	...	...	Dr. Dunlop, 11	2 2	Mr. Knox, 12	2 2
OPERATIVE SURGERY ...	Dr. Alex. Ogston, 10	2 2	Dr. Chiene, 8	3 3	...	...	...	...	...	...	...	...	...	...

* Also in Winter.

† With Pract. Instruction at an Asylum (Mon. Wed. Fri.), £3 8s.

‡ In Summer.

§ Mr. A. G. Miller, Dr. MacGillivray, Mr. C. W. Cathcart, Mr. F. M. Caird, and Mr. Hodson.

TABULAR LIST OF THE CLASSES, LECTURERS ETC., AND FEES, AT THE MEDICAL SCHOOLS OF IRELAND, FOR THE SESSION 1898-99.

	DUBLIN UNIVERSITY.	DUBLIN R. C. OF SURGEONS.	LEDWICH SCHOOL OF SURG. & MED.	DUBLIN, CAR. MICHAEL COLL.	DUBLIN, CATHOLIC UNIVERSITY.	BELFAST, QUEEN'S COLLEGE.	CORK, QUEEN'S COLLEGE.	GALWAY, QUEEN'S COLL.
	LECTURERS.	LECTURERS. DAYS AND HOURS.	LECTURERS. DAYS AND HOURS.	LECTURERS. DAYS AND HOURS.	LECTURERS. DAYS & HOURS.	LECTURERS. DAYS & HOURS.	LECTURERS. DAYS & HOURS.	LECTURERS. DAYS AND HOURS.
	FEE.	FEE.	FEE.	FEE.	FEE.	FEE.	FEE.	FEE.
ANATOMY AND PHYSIOLOGY	Dr. Cunningham (Surgery)	Dr. Mapother M. W. F. 3	Mr. T. Mason Mr. M. A. Ward	Dr. J. A. Scott* daily (ex. S.) 2	Dr. Nixon Dr. Coppinger (ex. S.) 12	Dr. P. Redfern (ex. S.) 2	Dr. J. J. Charles (ex. S.) 12	Dr. P. Redfern daily (ex. S.) 9
ANATOMY, DESCRIPTIVE & SURGICAL	Dr. Cunningham Dr. Little	Prof. S. Stoker & Fraser	Dr. T. P. Mason and Mr. Ledwith	Dr. Heuston, daily 1	Dr. R. Cryan Dr. Hayden (ex. S.) 1	Dr. P. Redfern	Dr. J. J. Charles	Dr. P. Redfern daily (ex. S.) 1
PRACTICAL ANATOMY AND DISSECTIONS	Dr. Cunningham Dr. Little	...	...	Dr. Heuston, daily 1	Dr. Redmond Dr. McCallagh Dr. M. Ardle Dr. Chance Dr. O'Carroll	Dr. Sinclair (ex. S.) 12	Dr. Charles and Demonstrators	Dr. P. Redfern (and Demonstrators) Daily, 9 to 4
CHEMISTRY	Dr. Reynolds	Prof. Sir C. Cameron	Mr. E. Lapper	Dr. Campbell F. 11, 12	Dr. Campbell F. 11, 12	Dr. Lettis (ex. S.) 3	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
PRACTICAL CHEMISTRY	Dr. Reynolds	...	Mr. E. Lapper	Dr. Campbell F. 11, 1	Dr. Campbell F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
MATERIA MEDICA AND PHARMACY	Dr. W. G. Smith	Mr. Macnamara Dr. Minchin	Mr. R. D. Parey	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
BOTANY AND ZOOLOGY	Dr. Wright Prof. Mackintosh	...	Mr. Robinson	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
INSTITUTES OF MEDICINE	Dr. Purser	...	Mr. T. Mason	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
NATURAL PHILOSOPHY	Prof. Fitzgerald	...	Mr. Lapper	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
HOSPITAL PRACTICE	Prof. Fitzgerald	...	Mr. Lapper	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
CLINICAL LECTURES	Prof. Fitzgerald	...	Mr. Lapper	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
SURGERY	Dr. E. H. Bennett	Prof. Sir W. Stokes and Hamilton	Mr. Nixon Mr. Stoker	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
MIDWIFERY, &c.	Dr. Kirkpatrick	Prof. Sir W. Stokes and Hamilton	Mr. Nixon Mr. Stoker	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
MEDICINE	Dr. Finny	Dr. Foot M. W. F. 11	Dr. Knight Mr. Redmond	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
MEDICAL JURISPRUDENCE	Dr. Bewly	Dr. Davy	Mr. R. Travers	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
COMPARATIVE ANATOMY	Prof. Mackintosh	Prof. Sir C. Cameron	...	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
PRACTICAL PHARMACY	Dr. W. G. Smith	Prof. Sir C. Cameron	...	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12
LOGIC	The College Tutors	Prof. Sir C. Cameron	...	Dr. F. 11, 1	Dr. F. 11, 1	Dr. Lettis	Dr. Maxwell Simpson	Dr. Rowley M. W. F. 12

& Zoology in Winter; Botany in Summer.

Summer, M. Tu. W. Th. F. 12.

† In Summer.

• *Prnc. Phys. in Summer.*

METROPOLITAN HOSPITALS AND MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—The clinical practice of the hospital comprises a service of 750 beds, of which 676 are in the hospital at Smithfield, and 75 are for convalescent patients at Swanley.

Eight house physicians, ten house surgeons, and a midwifery assistant are appointed annually, each of them holding office for one year, and provided with rooms by the hospital authorities. The ophthalmic house surgeon is appointed for six months, and is eligible for re-election for a second term of six months. The senior assistant chloroformist and junior assistant chloroformist are appointed annually, and are provided with rooms. Two qualified assistant electricians are appointed every three months. No fee is paid for any of these appointments, and each receives a salary of £25. The clinical clerks, the obstetric clerks, the clerks to the medical out-patients, the dressers to the surgical out-patients, and the dressers in the special departments are chosen from the diligent students. Forty ward dresserships are given annually to the students who pass the best examination in the subjects of study of the first year. Other ward dresserships may be obtained by payment of the usual fees.

A college is attached to the hospital, in which students can reside, subject to the college regulations.

Foundation and other Prizes.—Open Scholarships in Science of the value of £130 each, tenable for one year, will be competed for in September. Candidates must not be more than twenty-five years of age for one, and twenty-one for the other, and must not have entered to the medical or surgical practice of any metropolitan medical school. The subjects of examinations are Physics, Chemistry, Botany, Physiology (not more than four subjects to be taken), and Zoology.—Preliminary Scientific Exhibition (founded 1873). The subjects of examination are identical with those of the Open Scholarship in Science. This exhibition, of the value of £50, is tenable for one year. The examination is confined to students of the hospital of less than six months' standing, and will be held in October.—The Jeaffreson Exhibition, of the value of £20, is awarded after examination in the subjects of General Education. It is now an Open Exhibition.—A Senior Scholarship, £50, in Anatomy, Physiology, and Chemistry.—Kirke's Scholarship and Gold Medal in Clinical Medicine, value 40 guineas. Lawrence Scholarship and Gold Medal, of the value of 40 guineas (founded in 1873 by the family of the late Sir William Lawrence).—Two Brackenbury Scholarships in Medicine and Surgery, £30 each.—Junior Scholarships in the subjects of study of the first year: 1st, £50; 2nd, £30; 3rd, £20.

A prize for Anatomy has been founded by the late Mr. Henry Skinner in memory of his brother, and by Miss Shuter in memory of her brother, formerly assistant surgeon to St. Bartholomew's Hospital.

CHARING-CROSS HOSPITAL AND COLLEGE.—Total fees, £94 10s. if paid in a single sum on entry, or £105 if paid in five instalments. General students pay proportionately lower fees, and are admitted without additional fee to the courses of Clinical Medicine and Surgery, to the new classes of systematic practical instruction in Medicine and Surgery, and to the practice of the Royal Westminster Ophthalmic Hospital. They alone are entitled to compete for the Scholarships, Gold Medal, and Pereira Prize.

Preliminary Science Instruction.—Arrangements have been made for students desirous of undergoing a course of instruction in science, such as that required for the Preliminary Scientific (M.B.) Examination of the University of London, to attend at the Normal School of Science, South Kensington.

Two Entrance Scholarships, of the value of 100 guineas and 50 guineas respectively, are awarded annually at the commencement of each winter session, after a competitive examination in the following subjects:—(1) English, including Geography and English History; (2) Latin and Greek; (3) French and German; (4) Mathematics, including Arithmetic, Algebra, and Geometry; (5) Chemistry (Inorganic) and Physics, including Statics, Dynamics, Acoustics, Heat, and Electricity; and (6) Animal and Vegetable Biology. The value attached to the several groups of subjects is 1000 marks respectively. Two hundred will be deducted

from the number of marks given for each paper, so that no credit will be given for any paper in which the candidate obtains less than one-fifth of the total marks. The Scholarships will be awarded to the two candidates respectively who shall obtain the highest aggregate of marks, the selection of the subjects being left entirely to each candidate. The subjects (as regards extent and the authors selected) will be the same as those chosen for the Matriculation Examination of the University of London in the June immediately preceding; as regards Chemistry, Physics, and Biology, the same as those for the preliminary Scientific Examination of the University of London. Candidates must give notice of their intention to compete on or before Monday, Sept. 17th, 1888. The examination will take place on Sept. 26th, 27th and 28th. The successful candidates will be required to enter for their complete medical education at Charing-cross Hospital, either immediately or at the commencement of the next following summer session.

A Scholarship of the value of 50 guineas is open to students from the University of Oxford who have passed the First M.B. Examination, and to Students of the University of Cambridge who have passed the Second M.B. Examination, and who have not entered at any London medical school. Subjects: Anatomy and Physiology, including Histology. The examination for this Scholarship, which will be largely practical, will be held on Sept. 26th and 27th. Notice to compete must be sent in on or before Monday, Sept. 17th, 1888. The successful candidate will be required to complete his curriculum at Charing-cross Hospital.—The Llewellyn Scholarship of £25, for students who have just completed their attendance on lectures; and the Golding Scholarship of £15, for students who have just completed their first year. The Pereira prize of £5 is open to all general students, and is awarded annually for the best clinical reports. The Governor's Gold Medal is given for excellence in clinical work. Silver or Bronze Medals, or an equivalent in books, are awarded to the most distinguished students in all classes; and special prizes in the classes of Dental Surgery, Practical Surgery, and Practical Histology.

ST. GEORGE'S HOSPITAL.—Perpetual pupils, by payment of £130 in three instalments, or £125 in one sum, are entitled to admission to the medical and surgical practice; to compete for prizes and exhibitions; to hold the appointments of house physician and house surgeon, assistant house physician and assistant house surgeon, ophthalmic assistant, registrar's assistant, and to become clinical clerks for two periods of three months each, and dressers for similar periods, free of any charge. Gentlemen are admitted to the hospital practice and lectures required by the Colleges of Physicians and Surgeons and the Society of Apothecaries on payment of £45 at the commencement of the first year of study, £45 at the commencement of the second year of study, £20 for the third, and £20 for each subsequent year of attendance. On payment of the third instalment the pupil may become perpetual, provided that the Dean can certify that his conduct has been satisfactory. These payments entitle the pupil to hold the offices of clinical clerk and dresser for three months each, and to become a candidate for the offices of house physician and house surgeon. Perpetual pupils are eligible for the offices of curator of the museum, medical and surgical registrar, demonstrator of anatomy, and obstetric assistant. These are all salaried offices. The obstetric assistant is resident, with a salary of £100.

Entrance Scholarships.—£125, open to sons of medical men; two of £50 each, open to all students commencing their medical studies; £90, open to students who have passed the Cambridge First M.B.; £65, open to students who have been signed up for or passed the Oxford First M.B. or Cambridge Second M.B.

Prizes.—The William Brown Exhibition of £100 per annum, tenable for two years, open to any perpetual pupil of St. George's who is under twenty-five years of age, and who shall have obtained a diploma or licence entitling him to be registered as a practitioner of medicine or surgery in England, within two years previously to the period fixed for the examination (July). The examination is to test the proficiency of the candidate in Medicine, Midwifery, and Surgery, including Ophthalmic Surgery.—The William Brown Exhibition of £40 per annum, tenable for three years, for general fitness for the exercise of the medical profession and for moral conduct, open to perpetual pupils

in their fourth year of study.—Sir Charles Clarke's Prize (interest of £200 consols) for good conduct; the Brackenbury Prize in Medicine, value £32; the Brackenbury Prize in Surgery, value £32; the Treasurer's Prize, £10 10s.; the Thompson Medal; the Brodie Prize for Clinical Surgery; the Acland Prize for Clinical Medicine; the Pollock Prize in Physiology; the Henry Charles Johnson Prize in Anatomy; and General Proficiency Prizes, value £10 10s. each, for students of each year.

GUY'S HOSPITAL.—*Appointments:* House physicians, house surgeons, obstetric resident assistants, clinical assistants, surgeons' and assistant surgeons' dressers, surgical ward clerks, clinical clerks, post-mortem clerks, extern obstetric attendants, and dressers and clerks in the special departments, are appointed from among the students, upon the recommendation of the medical staff, according to merit, and without extra payment. The house physicians, of whom there are three, hold office for six months each, the first two months as third house physician, another two months as second house physician, and the last two months as senior house physician. The third house physician attends in the Out-patient Department three afternoons in the week, and sees all the cases not seen by the assistant physician of the day. The second and senior house physicians have the care of the patients in the Medical Wards, and attend to all emergencies arising in the absence of the physicians. They are provided with board and lodging in the hospital free of expense. The house surgeons, of whom there are three, hold office for six months each. During the first two months the house surgeon has the superintendence of the Surgical Casualty Department; for the next two months he has charge of cases in the Special Wards, and assists in the Out-patient Room; and for the last period, as senior house surgeon, he has the care of the patients in the General Surgical Wards, and is responsible for their treatment in the absence of the surgeons. Except for the first two months, he is provided with board and lodging in the hospital free of expense. The surgeons' dressers are selected from those students who have completed their third winter session, and have been most diligent in the junior appointments. They hold office for six months each. Three are attached to each surgeon, and during their weeks of special duty they are provided with board and lodging in the hospital free of expense. The obstetric residents, two in number, are provided with board and lodging in the hospital free of expense.

Scholarships, Prizes, &c.—Entrance Scholarship in Arts (£131 5s.). Subjects: Latin, Greek, French, German, and Mathematics.—Entrance Scholarship in Science (£131 5s.). Subjects: Inorganic Chemistry, Zoology, Botany, Physics. The examination begins on Wednesday, Sept. 26th.—For first-year students: First prize £50, second prize £25, for Anatomy, Physiology, Materia Medica, and Chemistry.—For second-year students: First prize £25, second prize £10, for Anatomy and Physiology. The Sands Cox Scholarship of £15 (tenable for three years) for Physiology. The Michael Harris prize of £10 for Anatomy.—For third-year students: First prize £25, second prize £10, for Medical and Surgical Anatomy, Midwifery, and Therapeutics.—For fourth-year students: First prize £25, second prize £10, for Medicine, Surgery, Midwifery, and Medical Jurisprudence. The Golding Bird prize of £33 for Methods of Diagnosis in Disease.—For senior students: The Treasurer's Gold Medal for Clinical Medicine; the Treasurer's Gold Medal for Clinical Surgery; the Guiney Hoare prize of £25 for Clinical Reports and Commentaries; and the Beaney prize of 30 guineas for Pathology. The Physical Society awards two prizes, each of £5, to the authors of the best Essays on selected subjects, prizes of £10 and £5 for the best papers read before the Society, and a prize of £5 to the member who has most distinguished himself in the debates of the session.

Fees.—1. A perpetual ticket, including admission to lectures, demonstrations, and hospital practice, competition for prizes, and eligibility for hospital appointments, may be obtained—(a) by the payment of 125 guineas on entrance; (b) by two payments of £66, one on entrance, the other at the commencement of the ensuing session; (c) by the payment of three annual instalments, at the commencement of each academical year: first year, £50; second year, £50; third year, £37 10s. 2. A reduction is made in the fees for a perpetual ticket in the case of students who have spent one or more years at another medical school. Students

entering as second-year students are charged for their first year at Guy's Hospital, £50; second year, £40; third year, £20; or 95 guineas in one sum on entrance. Students entering as third-year students are charged for their first year at Guy's Hospital, £50; second year, £20; or 65 guineas in one sum on entrance. Students entering as fourth-year students are charged for their first year at Guy's Hospital, £50; second year, £5; or 50 guineas in one sum on entrance.

KING'S COLLEGE.—The physicians' assistants, the physician-accoucheur's assistant, the ophthalmic clinical assistant, the clinical clerks, and the house surgeons and dressers, are selected by examination from among those matriculated students of the College who are pupils of the hospital. Rooms are provided within the walls of the College for the residence of matriculated students. Rooms and commons are provided at the hospital for the resident officers free of charge.

Scholarships.—Warneford Scholarships: Two of £25 per annum for three years for Literature. Two additional Scholarships of £25 per annum each for two years will be awarded this year. Science: One of £50 and one of £25 each for two years. Sambrooke: One of £60 and one of £40 for Science. Rabbeth Scholarship of £20 per year for Science. College Scholarships: One of £40 per annum for two years; one of £30 for one year; three of £20 for one year. The Daniell Scholarship for Chemistry, of the annual value of £20. Sambrooke Registrarships, of the annual value of £50 each, and tenable for two years, are open to all matriculated students who have filled any one of the higher appointments of the hospital, or who have become Associates. The Leathes Prizes, value £7, and the Warneford Prizes, value £40, are given annually amongst the matriculated medical students. Two Medical Clinical Prizes, one of £3 for the winter session, and one of £2 for the summer session, and two Surgical Clinical Prizes, of £3 each, are given. The Todd Medical Clinical Prize consists of a bronze medal and books to the value of £4 4s. The Tanner Prize for Obstetric Medicine, value £10, and the Carter Gold Medal and Prize for Botany, value £15, are given annually in July. Class Prizes, value £3 3s. each, are awarded annually in every subject. A Warneford Scholarship of £25 per annum for two years for third-year subjects is awarded annually to resident students only.

LONDON HOSPITAL AND COLLEGE.—The Medical School of the London Hospital has lately been entirely remodelled and rebuilt. The present buildings were opened by their Royal Highnesses the Prince and Princess of Wales on May 21st, 1887, the accommodation now afforded being more than double that which was provided in the old buildings. The hospital, which is the largest in Great Britain, contains nearly 800 beds. Last year the number of in-patients was 8863, out-patients 95,760, and the number of accidents 9702.

The following Scholarships and Prizes will be offered for competition during the ensuing winter and summer sessions:—Two Entrance Scholarships in Natural Science, of the value of £60 and £40 respectively, will be offered for competition on September 26th, 27th, and 28th, 1888. The subjects are Physics, Botany, Zoology, and Inorganic Chemistry. The successful candidates must forthwith become full pupils of the hospital and school, if not already entered, and are not eligible to compete for the Buxton Scholarships.—The two Buxton Scholarships, value £30 and £20, will be offered for competition on October 1st, 2nd, and 3rd, 1888. The subjects are those appointed by the General Council of Medical Education and Registration as the subjects of the Preliminary Examination.—A Scholarship, value £25, in Anatomy, Physiology, and Chemistry, will be competed for at the end of the winter session by first and second year students.—A Scholarship, value £20, in Anatomy and Physiology, for first-year students. (At the commencement of the summer session.) The Letheby Prize, value £30, for proficiency in Chemistry. (At the end of the summer session.) Open to all full students who have completed their second summer session up to the termination of their fourth year from entrance.—A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Medicine. (At the end of the winter session.)—A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Surgery. (At the end of the winter session.)—A Hospital Scholarship, value £20, for proficiency and zeal in Clinical Obstetrics. (At the end of June.)—The Duckworth Nelson Prize, value

£10, will be offered biennially for competition at the end of the winter session, and be open to all students on similar conditions to those of the Hospital Scholarships. The subjects of examination will be Practical Medicine and Surgery. —The Hutchinson Prize, value £35, will be given triennially to the author of the best essay upon a subject in Clinical Surgery. Candidates must be full students of the hospital who have not been registered more than ten years. —Out-patients' Dressers' Prizes. Six prizes, of the aggregate value of £60, will be offered for competition at the end of the winter session. Candidates must pass an examination in Minor Surgery, have dressed diligently for twelve months, and have passed the Primary Examination of the Royal College of Surgeons. —Two Dissection Prizes, value £6 and £4.

Special classes are held throughout the year for the Preliminary Scientific Intermediate M.B. Examinations of the University of London and for the Primary and Pass Examinations for the Fellowship of the Royal College of Surgeons. Special entries can also be made for Medical and Surgical Practice, the Operative Surgery classes, &c.

In addition to the regular courses of lectures, there will be given during the winter and summer sessions a course of lectures on Clinical Medicine by Sir Andrew Clark, Bart., F.R.S., Emeritus Professor of Clinical Medicine, and a course of lectures on Clinical Surgery by Mr. Jonathan Hutchinson, F.R.S., Emeritus Professor of Clinical Surgery.

During the summer session a course of lectures will be delivered on Pathological Chemistry by Dr. C. H. Ralfe, Physician to the Hospital, on Mondays, at 4 P.M.

ST. MARY'S HOSPITAL.—There are three House Physicians and three House Surgeons, each appointed for six months, and two Obstetric Officers, each appointed for six months. They board free of expense in the hospital, except that the obstetric officer resides outside the hospital at his own expense for the first three months. These appointments are awarded after competition, without additional fee. Two Demonstrators of Anatomy are appointed annually, with a salary of £70 and £60 respectively; and a Demonstrator of Physiology, at £120 a year. All these officers are eligible for re-election. There is also a Demonstratorship in Pathological Anatomy, of the value of £15, and tenable for six months; the holder of this scholarship will assist the pathologist in the discharge of duties in the museum and dead-house. Two Prosectors of Anatomy and two Assistant Demonstrators of Physiology are appointed annually, and receive a certificate and £5 each for satisfactory services in their respective departments. All students are required to perform the duties of clinical clerk and dresser during the last two years of their curriculum. Students of the third year and of subsequent years are also appointed as clerks and dressers to assist the physicians and surgeons in charge of the out-patients. In addition to the instruction given in the wards daily, special Clinical Lectures are given on Fridays throughout the academical year, at 4 P.M. The hospital contains 281 beds. Two wards are appropriated to the Diseases of Children, and one to those of Women; beds are also provided for Ophthalmic, Aural, and Cutaneous cases.

Scholarships, Prizes, and Appointments: Scholarships offered for open competition previously to entering at the Medical School.—Entrance Scholarships: The following will be offered for competition on Sept. 27th and 28th.—One Scholarship in Natural Science, of the value of 100 guineas, open to any gentleman who has not completed a winter session of study at a medical school. Three Scholarships in Natural Science, each of the value of 50 guineas, under the same conditions. One Scholarship of the value of 100 guineas, open to students from Epsom College, being sons of medical men, and who have not completed a winter session of study at a medical school. Two Scholarships, each of 50 guineas, open to students from the Universities of Oxford, Cambridge, or other University, who have not entered at any London medical school. The examination for the Scholarships will be conducted according to the syllabus of the Preliminary Scientific Examination of London University. A Scholarship in Mathematics and one in Classics, each of the value of £50, will be open to competition on April 30th, 1889, to students who enter in May, 1888.

In addition to the Open Entrance Scholarships, Class Prizes, and usual Appointments, Scholarships will be offered for competition at the end of each year, open to all pupils.

These Scholarships are of the value of £20, £25, and £30, for the first, second, and third years respectively.

A residence for students, 33 and 35, Westbourne-terrace, W., in connexion with the hospital, is under the charge of a warden, and the Dean is prepared to receive applications from students desiring to enter upon residence during the ensuing session. Terms: 90 guineas for the academical year, to include special instruction by the Demonstrators on three evenings a week.

MIDDLESEX HOSPITAL.—There is a special Cancer Department, affording accommodation for thirty-three in-patients, whose period of residence in the hospital is unlimited. Classes, open to all the students, are held for practical instruction in Medicine, Midwifery, in the microscopical examination of healthy and diseased tissues, and also in the application of bandages and other surgical apparatus. Students are allowed to take out to read at their own homes the books from the large and carefully selected medical library of the school. The museum has recently been rearranged, and a complete catalogue prepared of the various specimens. Two Entrance Scholarships, of the annual value of £50 and £30, and tenable for two years, are offered for competition at the commencement of the winter session. An Exhibition in Elementary Anatomy, Osteology, and Physiology, value £10 10s., is awarded to students at the end of their first year. The Lyell Medal is awarded annually for proficiency in Surgical Anatomy and Practical Surgery. The Hetley Prize is awarded annually for Clinical proficiency. Two Broderip Scholarships, of the annual value of £30 and £20, tenable for two years, are awarded to those students who pass the best examination at the bedside and in the post-mortem room. The Murray Medal and Scholarship, founded in connexion with the University of Aberdeen, is awarded every third year to a student of this hospital; it will be next awarded in May, 1889. The Governors' Prize of 20 guineas is also awarded annually to the student after his third winter session who shall pass the best clinical examination in the out-patient departments. Valuable class prizes are also given, and sixteen resident clinical appointments are annually awarded, after competitive examination, to students who have completed their education and complied with the regulations of the School.

Arrangements have been made for students desirous of undergoing a course of instruction in Science, such as that required for the Preliminary Scientific (M.B.) Examination of the University of London, to attend such a course at the Normal School of Science, South Kensington. Fee for the whole course, £35. Students who enter for this course will be allowed a deduction of £20 on the fees for the medical curriculum.

The Residential College, which can accommodate about thirty students, adjoins the Medical School. The resident warden assists the students in their studies.

ST. THOMAS'S HOSPITAL.—Prizes and Appointments for the year 1888-89.—For First-year students: Two Entrance Scholarships in Natural Science of the value of 125 guineas and £60 respectively, open to all first-year students, will be awarded during the first week in October, after an examination in Physics, Chemistry, and either Botany or Zoology, at the option of the candidate; the William Tite Scholarship, the proceeds of £1000 Consols, is awarded each year; also prizes of £20 and £10; summer, £15 and £10. For Second-year students: The Peacock Scholarship of £38 10s., and the Musgrove Scholarship of £38 10s., are awarded biennially to the students who shall take the highest place in the first-class list in the examinations at the end of the second winter session; they are tenable for two years, provided the holder obtains a place in the first class in the subsequent examinations: making the winter prizes £38 10s., £20, and £10; summer, £15 and £10; with the dresserships and the clinical clerkships. For Third-year students (winter): Second Tenure of Scholarship, £38 10s., and prizes of £20, £15, and £10; summer, £15 and £10. Clinical clerks and dressers are selected according to merit. The Grainger Testimonial Prize of £15 annually is awarded to students, who must be from three to six years' standing, for the best Anatomical or Physiological Essay, to be illustrated by preparations and dissections. The Cheselden Medal for Surgery and Surgical Anatomy, and the Mead Medal for Practical Medicine, are awarded annually to fourth-year

students. The Solly Medal, with a prize of from 10 to 20 guineas, will be awarded biennially to a student of the third, fourth, fifth, or sixth year, for the best report of surgical cases. The next award will be made in 1889. The Treasurer's Gold Medal, for general proficiency and good conduct, is awarded annually to a fourth-year student.

Classes in Practical and Operative Surgery are held four times a week for six weeks prior to the final examinations of the Examining Board in January, April, and July. In connexion with these classes, Clinical Instruction is given in the wards by the resident assistant surgeon, and a course of demonstrations on Museum Specimens is given by the curator, Mr. Shattock.

UNIVERSITY COLLEGE, LONDON.—*Composition Fees.*—1. For the entire medical education required by the Examining Board in England and the Society of Apothecaries, 120 guineas, if paid in one sum at the commencement of the course; 125 guineas, if paid by instalments, as follows—first year, 55 guineas; second year, 50 guineas; third year, 20 guineas. 2. For those students who do not require to attend Chemistry, Pharmacy, and Materia Medica at a medical school (under the regulations of the Examining Board in England) the fee will be—100 guineas, if paid in one sum; 105 guineas, if paid by instalments, as follows—first year, 50 guineas; second year, 35 guineas; third year, 20 guineas. 3. For the whole course of instruction for the Intermediate Examination in Medicine of the University of London, 50 guineas. 4. For the course of instruction for the final M.B. Examination of the University of London, 70 guineas, if paid in one sum; 72 guineas, if paid by instalments, as follows—first year, 40 guineas; second year, 32 guineas. 5. Composition fee for Dental Students, 60 guineas. 6. Composition fee for the whole course of instruction for the Preliminary Scientific (M.B.) Examination of the University of London, 35 guineas.

Exhibitions, Prizes, &c.—Three Entrance Exhibitions, of the respective values of £100, £60, and £40 per annum, tenable for one year, are annually awarded, upon examination by printed papers, to gentlemen who are about to commence their first winter attendance in a medical school. The subjects of the examinations are—Chemistry, Physics, Botany, and Zoology. The next examination will take place at the College on September 27th and 28th. The Atkinson Morley Surgical Scholarship of £45, tenable for three years, is annually awarded to the student who, upon examination, is found to possess the greatest proficiency in the Theory and Practice of Surgery. The Sharpey Physiological Scholarship of about £105 per annum, tenable for three years, for proficiency in Biological Science. Filliter Exhibition: a prize of £30 is awarded annually, in July, to the most proficient student in the class of Pathological Anatomy. An Atchison Scholarship, value about £55 per annum, tenable for two years. The Cluff Memorial Prize, value about £15, every second year to the most proficient in Anatomy, Physiology, and Chemistry. The Erichsen Prize: a surgeon's operating case of the value of £10 10s., awarded yearly to the student of the class of Practical Surgery who shall most distinguish himself by manipulative skill. The Morris Bursary of £25 a year, tenable for two years. Besides the above, gold and silver medals and other prizes are awarded in each class.

Residence of Students.—University Hall (Professor Henry Morley, Principal) adjoins the College, and is designed to enable men studying in University College to live in chambers under conditions of fellowship adapted to the needs of modern student life. Full information as to cost and conditions of residence in University Hall may be had by application at the office of the College.

Several professors and other gentlemen connected with the College receive students to reside with them; and in the office of the College there is kept a register of persons unconnected with the College who receive boarders into their families; among these are several medical gentlemen.

WESTMINSTER HOSPITAL.—The hospital contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, and for Diseases of Women, and a special ward for Children. The Anatomical Museum is constantly open to the students. There are also a Pathological Museum and a Materia Medica Museum.

A curator of the museum and a pathologist, each with a

salary of £50, and a medical and surgical registrar, each with a salary of £40, are appointed annually. Three house physicians, two house surgeons, and a resident obstetric assistant are appointed for six months after examination, and are provided with rooms and commons. Clinical assistants to the physicians and surgeons, and to the officers in charge of special departments, are appointed from among qualified students of the hospital.

Scholarships and Prizes.—Science Scholarship, value £100, is offered annually; the Guthrie and Entrance Scholarships, on alternate years, value £80; and two Entrance Scholarships, value £40. Entrance Scholarship, summer session, value £40. The Treasurer's Prize, an exhibition in Anatomy, Physiology, and Chemistry, value £10 10s., tenable for one year for first-year men. The President's Prize, a scholarship in Anatomy, Histology, and Physiology, value £21, given by his Grace the Duke of Westminster, President of the Hospital, to a student of the second year (to be styled Assistant Demonstrator). At the end of the fourth winter session, prizes of £5 each (books or instruments) in Clinical Medicine and Clinical Surgery. Frederick Bird Medal and Prize, value £15. Subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth. In most of the classes special prizes, value about 2 guineas each, are given by the lecturers.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road. Consulting Physician: Sir Andrew Clark, Bart., M.D. Consulting Surgeons: Frederick le Gros Clark and W. S. Savory. Physicians: Drs. Cholmeley, Burnet, Beale, and Beavor. Obstetric Physicians: Drs. W. S. A. Griffith and Dakin. Surgeons: Messrs. W. Adams, W. Spencer Watson, Macready, Lockwood, and H. W. Allingham. Ophthalmic Surgeon: Mr. Jonathan Hutchinson, jun. Aural Surgeon: Mr. W. R. H. Stewart. Throat Department: Mr. W. Spencer Watson. Skin Department: Dr. Cook. Dental Surgeon: Mr. E. Keen. The new buildings in the Holloway-road have recently been completed, and the practice of the hospital is open to qualified practitioners and senior students. Clinical assistants are appointed in the wards and out-patient department. Further information can be obtained on application to the Hon. Secretary of the Medical Committee, 23, Upper Berkeley-street, W.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Four Clinical Assistants reside in the hospital for a period of six months. Pupils are admitted to the practice of the hospital: terms £3 3s. for three months; six months, £5 5s.; perpetual £10 10s. Lectures and Clinical Demonstrations are given throughout the year by members of the medical staff. The medical practice of the hospital is recognised by the University of London, the Apothecaries' Society, and the Army and Navy and Indian Medical Boards. The hospital contains 321 beds in the two buildings.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road. (Established 1814).—This hospital has recently been enlarged by the addition of a very complete out-patients department, and also by the erection of a new wing, which provides accommodation for 80 in-patients.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—The new hospital, with the Finchley branch, contains 180 beds and cots. The physicians attend every Monday, Tuesday, Wednesday, and Friday, at 2.30 P.M. In- and out-patients' practice and electrical-room treatment at that hour. Physicians: Drs. Ramskill, Radcliffe, Hughlings Jackson, Buzzard, and Bastian. Physicians for out-patients: Drs. W. R. Gowers, D. Ferrier, Ormerod, and Beavor. Assistant Physicians: Drs. James Anderson and Tooth. Surgeons: Messrs. W. Adams and Victor Horsley. Ophthalmic Surgeons: Messrs. R. Brudenell Carter and Marcus Gunn. Aural Surgeon: Mr. A. E. Cumberbatch. Laryngologist: Dr. Felix Semon. House Physicians: Messrs. Walter Hull and W. S. Colman. Medical practitioners and senior students may attend the practice after signing their names in the clerk's office.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—The hospital founded in 1804, and considerably enlarged in

1876, now contains 100 beds for patients, which were occupied during last year by 2185 persons. The out-patients are yearly over 20,000; attendances, 122,445 in 1887. Operations are performed daily from 10.30 to 1 o'clock, and three surgeons attend on each day. Students are admitted to the practice. Fee for six months, £3 3s.; perpetual, £5 5s. Classes, demonstrations, and lectures are periodically given, to which perpetual students are admitted free. Students of the hospital are eligible for the office of house surgeon, or may be appointed clinical assistants. The secretary, Mr. Robert Newstead, will furnish further information, as may be desired.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—The hospital contains 50 beds; and the patients, who number 10,000 annually, are seen at 1 o'clock and operations performed daily at 2 o'clock. The following are the days of attendance of the surgeons: Mr. Power and Mr. Frost, Monday and Friday; Mr. Rouse, Tuesday and Saturday; Mr. Macnamara, Monday and Thursday; Mr. Cowell and Mr. Wainwright, Wednesday and Saturday; Mr. Hartridge, Tuesday and Friday. The practice of the hospital is open to students. Fees for six months, £3 3s.; perpetual, £5 5s. Students of the hospital are eligible for the post of house surgeon. Special demonstrations and lectures will be given during the session. Secretary: Mr. T. Beattie-Campbell.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street.—Surgeons: Messrs. B. E. Brodhurst, H. A. Reeves, Charles Read, and William E. Balkwill. Assistant-Surgeon: Mr. H. F. Baker. House-Surgeon: Mr. E. H. Norris. Secretary: Mr. Maskell. Operations on Mondays at 2 P.M. The hospital is open to all legally qualified practitioners. Pupils are admitted to witness the practice of the hospital on the following terms: six months, £3 3s.; twelve months, £5 5s.; perpetual, £10 10s.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL, Leicester-square.—Lectures are delivered, in winter, on Mechanical Dentistry, by Dr. J. Walker, on Wednesdays, at 5 P.M. In summer, by Mr. Hutchinson, on Dental Surgery and Pathology, on Tuesdays and Fridays, at 8 A.M., and by Mr. Arthur Underwood, on Dental Anatomy and Physiology (Human and Comparative), on Wednesdays and Saturdays, at 8 A.M. Fees: General fee for special lectures required by the curriculum, £15 15s.; fees for two years' hospital practice required by the curriculum, £15 15s.; total fees for lectures and practice, £31 10s. Hospital Surgeons: Messrs. Canton, Gregson, Hepburn, Storer Bennett, Claude Rogers, and Woodhouse. Assistant Surgeons: Messrs. Hern, Matheeson, Parkinson, Read, Rogers, Truman, and E. Lloyd Williams. Anaesthetists: Messrs. Braine, Bailey, Bird, and Mills. Assistant Anaesthetists: Drs. Buxton and Hewitt. House Surgeon: Mr. H. Williams. Assistant House Surgeons: Messrs. F. Colyer and G. Seymour. Medical Tutor: Mr. W. Paterson. All communications to be addressed to Mr. Morton Smale, Dean.

Returns for the session 1888-89 have not been received from this School.

SEAMEN'S HOSPITAL (late Dreadnought), Greenwich, S.E.—This institution is established for the relief of seamen of all nations. Casualties are received at all hours. Apartments are provided in the house of the Principal Medical Officer for students. Honorary Consulting Physicians: Dr. Robert Barnes, F.R.C.P., and Dr. Richard Quain, F.R.C.P. Visiting Physicians: Dr. John Curnow, F.R.C.P., and Dr. John Anderson, C.I.E., M.R.C.P. Honorary Consulting Surgeon: Mr. J. N. Davies-Colley, F.R.C.S. Visiting Surgeon: Mr. G. Robertson Turner, F.R.C.S. Medical Officer, Well-street Dispensary: Mr. C. E. Cotes, F.R.C.S. Principal Medical Officer: Mr. W. Johnson Smith, F.R.C.S. House Physician: Dr. E. F. Trevelyan. House Surgeon: Mr. R. Ritson, M.R.C.S. Secretary: Mr. P. Michelli.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W. (Established 1873).—Physicians: Dr. James Edmunds, M.R.C.P., Dr. R. J. Lee, F.R.C.P., Dr. J. J. Ridge. Surgeon: Dr. W. J. Collins, F.R.C.S. Dental Surgeon: Mr. A. Alexander. The hospital contains 70 beds. The in-patients average 700 and the out-patients 3000 a year. The medical and surgical practice of the hospital is open to students and practitioners. Classes will be held during the winter and summer sessions for students preparing for the final examinations at the Hall, the Colleges, and the Universities; fees for courses in all subjects from £5 5s. a month. Appointments, vacancies for which are advertised in the medical journals: Registrar and Pathologist, senior

and junior House Surgeons. For particulars as to hospital practice and classes apply at the hospital to the Dean, Dr. W. J. Collins.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Queen's-square, W.C., and Cromwell House, Highgate.—There are now 121 beds in the hospital, Great Ormond-street, and 52 beds at the country branch; total, 173. In-patients last year, 1186; out-patients, 15,647. Particulars as to the times of Medical and Surgical Visits and the Practice of the Hospital can be had on application to the Secretary.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL AND MIDWIFERY TRAINING SCHOOL, Marylebone-road, N.W.—Consulting Physicians: Dr. G. O. Rees and Dr. Brodie. Consulting Surgeons: Mr. H. Lee, and Sir William MacCormac. Physicians to In-patients: Dr. W. Hope and Dr. W. C. Grigg. This hospital, which has been recently enlarged, receives nearly 1000 patients annually, besides having a large out-patient department. Medical pupils are received at all times of the year. Pupils have unusual opportunities of seeing obstetric complications and operative midwifery, on account of the very large number of primiparous cases—upwards of three-fourths of the total admissions. Clinical instruction is given on the more important cases which present themselves. Certificates of attendance at this hospital are recognised by all universities, colleges, and licensing bodies. Midwives and Monthly Nurses are trained. The Midwives are specially prepared for the examination of the Obstetrical Society, and the fees are paid by the hospital for those who obtain the Society's diploma. Fees: Medical students, £3 3s. for one week; £5 5s. for two weeks; £8 18s. 6d. for four weeks, exclusive of board and lodging; Pupil Midwives, £26 5s. for twelve weeks, and Pupil Nurses, £11 0s. 6d., for eight weeks, both inclusive of board and lodging. For further particulars, application should be made to G. Owen Ryan, Esq., Secretary, at the hospital.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road. (Instituted 1816).—Consulting Physicians: Dr. Wilks and Dr. John Williams. Consulting Surgeon: Arthur Durham. Physicians: Drs. W. A. Duncan, Alex. Haig, Septimus Sunderland, and W. R. Dakin. Surgeon: Mr. H. C. Jacobson. Assistant Surgeon: Mr. E. Overman Day. Surgeon-Dentist: Mr. Alfred Barnard. Resident Medical Officer: F. M. Johnson. Secretary: Mr. R. G. Kestin. Advanced students in Medicine, and such practitioners as may desire it, are permitted to attend the practice of this hospital gratis. If a certificate signifying such attendance be required, the sum of £5 5s. must be paid to the physicians and surgeons in ordinary conjointly.

HOSPITAL FOR WOMEN, Soho-square, W.—Consulting Physician: Dr. Protheroe Smith. Physicians: Drs. Carter, Richard T. Smith, Holland, and Mansell Moullin. Surgeon: Mr. H. A. Reeves. Assistant Physicians: Drs. Bedford Fenwick and Oliver. Assistant Surgeon: Mr. S. Osborn. Pathologist and Registrar: Dr. Norman Dalton. Anaesthetists: Dr. Dudley Buxton and Mr. Chas. J. Ogle. In connexion with this institution there has been for some years a well-organised Clinical Department, which has lately been enlarged under the title of the London School of Gynecology. To meet the want increasingly felt by medical men of an accurate knowledge of the ordinary diseases of women, ten gentlemen are appointed every three months to act as clinical assistants to the physicians and surgeons seeing out- and in-door patients. The appointments are nominally "open to qualified medical men and to students of medicine after their third year," but in the selection of candidates preference is naturally given to gentlemen already engaged in practice. The large numbers of out-patients afford quite unrivalled opportunities for practical instruction in the use of gynecological instruments, and for the study of diseases peculiar to women. A course of lectures on the Anatomy and Physiology of the Female Pelvic Organs is given during each quarter by a member of the Staff. Clinical lectures are given in the Operating Theatre on alternate Thursdays, throughout the winter and summer sessions. Valuable prizes are given, after examination, annually, open to past and present clinical assistants. Fee for the three months' course, £5 5s. Any further information can be obtained by letter, addressed to the Dean at the hospital.

ROYAL EAR HOSPITAL, Frith-street, Soho-square, W. (Founded 1816, for the special treatment of Diseases of the Ear).—During 1887, 56 in-patients and 2654 out-patients were treated. The clinique of the Hospital is open to medical practitioners and advanced students by previous

arrangement with the secretary. Surgeons: Dr. Urban Pritchard, and Mr. Farquhar Matheson. Secretary: Mr. M. C. Puddy.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W., and Churchfields, Margate.—The hospital contains 60 beds and 12 at the home at Margate, and has a large out-patient department (over 500 weekly). Physicians: Dr. Julian Evans and Dr. Ridge Jones. Physicians to the out-patients: Drs. Albert Venn, T. Coldcott Fox, F. D. Drewitt, and Henry Philpot. Surgeons: Messrs. Pick and Clutton. Surgeons to the out-patients: Messrs. Walter Pye and D'Arcy Power. Dental Surgeon: Mr. Francis Fox. House Surgeon: Mr. W. H. C. Staveley. House-Physician: Mr. J. W. Carr. Secretary: Captain W. C. Blount, R.N. Out-patients are seen daily as under:—Medical cases: Monday only at 9 A.M.; and every afternoon at 1.30. Surgical cases: Daily, except Wednesday and Saturday, at 9.30 A.M. Dental cases: Saturdays, at 9 A.M.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Consulting Physicians: Dr. Robert Barnes and Sir Andrew Clark, Bart., M.D. Consulting Surgeon: Mr. Buxton Shillitoe. Consulting Ophthalmic Surgeon: Mr. George Cowell. Physicians: Dr. Eustace Smith, Dr. Horatio B. Donkin, and Dr. H. Radcliffe Crocker. Surgeons: Mr. R. W. Parker and Mr. L. A. Dunn. Assistant Surgeon: Mr. W. H. Battle. Assistant Physicians: Dr. J. A. Coutts and Dr. Dawson Williams. Administrator of Anesthetics: Mr. Thomas Bird. Resident Medical Officer: Mr. J. Scott Battams. Secretary: Ashton Warner. Lady Superintendent: Miss F. A. Davies. Matron: Mrs. Fisher. The hospital maintains 102 cots, and on an average 100 out-patients daily.

WEST LONDON HOSPITAL, Hammersmith-road, W.—This hospital has 101 beds. About 1300 in-patients and 16,000 out-patients, whose attendances number nearly 50,000, are treated annually. There are appointments for a House Physician and two House Surgeons, with board and residence tenable for six months. Also appointments for a limited number of Clinical Assistants. Physicians: Drs. D. W. C. Hood, F. G. D. Drewitt, and W. P. Herringham. Physician for Diseases of Women: Dr. Albert Venn. Surgeons: Messrs. C. B. Keetley, F. Swinford Edwards, and W. Bruce Clarke. Surgeon for Diseases of the Eye: Mr. B. J. Vernon. Assistant Physicians: Drs. J. B. Ball, Seymour Taylor, and A. E. Garrod. Assistant Physician for Diseases of Women: Dr. J. A. Mansell Moullin. Assistant Surgeons: Messrs. C. A. Ballance, H. F. Weiss, and S. Paget. Assistant Surgeon for Diseases of the Eye: Mr. H. P. Dunn. Surgeon Dentist: Mr. H. L. Albert. Pathologist: Mr. H. P. Dunn. Physician in charge of Throat and Nose Department: Dr. J. B. Ball. Aural Surgeon: Mr. S. Paget. Physician to Skin Department: Dr. F. G. D. Drewitt. Surgeon to Skin Department: Mr. H. F. Weiss. Surgeon in Charge of Orthopædic Department: Mr. C. B. Keetley. Physician in charge of Electrical Department: Dr. W. P. Herringham. Administrators of Anesthetics: Messrs. T. Gunton Alderton and Rickard W. Lloyd. Secretary: Mr. R. J. Gilbert.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Consulting Physician: Dr. W. S. Playfair. Consulting Surgeons: Mr. W. Marrant Baker and Mr. H. G. Howse. Physicians: Drs. Fred. Taylor, James F. Goodhart, Nestor Tirard, and Fred. Willcocks. Surgeons: R. Clement Lucas, G. H. Makins, F. S. Eve, and J. H. Targett. Ophthalmic Surgeon: Dr. W. A. Brailey. Dental Surgeon: Mr. R. Denison Pedley. House Surgeon: Dr. Geo. A. Carpenter. Hon. Secretary: Dr. I. Dobree Chepmell.

ALL SAINTS CHILDREN'S HOSPITAL, 4, Margaret-street, and 59, Mortimer-street, W.—Founded by the All Saints Sisterhood in 1882 for Chronic Joint Diseases. Twelve beds for boys and eight for girls under the age of ten years. Surgeon, Mr. Noble Smith.

MR. THOMAS COOKE'S SCHOOL OF ANATOMY, PHYSIOLOGY, SURGERY, &c.—By decision of the Royal Colleges of Physicians and Surgeons, gentlemen rejected at their Anatomical and Physiological Examinations (Primary R.C.S., or Second Conjoint) can get "signed up" from this school for the three or six months' work they are now required to put in before re-examination. This school is intended to meet the requirements of two classes of students: 1. Qualified practitioners and advanced students—i.e., gentlemen wishing either to obtain some of the higher qualifications, or to compete for appointments in Her Majesty's Army, Navy,

and Indian Medical Services. 2. Students preparing for the usual Primary and Pass Examinations of any of the licensing bodies. The instruction is given on the dissected and undissected body, with normal and pathological specimens, microscopical preparations, chemical, physiological and surgical apparatus, splints, &c. The school possesses a good collection of physiological apparatus, allowing of the demonstration to the class of the great bulk of the usual practical exercises in Physiology; also chemical apparatus, allowing every student not only to see, but to repeat for himself, the analysis of the principal food-stuffs, and fluids and solids of the body, and also all the usual reactions, tests, &c. Gentlemen preparing for the Higher Examinations receive special instruction in the more difficult subjects, and have the advantage of personally repeating the practical exercises in Physiology above alluded to. The operations of surgery are performed by the students on the dead body. Private address: 40, Brunswick-square.

SOUTH LONDON SCHOOL OF PHARMACY.—This school was established in 1868, and removed to the present premises in 1875. Owing to the expiration of the lease at the old premises, it has recently been joined by the analytical and general science teaching branches previously carried on at Kennington-cross, and the whole institution is now consolidated under one roof, so bringing every department under the continuous and direct control of the director, Dr. John Muter, M.A., F.R.S.E., F.C.S., F.I.C., who personally delivers the lectures on Chemistry, Physics, and Botany, and superintends the laboratory instruction. The department most valuable to medical students is the Medical and General Science Tutorial Department. The subjects taught are:—For Matriculation, &c.: Elementary Chemistry. For First B.Sc. and Preliminary Scientific: Inorganic and Practical Chemistry. For First M.B.: Organic Chemistry, Analysis, and Pharmaceutical Chemistry and Materia Medica. For Apothecaries' Hall and Royal Colleges of Physicians, London and Edinburgh: Chemistry, Botany, and Materia Medica. For Pass M.B. Lond.: Practical Toxicology and Forensic Medicine. Students attend by special arrangement, and perpetual or time fees may be had from the Secretary, Mr. Baxter, 325, Kennington-road, London, S.E.

SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—Chemistry and Physics: Professor Dunstan, F.C.S. Practical Chemistry: Professor Atfield, Ph.D., F.R.S., F.I.C., F.C.S., F.W. Short, Demonstrator, and Edmund White, Assistant Demonstrator. Botany: Professor Green, M.A., B.Sc. Materia Medica: Mr. Holmes, F.L.S. Practical Pharmacy: Joseph Ince, F.L.S. The session commences on Monday, Oct. 1st, at 9 A.M. Medical students, or pupils intending to enter the medical profession, are admitted to the lectures &c., and to a course of practical chemistry of any length in the laboratories. Application for admission to the school, or for further information, may be made to the professors or their assistants, 17, Bloomsbury-square, London, W.C. Sir Henry Roscoe, M.P., L.L.D., F.R.S., will deliver an introductory address on Wednesday, October 3rd, at 8 P.M.

ENGLISH PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

BATH ROYAL UNITED HOSPITAL.—120 beds. Honorary Consulting Physician: Dr. Coates. Honorary Physicians: Drs. Goodridge, Cole, and Fox. Honorary Surgeons: Messrs. Stockwell, Fowler, and Freeman. Honorary Assistant Medical Officers for Out-patients: Dr. Field, Mr. Cowan, and Mr. Craddock. Honorary Assistant Surgeons: Messrs. Green, Scott, and Hansford. Dental Surgeon: Mr. Gaine. Pathological Registrar and Curator: Mr. H. Culliford-Hopkins. The hospital is recognised by the Royal College of Physicians, Surgeons, &c., and licensed for dissections. It contains a library and an excellent museum, in which are a large number of interesting specimens, both in Pathology and Comparative Anatomy. Fees for attendance—twelve months, £10 10s.; six months, £5 5s. (Temporary pupils can also, by permission of the Honorary Staff, attend the practice of the hospital by the payment of £1 1s. for each month.) Instruction in Practical Pharmacy for three months, £3 3s. Number of patients admitted during the past year, 975; out-patients, 8602. Operations performed, 157. Anesthetics recorded, 134. For further particulars apply to the Registrar and Curator.

QUEEN'S COLLEGE, BIRMINGHAM.—The Sands Cox Prize, of the value of £20, is offered annually in the Medical Department. It is open to students who have completed their curriculum, and is awarded after examination in Medicine, Surgery, and Midwifery. Two Ingleby Scholarships are offered annually after examination in Obstetric Medicine and Surgery and Diseases of Women and Children. The Scholarships are open to students who have completed two years of their curriculum in this College. One or more Sydenham Scholarships will be offered annually, of the value of 30 guineas each. The orphan sons of former students of the Birmingham Medical School have priority of election. No Sydenham scholars are elected whose age exceeds twenty-three years on the day of election. The Scholarships are held for three years, subject to good behaviour. One or more Queen's Scholarships will be offered annually, of the value of 30 guineas. They are held for three years, one-third being paid each year, subject to good behaviour. The Russell Memorial Prize is awarded annually after examination in Nervous Diseases. Students of Queen's College are qualified to compete for all scholarships, gold medals, and other prizes offered by the University of London, the Royal College of Surgeons, and the Apothecaries' Society.

GENERAL AND QUEEN'S HOSPITALS, BIRMINGHAM.—*General Hospital:* Consulting Physician: Dr. Fletcher. Consulting Surgeons: Mr. Crompton and Mr. Baker. Physicians: Drs. Wade, Foster, Rickards, and Saundby. Surgeons: Messrs. Pemberton, Bartleet, Jolly, and Chavasse. Obstetric Officer: Dr. Malins. Assistant Physicians: Drs. Simon and Foxwell. Assistant Surgeons: Messrs. Haslam and Barling. — *Queen's Hospital:* Consulting Obstetric Surgeon: Mr. Berry. Consulting Surgeon: Mr. Furneaux Jordan. Physicians: Drs. Sawyer, Carter, and Fumckling. Surgeons: Messrs. Wilders, Bennett May, Lloyd, and Marsh. Obstetric Surgeon: Mr. A. F. Hawkins. Ophthalmic Surgeon: Mr. Priestley Smith. Dental Surgeon: Mr. Charles Sims. Physician for Out-patients: Dr. Hogben. Casualty Surgeons: Messrs. Clay and Morrison.

MASON COLLEGE, BIRMINGHAM.—Founded 1875. Opened 1880. The session will commence on October 1st. Instruction is given in Arts and Science, and students are prepared for the various examinations of the University of London. Entrance and other Scholarships and Prizes are offered for competition. This College is associated with Queen's College, Birmingham, for the purposes of medical education, all students of the latter College attending in the Physical, Chemical, Zoological, Botanical, and Physiological Departments of Mason College. The Library contains upwards of 18,000 volumes. A syllabus containing full information as to the various courses of instruction, fees, &c., will be forwarded on application to the Secretary.

BRISTOL SCHOOL OF MEDICINE (affiliated to University College, Bristol).—Students can complete in Bristol the entire course of study required for the Medical and Surgical Degrees of the University of London, and for the Diplomas of the Royal College of Physicians of London and the Royal College of Surgeons of England, the Apothecaries' Society of London, and the Army and Navy Boards. The lectures and instructions given at University College, Bristol, are adapted to the various Preliminary Arts Examinations above referred to, and also to the Matriculation and Preliminary Scientific Examinations of the University of London; while the Medical School, the Royal Infirmary, and the General Hospital together provide for every detail of the professional curriculum required by the University of London and the above examining boards. All necessary information may be obtained from the Dean of the Bristol Medical School, Dr. Markham Skerritt.

BRISTOL ROYAL INFIRMARY (founded 1735).—264 beds. Physicians: Drs. Shingleton Smith, Waldo, Shaw, and Prowse. Surgeons: Messrs. Board, Dowson, Prichard, Greg Smith, and Harsant. Ophthalmic Surgeon: Mr. Groom. Obstetric Physician: Dr. Wedmore. Dental Surgeon: Mr. Ackland. Assistant Physician: Dr. Williams. Assistant Surgeon: Mr. Paul Bush. House Surgeon: Dr. Swin. House Physician: Mr. Hill. Secretary: Dr. Shingleton.

Scholarships and Prizes.—Two Entrance Scholarships, 35 guineas and 10 guineas, awarded annually in October, after examination in general subjects; Surgical and Medical Scholarships, 5 guineas each, with 7 guineas added

in money; Clark Prize, 15 guineas; Crosby Leonard Prize, 7 guineas; Tibbitts Prize, 9 guineas; Midwifery Prize, 3 guineas in books; Six Pathological Prizes, 3 guineas each.

Dressers reside in the house in weekly rotation, and have charge of all casualties under the supervision of the house surgeon. Special instruction (including dresserships) for first-year students in the out-patient department. Class instruction in the wards by the physicians and surgeons on four days a week, in addition to the regular clinical lectures. Clinical Clerkships and Dresserships, 5 guineas for each six months. Special departments for Diseases of Women, the Eye, Ear, &c., with Clerkships and Dresserships attached. One or two Pathological Clerks are appointed every four months, who perform all post-mortem examinations. The large museum and well-stocked library are arranged and managed for the advantage of students.

Further information can be obtained from Dr. Arthur B. Prowse, Dean of the Faculty.

BRISTOL GENERAL HOSPITAL.—164 beds. Physicians: Drs. Markham Skerritt, Harrison, and Baron. Physician-Accoucheur: Dr. Lawrence. Surgeons: Messrs. Lansdown, Dobson, Keall, and Pickering. Dental Surgeon: Mr. Parson. Assistant Physician: Dr. Clarke. Assistant Surgeon: Mr. Barclay. House Surgeon: Dr. Newnham. Physicians' Assistant: Mr. Hill. Assistant House Surgeon: Mr. Trevelyan. Clinical Clerkship, six months, £5 5s. Dressership, six months, £5 5s. Obstetric Clerkship, three months, £3 3s. Special clinical instruction is given in Diseases of the Skin, Eye, Ear, and Throat, also in Diseases of Women and in Dental Surgery. Further information may be obtained of the Secretary, at the hospital, or from Dr. Markham Skerritt, Dean of the Hospital Faculty.

Scholarships and Medals.—Lady Habersfield Entrance Scholarship: This scholarship, founded in 1875, of the value of 30 guineas, the interest of £1000, bequeathed for the purpose by the late Lady Habersfield, is awarded annually at the commencement of the winter session, after a competitive examination in subjects of general education. Second Entrance Scholarship: An additional Entrance Scholarship of the value of £20 is awarded when more than six candidates present themselves. Clarke Scholarship: A Surgical Scholarship, of the value of £15, founded by H. M. Clarke, Esq., of London, is awarded annually at the end of the winter session, after an examination in Surgery. Sanders Scholarship: A Scholarship founded by the late John Nash Sanders, Esq., of the value of £22 10s., is awarded annually at the end of the winter session, after examination in Medicine, Surgery, and Diseases of Women. Martyn Memorial Pathological Scholarships, founded in 1878, by public subscription, in memory of the late Dr. Samuel Martyn, Physician to the Hospital. Two Scholarships, each of the value of £10, are awarded annually; one at the end of the summer session, and one at the end of the winter session. A student may, at the option of the Faculty, hold both these Scholarships. After a competitive examination in Pathology and Morbid Anatomy, the successful candidate is appointed Pathological Clerk to the hospital for the term of six months. Committee Gold Medal: This medal, presented by the committee of the hospital, is awarded annually at the end of the winter session to the student of the fourth year who has most distinguished himself during his career at the hospital and medical school. Committee Silver Medal: This medal, presented by the committee of the hospital, is awarded annually at the end of the winter session to the next most distinguished student of the fourth year. The rules relating to the several Scholarships may be had on application.

ADDENBROOKE'S HOSPITAL, Cambridge.—Clinical Lectures in Medicine and Surgery, in connexion with the Cambridge Medical School, are delivered at this hospital twice a week during the academical year; and practical instruction in Medicine and Surgery in the wards and out-patients' rooms is given by the physicians and surgeons daily, during the vacations as well as term time. Instruction is also given in all the special modes of medical and surgical investigation. Clinical Clerks and Dressers are selected from students according to merit, and without payment.

DEVON AND EXETER HOSPITAL, Exeter.—Medical and Surgical Staff: Consulting Physician: Dr. Drake. Physicians: Drs. Lewis Shapter, H. Davy, and Arthur G. Broomfield. Consulting Surgeons: Messrs. A. Cumming

and T. W. Caird. Surgeons: Messrs. Blankart, Harris, Domville, and Bell. House Surgeon: Dr. Russell Coombe. The hospital contains 218 beds (including special children's wards). There is a good library, museum, dissecting and post-mortem rooms. Attendance on the practice of this hospital qualifies for all the examining boards. Arrangements can be made by which students can attend Midwifery. For further particulars as to fees &c., apply to the House Surgeon.

WEST OF ENGLAND EYE INFIRMARY, Exeter.—Surgical Staff: Messrs. Bankart and Toswill. Registrar: Mr. Roper. The infirmary contains fifty beds. Students of the Exeter Hospital can attend the practice of the Eye Infirmary. Patients for the year ending Michaelmas, 1887, 1862.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne.—The following Scholarships and Prizes are awarded annually:—A University of Durham Scholarship, value £100, for proficiency in Arts, awarded to full students in their first year. The Dickinson Scholarship, value £15, and a Gold Medal, for Medicine, Surgery, Midwifery, and Pathology. The Tulloch Scholarship, value the interest of £400, for Anatomy, Physiology, and Chemistry. The Charlton Scholarship, value the interest of £700, for Medicine. The Gibb Scholarship, value the interest of £500, for Pathology. The Goyder Memorial Scholarship (at the Infirmary), value the interest of £325, for Clinical Medicine and Clinical Surgery. At the end of each session a Prize of Books and Honours Certificates are awarded in each of the regular classes. Assistant Demonstrators of Anatomy, receiving each an honorarium of £5, an Assistant Curator of the Museum, Prosectors, and Assistant Physiologists are elected yearly. Pathological Assistants, Assistants to the Dental Surgeon, Assistants in the Eye Department, Clinical Clerks, and Dressers are appointed every three months.

ROYAL INFIRMARY, Newcastle-upon-Tyne.—Physicians: Drs. Philipson, Drummond, Oliver, and Limont. Surgeons: Drs. Arnison, L. Armstrong, and Hume, and Mr. Page. Assistant Surgeons: Mr. T. A. Dodd and Mr. Williamson. Pathologist: Dr. Drummond. Dental Surgeon: Mr. E. Fothergill. House Physician: Dr. Edward Cave. The infirmary contains 280 beds. Clinical Lectures are delivered by the Physicians and Surgeons in rotation. Pathological Demonstrations are given as opportunity offers by the Pathologist. Practical Midwifery can be studied at the Newcastle Lying-in Hospital. Instruction is given in Psychological Medicine at the Coxlodge Lunatic Asylum. A Special Course of Instruction is given in the City Hospital for Infectious Diseases by the Superintendent, the City Officer of Health, Mr. H. E. Armstrong.

GENERAL KENT AND CANTERBURY HOSPITAL.—Open for the reception of patients April 26th, 1793. 50,300 in-patients and 90,195 out-patients have been admitted since the hospital was open. The hospital contains 102 beds. Pupils of the staff are admitted to the practice of the hospital, and have the use of the library of the East Kent and Canterbury Medical Society, for £7 7s. Operation day, Thursday, 11 A.M. Consulting Physician: Dr. Alfred Lochee. Physician: Dr. Henry Alex. Gogarth. Consulting Surgeon: Mr. James Reid. Surgeons: Messrs. Charles Holtum, Frank Wachter, T. Whitehead Reid, and John Greasley. Dentist: Mr. Martin L. Bell. House Surgeon: Mr. Z. Prentice. Assistant House Surgeon and Dispenser: Mr. F. K. Holman. Secretary: Mr. Charles H. Read. Over 800 in-patients, 3000 out-patients, and 1000 dental cases are attended in a year.

LEEDS GENERAL INFIRMARY AND MEDICAL DEPARTMENT OF THE YORKSHIRE COLLEGE.—The Leeds General Infirmary has accommodation for 320 in-patients, surgical and medical, and during the last year 4428 in-patients and 30,985 out-patients were treated; these numbers show a remarkable increase if compared with statistics of ten years ago, when only 11,500 out-patients were seen. Clinical teaching takes place daily in the wards, and Clinical Lectures are given in the operating-room. There are Medical, Surgical, Ophthalmic, Aural, and Electrical Departments, in each of which special instruction is imparted to students. A Gynaecological and Extern Obstetric Department, together with Laryngeal and Skin Clinics, are in operation.

The Public Dispensary, the Fever Hospital, and the West Riding Lunatic Asylum are other medical institutions which are made use of by the Leeds students.

The Leeds Medical School, now the Medical Department of the Yorkshire College, occupies a central position in the town, close to the General Infirmary, and a few minutes' walk from the buildings of the Science and Art Departments situated in College-road. The teaching in Chemistry and Physics, Practical Chemistry, Practical Toxicology, Biology, and Botany is given in the College-road buildings, the lecture-rooms and laboratories of which are amongst the most commodious in the kingdom. The accommodation for teaching comprises all the conveniences necessary for the various branches of study. All the other courses required by the examining boards are given by Professors and Lecturers. The Museums and Library offer special advantages. Two Entrance Scholarships are offered: one, of the value of 60 guineas, covering admission to all requisite lectures; and the other, of the value of 40 guineas, covering the cost of admission to the medical and surgical practice of the infirmary. Several valuable prizes are given at the end of each session. The following appointments at the infirmary are annually open to students: Resident medical officer, resident surgical officer, resident obstetric officer, appointed for twelve months and eligible for re-election; two house physicians, holding office for twelve months; four house surgeons, for twelve months; twenty-four physicians' clerks, for three months; twenty-four surgeons' dressers, for six months; eight ophthalmic and aural surgeons' dressers, for three months; eight gynaecological ward clerks, for three months; eight gynaecological out-patient clerks, for three months; twenty-four assistant physicians' clerks, for three months; twenty-four assistant surgeons' dressers, for three months; forty-eight dressers in the casualty-room, for three months; twelve post-mortem room clerks, for three months. There are appointments open to students in other medical institutions in the town, and also in the West Riding Lunatic Asylum.

UNIVERSITY COLLEGE, LIVERPOOL, MEDICAL FACULTY: VICTORIA UNIVERSITY.—The Infirmary attached to the School contains 300 beds, with 40 special beds for the treatment of Diseases of Women. Lock, Lying-in, and Eye and Ear Hospitals are in the immediate vicinity, and their practice is open to the students of the Medical Faculty.

The composition fee for lectures and classes is £23 14s. for Preliminary Scientific Classes, and 60 guineas for the Medical Classes required for Victoria and London degrees; 55 guineas for the classes for the London diploma, or 50 guineas without Chemistry. The composition fees are payable in two instalments, with an interval of twelve months. The fee for hospital practice is 40 guineas, which may be paid in the same way.

Two house physicians and three house surgeons are appointed from the qualified pupils every six months, also clinical clerks, dressers, and post-mortem clerks.

Two Holt Tutorial Scholarships, each of the value of £100, are awarded annually by the Medical Faculty to senior students. Also an entrance Lyon Jones Scholarship of £21 for two years for students proceeding to the Victoria degree, and another of the same value open to all students who have completed their second year. The Derby Exhibition of £15 for Clinical Medicine and Surgery. The Torr and School Gold Medals for Anatomy and Physiology, and the class prizes.

LIVERPOOL NORTHERN HOSPITAL.—150 beds. There is a special ward for the treatment of children. Clinical lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all students without additional fee.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Physicians: Drs. Cameron, Carter, and Williams. Surgeons: Messrs. Paul, Rawdon, and Alexander. Senior House Surgeon: Dr. F. H. Wignmore. Junior House Surgeons: Mr. W. C. Helme and Mr. R. Jackson. 200 beds. Clinical Lectures are given by the physicians and surgeons during the winter and summer sessions. Clinical clerkships and dresserships are open to all students. Special wards for accidents and diseases of children. Resident students received.

NORFOLK AND NORWICH HOSPITAL.—220 beds. One year's attendance recognised by the examining boards. Fees: For the physicians' practice, 5 guineas for six months.

For the surgeons' practice, including dressership, £10 for three months; £15 for six months; £20 for one year; £30 for two years. Pupils resident and non-resident. Consulting Physician: Sir P. Eade, M.D. Consulting Surgeon: T. W. Crose, Esq., F.R.C.S. Physicians: Dr. Barton, Dr. Bateman, and Dr. Taylor. Surgeons: Mr. Cadge, Dr. Beverley, and Mr. Williams. Assistant Surgeons: Mr. H. S. Burton and Mr. Robinson. House Surgeon: Mr. H. Chester Nance. Assistant House Surgeon: Mr. G. Sydney Green. Secretary: Mr. Albert E. Boyce.

NORTHAMPTON GENERAL INFIRMARY.—Established 1743; rebuilt 1793. In-patients, 1693; out-patients, 8223. The number of beds is 144, and 16 new ones will soon be in use. Out-patients are received, and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given in Anatomy and Materia Medica and Practical Pharmacy. Pupils' fee £25 per annum, or a perpetual fee of £50.

MEDICAL DEPARTMENT OF OWENS COLLEGE, VICTORIA UNIVERSITY.—This medical school is located in a large new building, which forms a part of Owens College. It is provided with a very large dissecting-room, physiological laboratory, private laboratories, and work-rooms, besides lecture-rooms, a museum, and a library. In order to give the fullest possible opportunities for teaching and investigation in the departments of Anatomy, Physiology, Pathology, and Materia Medica, a great extension of the school buildings has been made. The more strictly practical departments of medical study are taught partly in the Medical School and partly in the Royal Infirmary, to which are attached a fever hospital, a lunatic asylum, and a convalescent home. Medical and surgical clinical classes are conducted in the infirmary, and separate instruction is afforded in the elements of medical and surgical physical diagnosis, in obstetric medicine, ophthalmic surgery, and pathological anatomy by the different members of the staff of the medical school and infirmary. The following scholarships and prizes are open to students of the medical school:—1. A Dauntsey Scholarship of the value of about £100 is offered annually for competition at the beginning of October to persons who have not been students in any medical school in the United Kingdom, and whose age does not then exceed twenty-five years. The subjects of examination are—(a) General and Comparative Anatomy; (b) Physiological Botany; (c) Chemistry; (d) Mathematics or Latin. 2. A Scholarship and Prizes are awarded at the end of each academic year to students of the first, second, and third year. 3. A Platt Physiological Scholarship of £50 a year for two years is offered annually to the student who, having studied for one entire session in the Physiological laboratory of Owens College, has prosecuted the best original investigation in Physiology, and has passed a satisfactory examination in Physiology. 4. Two Platt Exhibitions of the value of £15 each, to be competed for by first and second year students in the class of Physiology. 5. A Dumville Surgical Prize of £20 is offered annually for proficiency in Clinical Surgery. 6. Turner Medical Prize, £25. 7. Medical and Surgical Clinical Prizes, each of the value of 6 guineas, are open to competition each year for the best reports (with comments) of cases which have occurred in the wards of the infirmary.

MANCHESTER ROYAL INFIRMARY.—Consulting Physicians: Drs. R. F. Ainsworth, Frank Renaud, H. Browne, and Sir Wm. Roberts. Consulting Surgeons: Mr. George Bowring and Mr. E. Lund. Physicians: Drs. Henry Simpson, John E. Morgan, D. J. Leech, and J. Dreschfeld. Assistant Physicians: Drs. James Ross and Graham Steell. Obstetric Physician: Dr. Lloyd Roberts. Surgeons: Messrs. F. A. Heath, Walter Whitehead, Thomas Jones, and James Hardie. Assistant Surgeons: Messrs. Fred. A. Southam and G. A. Wright. Ophthalmic Surgeon: Dr. D. Little. Dental Surgeon: Mr. G. W. Smith. Resident Medical Officer: Dr. Ernest S. Reynolds. Resident Surgical Officer: Mr. E. T. Milner. Medical Registrar: Dr. J. S. Bury. Surgical Registrar: Mr. W. Thorburn. Pathological Registrar: Dr. Thomas Harris. Assistant Medical Officers: Drs. S. Moritz and A. T. Wilkinson. Administrator of Anesthetics: Mr. Alexander Wilson. General Superintendent and Secretary: Mr. W. L. Saunder.

BARNES CONVALESCENT HOME, Chesham, Cheshire (in con-

nexion with the Manchester Royal Infirmary).—Resident Medical Officer: Mr. Alexander Johnston. Secretary: Mr. W. L. Saunder.

MONSALL FEVER HOSPITAL, Newton Heath (in connexion with the Manchester Royal Infirmary).—Resident Medical Officer: Dr. H. Falconer Oldham. Assistant Medical Officer: Mr. Percy Edwards. Secretary: Mr. W. L. Saunder.

MANCHESTER GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury and Gartside-street.—The hospital contains 140 beds, including 28 for scarlet fever. The medical staff visit the hospital daily at 10 A.M. Special classes are held for clinical instruction on Saturdays during the winter months. Out-patients are seen daily at 9 A.M. at the dispensary, Gartside-street, Manchester. Physicians: Drs. Ashby and Hutton. Surgeon: Mr. G. A. Wright. Assistant Surgeon: Mr. Joseph Collier. During 1887 there were 1352 in-patients and 10,260 out-patients under treatment at the dispensary.

RADCLIFFE INFIRMARY, OXFORD.—This infirmary is open to students for Medical and Surgical work in the wards and out-patients' departments. Clinical lectures are given by the Lichfield Clinical Lecturers in Medicine and Surgery. Also tutorial instruction and demonstrations are given in special Regional Anatomy (medical and surgical), methods of Medical Diagnosis, and Surgical Manipulation. Practical Pharmacy is taught in the Infirmary Dispensary. The whole course of study at the museum and infirmary combined is intended for students until they have passed the Second Conjoint Examination, or the 1st Oxford M.B.

SHEFFIELD SCHOOL OF MEDICINE.—The infirmary contains 200 beds, a Museum of Pathology, Library, and Post-mortem Theatre, with microscopes and all the appliances for clinical research. The Public Hospital and Dispensary contains 101 beds, and is recognised by the examining bodies. Perpetual fee for attendance on all the lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £45. A tutor's fee of £2 2s. is required from students entering for Anatomy and Physiology.

JESSOP HOSPITAL FOR WOMEN, Gell-street, Sheffield.—The hospital is devoted to Diseases peculiar to Women. There is also an Obstetric Department for the admission of a small number of cases. A staff of midwives connected with the hospital attend lying-in women at their own homes, and in case of need are assisted by the members of the medical staff. Out-patients are attended daily. Students can attend the practice of the hospital, and be supplied with cases of midwifery.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—The New Infirmary, opened in 1869, is built on the pavilion plan, has accommodation for over 200 patients, including children's wards and special ovarian wards. In-patients last year, 1852; out-patients, 9675. The attendance of pupils at this infirmary is duly recognised by all the examining boards; and there are unusual facilities for acquiring a practical knowledge of the profession. Physicians and Medical Officers: Drs. J. T. Arlidge and C. Orton, and Messrs. M. Ashwell and J. G. U. West. Surgeons: Messrs. W. H. Folker, J. Alcock, and W. D. Spanton. Dental Surgeon: Mr. W. Bartlett. Secretary: Mr. R. Hordley, Hartshill, Stoke-on-Trent, from whom particulars as to fees &c. may be obtained.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Founded 1848. Beds, 224. A preparatory school of Medicine and Surgery. The pupils have the advantage of seeing the whole of the practice of the physicians and surgeons, and are trained in clinical work by the medical and surgical staff. The attendance of pupils at this hospital is recognised by all the examining boards. Operations are performed every Thursday at 11 o'clock, and practitioners are welcomed.

YORK COUNTY HOSPITAL.—Established 1740; rebuilt 1851; 130 beds. In-patients, 1249; out-patients, 7171. Consulting Physician: Dr. W. Matterson. Consulting Surgeon: Mr. W. D. Husband. Medical Officers: Messrs. R. Hewetson, W. H. Jalland, F. Shann, R. Turner, M.B., and R. Petch, M.B. Dental Surgeon: Mr. W. Glaesby. House Surgeon: Mr. Lionel Williams. Assistant House Surgeon: Mr. A. F. Duke. Secretary: Mr. W. R. Stainsby.

SCOTTISH HOSPITALS AND MEDICAL SCHOOLS.

SCHOOL OF MEDICINE, EDINBURGH.—The lectures qualify for the University of Edinburgh and the other universities; the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin, and the other Medical and Public Boards. In accordance with the Statutes of the University of Edinburgh, any four of the medical classes required for graduation, or two complete *anni medici*, may be attended in this school, each of which *anni medici* may be constituted by attendance on two of the six months' courses, or on one of these and two three months' courses. The regulations require that the fee for any class, taken for graduation in Edinburgh, shall be the same as that for the corresponding class in the University. The whole education required for graduation at the University of London may be taken in this school.

Fees.—For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh the perpetual fee is £2 4s. Practical Anatomy (six months' course), £3 3s.; course of demonstrations, £2 2s.; perpetual, £4 4s. Practical Anatomy, with course of demonstrations, £4 4s. Practical Chemistry, £3 3s. Analytical Chemistry, £2 a month, £3 for three months, or £10 for six months. Practical Materia Medica, including Practical Pharmacy, Diseases of the Ear, Diseases of the Skin, Diseases of Children, and Diseases of the Tropics and Climatology, each £2 2s. Vaccination, £1 1s. For summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including Anatomical Demonstrations, Operative Surgery, and Practical Medicine and Medical Diagnosis, each £2 2s. Insanity, £1 1s.

EDINBURGH SCHOOL OF MEDICINE AND PHARMACY, Marshall-street, Nicolson-square.—The classes of this school will be resumed for the winter session on October 1st next. Chemistry, Theoretical and Practical, Midwifery, Surgery, and Medicine. From the Dispensary attached to this institution, Pharmacy, Practical and Theoretical. Practical Midwifery. Out-door Practice. Medical and Surgical Diagnosis. Attendance at this institution qualifies for the University of Edinburgh and all other licensing boards. Tutorial classes in all the branches of the medical curriculum. Preliminary Medical Classes, 11 A.M. to 4 P.M., and in the evening. Particulars of R. Urquhart, Secretary.

ROYAL INFIRMARY, EDINBURGH.—Beds are set apart for clinical instruction by the professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary physicians and surgeons. Special instruction is given in the medical department on Diseases of Women, Physical Diagnosis, and on Diseases of the Skin; and in the surgical department on Diseases of the Eye, the Ear, and Larynx. Separate wards are devoted to Venereal Diseases, Diseases of Women, Diseases of the Eye, also to cases of Incidental Delirium or Insanity. Post-mortem examinations are conducted in the anatomical theatre by the pathologists, who also give practical instruction in Pathological Anatomy and Histology. The fees for hospital attendance are as follows—viz.: Perpetual ticket, in one payment, £12; annual ticket, £6 6s.; six months, £4 4s.; three months, £2 2s.; monthly, £1 1s. Separate payments amounting to £12 12s. entitle the student to a perpetual ticket. No fees are paid for any medical or surgical appointment. The appointments are as follows:—1. Resident physicians and surgeons are appointed, and live in the house free of charge. The appointment is for six months, but may be renewed at the end of that period by special recommendation. 2. Special non-resident clerks are appointed for six months. The appointment may be renewed for a like period by special recommendation. 3. Clerks and dressers are appointed by the physicians and surgeons. These appointments are open to all students and junior practitioners holding hospital tickets. 4. Assistants in the pathological department are appointed by the pathologists.

EDINBURGH EYE, EAR, AND THROAT INFIRMARY, 6, Cambridge-street, Lothian-road. Clinical Lectures and instruction are given in this institution, which is open at 1 o'clock daily for out-door patients for Eye Diseases; Mondays, Thursdays and Saturdays at 12 noon for out-door Ear Patients; and Tuesdays and Fridays at 4 P.M. for out-door Throat Patients. Those whose diseases require operations or more than ordinary care are accommodated

in the house. Consulting Surgeon: Dr. Joseph Bell, F.R.C.S. Surgeons: Dr. J. J. Kirk Duncanson, Dr. G. Hunter Mackenzie, and Mr. J. Maxwell Ross. Treasurer and Secretary: Mr. A. P. Purves, 102, George-street.

ANDERSON'S COLLEGE MEDICAL SCHOOL, GLASGOW.—The following courses are given, which qualify for all the licensing boards:—In winter: Anatomy, Chemistry, Physiology, Surgery, Medicine, Materia Medica, &c. In summer: Anatomy, Practical Chemistry, Practical Physiology, Midwifery, Medical Jurisprudence, Botany, Hygiene, &c. The Chemical Laboratory is open daily from 10 to 5. Students of the School are admitted to the Lectures and Clinique at the Ophthalmic Institution free of charge.

Fees.—Each course of lectures (except Anatomy), first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy (including dissecting-room), first session, £4 4s.; second session, £4 4s.; third session, £1 1s.; summer (including Practical Anatomy), £2 2s. Practical Anatomy only, £1 1s.; Osteology, £1 11s. 6d. Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at reduced fees. Fees for all the Lectures and Hospital practice required of candidates for triple qualification, £48.

The Kerr Bursary (value one-third of the interest on £1000 in bank on deposit) will be vacant in the Junior Anatomy Class.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—The winter session will open on October 26th. Courses of lectures are given on all the subjects required by the licensing bodies for qualification, and lectures and demonstrations are also given on Public Health, Practical Physiology, Operative Surgery, Aural Surgery, Dental Surgery, Diseases of the Eye, and of the Throat and Nose. During summer lectures on Insanity are given by Dr. A. Robertson, in the City Asylum under his charge.

Class Fees.—For each course, first session, £2 2s.; second session, and perpetual, £1 1s.; Anatomy: First winter session, £4 4s.; summer session, £1 11s. 6d.; second winter session, £4 4s.; afterwards the fee for lectures and practical anatomy is £1 11s. 6d. per session. Dental Dispensary free to students of the hospital; to others, £5; first year, perpetual, £10. Lectures on the Eye, £1 1s.; other special courses free.

GLASGOW ROYAL INFIRMARY.—Number of beds, 542. In addition to the ordinary medical and surgical wards, there are separate wards for the treatment of Venereal Diseases and the Diseases of Women, whilst Diseases of the Skin, Eye, Ear, Throat, and Teeth are specially treated at the Dispensary. Courses of Clinical Medicine and Surgery are given by the physicians and surgeons; instruction in Pathological Anatomy and Histology is given by the pathologist.

Appointments.—There are four physicians' and six surgeons' assistants. These appointments are free, and can be held for twelve months; they are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in medicine or surgery. Clinical assistants, dressers, dispensary clerks, and pathological assistants are selected from the students without additional fee.

Fees for Hospital Practice and Clinical Lectures.—First year, £10 10s.; second year, £10 10s.; afterwards free. For six months, £6 6s.; three months, £4 4s. Vaccination certificates, £1 1s.

GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR, 28, Elmbank-crescent.—The hospital, which contains twelve beds for in-door patients, is always open for urgent cases. Hours of surgeons' visits 2 P.M. daily; clinical teaching daily. Out-patients are seen on Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, and Saturdays, at 2 P.M., by Dr. Barr and assistants; and operations and special demonstrations to students and practitioners take place on Thursdays from 3 to 4 P.M.

GLASGOW WESTERN MEDICAL SCHOOL.—The school is situated close to the University and Western Infirmary, in which latter students obtain their Hospital Practice and Clinical Lectures. To accommodate the increasing number of students, the rooms have been recently re-arranged and enlarged. Lectures and Demonstrations are given on Anatomy and on Surgery, by Dr. D. N. Knox; on Practice of Physic, by Dr. D. C. McVail; on Midwifery and Gynaecology, by Dr. W. L. Reid; on Diseases of the Ear, Throat, and Nose,

by Dr. Walker-Downie; on Diseases of the Eye, by Dr. F. Fergus; and on Diseases of the Skin, by Dr. Murray.

The Lectures qualify for the University of Glasgow, in accordance with the regulations, the Faculty of Physicians and Surgeons, Glasgow, and the other corporations.

Class Fees.—For each course of Lectures, except in the special courses hereafter noted, first session £2 2s., second session £1 1s. Students who have attended a first course elsewhere pay £1 1s. For the following three special courses, the fee for each, is £1 1s.: Diseases of Ear, Throat, and Nose, Diseases of Eye, and Diseases of Skin.

GLASGOW WESTERN INFIRMARY.—This hospital adjoins the University of Glasgow. Number of beds upwards of 400. Special wards are set apart for Diseases of Women and for Cutaneous Affections. In the out-patient department there are special clinics for Diseases of Women and for Diseases of the Throat, Ear, and Teeth. The Clinical Courses are given by the Physicians and Surgeons, each of whom conducts a separate class, and students may attend whichever they select at the beginning of the session. Special instruction is given to junior students by tutors or assistants, and clinical clerks and dressers are selected from the members of the class. All the courses of clinical instruction are recognised by the University of Glasgow and the other boards in the kingdom. In the Pathological Department the course is both systematic and practical, and extends through the winter and following summer; these are likewise recognised by the University for graduation. Eight resident assistants are appointed annually, without salary, from those who have completed their course. The fee for the hospital practice, including the various courses of clinical instruction, is 20 guineas in one payment, or in two equal instalments for the first and second year; for six months, 7 guineas; and for three months, 4 guineas.

GLASGOW HOSPITAL FOR SICK CHILDREN, situated at Garnet-hill, was opened in December, 1882, and is now available to medical students for clinical instruction in the diseases peculiar to childhood. The hospital includes 70 beds for non-infectious cases only. A specially designed Dispensary, or Out-patient Department, will be opened early in September.

GLASGOW OPHTHALMIC INSTITUTION, 126, West Regent-street.—40 beds. Clinical and systematic course of lectures for students during the winter and summer seasons. In-patients, 463; out- or dispensary patients, 3249. Operations on Wednesdays and Saturdays. Consulting Physician: Samuel J. Moore, Esq., M.D. Acting Surgeon: J. R. Wolfe, Esq., M.D., F.R.C.S.Ed. Acting Physician: J. S. Cumming, Esq., M.D. Assistant Surgeons: J. McGregor Robertson, M.A., M.B., C.M., and A. T. Thomson, M.D.

ABERDEEN ROYAL INFIRMARY.—Contains about 250 beds. Consulting Physician: Dr. A. Harvey. Physicians: Drs. J. W. F. Smith-Shand, R. Beveridge, Angus Fraser, and P. B. Smith. Surgeons: Messrs. A. Ogston, J. O. Will, R. J. Garden, and J. Hall. Dental Surgeon: Dr. Williamson. Treasurer and Secretary: Mr. W. Carnie.

ABERDEEN ROYAL LUNATIC ASYLUM.—Contains about 580 beds. Medical Superintendent: Dr. William Reid. Consulting Physician: Dr. Robert Jamieson. Secretary: Mr. W. Carnie. Clinical instruction is given to students during three months in summer.

IRISH HOSPITALS AND MEDICAL SCHOOLS.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Belfast.—Eight Junior Scholarships have been founded in the Faculty of Medicine, of the annual value of £25 each. Two are tenable by Matriculated Students, commencing the first, second, third, and fourth year of their course respectively. The examinations for Junior Scholarships of the second and third years in the Faculty of Medicine take place at the commencement of the second and third year of their medical course. Matriculated students in Medicine intending to compete for Medical Scholarships of the second year must be of not more than one year's standing as students of Medicine, and must have attended, in some of the Queen's Colleges, or in a University capable of granting degrees in Medicine, two at least of the following courses—viz.: Chemistry, Botany, and Zoology, Anatomy and Physiology, Materia Medica and Pharmacy, Practical Chemistry, Practical Anatomy. Matriculated students in Medicine

intending to compete for Medical Scholarships of the third year must be of two years' standing and not more, and must have attended, in some of the Queen's Colleges, or in a University capable of granting degrees in Medicine, four at least of the following courses—viz.: Chemistry, Botany, and Zoology, Anatomy and Physiology, Materia Medica and Pharmacy, Practical Chemistry, Practical Anatomy. Matriculated students in Medicine intending to compete for Medical Scholarships of the fourth year must be of three years' standing and not more, and must, in addition to the qualifications prescribed above, have attended, in their third year, two at least of the following courses—viz.: Theory and Practice of Medicine, Theory and Practice of Surgery, Midwifery, and Diseases of Women and Children.

QUEEN'S COLLEGE SCHOOL OF MEDICINE, Cork.—The building is provided with a very large, well-ventilated dissecting-room, with physiological and toxicological laboratories, materia medica, anatomical and pathological museums, as well as a room for surgical and obstetrical instruments and appliances. There are well-appointed physical and chemical laboratories, and a large natural history museum in the adjoining building, and part of the College ground is laid out as a botanical garden. The plant houses are now completed and well filled with plants, and are open to the students in the class of Botany.

Fees.—For Practical Anatomy and for Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 first course, and £2 for each subsequent course. Other medical classes, £2 first course, and £1 each subsequent course. Eight scholarships (value about £30 each), as well as several exhibitions and class prizes, are awarded every year.

SIR PATRICK DUN'S HOSPITAL, Dublin (in connexion with the School of Physic).—The payment of £3 3s. to the hospital entitles any student to attend the clinic of the hospital for twelve months, and to attend the lectures delivered by the University Lecturer in Operative Surgery. Students who have taken out the degrees of Bachelor in Medicine and Master in Surgery in Trinity College are entitled to attend the hospital as perpetual free pupils.

Clinical Lectures are delivered in the hospital theatre at 10 o'clock on Mondays and Tuesdays. In addition to the hospital fee, the payment of a fee of £9 9s. is required for the privilege of attending these lectures. Total fees for hospital and lectures for twelve months, £12 12s.

Sir Patrick Dun's Maternity.—Total fees for college students, £3 3s. Total fees for externs, £6 6s.

THE ADELAIDE MEDICAL AND SURGICAL HOSPITALS, Peter-street, Dublin.—Fee for nine months' hospital attendance, £12 12s.; six months', £8 8s. Summer, three months', £5 5s.

Three resident pupils are selected half-yearly. At the termination of the session, prizes in Clinical Medicine and Surgery, in Obstetric Medicine, and in Ophthalmic Surgery will be awarded.

Hudson Scholarship.—In addition to the junior prizes, the Hudson Scholarship, £30 and a gold medal, as well as a prize of £10, together with a silver medal, will be awarded at the end of the session for proficiency in Clinical Medicine and Medical Pathology, Clinical Surgery and Surgical Pathology, Pathological Histology, Surgical Appliances, including instruments and bandaging, Ophthalmology, and Gynaecology.

The certificates of attendance are recognised by all the universities and licensing bodies in the United Kingdom.

LEDWICH SCHOOL OF SURGERY AND MEDICINE, Peter-street, Dublin (formerly original School of Anatomy, Medicine, and Surgery).—There are endowments in favour of students, subject to conditions prescribed by the founder, in the following departments:—Two in Anatomy and Physiology; two in Minute Anatomy; two in Practical Anatomy; one in Surgery. Certificates of attendance on these lectures are received by the various examining boards: by the Apothecaries' Halls of Dublin and London; by the King and Queen's College of Physicians in Ireland; by the Royal Colleges of Physicians, London and Edinburgh; by the Royal University, the Universities of Dublin, London, and Glasgow; by the Glasgow Faculty of Physicians and Surgeons; and by the Queen's University in Ireland. The Senate of the Royal University having recognised the lectures of this school, arrangements have been made to educate students for its Medical and Surgical Degrees in accordance with its requirements. This school is in a central situation, and is replete with every convenience for study and successful instruction. By its teachers it is con-

nected with nine hospitals, four of which are Medical and Surgical hospitals, one for Fever, one for Midwifery and Diseases of Women and Children, one for Diseases of the Eye and Ear, &c.

Returns for the session 1888-9 have not been received from this school.

CARMICHAEL COLLEGE, Aungier-street, Dublin.—The following scholarships &c. are awarded to students entering for an *annus medicus* for the current year:—The Carmichael Scholarship, value £15; the Maine Scholarship, value £15; also Lecture Prizes, value £3 and £2 each; £97 being given annually in prizes.

DR. STEEVENS'S HOSPITAL.—This hospital, containing beds for 250 patients, is situated close to the Kingsbridge Terminus of the Great Southern and Western Railway, occupying a position in the centre of one of the busiest manufacturing districts of the city, otherwise unprovided with medical institutions. Immediately adjoining is St. Patrick's (Swift's) Asylum for the Insane. The hospital is easily accessible by two lines of tramways, and, owing to its position, affords exceptional advantages for clinical instruction. There is a ward entirely devoted to Syphilitic Disease, a detached building for Fever Cases, and an extensive Out-patient Department, with separate Clinics for Diseases of the Skin, Throat, Teeth, and those peculiar to Women.

The hospital is visited daily at 8.30 A.M. by the resident surgeon, and at 9 A.M. by the physicians and surgeons. The surgical wards are also visited each evening. Clinical Lectures are given by the physicians and surgeons during the session. There is accommodation in the hospital for two medical and six surgical resident clinical assistants, who, in addition to their rooms and furniture, are provided with coals and gas.

Fees.—Hospital Practice: Nine months, £12 12s.; six months, £8 8s.; three months, £5 5s. Dressership: Winter, six months, £21; summer, do., £15 15s.

MATER MISERICORDIÆ HOSPITAL, Dublin.—This hospital contains 230 beds, 50 beds being specially reserved for patients suffering from fever and other contagious diseases. Two Clinical Lectures will be delivered in each week, in addition to the daily bedside instruction. A special course of lectures on Fever will be given. A certificate of attendance upon this course, to meet the requirements of the King and Queen's College of Physicians, may be obtained. A ward has been assigned for the treatment of Ophthalmic Diseases. Opportunities are afforded for the study of Diseases of Women in the ward under the care of the Obstetric Physician, and at the dispensary held on Wednesdays and Fridays during the session. Lectures on Clinical Gynaecology will be delivered on Wednesdays. "Leonard Prizes" (Clinical): Prizes of the value of £30 will be given at the end of the winter session, in accordance with the directions contained in the will of the late Mark Leonard, Esq. Certificates of attendance upon this hospital are recognised by the Royal University and all the licensing bodies in the United Kingdom.

Fees.—Nine months, £12 12s.; six winter months, £8 8s.; three summer months, £5 5s.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS, North Brunswick-street, Dublin.—These hospitals contain 312 beds—110 for Surgical cases, 82 for Medical cases, and 120 for Fever and other epidemic diseases.

There will be a distinct course of Lectures and Clinical Instruction in Fevers. Operations are performed on Monday and Wednesday mornings, except in cases of emergency. A course of Practical Instruction in Ophthalmic Surgery will be given. Fee for the certificate, £3 3s.

A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Resident Clinical Clerks are appointed each half-year, and provided with furnished apartments, fuel, &c. These appointments are open not only to advanced students, as formerly, but also to those who are qualified in Medicine or Surgery. Dressers are selected from among the best qualified of the pupils, without the payment of additional fee.

COOMBE LYING-IN HOSPITAL, AND GUINNESS DISPENSARY FOR THE TREATMENT OF DISEASES PECULIAR TO WOMEN.—The hospital contains 65 beds, and has also a large extern maternity attached. Nearly 3000 confinements are attended annually by the pupils of the hospital. A special dispensary for Diseases peculiar to Women is held daily, and clinical instruction given. The certificates of the hospital are recognised by all licensing bodies, and its

diploma is accepted by the Local Government Board, &c. Further particulars can be learned from the Master at the hospital.

KOTUNDA HOSPITAL, Rutland-square, Dublin.—This institution consists of two distinct hospitals—namely, the Lying-in Hospital and the Auxiliary Hospital, the latter for the reception of patients suffering from Uterine and Ovarian Diseases. There is also a large extern maternity in connexion with the hospital, and a dispensary for Diseases peculiar to Women, which is open daily. Clinical instruction is given daily (Saturdays excepted) in Midwifery and the Diseases peculiar to Women, special attention being directed to the application of antiseptics in midwifery, and lectures on these subjects are delivered regularly throughout the session. Accommodation is provided for a limited number of intern pupils.

MEDICAL TEACHERS.

DR. ALTSCHUL has made Stuttering, Lispering, Falsetto, recent or of long standing, due to Nervousness, &c., irrespective of age or sex (without any mechanical appliances), his special, life-long study. The voice developed and strengthened.—9, Old Bond-street, W.; and at Brighton and Hastings.

Messrs. BAILLY and COATES prepare candidates for Matriculation, Apothecaries' Hall, College of Preceptors, and all other English, Scotch, and Irish Medical Preliminary Examinations.—30-32, Ludgate-hill, E.C.

MR. ALFRED BATCHELOR educates the Deaf.—Southernwood, Disraeli-road, Baling, W.

MR. J. BECKTON, C.M., prepares candidates for the London Matriculation, Medical and Law Preliminary University, Local, and other Examinations. Boarders received.—41, Torrington-square, W.C.

Messrs. BOSWORTH and STERN prepare for Preliminary Medical, First B.Sc., &c.—Kenmore, Putney, S.W.

MR. L. BRYAN, M.A. Cantab., continues for the thirteenth year his most successful preparation of resident and non-resident students for Matriculation and the Medical Preliminaries. Students entering at any of the hospitals are taken as boarders and receive careful supervision, every home comfort, and assistance in their professional studies.—140, Gower-street, W.C.

MR. KENNETH CAMPBELL, M.B., F.R.C.S., prepares candidates for the Naval and Indian Medical Services.—63, Lincoln's-inn-fields, W.C.

MR. H. CRASSWELLER, B.A., prepares candidates for Medical and Law Preliminaries and Matriculation.—12, Aberdeen-road, Highbury New-park, N.

MR. A. H. DAWES, 1st B.A. Lond., gives lessons privately, in class or by post, in preparation for the London Matriculation and Medical Preliminary Examinations.—31, Southampton-street, Strand, W.C.

MR. H. N. DIXON, M.A., gives a thorough and high-class education to Deaf Children based upon the Oral method.—Wickham House, East-park, Northampton.

MR. JOHN EVANS, M.A., prepares candidates for all Examinations.—Queen's-park, Oswestry.

MR. J. GIBSON, M.A., prepares candidates for the London Matriculation, and Preliminary Medical and Legal Examinations.—Quernmore, Bromley, Kent.

MR. A. E. GOOCH, B.A. Lond., prepares for Matriculation and Preliminary Medical Examinations.—33, Alfred-place, Gower-street, W.C. **DR. CRESSWELL HEWITT** prepares for the San. Science Cert. and all Examinations.—50A, Lincoln's-inn-fields, W.C.

MR. THOMAS LYLE, M.A., F.R.Hist.S., of the London and Dublin Universities, prepares gentlemen, resident and non-resident, for the various Preliminary Arts Examinations and Matriculation at the London and Cambridge Universities.—Grove House, Shacklewell-lane, London, E. **MR. A. J. MAINWARING, M.A.**, prepares candidates for all Preliminary Examinations.—115, Edith-road, West Kensington.

DR. A. C. MAYBURY prepares for all Medical and Science Examinations.—19, Bloomsbury-square, W.C.

MR. A. ORMOND prepares candidates for Preliminary Medical Examinations.—24, St. Mary Abbott's Terrace, Kensington.

MR. PIESSE prepares candidates in Materia Medica, Botany, Pharmacy, and Chemical Physics.—Savoy House, 115, Strand, W.C.

MR. W. VAN PRAAGH has made the cure of all Defects of Speech, both acquired and congenital, his special study.—11, Fitzroy-square, W.

MR. H. SERGEANT, B.A. Lond., holds special classes for London University Matriculation, the Preliminary Medical Examinations, &c.—8, High-street, Camden-town, N.W.

MR. V. BUTLER SMITH assists pupils in reading up for the London Matriculation, and Legal, Medical, and Pharmaceutical Preliminary Examinations.—Polytechnic, 3.9, Regent-street, W.

MR. W. H. VERNON, M.P.S., prepares candidates for Medical and Pharmaceutical Preliminary Examinations.—72, Aubert-park, Highbury, N.

MR. H. WAITE prepares pupils for Matriculation, Preliminary Scientific, and the Examinations for Medical Registration of all the licensing bodies.—342, Strand, W.C.

MR. F. A. WHITE, B.A., prepares candidates for Matriculation and Medical and Legal Preliminary Examinations.—67, Richmond-road, Bayswater, W.

MR. H. W. WHITE educates Deaf and Dumb Children of the higher classes on the Pure Oral system.—115, Holland-road, Kensington.

MR. MAURICE WILLIAMS prepares candidates for Examination in Theoretical and Practical Chemistry, Materia Medica, &c.—The City School of Chemistry, 27, Chancery-lane, W.C.

MR. J. WOODLAND, F.L.S., F.C.S., holds classes and demonstrations in Practical and Theoretical Chemistry, Chemical Physics, Materia Medica, and Pharmacy; in the Botanical classes specimens are supplied to each student, and all apparatus is found for the Practical Chemistry course. These classes are held for candidates for the Primary L.R.O.P., L.S.A., and the M.B. degree of the different Universities, at the Central School of Chemistry.—173, Marylebone-road, N.W.

A TABULAR VIEW OF THE DAYS AND HOURS OF THE INTRODUCTORY LECTURES

To be delivered at the different Medical Schools.

	Lecturers.	Days and Hours.
St. Bartholomew's Hospital	(No Lecture) ...	—
Charing-cross Hospital	(No Lecture) ...	—
St. George's Hospital	Dr. Ewart ...	Oct. 1st 4
Gray's Hospital	(No Lecture) ...	—
King's College	Prof. J. H. Mieschen ...	1st 4
London Hospital	(No Lecture) ...	—
St. Mary's Hospital	Dr. Waller ...	1st 3
Middlesex Hospital	Mr. W. Foster ...	1st 3
St. Thomas's Hospital	Dr. Cullingworth ...	1st 3
University College	Prof. W. Ramsey ...	1st 4
Westminster Hospital	Mr. C. Stonham ...	1st 4
School of Pharmacy of the Pharmaceutical Society of Great Britain	Sir H. Roscoe ...	3rd 8
Owens College, Victoria University	Prof. J. Ross ...	1st 4
Sheffield School of Medicine	Sir A. Clark ...	Sep. 29th 8.30
Glasgow Royal Infirmary School of Medicine	Mr. J. M. Milne ...	Oct. 24th

RECENT PATENTS.

THE following list of patents is specially compiled from official sources for THE LANCET by Messrs. Rayner and Cassell, Patent Agents, 43, Southampton-buildings, London.

- 11,881.—"Improved antiseptic jute dressings for surgical purposes." J. F. Anderson. Aug. 17th, 1888.
 11,923.—"Improvements in hafts or handles for bistouries and other surgical instruments." W. Walb. Aug. 17th, 1888.
 11,964.—"A right angle attachment for holding dentists' excavating burs at right angles while revolving." F. H. Hallam. Aug. 18th, 1888.
 12,012.—"An improved emulsive preparation of cod-liver oil." D. A. Davis and J. A. Hicks. Aug. 20th, 1888.
 12,073.—"Improvements in apparatus for lifting and assisting patients." Otto Hass. (Complete specification.) Aug. 20th, 1888.
 12,096.—"Improvements in clothing material for surgical and other purposes." J. H. Haywood. Aug. 22nd, 1888.
 12,137.—"A medicated instrument or bougie for the local treatment of diseases of the urethra, uterus, prostate, &c." T. Christie. Aug. 23rd, 1888.
 12,191.—"Improvements in dental chairs." D. D. Hepburn and E. Gandner. Aug. 23rd, 1888.

PRIZES AT THE MEDICAL SCHOOLS.

THE following is a list of the Prizes, &c., awarded at the various metropolitan medical schools, for the Sessions 1887-88:—

ST. BARTHOLOMEW'S HOSPITAL COLLEGE.—Lawrence Scholarship and Gold Medal: G. Heaton. Brackenbury Medical Scholarship: B. Pierce. Brackenbury Surgical Scholarship: J. G. B. Colby. Senior Scholarship in Anatomy, Physiology, and Chemistry: H. J. Waring. Open Scholarships in Science: Senior, W. B. Jones; junior, H. T. Parker and A. N. Weir. Preliminary Scientific Exhibition: H. W. Armistead and J. C. Baker. Jefferson Exhibition: W. J. Anson. Kirke's Scholarship and Gold Medal: C. H. Roberts. Bentley Medical Prize: F. W. Andrews. Bentley Surgical Prize: M. A. Edelen. Hichens Prize: F. Mangin. Wix Prize: Not awarded. Harvey Prize: J. F. Hall, prize; 2, H. J. Waring; 3, J. Small; 4, C. H. Langford; 5, H. A. Eccles; 6, A. G. Gane; 7, A. B. Boyd; 8, W. H. Sarjant. Practical Anatomy: Junior Treasurer's Prize: N. O. Wilson; 2, H. W. Armistead; 3, O. Holat; 4, A. S. Blackwell; 5, R. J. Eastick; 6, W. B. Jones; 7, B. G. Seton; 8, S. K. Slater; 9, H. H. Drew; 10, H. C. Arathoon. Practical Anatomy: Senior Foster Prize, M. L. Hepburn, prize; 2, R. Brown and J. F. Hall, equal; 4, R. D. Hotchkiss; 5, A. Quennell; 6, W. H. Maldlow and H. J. Waring, equal; 8, B. Henry; 9, C. B. Dale and L. W. Dryland, equal. Shuter Scholarship, J. H. Edwards, B.A. Junior Scholarships, A. G. Gane; 2, H. J. Waring; 3, T. L. Paget.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—Summer Session, 1887, and Winter Session, 1887-88.—Llewellyn Scholarship, certificate, and £25. S. Noy Scott; Governor's Clinical Gold Medal, S. Noy Scott; the Pereira Prize, certificate, and £5. S. Noy Scott; special prize, value £3 3s., in connexion with the above, A. B. Baker; Golding Scholarship Certificate and £15, J. B. Williams. Senior Anatomy: Prize, D. C. Johnston. Junior Anatomy: Prize, C. H. J. Lockyer; prize, J. Busfield. Senior Physiology: Prize, G. F. Dickinson. Osteology: Summer prize, C. H. J. Lockyer. Osteology: Winter prize, A. W. W. Hoffman. Junior Physiology: Prize, H. W. J. Cook. Practical Physiology: Prize, D. C. Johnston. Chemistry: Prize, W. M. Palmer. Practical Chemistry: Prize, D. J. Jones. Medicine: Prize, F. H. A. Taylor. Practical Medicine: Senior: Prize, F. H. A. Taylor. Practical Medicine: Junior: Prize, S. Noy Scott. Surgery: Prize, S. Noy Scott. Minor Surgery: Prize, A. W. W. Hoffman. Practical Surgery: Prize, a minor surgery operating case, A. E. Baker; prize, H. D. Johns. Materia Medica and Botany: Prize, H. S. Baker. Midwifery: Prize, F. Grange. Forensic Medicine: Prize, F. J. Duncan and F. Grange (equal). Pathology: Prize, P. J. Duncan. Therapeutics: Prize, J. P. Harold and S. Noy Scott (equal). Dental Surgery: First prize, certificate and six guineas, A. Black; second prize, certificate and four guineas, J. H. Day.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—The H. C. Johnson Prize in Anatomy: R. M. H. Walford. Brackenbury Prize in Medicine: B. V. Sordani. Brackenbury Prize in Surgery: H. Higgins. Acland Prize in Clinical Medicine: W. M. Davidson. Brodie Prize in Clinical Surgery: H. Higgins. William Brown £100 Exhibition, tenable for two

years: A. H. Ward. Sir Charles Clarke's Prize: Claude Truman. General Proficiency Prizes: H. Barkworth and E. M. H. Walford.

GU'S HOSPITAL MEDICAL SCHOOL.—The Treasurer's Gold Medal for Clinical Medicine, Ernest Henry Starling. The Treasurer's Gold Medal for Clinical Surgery, Robert Devereux Mothersole. Gurney-Hoare Prize of £25 for Clinical Study, George Herbert Pennell. Beaney Prize of 30 guineas for Pathology, Ernest Henry Starling. Mackenzie-Bacon Prize of £15 for Nervous Diseases, Arthur Henry Williams. Golding-Bird Medal and Prize of £20 for methods of Diagnosis, Robert Devereux Mothersole. Michael-Harris Prize of £10 for Anatomy, John Henry Bryant. Fourth-year students: Alfred Parkin, first prize, £25; Robert Devereux Mothersole, second prize, £10. Third-year student: Frederick William Hall, £25. Second-year students: John Henry Bryant, Bertram Whewell Hogarth, and Arthur Stanley Wohlmann, £11 18s. 4d. each, equal. First-year students: Alfred Theodore Rake, first prize, £50; Thomas Holmes, second prize, £25. Open Scholarship in Arts of 125 guineas, Richard Llewellyn Wason. Open Scholarship in Science of 125 guineas, Alfred Theodore Rake.

KING'S COLLEGE.—Winter Session.—Warnford Endowment: Thomas Boswall Beach and Frank Walter Gunn, prizes. Divinity: William Francis Adams. Barry Prize: Charles Frederick Gross and William Turner, prizes. Jelf Medal: Thomas Boswall Beach. Anatomy: William Francis Adams, prize. Physiology: Arthur Whitfield, prize. Chemistry: Arthur Whitfield, prize. Medicine: Thomas Boswall Beach, prize. Surgery: Thomas Boswall Beach and Peyton Todd Beale, prizes. Clinical Surgery (Professor Lister): Arthur Henry Cheate, prize. Clinical Surgery (Professor Wood): Harry Lambert Lock. Comparative Anatomy and Zoology: William Turner, prize. Summer Session.—Obstetric Medicine: Arthur Henry Cheate, Tanner prize; Lionel Vernon Cargill, prize. Forensic Medicine: Lionel Vernon Cargill, prize. Materia Medica: Eric Law Pritchard, prize. Carter Prize for Botany: Alfred Padelle. Pathological Anatomy: Lionel Vernon Cargill, prize. Todd Prize for Clinical Medicine: Lionel Vernon Cargill, prize.

LONDON HOSPITAL MEDICAL COLLEGE.—Entrance Science Scholarships for proficiency in the subjects required for the Preliminary Scientific M.B. Examination at the University of London: £50 Scholarship, E. Blomfield; £40 Scholarship, E. B. Manning. Buxton Scholarships for proficiency in the subjects required for the preliminary examinations: £20 Scholarship, R. J. Fyfe; £20 Scholarship, C. A. Kisching. Clinical Medicine: £20 Scholarship, given by the House Committee and the Medical Council, H. B. Skyrms; hon. certificate, W. S. Fenwick, L. Beckett. Clinical Surgery: £20 Scholarship, given by the House Committee and the Medical Council, W. S. Fenwick. Clinical Obstetrics: £20 Scholarship, given by the House Committee and the Medical Council, H. B. Skyrms. Latheby Prize for proficiency in Chemistry: £20, D. Brown. Anatomy, Physiology, and Chemistry: £25 Scholarship, given by the Medical Council, A. H. Smith. Anatomy and Physiology: £20 Scholarship, given by the Medical Council, E. Blomfield. Dressers' Prize for zeal, efficiency and knowledge of minor surgery, given by the House Committee: £15, Prize, F. J. W. Porter; £10 Prize, A. W. Sturdee; £5 Prize, G. E. T. Hayton.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Entrance Scholarships in Natural Science: 100 guineas, E. B. Manning; 50 guineas, G. G. Clarke; 50 guineas, A. Paine. University Entrance Scholarships of 50 guineas each: W. Overend, B.A. Oxon., and A. Bindloss, B.A. Cantab. Buxton Scholarship of 100 guineas: E. Gilmour. Classical Scholarship of the value of £50: J. Broadbent, B.A. Oxon. Mathematical Scholarship of the value of £50: H. G. Pryce, B.A. Cantab. Summer Session, 1887.—Second year—Midwifery: Prize, H. A. Caley. Medical Jurisprudence: Prize, H. A. Caley. First Year: Materia Medica: Prize, W. V. Low. Botany: Prize, F. W. Lewis and O. Fuller, equal. Practical Chemistry: Prize, L. Rogers and J. B. Vickers, equal. Histology: Prize, L. Rogers. Winter Session, 1887-88.—Third year—Medicine: Prize, R. H. Cole. Surgery: Prize, R. H. Cole. Practical Surgery: Prize, R. H. Cole. Pathology: Prize, R. H. Cole. Third and Fourth Years.—Clinical Medicine: Prize, J. Griffiths and N. B. Ridley, equal. Clinical Surgery: Prize, R. H. Cole and C. H. Powers, equal. Prizes in Ophthalmology of £10 10s. each: A. M. Hieckley and H. J. Daggett. Pathology Scholarships: P. J. Kingston, July, 1887, and H. H. Cole and J. Griffiths, equal, January, 1888. Second Year.—Anatomy: Prize, L. Rogers. Physiology: Prize, G. M. Winter. First Year.—Anatomy: Prize, J. R. Evans. Physiology: Prize, H. A. Nathan. Chemistry: Prize, J. R. Mander Smyth. Special Prizes, 1887 (first-year students).—For proficiency in Anatomy, Histology, Materia Medica, and Chemistry: L. Rogers. Second-year students.—For proficiency in Anatomy, Physiology, Midwifery, and Medical Jurisprudence, R. H. Cole. Third-year students.—For proficiency in Medicine, Surgery, Pathology, and Operative Surgery: F. W. Lewitt.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Summer Session, 1887.—First-year students: A. King, college prize, £15, and certificate of honour; H. Burden, college prize, £10, and certificate of honour. Second-year students: A. F. Stabb, college prize, £15, and certificate of honour; H. S. Cooper, college prize, £10, and certificate of honour. Third-year students: H. G. Turney, college prize, £15, and certificate of honour; H. A. Roberts, college prize, £10, and certificate of honour. Winter Session, 1887-88: Entrance Science Scholarships: J. B. Harris, scholarship, 125 guineas, and certificate of honour; J. B. Winston, scholarship, £20, and certificate of honour. First-year students: J. H. Fisher, the William Tite Scholarship, £30, and certificate of honour; A. Banks, college prize, £20, and certificate of honour; O. S. Wallace and O. S. Jaffe (equal), college prize, £10, and certificates of honour. Second-year students: O. P. Lovell, the Peacock Scholarship, 40 guineas, and certificate of honour; W. F. Umney, college prize, £20, and certificate of honour; H. Burden, college prize, £10, and certificate of honour. Third-year students: A. F. Stabb, second tenure of the Musgrave Scholarship, with college prize, £20, and certificate of honour; S. G. Toller, college prize, £15, and certificate of honour; W. G. G. Stokes, college prize, £10, and certificate of honour. Reports of Surgical Cases: O. H. James, the Solly Medal and prize. Surgery and Surgical Anatomy: F. O. Abbott, the Cheselden Medal. Practical Medicine: H. G. Turney, the Mead Medal. For general proficiency and good conduct: F. O. Abbott, the Treasurer's Gold Medal.

UNIVERSITY COLLEGE.—Winter Session.—Entrance Exhibitions: £100, E. W. Selby; £80, A. G. Levy; £40, W. L. Andriessen. Atchison Scholarship, £80 per annum, for two years, H. M. Fernandez. Bruce Medal, G. W. Sutherland. Surgery: Gold medal, Michael G. Foster; silver, equal, G. W. Sutherland and Ernest Willis. Physiology—Senior Class: Gold medal, W. M. Stevens; silver, A. Griffith. Junior Class: Silver medal, E. W. Selby. Anatomy—Senior Class: Gold medal,

W. M. Stevens; first silver, A. Griffith; second silver, W. B. Morton. Junior Class: Silver medal, C. O. Chiddell. Medicine: Gold medal, H. M. Fernando; first silver, T. L. Pennell; second silver, F. B. Blaxall. Practical Chemistry: Gold medal, B. L. Abrahams; first silver, T. J. Rodocanachi; second silver, A. H. P. Dawney. Pathology—Practical course: Tuke Medal, H. M. Fernando. Clinical Medicine—Senior Class: Fellowes Medal, gold, G. R. Murray; silver, equal, W. B. Hanson and B. M. H. Rogers. Junior Class: Fellowes Silver Medal, W. J. Broadhurst. Clinical Surgery: Liston Gold Medal, W. B. Hanson. Practical Surgery: Erichsen Prize, G. B. M. White. Clinical Dental Surgery: Prize, E. O. Turner. Summer Session.—Ophthalmic Medicine and Surgery: Silver medal, F. B. Blaxall. Practical Chemistry—Senior Class: Gold medal, A. Griffith; first silver, R. T. Bakewell; second silver, E. W. Selby. Materia Medica and Therapeutics: Gold medal, A. Griffith. Midwifery—Senior Class: Gold medal, H. M. Fernando; silver, G. W. Sutherland. Junior Class: Silver medal, R. L. S. Nuthall. Medical Jurisprudence: Gold medal, H. M. Fernando; silver, G. W. Sutherland. Pathology: Filler Exhibition of £30, L. B. Hill; silver medal, T. L. Pennell. Histology and Practical Histology: Gold medal, E. W. Selby; silver medal, H. A. Ballance. Hygiene: Silver medal and prize, J. H. R. Brock. Clinical Medicine—Senior Class: Fellowes Gold Medal, M. G. Foster; silver medals, equal, W. Gordon and W. W. H. Tate. Junior Class: Fellowes Silver Medal, H. H. Horden.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—Entrance Scholarships, A. M. Gossage, £80; W. H. A. Tebbe (Summer), £40. Treasurer's Prize for first winter subjects, value 10 guineas, J. B. Byles. President's Prize for second-year subjects, value 20 guineas, A. W. Harrison. The Bird Prize, value £15, E. Caudwell. The Chadwick Prize, value 20 guineas, A. H. W. Hunt. Clinical Medicine Prize, F. B. Betts and J. B. Plant (equal). Clinical Surgery Prize: J. B. Plant. Class Prizes and Certificates.—Winter Session.—Anatomy—Senior Class: A. W. Harrison, H. C. C. de Renzi, R. H. Reynolds; Junior Class: H. W. Lewis, J. B. Byles, A. S. G. Bell. Physiology—Senior Class: R. H. Reynolds, A. W. Harrison, H. C. C. de Renzi, A. T. Coleman; Junior Class: R. Cullinan, H. W. Lewis, W. H. Gossage, H. A. Stonham, J. B. Byles, A. S. G. Bell. Histology—Senior Class: A. W. Harrison, A. T. Coleman, H. C. C. de Renzi. Chemistry—Junior Class: J. B. Byles and B. Cullinan (equal), A. S. G. Bell, W. H. Gossage. Medicine—Senior Class: F. B. Betts and H. B. Pearson (equal), prize. Surgery—Senior Class: B. J. Pritchard, prize. Summer Session.—Materia Medica: W. H. A. Tebbe, prize. Practical Chemistry: W. H. A. Tebbe, prize. Histology: A. S. G. Bell, prize. Pathology: E. J. Pritchard and P. M. Yearley (equal), prize. Midwifery: P. M. Yearley, prize. Forensic Medicine and Toxicology: P. M. Yearley, prize.

THE MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Eraser Scholarships for the best examination at the bed-side and in the post-mortem room.—First, A. E. Watson; second, J. A. Hutton. Governor's Prize: J. K. Clarke and H. A. Daniel, equal. Exhibition in Anatomy (first year): H. W. Gibson. Hetley Prize: J. K. Clarke. Lyell Medal: J. B. Hancock. Medicine, A. E. Watson; Surgery, J. K. Clarke; Practical Medicine and Therapeutics, C. H. Fazan; Practical Surgery, E. E. Norton; Practical Midwifery, G. Blam and C. E. Souby (equal); Anatomy, E. C. Long; Physiology, C. E. Souby; Chemistry, T. E. Lloyd; Dissections, A. B. Atkinson; Pathological Anatomy, E. C. Long; Midwifery, E. C. Long. Forensic Medicine, C. H. Fazan; Materia Medica, W. Rushton; Practical Chemistry, G. M. F. Nellen; Practical Physiology, T. Carwaine; Psychological Medicine, C. H. Fazan. Entrance Scholarships: First, A. Shepherd; second, T. T. Cockhill.

LONDON SCHOOL OF DENTAL SURGERY.—Saunders Scholar, W. H. Dolamore; Ash's Prize, W. H. Dolamore. Class Prizes.—Winter Session.—Mechanical Dentistry: First prize, E. A. Manton; second prize, A. Black. Metallurgy: First prize, W. H. Dolamore; second prize, F. A. Harant. Operative Dental Surgery: First prize, W. H. Dolamore; second prize, E. H. Bates. Summer Session.—Dental Anatomy: First prize, W. H. Dolamore; second prize, E. H. Manton. Dental Surgery: First prize, W. H. Dolamore; second prize, J. G. Turner. NATIONAL DENTAL COLLEGE.—Ryder Medal: William Rushton. Dental Anatomy: Prize, W. Rushton. Dental Mechanics: Prize, Arthur Fogg. Metallurgy: Prize, F. T. Hascroft. Dental Surgery: Prize, Albert S. Jones. Operative Dental Surgery: Prize, Arthur Fogg. Dental Materia Medica: Prize, Charles Clark. Mechanical Work: Prize, E. A. H. Field. Students' Society Prize: William Rushton.

the medical man should be learnt from a correct interpretation of the symptoms and the physical signs presented by his patient, rather than from a pedantic consideration of recondite and often obsolete terms.

PAUCITY OF CANDIDATES FOR MEDICAL POSTS.

THE overcrowding of the profession is in most places, both in this country and abroad, so great that it is somewhat startling to read of a beautiful and well-favoured district in the heart of Europe where the dearth of candidates for junior medical appointments of a good class—posts where much opportunity for practical work exists—is becoming quite serious. The region referred to is the Tyrol. It is stated that when the post of assistant medical officer to a lunatic asylum was vacant, an appointment was made of which the director did not at all approve, and when he protested rather energetically, it transpired that there was no other candidate qualified for the post, the salary of which is £80 a year, besides free lodging. Again, an assistant accoucheur was required, the salary being £120 with rooms. For this post only two candidates presented themselves, one of them being an Italian. Some posts have to be given to students, as no qualified men can be found to take them. Of course, the salaries mentioned would be small in this country; nevertheless, there is little doubt that they would attract eligible candidates. In such a district as the Tyrol, however, the sums named probably represent half as much again in real value as they would do here. Once more: The proprietor of a bathing establishment recently advertised for a medical man for the summer months; offering board and lodging as remuneration. Not a single candidate presented himself. We remember a loud complaint not long since from Bohemia about the overcrowding of the profession there. Might not some of the most hardly pressed of these migrate to the Tyrol, where, of course, their diplomas hold good?

DISPUTES AS TO MEDICAL CHARGES.

THE necessity or the propriety of including a statement of particulars of attendance in the bills furnished by medical men becomes every now and again the subject of newspaper controversy. Explanatory notices of this kind have not hitherto been considered necessary as a rule, nor can we see any reason why they should now be incorporated among the customs of general practice. At the same time, it is clear that cases of dispute require a law for themselves, and cannot possibly result in a mutual understanding without such a statement of details, which is then as truly professional as it is requisite. Differences of opinion on the question of charges are by no means uncommon between patients and their medical advisers; and it is not likely that any arrangement which can be contrived will quite prevent their occurrence. In those instances, for example, where they arise out of an arbitrary denial of liability on the part of patients or their friends without further proof than is afforded by memory alone, the difference is too much a matter of caprice to be prevented by any set rule. Where, again, though liability is admitted, the disagreement relates to the question of what sum constitutes a sufficient fee, some improvement may be expected to follow the establishment of a regular system of charges. We do not say that at present there is no such system, but we are sure that it is neither so perfect nor so well founded as it should be. An average rate exists, but it varies in different districts, and even in a given area is subject to variations in accordance with the monetary position of those under treatment, falling, naturally, to suit the slender means of the poor labourer, and rising,

Annotations.

"No quid nimis."

TECHNICAL TERMS.

THE fluent employment of technical terms indicates a pleasing precision which inspires confidence; but a choice terminology, such as we possess in medicine, requires considerable management to avoid a "derangement of epithets." Technicalities are to be avoided in speaking before the laity, unless their education affords a presumption of correct interpretation. In explaining the nature of a malady or the cause of certain symptoms, it should be easy to use language which may be readily understood, and yet not cause unreasoning terror. Scientific teaching is, however, now becoming so common that it is desirable to guard against the random, careless employment of high-sounding terms. The misapplication or wrong pronunciation of a technical term may sometimes be merely a "source of innocent merriment," but it not uncommonly will serve to damage a reputation. A dictionary will not teach a language, and the language of

on the same principle, that it may bear a like proportion to the income of his wealthy neighbour. So, likewise, it is liable to alteration with reference to the nature of special services or the hour of attendance. All this is well enough. We do not object to the arrangement, and the public generally also appreciate its fairness. What we do desire to see, however, is the general acceptance by visiting practitioners of some uniform plan in the statement of their charges. It is in Birmingham, if we mistake not, that these have a fixed relation to the rental of the houses visited. Why should not this or some similar principle direct the judgment of practitioners elsewhere in deciding what is due for their professional services? It would much assist the harmony of their intercourse with the public—a matter of the greatest consequence to all concerned—if the question of fees were thus by common consent as much as possible lifted out of the sphere of merely personal opinion.

EXAMINATION SCHEDULES.

IN our present number will be found reference to the regulations of the various examining bodies. Students will do well to apply personally for the detailed regulations issued by the London University and the Conjoint Board of the Colleges of Physicians and Surgeons. These regulations not only indicate the subjects of examination, but also the range covered in each subject; in chemistry and materia medica a definite schedule guides the reading of the student. In spite of their utility, schedules are defective if they lead students to confine their attention too rigidly to the lines indicated. Schedules are mere sign-posts pointing to the land beyond, and denoting the best way to reach it. They are not intended by those who frame them as boundary lines separating the valuable from the worthless. In our schools the course followed by the teaching is to a very large extent controlled by examination limits. A certain intolerance greets the introduction of subjects which overstep the boundary. Some students form a habit of questioning the value of extra-schedule material, forgetting that, in studying science, no scientific fact may be disregarded. Correctly employed, these schedules teach a beginner how to walk circumspectly, but their limited utility may be inferred from the fact of the omission of castor oil and santonin from a particular schedule which sadly needs revision.

GRIEVANCES OF FOREIGN RURAL PRACTITIONERS.

OUR Belgian *confrères*, especially those of them who practise in country districts, seem to have a good many grievances. They are threatened with a law which will take away from them the right of dispensing medicines for their own patients; they are subjected to the rivalry of all sorts of irregular and amateur practice, to the jealousy of the pharmacists, who cannot bear that a doctor should dispense, even though there may not be a pharmacist or a chance for one to gain a livelihood within several miles; and last, but not least, they complain that they are treated with a great want of consideration by the provincial medical commissions, the very bodies to whom they naturally look for aid when difficulties arise. In this country, where indeed we are in the habit of supposing that the medical corporations and the Medical Council are apt to err on the side of neglecting obvious responsibilities rather than on that of vexatious interference with medical men, it is a little hard to understand the "paternal government" system of even the most enlightened continental countries. For example, opinions everywhere differ as to the advisability of performing Cæsarean section under certain circumstances, and in this country the criminal law would certainly never interfere with a medical man for not undertaking

such an operation. In some countries, however, as in Austria, no choice is allowed, the operation being obligatory under certain specified circumstances. Again, the supply of medicines by medical men is usually, where it is permitted at all on the Continent, hedged round with a number of vexatious restrictions dictated apparently by pharmacists, and pointing to a doubt as to whether the doctors have any interest in curing their patients. In Belgium it seems the medical commissions of the different provinces issue an annual list of drugs required to be kept by doctors who dispense. These lists differ from year to year, so that it is impossible for a medical man to tell what drugs he must be prepared to purchase a year hence. In Hainault no less than 250 drugs are necessary, while 100 suffice in East Flanders. More diverse still are the minimum quantities which the commissions require to be kept. Thus, taking the solution of subacetate of lead, in the province of Antwerp 500 grammes must be kept, whereas 100 grammes is enough in Limburg and 50 in Luxembourg. Of course these surgeries (*officines*) are inspected, and for every drug which is damaged or spoiled by keeping the unfortunate doctor, even though he may never use it, is liable to be fined five francs. Some years ago belladonna leaves and stramonium leaves were *de rigueur* in one province; now these appear no longer on the list, their places being taken by liquorice root and couch grass. It must be understood, too, that a medical man cannot go to wholesale houses for his drugs, but must obtain them from a pharmacist. The opposition of the profession in Belgium to the proposed legislation, by which dispensing was to be entirely prohibited, has been so great and so nearly unanimous that the change has been postponed, if not indeed abandoned altogether.

DIAGRAMS.

DIAGRAMS, good and bad, ancient and modern, artistic and inartistic, will soon be emerging from their resting places, to puzzle a fresh generation by their colour and perspective. Many diagrams possess an interesting history in being perhaps the work of a lecturer at a time when youth and enthusiasm enabled him to turn artistic tendencies to the advantage of his class. These diagrams are the most valuable for teaching purposes, since they bring to notice some fact which it is easier to see than to describe; others, made to order, may be almost too painfully accurate to be of much service; details are depicted so minutely, that in the crowd, the essentials are apt to be overlooked. Most diagrams do not pretend to be finished pictures, true in proportions and colouring; they are merely judicious exaggerations coloured conventionally. Students who lose sight of this will lay up a store of wrong impressions difficult to eradicate. Valuable when their scope and intention are rightly grasped, diagrams are merely illustrations which are not intended to divert attention from the lecture.

WE regret to learn from Mr. Cunstace, the Secretary to the Metropolitan Hospital Sunday Fund, which closes its financial year at the end of October, that the amount collected is still about £700 less than the total sum received last year. It is surely only necessary to mention this fact to stimulate the friends of hospitals to make the collection of the present year at least equal to that of 1887.

A FEW days ago, Mr. Thelwall, a surgeon at Farndon, Chester, on having his attention drawn to a man who had leaped over Farndon Bridge into the Dee, at once plunged into the river, and after great difficulty succeeded in rescuing the would-be suicide, who was then unconscious. Mr. Thelwall, however, successfully restored consciousness, and saved the man's life.

UNITED HOSPITAL ATHLETICS.

THE students of our great metropolitan schools of medicine are placed at a disadvantage as regards athletic sports, for since the hospitals are of necessity placed in the most crowded parts of the City, it requires an effort and rather a large expenditure of time and money to reach an available cricket or football ground. Hospital life, too, has a general tendency to promote and encourage a state of mind which is rather the reverse of energetic, for a student from the first becomes imbued with the idea that so long as he is within the hospital gates he is doing some work; and though men waste an enormous amount of time over the fires in the dissecting-room and library, in the operating theatre, and while going round the wards, it is a matter of the greatest difficulty to persuade more than perhaps one infirmity that it is a good thing for mind and body to spend an afternoon occasionally at football or cricket. Hence hospital athletics are not up to the standard that they should be, though it is a subject for congratulation that during the past two years there has been a distinct improvement in nearly all the branches of athletics—especially so in cricket; and that two new challenge cups have been started—viz., one for lawn tennis, and one for cross-country running. We take the opportunity of impressing upon freshmen of the coming session the desirability of devoting to healthful recreation some of the time which is often simply frittered away. Even university men, who scorn to work regularly in the afternoon at Oxford or Cambridge, when they come to London are quite as neglectful as any others in taking an occasional "afternoon off." The consequence is that a large number of men "knock up" when clerking or dressing. If a student were to carefully estimate the number during the year at his own hospital who thus have to take a forced holiday, he would be surprised at the large percentage.

The United Hospitals Athletic Club is by far the oldest of the United Hospitals Clubs. It was inaugurated in 1867, and on May 31st in that year the first annual sports were held at the Lillie Bridge grounds. The meeting soon increased in importance, and became one of the athletic events of the year. It commanded a much larger attendance of spectators than nowadays, for it was then the only hospital athletic meeting of the year, and the committee were always very careful to provide an excellent band; but as each hospital now aims at an ambitious meeting of its own, the united meeting is shorn of part of its interest and of a large amount of its support.

The Challenge Shield was won by St. Bartholomew's this year for the fourth time in succession, their representatives gaining 8 firsts out of a possible 11, and 2 seconds and a third in the remaining three events. Never has there been such a hollow victory, the previous best being 6 wins out of 11 by St. Thomas's in 1880. The best "records" for the various events, which are now published for the first time, are as follows:—

100 yards	B. B. Connolly (Guy's)	10½ sec.
220 yards	L. Stokes (Guy's)	22½ sec.
440 yards	F. Little (St. George's)	51½ sec.
880 yards	T. A. Guinness (King's)	2 min. 2½ sec.
1 mile	W. Kent Hughes (St. Barthol.)	4 min. 38½ sec.
3 miles	H. P. Ward (King's)	16 min.
120 hurdles	A. Quennell (St. Bartholomew's)	16½ sec.
Putting weight	J. G. Graveley (Guy's)	37 ft.
High jump	G. R. Nunn (Guy's)	5 ft. 7½ in.
Long jump	G. Power (Guy's)	20 ft. 10 in.
Throwing hammer	J. Orford (St. Thomas's)	90 ft. 4 in.

The best individual performance has been accomplished by G. R. Nunn, who in the year 1867 gained 4 firsts and a second. The Shield has been won by St. Bartholomew's, 4 Guy's, and St. Thomas's five times each; by King's and St. George's, three times each; and by London, once.

The Rugby Union United Hospitals Club was started in the winter of 1874, and in the beginning of 1875 the first Inter-hospital Cup Ties were played. The final this year, after a very good game between St. Thomas's and St. Mary's, resulted in a win for the former by two tries and a touch down to nil; the forwards of St. Thomas's proved too powerful for the other hospitals, and it is mainly to them that their success was due, though the excellent play of Toller at three-quarter was invaluable. There is perhaps more interest taken in these ties than in any other, and the standard is also higher as a rule. The Club varies in the number

of its outside matches; this year there were but few, so we cannot judge as to its position in the football world; the members can, however, send a very powerful team into the field, and include several international players among their number. The ties this year resulted as follows:—First round: St. Thomas's beat Guy's; St. George's beat Charing-cross; London drew with St. Bartholomew's; St. Mary's and Middlesex had a walk over; University College a bye. Second round: St. Thomas's beat University; St. Mary's beat London; St. Bartholomew's beat St. George's; Middlesex a bye. Semi-final: St. Thomas's beat St. Bartholomew's; St. Mary's beat Middlesex. Final: St. Thomas's beat St. Mary's. The Cup has been won by Guy's four times, by St. George's three times, by St. Bartholomew's, London, and St. Thomas's twice each, and by Middlesex once.

The Cricket ties were started in 1884, and contests have been held annually. On each occasion Guy's have proved victorious, but they were disqualified in 1886 through a misunderstanding on their part as to the eligibility of one of their players. The Final this year was played between Guy's and St. Bartholomew's, and was won by the former by six wickets; J. C. Shenton made 149, not out, for Guy's, out of a total of 186. He had previously made a "record" for the ties by scoring 172, not out, against Middlesex Hospital. United hospital cricket has made great strides during the last two years; not only are the ties more keenly contested and productive of better cricket than formerly, but the United Hospitals Club is fast establishing itself as one of the best teams about London, having beaten this year such clubs as Richmond and Hampstead, and not having suffered a defeat for two years. The Cup ties were as follows:—First round: London beat King's; St. Bartholomew's beat Westminster; Guy's beat Middlesex; St. Thomas's beat St. Mary's; University beat Charing-cross. Second round: Guy's beat University College; St. Bartholomew's beat London; St. Thomas's a bye. Semi-final: Guy's beat St. Thomas's; St. Bartholomew's a bye. Final: Guy's beat St. Bartholomew's.

The Association Football Club began their inter-hospital contests in 1884, and these, like those at cricket, have been won each year by Guy's. The ties were as follows:—First round: St. Bartholomew's beat Westminster; St. Thomas's beat London; St. Mary's beat Charing-cross; Guy's beat St. George's. Second round: Guy's beat St. Thomas's; St. Bartholomew's beat St. Mary's. Final: Guy's beat St. Bartholomew's, after a close and exciting game, by one goal to none.

The Rowing Club contents itself with only indulging in Cup ties, and the members have not yet managed to get an eight together for Henley. The results this year were as follows:—First heat: St. Thomas's beat Middlesex easily. Second heat: St. George's beat Guy's by half a length, the latter being the same distance ahead of St. Bartholomew's. Final heat: St. Thomas's beat St. George's. Winners: 1885, London; 1886 and 1887, Middlesex; 1888, St. Thomas's.

The Lawn Tennis contests were won by St. George's for the second year in succession. They were only inaugurated last year.

The Cross-country Challenge Cup was won by St. Thomas's easily; last year the first contest was won by the representatives from St. Bartholomew's.

Obituary.

JAMES T. HILLIER, M.R.C.S. &c.

WE grieve to record the death of Mr. James T. Hillier of Ramsgate, which took place on Wednesday, the 29th ult., at the railway station, just as he was about to start on a short visit to a friend, and was in the very act of showing his ticket. The deceased gentleman, who was only sixty-one years of age, and was apparently in excellent health and spirits up to the very moment of his death, was a pupil of St. Bartholomew's, and had been in practice in Ramsgate for nearly forty years. During that time he had made himself a wide circle of friends, both within and without the profession, by his widely known scientific attainments, and by his kind and genial disposition. Mr. Hillier was one of a class of practitioners now becoming rare among us—men who found time, amid professional toil, to cultivate a wide acquaintance with natural science. He was an excellent field botanist, and an earnest and zealous microscopist, especially in the department of marine zoology, in which

field of study he enriched our marine fauna by the discovery of one or more sponges new to Britain; he was also a well-known member of the Kent Archaeological Association, of the Queckett Club, and of the Marine Biological Association. Besides these special fields of work, he had a good acquaintance with geology, and indeed with most other branches of natural science. Practitioners of the type of Mr. Hillier, who combine a love and zeal for natural knowledge with the practical work of their profession, are, we fear, gradually dying out. And it is to be regretted that recent regulations of our examining bodies do not tend to foster or encourage the pursuit of natural history, seeing that a knowledge of botany and zoology does not enter into their curriculum.

The funeral of the lamented gentleman was attended by a large and representative assemblage of the inhabitants of Ramsgate and the neighbourhood, including most of his medical brethren in the town and vicinity.

IRVINE KEMPT MILNE, M.D. ABERD.

WE have to record the death of Dr. Milne, which took place at Shipdham, Norfolk, on the 17th of July, from abscess of the brain, at the early age of thirty-five. The deceased gentleman was born at Pitmedden, Aberdeenshire. He was educated at the Grammar School and University of Aberdeen. Having passed all his examinations before he was twenty-one years of age, and consequently too young to graduate, he entered the service of the White Star Line as assistant surgeon on board the steamships *Republic* and *Adriatic*. In 1874 he graduated M.B., C.M., and rejoined the *Adriatic* as surgeon. He also served on the Holt China Line, and made several voyages to China in the *Glaucon*. While there he had the offer of a lucrative appointment at Penang, which he declined, as he preferred not settling down until he had seen a little more of the world. As surgeon to the *Congo* he visited the West Coast of Africa, after which he entered the service of the Allan Line, serving on board the steamships *Nova Scotian*, *Circassian*, and *Sardinian*. He was a great favourite with both crew and passengers, many of whom gave substantive tokens of their appreciation of his kindness and skill as surgeon.

In 1877 he took his M.D. and settled at Shipdham, Norfolk, where he succeeded to the extensive practice of the late Mr. Clouting. He held the appointments of medical officer and public vaccinator to the Mitford and Landitch and Swaffham Unions; surgeon to the Foresters and Odd Fellows, and acting surgeon to the 3rd Norfolk R.V.

His funeral was attended by almost the entire village and neighbourhood. As a mark of respect the shops were shut and the blinds of the principal houses drawn down.

Medical News.

INDIAN MEDICAL SERVICE.—The following is a list of successful candidates for this service:—

	Marks.		Marks.
Drake-Brockman, H. E.	3470	Prall, S. E.	3070
Lane, W. B.	3405	Lumaden, P. J.	3060

PRESENTATION.—The patients of the Provident Dispensary in connexion with the local hospital, Weston-super-Mare, have presented Dr. Sawtell, the medical officer, with a handsome timepiece as a token of their appreciation of his services.

NEW HOSPITAL IN DOUGLAS.—On Tuesday the Lieutenant-Governor of the Isle of Man formally opened a new hospital, erected by Mr. H. B. Noble, an inhabitant of Douglas, on a site given by Mr. Noble's late wife. It will replace the old inconvenient and unsuitable hospital in the lower part of the town.

PROPOSED FEVER CONVALESCENT HOME, EDINBURGH.—At the last meeting of the Edinburgh Town Council, the Public Health Committee recommended the purchase of Campie House and grounds, comprising six acres, at Musselburgh, as a convalescent home for patients from the City Fever Hospital, at a cost of £2700, which was considered a bargain for such a purpose. On the motion of Mr. James Pollard, who urged the importance and advantages of such a home, the recommendation was agreed to. Dr. Littlejohn, the medical officer of health, and the whole medical staff, highly approve of this municipal addition for the treatment of infectious diseases.

EXAMINATION OF CANDIDATES FOR HER MAJESTY'S INDIAN MEDICAL SERVICE.

MEDICINE.

Tuesday, Aug. 21st, 1888, from 10 A.M. to 1 P.M.

[A CASE of chest disease, terminating fatally, is given, and the symptoms described.]

1. Discuss the pathology of this case. Explain the indirect or pressure symptoms on anatomical and physiological grounds, and the diagnosis to which they point. 2. Describe the condition of the urine usually found in a case of (a) acute nephritis; (b) chronic nephritis in a gouty patient. What are the chief complications to be feared in each of these cases; and, finally, describe the appropriate treatment and general management of the cases and complications. 3. What are the symptoms of venous congestion of the liver? Under what circumstances is it brought about, and what are the changes in the liver as the venous congestion becomes more and more extreme? 4. Enumerate the causes of post-partum hæmorrhage. Give the differential diagnosis of its different forms, and describe the treatment. 5. Discuss the causation of the dyspnoea of asthma and bronchitis, and mention the drugs, their doses, and mode of administration, which most of all tend to the relief of such dyspnoea.

SURGERY.

Monday, Aug. 20th, 1888, from 2 P.M. to 5 P.M.

1. Describe the condition known as syphilitic keratitis (hereditary) the peculiarities usually observed in a patient so affected, and the treatment to be pursued in such a case. 2. Describe the conditions observed in acute inflammation of the knee joint, the changes which take place in the course of the attack, and the treatment in its various stages. 3. A young man was violently pushed down, and fell on his back on the pavement. He did not experience any pain after the accident, and was able to walk home with perfect ease. A few months subsequent, he began to feel weakness in his legs, and this gradually increased until he was barely able to raise himself from the sitting posture, and, when upright, had difficulty in standing or walking. There was slight dull pain in the lumbar region, and increased discomfort on stooping forward, but no restriction in the movements of the vertebrae. There was not any loss of sensation. What was the most probable cause of this paralysed condition, and what treatment should be adopted under such circumstances? It may be concluded that the patient recovered under treatment. 4. Describe the symptoms of fracture of the neck of the femur (1) when within the capsule, (2) when external to the capsule, and the treatment in each condition. 5. By what symptoms would a surgeon be able to diagnose rupture of the bladder, within the abdomen into the cavity of the peritoneum? Describe the treatment to be adopted in such an injury. 6. What are the pathological conditions which give rise to (1) senile gangrene, (2) traumatic gangrene; and what treatment should be adopted in each condition?

ANATOMY AND PHYSIOLOGY.

Monday, Aug. 20th, 1888, from 10 A.M. to 1 P.M.

1. Describe the frontal bone, giving an account of its connexion with other bones, the parts of importance which are in relation to or connected with it, its structure and development. 2. Describe the origin, course, anatomical relations, and distribution of the internal iliac artery, and of its principal branches. 3. Describe the structure, anatomical relations, and functions of the retina. 4. Describe the origin and distribution of the fifth nerve within the cranium; trace the distribution of the inferior maxillary division, and give an account of its functions. 5. Describe the parts and the order in which they are met with in a dissection of the popliteal space.

CHEMISTRY.

Tuesday, Aug. 21st, 1888, from 2 P.M. to 4 P.M.

1. When a mixture (in any proportion) of oxygen and hydrogen is exploded a certain volume of the mixed gases disappears. What were the relative volumes of oxygen and hydrogen in the portion which had thus disappeared? 2. Write down in the form of an equation the reaction which takes place on passing steam over pieces of iron heated to redness in a tube. 3. When a piece of filter-paper, on which warm oil of turpentine has been poured, is plunged into chlorine it bursts into flame, with the formation of a dense cloud of black smoke. Explain this phenomenon.

NATURAL SCIENCE.

Tuesday, August 21st, 1888, from 4 P.M. to 6 P.M.

Zoology.

1. What are the more important characters by which amphioxus differs from a typical vertebrate? 2. Refer the barnacle (*lepas*) to its proper class in the animal kingdom, and state your reason for so referring it. 3. Refer to its proper sub-kingdom and class an animal with the following characters:—Body protoplasmic, without differentiated organs or cellular tissues, without an enveloping membrane, and having the power of emitting extensile and retractile prolongations of its protoplasm.

Botany.

4. Distinguish among the following genera those in which the ovary is coherent with the calyx ("ovary inferior") from those in which the ovary is free ("ovary superior"):—*Ribes*, *malva*, *digitalis*, *cucumis*, *papaver*, *conium*. 5. Mention one or more instances of the occurrence of vibratile cilia in the vegetable kingdom. 6. Refer to its natural order a plant with the following characters, and cite one or more examples:—Corolla monopetalous, 5-lobed, regular. Stamens inserted on its tube and alternate with its lobes. Ovary free, 1-celled, with two parietal placentae. Seeds with fleshy albumen. Leaves opposite.

Physics.

7. At what temperature does water attain its maximum density? 8. What is the equatorial current of the ocean? Mention its direction. To what cause may it be attributed? 9. A solid body weighs in vacuo 100 grammes, while in water at 40° centigrade it weighs 80 grammes. What is its specific gravity?

To Correspondents.

MEMBRANOUS URETHRITIS.

DR. PAJOR recently reported to the Buda Pesth Medical Society a case of membranous urethritis occurring in a man, aged twenty-eight, the subject of repeated attacks of gonorrhoea, orchitis, and vesical catarrh. The endoscopic examination revealed a hard, greyish-white condition of the mucous membrane from the membranous portion to the navicular portion. This was twice brushed over with tincture of iodine without any result at first; subsequently, however, there was passed with the urine a delicate, milky-looking, tubular membrane, 9.5 centim. in length and 0.5 centim. in diameter, some smaller fragments of a similar character being passed afterwards.

Junius.—1. Legal agreements are, of course, binding.—2. Our correspondent must be in a better position to decide this point than we can be.

GIBSON AND WIFE v. JEFFRIES AND HILLS.

To the Editors of THE LANCET.

SIRS.—The following are the contributions to this fund received since June 12th:—

W. H. Hubert	£0 5 0	R. R.	£0 5 0
W. J. Pickup	0 10 6	T. A. White (L'Abbé Ter-	
P. Sheehy	0 10 0	ritat, Vaud)	1 0 0
Mark Cahill	1 0 0	Anon	0 5 0
A. F. Street	0 5 0		

The total amount received and promised up to date is only £25 14s. 6d., exclusive of £50 from the Bower and Keates fund. About £70 therefore still remains to be paid. As it may be difficult for some to look back for particulars of this case, and as they may have escaped the notice of many who would feel practical sympathy for Messrs. Jeffries and Hills, they are briefly as follows. (THE LANCET, Aug. 20th, 1887; *British Medical Journal*, Aug. 13th, 1887; *Medical Press and Circular*, Aug. 10th, 1887.) During an illness of Mr. Jeffries, Mr. Hills attended for him a primipara. Forceps being required, the perineum was unavoidably lacerated, which was promptly and properly attended to, as was shown at the trial, and partly healed. Subsequent additional treatment in hospital was required to complete the repair of the part. The plaintiffs (husband and wife) rocklessly charged Mr. Hills with malpractice, and brought an action against him, including Mr. Jeffries as the person with whom the contract was made. The jury found for the defendants with costs. As is usual in similar cases, the plaintiffs pleaded no means, and the defendants are now looked to for their own costs. While such actions can be brought, who that follows the practice of midwifery can feel himself for one moment safe? Surely our medical brethren will not leave them unassisted in their trial. I am, Sirs, yours faithfully,

10, George-street, Hanover-square, Sept. 1st, 1888. C. B. KEETLEY.

Viator has not enclosed his card.

M. O'S.—1. Yes.—2. No.

"MEDICAL PRACTICE IN AUSTRALIA."

To the Editors of THE LANCET.

SIRS.—If your correspondent, "Poylact," will refer to Dr. J. A. Lindsay's volume upon "The Climatic Treatment of Consumption," he will find much of the information which he desires about Australia, the sea-voyage, &c. (Vide the Sections on Australia, Tasmania, New Zealand, the Ocean Voyage, &c.) I am, Sirs, yours obediently, M.D.

WE tender our best thanks to those gentlemen who have kindly supplied us with the returns and prospectuses upon which the information given in this Students' Number of THE LANCET relative to the various medical examining bodies, hospitals, and medical schools of the United Kingdom is based.

The present number being principally devoted to information especially interesting to students, we are necessarily compelled to defer the publication of communications on other important subjects.

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Medical Diary for the ensuing Week.

Monday, September 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 11.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, September 12.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 8 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, September 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARGING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, September 14.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 15.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

ADVERTISING.

Books and Publications (seven lines and under)	£0 5 0
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Lecture

ON

CRANIAL AND INTRACRANIAL INJURIES.

Delivered at the Royal College of Surgeons of England,

By THOMAS BRYANT, F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY, ROYAL COLLEGE OF SURGEONS.

LECTURE III.

(Concluded from page 406.)

UP to this time my observations have been confined to the elucidation of the first of the two main clinical points which have had a common bearing upon all cranial injuries, and to which I drew your attention at an early period of this lecture—namely, “that all injuries of the head should be estimated *primarily* with reference to the amount of damage the cranial contents have sustained”; and I trust I have demonstrated with sufficient clearness that a cerebral injury of some kind is the one common factor. I propose now, therefore, to pass on and consider the treatment of cranial and intra-cranial injuries, and, with the light which the above conclusion throws upon the whole subject, see what bearing it ought to have upon the second clinical point to which attention has been drawn—viz., “that injuries of the head should be estimated *secondarily* with reference to the risk of the cranial contents becoming involved”; and it should be remembered that this risk is one to which every degree and variety of cranial injury is liable. In even such an apparently simple accident as a contusion of the head, whether with or without a scalp wound, the fear of this secondary danger ought not to be overlooked; indeed, it ought always to be held in view, for I imagine there are but few surgeons who have not been called upon to treat examples of scalp wounds, or patients who, having had cranial blows and being supposed to have been cured, have, on going to work or moving about, or after some indiscretion of diet, complained of headache, restlessness, giddiness, nausea, or even vomiting, with more or less febrile disturbance—all these symptoms being those of cerebral irritation, or the first step of inflammation. Or possibly the patient has complained only of local pain at the seat of injury, and the surgeon on examination finds some swelling of the soft parts over the bone or some change in the appearance of the wound, its healthy granulating surface having assumed a pale, flabby condition, always suggestive of an early osteitis or periostitis. “Acceleration or hardness of pulse,” wrote Percival Pott, “restlessness, anxiety, and any degree of fever, after a smart blow on the head, are always to be suspected and attended to. . . . When there is a wound, it will for a time have the same appearance as a simple wound. But after a few days all these favourable appearances will vanish; the sore will lose its florid complexion and granulated surface, and become pale, glassy, and flabby; instead of good matter, it will discharge only a thin discoloured sanies, and the pericranium will separate from the bone. The first appearance of alteration in the wound immediately succeeds the febrile attack, and as the febrile symptoms increase the sore becomes worse and worse. . . . Through the whole time, from the first attack of the fever to the last and fatal period, an attentive observer will remark the gradual alteration of the colour of the bone, if it be bare. At first it will be found to be whiter and more dry than the natural one, and as the symptoms increase the bone inclines more and more to a kind of purulent hue or whitish colour.” These extracts I have taken from the works of Percival Pott, who first drew attention to this danger of bone inflammation as a result of cranial injury a century ago, but possibly made too much of it. He regarded it as the chief element of danger in all cases of contusion, scalp wound, or fracture, and not only trephined the skull when osteitis existed, but laid it down as a rule that “perforation of the skull is absolutely necessary in seven cases out of ten of simple undepressed fracture.” The operation for trepanning was called for in these simple cases “to prevent the effects of inflammation, detachment,

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and suppuration of the dura mater, and consequently the collection of matter between it and the skull.” From this over-estimate of the value and necessity of the operation of trephining in cases of fracture, and the comparative rarity of cases of abscess between the bone and dura mater as a direct result of contusion, surgeons have been prone to treat too lightly the risks of a secondary osteitis following bone injury, whether complicated or not with scalp wound or even with fracture, and consequently to neglect what was good in Pott’s teaching. As a result, I feel sure that many lives are lost yearly, and that many narrow escapes from death occur. I have the notes of some fatal cases of the kind before me which I have taken from the post-mortem records of Guy’s Hospital. In four of these pyæmia was the immediate cause of death, and such a result was probably brought about by the inflammation of the venous channels of the diploë of the injured bone. I will not weary you by reading all the details of the cases, but will lay before you their chief points.

CASE 13. *Scalp wound; osteitis; necrosis; pyæmia.*—T. G—, a man aged twenty-two, having fallen from a height, came into Guy’s Hospital with a scalp wound and a compound fracture of his leg; he died from pyæmia. The scalp wound had apparently healed, and the man with his compound fracture seemed doing well in all ways, when on the tenth day headache and febrile disturbance appeared, followed by swelling in the seat of cranial injury, reopening of the wound, and suppuration of the parts covering the bone, from which the pericranium had loosened. Indications of pyæmia soon appeared, but no general head symptoms, and he died in two weeks. At the necropsy, the anterior half of the parietal bone beneath the scalp wound was of a whitish colour, bare for a space of three by two inches, and apparently dead. The necrosis extended through the bone, and on the surface of the dura mater beneath the bone there was lymph with pus, as also on the arachnoid surface. The brain was healthy. There were pyæmic abscesses about the body.

CASE 14. *Scalp wound; osteitis and necrosis of the injured bone; meningitis; pyæmia.*—Eliza S—, aged forty, came into Guy’s Hospital with a large scalp wound over the right parietal region, and exposed bone. The injury was the result of a fall off an omnibus, which for a few minutes stunned her. The next day she complained of headache, and on the fourth day it was incessant. On the ninth day sleeplessness and indications of fever appeared; the wound also became unhealthy. On the twenty-first day there were rigors, and on the twenty-fifth some hemiplegia on the left side, for which the operation of trephining of the right parietal bone was performed, and some fetid pus evacuated from beneath the bone. The dura mater beneath the bone was velvety. Convulsions soon came on, and death in a week. At the necropsy, the whole thickness of the right or injured parietal bone was found to be dead, and the dura mater beneath discoloured. The surface of the brain corresponding to the dead bone was covered with pus. Pyæmic abscesses were present in the lungs and liver.

CASE 15. *Scalp wound; osteitis of the external table; fracture of the inner table; pyæmia.*—Edw. N—, aged eighteen, having received a scalp wound to the right of the vertex of his skull from a falling bucket, came to Guy’s Hospital without any head symptoms, and had his head dressed. The wound healed rapidly without pain or trouble in about ten days, when some local swelling appeared, followed in two days by fever and rigors. In this condition he was admitted into the hospital, where pain and swelling of the right elbow joint appeared, and later on chest symptoms, which proved fatal three months after the primary accident. After death, the outer shell of the parietal bone beneath the scalp wound, to the extent of an inch and a half by one inch, was necrosed, but it had not been fractured. The inner surface of the corresponding area of bone was fractured, the fracture lying in the long axis of the oval necrosed piece. The fracture was a mere fissure, slightly starred, and its edges were perceptibly raised. A little stringy lymph hung about the bone. Over the dura mater corresponding to the fractured bone there was a yellowish patch of lymph. The brain was healthy. There were pyæmic abscesses in the lungs, liver, and elbow.

CASE 16. *Scalp wound; exposed and inflamed bone; death from bronchitis.*—A man, aged twenty-three, having been jerked off the shaft of a cart, received a blow and a wound over his left temple which exposed the bone. There were no head

symptoms. The wound was carefully dressed antiseptically, and for a week everything went on well. At the end of that time his temperature went up to 104° 6', and the glands of his neck commenced to enlarge. On the tenth day he had paralysis of the left facial nerve, and bronchitis set in, which quickly destroyed the patient, three weeks after the injury. At the post-mortem examination, two square inches of the left or injured temporal bone were exposed. The bone was dry and discoloured, but there was no obvious necrosis. The diploë of the bone in the line of section of the calvaria on the left side was more vascular than that on the right side. The brain and dura mater were healthy. The bronchial tubes were filled with viscid mucus. The other organs were healthy.

CASE 17. Scalp wound; necrosis of bone; abscess in the brain.—A male child, aged three, six weeks before death fell on his forehead, causing a wound one inch above the left orbit. No head symptoms were induced by the fall, and for three days all seemed to be well, when he fainted in his mother's arms. He was then brought to Guy's Hospital, and requested to be left; but to this the mother objected. A few days later the child again fainted and vomited, and as the vomiting persisted the mother brought her child into the hospital. At that time, sixteen days after the accident, the wound had healed, and the scar was adherent to the bone. The child vomited daily, and his temperature was just above normal. A week later, without any important change in the symptoms, the child had a fit which lasted an hour. During the fit the right leg was rigid, and the arm with the fingers and thumb became spasmodically flexed. The left limbs also moved spasmodically. Temperature 106°. In two days the child died. After death the frontal bone at the seat of injury was covered with purulent lymph beneath the pericranium. Beneath this the bone was rough and ulcerated. The inner table over a space the size of a sixpence was opaque yellow. When sawn through, a piece of the outer table was loose and necrosed. The dura mater at this spot was adherent to the brain. There was a little pus on its outer surface. The left frontal lobe of the brain beneath this spot was soft, swollen, and fluctuating, and when cut into was found to contain a large abscess of the size of an apricot, which had a distinct lining membrane. There was no red softening.

CASE 18. Scalp wound; necrosis of bone; abscess of the brain.—A middle-aged woman three weeks before her admission into Guy's Hospital received a scalp wound from a blow upon the forehead. She continued at her work for two weeks, and it is said without any head symptoms, when she became comatose and died in a week. She was brought to the hospital in the dying comatose stage. At the post-mortem examination a sloughing wound was found to occupy the centre of her forehead, and beneath it bone was exposed. The surface of the bone was yellow and dead, but not depressed. The area of dead bone was separated from the living by a shallow groove. The inner surface of the bone was blackish; the diploë was full of pus. There was chocolate-coloured pus beneath the dura mater of the injured part, and the brain beneath was suppurating, the abscess burrowing backwards.

CASE 19. Contusion of cranium; Pott's "puffy" tumour; trephining; meningitis; death; bruised brain.—W. L., aged forty-six, was admitted into Guy's Hospital, under the care of Mr. Howse, on Dec. 13th, 1882, fifteen days after having been knocked down by a cab and stunned. He was taken home after the accident, unconscious, and remained in that state for three hours. He then vomited and brought up blood. The next day he became drowsy; and four days later he had a convulsion, which was followed by others for three days. He then became delirious and unconscious. When admitted he was in a low typhoid state, constantly muttering and picking at the bedclothes. Temperature 100° 4'. There was no paralysis. A swelling was found over the vertex of the skull. This was cut down upon, and blood was seen effused beneath the pericranium, which readily peeled off the bone. The bone was bruised and yellowish. The inch-trephine was used. The dura mater, which bulged into the opening, and was covered with lymph, pulsated. Nothing more was done, except that the wound was dressed and cold applied to the head. The delirium, however, continued, and gangrenous pneumonia set in, which proved fatal on Jan. 13th, thirty days after the accident. After death the base of the brain was found to be bruised by *contre-coup*, and there was diffused meningitis.

The cases I have quoted were all examples of osteitis and

necrosis, the result of a contusion of the bone associated with scalp wound. I could give as many more associated with fracture if they were needed, and they would all tell the same tale. In none of the cases were there any symptoms of brain injury after the accident, and in most the symptoms did not appear for a week or ten days or a fortnight afterwards. In all, the mischief which produced death had clearly originated in the bone. In none of the cases had much care been employed to guard against the secondary mischief which took place, and which led on to a fatal issue; and it may reasonably be thought that, if judicious treatment had been applied from the receipt of the accident, no such result would have been recorded. The conclusion is therefore clear, that all scalp wounds which lead down to bone should be dealt with, for at least a fortnight or three weeks, with much care; and that such cases should, if possible, be treated as in- and not out-patients of hospitals for that time. For it is not the wound treatment only which calls for care, but the patient should be kept quiet, and given a simple unstimulating diet. Stimulants of all kinds should be forbidden, and meat allowed in very limited quantities. If at the end of two or three weeks, or thereabouts, no local or general symptoms appear to suggest mischief, the duties of life may be gradually recommenced. But even then a caution should always be given to observe care.

When local symptoms appear, such as have been described, a free incision down to the bone where no wound exists, or a free separation of the pericranium where there is a scalp wound, always does good. And should any symptom appear or persist which even suggests any intracranial complication, the operation of trephining should at once be had recourse to. "The spontaneous separation of the pericranium, if attended with general disorder of the patient, with chilliness, horripilation, languor, and some degree of fever, appears to me," says Pott, "from all the observations I have been capable of making, to be so sure and certain an indication of mischief underneath, either present or impending, that I shall never hesitate about perforating the bone in such circumstances. When there is just reason for supposing matter to be found under the skull the operation of perforation cannot be performed too soon; it seldom happens that it is done soon enough. The perforation sets the dura mater free from pressure, and gives vent to collected matter, but nothing more. The inflamed state of the parts under the skull, and all the necessary consequences of such inflammation, call for all our attention fully as much afterwards as before; and although the patient must have perished without the use of the trephine, yet the merely having used it will not preserve him without every other care." The prevention of this fatal trouble is, however, the more important point to emphasise; and for that purpose I bring the subject before you. Its early treatment may be beneficial and successful; its later treatment cannot be said to be so. Let us, therefore, teach the necessity of keeping patients with all but minor scalp wounds, and with those even where the bone is exposed, quiet and unstimulated for some weeks after the receipt of the injury where it can be done, and by so doing give nature an opportunity of repairing the mischief in the bone, which, though unseen, may reasonably be expected to be present after the application of a force sufficient to produce a scalp wound or a more severe injury. When a blow upon the head is known to have produced a fracture, the case is likely to be treated carefully; whereas, when no such fracture can be made out, and there is little or no external evidence of injury, the same care is not likely to be observed, although in both cases the violence which had been employed may have been equal. Yet in both cases the dangers of cranial osteitis from contusion are about the same. The fact, I am sure, requires to be emphasised, that cranial contusions, whether associated or not with fractures or with wounds, are always matters of serious importance, and as such should be treated from the first. Having dwelt upon the dangers of these cases, and illustrated some fatal results, I propose to quote a few examples of their successful treatment.

CASE 20. Scalp wound, and subsequent osteitis, treated by trephining; fissured bone discovered; cure.—Catherine S., aged twenty-eight, came into Guy's Hospital in July, 1884, under Mr. Howse, with a scalp wound and fissured fracture of the skull, the result of a blow from a machine. She had no head symptoms, either at the time of the accident or after, and in six weeks she was discharged, supposed to be cured. A month later she was readmitted for continual

headache and local pain in the seat of the former injury. She stated that she had not been able to work since she left the hospital. The old wound had reopened a week after leaving. On her readmission bare bone was felt—indeed, a piece of dead bone was taken away. In a day or so the pain in the head had much increased, even to make the patient scream. A crucial incision was then made down to the skull, when a fissured fracture was discovered. This operation did not give relief; consequently, she was trephined over the seat of fracture. The bone was found to be very dense and thickened, and its outer surface rough and pitted. No diploë existed. The dura mater was rough, and shaggy from adherent lymph. All cerebral symptoms had disappeared on the second day after the operation, and a rapid cure took place.

CASE 21. *Contusion of the head; otitis; trephining; discovery of fissured fracture; cure.*—Harry D—, aged five, was admitted into Guy's Hospital, under the care of Mr. Howse, on Sept. 29th, 1880, having two weeks previously, in a fall, struck the left side of his head against a kerb-stone. He was unconscious after the accident for a few minutes, when he vomited. He was kept in bed for two or three days, and was supposed to be convalescent, when he had headache, and at night some lightheadedness. And these symptoms persisted up to his admission to the hospital. At this time, a fortnight after the injury, a fluctuating swelling about an inch in diameter was discovered beneath the seat of injury behind the coronal suture. There was some fever with night delirium, but no paralysis. He was trephined at the seat of swelling, when a fissure in the bone was discovered, and the dura mater was seen covered with lymph. From this time everything went well; headache and delirium disappeared, and convalescence followed.

CASE 22. *Scalp wound; "puffy" swelling; trephining; cure.*—William T—, aged four, was admitted into Guy's Hospital, under Mr. Howse, on June 5th, 1885, having a week previously been struck above the right orbit by a swing and received a scalp wound down to the bone. He progressed well for two or three days, when the wound began to inflame and he became feverish. In this condition he was admitted. The wound at this time was sloughing, and the bone was exposed. Temperature 101°. A few days later, as no improvement took place, and the child was drowsy, the bone was trephined at a spot near the wound, which had become "puffy." The dura mater where exposed was granular, and the bone eroded. All symptoms at once disappeared, and a rapid recovery followed.

I will now pass on to consider the treatment of head injuries in the light of the view I am now advocating, for I am under a strong impression that such a view cannot do otherwise than have an important influence in rendering treatment more simple and intelligible; since, if in every grave, or indeed apparently uncomplicated, example, associated with more or less complete paralysis of at least one of the brain functions, such as is indicated by unconsciousness, the surgeon recognises to the full the force of the fact that the brain as a material organ is bruised or otherwise injured, a line of treatment is likely to be at once suggested which can best favour the restoration of the injured part towards health. Amongst the means which would probably find favour, physiological and mechanical rest would stand foremost, with the administration of nourishment simple enough to maintain the normal powers and help repair, and not stimulating enough to excite action. Everything in the form of alcoholic stimulants or solid meats would be forbidden; and this line of treatment would, moreover, be maintained for weeks, and possibly for months, the severity of the injury and the primary symptoms forming the surgeon's best guide to a decision. This careful line of treatment would also be adopted under the wholesome dread of exciting, by sins either of omission or of commission, the one common complication which the surgeon should ever have before him—namely, an inflammatory action in the injured organ. For experience speaks in no feeble terms that this action is readily started and with difficulty quelled, and that it is by such inflammatory changes in the injured brain that most head cases, simple or severe, are brought to a fatal termination. Mr. Hilton recognised this necessity nearly thirty years ago, for he taught "that recognised lesions of the brain and its membranes, associated with blows upon the head (whether the cranium be fractured or not), do not generally, or as a principle of treatment, obtain that extent of mechanical rest which is consistent with the expectation of perfect and complete structural repair. This error in the treatment of

such cases is one of the chief sources of the diseases of the brain and its membranes which are met with in practice. In cases of injury of what may be called the coarser structures, with more simple functions attached to them, we see that without perfect restoration of the structures their functions are not efficiently performed, and if used too early and too much they become painful and assume a chronic inflammatory condition. Such soft parts require weeks or months for their repair. Surely, then, we ought not to deny the necessary and proportionately much longer time for the repair of the more delicate brain tissues; a repair, be it remembered, which cannot be accomplished by any direct aid from the surgeon, but only by Nature herself employing her chief agent—Rest." It is a pleasure to me to be able to quote these apt sentences, framed by a former teacher and colleague upon this important subject—although many years have passed since they were uttered,—to support the views it has been my privilege to bring before you—views, I may say, that I have for long taught at Guy's, and have reason to believe with some advantage.

Should symptoms of intracranial irritation or inflammation show themselves, they should be dealt with actively, as, from the nature of the brain and its membranous coverings, the process once started soon spreads. In the early stage the application of cold to the head by means of a Leiter's metallic tube is the most efficient local, and free purgation the most effective general, means, with very low diet. If the inflammatory action is great, a free bleeding from the jugular vein or from the arm is strongly to be advocated, and this operation may in many cases be repeated with much advantage. I am convinced I have saved some lives by this treatment. In chronic cases the value of mercury taken internally cannot be doubted.

These, then, are the common lines upon which the treatment of the common factor of all cranial injuries, simple or severe cerebral injury, should always be based; and they should likewise form the lines of treatment of all its complications. Thus, if a simple fracture of the vertex, base, or of both, complicates the case, the treatment is the same. The cerebral injury needs the surgeon's care, and not the fracture, which will take care of itself. A cranial fracture will heal in the same way as other fractures, but it will take a much longer period; and fractures of the base of the skull are apparently amongst the slowest. In specimens 1084⁸² (eighty-four days), 1084⁸⁵ (ninety-one days), and 1084⁸⁶ (eight years), of the Guy's Museum, and in others of our own College museum, this point is indicated. The fractures of the skull will, at any rate, probably heal sooner than the cerebral injury will be repaired. The treatment for the latter will consequently have to be continued after the fracture has healed. If the fracture be but *slightly depressed*, whether simple or compound, and it appears only as a *fissure*, the case had probably better primarily be left alone, and dealt with secondarily on the smallest indication of cerebral trouble; for in these cases there is really comminution of the inner table, and consequently nothing in the form of bony spicules to fret and irritate the dura mater, and thus help forward a meningitis. To trephine in order to elevate this form of fissured fracture would, therefore, be to add another danger to a case in which the form of cerebral injury common to all already exists. If the fracture be *depressed, starred, or comminuted*, whether simple or compound, the elevation of the depressed bone should be the rule of practice, and the removal of all the splintered fragments of the inner table carefully carried out, the object of the operation being more to take away what, if left, must irritate the dura mater, and so add to the existing harm, than to relieve the depression. This operation should be performed as much in simple as in compound fractures, for the condition of the bones is the same in both; and with our modern treatment of wounds the danger of the operation in simple fracture is not materially increased. In *punctured fractures* the operation of trephining, undertaken with the object of removing the broken and displaced fragments of bone, should be a rule of practice never to be deviated from. The depressed and comminuted inner plates of bone to a certainty, if left, at a late if not early period of the case, irritate the brain and its coverings, and so set up an encephalitis.

How far the presence or absence of what are called brain symptoms should influence a surgeon in his decision as to surgical interference in the different forms of depressed fractures of the skull we have been considering has been

much argued. For the surgeon is quite unable in bad cases of cranial injury to differentiate symptoms, and to say how far those that are present in any individual case are due to the common factor—cerebral injury—which resulted from the force that produced the fracture, or how far they are caused by the depressed and fractured bone. But I am not sure that this is a point of much practical importance, for in a bad case of fracture of the skull cerebral injury is probably already severe, and the operation of elevating depressed bone and of removing comminuted fragments is not likely to aggravate the trouble; whereas in a less severe example in which the cerebral injury is likely to be less serious, the existence of depressed bone and of comminuted fragments must act injuriously, and should consequently be removed. Under all circumstances, it is consequently the surgeon's duty to remove whatever sources of trouble the presence of a depressed fracture may bring to an already serious case of cerebral injury.

The operation of trephining or of elevation of bone in depressed fracture is called for more with the object of removing from the brain what may or will be sources of local irritation rather than with any view of removing the effects of the depressed bone; for it is well recognised that, *per se*, a large area, and a considerable amount, of depressed bone are required to bring about symptoms of compression in an otherwise uninjured brain. Again, it is well known that a considerable extravasation of blood upon the surface of the brain, probably five or six ounces, whether between the bone and dura mater or in the cavity of the arachnoid, is required to bring about marked evidence of its presence, in the form of paralysis from compression. The rupture of the middle meningeal artery is a special complication of cranial injuries, or of fracture of the skull, but I do not propose to discuss it here at any length. I cannot, however, pass it by without referring to the exceedingly able article upon the subject published in the *Guy's Hospital Reports* for 1886, vol. xliii., p. 147, by my friend and colleague, Mr. H. A. Jacobson, since it contains not only a masterly account of every case on record up to date, but also a summary of the whole subject, which claims the close attention of every surgeon. His summary is as follows: 1. That the violence which causes middle meningeal hæmorrhage is often slight, and that in these cases no fracture may be present. 2. That where there is a fracture, it is often a mere fissure, and may involve the internal table only. 3. That the history of the case, and, above all, an interval of lucidity or consciousness, are invaluable; the latter being worth all the other symptoms put together. 4. That the symptoms of compression are in some cases deferred; that their onset may be then very sudden and rapidly fatal, failure of breathing being a marked feature. 5. That in those cases where the history is deficient, especially as to any interval of lucidity, and where it is difficult to be certain about the existence of hemiplegia, dilatation of the pupil on one side, that side corresponding to the clot, is a sign of great value. The explanation of this sign, that the third nerve is being pressed upon by a clot large enough to reach into the middle fossa, we owe to Mr. Hutchinson, with whose name in future this condition of the pupil should be associated. 6. That after trephining, exposure and partial removal of the clot, very severe hæmorrhage may set in and prove difficult to arrest. 7. That in severer cases laceration or contusion of the brain are only too frequently complications. This latter conclusion consequently links this special class of cases with the more general number of cranial injuries, and enables the surgeon to look upon them as a whole in the light in which I have now placed them before you.

There are many other questions in the surgery of cranial injuries which require elucidation, but time will not allow me to bring them under your notice. The points and questions I have selected are such as I believe to be most important to enable the younger surgeons and practitioners to read rightly the manifold and somewhat puzzling phenomena which severe cranial or cerebral injuries exhibit, and I have some confidence in the belief that, if the views I have expounded were accepted, the teaching and understanding of cranial or cerebral injuries would be greatly simplified. In conclusion, I must ask you who have listened to me so patiently and kindly to think over the questions I have ventilated, and to accept from me my warmest acknowledgments of the honour you have conferred upon me by allowing me, as your Hunterian Professor of Surgery, to deliver these lectures from this chair.

CASE OF STRANGULATED CÆCAL HERNIA, TREATED BY HERNIOTOMY AND LAPAROTOMY; DEATH FROM APOPLEXY.¹

By SURGEON-MAJOR W. GRAY,
SENIOR SURGEON, JAMSETJEE JEJEEBHROY HOSPITAL, BOMBAY.

A. L—, a Pathan, by trade an itinerant fruit seller, aged thirty, was admitted to hospital on May 13th, 1887, for a strangulated inguinal hernia on the left side. He stated that a reducible hernia had existed for six years, giving him little trouble, but that on the day previous to his admission, while on his rounds, it had descended and he was unable to get it back. He accordingly came to hospital for relief. The bowels had not been moved for two days. There was no vomiting; no tympanites; pulse soft and of fairly good volume; temperature 99°. It should be mentioned, too, that the patient was also the subject of a moderate degree of mitral obstruction. The scrotal tumour was the size of a small coconut, rather solid to the feel, and somewhat tender. As far as could be ascertained he had undergone no treatment before being seen at the hospital. An ice-bag was placed over the tumour, and a morphia injection given, but they failed to bring about any improvement in the state of affairs. Taxis was tried after a suitable interval, but without avail. At 10 P.M., as he was just beginning to show a little distress, I was sent for, and taxis, under chloroform, having again failed, I proceeded to perform herniotomy. On opening the sac—a practice which is the rule in the Jamsetjee Jejeebhoy Hospital—the first thing that came into view was the vermiform appendix. Further examination showed that the contents of the sac were the cæcum and about three inches of the ileum, all of which were healthy-looking, but a little congested. The cæcum was filled with faecal matter and a little gas; the small intestine above was also distended with liquid feces. The ring having been enlarged, reduction was attempted, but, to my surprise, I was unable to make the slightest impression on the hernia. The opening was still further enlarged until the gut lay loose in it, so to speak, and another and futile attempt at reduction was made. My next step was to try to remove some of the contents of the cæcum, but even with a large cannula they were too solid to come away. In any case, the little that was taken out was immediately replaced from the ileum. As far as I could discover, there was no obstruction to the return of the protrusion in the vicinity of the ring itself; all seemed free enough. The sensation conveyed during each attempt at reduction was that of pushing against some semi-elastic mass within the abdominal cavity, or as if the cæcum had descended behind the peritoneum. The gut would not "run" or "slide." Being now satisfied that I should not succeed in reduction by the usual method, I determined to open the abdomen between the umbilicus and pubes. I concluded that, if I failed to push the gut in, it could at least be pulled back. No further time was lost, therefore, in carrying out this determination; the abdomen was opened, and this is what I found: the cæcum had come across the cavity, from its normal position to the left ring, dragging with it a short meso-cæcum as well as a considerable amount of the peritoneal lining. Behind and above this, effectually blocking the road back, was a mass of small intestine. This being got out of the way, the ascending colon was sought out and seized, and after some traction, aided by pushing from without, the hernia was brought back into the abdominal cavity and properly replaced. All the parts, as well as the peritoneum generally, were now cleaned, and the abdominal wound closed with silk and wire sutures in the usual manner. My next step was to place a double silk ligature round the neck of the sac and fix the mass in the ring with a couple of sutures. The inguinal wound was then closed and both were put up with dry antiseptic dressing. The operation lasted an hour and a half. Notwithstanding its length and severity, as well as the mitral disease from which the patient suffered, he bore the anaesthetic wonderfully well.

¹ Read before the Bombay Medical and Physical Society.

Chloroform and Bryant's mixture were given alternately. In four or five hours he had quite recovered from its effects.

The operation described above was done under circumstances of some little difficulty. It was undertaken at night, the place was badly lighted, and the weather was very hot and oppressive. My observations of all the points connected with the case were not, therefore, so accurate or minute as they might have been under more favourable conditions.

For some days the patient went on fairly well, the temperature keeping generally at 100° or below. There was no pain or tympanites to speak of. He had two healthy motions on May 17th. He complained of cough on the morning of the 19th, and in the afternoon the temperature rose suddenly to 104·8°. Next day an attack of acute bronchitis was established. The coughing caused a good deal of abdominal pain. On the 20th the dressings were removed for the first time, when both wounds were found to be firmly united. They were re-dressed with a little dry boric cotton and oakum. The cough became less under treatment, and the temperature fell to normal. This favourable turn, however, was not to last. Diarrhoea set in on the morning of the 21st, and later on blood and mucus appeared in the stools. For the next ten days or so this state of matters continued. There were from six to ten liquid motions daily, usually containing blood and mucus, sometimes without either. The temperature remained at or about 100°, while the patient became steadily weaker and more emaciated. There was little or no abdominal pain, nor was there any tenderness about the cæcum. Every kind of anti-dysenteric treatment at our disposal was tried, but without effect. The wounds were again opened on the 23rd and the sutures taken out. No further dressings were required. On the 29th the calls to stool were hourly, and the patient became much weaker. A turpentine enema, with an increased amount of stimulant, brought about considerable improvement, and from this time he took a turn for the better. It now seemed evident that the source of the trouble lay in the rectum, and the appearance of pus in the stools served to confirm this view. Astringent injections, chiefly nitrate of silver, were now resorted to, with considerable benefit. The appetite improved, and he began to regain strength daily, although the rectal discharge still continued. I now had every hope of bringing him round, when about 10 o'clock on the morning of June 7th, after I had paid him my usual visit, he suddenly became unconscious, with muscular tremor, dilated pupils, and stertorous breathing. The temperature shortly rose to 103·4°, and the pulse was almost imperceptible. From this state he never rallied, and died at 4.30 in the afternoon of the same day.

I was fortunate in being able to obtain a post-mortem examination, a chance which does not often occur in surgical cases in Bombay; this was held the next morning. The wounds were soundly healed. On opening the abdomen everything appeared normal. Nothing was displaced, and there were no signs of peritonitis having occurred. The cæcum was in its proper position, the only thing abnormal about it being some extravasated blood in the neighbouring cellular tissue, showing, no doubt, where the lacerations had taken place at the time of its last descent. Being laid open, its mucous membrane, as well as that of the rest of the colon down to the sigmoid flexure, was apparently healthy. Lower down, however, and in the rectum, were several ulcers. The source of the dysenteric discharge was thus clearly demonstrated. A careful examination of the left inguinal region was next undertaken. Looking at the parts from within, the situation of the internal ring was indicated by a dimple in the peritoneal lining of the wall. No trace of a canal could be demonstrated. On opening up the external wound and dissecting the parts carefully, the external ring and inguinal canal were found contracted, and plugged by the neck of the sac encircled by its double silk ligature. All the parts were firmly fixed in position, and matted together by recently formed fibrous tissue. In fact, a radical cure had been obtained. An examination of the body of the sac, which still remained in the scrotum, showed its opposing walls adherent throughout. It was in process of obliteration, and it required some little force to tear asunder the adhesions. Proceeding to the heart, the mitral orifice was seen to be narrowed, while on the segments of the valves were several nodules of fibrin loosely attached and easily separable. Here at least was a plausible explanation (already suspected)

of the apopleptic attack—namely, the lodgment of one of these vegetations in a cerebral artery. To confirm this view, or otherwise, the brain was removed and directions were given to have it preserved and hardened for later and more careful examination. Unfortunately, these directions were not attended to, and when I called for the brain it was decomposed beyond recognition. Considering all the circumstances, however, the explanation already suggested of the fatal result is probably the correct one.

Connected with this case several very important points invite remark. First, the hernia was cæcal. Within the last three or four years I have had to deal with three cases of strangulated cæcal hernia in adults, but all were on the right side. In the case just detailed the hernia was on the left side. As far as I can recollect, only one other case of the kind has been recorded, the reference to which I am unable to lay hands on just at present. The complete failure to reduce, after the usual operation of herniotomy, is noteworthy. In each of the cases of right cæcal hernia just mentioned difficulty of reduction was encountered, but I succeeded at last. Judging at least from my experience, it would seem that a cæcal hernia is more difficult to reduce than any of the other varieties. The effecting of reduction by laparotomy, after herniotomy had failed, is, as far as I know, an operation that has not previously been recorded. I see in one of the journals recently a writer advocating laparotomy for strangulated hernia, but I do not think his views are, for obvious reasons, likely to be adopted, except, indeed, in cases of necessity, like the one under discussion. It has since occurred to me that inversion of the patient might possibly have got the obstructing mass of small intestine out of the way, and have thus permitted of the return of the cæcum without the necessity of resorting to the extreme measure described. Considering especially the adverse circumstances under which the operation was done, the rapid healing of both wounds without peritoneal or other inflammation may reasonably be regarded as a triumph of simple antiseptic surgery. Thorough cleanliness and dry absorbent dressing with iodoform were the only means employed. All the elaborate precautions recommended in books were disregarded. The tolerance of the peritoneum to prolonged operative interference is also well illustrated in this case. The vitality of the patient seems remarkable. Although the subject of mitral disease, he bore the anæsthetic perfectly well for an hour and a half, and appeared to suffer in no way from its effects. The complications, too, during the progress of the case, the severe attack of bronchitis, and the exhausting rectal discharge, were, together with the operation, not able to kill him. But for that untoward embolus I feel confident he would have come safely through all his troubles. The last point to be noted is the ease with which a radical cure of the hernia was effected by the simple procedure of placing a silk ligature on the neck of the sac, and fixing this in the ring by a couple of wire sutures. Its success was fully demonstrated at the post-mortem examination. Of late years it has been my usual practice to place a ligature on the neck of the sac in all cases of herniotomy, but before doing so a ring of the serous lining, opposite the point where the ligature is to be placed, is excised. This is done by way of promoting adhesion of the parts. The body of the sac is never removed; it is merely rendered aseptic, and it never gives the least trouble afterwards. Not wishing to cause further delay in the present case, I omitted to excise the ring of serous lining, yet adhesion took place quite as well without this step as with it. Authorities on the radical cure of hernia recommend the removal of the entire sac, a most troublesome piece of dissection. The examination here, however, demonstrated what I had already been pretty well satisfied of—namely, that this part of the operation is altogether unnecessary. The sac has only to be rendered aseptic, and, if very large, drained through a counter-opening, when it may safely be left to take care of itself.

Killiney, Ireland.

NEW NURSES' HOME, GLASGOW.—The inauguration of the new Nurses' Home, in connexion with the Royal Infirmary, took place on the 31st ult. It has been erected at a cost of upwards of £8000, and can accommodate 82 nurses, so that there are now, altogether, single rooms unconnected with wards for 120 nurses. As soon as the home is occupied forty beds will be liberated in the hospital and available for patients.

CASE OF LAPAROTOMY FOR INTESTINAL OBSTRUCTION.

By N. MAYNE, L.K.Q.C.P.I., &c.

ON March 10th, 1887, I was called to see W. A—, aged sixty-seven, who was reported to be suffering from severe pain, whose abdomen was greatly swollen, and whose bowels had not moved for several days, notwithstanding the administration of large doses of medicine. On my arrival I found the patient very desponding, pulse 120, temperature 101.1°, tongue brown and dry, insatiable thirst, constant vomiting, abdomen tympanitic, and in great pain; the tenderness of the abdomen was most intense, and was said to have begun at a point midway between the umbilicus and pubes and to the left of the linea alba. The rectum was empty, and presented no sign of disease. He did not suffer from habitual constipation. Having administered an enema of warm water and olive oil, the greater part of which escaped by the side of the enema tube, I had the abdomen well rubbed with castor oil, a large poultice applied, and gave hypodermically half a grain of morphia and one-hundredth of a grain of atropine. I also ordered a draught composed of morphia, tincture of belladonna, and tincture of hyoscyamus to be given in three hours, and repeated every fourth hour should the pain continue; a turpentine and opium stupe to be applied at bedtime over the abdomen; egg-and-brandy to be given often and in small quantities; and to have in the morning a tablespoonful of castor oil with a teaspoonful of turpentine, if not better. I at the same time told the patient that if he did not obtain relief before my visit next day, which I considered improbable, I thought it would be necessary to resort to an operation, the nature of which I explained to him.

On seeing the patient the following morning I found him very prostrate; pulse 140; temperature 102.2°; vomiting very severe and stercoraceous. I told him I believed the only chance of saving his life was an operation, and if it was to be successful the sooner it was performed the better. He said he was quite resigned to die, but that if not better he would come into the hospital next day. I ordered the treatment to be continued and poultices of bran to be applied every second hour, and before leaving cautioned him against taking croton oil or any other strong purgative, for by so doing he would make his case hopeless and destroy any chance of an operation being successful, and then I should have to reconsider the advisability of undertaking it. Another doctor was called in two or three days afterwards, and was told my opinion. He recommended him to go to the hospital and consent to the operation.

On March 15th, when brought to the infirmary about 2.30 P.M., the patient was in a state of collapse, with a pulse of 140 and a temperature of 103.2°, and to all appearance dying. Having given ether hypodermically, and got him to swallow some brandy, heat being applied to his body by means of hot-water jars, rubbing, and hot blankets, he rallied. There being diffuse bronchitis in both lungs, it was with some fear that he was put under the influence of chloroform. Having made an incision about four inches in length, and cautiously dividing on a director all the tissues, the peritoneum was opened. I intended to have examined the contents of the abdomen carefully with my hand, in order to discover the seat of stricture, and, if necessary (using every precaution), withdraw length after length of intestine till I found the part where the obstruction was situated; this, however, was not required, as the intestine appeared through the opening in a gangrenous state. With great care I passed my finger through the lower end of the wound in the peritoneum, and found the intestine tightly bound down to the peritoneum. On withdrawing my finger, all support to the intestine being removed, it immediately burst, and a large escape of flatus and thin feces resulted. With great difficulty I drew the intestine through the wound, which I protected as much as possible with sponges. When the discharge from the intestine had lessened, I carefully cleansed the wound of the abdomen, and stitched the intestine to its lower part, taking care that the stitches were in sound tissue. I then closed the wound, leaving an opening where the intestine was fixed of about two inches. The wound was covered with a pad of lint well impregnated with iodoform, which was kept *in situ* by a strong calico binder.

The patient was placed in a well-warmed bed, an ounce of brandy and two grains of quinine ordered to be taken, and morphia and atropia administered hypodermically. Temperature 103.1°; pulse 160, weak and compressible. He declared himself greatly relieved. He was then ordered a pill every fourth hour, composed of two grains of sulphate of quinine, half a grain of opium powder, a quarter of a grain of extract of belladonna, and three grains of hyoscyamus; and to have a tablespoonful of brandy-and-egg mixture every hour. On visiting him at 6 P.M., I found the dressing and bed saturated with the discharge of feces. The dressing and the soiled linen were changed. He said he was very easy, but weak, and could not live. At 10 P.M. I had again to change the dressing and bed linen. Temperature 103.3°; pulse weak and irregular, but could not accurately count it. A catheter was passed, and fourteen ounces of urine drawn off.

March 16th.—At 4 A.M. had to change dressing and linen. Again complained of great weakness and sensation of falling through the bed. Temperature 103.2°. The cough is very troublesome, and forces feces through the wound.—8 A.M.—Vomiting. Cough very troublesome. Changed dressing. Temperature 104°; pulse scarcely to be felt. Continued pills; ordered two ounces of champagne and dessertspoonful of brandy every second hour; a tablespoonful of very strong beef-tea to be given between each dose of champagne. Passed catheter.—12 noon: Pulse better. Vomiting ceased, but cough very troublesome.—9 P.M.: Appeared to be dying. Complained of want of air and inability to breathe. Gave brandy and half a drachm of ether. Turpentine stupe applied to back and chest. To have a mixture of carbonate of ammonia, bark, and senega; the brandy to be increased to a tablespoonful dose.

17th.—Temperature 104.2°. Treatment to be continued. Wound dressed three times. The case appeared hopeless.

18th.—Temperature 103.3°. Cough very distressing, and considerable bronchorrhœa. When dressing the wound, owing to a fit of coughing, two of the stitches in the intestine gave way; it was again stitched to the wall of the abdomen. As it was necessary to dress the wound at least three times daily, owing to the discharge from the intestine, I thought that in order to prevent it I would make a roll of lint about two inches in circumference and same in length, round one end of which I securely fastened a strong ligature, and, having the roll covered with an ointment of iodoform and vaseline, I carefully put it into the wound in the intestine, leaving the end with the ligature outside, and securely fastened it with plaster to ensure that it did not slip into the intestine; over all I put the usual dressing and binder.

19th.—Temperature 103.3°. Although very weak, he appeared better. On dressing the wound I found the roll of lint (*cork* I may call it) answered its purpose and came out easily on pulling the ligature, a considerable discharge of feces and mucus escaping after its removal.

20th.—Temperature 103°; pulse 146. Omit opium in pills, except at bedtime. Wound looking more healthy.

22nd.—Temperature 101.3°; pulse 120. Brandy reduced to a dessertspoonful. Washed out rectum by an enema of warm water and olive oil, carefully observing if any appeared in the opening in the intestine, but none could be seen. The rectum was from this date daily washed out; also every day a soft indiarubber tube was passed into the upper part of the intestine, and it was washed with warm water and olive oil. The intestine was united to the abdominal walls, and the sutures were removed.

25th.—Temperature 101°; pulse 120. Expressed himself as "getting well," but the cough and bronchorrhœa were very distressing. Considerable œdema of feet, and great pain in left leg. Urine healthy. Had some arrowroot, which he liked. Omit brandy from alternate dose of champagne.

27th.—Temperature 100°; pulse 120. Improved. Had cornflour for breakfast and supper. Stimulants to be given only four times daily; the beef-tea not to be so strong, and in larger quantities.

28th.—Temperature 99.2°; pulse 112. Had a solid motion on removal of plug. The cough and bronchial discharge were now the only source of anxiety, and kept him very weak and desponding. He had ten drops of turpentine and twenty of tincture of squills in mixture, with ammonia and senega, every fourth hour.

30th.—Temperature 99°; pulse 100. The patient afterwards steadily improved.

In consequence of illness, I did not see the patient again till May 6th; he was then walking about the ward. Before leaving hospital I procured for him a well-fitting umbilical

hernia truss, covered the pad with indiarubber, and told him to wear it. Every day he removes it for the purpose of defecation, and does not suffer the slightest inconvenience, though he follows his usual occupation (working on a small farm). When I saw him in July last, he declared he was in better health than he had been for years.

This case I consider clearly shows that the operation is not only justifiable, but one that should be performed in cases of intestinal obstruction; and that caution should be observed not to administer drastic purgatives—a practice which, I regret, is still often resorted to.

Longford, Ireland.

THE TREATMENT OF CONSUMPTION BY RESIDENCE AT HIGH ALTITUDES.

By JOHN LOWE,

FORMERLY MEDICAL OFFICER OF HEALTH, WORKINGTON; AND VISITING SURGEON, WORKINGTON INFIRMARY.

THE discussion of the above subject at the Royal Medical and Chirurgical Society, as published in THE LANCET of May 12th, is worthy of attention. The difference of opinion on the part of eminent physicians is noteworthy. The material which guided Dr. Williams to important conclusions can hardly be considered inadequate for the purpose; nor is the mere expression of belief in the equal value of treatment at lower levels or at home sufficient to invalidate his position. It may be pardonable to ridicule a sojourn among the Alps as the best treatment for phthisis when one has not lived there. But is it wise? The climate does appear paradoxical to people in England, and I conclude from the remarks of Drs. Pollock and Quain that they have not adequate personal experience of an Alpine climate, especially in winter. I have lived there during the four seasons of the year, so there can be no *tu quoque*. A foreign physician has recently written a book to show the absurdity of sending phthisical cases to Davos. He declares very frankly that he has never sent any cases there himself, and that he has not visited the Alpine resorts. He argues from what he calls "natural laws," and the results which he has obtained in the south of France! Is there not too much of this clap-trap in our books and at our great societies? Life is not dialectics. If prejudice or Philistinism is to displace evidence in determining the treatment of disease, I do not see how therapeutics can progress. But as there is no permanently wise man, perhaps Drs. Pollock and Quain may reconsider their "most firmly" expressed beliefs.

I had an attack of phthisis in the apex of the left lung last summer. The lesion was well marked early in August, but I felt utterly unfit for work during many previous weeks. I proceeded to Davos on the advice of Dr. Clifford Allbutt and Dr. C. T. Williams, about the middle of August—that is, as soon as a pulmonary hæmorrhage permitted me. A very few days at Davos sufficed to drive away intolerable lethargy, and to restore appetite and sleep. I gained a pound in weight each week during the first three months, and kept it. At the end of eleven weeks I walked sixteen miles over a stiff pass in four hours and twenty minutes. After this I did a good deal of climbing, and indulged in exercise that was accounted violent. On Jan. 1st I went to Wiesen, and remained there in medical charge until May, when I returned to England feeling better than I had done for a couple of years before. All the signs and symptoms of phthisis are now absent, with the exception of the inevitable supra-clavicular dulness.

There can be no doubt in my case of the tubercular nature of the disease. Bacilli were present in abundance. Two of my sisters died of phthisis a few years ago, and there is a family history of the disease as complete as could be wished. It began in my case precisely as it did in my sisters, and in them the average duration of illness was under two years. They were treated, by the advice of a very eminent physician, in the manner advocated by Drs. Pollock and Quain; and, notwithstanding everything that could contribute to success in this climate, the disease never showed any evidence of arrest in either case.

When I felt what I suspected to be the earliest subjective symptoms of phthisis, I gave the English health resorts a

trial for a few weeks. During this time I steadily lost weight and strength, until at last I had no inclination to move about at all. The Alpine climate changed all this in a few days, and at present I can put the weight, throw the hammer, or walk thirty miles with any man I know, not excepting his age or size. As there could be no question about the activity of phthisis in my lung last year, I believe there can be little doubt of its arrest now.

I had the opportunity of watching cases in Switzerland in every stage of the disease. I have had the same advantage in England to a greater degree. I never felt justified in giving a favourable prognosis in cases of phthisis sent to health resorts at home. Whatever may be said at societies, or written in books, the grim fact remains that, when the practitioner discovers phthisis, he is conscious of his utter inability to cope with it in this climate. I know a great many able men in large practice, and this is how they feel in the matter. There may be others, I admit, who really believe in the efficacy of respirating and general tinkering, but I do not know them. The English health resorts are the forlorn hope of phthisis, and so-called respiratory therapeutics—so far as they concern tubercular phthisis—constitute one method of advertising. I am aware of wonderful cases that are cited in even standard books to prove startling things, but I prefer to trust the evidence before my own eyes, and to do so I must reject authority in opinion. I believe it is wise to send an advanced case of phthisis to one of the English resorts, if only for the comfort thus afforded; but I hold it to be a cruel proceeding to do so in the early stage of the disease, and when little lung tissue is involved.

Many advanced cases of phthisis are to be seen at Davos which should not be sent there. They injure the good repute of the place and benefit nobody. If phthisis were diagnosed early, when there is slight consolidation, and Davos resorted to at once, there should then be no room for contention. Anyone can diagnose phthisis when there is a large cavity &c., but it is useless to discover the disease then. A practitioner in search of useful knowledge ought to go to Davos in winter, where he will find a lamentable testimony of our ignorance. He will be wearied by people describing how they were under their doctor at home many months before he discovered that they were suffering from phthisis, and then only when his attention was arrested by a hæmorrhage, or something prominent enough to make the case clear to an old woman. Cases with a large cavity in either lung are common enough at Davos. I have often wondered why medical men send these cases there to die. It is excusable to say that we cannot cure phthisis; but I am not sure that it is equally so to have to admit our inability to recognise the disease before a huge excavation exists in the lung. There has been a great deal of bacilli-hunting in our schools, and volumes of nonsense written about the pathology and cure of phthisis in recent years. Is it not as necessary to be able to tell when a patient has phthisis? We are all acquainted with the elaborate and learned controversy as to the pathology of the small-pox vesicle, but all the eminent contenders have not equalled Jenner in controlling the ravages of small-pox. It is not necessary to be always dodging bacilli with a microscope in order to say when phthisis exists. Our own senses and a stethoscope are surely adequate, and especially for the general practitioner, who sees the disease in its early stage, and has in consequence the most valuable opportunities for becoming expert in diagnosis. This field of study is evidently neglected, and post-graduate lectures point to a time when the general practitioner will have to submit to a State examination from time to time in order to show his competence to practise. Dr. G. H. Sutton pertinently writes: "Phthisis is said to be due to a bacillus, but of what use is that view in curing phthisis? Do not be contented to love knowledge for the sake of knowledge, but for what you can do with it. The 'view' is inadequate to cure phthisis, and on this account we must look on phthisis as made up of many physiological disturbances, and it can only be cured by bringing these disordered physiological changes into order again; and here hope in the cure of phthisis can be entertained." This is, at least, common sense, and will conform with experience at Davos. "The constitutional state," says Dr. Quain, "is the most important factor in bringing about recovery." Precisely, and in an Alpine resort will be found every element that such state requires for its perfection. The climate there is the antithesis of that at home, and

herein consists its efficacy. The peculiarities of each are known to men who read medical literature, and I do not propose to touch on that topic now. I would only remark that the Alpine climate invigorates the consumptive, and our climate depresses him. Abroad he can increase his weight through muscular development by exercise; at home he may put on some adipose tissue at the expense of his muscular system. Is it necessary to ask which is the more likely to be lasting? To benefit by exercise in the open air one must enjoy the exercise. Among the Alps the consumptive is never weary of exercise, but at home he loathes it.

Our great physicians are at last convinced that pure air is useful as a preventive and as a remedy, but it is now half a century since Dr. Henry McCormack urged with great earnestness the utility of pure air, and plenty of it. His advice was treated long enough with lofty sneers and contemptuous ridicule. Dr. Boddington pleaded in 1840 for what Dr. Williams is ably pleading now. It is worthy of reflection that we have not advanced one step in the treatment of phthisis for nearly half a century. Its rational treatment is still opposed by men deservedly eminent, but the educated public outside the professional circle have been to Davos in large numbers. They have benefited themselves by the change. Their friends at home have been apt in contrasting them on their return with other relatives who came back from Hastings, Bournemouth, &c., crippled and dying. We may go on to argue; the public will act. They are acting now. McCormack and Boddington lived to purpose; they gave a verdict.

Southport.

ON THE PRESENCE OF AIR IN SUPPURATIVE SWELLINGS OF THE ABDOMEN.

By EDWARD MALINS, M.D., M.R.C.P.,
OBSTETRIC PHYSICIAN TO THE GENERAL HOSPITAL, BIRMINGHAM.

PERCUSSION in the diagnosis of abdominal swellings is a recognised source of information, and under certain conditions affords valuable aid to conclusions. Thus, in the differential diagnosis between ascites and ovarian cystoma it would be impossible to be accurate without resorting to this among other methods of solution. In faecal impactions and other complications it also gives valuable information. But it is more particularly with regard to localised swellings the outcome of inflammatory processes that I wish to call attention to a condition which, though it may be exceptional, is certainly of considerable moment in the estimation of the character of these particular enlargements, and, as a consequence, materially affects their treatment. I have met with four instances where the percussion note over the area of a limited swelling in the lower abdomen has been distinctly, and to carefully repeated examinations, resonant; and yet there has been fluid beneath in each case. In each also—and this is a point of some significance—the fluid has been purulent; in three of the four the odour was offensive, as is common in collections in the neighbourhood of the intestines; in the remaining one it was of a negative character. What is the explanation of this? It is my belief that it is due to a layer of air occupying the uppermost part of the space in the interior of the swelling, and that this arises from decomposition of the contents. The changes arising from putrefactive processes, we know, result in the generation of gases, and these, being light, find their way to the surface of the fluid which, in the usually recumbent position of patients under these circumstances, is just beneath the abdominal wall. The decomposition of the fluid in these cases is rendered more possible from contiguity of decomposing materials, always more or less present in the intestinal tract, and probably from bacilli, which find their way more readily from the intestines through tissues undergoing the changes of inflammation. Thus they become the foci of changes from which decomposition results. It is most likely by this means that such comparatively rapid changes take place where the cellular tissue of the pelvis or abdomen is concerned, and why decomposition is so frequent in this locality. Again, when we reflect upon the difficulty there is in the exclusion of air in which germs may live and move and have their being, the possibility of

this origin is more apparent. It would seem that the pelvic and abdominal organs are fairly enclosed, and, that being so, are protected from outside influences of such a nature as here detailed; but in reality this is not so. There is nothing between a woman's peritoneal cavity and the external air; from the vagina to the uterus through the Fallopian tubes the tract is continuous, and under certain conditions the component structures forming this tract lose their tone, become less resisting, and practically offer no barrier to the entrance of air. This admission of air allows of decomposition, gathering strength as it passes along a surface, perchance reeking with all the necessary organisms for evil and most readily affording a basis for the manufacture and introduction of elements which, finding a congenial sphere, multiply and act in a manner after their kind. If this is so, and I see no reason to doubt the validity of the circumstances I have named, we gather an explanation which admits of being tested by clinical observation, and from this aspect affords a proof which has an interesting bearing upon the presence and value of percussion in relation to swellings in the pelvis and abdominal cavity. The following are the cases referred to:—

CASE 1.—Mrs. F—, aged twenty-six years. Married six years; no children; no miscarriages. There was a history of four months' illness, with abdominal pain and prostration coming on suddenly and accompanied by metrorrhagia and retention of urine. I saw her on Nov. 7th, 1887, with Mr. Alfred Freer and Mr. Hammond Smith of Stourbridge. There was a central swelling in the lower abdomen, reaching to just below the umbilicus, in the hypogastric and part of the two iliac regions; it was rounded, smooth, tender, and elastic to palpation, but distinctly resonant all over on gentle and as firm percussive as could be borne. The bladder was emptied by a catheter, when by the vagina and by the rectum bimanually a definite tumour could be recognised surrounding the uterus, which was below and in front. Temperature 103°; pulse 126; tongue red and dry. There had been no rigors or sweating. The diagnosis was suppurating hæmatocele. An incision was made in the middle line of the abdomen; this was deepened and the edges picked up with forceps. As the sac was opened carefully, there was a distinct escape of air, which "fizzed" out for an appreciable time. Nearly two pints of very fetid pus were evacuated, along with a number of flakes of decomposing lymph of various sizes. The space was thoroughly washed out with warm water and a glass drainage tube put in. The good effects were immediate, and, allowing time for so large a cavity to close, the patient made ultimately a satisfactory recovery.

CASE 2.—This was a case of remote parametric abscess. A lady aged thirty-five, the wife of a medical man, was confined on Dec. 27th, 1887, after an interval of seven years from the birth of her last child. There was some adhesion of the placenta, necessitating the introduction of the hand for its removal. She developed from the first a high temperature, quick pulse, and marked feebleness. I saw her for the first time on Dec. 30th, and Dr. Playfair met us in consultation on Jan. 3rd. After the continuance of bad signs for about ten days, there formed a well-marked phlegmon in the right broad ligament; it remained for some weeks, gradually decreased in size, and, subsiding, left some thickening only in its place. Still the temperature kept high, especially at night, with restlessness and want of sleep. There were profuse perspirations, quick pulse, and some ill-defined pain in the right iliac fossa; no shivering. After several weeks, with various exacerbations, there appeared a swelling in the right iliac region extending into the pelvis towards the uterus. Bimanually this could be felt to be a mass above the broad ligament, the latter being apparently free. Externally it was smooth, rounded in shape, resonant all over, the resonance being continuous with the cæcum. It became more prominent, and a hypodermic needle pressed into it deeply showed that it contained pus. I opened it on March 17th. After cutting down to the limiting parts, a small opening was made, through which air distinctly escaped; so much so that I thought the intestine was opened, and that perchance it was in front of the tumour. But on carefully enlarging the aperture, exit was given to about six ounces of thick pus. The cavity was washed out with a solution of mercuric perchloride (1 in 2000) and an elastic drainage tube put in. It is interesting to note that the temperature at once fell to normal, from having

been constantly elevated, at times considerably so, since the date of the confinement. It never reached above the natural standard subsequently, and from this stage, after a lingering illness with exciting alternations of hope and fear, the patient made uniform progress, and became rapidly convalescent.

CASE 3 (M. H., aged sixteen).—On Aug. 4th, 1887, at the General Hospital, I opened in the median line a central swelling of the lower abdomen, which from the history I thought probably arose from a ruptured cyst setting up localised peritonitis. The swelling was limited in extent, smooth, pyriform in shape, with the base upwards, and occupied the hypogastric region to within an inch of the umbilicus; so central and defined in shape was the collection that previous to her admission the girl was suspected of being pregnant. Still the history was inflammatory, though there was suppression of the catamenia. It was tympanitic all over, the resonance appearing to pass into the surrounding intestine, or to be the effect of intestine in front. On opening the swelling, exit was given to a pint and a half of fetid pus, an evident rush of foul air being extruded from the first entrance into it. The exact cause was not found, owing to the matting together of intestine around. The space was washed out with a solution of boric acid and water, and a drainage tube put in. The patient made a good recovery.

CASE 4.—The subject of this case was also a girl, aged eighteen, who had an abdominal tumour thought to be ovarian. There was a strumous history, with pain, fever, and emaciation for several months, during which time the swelling appeared. The abdomen was resonant all over, but on careful palpation a swelling could be made out in the hypogastric and part of the left iliac regions, and reaching nearly to the level of the umbilicus. On March 22nd, 1887, I opened it, the first incision giving vent to gas distinctly. About a pint of purulent fluid was let out. The cavity was washed out as before, a glass drainage tube being put in. Suppuration continued for some months before the opening closed, but the patient eventually did well.

There were features in common in all these cases. In each, resonance was beyond question, being verified by others; the percussion note was distinctly indicative of the presence of air rather than fluid. In each case gas was plainly extruded from the first opening made, being recognised by hearing and by odour. The deduction is obvious that in such cases confidence in diagnosis cannot be made dependent upon any individual sign, but must be derived from a combination of different methods of examination.

Birmingham.

A RELIABLE CAUTERY BATTERY FOR CONSULTING-ROOM USE.

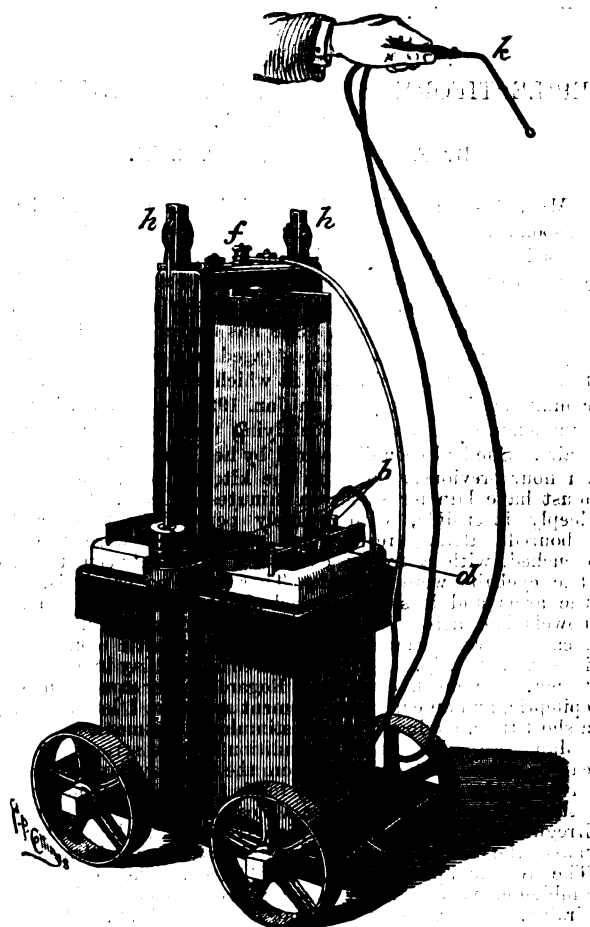
By ARNOLD WOAKES, M.R.C.S., L.R.C.P. LOND.,
SURGEON TO THE LONDON THROAT HOSPITAL.

A FEW years ago I constructed for my father, Dr. Edward Woakes, a battery for the electric cautery that should be economical and durable in its action, as well as always ready at a moment's notice. This particular battery has now been in almost constant daily use for a period of nearly three years, and has never failed to act when required, although it has been frequently used as often as six times in one day. On several occasions the fluid has been freshened by the addition of sulphuric acid, and the loss due to evaporation made good by the addition of fresh water, but one charge of the fluid has on the average lasted for six months without renewal. This result, combined with the frequent applications I have had for the details of its construction, has induced me to place before the profession the principles upon which it is based, and the necessary details for constructing the same.

From the accompanying engraving, it will be seen that this battery consists of a single cell, the carbons of which always remain in the fluid, while the zincs are alone depressed, when in action, to a depth varying according to the strength of the fluid.

The chief improvements over other batteries by which I have arrived at the above results are:—1. The use of one large cell in the place of several smaller cells connected together for intensity. As a matter of fact,

it is quantity, and not intensity, that is required for the cautery. One bichromate cell gives an electro-motive force of 1·8 volt, and is of quite sufficient intensity to overcome the resistance offered by the cautery, provided the conducting wires are not of great length; any addition in this direction is for several reasons—of which space does not admit of description—worse than useless. 2. The plan of letting the carbon plates remain always in the fluid is a point of great importance. It is adopted in smaller batteries for other purposes, but for some reason or other, when large batteries are taken into consideration, the carbons are almost invariably made to be raised with the zincs. By allowing them to remain always in the fluid the deleterious effects of crystallisation of salts in their pores are avoided; and since



a a Represent the containing jar, 12 in. deep by 6 in. wide by 10 in. long, inside measurement. *b* Represents the carbon plates, four in number, each 12 in. high by 7 in. wide by $\frac{1}{2}$ in. thick, all connected together by a brass framework to the positive terminal (*d*). *c c c* Represent the three zinc plates, each 12 in. by 7 in. by $\frac{1}{4}$ in., connected together to the negative terminal (*f*). *g* Represents one weight which, together with a similar weight on the opposite side, counterbalances the zinc plates, as a gas chandler or window is balanced. *k* Represents the cautery connected by wires to the terminals (*f* and *d*).

the negative and positive elements are quite distinct from one another, and not, as is usual, connected upon the same base-board, short-circuiting from the creeping of the fluid is entirely avoided; and, furthermore, the weight to be lowered and raised is diminished by the weight of the carbon plates, and there is not a single counteracting disadvantage. 3. By counterbalancing the movable parts, the zinc plates are capable of being immersed with the greatest ease to any required depth, and are so easily movable that they can, if desired, be lowered or raised by one hand of the operator, while with the other the cautery is still held in position. 4. In order to enable the battery to be moved about from one part of the room to another, it is provided with wheels, but is not otherwise portable. A smaller battery upon the same plan could of course easily be con-

structed, but only at a sacrifice of durability. Any one of the numerous bichromate solutions will answer for this battery; or a solution of chromic acid, with a little sulphuric acid, may be used instead. When the battery is to be re-charged, the exhausted fluid is syphoned off and the jar, with the carbons still in it, filled up with several re-changes of warm water. The zinc plates should at the same time be sponged over and, if necessary, re-amalgamated, but no cleaning of these plates is required in the intervals. Mr. Evans, the late porter of the London Throat Hospital, has within the past twelve months constructed several of these batteries, but without the wheels, and entirely enclosed in a wooden casing, with, I believe, entirely satisfactory results.

Harley-street, W.

CASE OF EPILEPTIFORM SEIZURE WITH UNUSUAL PHENOMENA.

By F. G. TOOKER, M.D. R.U.I.

MRS. B—, aged forty-six, married sixteen years, had a fit soon after marriage, when eight months pregnant, which caused premature labour, with the death of the child. Six years afterwards she had another fit, the nature of which was unknown. For the next ten years she had fair health, though she was not robust. She has two children, healthy boys generally, though the eldest (aged fourteen) has suffered from infantile paralysis. The fit which is the subject of this communication took place on Jan. 19th last. When I was summoned I found the patient lying upon the sofa downstairs. She had been discovered by her husband about half an hour previously lying on the kitchen floor, where she must have lain for some ten minutes at least. She was deeply insensible, with scarcely perceptible pulse and laboured rattling respiration. The teeth were firmly clenched, with a frothy exudation from between them. The eyeballs were everted. There was no paralysis, as the arms and legs were tossed about at intervals. The bowels had acted involuntarily. The usual restorative measures were employed, and the patient's condition improved slightly. After removal to bed she lay in a heavy torpor, with much dyspnoea. Regarding her condition as epileptic, and an early improvement as likely, I left her for a short time, having ordered a stimulant treatment.

Jan. 20th.—The patient's condition is more serious. She can be roused with difficulty from the heavy collapsed state in which she lies, occasionally tossing her arms about and uttering a loud moan. Pulse almost obliterated, and very irregular. Much dyspnoea, with tracheal rattling, which masks the cardiac sounds. Lips livid, and extremities cold. The tongue appears sore, as if bitten. The somewhat ambiguous nature of the case rendered a consultation desirable, and Dr. Paget of Great Crosby and Dr. Caton of Liverpool saw the case. An exact diagnosis was difficult. Thrombosis of heart or embolism of pulmonary vessels was suggested as probable. Stimulant treatment was agreed upon, as there was great collapse. The swallowing being good, she was ordered ether and brandy by the mouth, together with some meat preparations; also ether and strophanthus tincture (three minims), every hour hypodermically, were given alternately; while nutrient enemata of beef essence were administered every three hours by the rectum. After eight hours of this treatment the patient improved, the pulse becoming more perceptible and respiration easier. The bladder and bowels acted well and voluntarily. The urine was examined, and found to be normal. She was now ordered a mixture of tincture of strophanthus (three minims) every three hours, and ether inhalation in case of syncope.

21st.—Pulse and respiration much improved. Consciousness still very impaired. Patient restless, but uninterested in all around. Often groans as if in pain; replies in monosyllables to questions, and expresses herself as not being in pain. Ordered four grains of carbonate of ammonia every three hours, and two ounces of champagne alternately every three hours; and to be given bromide of potassium by rectum.

22nd.—Improvement continued. Patient restless, with

sleeping intervals. Heart sounds are audible: first sound indistinct; second sharp. Temperature 96°. More conscious. Articulates slowly, but distinctly. Complaints of pain in the head. Ordered a mixture of carbonate of ammonia, bromide of potassium, and tincture of strophanthus every four hours.

23rd.—Patient more intelligent, and taking nourishment well. Pulse good.

24th.—At midnight, exactly four days from the first symptoms, there was a change; the patient then became delirious, and to-day presents considerable mental disturbance. There is great torpor, with periods of muttering delirium and restlessness. When spoken to, the answer is "Yes" or "No," indiscriminately given. At times there is an apparent effort made to frame a correct reply to a question, but the wrong word is used, or only a word-like sound is uttered; the articulation is also very imperfect. The patient will not execute a simple movement of the hand or foot when asked; but there is no paralysis, as she often moves them freely when she requires. She will not or cannot protrude the tongue. Temperature 97.8° (highest yet attained). The bowels and bladder act voluntarily. Nourishment well taken. Ordered bromide of potassium with carbonate of ammonia every four hours.

25th to 26th.—The bowels and bladder now act involuntarily. There is slight anaesthesia of the right leg, and the right pupil is rather larger than the left. Intelligence more impaired; there is difficulty in attracting the patient's attention. She puts out the tongue slowly. Temperature 96°. The bromide of potassium was ordered to be stopped; the carbonate of ammonia to be continued, with stimulant treatment.

27th to 29th.—There is a gradual improvement. Much more consciousness. The patient promptly draws away her arm when it is pinched. There is more use of language. She can name several articles correctly after one or two attempts. She can write her own name legibly, but not so readily the names of others. On trying to read aloud, most words are blurred and indistinct. Some words she cannot say, but can write them. From this stage the patient improved steadily and generally. She became less aphasic; and now, nearly three months after her illness, she is in fair health, but still somewhat aphasic. Her memory for recent events remains much impaired since her illness.

Remarks.—Whatever diagnosis may be given to this case, the interesting features of it will, I think, remain the same. If from the history of former attacks and from the nature of this latter one we assign to it the name of epilepsy, then we have presented to us some exceedingly rare post-epileptic phenomena, as the profound collapse immediately following and the aphasic symptoms subsequently. If we regard cardiac thrombosis as the cause, we are not without difficulty in fitting the symptoms to such a theory; thus, the former attacks and the nature of this one, as also the absence of paralysis with the aphasia, are points hard to reconcile with a thrombus and subsequent emboli in the region of Broca's convolution. Perhaps a middle course between the two views will lead nearest to the truth, and in following it one would assign an epileptic nature to the original attack, and refer the after-symptoms to the formation of a thrombus during its course. The fall upon the kitchen floor may have produced some symptoms of concussion which added to the profound collapse following the fit. The treatment affords, I think, much evidence in favour of strophanthus in desperate cardiac collapse, and also illustrates forcibly the truth that in such cases there is hope while there is life. I am indebted to Dr. Paget for some important notes on the case.

Blundellsands.

SHEFFIELD GENERAL INFIRMARY.—The ninety-first report read at the annual meeting of the governors and subscribers to the institution, held on the 5th inst., states that during the past year the expenditure had exceeded the income by £177 0s. 1d., which was attributed to the falling off in the Hospital Sunday and Saturday collections, and other minor causes. The number of beds now available are 200, of which forty-four are devoted to children's cases in distinct wards. The appointments for the increase of the honorary medical staff, as named in the preceding year's annual report, were made in September last, and found to be a source of considerable importance to the efficient working of the institution. The benefit derived by a large number of patients from the "Overend Convalescent Fund" was again recorded. The report was adopted.

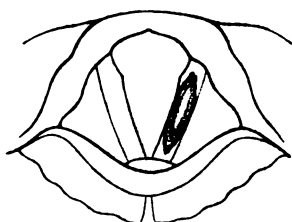
Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CYST OF VENTRICULAR BAND.

By CHARLES W. HAYWARD, M.B.

WHILE attending the cliniques of Professors Schrötter and Schnitzler in Vienna, I had the good fortune last December to have assigned to me for treatment a patient who had come to the clinique of the latter professor. She was about forty-three years of age and of healthy appearance, but her voice was markedly affected with a harsh hoarseness. This, she stated, had first commenced rather more than six months previously, and had gradually got worse. On examining the larynx, the parts were found normal with the exception of the left true cord, which showed a large cyst. (See woodcut.) This cyst occupied the middle three-fifths of



the cord for its entire breadth, and was rounded, sloping off at the ends, and at the middle being about one-eighth of an inch in thickness. It presented a translucent slightly striated appearance, and during phonation was seen to interfere seriously with the accommodation and vibration of the cord.

The treatment adopted was as follows. Having painted the throat with a 10 per cent. solution of cocaine, I incised the cyst with Schrötter's guarded intra-laryngeal knife. A clear mucus-like fluid exuded. I attempted to obtain some of this for microscopical examination. I introduced a brush and pressed the contents out of the cyst, but, owing to the gagging of the patient, the examination was not reliable, the specimen obtained consisting of ordinary mucous secretion and some blood. I then, by means of Schrötter's pincette, pulled away the cyst wall, and then touched the site of the cyst with solid nitrate of silver. On returning next day, the patient stated that the pain had been very slight, and that she felt the throat improved. The site of the cyst was occupied by a white eschar from the nitrate of silver. The larynx was pencilled with nitrate of silver solution (10 per cent.). The pencilling was repeated for a few days with a weaker solution (5 per cent.), and by about the fifth day the white eschar was gone and the cord getting to look normal again. For three or four days the pencilling was made with chloride of zinc (chloride of zinc, 16; distilled water and glycerine, of each 240) instead of the nitrate of silver, and in about a fortnight the patient returned to her home with the hoarseness almost entirely cured.

The case excited great interest among the English and American doctors attending the clinique, and they will no doubt remember it should they peruse these notes, as they watched its progress all through, and envied me the good fortune of securing such a case.

Liverpool.

A CASE OF OPIUM POISONING.

By WILLIAM EASBY, M.D.

On Sept. 5th I was called to the police station in Peterborough to see A. B—, aged thirty-seven, a tailoress. I saw her at 1.30 P.M., and was told that she had swallowed half an ounce of tincture of opium an hour before I saw her. A two-drachm bottle was found in her possession, which she stated had been filled twice. This

was also verified by the druggists who sold it. She had been drinking during the morning, and had quarrelled with a man she had lived with for the last six years. When I saw her she was excited, face flushed, pulse quick, and pupils normal. I made her swallow half a pint of warm water, and then injected into the left arm ten minims of a solution of apomorphia, which contained one-tenth of a grain of the drug. She was violently sick in about two minutes, the vomited matter smelling of laudanum. The stomach was then well washed out with warm water introduced through a syphon tube, and she was kept moving about for several hours. My reason for reporting this case is to record the fact that a solution of apomorphia will keep good for some years. The solution I used was procured five years ago, and is as potent as ever. Some authorities appear to think that age decreases its powers, and when the solution becomes dark green it is inert. My solution is a deep green, and several hours after the drug was injected the site was plainly visible by a dark green stain under the skin. After washing out the stomach, I injected the 120th of a grain of atropine, and she was well walked about for some hours. At 7 P.M. she was giddy and drowsy, but able to walk about alone, and at 9.30 P.M. she was locked up for the night. The next morning she was complaining of some headache, and had been sick; with these exceptions she was quite well. From inquiry at the druggist's where the tincture was purchased, they informed me it was of pharmaceutical strength.

Peterborough.

REMOVAL OF HORNY GROWTH FROM THE DORSUM OF THE HAND.

By ERNEST H. ELLISON, M.R.C.S., L.R.C.P.

It may possibly be of some interest to the readers of THE LANCET to have brought before them the case of Mr. S. W—, aged seventy-nine, resident in Castleton, Derbyshire, from whom on July 19th last I removed a growth entirely horny in consistence, presenting very much the appearance of a lamb's horn, measuring at the widest part of its base an inch and a half, and at its apex about three-quarters of an inch; the length of the horn being three inches, and curved from base to apex; the growth being freely movable with the integuments, and situated over the tendons of the extensor communis digitorum close to the metacarpo-phalangeal joints of the fore, middle, and ring fingers of the right hand. The patient stated that the horn originated from a small wart about six years ago, which had frequently been subjected to irritation. Prior to removing the growth the tissues beneath its base were injected in three places with five minims of a 10 per cent. solution of cocaine. The removal was effected by two oval-shaped incisions, the patient describing the operation as perfectly free from pain. The wound was dressed antiseptically until Aug. 29th last, at which date cicatrisation was complete.

Should any other member of the profession have met with a similar growth on the same part of the human body, I shall be glad to be informed of it.

Castleton, near Sheffield.

INTERESTING CASE OF EMPYEMA.

By J. HORATIO DRAKE, L.R.C.P., L.R.C.S. Edin., &c.

J. B—, aged twenty-three, came under my care on May 13th, 1887, suffering from left-sided pleurisy, with effusion. Aspiration had been attempted three times previously, twice with partial success, but the last time unsuccessfully. The pain was severe; the temperature 103°5'. There was absolute dulness over the whole of the left side, and the apex beat could be seen and felt just to the right of the right mammary line. The pulse was very feeble and irregular, and beating about 120 times a minute. The breathing was considerably embarrassed, and the expression careworn. I attempted to aspirate, but without success, so an early operation was advised, which was agreed to. The next day chloroform was administered, and I made an incision in the fifth interspace, in the mid-axillary line, and penetrated to the depth of an inch without obtaining any fluid. I then inserted a director and carefully penetrated deeper, till at the depth of two inches fluid was

reached, and over seven pints drawn off. The fluid which flowed first was sero-purulent, but towards the end it was trypsin. At the termination of the operation the temperature fell to 102°5, the breathing and pulse improved, and the apex beat was felt at the left of the sternum, but still in the fifth interspace. A drainage tube was inserted, and the wound dressed with carbolic acid.

May 15th: Temperature 101°; pulse 100, gaining in strength and steadier. Cavity syringed with a 1 per cent. solution of carbolic acid and dressed as before. A mixture was administered of bicarbonate of potash and compound tincture of cinchona.—16th: Temperature 100°; pulse 100, steadier. Cavity syringed and dressed as before.—17th: Temperature 102°. Found drainage-tube blocked; removed it, and inserted a larger one. Cavity syringed and dressed daily.—18th: Temperature 99°5; pulse 90. Going on well. After this the temperature never rose above 100°, and the patient progressed very satisfactorily.—On July 5th, 1887, the left side of the chest was found to measure 14·5 in., and the right side 16·5 in. The left lung was partially collapsed. There was a sinus about two inches deep, which continued to discharge. I endeavoured to close this by injecting a weak solution of iodine, but though the discharge lessened, the sinus did not entirely close. The patient, however, is now able to walk a couple of miles without feeling fatigue, and to do a little light work in his capacity as gardener.

Uffulme.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASE OF PERI-RENAL MYXOMA; RETRO-PERITONEAL ABDOMINAL NEPHRECTOMY; RECOVERY; REMARKS.

(Under the care of Mr. GOULD.)

THE difficulties in diagnosis presented by this tumour were very unusual, and Mr. Gould in his remarks points them out and explains the reasons for their occurrence. We would draw special attention to the method of treating the peritoneum in this operation. By it the risks of peritonitis would seem to be diminished, and this of itself is a most important gain, especially as the shock of the operation does not appear to be increased, even when the peritoneum is stripped off over a large area. The importance of this will be obvious, as, in his statistics on abdominal nephrectomy, Gross places peritonitis next to shock as the commonest cause of death, ascribing 21 per cent. of the deaths to it. For the notes of the case we are indebted to Mr. F. C. Brodie, house surgeon.

A. C.—, aged thirty, a railway porter, was admitted on May 1st, 1888, with a large abdominal tumour. Family history good. The patient had been a soldier for four years. He left the service eight years ago, and ever since had been employed as a railway porter. He stated that he had been married eight years, and had four children, all healthy. He had been quite well till January, 1888; he was then seized suddenly with severe cramping pains in the abdomen, which completely laid him up, lasted one day, and then as suddenly disappeared, but were followed by slight diarrhoea. In March, 1888, he was in the goods yard and was squeezed between two buffers, the coupling chain being tightly drawn across his abdomen. This caused him slight inconvenience for two days. A week later he had another attack of diarrhoea, which continued till April 3rd, the motions being of a light colour and rather offensive. He also noticed a swelling about the size of a Tangerine orange just below the umbilicus, which rapidly increased in size. There was a good deal of pain in the back, shooting down to the right testicle, which, he stated, had been painful and somewhat swollen for a month. He had for the same length of time had some difficulty in holding his urine, being disturbed several times during the night to pass it.

For four months he had suffered from dyspnoea, and had frequently noticed blood in his motions. The urine had never been abnormal in appearance. On April 9th the tumour was aspirated at a point two inches and three-quarters below the costal arch in the nipple line, and four ounces of viscid mucoid and apparently blood-stained fluid drawn off. He had no pain following this, but an attack of acute tonsillitis, lasting several days, supervened.

State on admission.—Patient is a well-developed muscular man, with sallow complexion and rather melancholy expression. Pulse 86, regular, of good character; respiration 20. Tongue moist and slightly furred. Thoracic percussion note resonant, and equal on the two sides; it extends in the mesial line to within an inch of the xiphoid, in the right nipple line to the fifth rib, in the right axillary line to the seventh rib, and at the right back to the tenth rib. Heart's apex displaced slightly to the left, being in the fourth space in the nipple line. Abdomen: On inspection there is a large, somewhat ill-defined swelling, situated to the right of the middle line and causing some bulging of the lower ribs on that side. It is apparently continuous with the liver, as no resonant note can be obtained between them. The hepatic dullness commences above at the seventh rib, and the lower border of the tumour corresponds to a line drawn from the anterior superior spine of the ilium to a point two inches below and to the left of the umbilicus; from here it ascends in a double curve to an inch above the xiphoid (determined by dullness on percussion), and hence well back into the right loin, where, however, there is very little increase of resistance as compared with the left side. It is smooth on the surface, and not painful, but is slightly tender on manipulation, especially just below the umbilicus. The margin of the tumour below is rounded, and the whole mass moves slightly with respiration; fluctuation is distinct, especially in the anterior axillary line. The percussion note over the above area is dull; over the rest of the abdomen somewhat tympanitic. Splenic dullness normal. The girth of the abdomen at the umbilicus is thirty-four inches. The right spermatic cord is enlarged, due to fullness of the veins. There is no oedema of either leg. Urine clear; sp. gr. 1020; acid; no albumen.

Operation.—On May 12th, the patient having been anaesthetised, an incision was made through the skin in the right linea semilunaris about four inches in length, and the tissues were divided down to the peritoneal cavity, behind which the tumour was found to be situated. The lower thin edge of the liver was seen in about the normal situation overlapping the upper border of the tumour, whilst crossing its lower margin in front the collapsed colon was seen. The incision was now prolonged both upwards in a straight line and downwards in a curved line, the concavity being downwards and to the right. The peritoneum was then separated from the abdominal wall on the right side of the incision, and off the front of the tumour; and the original wound in it was united by a continuous suture of catgut, so as to close the peritoneal cavity securely. A syphon trocar was next introduced into the most prominent part of the tumour, and a few ounces of brown mucoid fluid escaped; as this did not run freely, the opening was enlarged after removing the trocar, and a large quantity of clot and soft gelatinous material removed with ovum forceps. The cyst wall, which was very thick and tough, was freed all round with the fingers, and the renal artery and vein exposed; these were tied separately with kangaroo tendon, after which the ureter was treated in the same manner. After several bleeding points had been stopped, the whole tumour was removed, and with it, but behind and only attached to its surface, the right kidney. Lastly, the cut end of the ureter was stitched to the skin at the lower end of the wound. There was but slight hæmorrhage, and the parts having been well irrigated with perchloride of mercury solution (1 in 2000), the edges of the incision were united by four deep sutures of fishing gut and eleven superficial ones of catgut, a large drainage tube was inserted, and the wound dressed with iodoform, boracic lint, and sal alembroth wool, fixed in place by strapping. On examination of the tumour after removal, it showed a thick capsule of fibrous tissue enclosing fluid and gelatinous substance. The wall was adherent to the kidney cortex, which was compressed and wasted by its pressure. The kidney itself was small, but not at all involved in the tumour. On microscopical examination by Mr. Roger Williams, there was found a ground substance composed of mucin and loose fibrous tissue.

with a large number of small round cells embedded therein, some of which were branched. There were no signs of fat.

May 14th.—Patient has been very comfortable; passed urine naturally. Wound re-dressed; drainage tube shortened one inch. No redness or tension about wound; no pain. Pulse 100; temperature 101.2°.

16th.—Wound re-dressed; slight serous discharge. No tenderness in loins. Tongue furred. Drainage tube removed. Bowels acted after two enemata and soda sulphas. Pulse 100; temperature 100.8°.

19th.—Wound re-dressed; the four deep sutures were taken out; track of drainage tube irrigated with perchloride of mercury. Pulse 100; temperature 100.2°.

21st.—Sat up in bed; feels better. Pulse 100; temperature 100.6°.

23rd.—Wound re-dressed; it has all healed, with the exception of the extreme lower end. Very little discharge. Superficial sutures removed.

25th.—There was a good deal more discharge, and pus was seen exuding from the middle of the incision. This opening was enlarged, and some more pus then escaped. Pulse 90; temperature 100°.

27th.—There was a good deal of pus and bloody serum in the dressing; very little tenderness, but some hardness along the incision. Boracic fomentations applied.

29th.—Discharge much less. Tongue clean. Pulse 86; temperature 98.6°.

June 2nd.—There is hardly any discharge. The patient got up this evening.

9th.—Had a sharp attack of tonsillitis, which sent the temperature up to 102.4°. Both sides were affected.

17th.—Has quite recovered from sore throat, and the discharge from the wound has nearly ceased.

23rd.—Went into the garden to-day. The wound has healed, except a surface about the size of a threepenny-piece. On the 25th he went to Margate.

Remarks by Mr. GOULD.—The diagnosis of this tumour presented certain difficulties, for in two or three ways its characters were not those common to renal tumours. In the first place, there was no zone of resonance between the liver dulness and the tumour—a fact due to the great size of the swelling; then the tumour moved slightly with respiration, which is a sign strongly relied upon to distinguish hepatic from renal tumours; thirdly, there was no colon-resonance in front of the tumour; and, lastly, the swelling was not prominent in the loin, nor could it be forced back into the loin. The great size of the tumour is in all probability the main explanation of these peculiarities; but the fact that the growth sprang from the tissue in front of the kidney only is largely accountable for the absence of all prominence in the loin. I have recently had under my care another case of myxo-sarcoma of the peri-renal tissues which was mistaken for a tumour of the liver, not only by myself and colleagues at Middlesex, but by physicians at another metropolitan hospital, and not a doubt was entertained of its nature until the post-mortem examination showed a condition very similar to that present in this case. [The notes of this case will shortly be published.] The method of operating adopted in this case appears to me to have important advantages. By opening the peritoneal cavity, the tumour (or kidney) to be removed can be thoroughly explored, and the state of the opposite kidney and of the other abdominal viscera can, if need be, be investigated. This can easily be done through a small incision. To complete the operation, the peritoneum must be stripped off from the lateral side of the abdominal wound, and this stripping must be continued until the whole of the front of the kidney or the tumour is bared. Then the two edges of the cut serous membrane should be carefully and closely sutured. By this means the subsequent steps of the operation and the operation wound are kept quite extra-peritoneal, and there is no risk of any injury being done to the colon. There is no difficulty in this stripping of the peritoneum, and such a measure has obvious advantages over the plan of occluding the peritoneal cavity by stitching the inner cut edge of the parietal peritoneum to the edge of the serous membrane divided just outside the colon. Where the surgeon has no occasion to explore the kidney to be removed or its fellow before completing the operation, the peritoneum should not be opened at all, but the abdominal incision carried down to the subperitoneal fat, and then at once the peritoneum stripped up, much as is done in the ligation of the external iliac artery. There is no other feature in the operation calling for comment; the

attack of tonsillitis, which interrupted the patient's convalescence, was such as he frequently suffers from.

ST. MARYLEBONE INFIRMARY, NOTTINGHILL.

A CASE OF TUBERCULAR LARYNGITIS: TRACHEOTOMY PERFORMED WITH COCAINE; REMARKS.

(Under the care of Mr. W. P. PEAKE.)

THE following notes were taken by Mr. Rosegood, clinical assistant.

J. G.—, aged forty-seven, a weak, strumous-looking woman, was admitted suffering from aphonia and cough. She stated that four years and a half ago she had a fright, which caused her to lose her voice, followed by a constant hacking cough and expectoration. Since this the symptoms had persisted and increased in intensity. The breathing also had become affected during the whole course of the complaint. She had wasted considerably. She said that her mother was healthy, and that her father and two sisters died of consumption.

On examining the chest, the left apex was dull on percussion, and bronchial breathing and pectoriloquy were present, amphoric breathing and whispering pectoriloquy developing during her stay in the infirmary. On examination with the laryngoscope, small ulcers were seen in the region of the vocal cords and some extensive ulceration around the epiglottis.

The patient continued in the same state for about six months. Trochisci cocaine (one grain), administered three times a day, somewhat relieved the pain in her throat, and conium spray had the effect of relieving the pain also. During the last three months she has been going down hill rather rapidly, the breathing becoming more hurried, the dyspnoea being more marked during the last three weeks. On Aug. 24th, as the patient was suffering from very distressing attacks of dyspnoea, tracheotomy was performed. The state of the patient's lungs being such as to render an anæsthetic dangerous, it was decided to inject cocaine (5 per cent.) over the region of the incision. The skin having become quite anæsthetic, the usual incision was made below the cricoid cartilage, and each subsequent cut was immediately sponged with a 10 per cent. solution of cocaine. The patient bore the operation without wincing, and only suffered pain when the trachea was cut through. She had an attack of syncope before the operation was commenced, which was relieved by a hypodermic injection of brandy. The patient did well for three days, when her food began to come through the tube immediately on being swallowed; this continued more or less till her death, ten days after the operation.

Necropsy.—The larynx was found to be extensively ulcerated around the vocal cords, the ulceration stopping short one inch and a half below the cricoid cartilage. The epiglottis was ulcerated away completely, and food was sticking in the upper part of the trachea, evidently having been forced through the upper opening of the larynx. Left lung breaking down with tubercle. The right lung was studded with small caseating beads of tubercle.

Remarks by Mr. PEAKE.—I have called attention to this case because I think the local anæsthesia by cocaine essentially useful under the circumstances, chloroform being dangerous on account of the state of the lungs, and the probable movement of the patient rendering the operation more difficult if performed without anæsthesia, local or otherwise. In this case the operation was performed without pain almost from beginning to end. Cocaine has also the power of controlling capillary hæmorrhage. The case was interesting, also, from the fact of the food returning through the tube immediately on being swallowed, suggesting that the œsophagus had been incised. The necropsy showed that this was not the case, the food passing down the opening of the larynx.

ROCHDALE INFIRMARY.

A FATAL CASE OF COMMUNED FRACTURE OF THE CERVICAL VERTEBRÆ WITHOUT IMMEDIATE SYMPTOMS; REMARKS.

(Under the care of Mr. R. BURDETT SELLERS.)

FOR the following notes we are indebted to Dr. D. F. Whiteley, house surgeon.

J. B.—, aged seventeen, a stable boy, was admitted into the Bright ward of this infirmary at 6.30 p.m. on Aug. 28th;

1888, for injuries received by falling through a trap-door from a hay-loft on to a stone floor of the stable beneath, a distance of about twelve feet, and it was stated that he had fallen on his left shoulder. Examination did not reveal any serious lesion, and he only complained of some pain on movement, situated at the back of the neck and shoulder. There was no abrasion of the skin anywhere. He was quite conscious, talked reasonably, and could move all his limbs. The face was pale, pulse feeble and regular, breathing quiet, pupils very slightly contracted, and the temperature subnormal—viz., 95°. He kept in this condition up to 3 A.M. next morning, when his breathing became irregular and shallow, and the temperature had begun to rise, and at this time registered 102.6°; at 7.20 A.M. it was 105°, at 8.20 it was 106.6°, and at 9.20 it was 107.6°. He was perfectly conscious, and spoke sensibly to the nurse. At 9 A.M. he began to vomit, and continued to do so till a few minutes before 10 A.M., when he died, sixteen hours and a half after receipt of the injury. At 9.45 A.M. he had a slight convulsion. No symptom of paralysis or dyspnoea were noticed at any time.

A post-mortem examination was made six hours after death, when it was found that the third, fourth, fifth, and sixth cervical vertebrae were fractured as follows: Third cervical vertebra: An incomplete fracture through three-fourths of the body from behind forwards; each lamina was broken from its articular processes. Fourth cervical vertebra: The body was fractured into two lateral halves; the left pedicle was broken from the body, and the left lamina fractured in several pieces; the right lamina was broken from its articular processes. Fifth cervical vertebra: The body was fractured into two lateral halves; the laminae were broken from the articular processes on each side, and the right lamina was also broken from the spinous process. Sixth cervical vertebra: An incomplete fracture through the body, the anterior surface being alone intact; also an incomplete fracture at the junction of the laminae with the spinous process. The spinal cord and its membranes were found completely free from injury, but a blood clot was found between the broken bones and the spinal membranes. The head was opened and the brain found normal, excepting some slight congestion on the upper surface; there were evidences of a large contusion on the vertex of the skull, but no fracture of the skull at any part.

Remarks by Mr. SELLERS.—The special points in this case which I would call attention to are: (1) an injury of so severe a character in which no special symptoms were noticed; (2) the apparent absence of injury to the phrenic nerve, although the third and fourth cervical vertebrae were more seriously fractured than the rest; and (3) the temperature, which was the first indication noticed of any serious lesion. The probable cause of death was, in my opinion, either (a) from pressure of blood-clots noticed at the necropsy, (b) from severe general shock, (c) from profound disturbance of the nerve-centres in this region, or (d) possibly a combination of all these three factors. In conclusion, I may here say that soon after the accident the patient was very carefully placed upon an ambulance stretcher and removed to the infirmary under medical supervision. Perhaps, if other means of conveyance (or any undue rough handling) had been adopted, some displacement of the bony fragments might have taken place, and thereby have given rise to a train of symptoms which we so naturally expect in any severe injury to this region.

Notices of Books.

A Manual of the Operations of Surgery for the Use of Senior Students, House Surgeons, and Junior Practitioners. By JOSEPH BELL, M.D., F.R.C.S. Edin. Sixth Edition, revised and enlarged. With Illustrations. Edinburgh: Oliver and Boyd. London: Simpkin, Marshall, and Co. 1888.—The popularity of this work is shown by the fact that it has been generally recognised as a valuable aid to the surgeon since the publication of the first edition in 1866. Each edition—it has now reached the sixth—has been brought out under the direction and supervision of the author, and thus there has been continuity in the design originally laid down by him. It is a book which has, during the twenty-two years it has been in the hands of many generations, excisions, and additions have been made to keep it

on a level with the acknowledged best modes of operative procedure. On the whole, the book is well written, and the space fairly apportioned to the several sections of practical surgery. We had hoped, however, to find that a little more space had been allowed to operations of recent introduction or reintroduction. Curiously enough, too, there are several omissions which the reader would hardly have suspected. Thus, for instance, no mention is made of suture of the patella, Porro's operation, Ogston's operation for genu valgum, and others. The chapter on the Surgery of the Trunk Nerves, though short, is to the point. We hardly think, however, that the reference to stretching the spinal accessory nerve would be of much assistance to one about to perform the operation. It is a matter admitting of some doubt whether, in those instances where the author has insufficient space to give the various steps of an operation, it is worth while to write the directions so shortly as to be little more than an index. The letterpress of the work is excellent, and the diagrams, though few in number, are fairly well executed. The teaching of Dr. Bell is that of a sound experienced surgeon, and we believe that, as heretofore, his manual will be largely read and appreciated.

A Practical Text-book of the Diseases of Women. By ARTHUR H. N. LEWERS, M.D., M.R.C.P. London: H. K. Lewis. 1888.—This is an average specimen of its class—the class of text-books addressed to the unambitious student. If its aims are higher, it needs completion. As a pass manual too much space is occupied by the relation of the author's personal experiences, and by such operations as ovariectomy and extirpation of the uterus, which are quite beyond its proper range, and the room of which might be occupied by the expansion of subjects of more general utility, which are somewhat crowded out. Authorities are rarely quoted, and this is quite intelligible in a small work; but if names are quoted they should be quoted properly. For instance, on page 351 reference is made to Vedeler's statistics on the relation of antelexion to dysmenorrhœa, and none to those of Dr. Herman. The quotation professes to be made from Hart and Barbour's manual; but on referring to that work we find Dr. Herman's name as we expected, and it has therefore doubtless been accidentally omitted by Dr. Lewers. There is a little slip already pasted in the book to correct a mistake; we advise the author to add another to correct this. The work is well got up by the printer and publisher.

Laryngoscopy and Rhinoscopy. By PROSSER JAMES, M.D. Fifth Edition. London: Baillière, Tindall, and Cox. 1888.—There are comparatively few manuals specially devoted to the subject of which this small work treats. As a rule laryngoscopy is either relegated to a chapter in general works on diagnosis, or else it is expanded into a monograph, which can hardly be of wide utility. Dr. Prosser James has, however, succeeded in presenting to the profession a book which, as a practical guide to the diagnosis and treatment of throat disease, has gained deserved success. It seems to us that a work of this class is admirably adapted for the purposes of the general practitioner, as well as of the student; for it is not too cursory to be superficial, nor too exhaustive to be beyond the needs of ordinary practice. The author states that in revising this edition he has practically rewritten the sections devoted to rhinoscopy, and has made many additions to the text. Those to whom the book is familiar will find ample evidence of the pains taken by the author in maintaining the work abreast of the times, whilst others will do well to make the acquaintance of a trustworthy guide to an important subject.

Mechanics and Experimental Science. By EDWARD AVELING, D.Sc. London: Chapman and Hall.—This is the first of a series of books intended to cover the ground

of mechanics, chemistry, heat and light, magnetism, and electricity, so far as these subjects are necessary for the purposes of matriculation at the London University. The new regulations, which came into force in June of this year, under which this examination will henceforth be held, make the three subjects last mentioned optional, in place of the examination in chemistry, which has heretofore been compulsory. It is to meet the condition of things thus arising that the present series of text-books has been projected. The first of them deals with mechanics, and has been written with great care. It will no doubt prove to be a very serviceable class-book; and especially commendable are the side-notes, index to formulas, and general index with which it is illustrated. A very useful collection of examination papers also adds greatly to its value. But, notwithstanding the evident care which has been bestowed upon its preparation, there are here and there some strange inaccuracies and infelicities of expression. Thus, we read, on page 33, of "any number of uniform velocities.....in the same straight line," without any explanatory reference to the difficulty that a body cannot have more than one velocity at one time in any one direction, and by consequence not more than two in the same straight line. Again, on page 104 the dictum, "in the case of surface reaction the opposing pressure is in a direction perpendicular to the surface, no matter at what angle the force opposed may act, or at what angle the surface may be inclined," is laid down without any proof of its truth or any clear indication of its great importance; while on page 80 we have the bewildering proposition that the energy of a moving body "will not *depend upon* the velocity simply, but upon the square of the velocity." Of course the author meant to write "*be proportional to*" instead of "*depend upon*;" but throughout the book verbal slips more or less serious are not at all uncommon. In the presence of a competent teacher, who can smooth away difficulties thus arising, these little shortcomings will not matter much, but to the solitary student they would become serious sources of difficulty.

The Illustrated Guide to Epping Forest (J. P. Murray, Queen's Head-passage, Paternoster-row) is a useful companion for holiday-makers who propose to spend a few hours at this sylvan retreat, happily preserved for the pleasure and recreation of Londoners. It is published at one penny, and is prettily illustrated.

New Inventions.

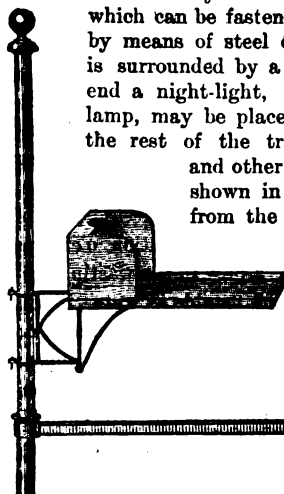
ABSORBENT WASHABLE WATERPROOF SHEETING (PATENT).

THIS patent material, which is like ordinary mackintosh sheeting on the one side, resembles a soft bath towel on the other. We have received and tried a sample of it, and it possesses the following great advantages over non-absorbent waterproof sheetings. In the nursery, the sheeting is valuable when made into bibs, by securing dryness to the chest and clothes. For use as bed-guards and accouchement sheets, being perfectly soft and pliable, it does not ruck up or get out of position by any movement of the patient, and the discomfort and risk of chill attending the use of an ordinary mackintosh are prevented. For nurses' aprons, especially those engaged with children, it is very clean; the proofed side can be worn outwards during any operation or dressing, and, if soiled, can be easily cleaned with a sponge and then turned. Being absorbent, yet waterproof, it can be used with great success for wet packing and compresses. This material is guaranteed to wash in lukewarm water with

soap, and after being rinsed may be put through any ordinary wringing machine, or may be wrung out by the hand, as its pliability leaves no fear of cracking. Though a little more expensive than the ordinary sheeting at the outset, the inventors claim for it that it will wear equal to three ordinary sheets. Messrs. Hedgcock & Co., of 138, Grosvenor-park, Camberwell, S.E., are the manufacturers.

ADJUSTABLE BED-TRAY.

THIS simple and very convenient invention is shown in the annexed illustration. A light wooden tray, which rotates easily on a swivel, is attached to a frame which can be fastened to the bedpost in a minute by means of steel clamps. One end of the tray is surrounded by a light screen. In this enclosed end a night-light, a food-warmer, or any small lamp, may be placed with perfect security, while the rest of the tray holds medicine, a watch, and other light articles. In the position shown in the figure the light is shaded from the eyes of the patient or nurse,



but the slightest movement of the hand will turn the tray round over the bed, so that medicines or food may be prepared with the least possible inconvenience. The whole apparatus takes very little room, and, as its cost is moderate, it is likely to be

extensively adopted. The manufacturer is Mr. S. H. Cousins, 35, Priory-park-road, Kilburn, N.W.

CLARKE'S PYRAMID NURSERY-LAMP FOOD-WARMER.

THIS admirable food-warmer consists of several parts, some of which possess novelty as well as advantage. The lamp itself is a neat tray and handle supporting a somewhat powerful night-light and a pyramidal or dome-shaped glass. This alone is valuable as a cheap and excellent lamp, useful for many other household purposes besides those of the nursery. Over the lamp is a water-bath, and immersed in this is a porcelain pannikin and cover. By an ingenious arrangement, the liquid pours from this pannikin in a small uniform stream, so that bottles may be filled without danger of spilling. The apparatus, which may be obtained of Mr. S. Clarke, 3, Ely-place, London, is moderate in price, and will be found of use in the nursery.

THE YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—On the 31st ult. a meeting of the members of this Association was held at York. Dr. T. Britton of Harrogate, the President, occupied the chair. A resolution which had been adopted at a meeting of the committee, held for the purpose of considering the new arrangement for members under the Association scheme to join the Amalgamated Society of Medical Officers of Health, was read and agreed to. The President exhibited a calculator by which the work of medical officers of health, who had large numbers of calculations to make, would be much facilitated; it was very simple and effective. The notification of infectious diseases in York was brought forward by Mr. S. W. North, and some discussion ensued. Mr. J. Mitchell Wilson read a paper giving his experience of cases of small-pox in the Doncaster district from December up to July, upon which some brief observations were made, and the meeting terminated.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 15, 1888.

AN interesting discussion took place in the Chemical Section of the British Association on the 7th inst, resulting from the sudden invasion of the chemical territory by the biologists led by such redoubtable antagonists as Professors FOSTER and THISELTON DYER, whilst the defence was maintained by Professors ROSCOE, ARMSTRONG, and GARDNER. The charge formulated by the biologists is that the chemists do nothing to help them in their difficulties. They ask for bread and are given a stone. Protoplasm, says Professor FOSTER, is a material undergoing constant change; built up perpetually by chemical forces, each particle of it gains the summit or highest degree of integration; and then like "vaulting ambition o'erleaps itself and falls on the other side" a prey to the wasting process, and tending to degradation. Unstable as water, it will not stand. No conception can be formed of its appearance; no act can analyse its composition. Substances which appear to be identical in the proportions of the elements they contain present widely different properties. No chemist would pretend to be able to distinguish with accuracy between many of the proteids. Yet, if one proteid be injected subcutaneously, the animal will die, whilst another is innocuous. In one state a proteid will be indifferent to oxygen gas; in another it will have a powerful affinity for it. As a recent writer puts it, the molecule of albumen begins to live by breathing oxygen. The relations of the proteids to physical agents are equally obscure. One form will coagulate between 50° and 60°; and another, which presents no visible difference, will resist a temperature of 70° F. The greater part of the body is made up of living material in which we can distinguish no essential differences. Yet the protoplasm of different animals is probably as different as the animals themselves. Again, in the case of the ferments, the physiologist requires to know why one substance acts as a ferment and another has no such action. What is the agent which, in the saliva or pancreatic juice, converts starch into dextrine and then into sugar; or, in the gastric juice, which changes proteids into peptones? What are the intermediate steps of the process? Why, in some ferment actions, do higher and more complex products appear; in others, lower? What is there in the bland fluid excited by the rattlesnake which holds such enmity to the blood of man? The same questions are asked by the vegetable biologists. They, too, wish to know the exact stages by which the living and active cell is formed from a chemical point of view, and the *rational* of its operation on inert and non-living matter. What are the steps of the process by which the plant, from water, carbonic acid gas, ammonia, and a little mineral substance, can build up the stately palm, generate oil, tannin, sugar, and the thousand other products of the vegetable kingdom? To all this the chemist gives but a faltering and uncertain answer. Sir HENRY ROSCOE replies that, before the course of nature's action can be recognised

and explained, the molecular constitution of the various bodies must be determined by synthesis in the laboratory; whilst Professor ARMSTRONG frankly admits that the ignorance of chemists on these points is due to the fact that they have been born too soon, and ventures the prediction that in fifty years many of these questions will be solved; whilst he seems to think that the knowledge of the proteids, as one branch of the inquiry, is a mere matter of money, and that for a few thousand pounds, distributed amongst competent men, we might learn something really valuable about them, though, if left to individuals, it would be long before any tangible results were arrived at.

After all, the remarks made by Professor GARDNER seem to be the most suggestive, for he pointed out that in the living substance the most gigantic changes and evolution of energy appear to be effected by the action of delicate reagents; and if any result is to be obtained in regard to the proteids, it will be by treating large quantities of them with similar solutions, rather than by the methods with which chemists are familiar. With respect to the question of vital force, he found considerable difficulty in thinking of protoplasm as a substance. He was of opinion that the phenomena of life consisted in an infinite arrangement and rearrangement of an exceedingly complex system of molecules, and that protoplasm would ultimately be found to be the development of energy and nothing tangible. It is clear that much work has to be done in chemistry before the professors of that exact science will be capable of affording any material assistance to the physiologists.

THE holiday season is producing its usual crop of casualties. From the seaside and the Swiss mountains come tales of accident and death, the frequency and familiarity of which should not make us oblivious to a proper sense of how much preventable misery they involve; for, without doubt, in the vast majority of cases such accidents are preventable. If, like the fatalities of the battle-field, they were part of the necessary order of things, if holiday-keeping had any inherent right to claim its annual quota of victims, we might be silent. There is little wisdom or advantage in protesting against the inevitable. But there seems no just cause why the annual holiday, now established as a necessary and salutary custom, should be enjoyed with any appreciable risk to limb or life. In few departments has modern civilisation made greater advance than in rendering travel cheap, expeditious, and safe. As a matter of arithmetical calculation, the traveller by rail or steamer probably runs less risk than the pedestrian in the streets of London, and such dangers as he encounters are either trivial or, if grave, are in more or less degree self-invited. The casualties of this season are, we repeat, in the main, clearly preventable.

These casualties are mainly comprehended under three categories—namely, deaths while bathing, boating accidents, and misadventures upon the mountains. Bathing fatalities are due mainly to two causes—first, ignorance of the nature of the strand or coast on the part of the non-swimmer, who ventures incautiously out of his depth, or is swept away by some unknown current; secondly, accidents to the swimmer in deep water while he is out of the reach of help. In the popular mind "cramp" is regarded,

probably without sufficient reason, as the chief cause of these latter accidents. It is clear that the former class of casualty might be almost wholly avoided if bathing were forbidden except at authorised places, and if care were taken to forewarn the non-swimmer of any peculiarity in the conformation of the coast or the nature of the prevailing currents. It would hardly be too much to ask the municipalities of our leading watering-places to exercise a little more real control over the bathing, which forms one of their chief attractions; to instal an official, with more authority than the usual attendant, who might supervise the entire bathing arrangements, forbid bathing at dangerous places and unsuitable times, and be responsible for the efficiency of life-saving apparatus. As regards the second type of case, we fear much mischief results from the common notion that all sudden accidents to the swimmer in deep water are due to "cramp." As a matter of fact, cramp, when it does occur, only incapacitates one limb, and need cause no fatality if help be reasonably near, provided the swimmer does not lose heart and give himself up. The cases, unhappily so numerous, in which the more or less accomplished swimmer is seen to struggle for a moment or two and then sink, are in all probability due usually to failure of the action of the heart. Such cases rarely occur except where the swimmer has exhausted himself by long immersion, and often by vainglorious efforts to accomplish some unusual feat of natation. We need, then, to teach that *feeble circulation*, and not "tendency to cramp," is the great indication for caution in bathing, and that individuals thus affected cannot safely remain many minutes in the water or essay any lengthened efforts of swimming. It would be pedantry to lay down any rules regarding the precise time during which immersion may be safely enjoyed, or the length of swim that may be prudently attempted. Everything depends, of course, upon the individual; but the bather may safely take it for granted that if he remains immersed until numbness of the extremities or shivering has set in, or if he continues to swim until he feels marked muscular fatigue, he has exceeded the limits of prudence. When accidents of this class occur, everything evidently depends upon the prompt use of life-saving apparatus. It cannot be too urgently impressed upon the public mind that in such cases every moment is of priceless value. Instances now and again find their way into the papers of resuscitation from drowning after immersion had lasted twenty, thirty, or forty minutes; and the public, with its usual appetite for the marvellous, reads such cases, and gets a hazy idea that there is practically no limit to the time after which recovery from submersion is not at least possible. Such a belief is in every way lamentable. While we must grant that the time cannot be definitely fixed, and varies according to age, sex, and the peculiar circumstances of the case, it should be emphatically taught that death from submersion generally ensues in *from four to five minutes*, and that after that period, while it is right to make persevering use of proper remedies, recovery cannot be confidently expected.

Accounts of mountaineering accidents generally reach us from Switzerland. They may sometimes be an apparently inevitable concomitant of a most exhilarating and health-giving pastime, but oftener they are due to the neglect of reasonable precautions. In the Alps mountaineering is a

profession requiring soundness of heart and limb, long practice, and a special training. The guides are as much experts in their way as skilled yachtsmen, and it is the merest folly on the part of the tyro to despise and dispense with their invaluable aid. No doubt, mountaineering in a small way may be tried by anyone who has the taste and the necessary strength for it; but where the ascent of snow mountains is essayed, especially of such giants as the Jungfrau, the Matterhorn, or Mont Blanc, guides are indispensable, and their presence and help will avert many a threatened accident.

It is to be feared that many accidents of the holiday time owe their origin to a spirit akin to bravado. The desire to swim a few yards further or to climb a few hundred feet higher than someone else is often the motive impelling the unwary to attempt feats that are dangerous and useless. We see in the immense popularity of public exhibitions involving great risks to the exhibitor the same drift of public sentiment, against which all leaders of opinion should raise their voices. We must teach that there is nothing noble in soliciting needless danger for profitless ends, that all ostentation of bravery is unseemly, and that the truest nobility of character may be shown in declining perils which promise no good, and may bring infinite mischief upon us and ours.

THE history of the progress of modern surgery is very closely intertwined with the history of the discovery of anæsthesia-producing agents, and the increased facilities acquired in their application. It is almost trite to say that, but for our knowledge of how to produce anæsthesia, abdominal and brain surgery would never have gained their present position in the van of operative therapeutics. With the disappearance of the necessity for manipulative celerity became possible the most extensive and laborious operations, involving deep dissection and patient exploration. The history of the discovery of chloroform and ether reveals rivalry between these anæsthetic agents which is not desirable. Side issues have been allowed to creep in and obscure the broad bearings of the true question under consideration. Amongst others, the following causes have led to a nearly universal adoption of chloroform, or some chloroform-containing compounds, as the routine anæsthetic in general practice. The mere "getting a person under" is easy of accomplishment when chloroform is used, and needs little apparatus beyond a drop bottle and a folded towel, and this is a matter of no slight importance to the busy practitioner. And, further, owing to the lamentable absence of instruction in the methods of administering anæsthetics, few students gain any experience in the modern modes of procedure, and are quite incompetent to etherise a patient in a satisfactory manner; they find chloroform pretty easy, and so adopt it. But another agency at work has been the strong predilection among Scotch surgeons for chloroform, and the unhesitating manner in which the advantages of that anæsthetic have been paraded, while its dangers have been discounted. These causes have reacted so powerfully to establish chloroform's supposed superiority over ether that it will probably take years before it is at all widely recognised that ether is not only a safer general anæsthetic than chloroform, but is not really difficult to manage if once the method of its administration is mastered. In general,

we may affirm that the dangers of chloroform are of such a kind that the utmost human forethought is powerless to avert them, while the disadvantages possessed by ether may usually be wholly obviated by due prevision and careful management of the drug. The need for reopening this much-vexed question is amply shown by the ever-increasing mortality from chloroform. We have before us the records of at least six deaths which appear unnecessary, since in none of the instances does it transpire that any cause existed which prevented the employment of ether rather than chloroform. We are informed, with the melancholy sameness which marks such reports, that in every case the patient was examined before the operation was commenced, and "there was nothing wrong with the heart or lungs"; the patient succumbed "owing to failure of the heart, brought about by struggling whilst being chloroformed." And in cases where a necropsy is made we learn "the heart was found to be a little fatty." Now as such post-mortem reports are not usually made by an independent expert, we cannot place the fullest confidence in the record, since there are but few who would venture to speak authoritatively about post-mortem appearances referable to chloroform without special knowledge and careful microscopic and analytical research. But what is still more unsatisfactory about the results of the coroner's quest in these cases is that we rarely, if ever, find the simple question put, "Was there any reason why ether could not have been administered instead of chloroform?" It is at least a matter of great regret that all deaths resulting from anæsthetics are not investigated by experienced persons, who would collect and tabulate the facts about the phenomena occurring before death, and subsequently conduct a searching necropsy; much valuable information could in this way be accumulated, and its lessons would, we might well hope, tend to minimise the terribly high mortality from chloroform. There is now an abundance of evidence demonstrating beyond cavil that chloroform is a dangerous anæsthetic; it has been shown that dilute solutions, when led through the detached heart of frogs or percolated through the vascular system of a "salt frog," will speedily throw the cardiac muscle into spasm; nor can the muscle be reinstated by withdrawing the chloroform and perfusing a nutrient material such as blood solution, for the heart after one or two recoveries will, if again subjected to the action of the chloroform, be thrown into permanent spasm. There is, then, no question that chloroform possesses the power of producing pathological change in the cardiac muscle. Indeed, NÖTHNAGEL has shown that rabbits become the subjects of fatty change in the myocardium as a result of inhalation of chloroform. Some recent researches of UNGAR also throw considerable light upon the matter, although undertaken with the immediate view of elucidating the causation of death from chloroform occurring some time after the inhalation. UNGAR chloroformed dogs for some hours at a stretch for several days and then ceased the inhalations, and found that the animals died at varying intervals after discontinuance of the drug, the post-mortem inspection revealing well-marked fatty degeneration of the heart, kidneys, and liver. In the case of human beings death occurs at three stages; there may be that terrible and sudden dissolution

which follows the few initial inbreathings of vapour; while, in the second stage, death is usually said to be due to paralysis of the respiratory centre; and, in the third, it does not take place till some hours after the inhalation. As to the pathology of the first form, we know nothing for certain; and this want of knowledge, and lack of power to predict in whom this terrible accident will occur, render it, we believe, most unwise to incur the risk, except the exigencies of the patient or the surgeon render it obligatory. Of the second form of death we know more, and can usually be sure that it will follow the employment of an excessively high percentage of chloroform vapour to air, or a too prolonged administration leading to saturation. UNGAR's experiments explain the third, and formulate in exact terms a surmise which KASPAR and LANGENBECK had previously advanced. In the face of such evidence, none of which has been successfully rebutted, it would seem wiser not to persist in the use of chloroform, except in cases where other anæsthetics cannot be safely employed.

It has long been known to those who have even a superficial acquaintance with the general sanitary circumstances prevailing in different parts of this country that there existed at Cambridge conditions constituting a serious danger to health, and which were the greater reproach because they have prevailed in a centre of learning boasting especially of progress in the various departments of science. But it has remained for those who have access to Dr. BUSHELL ANNINGSON's recently issued report fully to apprehend how grave are the sanitary conditions of this university town, to which an important proportion of the youth of this kingdom are naturally attracted. Dr. ANNINGSON explains that, in reporting as he does, he is influenced by a deep sense of the responsibility devolving upon him; and, in view of the continuous presence of fatal diphtheria, which has now spread over a period of two years, he fears he may have erred in not pressing with more than his customary force, "the urgent need of grappling with the sewage question," especially in so far as the state of the existing sewers and drains is concerned.

With this significant introduction, he proceeds to show that he does not stand alone in the views he expresses. He proceeds to quote the opinion of the borough engineer and surveyor, to the effect that the most cursory glance will show that "not a single district of the town can be deemed to be in a satisfactory condition"; that, of 371 openings made in the sewers, "seething deposits" were found in no less than 258; that, owing to faulty construction, many of the sewers are "simply elongated cesspools of the worst description, containing sewage in vast quantities in a state of decomposition," and that this putrescent filth permeates the subsoil. Certain specified localities are, according to the medical officer of health, "sewage-saturated areas"; and, in order to bring home the serious evils which exist, to the most unskilled of readers, a series of diagrams are attached to the report embodying samples of the ill-constructed, broken, and leaky drains, opening into sewers, all of which are more or less choked, whilst some are almost entirely blocked with filth deposit.

Reviewing the past history of Cambridge, reference is made to the recurrence of outbreaks of enteric fever and of

diarrhoea; and as regards any contention that, notwithstanding the prevalence of this needless amount of preventable disease, the town has exhibited a generally low death-rate calculated on the "national" system, Dr. ANNINGSOON reminds the sanitary authority that he has on many occasions explained this to be a fallacious test of healthfulness, especially in view of the exceptional circumstances of the population of this university town. As already indicated, diphtheria has been extensively present in Cambridge during the past two years, and the immediate causes of its diffusion are stated to be bad sanitary conditions, in addition to social intercourse and school assemblage. During 1886 there were twenty fatal attacks; the disease persisted during the early part of 1887, after which it became more diffused over the town, and was especially maintained in the district where it originally commenced. So far as is known, fifty-one households were affected last year, the attacks including thirty-nine non-fatal cases and thirty fatal cases. We hesitate, however, to accept the statistics as to non-fatal attacks, for to do so would be to credit Cambridge with a diphtheria death-rate of a formidable character, and one which is exceptional even under the grave sanitary circumstances which prevail in that town; indeed, Dr. ANNINGSOON very properly suggests that his knowledge of the total attacks must be incomplete.

The story which is told in Dr. ANNINGSOON'S report affects, as he himself states, not only the sanitary authority, but the University, and through it the nation at large. It is clearly one of imperial importance, and in view of the many years during which the question of the provision of a proper system of sewerage for Cambridge has been under consideration, it is one that calls for all the publicity which can be given to it. What the present attitude of the Cambridge Improvement Commissioners as to this question is we do not know; but the circumstance that their own medical officer of health finds it necessary to recall to them the fact that in aiming at the removal of some of the more obvious of the existing sources of nuisance, and at preventing the continuance of sanitary evils, at least as regards new houses, he has been recommending the adoption of building and nuisance bye-laws "for several years past," is by no means hopeful for the solution of the difficulty through the agency of the ordinary channels by which sanitary improvements have been so widely carried out in this country generally. It remains for those who have other than mere local interests in Cambridge to take up the question of the sanitary state of this important centre of education.

WÜRZBURG has just supplemented its resources as a medical school by the erection of a new Psychiatric Clinique, under the superintendence of Dr. Rieger, Professor in the University. Besides a spacious auditorium for lectures, it is provided with every means for the study of mental disease and of its treatment approved by modern science. Never fewer than thirty patients, selected, among other reasons, for their clinical and scientific interest, are under Professor Rieger's care.

AT Zürich the International Meteorological Committee has just been holding its sittings, Great Britain being represented by Mr. R. H. Scott, Russia by Prof. Wild, Austria by Prof. Hann, Italy by Signor Tacchini, and Norway by Director Mohn.

Annotations.

"No quid nimis."

THE NEW THERMAL SYSTEM AT BATH.

THOSE members of the profession who have been fortunate enough to visit Bath during the meeting of the British Association for the Advancement of Science must be more than gratified by the generous reception they, in common with other members and associates, have received. To medical men the "baths of Bath" have at all times been of interest; but this year the inauguration of a new thermal system of treatment in connexion with the hot springs of this ancient health-resort opens a new era, which bids fair to revive the great popularity of Bath as a fashionable inland watering-place. From the dawn of the Christian era, when this country was first subdued by the Roman legions, the hot springs of Bath have been recognised as possessing medicinal qualities. The gifted conquerors of this country, while they drove before them the uncultured aboriginal tribes, brought with them and left behind them the arts of civilisation and refinement. In no spot in the kingdom can the remains of these arts and refinements be traced more fully than in the ancient city of Bath. This is due mainly to discoveries made by members of the medical profession. In the year 1755, Dr. Lucas, a physician of local eminence, found the ruins of Roman baths surpassing in extent and magnificence anything discovered before or since elsewhere in the kingdom. He conjectured that still greater discoveries would probably be made at Bath. His predictions have been verified. In the years 1799 and 1803 some further examinations revealed extensive subterranean Roman remains, which proved to be a series of magnificently constructed baths. In an account written in 1822 by Dr. Spry full credit is given to his predecessor. He speaks of the discovery as revealing "a specimen of grandeur and magnificence which would do honour to Herculaneum, or even Rome herself, accidentally discovered in the highest state of preservation." But the still greater treasures remained hidden, and it was not until the year 1871, less than twenty years ago, that the full extent of these magnificent remains was investigated. They were found buried beneath some of the poorer houses of the city, and filled in by the refuse of past centuries. Within the past ten years the municipal authority of Bath has earned the gratitude of the historian, the antiquarian, and especially that of medical men and their patients. A light is thrown by these discoveries on the thermal system practised by the Romans in this country. Their oblong and circular baths as exemplified at Bath, with their corridors, dressing cubicles, and appendages, might be taken as models for public baths for the present day. The proportions are almost faultless, and the ornamentation in stone carving and mosaic flooring exquisite. With commendable enterprise and judgment, some of these have been reproduced in a new and extensive system of baths, with every modern contrivance for the thermal treatment of disease. Whatever could be found that was remedial in the continental system of baths has been adopted here, regardless of difficulty and outlay. Future generations will be thankful to the medical men of Bath, and to the municipality which has acted on their suggestions. It would be invidious to mention names, even of those known to have been the most active.¹ Those interested in the future of Bath should not lose sight of the fact that, notwithstanding the great natural advantages derived from the abundance of hot water springs, and the accepted medicinal virtues of the water, it is largely to their judicious administration

¹ Fuller information can be found in a work just issued from the press, entitled "The Thermal Baths of Bath," by H. W. Freeman, F.R.C.S.

and skilled local application that their efficacy is due. The success or failure in any particular case may appear "next to nothing" in the repute of a medicinal system. The gist of Sir Frederick Bramwell's presidential address at Bath was to the effect that most great ends were accomplished by attention to "next to nothing." These three words have been repeated in most of the discussions, and have become "household words" in Bath during the Association week. We hope they will be retained there. Much has been accomplished in the city, but there remains still more to do if Bath is to regain and maintain her former prestige as a fashionable health resort. There must be adjuncts to the thermal system treatment. Bath is not deficient in open spaces and pleasure grounds, but none of these, unfortunately, occupy the situations where open space is most needed. Around the new baths and unique Roman remains pleasure grounds should be constructed for the invalids, and an enclosed "winter garden" has become a necessity. A pleasant lounge and some amusement may to the uninitiated appear "next to nothing" in the treatment of disease; but to the initiated they are known to be very important adjuncts, and in the estimate of the invalid essentials.

THE DEATH-RATE OF THE ARMY.

A CORRESPONDENCE, which, perhaps, may be fairly described as more amusing than instructive, has been carried on in *The Times* on the subject of the relative death-rate of the German and British armies. A daily paper having commented on the death-rate in the German army being lower than in our own, notwithstanding the "unexampled expenditure per head on the maintenance of our army," Mr. Kavanagh, of the Army Medical Staff, wrote to *The Times*, expressing his surprise at a comparison being made between an army enlisted at home and serving at home with one of which a large proportion is serving in India and the colonies. Comparing the death-rate of the troops serving in the United Kingdom with that of the German army, he finds that they are nearly the same. But he then, by a curious process, makes out that the death-rate of the army abroad is only 4.8 per 1000. "Taking the death-rate at home from the total death-rate, we find that 4.8 represents the deaths per 1000—i.e., far below the German rate." This letter drew an answer from a correspondent under the signature of "Medicus," who pointed out the absurdity of the method by which the result was obtained, but who does not seem to be much better acquainted with the method of obtaining an accurate ratio, for he says, "The true answer is of course 15.56 per 1000." He does not state how he arrived at this conclusion, but he seems to have taken the difference between the total death-rate and the home rate and added it to the former! If the numbers of the men serving at home and abroad had been identical, the result would have been accurate, but they were not. "Medicus" has evidently committed the mistake of making his calculations upon ratios of unequal quantities, instead of upon the actual numbers. Calculated upon the figures given in the Army Medical Reports, the ratio is 15.45 per 1000. "Medicus" has also quoted statistics from the Report of the Registrar-General to show that the death-rate of the army at home differs but little from that of civil life, but though the conclusion is probably not far from the fact, the mode in which the figures are stated by him is manifestly wrong. With regard to the subject which has given rise to this discussion, we would merely observe that one important element in forming an accurate comparison is wanting—the relative age-distribution of the men composing the two armies. A difference in this would probably account for any slight difference which is shown in the death-rates.

THE TRADES UNION CONGRESS AND "THE LANCET."

WE note with pleasure that the representatives of the organised working-class trade societies of this country have duly appreciated our efforts to defend those of their order who are the victims of the sweating system. The present annual Trades Union Congress is apparently the largest and most influential gathering of the sort that has ever taken place; and, from the very first day, the grievance arising from the sweating system was forcibly put before the delegates. A great portion of the opening address delivered by the president, Mr. Shaftoe, dealt with the subject. The facts he brought forward, and the prices mentioned as being paid to the workers in sweating shops, coincided with what was described in our special reports on the subject. But, what is of greater importance, there was equal approval of our suggested remedies. Mr. Shaftoe urged that it was now generally agreed that the 69th clause of the Factory Act should be abolished, and factory inspectors thus enabled to enter private houses, bedrooms, or places in which goods are believed to be in process of manufacture; and he added that "it is obvious this would enormously check the sweating system." The President then, referring specially to our reports and articles, remarked, amid the applause of the Congress, as follows: "A valuable suggestion has been thrown out by THE LANCET on this subject, which should merit careful consideration. It is that municipalities should build special workshops for such trades, whereby proper light, ventilation, and sanitary accommodation could be secured. Such places could be let at a fair rent, and would thus be no pecuniary loss. This proposal will no doubt be carefully considered by you, as it offers at once a reasonable solution of the sweating difficulty, with a genuine chance of mitigating the evils of overcrowding. It is, however, only a public duty on our part to thank THE LANCET for the valuable service it has rendered to the cause of labour by exposing the iniquities of the sweating system, and the able papers of its Special Commissioners have done much to raise popular indignation."

TREATMENT OF TYPHOID FEVER.

IN compliance with the request of the Sydney Board of Health, Dr. W. Peirce, medical superintendent of the Coast Hospital, has reported upon the treatment of cases of typhoid fever, of which the rate of mortality during the first five months of the present year has been unusually low. Dr. Peirce, in his memorandum, states that, in cases received within the first ten days of the disease, calomel (three to five grains) is administered; and after that acetanilide, in five-grain doses, whenever the temperature exceeds a certain point (101° to 103°), up to six or eight times in the twenty-four hours. The effect of this is to cause a fall of temperature in about forty minutes, attaining its minimum in from two to four hours, with concomitant fall in the pulse and respiration rates, with decrease of arterial tension and profuse sweating. The tendency to delirium is diminished, and there is "a remarkable feeling of ease and repose, which appears partly to depend on the production of a certain amount of peripheral anaesthesia." When the effect of the drug passes off, the temperature often rises with great rapidity. He considers this treatment to have many advantages over cold bathing. He has given the drug continuously for several weeks, and has not found it contra-indicated, even when there were cardiac complications. It renders the course of the fever milder, but it may not lessen the duration of the disease. In all cases where it is freely given there is liability to occasional cyanosis of extremities and face, with irregular pulse. Alcohol was given very sparingly, and generally only in cases of failing

heart; and Dr. Peirce thinks that the prolonged use of alcohol is very injurious. He also describes the measures employed to combat the various complications. At the meeting at which the report was read the Board of Health passed the following resolution: "That the Board of Health desire to record their appreciation of Dr. William Peirce's very able report on the subject of typhoid fever, and the reasons which have led to the small mortality in the Coast Hospital, of which institution he is the medical superintendent, during the first five months of the year 1888."

LUNACY STATISTICS.

THE statistics published year by year in the reports of the Commissioners in Lunacy, numerous as are the tables supplied, are still deficient in much of the information necessary for arriving at sound conclusions as to the frequently asserted increase of insanity in England. Among the more important defects in the statistics of the Lunacy Report may be mentioned the omission of any information as to the ages of the insane, without which it is impossible to calculate the true effect of the undoubted accumulation of inmates of asylums in recent years, due to the marked decline in the recorded death-rate in these institutions. This most important defect in the statistics given in the report of the Lunacy Commissioners has been constantly pointed out in these columns, and elsewhere, during the last fifteen years, and yet up to the present time no attempt has been made to supply the deficiency. It is essentially necessary to consider fully and carefully the element of age in all conclusions based upon any vital statistics, and this is especially necessary in the case of lunacy statistics, from the more or less necessary defects in the materials from which those statistics are constructed. To take an example: The facts and figures published by the Commissioners show that on Jan. 1st in this year 270 of each 100,000 of the male population of England and Wales, and 306 of the same number of females, were known to the Commissioners to be insane. These figures, to the uninitiated, are frequently taken to signify that females are more liable to suffer from insanity than males, whereas they are, as has been frequently pointed out, absolutely worthless for deciding the relative liability of men and women to insanity. A knowledge of the ages of the insane population of each sex, moreover, shows clearly how fallacious would be the conclusion suggested by the ratios given by the Commissioners. In the census report for 1881 is given a small table showing the number of insane males and females, at successive age-periods, per million of population enumerated in 1881, of corresponding age and sex. This table shows that at all ages the numbers were 1874 of males and 2107 of females. An examination of the separate age-periods, however, shows that up to forty-five years of age the proportion of lunacy among women is smaller than among men. Between twenty and twenty-five years of age the proportion per million, in 1881, was 1037 among males and 894 among females; and between twenty-five and forty-five years, 3298 among males and 3117 among females. Above forty-five years, owing, as we may safely assume, to the much lower death-rate among female than among male lunatics, the excess in the female proportion of existing lunatics appears. Between forty-five and sixty-five years the proportion of lunatics per million was 5029 among males and 5965 among females; while over sixty-five years the proportion among males fell to 4776, while that among females further rose, owing to accumulation, to 6137. The census report also calls attention, in explanation of these figures, that in the ten years ending with 1881 the annual death-rate among the male insane was 11·94 per cent., while among the female insane it did not exceed 8·13 per cent.; and, further, that the

recovery rate was 10·50 per cent. among males and 11·59 per cent. among females. Thus the discharge rate (including deaths and recovery), which was 22·44 per cent. among males, did not exceed 19·72 among females. Hence, obviously, the far greater accumulation among females than among males, causing the larger proportion of existing cases among females of all ages, notwithstanding the evidently smaller number of cases of attack among females, judged by the proportions at the earlier age-periods. The Census Commissioners further show that, in order to maintain the same proportionate numbers of insane in each sex as was enumerated at the time of the census, there would have to be annually 756 new cases of male insanity against 661 new female cases, implying that of equal numbers living of each sex there are 106·8 new cases of male insanity to each 100 of new female cases. These figures probably represent approximately the comparative liability of the two sexes to be attacked by lunacy.

A CENTRAL MORTUARY FOR LONDON.

A PLEA has been made for a central mortuary for London, or rather for a central "morgue," where the dead may lie exposed to view, as in the morgue in Paris. This demand is based upon the requirements of justice, and the argument is used that the victim of a murder may have been seen by some passer-by at a moment which it may be important to fix in connexion with other points in the case, and that the passer-by should have convenient opportunity for inspecting the dead, and correcting or confirming his impression that the person seen is the deceased; as evidence that this opportunity is now wanting, the story is told of the refusal of the police to allow the body of one of the recent Whitechapel victims to be seen. We may point out that, to meet a requirement of this kind, not one but several morgues would be needed. For the purposes of identification and for obtaining evidence, it is desirable that the body should be within easy access of the inhabitants of the district in which the crime is committed; but it is doubtful whether the exposure of the deceased to the public gaze would really aid in the detection of crime more than would the giving of facilities for the body to be inspected by those who can allege a sufficient reason for their desire. It is not desirable to make a public spectacle of the victim of a crime. In doing so, it is doubtful if there would be any other result than the gratification of a morbid curiosity which would not be without harm to public morality. At the same time, the difficulty which is now said to stand in the way of the inspection of a body should be removed; but something more than the satisfaction of mere curiosity should be required in support of an application to enter a mortuary.

CONJUNCTIVAL PEMPHIGUS.

ONLY twenty cases of this disease are on record according to Dr. F. Gosetti, who read a paper on the subject at the last meeting of the Royal Institute of Science at Venice, and of these all led to complete and irreparable blindness from the transformation of the conjunctiva and cornea into indolent or cicatricial tissue. Having described a similar case which had recently occurred in his practice, Dr. Gosetti remarked that previous observers of "conjunctival pemphigus" admitted that in the morbid process manifested in the eye concurrently with, or in succession to, the appearance of that dermatosis on other mucous membranes, they had never detected either on conjunctiva or cornea any eruption even distantly resembling the bullæ of pemphigus, which, when that disease affects the mucous membrane of the nares, for instance, or of the buccal cavity or the pharynx, present themselves in their characteristic bleb-like form. Dr. Gosetti maintains that the atrophic puckering

of the conjunctiva and the cicatricial degeneration of the cornea observed in such rare cases of pemphigus do not constitute a distinct nosological entity, but are to be attributed to the process known under the name of xerosis parenchymatosa of the conjunctiva, which is itself the final result of a grave inflammatory process affecting the mucous membrane of the eye, such as trachoma and conjunctival diphtheritis. The influence of the dermatosis bullosa in determining the ophthalmic phenomenon in question would, according to Dr. Gosetti, be sufficiently defined as a local trophic disturbance (*perturbazione trofica*) due to general disease of a marasmatic kind (such as pemphigus undoubtedly is), and affecting the conjunctival tissue. This trophic disturbance, with the consequent inflammatory process and the eruption of the bleb-like vesicles on the mucous membrane of the palpebra, would result in the atrophising sclerosis and the irreparable blindness that follows it.

THE JESMOND OUTBREAK.

MR. HENRY ARMSTRONG has recently presented to the corporation of Newcastle-on-Tyne a report on an outbreak of scarlet fever, the cause of which was, after a careful examination of all the circumstances, attributed by him to the use of milk from a special dairy, the infection having been received, after the milk left the cow, directly or indirectly, from the children of a carman, whose children were declared to have had neither scarlet fever nor sore throats, whereas in three cases redness of fauces, enlargement of tonsils, &c., were discovered. The area of the incidence of the disease is described in the report, and it is shown that up to a certain date and among the consumers of the milk 116 cases of scarlatina or of other form of sore throat were certified, the attacks being spread over sixty-three households. Roughly speaking, Jesmond-road may be taken as the 'centre of the affected area, there having been as many cases to the south of it as to the north; and, as regards that area, it is reported that, under the circumstances which led to the disease, structural sanitary defects were in no way the cause of it. Since the issue of the report some doubts have been expressed as to the source of the infection, and it is stated that the Jesmond district is one where there have been numerous complaints as to sewer and drain ventilation, and that it is by no means a locality the sanitary state of which is above suspicion. On the other hand, it is contended that, though perfection cannot be claimed for the sewers of this district, they are in good and efficient working order. The subject has given rise to considerable local correspondence, and the city engineer has prepared a report on the subject, in which he admits that "nasty smells" and "foul smells" occur and have been complained of, yet "sewer gas" has not been detected. Thus, he writes: "Foul smells? Yes, and in considerable variety and vigour. Sewer gas? No." And he explains, so far as we can understand him, that foul smells from a sewer refer to recent sewage smells, and that sewer "gas" comes from stale and decomposed sewage. As regards the latter, he proceeds to express his belief that not one person in ten in Newcastle has ever smelt "real sewer gas." Unfortunately, he goes on to admit, "nasty drain smells." He then explains that it is a common practice to lay house drains with little or no fall, with gaping joints, &c., and that from these and other causes the drain pipes at times get half-filled before there is sufficient force behind to drive the accumulated stuff into the sewers. Thus he admits the very conditions which tend so often to make public sewers not only foul but dangerous; indeed, there are few circumstances which more efficiently foul sewers than that very retention of sewage in drain pipes, which is a common cause of "gas," and, by reason of the resulting decomposition of the

be dangerous if it takes place in the sewers. We fail to see how a district which has its sewers fouled by offensive and decomposed drainage, which is only periodically jerked into them from drains which are little better than cesspools, can be held up as free from danger. The sewers themselves, and apart from the drains which join them, may be free from suspicion, and to this extent one of the contending parties may be right; but blocked and ill-constructed house drains are, as a rule, a greater source of danger than mere faulty sewers, for they are in much more intimate communication with dwellings. And Mr. Armstrong is doubtless also perfectly correct. He held that, milk being the cause, the disease was not found to be associated with any structural defect; and he was probably largely influenced in his opinion by the fact that scarlatina is not a disease the cause of which can be satisfactorily traced to sewers and drains, even when these are admittedly faulty. The case seems to us to be one in which there is truth on both sides; but also one in which there is overwhelming evidence that the surveyor's report as to the number of "badly laid house drains" calls for definite action on the part of the sanitary authority, if a favourite residential quarter is to maintain the standard of health which it appears to claim for itself.

MEDICAL CANVASSING.

WE must again enter our protest against the system of canvassing electors and governors for medical appointments to hospitals and public institutions which is still in vogue in country towns, and also, we regret to say, in London. Some of our readers have tried it, and know what it means beyond a waste of time and money, which can often be ill afforded. Then, again, the governors of a hospital are usually unable to judge as to the special fitness of a candidate for the vacant post, the meaning of medical terms and the distinction between those of a similar sound being unknown to them. Moreover, they do not understand the duties connected with the post which they propose to fill, or the value of the appointments which, having been previously held by the candidates, qualify for such a post. We venture to state that there are few hospitals the governors of which take sufficient trouble to visit even the out-patient department and see the work done there, or follow a surgeon's visit and see what it means for good. They attend occasional board meetings, some of them even with regularity; they may look into a ward and speak to the sister, a nurse, or a favourite patient; their name is on the list of governors of the place; they subscribe to its funds; they feel that they have done what is expected of them. A vacancy occurs amongst the staff, and a friend writes: "Support So-and-so, he is a nephew of mine"; a Royal personage writes, or one whose influence is great, and the vote goes accordingly; besides, it saves trouble. We would not say that there are not some who do consider the patients as well as themselves; but, alas, they are few. The right to elect gives them an increased sense of importance, and they do not appreciate their own relative ignorance of the qualifications of the candidates. The medical men attached to the hospital are undoubtedly the best judges, and it should be left to them to recommend for the election, the committee still retaining the actual power to elect, canvassing being forbidden. This method is employed at most of the large London hospitals, and works admirably. The staff are as jealous of the honour of the hospital as the most enthusiastic of governors, and are much better judges in every way of the merits of their future colleague. It seems to all derogatory to the dignity of the profession that members thereof should be compelled to visit and extol gentlemen not in touch with the medical science, the numerous perfections possessed by the victor—that is, if

opportunity be given of doing so. We must leave it to the profession to see that the opportunities of similar events occurring are diminished, for its members will have to take the first step in bringing home the truth of the matter to the governing bodies of the institutions where this system of canvassing, so humiliating to men of high principle, is still extant.

THE DIET OF THE SOLDIER.

IN commenting lately on the diet of the soldier (THE LANCET, Aug. 11th), we pointed out the necessity for an efficient system of supervision as to the quality of the meat delivered by the contractors, and suggested that instruction on this subject should be given at the military colleges. We observe that a very mild attempt in this direction has been made by the military authorities. A General Order has been issued directing the formation at Aldershot of "classes for the instruction of officers as to the method of judging of the quality of provisions, forage, &c." There are to be four such classes in the year, and the course for each class is to last a fortnight. One officer from each regiment of cavalry, division of royal artillery, and battalion of infantry stationed at Aldershot is to be detailed for attendance on the course. A limited number of officers from out-stations will be permitted to attend, but, rather unfairly, they will be required to pay their own expenses, quarters being provided for them if available. This is a step in the right direction, but it is a very inadequate provision for the supply of a great and serious want. We trust that the authorities may see their way to extend the sphere of instruction beyond the camp at Aldershot. There can be no reason why such classes should not be organised at all the camps and large stations. But in addition it seems imperatively necessary that instruction on this important subject should be given at Woolwich and Sandhurst, so that officers on joining the army should be qualified, at least educationally, to discharge a duty which involves so much of the health, efficiency, and comfort of the soldier. We trust steps will at once be taken to ensure this most desirable improvement. We would suggest to those gentlemen who devote themselves to the task of preparing candidates for commissions that it would redound much to their credit if they added instruction on this point to their present course. Such a step would, we believe, be fully appreciated by all who take an interest in the welfare of the soldier.

SMALL-POX IN FRENCH TOWNS.

It appears from the monthly statistical return issued by the French *Bureau de l'Hygiène Publique* that small-pox mortality during last year was nearly eight times as fatal in the principal French towns as it was in the largest English towns. France at the time of the last census in 1886 contained fifty-one towns with a population exceeding 30,000 persons, and the statistical return above mentioned shows that during the twelve months of 1887 the reported deaths from small-pox in these towns were 1956, and equal to a rate of 0.31 per 1000 of their aggregate population. In the twenty-eight large English towns dealt with in the Registrar-General's Weekly Return, each of which had at the time of the last census in 1881 a population exceeding 70,000 persons, only 332 deaths from small-pox were registered during last year, giving a death-rate of but 0.04 per 1000. Comparing Paris with London, we find that 389 deaths occurred in the former city to 9 in the latter, and, corrected for difference of population, there were 85 small-pox deaths in Paris to 1 death in London. The only large English town in which any approach to epidemic prevalence of small-pox occurred last year was Sheffield, where the rate was 0.88 per 1000; while it may be noted that the death-rate per 1000

from this disease was 1.21 in Nice, 1.37 in Toulouse, 2.64 in Avignon, 2.98 in Calais, and 3.58 in Brest. In the first six months of this year the death-rate from small-pox in these French towns exceeded that which prevailed in the first half of last year; it was equal to 0.42 per 1000, while in the twenty-eight English towns in the same period it was 0.12 per 1000. In Paris 185 deaths from small-pox were recorded, while in London, with nearly double the population, the number was only 5. The epidemic showed increased intensity in Brest in the six months ending June last, causing an annual death-rate of 5.22 per 1000; the small-pox rate was also equal to 1.01 in Grenoble, 2.09 in Montpellier, 2.18 in Havre, 2.73 in Lorient, and 11.24 in Cotte, a town with a population of nearly 40,000 persons. Unfortunately these mortality statistics do not date back further than the commencement of last year, and it is therefore doubtful whether France is now suffering from an epidemic wave of small-pox, or whether the rates referred to above as prevailing in the French towns during the past eighteen months represent the normal mortality from this disease in the urban population of France.

THE REPEAL OF THE CONTAGIOUS DISEASES ACTS: A SUGGESTION.

MR. ALBERT BENTHALL, M.R.C.P., of Southsea, has sent us a letter respecting the Contagious Diseases Acts and the disastrous effects of their repeal. He says—and we can readily believe it—that no one who is not practising in a garrison town can have any conception of the evil. But he and others who wish to make suggestions on this question must not ignore the fact that the evils resulting from venereal diseases are by no means limited to garrison towns and naval seaports, but are felt more or less in all towns and cities. It was the very limited area of the operation of the Contagious Diseases Acts which neutralised so very much their good effects, and gave them a partial character. Their effects in diminishing disease was beyond dispute; and as the civil population of the garrison towns and naval seaports to which they were applied experienced the benefits of these Acts, it was a grievous mistake not to extend them, or at least to give local authorities the opportunity of applying them. It was this timidity on the part of former Governments which led to the subsequent suspension and repeal of the Acts. Mr. Benthall considers that nothing can be done on the basis of the late Acts, and he suggests the compulsory examination of males. "That any male of immoral habits should be required to produce a certificate not more than three days old, from a legally qualified medical practitioner, stating that he is free from infectious disease. That any woman could demand production of this certificate, and if it was not produced, inform the police. The man to be fined £5. Half to go to the informer (!). That any man found to be suffering from contagious disease should be sent to hospital and detained until cured." This suggestion is so utterly impracticable that our only object in publishing it is a desire to give publicity to every suggestion honestly made with a view to prevent disease, and in the hope of something more practical being suggested. Mr. Benthall has fallen into two errors. One is that the Acts were directed against one sex—i.e., the female,—which is untrue. They were directed against common prostitutes, a proportion of the female sex who make a trade of prostitution, and by whom the greater amount of venereal disease is created and propagated. The second error is that men are equally guilty with prostitutes in spreading disease, which is a wholly untenable proposition. That women are unfortunately infected by men is too true; but while any man cannot, for obvious reasons, infect more than comparatively few women, there is no limit to the number of men whom one prostitute may infect. Mr. Benthall believes that his

proposal would not only decrease disease, but would largely prevent immorality, especially among youths and those who are not wholly vicious. If he will refer to the series of leading articles published in THE LANCET in 1885 and 1886, he will find all the arguments in favour of and against the Contagious Diseases Acts fully given, and every objection fully met. Evidence is rapidly accumulating which shows the disastrous effects which the repeal of these Acts has had upon the men of the army and navy, a condition of affairs which will probably go on until the much-enduring British taxpayers again complain loudly. Then will the Acts probably be restored, since there is no other effectual means of preventing venereal disease than the compulsory periodical examination of all known prostitutes.

PROGRESSIVE OPHTHALMOPLEGIA.

THE commonest cause of progressive ophthalmoplegia is syphilis or independent degeneration of the nervous centres. M. Meyer has examined a man, aged sixty-two, who was the subject of blepharoptosis and absolute immobility of the ocular globes, which were somewhat protruded and a little divergent; but accommodation was said to have been intact. The corneal reflex was notably diminished, but no other nervous symptoms existed. A granular fatty degeneration of all the motor nerves of the eye was discovered on microscopical examination, and the muscles were in process of fatty and granular atrophy. The optic nerve, ophthalmic ganglion, and the fibres of the sympathetic presented no appreciable lesion. A peripheral neuritis was observed also in the phrenic nerve, in a great number of the intercostal nerves, and in different muscular and cutaneous nerves of the forearm, arm, and leg. The hypoglossal and the glossopharyngeal were much changed, and also the pneumogastric, the recurrent, the superior laryngeal, and sensory branches of the trigeminal. There were no changes in the central nervous system. Although the man was much wasted and very tired and weak, further motor or sensory symptoms were wanting; no mention is made of the faradaic reactions of the muscles. In connexion with the disease of the phrenic nerve, the existence of a bronchial dilatation with much expectoration is interesting. Unless the cachexia gave rise to the multiple neuritis, the source of the changes does not seem obvious.

THE REVOLVER.

OF late years the custom of carrying firearms, to be used in case of improbable need, has become inconveniently common in this country. It is easy to understand that such a handy weapon as the revolver is essential to the soldier or the traveller in lands where law is but a name. In the more settled state of society with which we are familiar the necessity is, to say the least, open to question. The danger of bodily injury to which private persons are occasionally liable at the hands of idle ruffians is not, indeed, a mere delusion. On the other hand, it is not so pressing that it must be met by supplementing the services of an efficient, if not too numerous, police by a readiness on the part of individuals to take the law of life and death into their own hands. Even in the case of the police themselves, whose duty it is to seek and meet the criminal desperado on his own ground, the revolver has, we believe, not hitherto been adopted as a needful armament. The reason for this is not that it might not in certain cases have rendered valuable service, but that the necessity for it has hitherto been quite exceptional, while the temptation to resort to it in conditions of less absolute urgency might at times be too much for human endurance. The revolver is the perfect all-weather weapon, and the pocket revolver has become a familiar friend who would do

well to copy their example. Human nature at its best is not absolutely reliable. Should it, then, be trusted in the event of sudden assault or other provocation to deal justice only to the offender? Can it be depended on to repress, if needful, the temptation to reply with a hasty bullet? We may safely say not, and experience teems with incidents which confirm our statement. It is probable that public safety would gain considerably if a heavy tax were placed upon a weapon which has been so often the ready means of murder and suicide.

CONSTANT WATER SUPPLY.

THE Corporation of the City of London have published a report giving their reasons for not complying with the petition from various City parishes asking them to obtain a constant water supply for the area under their jurisdiction. The reasons are that the water company would require that every house should be provided with the requisite fittings, and that it had been found in St. Pancras that this would entail a cost of £5 in each case. The fittings which would be required are those which are specified in regulations approved by the Board of Trade. These requirements do not relate specially to constant water supply, but appear only to be enforced when a demand is made for constant service; then the water company begins to enforce its rights, and householders who have in ignorance allowed other fittings to be placed in their houses are compelled to make expensive changes to meet the wishes of the company. Thus the company is able to hold the threat of expense over any district desiring a constant service. Mr. John Hamer, the honorary secretary of the Mansion House Council, has contrasted the behaviour of the two water companies supplying the parish of St. Pancras. The West Middlesex Company only demanded an alteration in fittings when this was absolutely necessary—that is, when they gave rise to waste of water; the New River Company, on the other hand, appear to have insisted on an alteration whenever the fittings were not of a kind prescribed in the regulations; hence the demand of the vestry for constant supply has entailed upon the inhabitants resident in the former company's area almost no expense, but in the area of the latter company an enormous cost. The Corporation of the City have to deal with the New River Company only, and they are therefore fully justified in telling the citizens of the expense to which they will be put; but they will doubtless bear in mind that, had the City been supplied by another company, they could have had the boon they sought without the expense.

THE BURIAL OF STILLBORN INFANTS.

A CASE which came before the Portsmouth magistrates on the 6th inst. shows how completely the wisest provisions of the law may be nullified by the laxity of those whose duty it is to enforce them. Until the passing of the Amended Registration Act of 1874 there were no regulations whatever for the burial of stillborn infants, except such as the authorities of each burial-ground might choose to make for themselves. By that Act it was provided that before the body of any infant was buried as that of a stillbirth, or still-born infant, a certificate or declaration to that effect should be produced or made. It is the general practice throughout the country to adopt a sliding scale of fees for burials, increasing according to the age, the difference between that for a stillbirth and for a deceased infant (however short-lived) ranging from eighteenpence to seven shillings and sixpence, or even more. Dr. Johnson used to remark that "there was a time in his life when sixpence was a very serious consideration for him." It is a very serious consideration now for poor people, and it is greatly to be wished that this temptation to fraud could be removed by having a uniform

fee for the burial of the bodies of all newly-born infants, whether they shall have been stillborn or survived their birth. In the Portsmouth case, the midwife present at the birth was the person charged. Though she saw the child born living and surviving its birth one hour and a half, she gave a certificate of stillbirth, and succeeded in getting it buried as such. It would also appear that this was a usual practice with her, and that the official in charge of the Mile-end Cemetery at Landport was entirely ignorant of the provisions of the Act of 1874. According to his own statement he buried, at a rough guess, from 100 to 120 bodies of infants every year without medical certificates or the requisite declaration. This is a circumstance calling for an inquiry from the Home Secretary. It is needless to point out the terrible effects of such a loose system of burial, and we note with satisfaction that the defendant was fined £3, or in default, a month's imprisonment. The magistrates also expressed great dissatisfaction at the entire ignorance of the provision of the Act shown by the official of the cemetery, characterising this loose manner of burial as most reprehensible. Copies of those clauses of the Act which relate to the burial of infants ought to be in the hands of every official in charge of a burial-ground, and should also be placarded on the office wall, for the benefit of midwives and others who are ignorant of the Act and its penalty clauses.

WEST HARTLEPOOL CEMETERY AND POSSIBLE WELL POLLUTION.

THE proposed extension of the cemetery at West Hartlepool has given rise to fears that pollution of the public water supply might result if it were carried out; and Dr. Gourley, the medical officer of health, has expressed apprehensions as to this. He has explained that the water supply is drawn from a well in the magnesian limestone, situated about 400 yards to the eastward of the proposed extension, the depth of the well being some 200 feet, and the level of the water having been reduced by pumping; and he has stated that there are apprehensions of danger of the infiltration of putrid animal matter into the well, and hence serious risk of dangerous contamination of the public water source. Amongst other matters, he has further pointed out that the land between the proposed cemetery extension and the waterworks has been made up with refuse material, in itself dangerous to health. Mr. R. E. Middleton, Mem. Inst. C.E., has in consequence dealt with the matter at some length, and he has arrived at a number of conclusions in the main adverse to this view. He points out that the proposed cemetery site consists of a band of clay varying in thickness from 26 ft. at its eastern end to 17 ft. at its north-western end; that bore-holes show it to be impervious to water; that burials can be so arranged as to leave a bed of clay not less than 10 ft., which shall not be pierced; that the waterworks do not draw their water from any of the upper strata, but from beds below, and hence that pumping produces no scour in the upper strata; and he draws the conclusion that the proposed cemetery extension is not liable to produce contamination of the water supply. At the same time, he urges the construction of certain drains around and in the cemetery, and he points to the risk which is incurred by the deposit of town refuse where the stone crops out, and by reason of cesspools. The report which he has prepared seems to exonerate a cemetery in the proposed situation from doing possible harm; and as we believe that Mr. Middleton's services have been called in as an independent expert, the greatest weight should be attached to his opinion. But there has recently, in more cases than one, been a tendency to construct cemeteries for the dead without proper regard to the numerous interests of the living in the important

matter of water supply; and if, locally, doubt is still held as to the possibility of danger arising from a cemetery in the intended position, the present is the time for exhaustive inquiry by some skilled geologist who has made the subject of water supply a special study. Under any circumstances, Dr. Gourley will have the satisfaction that his attitude has secured the consideration of a number of reasonable doubts, and that it has enabled those doubts to be dealt with before it had become too late.

SMALL-POX AND VACCINATION.

A REPORT of Dr. Mumby, medical officer of health for Portsmouth, has met with some local criticism for the reason that it contains photographs illustrating the appearance of a vaccinated and unvaccinated person respectively when suffering from small-pox. Distasteful as the illustrations may be, they honestly show the disease in its two forms. The opponents to vaccination undoubtedly meet with success because small-pox is rarely seen at the present time by the majority of English people, and its terrors have therefore ceased to have the influence which they possessed in pre-vaccination days. If opponents of the Vaccination Acts could be made to see in small-pox hospitals the terrible disfigurements from this disease which result when unvaccinated persons are attacked, their objections to vaccination would receive a rude shock. What small-pox can do in an unvaccinated community may be learnt from the story which is told concerning Morocco. It is stated that some twenty thousand people have fallen victims to this disease; in a single town, Rabat, thousands are believed to have died, the panic-stricken people flying in all directions from the infected district. When it is considered how gladly these poor creatures would avail themselves of the protection afforded by vaccination, it is painful to read that at Luton the guardians are refusing to enforce vaccination, and have returned a discourteous reply to the Local Government Board, who had called their attention to the fact that less than half the children had been vaccinated who had been born in that district during the period from July to December last year. Unfortunately, the Luton board are not exceptional, for we learn that the Gloucester board of guardians have also adopted a resolution that there should be no prosecution of nearly five hundred persons who had neglected to have their children vaccinated.

WOOLWICH AND SANDHURST.

THE Reports of the Board of Visitors upon these two national military schools have just been published, and afford as little information as possible respecting the health of the cadets. It is true we are told that at Woolwich the Board "observed with much satisfaction their bright and healthy appearance," but it would have been much more satisfactory if the usual numerical details respecting the amount and nature of the sickness which had occurred among them had been furnished. The number of cadets at the date of inspection was 252, "being 50 over the establishment." The report states that "the total number who have been admitted to hospital was 130, or an average of 1.61 per cent.;" we should rather have been disposed to say it was 51.6 per cent. On the inspection day there were 8 sick in hospital, or 3.17 per cent., which appears to us a very high ratio. No information is given as to the diseases for which they were under treatment. It is also stated that during the year eight lost a term through sickness. Of Sandhurst, the Board report that the health of the cadets during the year has been good, and their appearance and physical condition all that could be desired. At the date of the examination the number was 306, excluding one rusticated. The admissions into hospital during the year were 112, or 36.6 per cent., which contrasts

favourably with the proportion at Woolwich. The average constantly sick was in the proportion of 1·23 per cent.; on the day of inspection the number in hospital was three, or '98 per cent., as against 3·17 at Woolwich. At Sandhurst only one cadet lost a term through sickness. We have on previous occasions called the attention of the authorities to the marked difference in the health of the cadets in these two schools, and suggested the propriety of an inquiry into its causes, but the only result of our suggestion appears to have been the suppression of the reports of the medical officers. It is no doubt unpleasant to the military authorities to have such matters discussed, but we feel satisfied that the best course they could adopt in the interests of the army would be to give full and satisfactory information on the subject, and take advantage of any criticisms, favourable or adverse, to improve the sanitary conditions of the establishments, even although that might involve an increased expenditure.

THE SANITATION OF POOR DWELLINGS.

THE Mansion House Council on the Dwellings of the People are steadily persevering in their efforts to improve the sanitary condition of London districts, and, thanks especially to the attention which their representations to the Home Office have received, they are meeting with considerable success. At a meeting held last week at the Mansion House, it was stated that the inquiry recently held in Bethnal-green had led to the most satisfactory results, while in some other parishes the local authorities had shown much willingness to remedy any defects pointed out to them by the Council; in Shoreditch especially evils found to exist had been promptly remedied. Special inspections had been made in Woolwich and portions of Plumstead and Bromley, showing the need for more active sanitary administration in those areas. The next Home Office inquiry will be held at Rotherhithe, and the Council have appointed two gentlemen to represent them thereat. A striking instance of overcrowding was brought to light by an inquest held last week in Spitalfields concerning the death of a child aged four months. The baby, who had died from suffocation, had shared a room about twelve feet square with six other children and its parents—that is to say, each person had but a little more than a hundred cubic feet of air space; and for this miserable accommodation a charge of 4s. 6d. was made. The jury returned a verdict censuring the sanitary authorities, and the case affords evidence of the need for continued watchfulness of bodies like the Mansion House Council over the interests of the poor.

GASTROSTOMY IN THE PROVINCES, AND THE FEE FOR IT.

A SUCCESSFUL case of gastrostomy is reported, in connexion with a County Court action for the recovery of fees for the operation, in the *Hereford Journal* of Sept. 1st. The surgeon, Mr. Thomas Edward Williams, of Talgarth, had to sue the patient for £36 15s., a balance over and above fifteen guineas paid by the defendant. The operation was done for malignant disease of the oesophagus in December last, and at the time of the trial the patient was alive and well, being fed through the opening made by Mr. Williams. The operation was performed, as usual, in two parts. The first was done on Dec. 13th, the second on Dec. 18th. The patient lived twenty miles away, and there were several intermediate visits. On two occasions at least Mr. Williams remained for the night. After the first operation there was distressing thirst, which was assuaged by rectal injections of warm water. The plaintiff charged five guineas for his journeys—three for himself, and two for his assistant. When he stayed the night, he charged seven guineas. For the prolonged absence from

home on the day of operation seven guineas were charged, and ten for the actual operation. The whole charges were, in fact, extremely reasonable, and all the medical witnesses but one thought so. The jury found for the plaintiff for £28 3s., and the judge allowed costs on the higher scale, adding that he thought the verdict a most proper one. It is not often that a man has life saved for him so directly and palpably as in such cases as this. The reluctance to pay was remarkable on any supposition but that of poverty, which was excluded. We regret that one medical man should have given any support to the defendant in his opposition to paying fees really inadequate to the service rendered. The defendant's lawyer is privileged to denounce the plaintiff and all his ways, and much importance does not attach to his censure. But when a member of the profession does well and makes a reasonable demand for his service, he should be supported heartily by all his professional neighbours.

NATIONAL PENSION FUND FOR NURSES.

THE process by which the prospectus of the National Pension Fund for Nurses is getting pieced together is a highly curious one. A scheme is formulated and made public. In due course it is criticised and found to be conspicuously defective. Thereupon, with much angry expostulation, its constructors announce that they have the remedy in reserve, and that if the critics only understood the scheme they would be perfectly satisfied. The latest instance of this method has grown out of the notice of the newly issued prospectus, which appeared in our impression of the 25th ult. We there commented on the disparity between the premium chargeable to a pension policy-holder of the age of forty-eight years and a fortnight and to another of the age of forty-eight years and fifty weeks, and showed that it amounted, for what is practically the same benefit, to the difference between £270 and £500. This has elicited the answer that "when a nurse is asked to pay a premium of £20 a month it is understood she will pay a definite number of premiums and no more." This is a very important proviso, and it would be curious to learn why it should have been left to be understood instead of being distinctly stated at the first. But now that it is made public we must ask some further questions about it. In the first place the nurses will want to know how far this principle applies. If a nurse when asked to pay £20 a month is understood to be about to pay a definite number of premiums, we presume that a like understanding will hold when she is asked to pay £10. Will it hold when she is asked to pay £1 a month, or when she is asked to pay 3s. 3d.? In a word, we shall be glad to learn whether the premiums quoted in Table A of the prospectus are payable from the date of the policy until the date when the benefit commences, or are payable only in every case for the definite number of undivided years which would be obtained deducting the age at entry from the age of commencing benefit. Or, if some of the premiums are chargeable on the one method and some on the other, we want to know where the line is drawn. A similar point, about which we invite the managers to give some further information, arises under Tables E and F, which provide combined sick pay and pension. Is a nurse who is asked to pay a monthly premium of, say, £16 5s. 8d. to understand that she will not be called upon to pay more than twelve premiums? If so, will she be secure of sick pay during the whole time that she is a member not entitled to pension, whether that time be barely twelve months or fully twenty-three? The premium above quoted apparently contains a contribution of 3s. 5d. towards the sick pay fund. Is she to pay only

twelve such contributions whether she benefits by the sick fund for the longer or the shorter period, or is her contribution to be proportioned in the ordinary way to her possible claim to benefit? And, finally, whatever the solution given of these particular problems, we shall be glad to know whether the same answers will apply *mutatis mutandis* throughout the table.

THE REASSEMBLING OF SCHOOLS AND INFECTIOUS DISEASES.

THE time for the reassembling of our schools induces us to say a word of great importance to both masters and pupils. The introduction of infectious disease into a family is distressing and disturbing enough. But this is little compared with the hardship of its introduction into schools. Yet this is often done with most singular carelessness. A few days after a school reassembles, a boy shows malaise and develops infectious disease, with which he may infect twenty other boys, possibly some of them with fatal results. Short of this, the derangement of the school and of the work and plans of the individual boys is enormous. This is a case in which the argument for notification is very cogent, and in which carelessness is something like a crime. Every parent who is guilty of such carelessness ought to be made to realise the gravity of his fault. A few successful prosecutions for the exposure of children with infectious diseases would do good. There are some parents who are not amenable to any other kind of argument. But, in general, the evil "is wrought by want of thought." It is not the less cruel in its operation. A word in time may induce all parents to reflect on their responsibility in this matter. If their children have had any doubtful illnesses, let them be kept at home till all fear of conveying disease is clearly over. The profession is often pressed in this matter. It should not suffer itself to be so. When there is any doubt in any given case, the benefit of the doubt should be given, not to the single child, but to the school to which it is proposed to send it. We give this advice with a grave sense of the evil to be averted.

METROPOLITAN ASYLUMS BOARD.

IN his annual report to the Metropolitan Asylums Board, the Chairman, Sir Edwin Galsworthy, gave the history of the board's proceedings during the twelve months ending with the first quarter of the present year, and dwelt upon the demands made during this period upon the managers for hospital accommodation for persons suffering from scarlet fever. Future experience, he said, could alone determine whether fever in the metropolis during last autumn was more than usually prevalent, or whether Londoners were learning to make a larger use than heretofore of the hospitals provided by the board, the latter, perhaps, depending upon the increased facilities given for the removal of cases of infectious disease by the Local Government Board's amended order, by which the certificate of any duly qualified man is recognised as sufficient warranty for admission. Sir Edwin Galsworthy estimates that the managers received as many as one-third of the total cases of fever occurring in London, and at one period had 2789 cases under treatment, this number approaching very closely to the 3000 beds which the Royal Commission held to be necessary for the wants of London. It must be recollected, that the Commissioners in determining this number had in their mind the existence of a system of compulsory notification of infectious disease, by which it was expected that the opportunity for the extension of epidemic disease would be limited. In the absence of this system the managers may be called upon to extend the accommodation beyond the limits fixed by the Commission, for there is no longer any thought of restricting

the use of the managers' hospitals to the very poor, and it may be anticipated that a still larger proportion of those attacked will seek admission. London, therefore, must choose between the expense of further hospital provision, or the system of notification.

FEES FOR DISINFECTION IN MARYLEBONE.

MR. WYNTER BLYTH raises an important question in his report on the health of Marylebone for the month of July—namely, that of the expediency of making a charge for the disinfection of infected articles and rooms. He rightly explains that it is generally recognised as a principle by leading sanitarians that the expenses which become necessary for protecting the public against infectious disease should be a common charge on the community, and that, whether the question involved is that of the isolation of the sick or the disinfection of infected things, the charge should in no instance be imposed on the persons who are the sufferers. The vestry, unfortunately, only met their medical officer of health half way, by passing a resolution "that no charge be made in future for disinfecting rooms, bedding, &c., where the disinfection is ordered by the sanitary department, but that the present fees be continued in all cases where application is made for disinfection to be carried out." Anything more illogical could hardly be conceived. Those who have sufficient intelligence to appreciate the value of preventive measures, and who have sufficient interest in the welfare of their neighbours to be desirous of getting rid of a common danger, are practically to pay a fine to a body appointed to protect the public health; whilst the ignorant, and those who are careless enough to leave infection uncontrolled until the sanitary authority are compelled to interfere, are relieved of all cost, the expense in their case being borne, amongst others, by those who have already been made to pay for their desire to protect the community at large.

POST-EPILEPTIC EXHAUSTION.

HEMIPLEGIA, paralysis and diminution of sensation, and perversion of the function of perspiration, have long been known to occur after epileptic discharges. M. Féré has injected into the subcutaneous tissues of epileptic patients seven milligrammes of pilocarpine into the mid-line of the body immediately after a fit, or sometimes in the interval between the fits. Strass had previously employed pilocarpine as a means of detecting nervous degeneration. Féré found that the epileptic patients scarcely sweated at all when the pilocarpine had been injected immediately after a fit, thus pointing to the inference that the nervous centres controlling perspiration had been temporarily exhausted by the epileptic discharge. In hysterical hemianæsthesia, pilocarpine also fails to cause sweating in the anæsthetic areas.

THE WHITECHAPEL MURDERS.

THE theory that the succession of murders which have lately been committed in Whitechapel are the work of a lunatic appears to us to be by no means at present well established. We can quite understand the necessity for any murderer endeavouring to obliterate by the death of his victim his future identification as a burglar. Moreover, as far as we are aware, homicidal mania is generally characterised by the one single and fatal act, although we grant this may have been led up to by a deep-rooted series of delusions. It is most unusual for a lunatic to plan any complicated crime of this kind. Neither, as a rule, does a lunatic take precautions to escape from the consequences of his act; which data are most conspicuous in these now too celebrated cases. The truth is, that under the circumstances nobody can do more than hazard a guess as to the probable

condition of mind of the perpetrator of these terrible tragedies. Until more evidence is forthcoming, it appears to us to be useless to speculate upon what can only at present be regarded as problematical.

A MEDICAL BADGE.

AN evening contemporary gives an account of an American physician as he starts from his office with an olive-coloured button in his coat, which he uses to designate that he is a physician. It would be more effective to put a big label on his hat or his arm, calling himself the medicine man. We hope this gentleman will remain singular in this respect. We are told, indeed, that this question of a distinctive badge is to come up before the medical societies in the coming session. We venture to think that the societies will find more worthy and urgent subjects for discussion. Doctors are not often far off when they are wanted, but it is too bad to expect them to carry a sign-board on their hat or coat. The suggestion savours much too strongly of advertisement.

PYOGENIC BACTERIA.

MM. ALBARRAN and A. HALLÉ have studied a pyogenic infective organism commonly occurring in purulent urine, and believed to be capable of producing suppurative inflammation in the urinary organs and tracts. Acting upon the renal tissue, it sets up the diverse lesions of suppurative infections nephritis, either gaining an entrance from the pelvis of the kidney or being carried to the cortex in the blood of the renal vessels. After entering the blood it may induce subacute, acute, or chronic infective lesions, which often prove fatal. These conclusions prove the necessity of maintaining absolute asepsis in all operations practised on the urinary passages, including of course catheterism, and the advisability of a previous bacteriological examination of the urine in all operations in which bleeding must occur. This preliminary examination often shows the presence of bacteria, and affords an indication for a preparatory antiseptic treatment. The biology of this bacterium has also been studied.

THE BOWMAN TESTIMONIAL

AT a meeting recently held at Dr. George Johnson's house, it was proposed to make Sir William Bowman some acknowledgment of the appreciation in which he is held on account of his high character and professional and scientific attainments. It has been decided that a portrait of Sir William be painted, and possibly some of his publications reprinted. An influential committee has been appointed, and it is hoped that the funds will allow the distribution of a good reproduction of the portrait, which is to be painted by Mr. Oulless, R.A., to subscribers of at least two guineas. The treasurer of the fund is Dr. George Johnson, 11, Savile-row, W., to whom subscriptions may be sent.

HOUSE DRAINAGE.

IN a recent number of an evening contemporary attention is called to the summoning of a builder at Birmingham for an infringement of a borough bye-law, by which builders are prohibited from covering up drains before inspection, and the question is pertinently asked, why should the metropolitan builder be allowed to do what is forbidden to his brother in the midlands? The answer is to be found in the report of the Commissioners appointed by the Home Secretary to consider the sanitary requirements of Bethnal-green. Under the Metropolitan Local Management Act, the Metropolitan Board of Works have been empowered to

make bye-laws regulating house drainage in London but these powers have not been exercised, and builders have been allowed to construct drains in any manner they thought fit. One of the most important branches of sanitary administration entrusted to the Metropolitan Board of Works has been completely neglected, and this to the great detriment of the metropolis, and to the expense of those householders who have been wise enough to have their drainage reconstructed. Bye-laws might be framed so as to be very comprehensive. Other towns have long enjoyed advantages which London has neglected to obtain. We trust the County Council of London will early devote its attention to this subject. Only the other day at Boston, in Lincolnshire, a builder was fined for permitting houses to be occupied the drainage of which had not been approved by the local authority, but in London there is no such protection for intending householders.

POLITICAL AGITATION IN IRELAND AND THE MEDICAL PROFESSION.

IT is said in some parts of Ireland that the political agitation, and the doctrines underlying it, are having a very injurious effect on medical practice. People are apt to think that they should receive medical relief as a State right. This has long been provided for in the dispensary system of Ireland as regards the people that by any pretence can be regarded as poor. But it is now complained that people who heretofore have had a feeling of pride and independence, and who would go to the medical man of a district as private patients and gratefully compensate him for his services, now apply for the red ticket and accept gratuitous medical attendance. We cannot say to what extent this prevails, but we cannot doubt the accuracy of our information as regards some parts. We devoutly hope that it does not apply extensively. Ireland has a reputation to lose in this matter. She has the credit, rightly or wrongly, of paying medical men generously; and she has had splendid men to pay. We will not believe that any political doctrines can easily spoil such a reputation. But it is no use to conceal that it is in some danger.

DOUBLE ATHETOSIS.

ALTHOUGH hemiathetosis has received much consideration, neither its pathology nor that of bilateral athetosis is properly understood. In bilateral athetosis M. Brousseau has observed transient contractions causing the foot to change its posture, being alternately like talipes varus and talipes equinus. Oulmont has recorded similar intermittent spasms in hemiathetosis. Articulation is also interfered with, and muscular atrophy may occur, though in double athetosis neither hypertrophy nor atrophy is the rule. A quasi-rhythmic spasm was also noticed in the shoulders in his case by M. Brousseau. Tetany is sometimes followed by muscular atrophy. Cerebral wasting is the cause of most cases of bilateral athetosis, and probably this is accompanied by irritation of the pyramidal tracts. In some cases of chronic Bright's disease the atrophy of the brain occurs in patches corresponding to arterial disease.

THE RATING OF HOSPITALS.

IT is high time that the rating of charities was put upon a just basis. It is obviously absurd that St. Thomas's Hospital should pay £2000 in rates and the London Hospital only £56. In other countries the State supports the hospitals in this it not only leaves the hospitals to be supported any how, but taxes those benevolent persons who save the State's money, and do what some consider the State's duty. It is gratifying to know that an attempt is to be made to get Parliament to settle this subject on a definite basis.

NEW INVENTIONS FOR USE IN DENTAL SURGERY.

THE modern practice of dental surgery, requiring as it does so extensive a use of the dental engine, and that often in a cramped position, is much more laborious than formerly, when the forceps had almost unlimited sway, and any labour-saving appliances are welcomed. Mr. Coxeter has invented an electric dental engine. The whole apparatus weighs but a few ounces, and is held in the hand when in use, like the electric mallet, which it resembles in shape. The electric current is generated by a large primary battery, or the engine can be worked by means of accumulators or a dynamo. It is spoken highly of by some dentists who have used it, but seems to be rather deficient in power for heavy work. Another invention for a similar purpose is Hastie's water motor, which was introduced by Mr. Walter Campbell of Dundee, and, as its name implies, is worked by hydraulic pressure. As it is now fitted it is almost perfect as a dental motor, but it requires a considerable force of water, and is hardly practicable unless supplied direct from the main.

INCREASED CONSUMPTION OF SPIRITS AND BEER.

THE Report of the Commissioners of Inland Revenue issued a few days ago shows that for the year ending March 31st, for the first time since 1883-84, there has been an increase in the quantity of spirits charged with duty. The amount of increase was 436,114 gallons. The gross receipts from beer duty for the past year amounted to £8,874,510, and the repayment on beer exported to £162,977, leaving the net receipts at £8,711,533. This is the greatest amount which the beer duty has ever reached, and is attributed partly to the Jubilee rejoicings. If so, we must be thankful that jubilees are not of frequent occurrence; for such quantities of beer are not taken with impunity, and without much impairment of health and life.

FALSE CHOLERA RUMOUR IN FRANCE.

It was rumoured last week that cholera had broken out at Fort Rosny-sous-Bois; but it now transpires that the disease was enteric fever, which having broken out amongst the troops, it became necessary to transfer the battalion quartered there to Sabory. The epidemic has since that step materially declined.

FROM the report on the condition of the metropolitan water supply during the month of July by the water examiner appointed under the Metropolis Water Act, 1871, it appears that the Thames water sent out by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies contained in every case a markedly increased proportion of organic matter as compared with the previous month's samples. This increase is of course due to the heavy rainfall and swollen state of the river, although the samples were collected prior to the severest floods, which occurred at the latter end of the month. The water principally derived from the river Lea, and supplied by the New River and East London Companies, exhibited no material alteration as regards organic matter, the proportion present in the New River Company's supply being but little in excess of that in the deep well waters, whilst that in the East London Company's water was less than in any of the Thames supplies. All the samples were clear and bright.

At a meeting of the Council of the University College, Dundee, on Wednesday last, Mr. Andrew Melville Paterson, lecturer at Owens College, Manchester, and also at the Victoria University, was elected to the chair of Anatomy, recently founded by Mr. Cox, a merchant in Dundee. The salary is £350 per annum, and two-thirds of the fees.

AMERICANS have taken a step in advance of England in the matter of checking the sale of indecent books and pictures. By a recent amendment of the United States Act relating to special crimes, any person who makes use of the Post Office to transmit indecent books, pamphlets, letters, or post-cards is liable to a fine of £1000 and five years' imprisonment. The example of the Transatlantic senators might with advantage be followed by our law-makers.

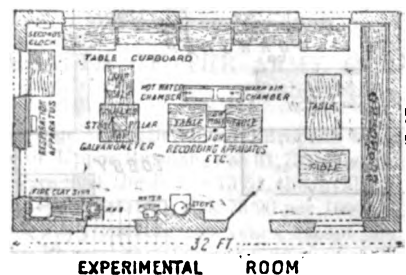
ROYAL COLLEGE OF PHYSICIANS OF
EDINBURGH.

THE NEW RESEARCH LABORATORY.

THE question of equipping a research laboratory has for the past three years occupied a very prominent position in the discussions of the Royal College of Physicians, Edinburgh, but it was only last year that the committee appointed by the College was able to throw the plans into a feasible and at the same time thoroughly acceptable shape. When the matter had been taken in hand the committee entered into the scheme with great energy and thoroughness, and within a very short time suitable premises were acquired, the necessary structural alterations were at once commenced, a superintendent was appointed, and apparatus was ordered and fittings were put in hand to be ready for use as soon as the building should be prepared for their reception. The premises are well adapted for the purpose for which they were acquired. They consist of a three-storeyed house, No. 7, Lauriston-lane, near the Royal Infirmary, to which had been added a large detached room in the back court. There are also commodious outhouses and a plot of ground of considerable size at the rear of the building.

Commencing on the ground floor, we first come to the room in the back court set apart for experimental physiology, 32 ft. in length, 18 ft. in breadth, and 14 ft. high; it is well lighted by seven windows, three of which, facing to the west, are fitted with tables for microscopic work. (Fig. 1.)

FIG. 1.



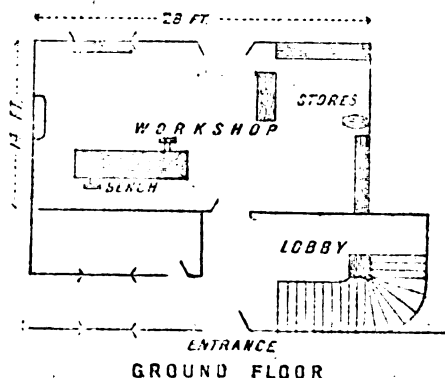
Between each of these tables is a cupboard and a range of shelves for the reception of material. On the south wall is fixed the Cambridge Scientific Instrument Company's respiration apparatus, driven by water power. On the east side at the south corner are drainer and wash-basin. Near to this is a small Thirlmere water motor used for driving light (one inch) spindle shafting, which is fixed to the wall by six brackets placed above the windows and doorway. From this recording apparatus may be driven at any part of the room at 360 different speeds. The northern end of the room is occupied by a large cabinet, in which are stored the various pieces of apparatus. Near the south end is a stone pillar bedded in the ground, so arranged as not to be affected by movements in the room. There being no thoroughfare in the lane, no disturbance can arise from wheel traffic. Around it is fixed a table to which the galvanometer wires are attached. The galvanometer is placed on the stone pillar in a glass case with a hinged door, and is always kept ready for use, short wires being carried from the table to the instrument. A hinged lamp table and brass rods, over which curtains are hung, complete the galvanometer fittings. Work tables occupy the remainder of the centre of the room. Electrical, time marking, and other apparatus, tuning forks, perfusion

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apparatus, shunts, compensators, &c., constitute the greater part of the instruments in this room. Marriott's arrangement for obtaining regular pressure for injecting and other purposes is hung from the roof at two points.

At each window table on the west side is a bell jar used for protecting the microscope from dust. This is counterbalanced by a weight which runs on a brass guiding rod, so that there is no danger of breakage to the window through swinging of the weight. When not in use, the bell jar is drawn up out of the way towards the ceiling. Such an arrangement economises room and prevents breakages. On each microscope table, which is painted and hard varnished, a white band about four inches broad is painted four inches from the edge of the table. Some of the tables, instead of being varnished, are covered with plate glass, painted as above on the under surface, and embedded in felt. On these glass-covered tables the microscope stands on a felt circle, to diminish the risk of breakage, and the bell jar is lowered over the microscope. The sink and drainage apparatus in this room may be taken as a type of those throughout the whole house. It consists of a large earthenware sink, on one side of which is a grooved draining board covered with lead, the grooves all leading to the sink. A swan-neck tap supplies the water; to this tap are two nozzles, to one of which is wired a piece of indiarubber tubing, used to connect the Geissler exhaust pump &c.; the other nozzle gives a steady unbroken jet of water $\frac{3}{4}$ in. in diameter. The wall behind the sink is leaded for about 3 ft. up; at the upper part of this are a couple of shelves, the upper one perforated for draining flasks and bottles, the lower one grooved, and with a gentle slope to carry all moisture to the sink. Below these shelves are a couple of rows of wooden pegs fixed into the wall at an angle of 45° . These are very useful for draining all kinds of glass apparatus. In the main building in the lower flat is a large entrance lobby, to the left of which is a part of the laboratory assistant's quarters. At the back, with an outlook into the court and on to the experimental department, is a large room, which has been fitted up with a bench and tools for carpentering, metal and wire

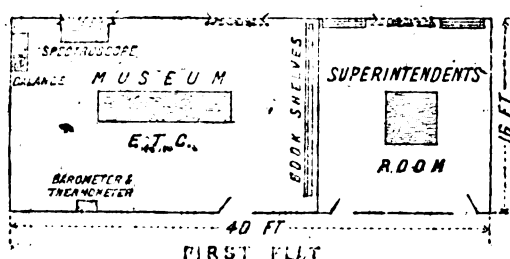
FIG. 2.



working, &c. (Fig. 2.) In this room is also a large Bruce microtome, with which sections of whole organs are made.

On the second flat, three of the five rooms are fitted up for the laboratory assistant. Of the others, a large room is set

FIG. 3.

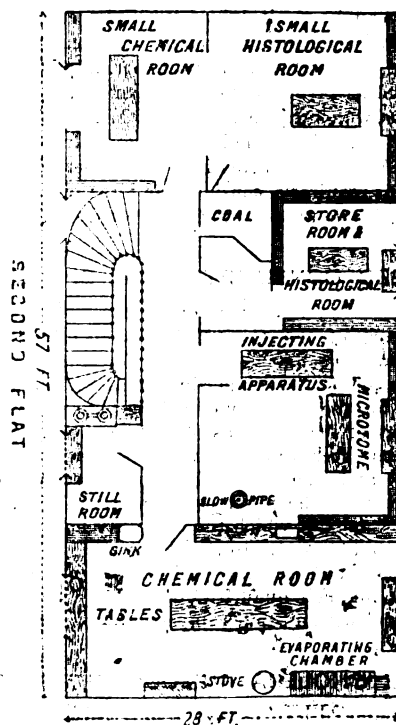


apart for committee meetings, and is used as a library and museum. (Fig. 3.) It is also fitted with Oertling's short beam balance, supported on a solid iron bracket let into the wall.

A certificated barometer graduated in inches and millimetres, and a thermometer with centigrade and Fahrenheit scales is placed here for temperature and pressure corrections. There is also a large spectroscope made by the Cambridge Scientific Instrument Company with Steinheil's prisms. It is protected when not in use by a glass case, which is counterbalanced in the same way as are the bell jars at the microscope windows.

The fifth room on this flat is the superintendent's private room, where the administrative work of the laboratory is carried on. On the next landing are six rooms. (Fig. 4.)

FIG. 4.



The first of these, a small one used as a stillroom, where the still is connected with the water pipe and is self-feeding, so that, to obtain a supply of distilled water, all that is necessary is to turn on the tap and light the Bunsen burner.

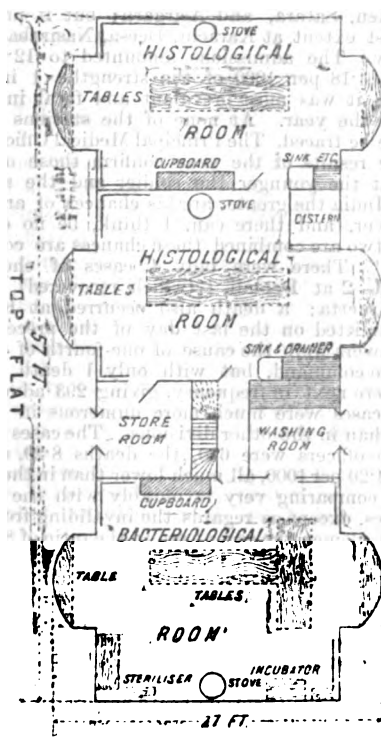
A second room, the chemical room, is fitted with a good supply of water and gas. There are eight taps in the room, seven of which are swan necked, with a double nozzle. Two ends of the room and the evaporating chamber are fitted with ten-inch basins, and in the corner is a sink with drainer, pegs, &c., similar to those already described. The room is lighted by half a dozen gas brackets, and for the gas supply for Bunsens, &c., there are eighteen connexions. On three sides of the room are three shelves at intervals of 9 in. and 15 in. On the fourth side of the room is a large evaporating chamber, divided into two by a hinged window.

The two compartments are ventilated separately into a metal chamber opening into the flue. In this metal chamber a Bunsen may be kept burning, to keep a current from the evaporating chamber into the flue. At one end, and opening into the chamber, resting on the stone slab continued outside the chamber, is one of Fletcher's sand-baths. This room is stocked with most of the apparatus necessary for carrying on physiological chemical work, the analysis of air, water, food, and the rest. The next room is set apart for blowpipe work, metal injections (Cathcart's method), embedding in paraffin and celloidin, and section-cutting. It is also used as a store-room for some of the glass apparatus, and the window is fitted with a table for histological work. Next door, on this same flat, is a small room used as a store-room for reagents and other chemicals. The window is fitted with a table for microscopic work. Then comes another small histological room, set apart for the estimation of urea, albumen, sugar, &c., in urines in con-

nexion with clinical work undertaken by the Fellows of the College.

On the top storey are three splendidly-lighted rooms, all of which are devoted to microscopic work. (Fig. 5.) In the south room the apparatus necessary for bacteriological research is collected. Two large projecting roof or dormer windows face east and west respectively. Each is fitted with a table covered with a sheet of plate glass, on the under surface of which are painted three strips, the first 4 in. broad, black; then a similar white band, and then a broad black band extending to the back of the table. On each side are shelves from the floor for about 5 ft. up. These are within reach of anyone sitting at the table. On each side is a drawer 3½ in. deep; but the remainder of the space under the table is left quite open in order that earthenware jars for the reception of chemicals, washings, and debris may be accommodated. On the left side is fitted a rack for test tubes, and in front and to the right are stands for ordinary histological reagents. Above the level of the table in front are four small shelves, on which are placed covered vessels for clean and dirty slides and cover glasses. A syphon arrangement for distilled water, a bell jar with counterpoise

FIG. 5.



running on a brass rod, a Bunsen burner, and a lamp complete the fittings at this table. One of Browning's microspectroscopes has also been fitted up in this room. Racks for series of Hesse's tubes and shelving complete the fittings here; but opening out from it is a small room with a sink and large sloping drainer, at which most of the glass apparatus is washed.

The other two rooms in this flat are fitted up for histological work, with window tables, sinks, cupboards, spirit vessels, shelving, &c., each for two workers. In connexion with the histological department, apparatus for microphotography has been fitted up by Messrs. Forgan.

The arrangements for conducting the work are somewhat as follows. The College has established and will maintain the laboratory for the prosecution of original research. To facilitate such work the Council of the College "appoint a scientific superintendent, who must devote such portion of his time as may be determined by the Council to the work of the laboratory, where, under the supervision of the curator and committee, he shall himself undertake the prosecution of original research, and be prepared to assist, if required to do so, in the work of other investigators. Under like supervision he shall also be prepared to furnish

the Fellows of the College with reports upon such matters as the histology of morbid specimens, and of the chemical and microscopic characters of urines," in which work he is assisted by the resident attendant.

The laboratory is open without fee to Fellows and Members of the College, to any Licentiate who shall obtain the sanction of the curator and committee to use the laboratory for the purpose of scientific research, and "to any medical man or investigator who shall obtain the sanction of the Council of the College as well as of the curator and committee to use the laboratory for the purpose of scientific research."

The institution is open for research work daily, Sundays excepted, from 10 A.M. till 5 P.M., except on Saturdays, when it is closed at 1 P.M. A special arrangement may be made by those desirous of working after the usual hours of closing, but for this the written permission of the superintendent must be obtained.

Investigators are entitled to the assistance of the laboratory officers or servants in the preparation of apparatus; but the actual work of carrying on experiments, cutting and mounting specimens, &c., must be done by the investigator himself.

The whole of the expense of establishment and maintenance has been and will be defrayed from funds placed at the disposal of the committee by the Council of the College. Of this, an initial grant of £1000 was made with which to adapt and furnish the house, and buy apparatus, instruments, and chemicals. In addition to this, an annual grant of £650 is made, from which all salaries, rents, and taxes are paid, and stock is kept up. Of these sums, only about £830 of the original £1000 and £600 of the annual grant was spent during the first twelve months, so that the whole equipment and fittings of the laboratory, together with the current expenses during the above period, cost only £1430.

During the year there have been twenty-three medical men, nine Fellows and four Members of the College, and nine other qualified men engaged in pathological, physiological, chemical, or bacteriological investigations, some of which have been completed and will shortly be published. In addition, nearly 100 tumours or other histological preparations have been examined, and numerous analyses made by or for the Fellows of the College and others. The laboratory has also been used for examination purposes in connexion with the diplomas in Public Health granted by the College.

HEALTH OF THE ARMY IN 1886.

No. III.

THE average strength of the European troops in India, exclusive of Upper Burmah, was 61,757; the admissions into hospital were 1484, the deaths 1551, the invalided to England 2105, and the constantly sick 7390 per 1000—all under the average of the preceding ten years, except the mean sick, which was 10 per 1000 above the average. The increase, compared with the preceding year, was chiefly in Madras, but also, though to a less extent, in Bombay; in Bengal there was a slight decrease.

In Bengal the admissions were 1516, the deaths 1580, the invalids 1830, and the mean sick 7196 per 1000 of strength—all, except the mean sick, under the average. Omitting the stations at which the average strength was under 100, Kasauli has the highest ratio of admissions, amounting to 2830 per 1000, and Solon the lowest, 761. It was also very high at Allahabad, Delhi, and Barrackpore. The highest death-rates were 50.85 at Fort Lahore, 43.22 at Jhansi, and 42.99 at Jullundur; while at Landour, Jutogh, Solon, Fort Attock, and Kuldunnah no death occurred during the year. Malarial fevers were the most prevalent disease, and enteric fever the most fatal. Of the latter, the admissions were 20.7 and the deaths 5.61 per 1000, or upwards of one-third of the total mortality. The disease appears to have been very widespread, the only stations which did not return any case being Darjeeling, Muttra, and Landour. Those at which it was most prevalent and fatal were Lucknow, Sialkot, Rawal Pindi, Ranikhet, Dagshai, Umballa, and Peshawar. The deaths were 221 in 820 cases, or upwards of one in four; the greatest number of cases occurred in the second and of deaths in the third quarter. At none of the stations could the origin of the

disease be traced to local conditions, "and the conclusion arrived at was that it was due to climatic effect on young and recently arrived soldiers." There were only 36 cases with 25 deaths of cholera, being in the ratio of 0·9 and 0·63 per 1000 of strength. The only stations at which it could be said to prevail as an epidemic were Dinapore, Shahjehanpur, and Jhansi; at the two former in the last quarter and at Jhansi in the third quarter of the year. One-third of all the cases occurred at Dinapore, most of them "coming from the temporary barracks, which are close to the river, badly planned and built, and subject to malarious influences." Malarial fevers caused the very high rates of 1282 admissions per 1000 of the strength in the Quetta district, and of 666 per 1000 in the Meerut division; and at Quetta the death-rate from this cause was 3·78. The Lahore, Saugor, Gwalior, and Allahabad divisions also furnished a high proportion of cases. Venereal diseases continue to be an important cause of inefficiency, the admissions having amounted to 308 per 1000, and the proportion constantly sick under that head to 21·80. The abuse of alcohol gave rise to 16·3 admissions and 0·20 deaths per 1000. Allahabad and Saugor furnished the highest ratios of admissions, and Peshawar and Gwalior the lowest. Among the deaths from injuries were two from lightning; they "occurred in the swimming-bath at Sialkot, where the men were bathing. The building was struck, and they were killed instantaneously; five other men were in the water at the time, two of whom were affected, but ultimately recovered."

Among the officers in Bengal the cases were 689, the deaths 26·13, and the invaliding 33·97 per 1000, the first being much under, but the mortality and invaliding greatly in excess of, the proportion among the men. Enteric fever was slightly more prevalent and fatal than among the men. Six of the 30 deaths were from accidental causes. In an average of 1920 women the cases were 716, and the deaths 17·71 per 1000, the latter being 2·20 per 1000 higher than among the men. One-fourth of the deaths were from enteric fever. Among the children there were 497 cases and 47·25 deaths per 1000.

In the Madras command, exclusive of Upper Burmah, in an average force of 11,199 the admissions were 1366, the deaths 16·60, the invalids sent home 23·84, and the mean sick 80·68 per 1000—all except the invaliding considerably above the average. In Lower Burmah the admissions were 1887, the deaths 34·30, and the mean sick 106·98 per 1000, but these results were "greatly influenced by sickness and mortality of troops going to, and particularly returning from, field service." Omitting the stations in Burmah and those at which the strength was under 100, the highest ratio of admissions was 2387, at St. Thomas's Mount; and the lowest 939, at Belgaum. The highest death-rate was 33·03, at Madras and Pallaveram; at Mallaporam no death occurred during the year. The high ratio at St. Thomas's Mount is stated to have been "partly due to the effects of field service and partly to the amount of sickness which occurred in one battery just arrived from England, and consisting chiefly of young soldiers." Venereal diseases were the most prevalent, and enteric fever the cause of the greatest number of deaths; the latter amounted to very nearly one-fourth of the total mortality. It prevailed to a great extent at Secunderabad, Bangalore, and Wellington. There were only 5 cases in Burmah, 3 at Rangoon, and 2 at Thayetmyo; but they were all fatal. At Secunderabad, in a force of 2695, there were 76 cases and 25 deaths; at Bangalore, in 1597, there were 30 cases and 8 deaths; and at Wellington, in an average of 413, there were 11 cases and 2 deaths. The disease was most prevalent and fatal in the third quarter, and the proportion of deaths to cases was 1 in 3. At none of the stations could any definite cause for the prevalence of enteric fever be assigned; at Bangalore it was supposed that "the men do not contract the disease in barracks, but outside, either in the lazars or villages, where they are exposed to insanitary conditions, and drink filthy water and common bazaar beverages." There were only 2 cases of cholera, with 1 death, during the year; both occurred in Burmah. Malarial fevers were the cause of 140 admissions per 1000; but if Burmah be omitted, where their prevalence was greatly increased by the cases contracted on field service, the ratio was only 34 per 1000. Venereal diseases gave rise to 283 admissions and 21·42 constantly non-effective per 1000 of strength, results slightly under those of Bengal. In Burmah the admissions and deaths were very high at Thayetmyo, amounting to 2910 and 54·86 per 1000, "resulting from the

exposure and harassing duties devolving upon the various columns operating in the neighbourhood." At Rangoon they were also high, being 1792 and 39·74 per 1000, the latter, apparently, consequent upon the establishment of a general hospital in connexion with the Burmah Field Force. At Port Blair, in the Andaman Islands, the admissions were only 940 and the deaths 7·52 per 1000; and at Toungoo, the only other station in Lower Burmah, they were 1348 and 14·28 respectively.

In an average strength of 274 officers, the cases were in the ratio of 958, the deaths of 10·49, and the invaliding of 101·4 per 1000, all higher than in the preceding year. Among the women, 887 in number, the cases were 895 and the deaths 12·40 per 1000. The children had 791 cases and 44·45 deaths per 1000, a much higher admission-rate, but slightly lower death-rate, than in Bengal.

The average strength in Bombay was 11,000; the admissions were 1488, the deaths 13·36, the invaliding to England 28·09, and the mean sick 73·98 per 1000—all, except the mean sick, considerably under the decennial average. The admissions ranged between 1102 at Kirkee and 2387 at Asirgarh, and the deaths between 3·87 at Ahmednagar and 30·30 at Ahmedabad. Malarial fevers were the most prevalent and enteric fever the most fatal diseases. Cases of enteric fever occurred at all the stations in the command, except Aden, Satara, and Asirgarh; but it prevailed to the greatest extent at Karachi, Deesa, Nasirabad, Poonah, and Mhow. The admissions amounted to 12·2 and the deaths to 4·18 per 1000 of the strength; 1 in 3 of the cases died; it was most prevalent and fatal in the third quarter of the year. At none of the stations could any local cause be traced. The Principal Medical Officer remarks that "the results of the year confirm those of previous years, that the younger the soldier and the shorter his service in India the greater are his chances of an attack of enteric fever, and there can, I think, be no doubt that when the two are combined these chances are considerably enhanced." There were only 4 cases of cholera, 3 of which died—2 at Deolali, 1 (which recovered) at Indore, and 1 at Quetta; a death also occurred at Karachi, of a man admitted on the last day of the preceding year. Malarial fevers were the cause of one-fourth of the admissions in the command, but with only 1 death. Venereal diseases were next in frequency, giving 293 admissions per 1000; the cases were much more numerous in the Mhow and Sind than in the other divisions. The cases of sickness among the officers were 610, the deaths 8·29, and the invaliding 44·20 per 1000, all much lower than in the preceding year, and comparing very favourably with the other two Presidencies, except as regards the invaliding from Bengal. Among the women the cases were in the ratio of 839 and the deaths of 14·66 per 1000, and among the children 557 and 48·76 per 1000. The water supply at Mhow has not been satisfactory, but steps are being taken to remedy this by the construction of a lake about five miles to the south-west, the water from which will be conveyed to a tank in the highest part of the cantonment, and thence distributed by gravitation.

The health of the troops on board ship seems to have been satisfactory, with the exception of the great amount of venereal disease among those on the passage out, which amounted to an annual ratio of 590 per 1000. Among those on the passage home the death-rate was 16·16, but of this 5·39 was by cholera on board the *Euphrates* on the second, third, and fourth days after leaving Bombay.

The number of recruits medically examined as to fitness for military service was 74,991, of whom 32,833 were rejected, being in the ratio of 438 per 1000. There were 62,658 primarily inspected by army medical officers, and 12,333 by civil medical practitioners; of the former 441 per 1000 were rejected, and of the latter only 208 per 1000; but on secondary inspection by army medical officers, 186 per 1000 were considered unfit, making a total of 394 per 1000. Among the causes of rejection, however, are several which ought rather to be considered military than medical, and which until lately it was the duty of the recruiting officer to ascertain before sending the man for medical examination. For instance, the height, the chest measurement, and the apparent age were all formerly points for which the military officer was held responsible, and deviations from the standard of which might be more fairly classed as not in accordance with the army regulations than as physical defects. There are also included in the rejections 373 men "found unfit within first three months of service,"

who certainly ought not to be included among the rejected on primary inspection. If these various groups be deducted, the proportion of rejections on medical grounds would amount only to 257 per 1000. The most frequent causes of rejection were muscular tenuity and debility, which gave rise to 54, defective vision 42, and disease of heart 19 per 1000. The proportion rejected was highest in the Household Cavalry, and lowest in the Royal Engineers; in the Royal Engineers and the Foot Guards the proportion was also lower than in the troops of the Line. England furnished 758, Ireland 139, Scotland 92, and the British Colonies and foreign countries 11 per 1000 of the recruits. Compared with the preceding year this shows a slight decrease in the number of Scotch recruits. Of the recruits examined 78 per 1000 were unable to read, and 56 able to read only, both ratios being considerably lower than in 1885. We regret to observe an increase in the proportion of recruits under nineteen years of age; of the total inspected 6576 in every 10,000 were under twenty, as against 6200 in the preceding year. As regards height, omitting boys, the highest proportion of recruits was between 5 ft. 4 in. and 5 ft. 5 in., of weight, from 120 lb. to 130 lb., and chest measurement, 33 in. to 34 in. From the tables given in this section of the report it has been calculated that, excluding boys under seventeen years of age, the average age of the recruits at inspection during the year was 19.5 years, the average height 5 ft. 5.0 in., the average weight 123.3 lb., and the average chest measurement 36.4 in.

THE BRITISH ASSOCIATION.

THE annual meeting of the members of this Association commenced at Bath on the 6th inst., the following being a brief summary of the proceedings in the Sections of Biology, Chemistry, and Anthropology.

On the opening day the Section of Biology met at the Mineral Water Hospital, when Professor W. T. Thiselton Dyer presided, and delivered the opening address.

The section of Anthropology met at the Grammar School, under the presidency of Lieutenant-General Pitt-Rivers, D.C.L., F.R.S. The presidential address having been delivered, Dr. G. B. Barron read a paper on the Constitutional Characteristics of those who dwell in Large Towns, the full text of which we hope to be able to publish in a future number.

Karl Grossmann, M.D., read a paper on Colour-blindness.

Mr. E. B. Tylor described a method of investigating the development of institutions as applied to laws of marriage and descent.

In the Zoological Department of the Section of Biology, Sir J. Lubbock, M.P., read to a crowded audience a paper on the Instincts of Solitary Wasps and Bees.

On the 7th inst. there was a joint meeting of the Chemical and Biological Sections in the Friends' Meeting House for the purpose of discussing the nature of the chemical problems presented by living bodies. The chair was occupied by Professor W. A. Tilden, president of the Chemical Section, and the discussion, which is referred to elsewhere in our columns, was joined in by Professor Michael Foster, Mr. W. T. Thiselton Dyer, Sir H. Roscoe, and Professors Armstrong, Schäfer, Gardner, and Gladstone.

On the 9th inst., at the meeting of the Chemical Science Section, Professor Dunstan read the report of the committee, consisting of Professor H. E. Armstrong, Mr. J. T. Dunn, Professor W. R. Dunstan (secretary), Dr. J. H. Gladstone, Mr. A. G. Vernon Harcourt, Mr. Francis Jones, Professor H. M. Leod, Professor Meldola, Mr. Pattison Muir, Dr. W. J. Russell, Mr. W. A. Shenstone, Professor Smithells, and Mr. Stallard, appointed for the purpose of inquiring into and reporting on the present methods of teaching Chemistry. The committee asked for re-appointment, which was granted.

The Rev. A. Irving read a paper entitled "Chemistry as a School Subject." A long discussion followed the reading of this paper, after which the Section adjourned.

At the meeting of the Physiological Department on Friday, Professor Roy, M.D., F.R.S., Professor of Pathology in the University of Cambridge, and Mr. J. G. Adami, M.A., M.R.C.S., University Demonstrator in Pathology at Cambridge, contributed a paper on the Physiological Bearing of Waist-belts and Stays. It stated that in the course of

an investigation upon the work of the heart in health and in disease certain facts were observed by the authors which throw not a little light upon the physiological bearing of waist-belts &c. By means of an instrument devised by them—a cardiometer—they have been enabled to register very accurately the changes of volume in, and the amount of blood propelled by, the heart under varying conditions. Experimenting upon the dog, they found that even slight compression of the abdomen caused an increase in volume of the heart, and with this a greatly increased amount of blood passed through the heart in a given time, the increase being often 30 and 40 per cent. and more. These phenomena can be explained without difficulty. The abdominal vessels are capable of containing all and more than all the blood in the organism. Slight compression of the abdomen will, without disturbing the arterial supply, drive out from the abdominal veins and venous capillaries a large amount of blood; and this blood so driven out will, as long as the compression continues, be of use for the other regions of the body—for the brain, muscles, &c. Now the functional activity of any organ depends directly upon its blood supply. Increase the arterial blood supply of any part, and, other things being equal, the activity and power of work of that part are increased. It is to be noted further that the abdominal walls in front and at the sides are formed of soft, more or less elastic, tissues. In health, pressure is, through these, exerted upon the abdominal contents, and at the same time upon the abdominal veins and venous capillaries. If, however, the abdominal muscles lose their tone, the walls become flaccid, and through the diminished pressure the veins pass into a condition of comparative dilatation, and thus hold not only a larger amount of blood than is necessary, but act, as it were, as reservoirs for this blood, and so deprive the rest of the body of an amount of fluid necessary for its due nutrition. Here, then, we have an explanation of the extensive use of some form or other of waist-belt by all nations who have passed beyond the stage of absolute barbarity. The waist-belt is of use, and has constantly been used, in cases of sudden and great exertion, and in those cases where, through want of tone of the abdominal wall, it becomes necessary to counteract the tendency to a useless storing up of blood in the abdomen; and lastly, and most frequently, by those in perfect health, by bringing more blood into the service of the brain and muscles to produce a condition of *bien-être*—of increased mental and muscular activity. With regard, now, to the second ground for the employment of waist-belts and stays. Flaccid abdominal walls are, from various circumstances, rather the rule than the exception in the gentler sex, and, among men, occur in those leading sedentary lives devoid of exercise. We are therefore brought to conclude that among women some form of waist-belt is very advantageous: be it from muscular weakness, or from a desire to obtain easily a condition of good mental and bodily activity. The modern corset is an article of apparel which may be said to be evolved from two separate belts—the waist-belt proper and the band over the lower ribs, the *στροφαίον* of the Greeks employed to preserve the figure. These in the course of time have become combined, and now are worn not only by the well-to-do, but by the poorest in every European country. Moderate constriction does no harm; extreme constriction is not only absurd, but dangerous, inasmuch as, instead of promoting exercise and activity, it does the reverse, and, while causing pressure upon the veins, affects the arteries also, and disturbs the blood supply of the abdomen and lower extremities as well. The pressure upon the abdomen should be capable of alteration according to circumstances, and should be slight after meals, when digestion is going forward and a full abdominal circulation is required. Stays should leave the lower part comparatively elastic, and pressure should be exerted by an external belt.

Dr. Collins read a paper on Chemical Constitution and Physiological Action, describing the effect of various substances (chiefly members of the aromatic series of organic compounds) upon the rate of secretion and constitution of the bile.

The second report of the committee, consisting of Professors Schäfer (secretary), Michael Foster, and Lankester, and Dr. W. D. Halliburton, appointed for the purpose of investigating the Physiology of the Lymphatic System, was presented.

In the Section of Anthropology the Marriage Customs of

the New Britain Group was the subject of a paper read by the Rev. B. Banks.

On the 10th inst., in the Section of Biology, the report of the committee to investigate the development of the oviduct and connected structures in certain freshwater Teleostei stated that perch had been selected as the most suitable subject, but the arrangements for the supply of ova and fry broke down, and it was proposed to renew the experiments under different conditions.

The Echinodermata of the Sea of Bengal was the subject of a paper by Professor F. Jeffrey Bell.

Mr. W. E. Hoyle read a report from the committee for administering a grant in aid of the Scottish marine station, in which it was shown that a laboratory at Granton and another at Millport, in the Firth of Clyde, had been maintained throughout the year, in addition to the steam yacht *Medusa*. Investigations had been carried out by various gentlemen, which were being communicated to the Association at this meeting, and it was asked that the grant should be renewed.

In the Section of Anthropology, Miss A. W. Buckland read a paper designed to trace the geographical distribution of various forms of Necklaces and Beads, as indicating some sort of commercial intercourse between the races among whom they are found either in present use or among the relics of the past. Major C. R. Conder, R.E., read a paper on the Early Races of Western Asia. Mr. J. T. Bent gave an account of some discoveries in Asia Minor. Some notes on the Hyksos, or Shepherd Kings of Egypt, were contributed by the Rev. Henry George Tomkins. Lastly, Mr. J. S. Glennie read a paper entitled "Pelasgians, Etruscans, and Iberians; their relations to the Founders of the Chaldean and Egyptian Civilisations."

On the 11th inst., in the Section of Chemical Science, several papers of a highly technical character were read and discussed. The Action of Light on Water Colours was the subject of a paper contributed by Dr. Arthur Richardson.

There was a joint meeting of the Sections of Geology and Biology to discuss the formation of Coral Reefs. Mr. Thiselton Dyer, president of the Section of Biology, occupied the chair, and in his opening remarks alluded to the discussion on the alleged conspiracy of silence on the part of the members of a certain geological school.

In the Section of Anthropology, Mr. J. Theodore Bent contributed a paper on Sun Myths in Modern Hellas.

The Ancient Inhabitants of the Canary Islands was the subject of a paper by Mr. J. Harris Stone.

Some account of the ancient (pre-Roman) stronghold of Worlebury, near Weston-super-Mare, was given by the Rev. Henry George Tomkins.

"Celtic Earthworks in Hampshire, in reference to the Density of the Celtic Population," was the title of a paper by Mr. T. W. Shore, F.G.S., F.C.S.

On the 12th inst., the last day of the meeting, in the Section of Biology, the second report of the committee, consisting of Professors Schäfer (secretary), Michael Foster, and Lankester, and Dr. W. D. Halliburton, appointed for the purpose of investigating the physiology of the lymphatic system, was presented.

Dr. W. J. Collins read a paper on Chemical Constitution and Physiological Action.

Mr. F. E. Beddard read a paper on the Anatomy of certain Marine Annelids, in which he had succeeded in tracing out the oviduct, and thus aided in solving the question, which had hitherto been one of difficulty.

In the Section of Anthropology, Miss A. W. Buckland read a paper giving a description, illustrated by photographs and plans, of King Orry's Grave, Isle of Man.

Mr. G. W. Bloxam submitted observations made by himself and Dr. J. G. Garson, in the Anthropometric Laboratory at Manchester.

PROPOSED SEWERAGE SCHEME FOR MANCHESTER.—

An official inquiry has just been opened at Manchester by Mr. S. J. Smith, C.E., on behalf of the Board of Trade, as to an application by the City Council for sanction to borrow £450,000, for the purposes of sewerage and sewage disposal, and £40,000 for the purchase of land to be utilised as a place of deposit for the refuse. The scheme, which is on a very extended scale, has been in course of preparation for four or five years, and is, with some modifications, similar to that in operation in Leeds. The inquiry was adjourned.

THE TRADES UNION CONGRESS ON THE ABOLITION OF SWEATING.

THREE or four times during the week the delegates assembled at Bradford discussed the sweating system. There were in all 165 delegates, and, if we add the number of paying members belonging to each of the societies represented, we get a total of 816,944 workmen and workwomen, for there were three delegates sent by women's trades unions. It is therefore very evident that the present Congress is more influential than its predecessors. The speakers represented the aristocracy of English labour, of whom a large proportion are electors. Consequently the opinion of such a Congress must exercise considerable effect on legislation, and no subject was treated in a more practical manner than that of "sweating." In his opening speech the President, as will be seen in another column, warmly approved our suggestion with regard to the construction of municipal workshops, and on the very first day a resolution was brought forward to the effect, "That this Congress views with considerable alarm the violations of the Factory and Workshops Act that are daily taking place in various parts of the country, and instructs the Parliamentary Committee to make a special effort to induce the Government to appoint a considerable additional number of practical persons as factory and workshop inspectors." This is a reform on which we have repeatedly insisted, adding that inspectors should have the power of employing detectives, and that their work should not be limited to any particular hours of the day. These two points were, however, not mentioned at Bradford. On the other hand, Mr. McLean of Edinburgh confirmed our assertion that the actual inspectors were sometimes out of sympathy with the workers whom it is their business to protect; and Mr. Meharg of Belfast raised the question of dressmaking in private houses, where, in the busy season, the work lasts from six in the morning to twelve at night, in spite of all the stipulations of the Factory Act. Other delegates insisted that machinery was still too often left without railings or protection, so that preventable accidents happened; while Mr. W. Austin, on behalf of the London journeymen bakers, made some revelations concerning the manufacture of household bread that were of a most unappetising description. The inspection of bakehouses was, he maintained, not properly managed. The sanitary condition of some of the places was very bad, and yet men had to work there. They were thorough dens, which only needed proper inspection to be condemned." Mr. Abraham, M.P., remarked that in South Wales there was only one inspector having control over from 3000 to 4000 factories. With such facts as these placed before the Congress, the delegates did not hesitate to carry the resolution mentioned above unanimously.

On Friday a resolution was proposed, "That provision be made whereby the Board of Trade, or other Government departments, shall have full power to prevent any contract for articles required by Governmental departments, or by any municipality, where such articles are provided out of either imperial or local taxes, being carried out by sub-contractors or sweaters."

Mr. Morrison, of the London saddle makers, remarked that the Government had already full power to prevent sweating, as there existed a contract providing that no work must be done at the homes of the people under a penalty of £100. But the Government officials forgot to impose this clause. They ought to be reminded that it was their duty to set an example by paying fair wages. To meet these objections the resolution was altered so as to imply the enforcement of the clause in all contracts, and then carried unanimously.

Subsequently the following resolutions were moved by Mr. Neil McLean, of the Edinburgh tailors, after a lengthy debate, and carried unanimously. We reproduce them *in extenso*, as it will be seen that they have been very carefully and thoughtfully drawn up:—

AMENDMENT OF THE FACTORY AND WORKSHOP ACT, 1878.

1. *Sanitary provisions.*—"That Sub-section 3 be so amended as to provide a minimum of 350 cubic feet of space per head of the workers employed in any apartment. That Sub-section 4 be so amended as to give full power to the inspectors under this Act to order such waterclosets, earthclosets, urinals, or other sanitary conveniences as are

necessary for the use of the workers, to be provided and kept in proper order; and that, if necessary for the carrying out of this provision, he shall take with him a person skilled in the inspection of such sanitary provisions."

2. *Power of inspector.*—"That Sub-section 69, limiting the power of inspectors to enter domestic workshops, be entirely deleted."

3. *Registration.*—"That Sub-section 75 be so amended as to include workshops upon the same conditions as factories; and further, that any employer giving out work to be made, or partly made, elsewhere than on his own premises, shall keep a list of such places for the use of the inspectors; and further, no person will be allowed to carry on any handicraft in any domestic workshop or dwelling-house, unless such dwelling-house or domestic workshop has been duly licensed for the purpose."

4. *Overtime.*—" (a) That in all cases of advantage being taken of the overtime exceptions under the Act it shall be compulsory to enter the date and duration of such overtime upon a sheet kept for the purpose, such sheet to be affixed to the wall or door of the factory or workshop, in such a position as to be seen by the workers interested, or by the inspector when he visits the premises; (b) that a clause shall be inserted into the Act making it illegal for parties working in any factory or workshop to evade the restriction as to hours by taking the work out of that or any other factory or workshop to be done elsewhere, or for the owner of any factory or workshop to cause or allow the work to be taken out of his factory or workshop for the purpose of such evasion; (c) that it be an instruction to the Parliamentary Committee to take steps to bring this matter before the Government, with the view of getting these amendments incorporated into the Act."

In the above clauses will be recognised many of the "measures to abolish sweating" which we recommended in a leading article bearing this title. It is very satisfactory to find that our suggestions are thus approved and actively brought forward by those who have the most experience and best know all the grievances we have sought to describe and remedy. We trust the Parliamentary Committee will not neglect the matter, but will profit by its *entrée* to the lobby of the House of Commons and the undoubted influence it exercises over the members of our Legislature to push these points home.

SCHOOL HYGIENE IN SWITZERLAND.

(From a Holiday Contributor.)

TEN fine days in six weeks. Such is the weather report from the "play-ground of Europe." Bad as the season has been, meteorologically considered, the influx of visitors has not diminished; indeed, there are resorts, particularly in Central Switzerland, where hotel-keepers refuse to promise accommodation owing to the daily excess of arrivals over departures. Except for mere change, there has been little to attract the British tourist to the Swiss lakes and mountains this year, while the poverty of hotel and *pension* in in-door resources has been felt more keenly than I ever remember it to have been; and yet to anyone who can forego the charms of scenery and the pleasures of active or risky exercise, Switzerland has many compensating interests, foremost amongst which is her social economy, particularly her educational system, on its hygienic as well as scholastic side.

Zurich, always to the front whenever the training of the young is in question, has just been the scene of a most successful Congress, and that an international one, on School Hygiene in general, and more especially on what its promoter calls "Ferien-Colonien," or Vacation Colonies. Germany, Austria-Hungary, France, Belgium, Italy, and Switzerland herself were all represented, and at its first sitting (on the 13th inst.) the chair was taken by the Pfarrer Bion, well known as an enlightened and energetic educationist. Congratulatory telegrams were read from Dr. Ranchfuss, director of the Children's Hospital of the Prince of Oldenburg at St. Petersburg, and from the widowed Empress Frederick of Germany, whose characteristically noble message, dated from Friedrichskron, was as follows:—"I salute from afar the Zurich Congress of the promoters of the Ferien-Colonien, and I gladly take occasion

to express my gratitude for all the blessings they have conferred on the rearing of poor children. May everyone who contributes to this love task earn a rich reward in its success." The Congress, on the motion of the President, telegraphed in reply to the Empress: "We, the representatives of Germany, Austria-Hungary, France, Belgium, Italy, and Switzerland, at the Congress for Ferien-Colonien and for allied efforts in school hygiene, most reverently thank your Majesty for your cordial congratulation, and beg you to favour our endeavours with your interest and support even from afar." This done, amid the applause of the numerous assembly, the business of the Congress began. Dr. Oscar Wyss of Zurich reported on the organisation and success of the Ferien-Colonien—colonies or establishments where poor children, during the vacation, can receive such care or, if need be, special treatment as they may have been found to require by their experience at school. The advantages of this institution were signally exemplified, not only in the educational, but also in the physical well-being of the child. Statistical evidence of the most gratifying kind was adduced and corroborated by Dr. Unruh of Dresden and Dr. Veith of Frankfurt. Rector Reddersen of Bremen spoke warmly in favour of the system, and M. Jules Steeg of Paris dwelt on the blessing it had already proved, even in its partially developed form, in France. Dr. de Cristoforis of Milan added his testimony from the Italian side, and suggested that uniform statistics as to the working of the institution should be compiled from the common experience of all the countries that had adopted it. Such statistical publications, Pfarrer Mittendorf of Geneva thought, should emanate from the Zurich Committee, as the originating centre of the Ferien-Colonien. A most interesting discussion closed the first or forenoon sitting of the Congress, from which it appeared that in Germany alone there were, in 1876, from one town, seven children sent to a Ferien-Colonie; while in 1885, from seventy-two towns no fewer than 9999 children were so accommodated and treated. During ten years, 34,722 German children had enjoyed the benefit of the institution, and the funds at the disposal of the committees throughout the empire amounted to 225,909 marks.

At the second or afternoon sitting Dr. Kerez treated of the sanatoria and seaside hospitals for rachitic and scrofulous children, and indicated the numerous endeavours, some of them being on a considerable scale, that had been made to multiply and perfect these health resorts in various countries. He gave, in the course of his paper, a most interesting account of the subalpine Swiss Kur-ort in Aegeri, and showed how results equally gratifying might be attained in other favoured spots.

The next day's (14th inst.) sitting was signalled by an important discussion raised by Director Jung of Munich on Kinderhorte (children's retreats). The scope, the conduct, and the good effects of these institutions on the moral, intellectual, and physical development of tender youth were strikingly set forth, thanks to the warm support accorded them by the Prussian, the Bavarian, and the Württemberg Governments. Dr. Jung concluded his cordially received paper with these words: "As far as in us lies we will continue to work in this field, and zealously and untiringly promote every undertaking which experience has shown us to be right, useful, and necessary for the safeguarding of our less-favoured youth." In a similar strain, Herr Fisler, a teacher of Zurich, followed, and showed that Kinderhorte, to fulfil their object as family homes, should restrict the number of their pupils, and in their management give preponderance, as against the purely scholastic, to the physical training, as the essential groundwork for the success of youth in future life. The next communication was that of Dr. Haab of Zurich, on Myopia and other eye affections in schools. He had examined in Zürich 2475 children before their entrance into the first class, and found in 441 an abnormal condition of the eyes, 174 being short-sighted. In very few cases is the myopic defect to be laid to the door of the school, his testimony in this respect confirming that of Dr. Stilling of Strasburg, already given in THE LANCET. At the close of the sitting, it was resolved, on the motion of Dr. Kotelmann of Hamburg and Dr. Leo Burgenstein of Vienna, to adopt the *Zeitschrift für Schulgesundheitspflege* (Journal of School Hygiene) as the international organ on the subject. This periodical was characterised by several of the speakers as a model of editing (Dr. Kotelmann has hitherto conducted it), and as a most effective organ for the diffusion

of sound and original ideas on the sanitary side of education.

The Congress concluded with the arrangement of the programme for its next meeting, after which a brilliant banquet took place in the Hôtel Bellevue. When the toast list had been got through, there followed a delightful voyage on the lake to the historic island of Ufenau, and the evening closed most enjoyably with a "Venezianische Nacht."

Zurich, August 16th.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5484 births and 3153 deaths were registered during the week ending September 1st. The annual rate of mortality in these towns, was equal to 17.5 per 1000. During the week ending Sept. 8th 5539 births and 3205 deaths were registered in these towns. The annual rate of mortality, which had been 16.4, 18.1, and 17.5 per 1000 in the preceding three weeks, rose again last week to 17.8. During the first eight weeks of the current quarter the death-rate in these towns averaged but 16.6 per 1000, and was 4.6 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12.7 in Bristol, 13.9 in Brighton, 14.2 in Portsmouth, 15.1 in Nottingham, and 15.3 in Wolverhampton. The rates in the other towns ranged upwards to 22.6 in Manchester, 22.8 in Leicester, 24.4 in Leeds, 24.8 in Preston, and 25.1 Norwich. The deaths referred to the principal zymotic diseases, which had been 639 and 582 in the preceding two weeks, rose again last week to 638; they included 414 from diarrhoea, 66 from whooping-cough, 55 from scarlet fever, 41 from measles, 34 from "fever" (principally enteric), 28 from diphtheria, and not one from small-pox. The lowest death-rates last week from the aggregate of these zymotic diseases were recorded in Derby and Birkenhead, and the highest rates in Norwich, Preston, and Leicester. The greatest mortality from diarrhoea occurred in Birmingham, Sunderland, Bolton, Sheffield, Leeds, Norwich, Leicester, and Preston; from whooping-cough, in Norwich; from scarlet fever, in Manchester and Blackburn; and from measles, in Leicester. The mortality from "fever" was comparatively low in all the towns. The 28 deaths from diphtheria included 18 in London, 3 in Newcastle-upon-Tyne, 2 in Brighton, 2 in Manchester, and 2 in Sheffield. Small-pox caused no death either in London or in any of the twenty-seven large provincial towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 1 small-pox patient at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 805 at the end of the week, against numbers increasing in the previous two weeks from 774 to 793; 79 cases were admitted during the week, against 83 and 93 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 172 and 130 in the preceding two weeks, rose again last week to 148, but were 21 below the corrected average. The causes of 66, or 2.1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Blackburn, Bolton, Preston, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Sunderland, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, in the week ending Sept. 1st, was equal to 16.1 per 1000, and was 1.4 below the mean rate during the same week in the twenty-eight large English towns. The annual rate of mortality in these towns, which had been 17.3, 16.7, and 16.1 per 1000 in the preceding two weeks, further declined to 16.0 in the week ending September 8th; this rate was 1.8 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 7.4 and 7.7 in Greenock and Leith, to 18.5 and 21.9 in Glasgow and Paisley. The 405 deaths in the eight towns showed a further decline of 2 from the numbers in recent weeks, and included 22 which were referred to diarrhoea, 8 to measles, 7 to diphtheria, 6 to scarlet fever,

6 to whooping-cough, 2 to "fever" (principally enteric), and not one to small-pox; in all, 51 deaths resulted from these principal zymotic diseases, against 42 and 44 in the preceding two weeks. These 51 deaths were equal to an annual rate of 2.0 per 1000, which was 1.5 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 20, 16, and 25 in the preceding three weeks, were last week 22, of which 14 occurred in Glasgow and 3 in Paisley. The 8 fatal cases of measles exceeded the number in any recent week, and included 4 in Glasgow and 4 in Paisley. The 7 deaths from diphtheria, of which 6 occurred in Glasgow, also showed a considerable increase upon recent weekly numbers. The fatal cases of scarlet fever, which had been 4 and 5 in the preceding two weeks, rose to 6 last week, and included 2 in Dundee and 2 in Perth. Three of the 6 deaths from whooping-cough, and both the deaths from "fever," were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 70 and 56 in the previous two weeks, rose again last week to 71, and exceeded the number in the corresponding week of last year by 5. The causes of 36, or more than 9 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin was equal to 20.4 per 1000 in the week ending Sept. 1st. In the week ending Sept. 8th the rate of mortality in Dublin, which had been 17.9 and 20.4 per 1000 in the preceding two weeks, further rose to 21.7. During the first ten weeks of the current quarter the death-rate in the city averaged 19.9 per 1000, the mean rate during the same period being 16.2 in London and 16.9 in Edinburgh. The 147 deaths in Dublin showed a further increase of 9 upon the number in the previous two weeks; they included 12 which were referred to diarrhoea, 3 to "fever" (typhus, enteric, or ill-defined), 2 to scarlet fever, 2 to whooping-cough, 1 to measles, 1 to diphtheria, and not one to small-pox. Thus 21 deaths resulted from these principal zymotic diseases, against 10 and 19 in the preceding two weeks; these were equal to an annual rate of 3.1 per 1000, the rate from the same diseases being 2.9 in London and 0.6 in Edinburgh. The deaths attributed to diarrhoea, which had been but 4 and 7 in the previous two weeks, further rose last week to 12; while the fatal cases of "fever" showed a decline of 5 from the number in the previous week. The numbers of deaths from the other zymotic diseases scarcely differed from the numbers in recent weeks. Two inquest cases and 3 deaths from violence were registered; and 38, or more than a quarter, of the deaths occurred in public institutions. The causes of 18, or 12 per cent., of the deaths in the city were not certified.

THE SERVICES.

Brigade Surgeon J. Colahan, M.D., from Malta, has been appointed to the medical staff at Chatham. Surgeon Wright, from the garrison medical staff, has embarked for service at the Cape.

ARMY MEDICAL STAFF.—Deputy Surgeon-General Edmund Humphrey Roberts to retire on temporary half pay (dated Sept. 14th, 1888); Brigade Surgeon John Trehane May Symons, M.D., has been granted retired pay (dated Sept. 1st, 1888); and Brigade Surgeon Laurence Corban, M.D., is granted retired pay (dated Sept. 12th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Major Matthew Baines, M.D., resigns his commission (dated Sept. 5th, 1888). The undermentioned Acting Surgeons to be Surgeons, ranking as Captains (dated Sept. 5th, 1888):—Ernest William Skinner, M.B., 1st Cinque Ports Rifle Volunteer Corps; Andrew Alexander Watson, 3rd Lancashire Rifle Volunteer Corps; and John Hector Anderson, M.D., 5th Volunteer Battalion, the Gordon Highlanders.—Surgeon Robert de la Poer Beresford, 2nd Volunteer Battalion, the King's (Shropshire Light Infantry), to be Surgeon, ranking as Captain (dated Sept. 8th, 1888); Acting Surgeon Patrick Kynoch, 1st Roxburgh Border Mounted Rifle Volunteer Corps, to be Surgeon, ranking as Captain (dated Sept. 12th, 1888).

INDIA OFFICE.—The Queen has approved of the following admissions to the Indian Medical Service:—To be Surgeons

(dated March 31st, 1888): Bengal—Daniel Grove Marshall, David Macbeth Moir, Harry Frederick Whitechurch, James Reid Roberts, Frederick William Gee, Kanta Prasad, Patrick Wilkins O'Gorman, William Henry Gray, and George Thomas Mould. Madras—Allan Ewen Grant and Frank Charles Pereira.

ADMIRALTY.—The Admiralty have approved the following proposals of the Inspector-General of Haslar Hospital relative to a course of lectures, &c., for medical officers of all ranks:—All senior medical officers of ships and establishments at Portsmouth are invited to attend the laboratory at Haslar Hospital as frequently as their duties will permit to carry out a course of practical analytical instruction. The Surgeons of ships and establishments are to attend the course of lectures and practical work in the laboratory as regularly as their ordinary duties will permit. Medical officers of all ranks on half pay resident in the neighbourhood will have the privilege of attending the lectures and working in the laboratory, and also of being present at post-mortem examinations. No expense of any kind is to be incurred in carrying out these courses.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeons George Henry Madeley and James Dear Smith, M.D., have been placed on the Retired List of their rank, the latter at his own request.

The following appointments have been made:—Fleet Surgeon William D. Longfield, to the *Himalaya* (dated Sept. 11th, 1888); Staff Surgeon J. Irvine, to the *Flora*, additional, and Staff Surgeon W. E. Bretton, M.D., to the *Active* (both dated Sept. 5th, 1888); Fleet Surgeon William H. Stewart, to the *Malabar*; Fleet Surgeon Richard S. P. Griffiths, to the *Scrapis*; Staff Surgeon Thomas M. Sibbald, to the *Canada*; Surgeon Walter G. Axford, to the *Bellcophon*, additional; and Surgeon Edward J. Morley, to the *Lion* (all to date Sept. 12th, 1888).

YEOMANRY CAVALRY.—Surgeon H. P. Welchman resigns his commission (dated Sept. 5th, 1888).

VOLUNTEER CORPS.—*Artillery*: 2nd Volunteer (Devonshire) Brigade, Western Division, Royal Artillery: George Miles, Gent., late Honorary Assistant Surgeon, to be Acting Surgeon (dated Sept. 5th, 1888).—1st Orkney: Acting Surgeon T. P. Develin resigns his appointment (dated Sept. 5th, 1888).—*Rifle*: 1st Volunteer Battalion, the Leicestershire Regiment: Arthur Nathaniel Barnley, Gent., to be Acting Surgeon (dated Sept. 5th, 1888).—Surgeon and Honorary Surgeon-Major C. H. Bennett, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Sept. 5th, 1888).—Surgeon P. B. Giles is granted the honorary rank of Surgeon-Major (dated Sept. 5th, 1888).—1st Volunteer Battalion, the Prince of Wales's Volunteers (South Lancashire Regiment): Edward Lister, Gent., to be Surgeon (dated Sept. 8th, 1888).

Correspondence.

"Audi alteram partem."

"A DICTIONARY OF MEDICAL SPECIALISTS."

To the Editors of THE LANCET.

SIRS,—On returning to town my notice has been drawn to your leading article of the 25th ult., condemning in very strong terms the handbook I have in preparation. As such an expression of opinion from you may injure a book which I believe will be of great utility to the profession, I ask you, in accordance with your motto *audi alteram partem*, to give due prominence to an apology for my proposed "Dictionary," as I think your censure upon me is based upon insufficient information.

First as to the origin of the work. The idea was casually suggested to me by a provincial surgeon in general practice, and after consideration my judgment favoured such a work as likely to be of practical utility. I saw at once that it ought to be compiled, not by a medical man, but by one independent of the profession. Hence I determined to undertake the task. Then, to prevent all possibility of its becoming a mere advertisement for those anxious to dub themselves "specialist," and with the view that the qualifica-

tion should act automatically, it was determined that those only should be admitted who had been associated with some recognised hospital or school of medicine, thus ensuring the inclusion only of men of standing, to whom my work will be no more an advertisement than is Churchill's Directory or a hospital prospectus.

Now to deal with your objections to the work. You refer to the evils of specialism which the Dictionary may stimulate. That there may be evils in specialism can be readily admitted, but they will not be cured by leading a young man of twenty-one to think that the appearance of his name in the Medical Register proves that he is "fully qualified to pursue all branches of practice." I ask, who would allow such a youth fresh from the schools to operate for a cataract or to cut for stone? The services of a specialist would be certainly sought for. The law has for centuries recognised three specialists—the physician, the surgeon, and the apothecary,—while public and professional opinion has long recognised many others. Has not good rather than evil arisen from the growth of the specialist in diseases of the eye, the mind, women and children, the teeth, &c.? And to take further specialisation, are there not men who are eminent for, and have done much service by, their skill in lithotomy and ovariectomy? It seems to me, in view of the extent of purely legitimate specialisation in the present day, it is mere affectation to attempt to ignore it, especially as the profession and leaders in the profession seek to accentuate it by the formation of special societies, special journals, special hospitals, and special wards in general hospitals. As you say, the "discovery of this specialisation is the work of the public and the profession combined," and my Dictionary merely aims at assisting the discovery by giving lists of those engaged in special practice, with the individual information usual in such handbooks. At present similar information is open to all, but it can only be gathered by diligently scanning hospital prospectuses or the catalogues of medical booksellers, and then turning up the names in Churchill's Directory, in which the practitioners' qualifications are "advertised" or "made known." Wherein do I sin by attempting to save this waste of labour? It is not correct to say that "here is an attempt to advertise that a man is fully qualified only to practise one branch, or rather a bit of one." My Dictionary will simply state that the practitioner has attained special skill in one or more branches, and not that he is ignorant of the rest of his profession. In my prospectus I state that "the inclusion of a name in this list of specialists must not be taken to indicate that the practitioner necessarily devotes the whole of his time to special work, for some leading specialists also occupy themselves with general practice." This wholly removes an objection on your part which otherwise would have been of great weight. As to your suggestion that the practitioner aggrieved by the insertion of his name should consult his lawyer, I need only remark that he will but benefit my profession without doing himself any good, for happily it is no offence in this country to compliment a man by publishing of him that he is unusually well qualified in some branch of his profession when such happens to be the case. Fortunately, the very numerous and carefully filled up returns which I find awaiting me clearly indicate that the profession is not in agreement with the opinions embodied in your leading article. I may mention that thirty-one gentlemen have written to me asking that their names may be omitted. Twelve of them show good causes, such as retirement from practice, or that I am in error in styling them "specialist." Of the remaining nineteen, all, with one exception, are now attached to some hospital and pursue some specialty, many of them, I may remark, in conjunction with general practice. A few of the replies I now give—of course, without names. "A" states that he is not a "specialist"; but I find that he is advertised in a hospital prospectus as attending to "diseases of the throat." "B," who also objects to such an "advertisement" as my book; and refers to his lawyers, advertises of himself that he qualified at some foreign university, *summi cum laude*, and writes from the office of a highly specialised journal. "C," who also threatens me somewhat curtly with legal proceedings, is surgeon to a highly specialised hospital. "D" announces to me in very abrupt fashion a similar intention. The value of his opinion is, however, very greatly discounted by the fact that he was one of the first to send me in an accurate return to my questions, hours of consultation included. In this case he will probably find that first thoughts are often best. The remaining letters do not call for detailed remark. I can appreciate the writers' motives,

which are due to a fear that unwittingly they may infringe those unwritten laws of the profession which proscribe advertising, though I do not think their fear well grounded.

It is worth while now to observe that lists of specialists are not altogether unknown. I say nothing of the fact that at least one teaching body grants a diploma in obstetrics and State medicine. I may point out that an official Register of Dentists already exists, while Silverlock publishes a list of specialists. A very imperfect one exists in Bradshaw's Dictionary of Bathing-places, and quite recently a list of London ophthalmic surgeons, with their addresses for the present year, has been printed. No objection, so far as I am aware, has been raised to any of these. I have but one regret in connexion with my work, and that is the exclusion of provincial specialists. I wished their names to be added, but my publisher vetoed it this year for prudential reasons.

I should be the last to attempt anything which could derogate from the honour of a profession in which through early associations and friendships with medical men I have ever been deeply interested, and to which I believe that my proposed work will in a humble way prove a distinct benefit. I trust that my remarks, which have been necessarily lengthy, may have the effect of removing some misconceptions about my proposal.

I am, Sirs, your obedient servant,
Chancery-lane, W.C., Sept. 7th, 1888. W. P. W. PHILLIMORE.

P.S. It occurs to me that some men object to the terms "specialist," and "consultant" has been suggested to me as a better word. I do not wholly agree with this, but it is a point on which I should much esteem the expression of opinion from leading members of the profession.

. Mr. Phillimore's letter only confirms us in our objection to his most unnecessary proceeding. The casual origin of many undertakings finds a fresh illustration in his letter: the idea of the work was casually suggested to him by a provincial surgeon. He undertook the work "because he saw at once it ought not to be compiled by a medical man." We are not so quick-sighted as Mr. Phillimore, and certainly fail to see how a guide of any value is to be drawn up by a gentleman who confessedly knows nothing of the subjects or the persons, and is to be guided merely by what he sees in existing directories or advertisements of special hospitals. He finds some excuse for his advertising project in the existence of similar things already. It is curious to see the member of a learned profession defending the advertisement of a limitation of men's duties on the ground that Mr. Silverlock has afforded him a precedent. We are sure that Mr. Phillimore does not wish to be either unjust or uncomplimentary, but he threatens to be both. He proposes to ignore the whole of the specialists of the provinces, though they include some of the ablest of the profession. This surely is to be unjust. And he justifies this compilation by suggesting that it will be of use to country medical men. It is a poor compliment to country medical men to suppose that when they are called on to advise a patient in the choice of a consultant they will need to refer to Mr. Phillimore's book of random advertisements. The more detailed Mr. Phillimore becomes in his argument, the more does he fail to establish it. He declares that he will admit to his Dictionary only those who are connected with "recognised" hospitals or schools of medicine. What does Mr. Phillimore mean by the "recognition" of a hospital? Who is to recognise any given hospital before he will admit the members of its staff? What we should expect from this condition will be a multiplication of "special hospitals," one of the most pernicious developments of recent years. Mr. Phillimore must think the profession very backward in discovering merit and special faculty if its members cannot select a consulting physician or surgeon for their patients without his clerical assistance in collating the names and appointments of metropolitan medical men. We urge him to reconsider his project. He tells us that he has evidence that our views are not shared by the profession. We fail to see this. Thirty-one objections—drawn from the cream of London consultants—have been presented.

Names have to be weighed rather than counted in such a matter as this. There are always some men who are ready to see their names published. But it is not those who show this feeling who will commend themselves to the profession, or who are likely to command its respect.—ED. L.

To the Editors of THE LANCET.

SIRS,—On the 13th August, during my absence from home, a printed circular was sent me with a prospectus of the above proposed new work of reference, edited by W. P. W. Phillimore, Esq., M.A., B.C.L. A printed form was also enclosed, to be filled in by myself, stating, amongst other information, in what specialism I practised my appointments, works, inventions, and hours for consultation ("intended for the benefit of country practitioners"). This form to be filled in and returned to the editor not later than August 16th. A few names of respectable "specialists" are given on a specimen page for my encouragement. Now, it is impossible for anyone seriously to work at his profession without selecting some few points of clinical study for his field of labour, and thus in a sense becoming a "specialist"; but surely his hospital appointments and published works, of which a full list is already contained in the recognised Directories, and the reputation he may have earned amongst his medical brethren and pupils, are sufficient information as to his probable usefulness for consultation purposes, without the necessity of his name being included, with the trade-mark of specialist affixed, in a popular Dictionary edited by a layman.

It is probable that the proposed publication to which I allude will be assisted by but few men of any position, but it is to be observed that the circular has been sent round at a time when many are away from town, and that only a very few days' notice is given, after which the required information will be presumably collected and recorded by the editor, without the help or sanction of the person concerned. I have no knowledge of the editor, and do not doubt his literary fitness, but from long observation of the ignorance of laymen in matters relating to the medical profession, and especially when any question of ethics arises, I cannot think this publication likely to be either a safe and useful guide to the public, for whom it is clearly intended, or an edifying book of reference for the "country practitioner."

I am Sirs, your obedient servant,
London, Sept. 1888. F.R.C.P.

"SANITATION AT MARGATE."

To the Editors of THE LANCET.

SIRS,—I think no resident in Margate can complain of your able and impartial article of the 1st inst. on the Sanitation of Margate. There are one or two points, however, to which in the interests of sanitary science it may be well to call attention.

The writer states that whilst about 2 per cent. of the cases occurred in houses which were drained, the remainder (98 per cent.) were in houses discharging their sewage into cesspools. This is not the case. There are three modes of house drainage or sewage disposal in use in Margate: 1. Drainage into the sea. 2. Drainage into cesspools. 3. The accumulation of faecal matter in privy-pits. It was in the poor cottages using the privy-pits that the cases of typhoid occurred. The better class of houses using cesspools were as free from typhoid as those draining into the sea. All the houses in the town used the same water, but it was only in the privy-pits that the poison acquired the virulence necessary to produce typhoid. That typhoid did not occur in the lodging houses is shown by the fact that no visitor took the disease.

The inhabitants generally are anxious that the town should be well drained, but wish to avoid the errors into which so many towns have fallen. The mortality now is 15 per 1000, taking the average of the last ten years, and the zymotic mortality not above the average of health resorts. I fear that if we go in for miles of big storage sewers, with hundreds of stinking street ventilators, we shall only be jumping out of the frying-pan into the fire. If, however, we can have a system such as that of the Shone, with small sewers and quick discharge, no one will rejoice more heartily than

Your obedient servant,
Margate, Sept. 1st, 1888. A MARGATE SURGEON.

LIVERPOOL.

(From our own Correspondent.)

DEATHS FROM CARBOLIC ACID POISONING.

MORE deaths from carbolic acid poisoning have occurred. In one case it was evidently taken with a suicidal intent, but it is very much to be lamented that so deadly a poison should be sold indiscriminately, in any sort of bottle and unlabelled, even to children of tender age. In another case (making the ninth), a woman died from carbolic acid, which she had taken with a suicidal intent. The poison had been dispensed by the chemist with every precaution, both sides of the bottle being labelled "poison," and a satisfactory reason had been given for its purchase. The coroner, at the inquest, remarked on the singular fact that in all the nine cases the victims had been women. He trusted that some means might be discovered for reducing the number of these fatalities.

THE USE OF THE CANE IN SCHOOLS.

Mr. Preston, the stipendiary magistrate of Birkenhead, had recently before him the case of a female teacher charged with assaulting a girl by caning her on the hand. The magistrate expressed himself very strongly against the use of the cane for any except grave moral offences and against caning on the hands. The Birkenhead and District Teachers' Association, at a recent meeting, strongly resented the worthy magistrate's remarks, and upheld the use of the cane. While showing every sympathy with teachers in their difficult and responsible work, it cannot be denied that caning on the hands is a very cruel punishment, and as senseless as it is cruel. Its use too often means loss of temper on the part of the master or mistress, while the effects on the hands of a delicate child are often very serious. Mr. Preston's remarks are deserving of every support.

MYSTERIOUS DEATH AT SOUTHPORT.

An adjourned inquest was concluded yesterday on the body of a boy nine years of age which was found in a decomposed state in the attic of an unoccupied house in Park-avenue on the 13th ult., the attic door being locked and the key missing. Death had evidently taken place about ten days before the discovery of the body, and there was no apparent cause of death revealed at the post-mortem examination. At the adjourned inquest Dr. McNicholl stated that there was nothing inconsistent with death from suffocation or chloroform poisoning, traces of which would have disappeared in the interval which had ensued between death and the discovery of the body. It appeared that the deceased, with some other children, went, on Aug. 1st, to play on swings in Hesketh-park, and nothing more was seen or heard of him till the discovery of his body on the 13th. The jury returned an open verdict.

Liverpool, Sept. 12th.

BIRMINGHAM.

(From our own Correspondent.)

THE MUSICAL FESTIVAL.

THE musical festival recently held in this town was attended by a large and fashionable audience, and, as usual, was productive of new compositions which attracted much interest. The results, from a musical point of view, with regard to talent and performance are said by trustworthy critics to have been eminently satisfactory. The financial statement has not yet appeared, but it is known that there is a deficiency of some £2600 odd in the proceeds; at the same time, the working expenses have been considerably reduced, so that it is not possible to draw any conclusion at present as to the net profits. It is to be hoped that there will be a substantial balance to hand over to the General Hospital, on behalf of which the festival is held. The committee found a zealous and generous patron in the president, his Grace the Duke of Norfolk, who not only attended punctually all the meetings, in which he took an active interest, but who also contributed largely to the funds.

SANITARY ADDITIONS TO THE GENERAL HOSPITAL.

By the liberality of Mr. J. C. Holder, one of the members of the hospital committee, large and important additions have been made for the better arrangement of the closets

and bath-rooms in connexion with a number of the wards. These consist of two blocks of buildings outside the main building, running as far as the top and entered from the wards themselves. Free ventilation is thus ensured and all smells done away with. A great advantage is gained in convenience and sanitation, as well as in the comfort and health-condition of the inmates.

AN UNSOLVED MYSTERY.

Murder has of late been often surrounded by mysterious circumstances. In the history of crime in this town there has been nothing known to baffle inquiry more seriously than the recent death of a child six months old by a strange and exceptionally cruel mode of murder. It seems that the child was left by its mother in a perambulator in the house, under the care of two children, a boy and a girl, the only other occupant being the grandfather of the infant. This man was in a state of semi-intoxication asleep upon a sofa. On the mother's return she alleges that she found the child with a deep cut above the ankle of one leg, and she at once took it to a doctor, who sewed up the wound. When she returned home she discovered that the opposite foot was nearly severed from the leg. The child was taken to the hospital, where it died in half an hour from loss of blood, the foot having been cut off just above the ankle, being attached only by a bit of skin. The two children were at first charged on suspicion, but were subsequently liberated by the magistrates. A patient inquiry by the coroner resulted in an open verdict of wilful murder against some person or persons unknown. At present therefore the crime is undiscovered, and the murderer of the hapless infant is at large.

Sept. 12th, 1888.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

CARLISLE.

THE Hospital Sunday Fund Committee of Carlisle had a meeting on Aug. 29th for the purpose of distributing the present year's collections. The total receipts of the Sunday and Saturday Funds amounted to £1309 4s. 9d., being an increase of £27 15s. 10d. on the amount raised last year. The Workington Infirmary is added to the list of recipients this year for the first time. The principle adopted in the distribution has been *pro rata* as to the expenditure of each institution, the Cumberland Infirmary at Carlisle getting £650 and the five other minor institutions in proportion to their expenditure. The Whitehaven representative took exception to the system of distribution, which includes a special gift to some of the institutions, but the mayor, who presided, said the allocation was only experimental. It is pointed out by the local press that some of the charities, such as the Carlisle Dispensary, suffer under the new scheme.

THE BRITISH ASSOCIATION.

The British Association, after an interval of twenty years, returns to Newcastle-on-Tyne next year, and good progress is being made here with the preliminary work for its reception. The Mayor is to be chairman of the local committee, and, on the motion of Lord Armstrong, Professor Philipson has been elected vice-chairman. Even at this early period matters augur well for a successful meeting in 1889.

THE NEWCASTLE COLLEGE OF MEDICINE.

The old College has been taken possession of by the North Eastern Railway Company, but the new building has made rapid strides during the last few weeks, and will be quite ready to allow work in some of its departments to commence with the opening of the session in October. I hear that a very large number of candidates intend presenting themselves for the various medical degrees in connexion with the University of Durham, at the examinations to be held this month in Newcastle. For the first M.B. and the second M.B. there are over ninety entries, and these with other candidates for the licence in Sanitary Science will bring up the total to about a hundred.

MIDDLESBROUGH.

Mr. C. W. Currie, M.R.C.S., practising in Middlesbrough, died on Tuesday, August 28th, after an illness of five days. The newspaper notice mentioned the cause of death as pneumonia, but, in view of the late epidemic of pneumonia in the borough, I have taken some pains to get

at the cause of death, which is shortly as follows. Mr. Currie was sixty-eight years of age, was naturally delicate, with a permanently weak heart; he had not been attending any pneumonia cases for some time, but on the Friday preceding his death he got a chill and sore throat when attending a case of abortion; his throat symptoms increased and developed into laryngitis, and during the last forty-eight hours of his illness he had some pulmonary congestion, but never any of the prominent symptoms of pneumonia. His remains were removed to London for interment.

SUNDERLAND: THE HORSE.

Apart from the interest attaching to the horse as the useful servant of most medical practitioners, the paper read by Mr. Clement Stephenson of Newcastle last week before the North of England Veterinary Association at Sunderland, on Hereditary Unsoundness in Horses, has more than a passing interest. In his paper he treated, in an exhaustive and interesting manner, of the various diseases of eye, feet, &c., which he considered hereditary in breeding horses. "He was confident the more they investigated the subject in the animal and vegetable world, the more they would believe in the subtle and far-reaching power of hereditary influence. Therefore, only sound, good-looking animals should be bred from. The sire, particularly, should be sound, and true to his type."

BAROMETRIC DISTURBANCE AND MINE EXPLOSIONS.

Following close upon or simultaneous with a warning issued from the Meteorological Department on Friday last, to miners, an explosion took place at Chester Moor, near Durham, the same day, whereby six men were severely injured. Two were taken to the Durham County Hospital, and the others were immediately treated, on the spot, by Dr. Duncan of Chester-le-Street.

Newcastle, Sept. 4th.

DUBLIN.

(From our own Correspondent.)

MEATH HOSPITAL, DUBLIN.

THE "Bury Memorial Wards" being now completed, and provided with everything necessary for the reception of patients, his Excellency the Lord-Lieutenant and the Marchioness of Londonderry will open them, and also the "Barber Memorial Wing," on the 25th inst. The Countess of Meath has been elected a life governess of the hospital.

REFORMATORY AND INDUSTRIAL SCHOOLS, IRELAND.

The twenty-sixth report has recently been issued, and from it I learn that the inmates of reformatory schools at the close of 1887 were less in number than at any period during the past seventeen years. Of the 728 male inmates, 5 died last year—viz., 2 from lung disease, and 1 each from brain disease, heart disease, and septicæmia. Of the 1311 inmates of industrial schools, 27 boys and 52 girls died in the schools during 1887, the vast majority of the deaths being due to affections of the lungs. The educational status of young persons admitted year after year into industrial schools in Ireland plainly evinces the deplorably illiterate condition of the class of children from which the inmates of these institutions are taken. Of the 1311 inmates, 753 were unable to read or write, or about 57 per cent. were when admitted quite illiterate. The returns of previous years likewise afford evidence that the normal educational status of children sent to these institutions yearly deteriorates.

THE DRAINAGE OF KINGSTOWN.

Kingstown is a seaside resort situated about seven miles from Dublin, and contains about 22,000 inhabitants. The drainage arrangements of the place were, however, not all that could be desired, and it was agreed by those who took an interest in its prosperity that to maintain its position as the premier township, and to establish its reputation as a health resort, the entire foreshore of Kingstown should be freed from the pollution arising from the discharge of sewage. A committee of ratepayers was formed some time since to take this matter into consideration, and recently a deputation waited on the town commissioners to secure their support and assistance. It is proposed to obtain a loan from the Local Government Board to construct a sea wall at low-water mark along Scotchman's Bay, and to form a marine promenade, also an intercepting sewer to carry all sewage of the district into deep water. The estimated

cost of an intercepting sewer from the Board of Works' outfall at the West Pier to a point in the immediate vicinity of the Dalkey outfall at Bullock, together with an esplanade thirty feet wide and over a mile in length, which will enclose a space of about twenty acres along the shore of Scotchman's Bay, which enclosed space it is proposed, when filled in, shall form a public park, is £45,000. The commissioners have referred the consideration of the matter to a special committee, who are empowered to consult such counsel and engineers as may be deemed advisable. With the natural advantages which Kingstown possesses, its pretty harbour, and its lovely scenery, the proposed undertaking, if carried out, will place the township in the pre-eminent position it should undoubtedly occupy.

IRISH PRISONS.

From the tenth report of the General Prisons Board, it appears that there has been a reduction in the number of local prisons, and a saving in outlay of £2800. Since 1879, up to March last, the board have expended over £56,000 in the erection of new buildings, important structural alterations, sanitary works, water supply, and other permanent improvements. There has been for many years, it is satisfactory to learn, a gradual diminution in the number of convicts, both male and female, and more especially is that decline perceptible since the local and convict prisons have been placed under one central control. This result is largely attributed to the deterrent influence and improved management of both local and convict prisons since the passing of the Prisons Act of 1877.

THE M'GOVERN TREATMENT OF HYDROPHOBIA.

The Armagh guardians recently passed a resolution granting a sum of £2 to Mr. P. M'Govern, of Clan, co. Cavan, for his services in treating a boy named McGeery, who had been bitten by a rabid dog. The Local Government Board have, however, refused to sanction the proposed payment, inasmuch as Mr. M'Govern's house could not be deemed a hospital or infirmary to which workhouse inmates might be sent for special treatment under Section 7 of the Act 25 and 26 Vic., cap. 83.

FOOTBALL CASUALTY.

On Sunday last a man named Heeney, whilst playing in a football match near Navan, received such severe injuries that he died during the same evening.

Dublin, Sept. 11th.

BELFAST.

(From our own Correspondent.)

POISONING BY CARBOLIC ACID.

A VERY melancholy occurrence took place at the Royal Hospital on Sept. 6th. It would seem that a patient, twenty-five years of age, was admitted to this institution about five weeks ago suffering from hip disease. On Thursday he had been ordered a dose of "black draught." On that day an assistant nurse for the ward in which the patient was located received as usual the required medicines for the several patients in the ward from the apothecary's department. They were taken to the ward on a tray, and included a bottle labelled "carbolic acid—crude poison." The nurse in charge of the ward gave in mistake to the young man the bottle containing the carbolic acid, and he received a good part of two ounces. He immediately stated that the medicine was not right, and the nurse, who thought at the time she had acted properly, partook of the contents of the bottle herself to prove her assertion. Immediately afterwards, on recognising her mistake, she summoned aid, but, in spite of everything that could be done by the resident and one of the attending members of the staff, the young man expired shortly afterwards. The nurse herself has been very ill, but is now out of danger. An inquest was opened on Friday, but after some evidence had been given it was adjourned until the nurse would be able to be present. She is at present under arrest.

Belfast, Sept. 12th.

MEDICAL MAGISTRATES.—Mr. W. E. Evans Ker-shaw, Beech House, Middleton, L.F.P.S. Glas., F.R.C.S. Edin., and Mr. W. H. Hughes, Latchford House, Ashton-under-Lyne, M.R.C.S., L.S.A., have been placed on the Commission of the Peace for the county of Lancaster.

PARIS

(From our own Correspondent.)

RABIES IN RUMINANTS.

AMONG the papers recently communicated to the Société Nationale d'Acclimatation may be cited one on Rabies in Ruminating Animals, by M. Pion, veterinary inspector of the slaughter yards at La Villette, and which has been reproduced in the *Journal Officiel* of Aug. 27th, 1888. In a general way, rabies in the bovine species has, according to M. Pion, neither the violence nor the intensity which is observed in dogs. The author thus explains the cause of the difference. The bovine animals, being peaceful, are not so subject to being bitten. On the other hand, the earlier authors who had described the malady had greatly exaggerated the symptoms. It is now known that, thanks to more careful observations, rabies, as a rule, is not in the ox so dangerous or so terrifying. The author then describes certain symptoms which more or less resemble those of rabies, and are consequently often mistaken for the latter malady. The late M. H. Bouley, the well-known veterinarian, however, in his work on Rabies in the Bovine Species, summarises as follows the progress of the disease as observed by him in twenty-seven cases. First day: Slight colicky pains, or something more or less analogous, as the animal no sooner lies down than he gets up again. The senses are excited; there is a very sudden rising of the temperature; pruriginous pains at the seat of the bite. Second day: Less agitation; slight tenesmus; diminution of the temperature of the body, as well as that at the seat of the bite. Third day: Commencing paraplegia; strong tenesmus, with rejection of fecal matter, covered with mucus of a yellowish-brown tint; insensitiveness of the vertebral column; decreasing temperature. These symptoms are accompanied by bellowing. Fourth day: Complete paraplegia; violent tenesmus; excrement covered with frothy mucus; foaming at the mouth; bellowing more frequent. Fifth day: Same symptoms, with considerable diminution of the temperature; bellowing more rare; sense of taste not impaired. The period of incubation has been exactly ascertained, as the same dog had infected the twenty-seven oxen noted above, which were dispersed among a herd of eighty. The average period was from three to six weeks in three-fourths of these animals; in the remainder it lasted from six weeks to three months. All treatment was inefficacious. The principal lesions—indeed, the only ones—were observed on the spinal marrow, which was redder than it ordinarily is, and dotted, particularly about the level of the loins, with numerous spots in the form of lentils. In other parts nothing particular was seen. Inoculations practised on rabbits with the saliva and with portions of the bulb, diluted, transmitted rabies. But nowhere, not even in the cases cited, was it seen that rabies had been inoculated mediately or immediately from one herbivorous animal to another. Things must have happened otherwise among the deer of Richmond Park.

M. PASTEUR'S INOCULATIONS.

M. Pasteur has had a run of ill-luck with his antirabic inoculations lately, as reported by the *Sémaine Médicale*. On the 23rd of July last a man aged twenty-eight years died of rabies at the Hôtel Dieu of St. Etienne. He had been bitten by a rabid cat on the 16th of June, and was treated at the Pasteur Institute at Paris from June 20th to July 7th. After having completed his treatment by the antirabic inoculations, the man returned to his work as a domestic at St. Etienne, where the first symptoms of rabies manifested themselves on the 18th of July, that is thirty-two days after he had been bitten. On August 8th a young man aged twenty-two years died at the Necker Hospital at Paris, from convulsive rabies. He had been bitten by a mad dog on the 13th of July and was treated at the Pasteur Institute from the 16th. Death from rabies took place twenty-six days after the bite. On the 20th of June last a child eighteen months old died from rabies at Gentilly (Seine), thirty-six days after having been bitten by a rabid dog and inoculated at the Pasteur Institute. The child, who had been bitten on the 15th of May last, was first treated by the doctor of the place. Two days after—that is, the 17th—the inoculations were commenced and continued for twenty-four days. The first symptoms became manifest about the eighth day after the completion of the treatment

by the antirabic inoculations. A child at Marseilles aged thirty-one months, who was bitten on May 9th last by a rabid dog, and treated at the Pasteur Institute from May 14th to June 9th, died from rabies on June 23rd—fourteen days after the end of the treatment. An inhabitant of Chatenay, aged forty-four years, who was bitten on March 25th last by a rabid cat, and treated at the Pasteur Institute from March 26th to April 12th, died from rabies on July 30th. Madame Sarazin, of Saint-Maurice, in Switzerland, aged forty-four years, who was bitten on July 1st last by a mad dog, and treated at the Pasteur Institute from the 4th of the same month, died from rabies at the Hôpital Broussais in Paris on August 4th. To this list may be added the name of a workman of Chatenay, called Labeaume, who died from convulsive rabies at the beginning of the month of July last at the Hospital of Versailles, but who had not undergone the treatment regularly. Bitten on May 29th, 1888, by a rabid cat, Labeaume was put under treatment on the 30th of the same month, but he left the Pasteur Institute on June 2nd without signifying his intention to do so, and only returned on the 14th. At that time he experienced severe pains in the bitten arm, accompanied with headache. The inoculations were resumed and continued till June 29th.

TUBERCULOSIS.

Dr. Frémy, hospital physician, is charged with a mission to the United States, with the view of visiting the private and public establishments of that country that are devoted to the treatment of tuberculosis.

Paris, Sept. 11th.

EGYPT.

(From our own Correspondent.)

REPORT OF THE SANITARY DEPARTMENT.

PROBABLY for the first time in the history of Egypt the Public Health branch of the Government has issued a report. It treats only of the year 1887, and its well-wishers hope that it may now be an annual institution and gradually improve every year. Three-fourths of it is in English, being mostly contributed by English officials, and the remainder, in French, consists chiefly of translations from Arabic reports. The list of *personnel* includes 300 for the various medical services, 540 hospital attendants, and 620 workmen for watering and scavenging the streets, besides a huge number of unpaid barbers and midwives for country work; 2444 barbers and 4612 midwives are exempted from taxes to a slight extent, and pick up a livelihood by vaccination and minor surgery. During the year the provincial doctors were called upon to write no less than 8440 medico-legal reports for the police and law courts. Towards the end of the year eight dispensaries were opened in different towns, and treated large numbers of patients, most of whom were able to pay a small fee. A self-supporting Government dispensary in every large town would be a great boon. Registration of births and deaths is now carried out more thoroughly than it has ever been before; but, as statistics of the villages emanate from the barbers, and these worthies are generally unable to read and write, it is difficult to see how they can be made quite accurate. There is a temptation to conceal births on account of the future army conscription, and an excessive death-rate is hidden at first by trying to extend it over many succeeding weeks. Every village of more than 300 inhabitants is now supplied with a register, and of such villages there are about 4000. Smaller hamlets are supposed to supply statistics to the nearest village.

HOSPITAL ENTRIES.

There is a great improvement in the willingness of both men and women to enter the twenty-one hospitals of the Government. Only five years ago natives never entered these buildings unless they were sent there by the police. The year's figures show 11,674 admissions, of which half the number entered Cairo and Alexandria hospitals. At Cairo, where there is a large out-patient department, the attendance was upwards of 30,000, the prescriptions dispensed having been about 17,000.

IMPROVEMENTS AT ASSIOUT.

Here an energetic and intelligent native doctor has succeeded in getting a stagnant pond filled up, and also several

pits caused by brickmaking. The latrines and cesspools attached to the eight mosques were cleansed and disinfected, and this alone is a radical and rare reform. The slaughterhouse has been moved to a more suitable place, and the butchers now transport meat in carts instead of carrying it, exposed to flies, on their backs. The townspeople have commenced to have their night soil removed in closed barrels to trenches outside the town, the practice formerly having been to bury it in the interior of their houses.

PUERPERAL FEVER AT ISMAILIA.

There were lately three fatal cases of this disease, all attended by the same midwife. The doctor suspended and disinfected her for three weeks, after which no more cases occurred. Here, as elsewhere, the number of vaccinations exceeds the births. This is due to children unvaccinated in former years being hunted up by an incumbent more energetic than his predecessor. Revaccination of adults is rare.

PORT SAID HOSPITAL.

The Government hospital is under the management of a Scotch doctor, and has a daily average of 59 in-patients. This is the highest daily average ever reached at Port Said. The patients, besides natives, are of 11 European nationalities, chiefly Italian, Greek, French, and English. Of the deaths during 1887 more than one-fourth were due to a small-pox epidemic, the next most common cause of death being chronic diarrhoea among Turkish soldiers, who are sometimes landed in a dying condition. An out-patient service has recently been opened, and nearly 2000 cases were treated during the year. A new pavilion has been opened, consisting of two wards, for 50 patients, and allowing each 2000 cubic feet. Among other improvements, bath-rooms and washhouses, with hot and cold water, have been newly built. The chief blot on this hospital is the absence of nursing, this being entirely left to untrained hospital attendants. The linenry, laundry, and kitchen are well presided over by *sœurs de charité*. The small-pox epidemic existed for a year, ending in June, 1887, and attacked 437, of whom 157, or nearly 36 per cent., died. The total vaccinations of children and adults were 6216, in spite of a widespread belief among the natives that this operation during an epidemic would only serve to spread small-pox.

VETERINARY SERVICE.

The first authentic case of rabies occurred in Egypt in August, 1886, and in the following January a second case was found in an English dog in Cairo; while in June, 1887, a third case was reported from a village near Cairo, the dog having bitten eleven individuals, three of whom are said to have died of hydrophobia. This small record of rabies is very satisfactory, when it is remembered that Egypt contains thousands of dogs in a half-savage condition. During the past year there were eighteen cases reported, and probably others unreported, of glanders and farcy, but none communicated to man. Pleuro-pneumonia occurred among buffaloes and bullocks in three different provinces, but was easily checked by the sanitary measures adopted.

HELOUAN-LES-BAINS.

This little suburb of Cairo, with its sulphur baths, is becoming more and more popular, on account of its proximity to the capital and its dry pure desert air. During the winter months it is frequented by consumptive and other lung patients, while the baths are chiefly used by rheumatic invalids, who declare the waters to be stronger than those of Aix-les-Bains. During 1887, 9853 baths were taken, the greatest number being in February, March, and December.

STREET SCAVENGING SERVICE.

The Cairo streets are certainly kept cleaner since the work was made a branch of the sanitary department. Business streets are swept now six times a day, large streets twice, and small streets once daily. In addition to watering the roads during the day, an area of about 750,000 square yards, twenty-five water-carts and drivers are kept on duty each night for the supply of water to the fire-engine pumps, which depend chiefly on this for water. The introduction of mechanical sweeping machines has proved a great boon after heavy rain.

TYPHUS FEVER IN ONE VILLAGE.

Another curious instance has just occurred of typhus slumbering in a village in Dakahieh province, and not spreading to the neighbourhood. In May there would seem to have been a few cases of small-pox and relapsing

fever, and the monthly deaths in the hamlet rose from seven to sixteen, and in June to twenty-two. In July an energetic native doctor was sent to the spot, and found thirty-five persons suffering from typhus, of whom twenty-six were cured and nine died. The villagers, as usual, tried to hide their sick, one being discovered in a house almost completely buried in chopped straw. In order to try to shorten the doctor's visit they did their best to prevent him from obtaining food. This little outbreak is now at an end, free aeration having proved too much for it.

REPORTS OF EPIDEMIC DISEASES.

Last year small-pox was reported from seven of the fourteen provinces of Egypt, relapsing fever from eight, measles from two, and "gastric fever" from one.

Cairo, Aug. 31st.

Obituary.

LUKE ARMSTRONG, M.D., M.R.C.S.

WE regret to have to record the death, at Cullercoats, on the 9th inst., of Dr. Luke Armstrong of Newcastle-on-Tyne. Born in the Tynedale district in 1835, the deceased received his professional education at the Newcastle College of Medicine, receiving his diploma as a Member of the Royal College of Surgeons of England, and becoming a Licentiate of the Royal College of Physicians of Edinburgh in 1860. In 1872 he obtained the degree of M.D. at the University of Durham. As a member of the Newcastle College of Medicine, he took an active part in the movement by which, in 1870, that institution became the University of Durham Faculty of Medicine; and equally interested was he (although here failing health somewhat hampered his action) in the measures taken for the construction of the new Collegiate building now rapidly approaching completion in the Bath-road, Northumberland-street.

Dr. Armstrong was lecturer on Operative Surgery and registrar to the College, and was president of the Northumberland and Durham Medical Society in the period 1879-81. It may be mentioned that his appointment as lecturer to the College of Medicine dates from 1864, and he was appointed registrar in 1870. In 1865 he was selected surgeon to the Newcastle Dispensary, and for several years held that post. Three years after gaining that appointment he was elected assistant surgeon to the Infirmary, and in 1870 he succeeded to the post of full surgeon of that institution. In 1885 his term of fifteen years' service in that capacity expired, and he was unanimously reappointed by the governors for another term of fifteen years. Amongst the other offices which he filled may be noted that of representative of the College of Medicine on the governing body of the College of Science. He also held the appointment of surgeon-major to the First Northumberland Artillery Volunteers, the senior corps of that arm of service in the kingdom.

For some time Dr. Armstrong had suffered from diabetes; indeed he had never for the last six years enjoyed robust health. His decease, however, was somewhat sudden, and is mourned by all with whom, in his private, public, or professional capacity, he had been brought in contact.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates having passed the qualifying examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society:—

Adams, C. Rutherford, St. Thos.'s Hosp. and Newcastle-on-Tyne.
 Cochrane, Jas. MacKend, M.D., C.M. Ontario, Toronto Hospital.
 Davis, Harry, University College.
 Francis, Lloyd, M.D. Oxon., M.R.C.S., L.R.C.P.Ed., London Hosp.
 Livey, William Edwd., Univ. Coll. and Liverpool Royal Infirmary.
 Masters, Alfred Thomas, St. Mary's Hospital.
 Mitchell, Elizabeth Simpson, Kingston Gen. Hospital, Canada.
 Preston, Francis Harrison, St. Bartholomew's Hospital.
 Stover, Herbert Charles, Guy's Hospital.

The following passed in Surgery:—

Baly, P. P., Queen's Coll., Birm.
 Baxter, C. E., Char.-cross Hosp.
 Bentley, W. L., Owens Coll.
 Case, W., King's College.
 Hewlett, R. T., King's College.
 Hoyle, J. C., St. Barth. Hosp.
 Knight, E., Univ. Coll., Bristol.
 Rudyard, H. A., Univ. Coll.
 Snell, E. S., Univ. Coll.
 Spurgin, F. C., Middlesex Hosp.

The following passed in Medicine:—

Brightman, F., Univ. College.	Marshall, C. F., Owens College.
Foster, J. E., Birmingham.	Slyman, W. B., St. Barth. Hosp.
Gordon, J. H., Bir. and Univ. Dur.	Vermaak, H., Queen's Coll., Bir.
Horton, A. J., Qu. Coll., Birm.	Wood, F. L., Owens College.

The following passed in Midwifery:—

Crompton, A., St. Bartholomew's Hospital.

LAMBETH INFIRMARY.—Within the past two years twenty members of the nursing staff of this infirmary have availed themselves of the midwifery practice of this Poor-law Institution, under the supervision and direction of Dr. Rugg, senior assistant medical officer, and obtained the diploma of the Obstetrical Society as certified midwives.

PRESENTATION.—On the 5th inst. Dr. T. W. Hime, lately medical officer for the Borough of Bradford, was presented with a purse containing £460, as a slight recognition of the services he has rendered to the town of Bradford during his tenure of office, and as a token of the friendship and esteem of the subscribers.

ST. GEORGE'S HOSPITAL.—The distribution of prizes will take place this year immediately after the inaugural address, which will be delivered by Dr. Ewart at 4 P.M. Professor Humphry of Cambridge has consented to deliver the prizes, and the proceedings will take place in the board-room of the hospital.

AMALGAMATION OF THE GENERAL AND EYE HOSPITALS, SWANSEA.—On the 7th instant a special meeting of the subscribers to the Swansea Hospital was held to consider a scheme for the amalgamation of the Swansea Eye Hospital with the General Hospital. Mr. W. Stone presided. The conditions proposed were approved, and a resolution was agreed to, that on the basis provided by them an amalgamation should be effected between the two committees, and power was given to carry out the necessary details.

THE SOUTHAMPTON VOLUNTEER AMBULANCE.—An ambulance detachment, or bearer section, of the 2nd Volunteer Battalion Hampshire Regiment, paid a visit to the Royal Victoria Hospital, Netley, on Saturday last. The party consisted of Surgeon Wade, a sergeant, and thirteen men. Upon arrival at the hospital they were met by Staff Sergeant Miller, of the Medical Staff Corps, who conducted them through the museums, wards, &c., the appliances for ambulance work in the field being especially interesting. This was the second visit to the hospital made by the 2nd Hants bearers.

THE STRATFORD-ON-AVON HOSPITAL.—Sir Arthur Hodgson presided at the annual meeting of the governors, held on the 26th ult. The financial statement showed the income had been £826 1s. 9d. and the expenditure £963 3s. 11d., exhibiting a deficit of £137 2s. 2d. The Rev. W. Bannard of Alveston subscribed £100 towards the extinction of last year's debt, and this being supplemented by other subscriptions to the amount of £154, the debt was discharged. Mr. Bannard also gave £105 as an annual 10 guineas subscriptions for the next ten years (his fifth life subscription to the institution).

PROVINCIAL HOSPITAL SUNDAY AND SATURDAY COLLECTIONS.—The Hertford Hospital Sunday collection realised £63 8s. 8d., which has been paid over to the Herts Convalescent Home. The Hospital Sunday at St Michael's, East Teignmouth, in aid of the General Maintenance Fund of the Teignmouth Infirmary and Convalescent Home, produced £50. The offertories at the Slough churches on Sunday last, on behalf of the parish Convalescent Fund, amounted to £14. The Friendly Societies demonstration, held in Swindon and the neighbourhood, on the 2nd inst., in aid of the Swindon Victoria Hospital, produced about £62. The Watford Hospital demonstration, held on the 5th inst., realised £134, of which £62 has been handed over to the Watford District Cottage Hospital, £62 to the Hertfordshire Seaside Convalescent Home, and £10 to the Watford Nurses' Fund.

THE ANIMALS' INSTITUTE, Kinnerton-street, Wilton-place, S.W., which was only opened this season for the reception of patients, has already more than verified its founder's fears that much suffering amongst the animals of the poorer class existed without proper surgical treatment. The gratuitous advice daily given is taken full advantage of, and the hospital accommodation for the worst cases is now too small to admit the great number of horses, dogs,

cats, and other animals requiring treatment. A supplementary institution is wanted—a sanatorium in the suburbs—where cases requiring prolonged treatment, careful dietary, and rest can be kept. Such an addition, if the preliminary expenses were forthcoming, can, it is stated, be made quite self-supporting, and by utilising the accommodation for paying patients be made even a source of income to the parent institution. The scheme is to be placed on a practical basis at a meeting to be held shortly in the committee room of the Animals' Institute.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Baroness Sudeley, late of Toddington, Gloucestershire, has bequeathed £250 to the St. Raphael's Convalescent Home, Torquay.—The late Miss Lowther has left by her will £1000 to the Whitehaven Infirmary.—The treasurer of the Salford Royal Hospital has received from the executors of the late Mr. J. Worrall Walker, formerly of Salford, £1396 3s. 8d., bequeathed to that charity.—The residuary legatees of the late Sir Joseph Whitworth are engaged in distributing the following further gifts to charitable institutions:—Stockport Infirmary, £1000; Infirmary at Derby, £2000; Clinical Hospital, £2000; Hospital for Sick Children, £1000; Manchester Infirmary, £1000; St. Mary's Hospital, £1000; Ancoats Hospital, £1000; Salford and Pendleton Hospital, £1000; Sick Poor and Nursing Institute, £1000; Lock Hospital, £500; and Southern Hospital, £500.

BOOKS ETC. RECEIVED.

BAILLIÈRE, J. B., Paris.

La Thérapeutique Médico-Chirurgicale en 1887, Revue des Travaux Français et Étrangers. Publiée sous la Direction du Dr. Paul Rodet. 1888. pp. 394.

CHAFFY BROTHERS, Limited, 35, Queen Victoria-street, London.

The Australian Irrigation Colonies on the River Murray, in Victoria and South Australia. By Chaffey Brothers. Illustrated, price 3s. 6d.

CHURCHILL, J. & A., New Burlington-street, London.

Headaches, their Nature, Causes, and Treatment. By W. H. Day, M.D. Fourth Edition. 1888. pp. 443.

Landmarks, Medical and Surgical. By Luther Holden. Fourth Edition. 1888. pp. 79.

On the Preventive Treatment of Calculous Disease, and the use of Solvent Remedies. By Sir Henry Thompson, F.R.C.S., M.B. Lond. Third Edition. 1888. pp. 87.

On the Relief of Excessive and Dangerous Tympanites by puncture of the Abdomen. A Memoir. By John W. Ogle, M.A., M.D. Oxon. F.R.S. 1888. pp. 111.

A Manual of Nitrous Oxide Anesthesia, for the use of Students and General Practitioners. By J. F. W. Silk, M.D., &c. 1888. pp. 120.

The Principles and Practice of Medicine. Edited and compiled from the manuscript of the late C. H. Fagge, M.D., F.R.C.P. By Philip Henry Pye-Smith, M.D., F.R.S. Second Edition. Vols. I. and II. 1888. pp. 1014 and 1103.

The Diagnosis and Treatment of Diseases of the Rectum. By W. Allingham. Edited and revised, with numerous diagrams, by H. W. Allingham. Fifth Edition. 1888. pp. 366.

An Atlas of the Pathological Anatomy of the Lungs. By the late Wilson Fox, M.D., F.R.S. 1888. pp. 296.

DOIN, OCTAVE, Paris.

Considérations Cliniques sur le Traitement du Catarrhe Chronique des Fosses Nasales. Par le Docteur L. Laccarret. 1888. pp. 151.

FANNIN & CO., Dublin, and BAILLIÈRE, TINDALL, & COX, London.

Hydrocele and its Treatment. By J. S. M'Ardle, F.R.C.S. Dublin. 1888. pp. 35.

HUMMEL, A. L., South Sixteenth-street, Philadelphia.

Comparative Studies of Mammalian Blood, with special reference to the Microscopical Diagnosis of Blood-stains in Criminal Cases. By H. F. Formad, B.M., M.D. With 16 Illustrations from photo-micrographs and drawings. 1888. pp. 60.

JOHNSON, T. G., Fleet-street, London.

The Bacon Shakespeare Question. By C. Stopes. 1888. pp. 140.

MACLEHOSE & SONS, Glasgow.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By W. Leishman, M.D. Vols. I. and II. Fourth Edition. 1888. pp. 863.

OLIVER & BOYD, Edinburgh.

Notes on Surgery for Nurses. By Joseph Ball, M.D., F.R.C.S. Ed. Second Edition, revised and enlarged. 1888. pp. 153. Price 2s. 6d.

SOLER, ALVAREZ, & CO., Havana.

A Contribution to the Normal and Pathological Anatomy of the Vocal Bands. By Dr. C. M. Desvernine (Havana). With Plates. 1888. pp. 20.

SWAN SONNENSCHN & CO., Paternoster-square, London.

Another World; or, the Fourth Dimension. By A. T. Schofield, M.D. 1888. pp. 92.

- TEODORO, ENRIQUE**, Madrid.
La Higiene de los Organos Vocales. Por Sir Morell Mackenzie, M.D. Traducido de la Quinta Edición, por Dr. Ramon de la Sota y Lastra. 1888. pp. 175.
- THE INSURANCE TIMES OFFICE**, Broadway, New York.
Brief Memoir of Stephen English. By P. Tertius Kempson, M.D. 1888. pp. 32.
- THE TRICHOLOGICAL ACADEMY**, 42, Marina, St. Leonards-on-Sea.
Handbook on Hair and Scalp Diseases, causing Baldness and Greyness. By G. H. Wheeler. For Students and Practitioners. Second Edition. 1888. pp. 211.
- TRÜBNER & Co.**, Ludgate-hill, London.
A Dialogue against the Fever Pestilence. By William Bullein. Early English Text Society; extra Series, 53. Part I. 1888. pp. 145, price 16s.
- The Anatomie of the Bodie of Man. By Thos. Vicary. With a Life of Vicary, Notes on Surgeries in England, Bartholomew's Hospital, &c.; an Appendix of Documents and Illustrations. Edited by F. J. Furnivall, M.A., Hon. Dr. Phil., and Percy Furnivall. Early English Text Society; extra Series, 53. Part I. 1888. pp. 336, price 16s.
- The Science and Art of Training. A Handbook for Athletes. By H. Hoole, M.D. Lond. 1888. pp. 124.
- VOSS, LEOPOLD**, Hamburg and Leipzig.
Die Geschichte der Tuberkulose. Von Dr. Med. August Predöhl. 1888. pp. 502.
- WERTHEIMER, LEA & Co.**, Circus-place, London-wall, E.C.
Penological and Preventive Principles, with special reference to Europe and America. By W. Tullack, Secretary of the Howard Association, London. 1889. pp. 414, price 5s.

The Chemical Actions of some Micro-Organisms; by Robert Warington (Harrison and Sons, St. Martin's-lane, London, 1888).—Thérapeutique: des Principes constitutifs de la Méthode Dosimétrique; par le Docteur Biéchy (Ch. Chanteaud and Cie., Paris, 1888).—The District Railway Guide to London, with coloured maps, plans, diagrams, &c. (Alfred Boot and Son, Old Bailey, London, 1888, price 6d).—Index Medicus: Authors and Subjects, vol. x., No. 7, July, 1888 (Trübner and Co., and Lewis).—Ueber den Bauchschnitt bei der Behandlung von intraperitonealen Verletzungen; von Sir W. Mac Cormac, F.R.C.S. (Jahresrede in der Medicinischen Gesellschaft zu London am 2 Mai, 1887; Uebersetzt von Dr. Oscar Thambayn in Halle a. S.—Practical Hints on Gas Consumption; by Joseph Shaw (J. Broadbent and Co., New-street, Huddersfield, 1888), price 2d).—The Reign of Law in Medicine; by J. B. Pike, L.R.C.P., M.R.C.S. (J. W. Topping, Loughborough, 1888), price 6d).—L'Hystérie Pulmonaire; par Dr. Léon-Petit (O. Doin, Paris, 1888).—Ensaio Critico sobre o diagnostico Etiologico da Ischuria Prostatica; por A. M. Da Cunha (Nova Goa, 1887).—Pathogénie et Traitement de la Kérato-Conjunctivite phlycténulaire (Ophthalmie des Scrofuleux); par le Dr. V. Augagneur (Imprimerie Vitto et Parnasse, 30, Rue Condé, Lyon, 1888).—Magazines for September: Leisure Hour, Good Words, Sunday at Home, Scribner's Magazine, Boys' Own Paper, Sunday Magazine (Isbister); Girls' Own Paper (Religious Tract Society).—Mind and Matter: a Sermon preached before the British Medical Association; by J. Caird, D.D., L.L.D. (J. Maclehose and Sons, Glasgow, 1888).—Ideation: Synopsis accepted by the Royal Belgian Society, 1887.—A New Philosophy; by J. Barker Smith, Surgeon (Trübner and Co., London), price 2s. 6d).—On Infant Feeding and the value of preparations of pure Alpine Milk; by Dr. Nachtigal (M. Ridgway, 169, Piccadilly, London, 1888).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

- BEAUMONT, W. M.**, M.R.C.S., has been appointed Surgeon to the Bath Eye Infirmary, vice F. Mason, deceased.
- BLACKRE, A. B.**, M.B., B.S. Durh., L.R.C.P., M.R.C.S., L.S.A., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.
- BRIGHT, E. F.**, M.D. Lond., M.R.C.S., has been appointed Senior Assistant Medical Superintendent of the Infirmary of the Parish of St. Pancras, London.
- BRISTOWE, H. C.**, L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Departments for Diseases of the Skin at St. Thomas's Hospital.
- BROOK, W. F.**, M.R.C.S., L.S.A., has been appointed House Surgeon to St. Thomas's Hospital.
- CALVERT, J. T.**, M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.
- COOK, S. B.**, L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.
- COOKE, C. W.**, L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.
- ECCLES, C. H.**, L.R.C.P., M.R.C.S., has been appointed Non-Resident House Physician to St. Thomas's Hospital.
- EDWARDS, J. ELLIS**, M.R.C.S., L.S.A., has been appointed Medical and Vaccination Officer for the District of Conwil, Carmarthen.
- EDWARDS, PERCY**, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Resident Medical Officer of the Hospital at Lodge Moor, Sheffield.
- FAWSETT, F.**, L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

- FOTHERGILL, T. P.**, M.D. Edin., M.R.C.S., M.B., has been appointed Medical Officer of the Bedale Southern District, Bedale Union.
- GARRETT, JOHN HY.**, M.D., B.S., L.S. Sc., Univ. Durh., has been appointed Resident Medical Officer to the City of Liverpool Southern Hospital for Infectious Diseases.
- GROOM, HARRY, B.A.**, M.B. Camb., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Wisbech Urban Sanitary District, vice Mason, resigned.
- HARRISON, C.**, M.R.C.S., L.S.A., has been appointed Medical Officer of the Keynsham Districts, and the Workhouse, of Keynsham Union.
- HOBHOUSE, E.**, M.A., M.B., B.S. Oxon., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.
- HORSFALL, THOMAS**, M.R.C.S., L.S.A., has been appointed Medical Officer of the Bedale Northern District, Bedale Union.
- HUGHES, S.**, M.B. Edin., M.R.C.S., L.S.A., has been appointed Resident Medical Officer of the City Hospital, Grafton-street, Liverpool.
- JAMES, C. H.**, L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to St. Thomas's Hospital.
- JONES, V. J. W.**, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Sub-district of St. Clears, Carmarthen Union.
- KEILLER, WILLIAM**, L.R.C.P., L.R.C.S. Ed., L.F. and S.G., has been appointed Assistant Medical Officer to the Edinburgh Provident Dispensary, vice A. A. Matheson, M.D., resigned.
- KER, JAMES, M.A.**, M.B., B.C., D.P.H. (Cantab.), has been appointed Resident Medical Officer to the Swansea General Hospital, vice R. Nelson Jones, resigned.
- KERSHAW, E. E.**, M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Middlesex Hospital.
- LEWIS, B. A.**, L.R.C.P. Lond., has been appointed Medical Officer of the Sub-district of Mydram, Carmarthen Union.
- LIGHT, E. M.**, M.A., M.B., B.C. Cantab., L.R.C.P., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.
- LIVING, ROBERT, M.D.**, M.B., M.A. Camb., F.R.C.P. Lond., has been appointed Consulting Physician for Skin Diseases at the Middlesex Hospital.
- LUARD, H. B.**, M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.
- MACRITCHIE, D.**, M.B. Aberd. and C.M., L.R.C.S., L.M. Edin., has been appointed Medical Officer for the Huntingdon District, Huntingdon Union.
- MARSH, J. H.**, L.R.C.P., L.R.C.S. Edin., L.M., has been appointed Medical Officer of the Workhouse, Bolton Union.
- MATHESON, A. A.**, M.D., M.R.C.P. Ed., has been appointed Medical Officer to the Edinburgh Provident Dispensary.
- MCCREERY, J. O.**, L.R.C.S.I., L.M., has been appointed Medical Officer of the Debenham District of the Bosmere and Clayton Union.
- ORD, W. W.**, M.A., M.B., B.Ch. Oxon., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.
- PARTRIDGE, SAMUEL**, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Darlaston, Staffordshire.
- PEARSON, JOSEPH, M.B.** and C.M. Aberd., has been appointed Resident Medical Officer for the Winter-street Hospital, Sheffield.
- RICHARDSON, J. N.**, M.B. Durh., M.R.C.S., has been appointed Medical Officer for the Marsden District, Huddersfield Union, vice McClintock, resigned.
- ROBSON, JAS. M.**, B.A., M.B. Durh., has been appointed Medical Officer of the Tynemouth District, Tynemouth Union.
- SANSOM, H. A.**, L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Departments for Diseases of the Skin at St. Thomas's Hospital.
- SEDDON, H. B.**, L.R.C.P., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.
- SHARP, EDWD.**, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Truro Union District.
- SMITH, J. W. T.**, M.D. Qu. Univ. Irel., has been appointed Physician to the Belfast Royal Hospital.
- WHEELER, T. K.**, M.D. Qu. Univ. Irel., L.M., M.Ch., has been appointed Surgeon to the Belfast Royal Hospital.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

- CENTRAL LONDON THROAT AND EAR HOSPITAL**, Gray's-inn-road.—Three Clinical Assistants.
- COUNTY ASYLUM**, Shrewsbury.—Junior Assistant Medical Officer. Salary £100 per annum, and £8 in lieu of beer, with board, lodging, and washing.
- COURT FORESTERS, AND SOCIETIES**, 18, York-street, West Cowes, Isle of Wight.—Medical practitioners to attend sick members of the above Societies.
- FULHAM UNION**.—Assistant Medical Superintendent. Salary £100 per annum, with board, furnished apartments, attendance, and washing at the Infirmary.
- GREAT NORTHERN CENTRAL HOSPITAL**, Holloway-road, N.—House Physician. Salary £50 per annum, with board and lodgings in the Hospital. Physician to Out-patients.
- NEWCASTLE-ON-TYNE DISPENSARY**.—Visiting Medical Assistant. Salary £120 per annum.
- NORTH SHIELDS AND TYNEMOUTH DISPENSARY**.—House Surgeon and Dispenser. Salary £180 per annum, with a furnished house, gas, coals, &c.
- NORWICH FRIENDLY SOCIETIES' MEDICAL INSTITUTE**.—Resident Medical Officer. Salary £20 per annum, to increase £10 per annum, for three years. Accouchement fee extra, 10s. 6d. each case (paid by patient).
- NOTTINGHAM FRIENDLY SOCIETIES' INSTITUTION**.—Resident Medical Officer. Salary £20 per annum, with residence; coal, gas, and rates and taxes (except income tax) will be paid by the Institution.

PARISH OF LAMBETH.—Assistant Medical Officer and Dispenser. Salary £125 per annum, with board, apartments, and washing. No alcoholic liquor allowed, but in lieu thereof an additional payment of £3 per year will be made.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Resident Medical Officer. Salary £70 per annum, with board, residence, and laundry.

ROYAL INFIRMARY, Hull.—House Surgeon. Salary 100 guineas per annum, with board and furnished apartments.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon. Salary £60 per annum, with board and lodging.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-st., Cavendish-square.—Resident Medical Officer. Salary £105 per annum, with furnished apartments, attendance, coals, and gas.

WESTMINSTER GENERAL DISPENSARY, 9, Gerard-street, Soho.—House Surgeon. Salary £100 per annum, with apartments; no board.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Assistant Physician. Administrator of Anesthetics.

Births, Marriages, and Deaths.

BIRTHS.

BUSH.—On the 31st ult., at Lansdown-place, Clifton, the wife of J. Paul Bush, M.R.C.S., of a daughter.

DREW.—On the 1st inst., at Saville House, Buntingford, Hertfordshire, the wife of J. Bowerman Drew, L.R.C.P.S. and L.M. Edin., of a son.

GREENHILL.—On the 6th inst., at Warwick House, Stoke Newington, the wife of Edward Fowler Greenhill, M.R.C.S., L.R.C.P., of Russell-street, Calcutta, of a daughter.

LANG.—On the 3rd inst., at Corowa, New South Wales, the wife of W. H. Lang, M.D., of a son.

MAGNIAGH.—On the 2nd inst., at St. Leonards-on-Sea, the wife of T. R. Foster Magniagh, M.D., of twin daughters, one stillborn.

REYNOLDS.—On the 29th ult., at Stamford-hill, N., the wife of W. Percy Reynolds, L.R.C.P. Lond., M.R.C.S., of a daughter.

ROPER.—On the 26th ult., at Shepperton-on-Thames, the wife of Edwin Roper, F.R.C.S., of a daughter.

MARRIAGES.

DANCY—BINNEY.—On the 30th ult., at Christ Church, Lee, Kent, Horace M. Dancy, L.R.C.P., of Southwell, Notts, to Ada Jane, only daughter of the late John Septimus Binney.

EWART—MULLER.—On the 1st inst., at St. Mary's, Swilland, Suffolk, by the Rev. J. D. Brown, Rector of Witneham, assisted by the Rev. J. Wickham, Rector of Swilland, Charles Ewart, M.D., L.R.C.P., M.R.C.S. Eng., of 58, Queen's-gate-terrace, South Kensington, S.W., to Maude Muller, daughter of Wm. Muller, Esq., of 17, Prince's-square, W.

MOYFORD—YEEND.—On the 29th ult., at the Parish Church, Upton-on-Severn, by the Rev. Canon Lawson, M.A., assisted by the Rev. F. H. Reddick, M.A., James Moyford, M.R.C.S., L.R.C.P., Upton-on-Severn, to Adeline Marion, only surviving child of W. G. Yeend and granddaughter of Richard Guilding, Capital and Counties Bank, Upton-on-Severn.

RAKE—SHANNON.—On the 30th ult., at B-shrook, Ireland, by special licence, Herbert Vaughan, L.S.A. and M.R.C.S. Eng., fourth son of Bevon Rake, L.S.A. and M.R.C.S. Eng., of Fordingbridge, Hants, to Louisa, youngest daughter of Thomas Shannon, of Newry, Ireland.

READ—LAWFORD.—On the 31st ult., at Wandsworth, by the Rev. W. G. Tarrant, B.A., Mahyn Road, M.D. Cantab., of 63, Battersea Rise, to Isabel Margaret, daughter of George Lawford, Esq., of Sherbrooke Lodge, Nightingale-lane, Balham.

REEVES—SMITH.—On the 5th inst., at Christ Church, Turnham-green, John Kingham Reeves, B.A., M.R.C.S., L.R.C.P., eldest son of the late John Kingham Reeves, of West Hendred, to Eleanor Charlotte, youngest daughter of the late Jas. Fletcher Smith, of Gunnersbury.

RUMBOLD—CROOK.—On the 4th inst., at St. Bartholomew's-the-less within the Hospital of St. Bartholomew, by the Rev. F. H. Beaven, Vicar of St. Paul's, Burton-on-Trent, assisted by the Rev. W. Ostle, Vicar of the Parish and Hospital, and the Rev. H. Tanner King, of St. Thomas's, Winchester, cousin of the bridegroom, Charles Frederic Rumbold, M.D., B.S., of Lowbourne House, Melksham, to Edith, second daughter of William Henry Cross, of St. Bartholomew's Hospital and of the Inner Temple, Barrister-at-Law.

SNELL—FLETCHER.—On the 2nd ult., at All Saints' Church, Scarborough, Gavin Stiel, M.B., C.M. Edin., of Elm-street, Clapham-common, to Barbara Mary, youngest daughter of William Fletcher, Stamford Villa, New Parks-crescent, Scarborough.

TRAVELL—REDFERN.—On the 6th inst., at St. Matthew's, Nottingham, by the Rev. T. B. Ferris, M.A., John William Travell, M.B., to Annie, only daughter of H. Redfern, The Park, Nottingham.

DEATHS.

BELL.—On the 11th inst., at the residence of his brother-in-law, Tregunter-road, South Kensington, the Rev. David Bell, M.D. Glas., for thirty-three years Vicar of Goole, Yorkshire, aged 80.

FURNIVALL.—On the 5th inst., at 5, Victoria Terrace, Bridlington Quay, suddenly, Charles Henry Furnivall, M.R.C.S., of Lynton House, Springfield Park, Acton, W., aged 46.

SMITH.—On the 30th ult., at Axbridge, Somerset, George Smith, M.R.C.S.E., L.S.A. (No cards).

MASON.—On the 27th ult., at Belmont, Bath, Frederick Mason, M.R.C.S., L.R.C.P., in his 65th year.

ROPER.—On the 26th ult., at Llandudno, North Wales, Thomas Clarke Roper, M.D., in his 71st year.

H.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, September 15th, 1888.

Date.	Barometer reduced to 32° F. (at Sea Level and 32° F.)	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. in Shade.	Min. Temp.	Ratio-fall.	Remarks at 8.30 a.m.
Sept. 7	30.04	N.W.	57	54	101	66	51	.05	Bright
" 8	30.07	N.W.	54	54	99	60	50	.04	Cloudy
" 9	30.21	N.E.	56	52	101	61	47	..	Cloudy
" 10	30.11	S.W.	55	51	89	61	49	..	Foggy
" 11	30.29	W.	53	50	106	67	46	.14	Bright
" 12	30.48	W.	52	50	102	69	46	..	Foggy
" 13	30.51	N.E.	53	51	105	67	49	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

"A SERIOUS QUESTION."

We reproduce the following paragraph from the pages of *Mr. Punch*, who, on occasion, can be serious with unquestionable effect. The suggestion is one which it is most desirable should be taken to heart by the whole community. The question is very serious indeed.

"Is it not within the bounds of probability that to the highly-coloured pictorial advertisements to be seen on almost all the hoardings in London, vividly representing sensational scenes of murder, exhibited as 'the great attractions' of certain dramas, the public may be to a certain extent indebted for the horrible crimes in Whitechapel? We say it most seriously. Imagine the effect of these gigantic pictures of violence and assassination by knife and pistol on the morbid imagination of unbalanced minds. These hideous picture-posters are a blot on our civilisation, and a disgrace to the drama."

Mr. J. Ezley, M.R.C.S.—Antifebrin (acetanilide) is insoluble in cold water, but freely soluble in alcohol. It is therefore generally prescribed with sp. vin. rect., and the rather pungent taste disguised by extract of liquorice. The dose is from two to ten grains.

T. H. F. S.—The questions had better be addressed to a respectable agent.

"AMBULANCES."

To the Editors of THE LANCET.

SIRS,—In an article in this week's LANCET you state that the police ambulance "is available for use under certain conditions in cases of illness, always in the event of accident." My experience has been different from this. Recently I was called in by the police to attend a woman who had fractured her spine by throwing herself out of window. I found her on the bed, and thought she had better remain where she was for the present. Three or four days later, the friends pressed me strongly to sanction her removal to a hospital, and, indeed, this, if possible, was highly desirable. They arranged for a bed, and then, at my suggestion and hearing my statement of the case, applied at the police station for the loan of an ambulance. The official in charge agreed at once, and sent a man down to arrange with me; and it was agreed that all expense should be defrayed. At the last moment, a superior official countermanded the whole affair, and left us only the possibility of a green-grocer's cart to make sure of getting the patient into the hospital. With the help of a plaster jacket, applied the day before, she was at length transferred thither safely, though at how great a risk you know as well as I.

"Southland-yard" may, perhaps, be reached through the medium of THE LANCET, and thus this note may do good.

I am, Sirs, yours faithfully,

Queen's-crescent, N.W., Sept. 1st, 1888. F. R. HUMPHREYS.

THE STUDENTS' NUMBER: CORRECTIONS.

THE name of Dr. A. H. N. Lewers, as Assistant Obstetric Physician to the London Hospital, was inadvertently omitted from the table on p. 488 in our last issue.—In the paragraph headed "Norfolk and Norwich Hospital," p. 496, the order in which the medical and surgical staff was placed, and the statement of fees, require correction as follows:—For the Physician's Practice for three months, £5 5s.; perpetual, £10 10s. Physicians: Dr. Bateman, Dr. Taylor, and Dr. Barton. Surgeons: Mr. Cadge, Mr. Williams, and Dr. Beverley. Assistant Surgeons: Mr. Robinson and Mr. Burton.

L.S.A.—We are not aware, but think it probable, that the same regulations are in vogue in the Islands as govern the practice of foreign medical men in the mother country.

Dr. Courtney Nedwill.—The advertisement enclosed by our correspondent is of a most objectionable character.

Mr. B. Adams Lewis.—Grossmith, 175, Fleet-street, E.C.

"MEDICAL PRACTICE IN AUSTRALIA."

To the Editors of THE LANCET.

SIRS,—The following short *résumé* of a voyage out to the Antipodes by sailing ship, made by myself five years ago, may be of some interest to your correspondent "Poylact."

I left London in November, and in consequence of a south-west gale was detained five days at the Nore. A fortnight elapsed before we got down to the latitude of Madeira, and during the whole of this time the cold was intense. There was no fire in the saloon, so the passengers naturally felt it keenly. The doors and ventilators were kept carefully closed, so in a few days the atmosphere, contaminated by the products of respiration and the combustion of the paraffin lamps, became perfectly stifling, and we were driven out into the bitter cold weather on deck to avoid suffocation. After passing Madeira we had splendid weather until we reached the Cape, when our troubles began again. We were a week among the ice, although in an exceptionally high latitude for it to be met with, and for another month our course took us through such cold stormy weather, as can only be found in low southern latitudes. Strong westerly gales, snow, and rain were constant, and only varied in severity; so here again the absence of heating apparatus in the saloon was acutely felt; and this is an almost constant defect in all sailing ships going to the Antipodes. The food, however, was good throughout.

In contrast with this experience, I may say that I returned by steamer round the Horn; and although the cold on deck was intense, yet in the saloon heated by steam everything was bright and cheerful in the extreme.

As a result of my own experience, I would strongly advise "Poylact" to go by some of the magnificent steamers, such as those of the Orient, P. and O., or Messageries Maritimes companies. The fares are a good deal heavier than by sailing ship, but the comfort is also greater in proportion, and as the track lies through warmer latitudes there is comparatively little cold weather. The only drawback is the excessive heat in summer in the Red Sea. I am, Sirs, your obedient servant,
Sept. 2nd, 1888. VIATOR.

To the Editors of THE LANCET.

SIRS,—The following answers to the questions of "Poylact" in your last issue will be found near the truth.

The most suitable parts of Australia for phthisis are inland. On the eastern side of Australia, all that country between the coast range and the coast is more or less unsuitable. Tasmania enjoys some reputation for this disease or its cure. Of the Australian colonies: In Victoria, the Murray district; in New South Wales the Darling River districts and the Blue mountains are recommended; while in Queensland patients are sent from all parts to Warwick, which is about 150 miles west of Brisbane; and I have heard of improvement in patients sent to Roma, Dalby, and even Charters Towers, which is further north. In Queensland at least it is very important to avoid the coast, and especially so in summer. Board and residence can be had at the townships I have mentioned at moderate rates, but at the stations (cattle or sheep) this is not usual. Voyage by sailing vessel has no advantage over the magnificent steamers now running in fast time to all ports. Saloon fare is about £70. Peninsular and Oriental, Orient, and Messageries lines are the best. The best way to go about settling in Australia is upon arrival to take a billet, and there are plenty to be had, travelling for an insurance company. In this way some months can be spent in learning the ways of the people, and opportunity is afforded of seeing the various towns and districts prior to starting practice.

I enclose my card and address, and shall be happy to answer any further questions your correspondent may put.—Yours faithfully,
Sept. 8th, 1888. AUSTRALIA.

TOUTING FOR PRACTICE.

M.D. complains of a handbill circulated freely among his patients advertising terms of attendance under a provident dispensary arrangement worked by an individual practitioner. Gentlemen should know that they do not escape the charge of acting unprofessionally when they send advertisements to the patients of other medical men by handing their bill "Provident Dispensary."

Mr. G. Hamilton-Gordon.—We would recommend our correspondent to make application to the Medical Officer of the Local Government Board, Whitehall.

"WHAT IS THE CAUSE OF CANCEROUS INFECTIVITY?"

IN connexion with the paper on this subject recently contributed to our columns by Dr. Jas. Braithwaite, its author forwards us a letter from Mr. Richmond R. Allen, L.R.C.P.Ed., of Pietermaritzburg, who states therein as follows:—"I have, owing to the frequency of cancer here, given some little attention to the subject, and I have come to the conclusion that excess of animal food is in some way responsible for the development of cancer; and for the following reasons:—1. In this colony cancer is a very common disease among Europeans, but not among natives. 2. Europeans consume food, mainly meat, three times a day, with little or no vegetables. 3. Sedentary habits, with excess of animal food and consequent excess of phosphates over and above the requirements of nature, is the usual history obtained from persons affected with cancer hue. 4. Natives—who are vegetarians—do not to my knowledge suffer from cancer, although there is a remarkable deficiency of lime salts from water."

A. B.—Skinner's chloroform inhaler will answer the purpose. It is a framework of wire, shaped like a scoop net and covered with flannel; the mixture is dropped on the flannel. Another simple contrivance can be made out of a piece of spongio-piline, twisted into a cone shape and fastened so with strapping; the mixture can be dropped upon a piece of sponge in the cone. The apex of the cone should be left patent.

THE PROTECTION OF THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—I noticed in your issue of Sept. 1st a very sensible letter, suggesting that the Council and Corporations would do much better by occupying themselves somewhat with the practical good of the profession, instead of wasting their time in arguing in a vicious circle about preliminary education. The abuse of medical charity and the provident system will, if allowed to go on unchecked, soon render the medical profession one only to be entered by those with good private means, or those who intend to devote themselves to public appointments. Private practice amongst the upper artisan and lower middle classes is becoming a vanishing point. This is just the class of practice which has supported the majority of medical men. The medical press, like the Council, does not seem inclined to make this a burning question. Pressure must be brought to bear upon public feeling, and on the constituted authorities of the profession, by the combination of general practitioners. I beg to suggest that all medical men who feel the evil of this unfair and degrading competition—all who see their well-to-do patients going to hospitals for advice or operation, all who feel the serious loss entailed by the abuse of clubs and provident institutions—shall band themselves together, and organise themselves into an association (or, if we wish to be in fashion, a league) for the protection of the profession and the regulation of these matters, in conformity with a due regard to real charity and the true interests of the general public.

I am, Sirs, your obedient servant,

Loughboro', Sept. 3rd, 1888.

J. B. PIKE.

* Our correspondent does not clearly indicate the right of the Medical Council and the examining bodies to deal with the questions which he mentions. The Medical Council would certainly soon be reminded that it had certain statutory duties to perform, and must mind its own business. All the same, the influence of the Medical Council has, as a matter of fact, been in the direction of limiting the numbers of the profession by constantly raising the standard of education, and so excluding many. That the medical press is indifferent to the evils caused by excessive numbers and by abuses of medical charity we decidedly deny—at any rate, for ourselves.—ED. L.

UNQUALIFIED ASSISTANTS AND BRANCH PRACTICES.

Rectus asks, "Is a medical man justified in keeping an unqualified assistant at a distance of four miles, provided the medical man visits the place three times a week, or oftener if necessary, and the inhabitants understand the assistant to be *sine* qualification, and still wish his services to be retained?" "Rectus" does well to put the question. The arrangement would be unjustifiable, and would render the principal liable to censure by the Medical Council.

Spartan.—It is not possible to lay down specific fees for every district. Our correspondent will do well to let his charges in this case correspond pretty closely with his usual rate of charge for patients in similar circumstances.

Dr. Groom (Wisbech).—If possible, next week.

TWIN S.

To the Editors of THE LANCET.

SIRS,—On Aug. 12th, I delivered Mrs. T—, aged twenty, a primipara, of twins, boys. Mrs. T— was a twin herself. On inquiring from her mother, I learnt that Mrs. T—'s father's brother's wife had had twins. There is no anterior history of twins so far as I could make out on the woman's side; or, in fact, as the mother very lucidly put it, it was a descent of twins on the male side. I do not know if this idea is new to you; as it was very strange to me, I thought I would trouble you with the fact. I am, Sirs, yours truly,
Sittingbourne, Sept. 3rd, 1888. T. SOMERVILLE SMITH, M.D.

THE ABUSE OF HOSPITALS.

Mr. Kesteven will scarcely expect us to find room for his letter. We cannot concede to him any monopoly as respects the justness of his views on hospital abuse, or on the means by which it is to be remedied. Our views of hospitals are very pronounced and explicit. We regard them as an indispensable boon to the poor, and, as a means of medical education, an inexpressible advantage to the rich. But they are largely abused, and it is our earnest and constant endeavour to reduce these abuses to a minimum in the interest alike of hospitals, of those who might be pauperised by hospital relief, and of the medical profession, which is injured by the indiscriminate admission of unfit cases.

An Enquirer.—After Jan. 1st, 1892, no one can be appointed to a district or districts having a population of 50,000 or more unless holding a diploma in sanitary science or employed during three continuous years in regard to a population of not less than 20,000. Our correspondent would not therefore be eligible for appointment, and unless previously to that date appointed for life, would have to vacate his office at the termination of the time for which he was appointed.

HOSPITAL FOR OUR FALLEN.

To the Editors of THE LANCET.

SIRS,—I much regret the closing of our lock hospitals. I think those who advocated their being closed scarcely realised the sad results. Hundreds of our poor fallen sisters are dying outside for want of proper medical care, and why should not this special form of suffering receive the same attention as any other disease, whatever the origin of it may be? Our homes are now being filled with women incapable of performing their work. Our funds suffer, and the cure of these poor women becomes an additional strain on our penitentiary workers. If some benevolent persons would start some small hospitals like St. Agnes, Margaret-street, it would be a great boon. Each Diocesan Penitentiary ought to have its Hospital, as well as its Refuge, working in connexion with it. I cannot agree with the argument of those who say we encourage sin because, when they leave the hospitals cured, they return again to their bad life. This does not often happen where they receive kind treatment and good influences at work besides, and those who appear hopeless may have received some help which may comfort them in their last hours. May those who have the power and the means have their hearts opened to do something towards helping in this good work, for I am sure they will reap a rich reward—for what work can be more Christ-like than helping our poor fallen sisters?

I am, Sirs, yours faithfully,

Penarth, Sept., 1888.

A PENITENTIARY WORKER.

A HINT.

WE receive now and again complaints of which the following is a sample:—"I, through THE LANCET, answered an advertisement for an assistant, and enclosed my photo, with a request that it might be returned. Not receiving it, I wrote, enclosing a stamp for its return, but have waited in vain. As this is the fourth photo of mine that has been retained, I think I am justified in feeling aggrieved, and would be glad of your help in exposing the wrong done to me." The matter seems trivial enough, but the neglect of common courtesy in the matter referred to on the part of those guilty of it may, it can easily be understood, sometimes be productive of serious inconvenience, and, if occurring frequently to the same individual, involve unnecessary expense. This hint should be amply sufficient to ensure the non-repetition of such a breach of good manners.

Dr. Davison (Buenos Ayres).—Although statements have been made, and reports have been written, condemnatory of sewer systems, we are not aware that any such condemnation can be regarded as in any way authoritative. It is perfectly true that there have been cases where the adoption of a system of sewers has been followed by an increase of preventable disease; but this has been due to faulty sewers and ill-constructed house drains, whereas the reverse is known to have been the general result where the works have been properly carried out. Sewers which admit of soakage from them, of stagnation of contents, and other evils are distinctly a source of danger; but such as are properly constructed and efficiently ventilated are not so, unless, indeed, faults attaching to house drains lead to nuisance in the sewers. House drains are, as a matter of fact, more responsible for the mischief with which sewers are credited than any other part of the water-carriage system; but if constructed on the principles laid down and illustrated in Knight's Annotated Edition of the Model Bye-laws of the Local Government Board, such dangers may be effectually avoided, whilst general improvement as regards healthiness results. As to the pail system, it must be remembered that it in no way avoids the necessity for sewers. In towns and cities the inhabitants receive an average of some fifteen to twenty gallons of water per head per day, and this water, more or less polluted, has to be conveyed away. The pail system only removes from that water the more solid excreta.

M.A. should apply to the British Consul, Berlin.

THE BEAUMONT TEAPOT.

IN our notice of this useful invention in our issue of the 4th ult. we inadvertently omitted to mention the address of the manufacturers. This, at the request of several correspondents, we now give—viz., Messrs. R. and W. Wilson and Sons, 90, Wardour-street, Soho, W. We may take this opportunity to remark that the same distinguishing feature—namely, the movable strainer—is also adapted to the vessel employed in making coffee.

Maoriland.—1. The scope of the Society is confined to London and its vicinity.—2. We know of no other institution of the kind limited to the profession.

OFFICIAL AMENITIES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 1st there is to be found an advertisement for a senior assistant medical officer in a registered hospital for the insane. Now, I should see nothing remarkable about that advertisement if I were not aware that there is already on the staff an assistant medical officer who has been there since the place was opened, and who is referred to in the current annual report as one of the "valuable and specially selected officials" who have given aid in the developing of the institution so far. I do not know the assistant medical officer in question; I have never seen him, and have never directly or indirectly had any communication with him. But this I do know, that, after a severe and prolonged training in a county asylum, he took office under his present superintendent in another asylum, and followed him loyally to the one in which they both are now labouring. Surely the committee does not intend to place a stranger over a tried officer; and surely no man with a grain of hope for fair treatment in the future would lend himself to such a transaction. Though a medical superintendent of many years' standing, I write this with all the feelings of one who once was

AN ASSISTANT MEDICAL OFFICER.

Sept. 5th, 1888.

UNITED HOSPITAL ATHLETICS.

WITH reference to our article on United Hospital Athletics in the issue of Sept. 8th, a correspondent writes to point out that the cup for the rifle competition which takes place yearly in the grounds of the National Rifle Association for the last five years—from 1884 to 1888—has been won by St. Thomas's Hospital, the members of which are naturally proud of their repeated successes.

B. Bromfield.—We do not give medical advice. All the questions put to us can be answered by the usual medical attendant.

A SENSATIONAL PATHOLOGICAL DEMONSTRATION.

To the Editors of THE LANCET.

SIRS,—My pathological feelings received a shock recently, on reading in a daily paper that hæmaturia had occurred from the throat of the late Emperor Frederick. But—O shade of Hunter!—how can the following incident, taken from a recent novel, be explained? Scene: a dissecting-room. Subject of demonstration: the brain of a man the victim of neuralgia. "The operator laid bare the brain. Every eye, bent, strained on it under the bad light, perceived it to have been, as it were, eaten away, consumed by a gnawing. The professor compressed his shaggy brows, and then, with one slice of the scalpel, laid open the globous mass. On the instant arose a cry, a hiss, a panting of bitter loathing, of horrible nausea. As the brain fell apart there crawled across the table, black from its rich battening, an enormous spider!" I pause for a reply, and have ordered a fresh work on zoology.

I am, Sirs, yours truly,

August, 1888.

AMICUS.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Ward Cousins, Southsea; Dr. J. Braithwaite, Leeds; Surgeon-Major Gray, Killiney; Mr. T. P. Pick, London; Mr. Tubbs, London; Dr. Thim, London; Mr. R. Harrison, Liverpool; Dr. Scriven; Mr. Teichelman, Birmingham; Dr. Tooker, Blundellsands; Dr. Hayward, Liverpool; Dr. Easby, Peterborough; Mr. F. R. Conder; Prof. J. Jones, New Orleans; Dr. W. Robertson, Newcastle-on-Tyne; Messrs. Van Houten and Zoon; Dr. Lewers, London; Dr. Cremen, Cork; Messrs. Christy and Co., London; Mr. W. H. Kesteven, London; Dr. Davison, Buenos Ayres; Mr. Cookson, Halifax; Mr. B. Bromfield; Messrs. Berndes and Co., London; Mr. Phillimore, London; Dr. A. B. Judson, New York; Mr. J. de Z. Marshall, Hastings; Messrs. Brown, Gould, and Co., London; Mr. A. J. R. Foulerton, Chatham; Mr. Woolmer, Buenos Ayres; Mr. McBean, Newcastle-on-Tyne; Rev. J. M. Buckley, New York; Mr. Treasure, Cardiff; Dr. Stephenson, Aberdeen; Mr. W. J. Nicholls, St. Ives; Mr. Morton, London; Mr. Parker, Cork; Dr. J. Shaw, Sheerness; Mr. J. C. Balfour, Redbourne; Dr. C. J. Lambkin, Lagos; Dr. Pittock, Margate; Dr. Churton, Leeds; Dr. T. S. Smith, Sittingbourne; Dr. Lowe, Southampton; Dr. D. G. Evans; Dr. Parnewan, Liverpool; Mr. W. I. Addison, Glasgow; Mr. B. Sellers, Rochdale; Mr. Peake, London; Dr. J. E. Squire, London; Dr. Gourley, Hartlepool; Mr. Pike, Loughborough; Dr. Scatliff, Margate; Dr. M'Mordie, Belfast; Mr. G. H. Gordon, London; Mr. Mends, London; Dr. Bell Taylor, Nottingham; Mr. J. H. Drake, Uffculme; Mr. Humphreys, London; Mr. Wilson, Castleton; Mr. Oswald, London; Mr. Logan,

Newcastle; Mr. Hay, Salford; Mr. F. R. Greenwood, Leyton; Dr. J. Phillips, London; Mr. Johnson, Shrewsbury; Lady E. Trevanion, London; Mr. Martin, Glasgow; Mr. Ormond, Bath; Dr. N. E. Davies Sherborne; Mr. Bryden, Yorks; Dr. Wise, Maloja; Dr. F. C. Taylor, Dorking; Mr. Essex; Dr. Downie, Glasgow; Mr. E. C. Bousfield, London; Dr. Langschmidt, Bredaslopp; Mr. N. Mayne, Longford; Axilla; Australia; X. Y. Z.; Diabetes; Rectus; Borough Fever Hospital, Leeds; Alpha, Glasgow; M.D.; Maoriland; A Penitentiary Worker; F. N.; J. D., M.B. &c.; Solicitatio; A. B. P.; An Assistant Medical Officer; M.D., Helmsley; Tropic, Birmingham; A Margate Surgeon; T., London; D. R. A., London; Iago, London; Bradford Infirmary; Z. Y., London; A. P., London; Seafeld, Coventry; Lady Superintendent, Northampton; Chirurgus; Cantab., London; Lit.; Candidate; Quæstor; A Family Doctor.

LETTERS, each with enclosure, are also acknowledged from—Dr. Norman Kerr, London; Mr. Hancock, Cornwall; Mr. Lee, Notts; Messrs. Lee and Martin, Birmingham; Mr. Roberts, Sheffield; Messrs. Child and Co., Leeds; Mr. Oliver; Mr. Macmahone, Cheltenham; Messrs. Jeary and Son, Norwich; Messrs. Warren, Bristol; Messrs. Wright and Co., Romford; Mr. Knowles, Burton-on-Trent; Messrs. Hooper and Co., London; Mr. Brown, Monmouth; Mr. Lee, Leeds; Mr. Bartlett, Romford; Major Peard, Dulwich; Mr. Beckton, London; Mr. Neal, Orkney; Mr. Montford, Bishopsgate; Mr. Taylor, Yorks; Mr. Dent, Southampton; Miss Duncan, London; Mr. Jackson, Workington; Mr. Sharpe, Cotehill; Mr. Brookes, Salop; Mrs. Jeffries, Market Harborough; Mr. Dilworth, Fermoy; Mr. Meredith, Ireland; Mr. Baron, Manchester; Mr. Jackson, Yorks; Mr. Carter, London; Dr. Clarke, Bucks; Mr. Wyatt, Bootle; Mr. Heywood, Manchester; Mr. Parker, Durham; Mr. Smith, Somerset; Dr. Dickson, Edinburgh; Dr. Wise, Walthamstow; Mr. Wormald, Manchester; Mr. McDougall, Torosay; Mr. Winkworth, Brighton; Mr. Griffiths, Lampeter; Mr. Lawford, Balham; Mr. Birch, Worthing; Mr. Waddy, Ireland; Mr. Harding, co. Cork; Mr. Collinson, Durham; Mr. Heffernan, Northampton; Dr. Thomson, Midlothian; Mr. Hornibrook, London; Messrs. Lacy and Johnston, Woolwich; Mr. David, Wales; Dr. Travell, Notts; Medicus, Bolton; Surgeon, Monmouth; Tannock, Greenock; Nurse Norah, London; A. S., London; Medicus, Bradford; Ramagate and St. Lawrence Royal Dispensary; G. T., Bath; Dundee Royal Lunatic Asylum; J. W. P., London; L. M. R., London; Bury Dispensary Hospital; Medicus, Newcastle; O. T., London; Surgeon, Hampton Wick; Chirurgus, London; M. C. U.; A. B. C., London; Immediate Returns, London; Forceps, Stratford; Medicus, London; Portsmouth Royal Hospital; Medicus, Surrey; Infirmary, Bolton; Bleanavon Works; X., Glasgow; T. R., London; Pomphus, London; Lady Superintendent, Sheffield; M.D., London; Forceps, London; Lady Superintendent, Canterbury; G. S., London; G. J. W., Fishguard; A. C. D., London; J. M., London; M.R.C.S., Kent; Boll Hall Mill Co.; D. W. K., Dublin; Delta, London; D. A., Mansfield; M.R.C.S., Fife; M.R.C.S., Acton; Medicus, Blackburn; A. T. D., London; P., Herts; Galen, London; X. Y. Z., London; T. L., London; Bona Fide, London; M.D., King's-cross; Midwife, London; R. C. B., Newcastle; B. W. M., Brighton; Thesis, London; B. D. B., London; C. S. H., London; P. E., London; Notts General Hospital; Omega, Mon.; Doctor, Halifax; Iachin, Bristol; S. H., Birmingham; J. B., Margate; Capricorn, London; Somerset, London; S. T., Birmingham; S. H., London; Aural, London; H. W., Ipswich; A. B., Hawkhurst; Phillips, London.

Luton Times and Bedfordshire Advertiser, Lagos Observer (West Africa), Western Daily Press, Hertfordshire Mercury, Hereford Times, Windsor and Eton Express, Glasgow Herald, Herald and Weekly Free Press, Denbighshire Free Press, Surrey Advertiser, Chat (Landport), Royal Cornwall Gazette, Reading Mercury, Thane Chronicle, Kent Coast Times, Bradford Observer, Southern Echo, Mid-Sussex Times, Newcastle Daily Journal, The Zephyrus, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 18.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, September 19.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, September 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations Friday, 1.30 P.M.
CHARGING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, September 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 22.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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An Investigation

INTO THE

PATHOLOGY OF PERNICIOUS ANÆMIA.

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INTRODUCTORY.

I PROPOSE in this paper to record the results of a series of investigations which I have recently made with the object of throwing light on the pathology of the disease variously termed *progressive pernicious* or *pernicious* anæmia. My investigations have been of a twofold nature—partly clinical, partly pathological. It is with the latter that I propose here specially to deal. My observations have had reference to the question how far we must believe in the existence of this form of anæmia as a special disease.

What is *pernicious* anæmia? Is it a special disease with features clinical and pathological peculiar to itself, or does it differ from other forms of anæmia merely in its intensity? Are we to hold with the view at first expressed by Quinke, and since held by many, that the disease may originate in many ways and be the product of very various morbid processes—loss of blood, continuous discharges, insufficient nourishment all being possible factors in its development provided they are of sufficient intensity and duration? Or are we to hold with the later view of the same observer, that while pernicious anæmia may have a *clinical*, it has no *pathological*, existence; that while forms of the disease found associated with definite organic disease, such as malignant disease, are to be regarded as *secondary*, others in which no such definite morbid changes can be found may be regarded as *primary*, while a third series are to be considered as *intermediate* in their nature? The difficulty attending the answer to be given to these questions may be gauged by the fact that within the past few weeks so able an authority as Dr. Bristowe¹ has confessed it to be "impossible at the present time to make any trustworthy distinction between the chlorosis of young girls and pernicious anæmia, except such as depend on the age and sex of the patient and on the effects of treatment," even while, at the same time, he expresses his belief in the existence of some fundamental difference between the two conditions.

It has been the object of my investigations to learn, with special reference to pernicious anæmia, whether any, and if so what, fundamental difference exists between this and other recognised forms of anæmia. Much of the confusion which still prevails regarding the title of this form of anæmia to be considered even *clinically* a special disease is undoubtedly to be ascribed to the vague use of the terms *progressive* and *pernicious* unfortunately applied to the disease in the first instance by Biermer. These terms have been constantly used by observers to designate conditions of anæmia having little or nothing in common. The assumption has been that the term *pernicious* is applicable to every condition of anæmia sufficiently profound, irrespective of its true nature, especially if it terminates fatally. *Pathologically*, much of the obscurity regarding the true nature of pernicious anæmia as distinguished from other forms of anæmia is similarly to be ascribed to the vague use of the term *anæmia* itself. The term is constantly used as almost synonymous with *pallor*, and is hence used to designate the most diverse conditions of the blood, the assumption being that the changes in the blood on which pallor may depend are the same in kind in all cases, however much they may vary in their degree in individual cases. Both these assumptions I find to be groundless. I have adduced evidence elsewhere² to show that clinically there is good reason for believing in the existence of a form of anæmia essentially *pernicious* in its nature distinguishable even during life from the other forms of anæmia. In the present paper I propose to complete the consideration of the subject by showing what the pathological features are which determine this difference, and in what respect it is to be regarded as also a pathological entity.

PATHOLOGICAL.

My pathological observations have been of a twofold nature—partly *anatomical*, partly *experimental*. I have sought to learn, in the first instance, what *anatomical* changes are to be constantly found associated with this form of anæmia; and then I have endeavoured in various ways to produce similar changes in animals experimentally. The results of these observations may therefore be conveniently discussed under two headings—*anatomical* and *experimental*. I shall first describe the various *anatomical* changes found in this disease, and discuss their relative importance; and then I shall show what light I have been able to throw on the true nature of this disease by means of experiments.

I. ANATOMICAL.

The anatomical changes found in this disease are as various as they are numerous. A consideration of them at first sight seems little fitted to throw much light on the true pathology of the disease. I find that they may with convenience be divided into three groups:—1. Those *occasionally* found associated with the clinical features of pernicious anæmia, including especially malignant disease and various gastro-intestinal lesions. 2. Those which may with justice be regarded as the result of the anæmia, including especially pallor and fatty degeneration in various organs of the body. 3. Those found in the blood itself or in those organs concerned either in blood formation or blood destruction.

1. *Various anatomical changes occasionally found associated with pernicious anæmia.*—The possibility of all the features which we have come to regard as more or less characteristic of pernicious anæmia being in certain cases apparently the result of well-marked organic disease, such as cancer, is a fact which has to be borne in mind and explained at the very outset of any inquiry into the pathology of this disease. It is this association, of the existence of which there cannot be a doubt, which is relied upon by those who hold that pernicious anæmia is not a special disease, but is merely a profound form of ordinary anæmia differing from others in its intensity. It is largely from this association that pernicious anæmia is often regarded merely as a symptomatic condition.

Malignant disease.—Of the existence of the clinical features of pernicious anæmia in association with malignant disease, especially cancer, there cannot be a doubt. At the same time, the frequency of this association has been probably over-estimated, mainly owing to the indiscriminate use of the term *pernicious* to designate any anæmia sufficiently profound, irrespective of its true nature. Apart from these more doubtful cases, however, a sufficient number of cases have been recorded by competent observers to prove conclusively that all the characteristic features of pernicious anæmia may be presented by patients the subjects of malignant disease. The question to determine is: What is the nature of this connexion? Is it accidental or essential? That malignant disease is not usually characterised by the clinical features of this variety of anæmia is certain. Hence, when the two are found in association, the question arises: Have the features, or association of features, which constitute clinically the disease we term pernicious anæmia been stamped on those proper to malignant disease without further anatomical morbid change than that constituted by the malignant disease itself? Or have anatomical changes special to, and characteristic of, pernicious anæmia been added to those already and independently existing? It is interesting to note that most of the cases of the nature recorded have been cases of malignant disease of the stomach. Nevertheless, there is no doubt that cases of malignant disease of this organ are constantly met with, running their course to the fatal termination without presenting any changes in the blood or any clinical features other than those which usually mark ordinary wasting diseases. It is equally without doubt that all the features of pernicious anæmia in their fullest intensity may be presented by cases in which no definite organic changes, whether of malignant or of other nature, are to be found. Hence the conclusion seems justifiable that when the two conditions—malignant disease and pernicious anæmia—are found associated, the connexion is to be regarded, if not precisely as accidental, at least as not essential; that the malignant disease does not constitute the essential anatomical change underlying the pernicious anæmia associated with it, however much in certain situations it may favour the development of those changes. It is only on such a

¹ Brit. Med. Jour., vol. I 1888, p. 1149.² "Is Pernicious Anæmia a Special Disease?" Practitioner, Aug. 1888. No. 3395.

view of the nature of the connexion between malignant disease and pernicious anæmia that we can explain why malignant disease, especially in the stomach, is not more usually found associated with the features of pernicious anæmia, and it is only on this view that such a case as that recorded by Eisenlohr³ can be explained, in which the ordinary symptoms of malignant disease of the stomach had existed for over two years and then suddenly took on those of pernicious anæmia. The natural view to take of such a case is that the malignant disease already existing there had more or less suddenly been superadded those anatomical changes characteristic of pernicious anæmia. Such is the conclusion we must arrive at, unless, with Dr. Coupland,⁴ we are prepared to recognise two forms of pernicious anæmia: one *symptomatic*, exemplified by cases such as the above, in which definite organic disease is found; the other *idiopathic*, exemplified by cases in which all such changes are absent. Even if we accept such a classification, the difficulty still remains to discover what the anatomical changes are which underlie the idiopathic variety of the disease; for, however obscure they may be, such changes must exist to account for a condition of the blood such as that met with in pernicious anæmia. It is more reasonable to suppose that the same anatomical changes underlie the features of pernicious anæmia in all cases alike, than to suppose that in one case the anæmia is the result of the malignant disease, while in another the same features, perhaps intensified, are to be found altogether apart from recognisable anatomical changes of any sort.

Gastro-intestinal lesions.—In the case of another group of anatomical changes it is not so easy to decide what the precise connexion between them and the anæmia is. I refer to the very various gastro-intestinal lesions so frequently met with in patients dying of this disease. The frequency with which gastro-intestinal changes have been found appears at first sight to lend colour to the view held by many—that pernicious anæmia cannot be regarded as a special disease, but is merely the outcome of a disturbance of nutrition such as is met with in no other disease. In addition to cancer of the stomach, to which reference has already been made, these gastro-intestinal changes include atrophy of the mucous membrane of the stomach, and especially of the gastric glands; cirrhotic contraction of the stomach, with disappearance of the gastric glands; interstitial inflammation of the gastric mucosa, with partial or total atrophy of the gastric glands; ulcers of the stomach and duodenum; duodenitis; degenerative changes in the sympathetic ganglia of the abdomen; and similar changes in the nerves of Meissner's and Auerbach's plexuses in the intestinal wall; and lastly, in this connexion, the presence of intestinal worms. Here, as in the case of malignant disease, the question to determine is how far these lesions are to be regarded as the essential morbid anatomical changes underlying the anæmia sometimes associated with them. In the first place, it is to be remembered that it is only in a comparatively few cases that even these changes have been found. As the essential morbid change, therefore, in this disease, they cannot possibly be regarded. What importance is to be attached to them in those cases in which they are present? To obtain an answer to this question, it is necessary to consider the various changes individually.

It will be noted how frequently changes in the gastric mucosa—thickening, interstitial inflammation, and atrophy of the gastric glands—have been described. To this point particular attention has been drawn by Dr. Fenwick.⁵ What significance is to be attached especially to this condition of atrophy of the gastric glands? The answer to the question is, I think, best supplied by the observations of Dr. Fenwick himself. He states that "he was struck with the frequency with which atrophy of the gastric glands presented itself in those dying of cancer." Thus, of fifteen cases of cancer of the breast, in only four were no anatomical changes to be found in the gastric mucosa. Some degree of atrophy was found in every case of cancer of the stomach. If atrophy of the gastric glands is to be regarded as the essential anatomical change in pernicious anæmia, it would seem reasonable to expect that pernicious anæmia should be found frequently associated with cancer of the breast, and almost invariably with cancer of the stomach. Curiously enough, however, I have not found a

single case recorded in which cancer of the breast has presented the features of pernicious anæmia; and as regards cancer of the stomach, it is the exception and not the rule for it to be marked by the clinical features characteristic of pernicious anæmia. In this case, therefore, as in the case of malignant disease, I am compelled to conclude that, however important atrophy of the gastric glands and other changes in the gastric mucosa may be as etiological factors—and what part they probably play we shall afterwards have occasion to refer to,—they cannot be regarded as the essential anatomical lesions underlying this form of anæmia, even in those cases in which they are found present.

The same holds true of the *degenerative changes in the nervous apparatus* of the intestinal wall and of the abdomen described, amongst others, by Sasaki⁶ and Banti,⁷ and regarded by these observers as independent lesions and as the cause of the anæmia. The view which naturally suggests itself, that these changes may possibly be as much the result as the cause of the anæmia, is fully supported by the observations of Scheimpflug⁸ made with special reference to these observations of Sasaki. In opposition to Sasaki, Scheimpflug finds that in a large number of cases the nervous structures of the intestinal wall present changes which may be regarded as the result of inflammatory, degenerative, or other pathological processes. He made a number of observations on the appearances presented by the plexuses of Auerbach and Meissner in various conditions. The result was to show that in many various conditions these plexuses were to be found more or less fattily degenerated. As regards the general frequency of pathological changes in the nervous structures of the intestinal wall, he finds that such changes are by no means uncommon, and that not only in wasting diseases, but also in certain acute infectious diseases, changes in the nervous apparatus of the intestinal wall—cloudiness, swelling, atrophy, fatty degeneration, &c.—are by no means unfrequent in their occurrence. In the face of these observations, I think it is impossible for us to agree with Sasaki in regarding these degenerative changes as absolutely independent lesions, and as the essential morbid anatomical condition underlying the disease.

The only other gastro-intestinal condition I shall notice at present is the *presence of intestinal worms*, the connexion between which and anæmia, similar in its nature to pernicious anæmia, has recently excited much interest and attention both in this country and on the Continent. The anæmia of the workers in the St. Gothard Tunnel presented apparently all the features of true pernicious anæmia, and was found to be due to the presence of the *Anchylostoma duodenale*, sometimes in large numbers, in the intestinal tract; it usually disappeared rapidly on their removal. More recently a number of cases have been recorded by Reyher and Runeberg, in which the connexion between anæmia of this kind and the presence of *Bothriocephalus latus* has been apparently equally close and equally marked. In neither case has the nature of the relation between the condition of anæmia and the presence of the worms been altogether satisfactorily explained. In the anæmia associated with the *Anchylostoma duodenale* the condition has been ascribed, probably in great part with some truth, to the loss of blood occasioned by the presence of the parasite. This explanation cannot, however, apply to all cases. On such a view, we are unable to explain why in certain cases recorded⁹ the anæmia was by no means proportionate to the number of worms present, and why in others it is almost absent altogether, when large numbers of the eggs of *Anchylostoma* are to be found in the stools.¹⁰ Hence, the rôle played by the worms in producing the anæmia is by no means so simple a one as the above view would indicate. As Sahli clearly shows, the degree of anæmia is certainly not dependent solely on the number of worms present; nor yet on the disturbances in digestion occasioned by their presence, since in the first instance digestive disturbances may be entirely absent. In the case of the *Bothriocephalus latus*, it is not even pretended that the anæmia is occasioned by any loss of blood. Some pathological factor other than the presence of worms must be here at work. Runeberg's observations¹¹ clearly show that not only may worms be present sometimes in considerable number, unassociated with any of the features of pernicious anæmia; but that—and this fact is still more im-

³ Deutsch. Archiv f. klin. Med., Bd. xx., 1877, p. 499.

⁴ Gulstonian Lectures, THE LANCET, vol. i. 1881, p. 571.

⁵ THE LANCET, vol. ii. 1877, pp. 1, 59, 77.

⁶ Virch. Archiv, Bd. xcvi., p. 287.

⁷ Jahresber. u. d. ges. Med., Bd. ii., 1881, p. 230.

⁸ Zeitschrift f. klin. Med., Bd. ix., 1885, p. 58.

⁹ Sahli: Deutsch. Archiv f. klin. Med., Bd. xxxii., 1883, p. 422.

¹⁰ Ibid., p. 423.

¹¹ Deutsch. Archiv f. klin. Med., 1885.

portant—even in Finland, where this parasite abounds, cases of pernicious anæmia are met with in patients not infested by the parasite, and that these cases prove especially intractable. This observation agrees with our experience of the disease in this country, where of its constant occurrence, independent altogether of the presence of worms, there cannot be a doubt.

The conclusion is therefore forced upon us that none of the conditions just considered, whether malignant disease or other gastro-intestinal lesions, can be regarded as the essential anatomical change even in the few cases in which they are present, or as fitted in any way to account for the peculiar features of this as distinguished from other forms of anæmia. With regard to them all, the same statement may be made—viz., that in all of them it is necessary to assume that there have been superadded certain anatomical changes essential to pernicious anæmia, and on which the features of pernicious anæmia depend. This conclusion is based chiefly on two considerations: (1) that similar anatomical changes, sometimes even more marked, are constantly to be met with in cases presenting none of the features of pernicious anæmia; and (2) that cases of pernicious anæmia are constantly met with in which no such gross anatomical changes are to be found.

2. *Anatomical changes the result of the anæmia.*—These include, in addition to the pallor so generally observed in the various organs of the body, notably the heart and kidneys, the fatty degeneration so frequently met with in varying degree in certain tissues of the body, more especially the heart muscle, the liver, kidneys, and smaller arteries and capillaries. They include also the extravasations met with, especially in the retina and elsewhere. Fatty degeneration of the heart is a condition so often met with that it has been regarded by various observers, amongst others by so great an authority as Dr. Wilks, as the chief pathological lesion to be found in this disease. Pernicious anæmia, according to this view, is made up of an ordinary anæmia intensified by the occurrence of this change in the heart. There is no doubt that more or less marked fatty degeneration of the heart muscle is found in the great majority of cases of pernicious anæmia. Thus Dr. Coupland found that, out of seventy-six cases recorded, in no fewer than sixty-four this condition of the heart was expressly stated to have been present; in six no mention was made of it, and in six the heart was described as healthy. Apart altogether from the likelihood—so strong as, in my opinion, to amount to certainty—that this change in the heart is the result of the anæmia, it is clear that its absence in certain cases of apparently undoubted pernicious anæmia must suffice to exclude any essential importance being attached to it. And this conclusion is further strengthened by the fact that fatty degeneration of the heart is met with in many other conditions of disease, and has been described as occurring to a very marked degree in a case of anæmia the result of metrorrhagia.¹²

The result of our considerations so far, therefore, points to the conclusion that pernicious anæmia cannot, like the anæmia of phthisis or other organic disease, be regarded as symptomatic in the ordinary sense of that term; and that even in cases in which it is found along with definite organic disease, such as malignant disease, or definite morbid anatomical changes, such as atrophy of the gastric glands, all the features of the disease cannot be explained solely by reference to these changes. The essential morbid changes must therefore be sought for in the blood itself, or in those organs concerned either in blood formation or blood destruction.

3. *Changes in the blood.*—These I shall only briefly refer to, as I have already discussed them more in detail elsewhere. They affect both the number and variety of the coloured corpuscles of the blood, as also their richness in hæmoglobin.

As regards the corpuscles, the changes are of a threefold nature: 1. An extraordinary diminution in their number—an oligocythæmia far more marked than that ever met with in ordinary forms of anæmia, sometimes more marked even than that resulting from loss of blood. This marked oligocythæmia is not unfrequently found apart altogether from loss of blood. 2. An extraordinary variation in form and size of the red elements of the blood, aptly described by Quincke under the comprehensive term *poikilocytosis*. These changes are common to all forms of anæmia, provided they are of sufficient intensity. They express merely the degree of anæmia existing, not in any way its nature. I find especially that they are common

to pernicious anæmia and the anæmia the result of loss of blood, and hence they cannot be regarded as in any way peculiar to the blood in pernicious anæmia. 3. The presence of small coloured elements not usually found in the blood—the so-called “microcytes” or “Eichhorst’s corpuscles,” which have from time to time been regarded as pathognomonic of the disease. These small bodies are remarkable in three respects: (a) their small size, their diameter in many cases not exceeding the fourth part of that of a normal red corpuscle; (b) their perfectly spherical form, resembling in this respect minute red corpuscles; and (c) their uniform deep yellow colour, resembling sometimes in this respect droplets of oil rather than elements of the blood. By their uniform spherical shape and depth of colour they are distinguishable, in my opinion, from the various other coloured microcytes so constantly seen in the blood in various conditions of profound anæmia, especially that due to the loss of blood. These present usually the most various shapes—drawn out, pointed, oval, &c.; and their depth of colour varies for the most part according to their size, in no case, however, exceeding that of the surrounding red corpuscles. These “yellow spherical microcytes” are to be found in the blood in the great majority of cases of pernicious anæmia, but not constantly. They vary much in number in different cases, and even in the same case at different times. They may disappear from the blood for a time altogether, to appear later on in greater number perhaps than before. They have been variously regarded as stages in the development of young red corpuscles, or as products of blood destruction. They have been considered as pathognomonic of pernicious anæmia;¹³ and, on the other hand, they have been described by at least two observers¹⁴ as occurring in other forms of anæmia and in some other conditions.¹⁵ Whatever view may be held as to their nature or pathognomonic value, there can be no doubt that the presence of these bodies constitutes a marked feature of the blood in many cases of pernicious anæmia.

Some of the other changes occasionally met with in the blood may here be briefly referred to. The presence of nucleated red corpuscles in the blood cannot be regarded as peculiar to pernicious anæmia. It is only in a few cases¹⁶ that they have been described. In no case were they ever found by Quincke¹⁷ in his many observations. On the other hand, Ehrlich¹⁸ has found them in the blood in all varieties of severe anæmia; and Neumann¹⁹ found them in the blood in a fatal case of anæmia the result of long-standing and profuse metrorrhagia.

As regards the colourless elements of the blood, the great majority of observations agree in showing that there is no absolute increase in the number of white corpuscles in this disease; and there is usually no increase in the number of granular elements and blood-plates in striking contrast, therefore, with the condition of the blood in many forms of wasting disease, such as phthisis, in which there is usually a very considerable increase in the number of these elements.

As regards the richness of the blood in hæmoglobin, one extremely interesting fact is to be noted—viz., that the percentage diminution in hæmoglobin is by no means proportionate to the percentage diminution in the number of corpuscles. Thus, Quincke states, as the result of his numerous observations, that, while the corpuscles were reduced on an average to 10 or 12 per cent. of their original number, the hæmoglobin percentage was only reduced to from 20 to 40 per cent. Some of Dr. Coupland’s observations²⁰ entirely agree with these; and this condition of the blood I have noted in most of the cases which have come under my notice. The condition is precisely the reverse of that found in chlorosis, where the poverty in hæmoglobin is far greater than can be accounted for by any fall in the number of corpuscles. To this condition of the blood I am inclined to attach no little value, both clinically and pathologically. Its full significance will be afterwards seen. In connexion with the relative richness of the blood in hæmoglobin there may be noted, further, (1) the readiness with

¹³ Eichhorst: Centralbl. f. d. med. Wiss., 1876, p. 466.

¹⁴ Litten: Berl. klin. Woch., 1877, No. 1; and Lepine, Union Méd., 1877, No. 114.

¹⁵ Afanassiew: D. Archiv f. klin. Med., Bd. xxxv., 1884, p. 232.

¹⁶ Litten: Berl. klin. Woch., 1880, p. 693.

¹⁷ D. Archiv f. klin. Med., Bd. xxv., p. 577.

¹⁸ Berl. klin. Woch., 1880, p. 405.

¹⁹ Zeitschr. f. klin. Med., Bd. iii., 1881, p. 414.

²⁰ THE LANCET, vol. i. 1881, p. 571.

¹² Neumann: Zeitschrift f. klin. Med., Bd. iii., 1881, p. 414.

which, in this condition, the colouring matter of the corpuscles separates itself from the stroma, and diffuses out or becomes collected toward one part of the corpuscle;²¹ (2) the readiness with which crystals of hæmoglobin may be obtained from the blood;²² and (3) the extraordinary richness of the individual corpuscles in hæmoglobin, even in cases (as in one recently under my notice) in which the diminution in their number is excessive—an observation which I have repeatedly had occasion to make.

These, then, are the anatomical changes found in the blood in this disease. It will be noted that, unless perhaps in degree, scarcely one of them, with the single exception of the relative richness in hæmoglobin, can be regarded as peculiar to pernicious anæmia. As regards the other changes—the oligocythæmia, poikilocytosis, presence of yellow microcytes, the occasional presence of nucleated red corpuscles, the absence of increase in the number of white corpuscles, or of the colourless granular elements of the blood—they are neither absolutely constant nor peculiar. It is only when they all exist in a certain degree and in a certain association that they can be regarded as sufficiently distinctive to constitute the form of anæmia we term *par excellence* pernicious. This point, however, I have discussed in detail elsewhere.

Changes in the Blood-forming and Blood-destroying Organs.

The changes in the blood are nevertheless the most marked and the most constant anatomical changes to be found in cases of pernicious anæmia. One naturally turns, therefore, to the organs concerned either in blood formation or blood destruction, since it must be on some disorder of one or other of these two great processes that the condition of the blood depends. It is in these organs that we must look for the characteristic anatomical changes underlying the disease. These changes I shall first consider *seriatim* in connexion with the various organs in which they are found—viz., the liver, spleen, bone marrow, and lymphatic glands.

Changes in the Bone Marrow.—In the red bone marrow the changes found are both macroscopic and microscopic. The increase in the quantity of the red marrow at the expense of the yellow marrow of the shafts of the long bones, as well as the striking change in its appearance—its peculiar rosy-red or violet-red colour in the great majority of cases,—has long directed attention to this as the possible seat of important changes in this disease. The microscopic changes associated with this change in the appearance of the bone marrow are of a twofold nature—the presence of large numbers of nucleated red corpuscles apparently pointing to some profound disorder of hæmogenesis (blood formation); the presence of large numbers of corpuscle-carrying cells, cells enclosing old red corpuscles or their pigment remains, apparently pointing to some disorder of hæmolysis (blood destruction). When first described, both of these changes were thought to be peculiar to pernicious anæmia. Both have since been shown to be common to pernicious anæmia and other forms of severe anæmia. As regards the former, nucleated red corpuscles are undoubtedly to be found in the bone marrow in large numbers in the great majority of cases of pernicious anæmia. Their presence, however, is neither constant nor peculiar. On the one hand, they have been described as absent altogether in certain cases; or, in others, as only few in number. In a well-marked case of this disease, which I have recently examined, nucleated red corpuscles were exceedingly few in number, and had to be sought for. On the other hand, they have been found in the bone marrow in other conditions, especially in cases of anæmia the result of severe and long-lasting hæmorrhages, as in the case of metrorrhagia described by Neumann.²³ Similar changes in the bone marrow have been produced experimentally in dogs by Litten and Orth,²⁴ and by Bizzozero and Salvioli,²⁵ by repeatedly withdrawing blood from these animals, and thus bringing about a condition of severe anæmia. The presence of nucleated red corpuscles cannot therefore be regarded as a change essentially peculiar to this disease; still less does it serve to explain the characteristic clinical features usually presented by this form of anæmia. The same remark applies to the corpuscle-carrying cells. First regarded as pointing to some excessive destruction of red corpuscles peculiar to the disease, they were soon shown to be common

to this and many other conditions. Thus Osler, in observations on seventy-five cases of disease other than pernicious anæmia, found these bodies so frequently that he could not connect their presence specially with any one disease. They were especially numerous in phthisis, pneumonia, typhoid, and ulcerative endocarditis. My own observations entirely confirm those of Osler. On the one hand, I have found that their presence in any excess is not a constant feature of pernicious anæmia. Thus, in one case in an elderly man I found them extraordinarily numerous, individual cells containing as many as ten or twelve old red corpuscles; while in another in a young man they were exceedingly few in number. On the other hand, I have found them very numerous in many other conditions, especially those of wasting disease occurring in elderly people. In connexion with these changes in the bone marrow, it may be noted, as my observations have shown, that in most cases the nucleated red corpuscles present a high degree of colouration—this appearance therefore indicating a great richness of the corpuscles in hæmoglobin, similar to that already described as occurring in the red corpuscles of the blood. Further, that in most cases, as determined by microchemical reagents, such as sulphide of ammonium, the bone-marrow tissue contains a considerable excess of iron, partly in diffuse, partly in granular form. This excess, however, is not constant, nor is the reaction of iron given by the tissue at all proportionate to the amount of granular pigment or number of effete red corpuscles it sometimes contains.

Changes in the Lymph Glands.—Few or no changes have been described in connexion with the lymphatic glands. The absence of any enlargement or other marked change enabled Biermer in the first instance to distinguish at once this form of anæmia from leucocythæmia, and this observation has been confirmed by all subsequent observers. One case is described by Eichhorst²⁶ in which the mesenteric glands presented some appearance of redness and swelling. Another is described by Weigert²⁷ in which, along with dilatation of the lymphatics of the neck, and of the mesenteric, portal, omental, and retro-peritoneal lymphatics, there was also some swelling of the mesenteric glands, their sinuses being filled with lymph containing many red corpuscles. This case Weigert was inclined to regard as one of supplementary blood formation on the part of the glands; but it stands alone, and any great value cannot therefore be attached to it. In Eichhorst's case the microscopical changes were not noted; and as regards the importance to be attached to the appearance of redness and swelling, it is only necessary to state that precisely similar changes were found by Neumann in the case of anæmia the result of severe metrorrhagia already referred to. In this case, with the exception of a very few nucleated red corpuscles, no changes were found microscopically.

Changes in the Spleen.—As regards the spleen, the changes hitherto described have, as in the case of the bone marrow, been partly macroscopic, partly microscopic. The changes, however, have by no means been so constant or so marked as in the case of the bone marrow. In a certain number of cases the spleen has been found enlarged, the enlargement being even recognisable during life.²⁸ Thus, in a case recorded by Dickinson, it weighed "at a guess" 10 oz. In two cases described by Dr. Finlay it weighed 19½ oz. and 16 oz. In three cases, for the opportunity of examining which I am indebted to the great kindness of my friend, Dr. Byrom Bramwell, the spleen is noted as weighing 19 oz., 11 oz., and 10 oz. respectively; and in another case, on which I made a necropsy recently for Mr. Wherry of Cambridge, the spleen weighed 13 oz. In all these cases, therefore, the enlargement has been very marked. But these only constitute a very small proportion of the cases recorded. In the great majority of cases the spleen is either described as normal, or no mention is made of its condition at all. Thus in a case of Dr. Stephen Mackenzie's,²⁹ it is described as "of natural size"; "not enlarged," as in a case of Dr. Carrington's,³⁰ weighing only 4 oz., as in another case,³¹ or only 3½ oz., as in a case of Dr. Smith's.³² Its other naked-eye characters have equally varied. It has been found soft and diffuent;³³ pale and soft;³⁴ and

²⁶ Die progressive perniciose Anæmie. Leipzig, 1878, p. 288.

²⁷ Virch. Archiv, Bd. lxxix., 1880, p. 387.

²⁸ Bristowe: Brit. Med. Jour., vol. i. 1888, p. 1149.

²⁹ THE LANCET, vol. i. 1878, p. 13. ³⁰ Ibid., vol. i. 1883, p. 113.

³¹ Dr. Finlay: Brit. Med. Jour., vol. ii. 1883, p. 864.

³² THE LANCET, vol. ii. 1881, p. 133.

³³ Dickinson: Brit. Med. Jour., vol. i. 1878, p. 631.

³⁴ Coupland: THE LANCET, 1881, p. 500.

²¹ Mackern and Davy: THE LANCET, vol. i. 1877, p. 642.

²² Copeman: St. Thomas's Hospital Reports, 1887.

²³ Op. cit. ²⁴ Berl. Klin. Woch., 1877, No. 51.

²⁵ Centralbl. f. d. Med. Wiss., 1879.

soft;³⁵ and, on the other hand, firm and red, or firm in consistence and of deep purple colour. In a case which recently came under my notice the spleen weighed 13 oz., was soft and pulpy in consistence, and presented an extremely deep violet or purplish colour, contrasting in this respect very markedly with the pallor presented by all the other organs of the body. Microscopically, no changes at all have been described in the great majority of cases. In a few cases a few nucleated red corpuscles have been found. Micro-chemically, the spleen has been found in certain cases to contain a considerable amount of pigment rich in iron; not, however, in any great excess.³⁶ In seven cases of pernicious anæmia which I have now had the opportunity of examining, the amount of iron contained in the spleen, as determined by micro-chemical examination, has in no case been in excess of that met with in certain other conditions. In none, for example, has it been more marked than in several cases of cirrhotic Bright's disease; and in three cases the spleen gave no micro-chemical reaction of iron at all—less even than that usually met with in normal conditions.

The changes in the bone marrow, lymphatic glands, or spleen—the chief seats of blood formation in the body—are thus neither sufficiently constant nor sufficiently distinctive to be regarded as the essential morbid anatomical changes in this disease. These must, therefore, be sought for in the organs concerned in the other great process of the blood—namely, blood destruction.

(To be continued.)

Clinical Observations

ON CASES OF

PERNICIOUS ANÆMIA, DILATED STOMACH, AND MELANO-SARCOSIS.

By C. W. SUCKLING, M.D. LOND., M.R.C.P.,

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Pernicious anæmia.—G. D—, a man aged thirty-two, a saddler, was admitted into the Queen's Hospital on Feb. 2nd last, complaining of pain in the epigastrium, relieved by food, and of pain in the head, with throbbing at the back of the head. His father died from cancer; his mother died from syncope following an accident. Two brothers and four sisters are alive and well, and no member of his family has suffered from anæmia. The patient had always been steady, and was never ill in his life until his present illness came on. He dates his illness from August, 1886. Just before this time his father died, and he had great grief and anxiety, and was also overworked, having to do his own and his father's work. He states that he gradually became pale, and that with the pallor the pains in the head grew worse. He had had epistaxis, but no vomiting or spitting of blood, and no black stools.

When admitted, it was found that he was well nourished, but intensely anæmic. The stomach was exceedingly irritable, and he was unable to take solid food. He frequently complained of nausea and sinking at the stomach, and often vomited. The heart could not be ascertained to be enlarged. Well-marked hæmic murmurs were heard at the apex, and also at the base in the pulmonary area. A continuous venous hum was heard in the veins at the root of the neck. The pulse was 120, very compressible, and small. An ophthalmoscopic examination revealed copious flame-shaped hæmorrhages in the retina. He was treated with arseniate of soda and dialysed iron by the mouth, and hypodermic injections of liquor arsenicalis. On Feb. 25th he had epistaxis, and vomited once or twice. He was also very restless at night. The blood was found to be pale, and the red corpuscles were very irregular in shape (poikilocytosis) and size. Many of the corpuscles were pear shaped; some had a tail-like process, some were shaped like a ring, and some like a dumb-bell. The white corpuscles were

granular and broken up, and diminished in number. With Gowers' hæmacytometer an average of only ten red corpuscles on two squares could be counted (the normal number being 100). On March 8th the patient suffered from vomiting and epistaxis; the blood corpuscles, estimated with the hæmacytometer, showed an increase in number, there being an average of fourteen in two squares. On March 10th vomiting and epistaxis again occurred, and this was repeated on the 11th, the patient becoming profoundly exhausted and too feeble to speak, though quite conscious. The patient died comatose on the 12th, respiration being very laboured. During the time the patient was under observation there was moderate but pronounced pyrexia. The urine was throughout free from albumen.

Necropsy.—The body was fairly nourished—certainly not emaciated. The skin was quite pale and waxy looking, there being no trace of hypostasis anywhere. The lungs were extremely pale, but otherwise healthy. On opening the pericardium, about three ounces of straw-coloured fluid were seen. Under the visceral layer of the pericardium on the heart's surface there were two or three small hæmorrhages. The heart was extremely pale, and its cavities were empty, only a few drops of blood being obtainable, and that resembled pink-coloured water. The liver was large, pale, and fatty, weighing 74 oz. The spleen weighed 6 oz., and was pale and pliable. The kidneys were quite pale, but otherwise healthy. The stomach was dilated and very anæmic. Dr. Hogben made a microscopical examination of the viscera. The heart muscle was pale and granular, and in parts the transverse striation of the fibres had disappeared. The capillaries of both kidneys were engorged, and the epithelium in the convoluted tubules was cloudy. The supra-renal bodies were healthy. The cancellous portion of the upper extremity of the left femur was examined. Sections were cut after softening in picric acid. There appeared to be an excess of fine connective tissue and fat cells in the cancellous spaces and some extravasated blood. Unfortunately a portion of the stomach was not kept for examination.

There can be no doubt that this case was one of pernicious anæmia. The following features distinguished the case from one of ordinary or symptomatic anæmia. (1) The excessive degree of the anæmia and the absence of any evident cause except mental anxiety, which has often preceded the onset of pernicious anæmia. 2. The inefficiency of remedies which quickly relieve ordinary anæmia. 3. The presence of fever without any localised inflammation. 4. The occurrence of hæmorrhage into the retina. 5. The great diminution in the number of the red corpuscles, and their altered shapes (poikilocytosis). 6. The prominence of gastric disturbance, evidenced by repeated nausea and vomiting, with pain after food. 7. The absence of any emaciation; this was noticeable, the patient being even somewhat *embonpoint*. The occurrence of retinal hæmorrhages in a case of anæmia is always an indication of great diminution in the percentage of red corpuscles, and, though perhaps not always limited to cases of pernicious anæmia, is highly suggestive of this complaint. Dr. Byrom Bramwell recommended the use of arsenic in this disease in 1877, and this drug has undoubtedly succeeded in curing some cases, but it is not a specific, and in the above case entirely failed, though given hypodermically as well as by the mouth, and in a gradually increased dose. Iron also entirely failed. It is very remarkable how cases are met with in groups. At the present time I have under my care at the Queen's Hospital a woman suffering from pernicious anæmia; a child with severe anæmia, there being retinal hæmorrhages and epistaxis, with very great diminution of the red corpuscles; and a man suffering from leucocythæmia. A girl of twelve was admitted a week ago suffering from profound anæmia, who died a day or two after admission. In all these cases iron and arsenic have been thoroughly tried without any evident benefit, and I am now treating the two cases of pernicious anæmia and the case of leucocythæmia with inhalations of oxygen.

Dilated stomach.—B. C—, a puddler aged forty, came to the hospital complaining of pain in the stomach and vomiting. The patient has not been addicted to alcohol, but, owing to the nature of his work and the consequent thirst, he has for years been in the habit of drinking copious quantities of ginger beer and of barley and oatmeal water. About twelve months ago he had pain and a sense of heaviness in his stomach after taking food. He soon began to vomit after his meals. The vomit was sour and liquid,

³⁵ Carrington, op. cit.; Bradbury, Brit. Med. Jour., 1876.
³⁶ Quincke, Deutsch. Archiv f. klin. Med., Bd. xxvii., p. 199; Peters, *ibid.*, Bd. xxxii., p. 182.

and he said that on standing it "frothed like beer." He suffered also from excessive flatulence and constipation. This condition had lasted till the time of his admission. On admission, it was found that the patient was a well-developed man, and that he had not lost much flesh, though he had been vomiting off and on for nine months. On palpation of the stomach a well-marked succussion splash could be elicited with ease, and fluctuation elicited a thrill which could be felt right across the abdomen. The stomach was very large, extending for two inches below the umbilicus. The vomit contained sarcinae. The patient was fed with nutrient enemata, the stomach was washed out daily with a solution of sulphate of soda (a drachm to the pint), and a mixture containing strychnia and sulpho-carbolate of soda was given by the mouth. No vomiting occurred after the commencement of this treatment, and in a few days he was allowed a small quantity of peptonised milk. After a month's stay in the hospital he was discharged quite free from all his previous symptoms, and able to digest solid food. His stomach was still enlarged, but was much smaller than it was on admission. The patient was directed to avoid taking much fluid, and to take food in small quantities and at regular intervals.

Melano-sarcosis.—M. M.—, a woman aged twenty-seven, was admitted into the Queen's Hospital complaining of a swelling on the left eye. There was no family history of disease obtainable. A pigmented growth protruded through the eyelids on the left side and perforated the cornea. The patient complained of severe pain in the left eye and of gradually increasing debility. The sight of the left eye was destroyed. All over the surface of the body numerous pigmented nodules could be seen; they were hard, painless, and varying in size, but most of them were about the size of a split pea. The liver was much enlarged and nodulated, but there was no jaundice or ascites. Cachexia and debility, which had been present at the time of her admission, gradually increased, and numerous fresh nodules appeared in the skin, the patient dying exhausted a few weeks after admission.

Necropsy.—The superficial veins of the thorax and abdomen were large; a great number of small subcutaneous pigmented nodules were found scattered all over the body. On reflecting the scalp, numerous subcutaneous nodules were seen, dark blue in colour. The brain was normal. The left optic nerve was atrophied. The peritoneum was covered with nodules, both pigmented and unpigmented. The mesenteric glands were enlarged. The liver was studded with new growths, and weighed 7 lb. 10 oz. The growths were deeply pigmented in some parts, and in others were of a pale bright yellow colour. Pigmented nodules were seen on the posterior wall of the uterus, in the supra-renal capsules, in the pancreas, and in the glands. The lungs and mediastinal glands were also studded with pigmented nodules. There were numerous subpericardial nodules deeply pigmented, and many subendocardial nodules in both ventricles. The heart was very small, and weighed only 6 oz. Microscopically the growths were found to consist of spindle cells, many of which were pigmented. The growth in the eye originated from the pigment layer of the retina.

The extreme malignancy of the disease in this case was remarkable, the rapid growth of the nodules in the liver and rapid reproduction of the disease in various parts of the body being very noticeable.

METROPOLITAN DOG STATISTICS.—From the Metropolitan dog statistics for August, it appears that the number of persons known to have been bitten by dogs during the month was one hundred and fifty, including four constables. Twenty-four mad or ferocious dogs were killed in the streets by the police, and five by private persons. Four other dogs were certified as suffering from rabies, and ten from epilepsy, whilst the number of stray animals taken to the Dogs' Home at Battersea was no less than twelve hundred and ninety six.

A WINDFALL FOR GLASGOW ROYAL INFIRMARY.—A copy of the will of Mrs. Margaret McAra, who died recently at Georgetown, British Guiana, has just been received in Glasgow, bequeathing a considerable sum to that institution. The testatrix was the widow of a druggist, and under her will the estate is to be realised as soon as possible. After payment of some minor legacies, it is estimated there will be a residue of upwards of £20,000 to be handed over to the infirmary.

ON THE RELATION OF WEIGHT TO HEIGHT AND THE RATE OF GROWTH IN MAN.

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THERE is a large field of medical observation which has been but imperfectly cultivated—namely, the correlation of physique and disease. The height, weight, and chest girth are rarely given in clinical records; yet one might reasonably expect that they would form interesting and important data. Had we the means of scientifically comparing the relation of weight to height, and of drawing conclusions therefrom, such data would be as frequently supplied as is now the daily temperature. The subject is one of special importance during the period of active growth of the body; but physicians rarely make use of the scales and measure because they do not know how to deduce from the data any opinion more trustworthy than what can be formed from general impressions that experience has taught, but which cannot be expressed. The subject enters into the question of life insurance, into the working of the Factory Acts, and in the selection of candidates for the various services; but even in these the questions are left to the judgment and experience of the medical officer, and are not determined by definite rules which would render the results scientifically useful. The age, height, and weight of a patient can with little trouble be recorded; but how are we from such data to determine his relative rank in the standard of physique? Height and weight alone will not suffice; for persons of the same height vary in weight according to age, and persons of the same age vary greatly in stature. How, then, can the relative weight be determined? We know the mean height and weight at the various ages for the whole population and for the different classes of society; but these means or averages do not help us in cases where the persons are above or below the average. Various methods have been proposed to determine the weight which corresponds to each inch of height, but these take no note of the fact that for the same height the weight varies with the age. What is required is a table of standard weight for each inch in height at the respective years of age. This has yet to be compiled, and the question is as to how it can be done. Having frequently felt the want of some reliable means of judging of the physical development of children and of adults, I was led to examine the large series of statistics collected by the Anthropological Committee of the British Association and those of Professor Bowditch for America. The results of this investigation are now offered as a contribution to our knowledge of the laws which govern the physical development of the body, and as a means of bringing the subject practically within the scope of clinical observation. One reason why the subject has hitherto attracted so little attention is that we have no method of readily comparing the results of observation. The ever-varying data of height and weight alone convey no definite idea to the mind, and the purely scientific spirit is, in general, too weak to furnish data without some apparent and immediate practical result.

I. A TYPICAL STANDARD OF HEIGHT AND WEIGHT.

In this investigation the factors which we have to deal with are age, height, weight, and chest girth. The latter in the present paper will be left out. The first step must be to obtain a typical standard. Stature is largely dependent upon race, but in the same race there is always a wide range of height, dependent upon hereditary and social conditions. To obtain a typical standard for a race, it is necessary to include observations of persons under all the varying conditions, and as widely scattered as possible. The disturbing influences are in this way made to neutralise each other. By combining the British statistics with those of the American born, we obtain a more trustworthy standard for investigation than by taking either of them separately. This has been done, and the resulting averages given in Table I. may be at present accepted as the best available standard for the English-speaking races. As the American statistics employed do not extend beyond the eighteenth year, this special inquiry has not been carried further on the lines first employed; and as the observations for the years

below five are too few to yield reliable results, they have been left out.

TABLE I.—Averages of Height and Weight of Boys and Girls of English-speaking Races. Calculated from the Totals of British and American Statistics.

BOYS.					GIRLS.				
Age.	Height in inches.	Gain in height.	Weight in pounds.	Gain in weight.	Age.	Height in inches.	Gain in height.	Weight in pounds.	Gain in weight.
5	41.30	—	40.49	—	5	41.05	—	39.63	—
6	43.88	2.58	44.79	4.30	6	42.90	1.94	42.84	3.21
7	45.86	1.98	49.39	4.60	7	44.38	1.99	47.08	4.24
8	47.41	1.55	54.41	5.02	8	47.00	2.11	52.12	5.04
9	49.69	2.28	59.32	5.41	9	49.05	1.96	56.28	4.16
10	51.76	2.07	66.40	6.58	10	51.19	2.14	62.17	5.89
11	53.47	1.71	71.09	4.60	11	53.26	2.07	68.47	6.30
12	55.05	1.58	76.81	5.72	12	55.77	2.51	77.35	8.88
13	57.06	2.01	83.72	6.91	13	57.96	2.19	87.82	10.47
14	59.60	2.54	93.46	9.74	14	59.87	1.91	97.56	9.74
15	62.27	2.67	104.90	11.44	15	61.01	1.14	105.44	7.88
16	64.66	2.39	120.00	15.10	16	61.67	.66	112.86	6.92
17	66.20	1.54	129.19	9.19	17	62.22	.55	115.21	2.35
18	66.81	.61	134.97	5.78	18	62.19	—	116.43	1.22

II. THE RATE OF GROWTH IN CHILDREN.

Table I. furnishes us with the means of studying an important question which it is necessary to understand before proceeding further in the investigation—namely, the rate of growth up to the eighteenth year. The general results have frequently been given by previous writers; but, from the mode in which they have been presented, the general conception of the subject is still very indefinite, and lacks the precision which may be obtained from further examination.

The table supplies the data, but a more accurate conception is derived by projecting them in graphic form, as has been done in the charts. The curves represent the annual increase in weight in boys and girls. (See Charts I. and II.) A glance shows that, whilst the curves for the sexes are similar in character, they differ in a marked manner in the periods. They show the same maxima and minima, but these occur at different years in each. In both there is great activity during the first two years of life, but the rate falls rapidly and is at a minimum during the third and fourth years. After certain variations it again increases, and attains a second maximum. Here the marked difference of the sexes is seen. The year of most active growth in boys is sixteen, in girls thirteen. Thereafter the curve again falls to a minimum in both at eighteen. Another well-marked feature is the dip which occurs in boys at eleven and in girls at nine, preceded in both by a slight rise. It is worthy of note that the ratio of nine and eleven is the same as thirteen to sixteen—that is, in the proportion of four to five; a fact which may point to a law of difference between the sexes which may have a much wider application.

An important question has to be considered. Are these changes fixed and determined, or do the variations in the activity of growth, with which all are familiar, occur at irregular and uncertain periods? To determine this point the two series of statistics—British and American—were examined separately, and the results are represented in the charts by the faint lines. The close accordance of the curves in their periods and amounts is sufficient to prove that the variations in the activity of growth are determined in time by a fixed law as definite as other steps in the process of development. The two main features of this law are (1) that about the ninth year in girls and the eleventh in boys there is a period of depression in the activity of growth, when they appear not to thrive so well as at other times; and (2) that in the thirteenth year in girls and

CHART I.—Annual Increase in Weight in Boys.

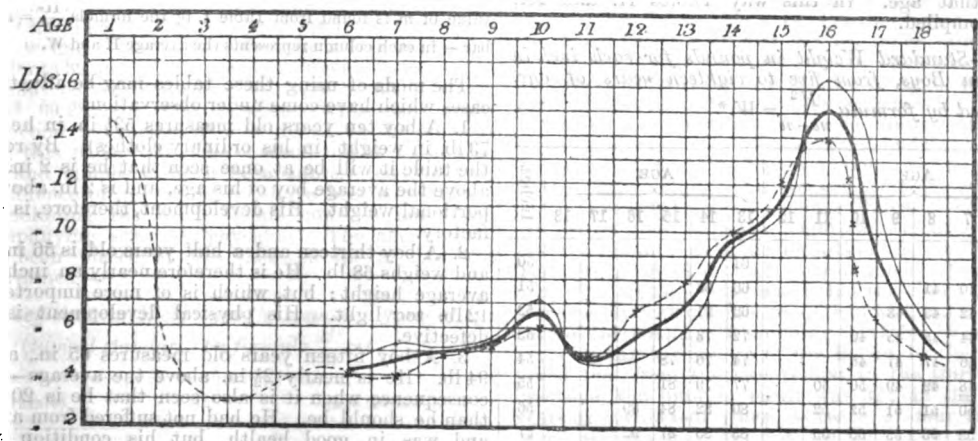
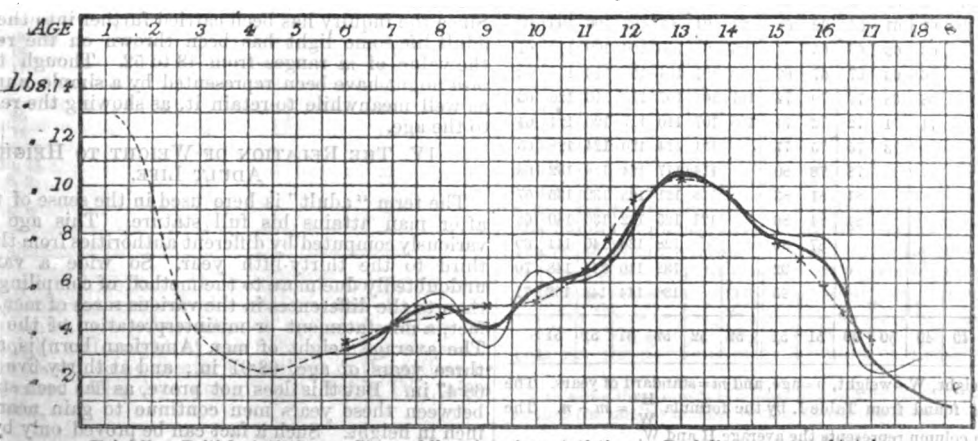


CHART II.—Annual Increase in Weight in Girls.



Faint line, British statistics. Star and line, American statistics. Dark line, average of totals. Before six years, statistics unreliable.

the sixteenth in boys growth is at its maximum, and that thereafter it again falls, more gradually in girls than in boys, to a minimum in the eighteenth and nineteenth years. These facts have important clinical bearings, the consideration of which must be at present deferred; but it may here be remarked that they show the importance of all statistics for these ages being kept for each year, and not in quinquennial or decennial periods, and that boys should not be compared with girls of the same age, but at the ages corresponding with the same phase in the curves.

III. THE RELATION OF WEIGHT TO HEIGHT DURING ADOLESCENCE.

Having obtained a typical standard of height and weight for each year of age up to eighteen, the next question is, Can we deduce therefrom any rule regarding the relation of these factors one to the other? Stature increases steadily with age, but not at a uniform rate. The weight also increases with age, but not uniformly or in arithmetical proportion to the height. The ratio of weight to height—i.e., the weight of each inch—increases with age, so that whilst between five and six years the weight of the inch is 1lb., at eighteen it is 2lb. After various workings and often-repeated trials the analyses of the table yielded the following law:—*Between five and eighteen years, inclusive, the weight varies directly as the height squared, and inversely as the amount by which the age falls short of a certain number that can be readily ascertained.* Let H represent height, W weight, n age, and m the ascertained number. The formula is, $\frac{H^2}{m-n} = W$. As the rate of growth is not uniform, but follows the curve given above, the value of m is not constant. It can, however, be readily found for each year from the typical standard, by the formula $\frac{H^2}{W} = m-n$. By this means we obtain for each year a coefficient whereby we can calculate the typical weight for any height of a person at that age. In this way Tables II. and III. have been compiled.

TABLE II.—Standard Weight in pounds for each inch in Height in Boys, from five to eighteen years of age. Calculated by formula $\frac{H^2}{m-n} = W$.

Inches.	AGE.								AGE.								Inches.
	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
40	37	37							64								50
41	39	39	40	41					66	68							51
42	41	41	42	43	43				69	71							52
43	43	43	44	45	45	46			72	73							53
44	45	45	46	47	47	48			74	76	78						54
45	47	47	48	49	49	50	50		77	79	81						55
46		49	50	51	51	52	52		80	82	84	89					56
47		51	52	53	53	55	55		83	85	87	92					57
48		53	54	56	56	57	57	59	86	88	91	96	99				58
49			57	58	58	60	60	61	89	91	94	99	102	106			59
50			59	61	61	62	62	64	92	94	97	103	106	109	60		60
51				63	63	65	65	66	96	98	100	106	109	113	61		61
52				66	66	67	67	69	98	101	104	109	113	116	62		62
53				68	68	70	70	72	101	104	107	113	116	120	63		63
54				71	71	72	72	74	106	107	110	117	120	124	64		64
55					73	75	75	77		111	114	120	124	128	65		65
56						78	78	80		114	117	124	128	132	66		66
57						81	81	83		118	121	128	132	136	67		67
58						84	84	86		121	125	132	136	140	68		68
59						87	89				128	136	140	144	69		69
60							92					132	140	144	70		70
61							96						136	144	148	71	71
m =	48	49	49	49	50	50	51	51	53	52	52	51	51	51			

* Let H = height, W = weight, n = age, and m = standard of years. The value of m is found from Table I. by the formula $\frac{H^2}{W} = m - n$. The bar — in each column represents the average H and W .

TABLE III.—Standard Weight in pounds for each inch in Height in Girls, from five to eighteen years of age. Calculated by formula $\frac{H^2}{m-n} = W$.

H. in inches.	AGE.								AGE.								H. in inches.
	5	6	7	8	9	10	11		12	13	14	15	16	17	18		
38	33								57								48
39	35	35	35						60								49
40	37	37	37						62								50
41	39	39	39	40					65	68							51
42	41	41	41	42	42				67	71							52
43	43	43	43	44	44	44			70	74	78						53
44	45	45	45	46	46	46			73	76	81	83					54
45	47	47	47	48	48	48			75	79	84	86					55
46		49	49	50	50	50	51		78	82	87	89	92				56
47		51	51	52	52	52	53		81	85	90	92	95	98			57
48			53	54	54	54	56		84	88	93	96	99	102	102		58
49			55	57	57	57	58		87	91	96	99	102	105	105	59	59
50				59	59	59	61		90	94	100	102	105	109	109	60	60
51				62	62	62	63			97	103	106	109	112	112	61	61
52				64	64	64	66			101	106	109	113	116	116	62	62
53					66	66	68			104	110	113	116	120	120	63	63
54					69	69	71			107	113	117	120	124	124	64	64
55						72	73				117	120	124	128	128	65	65
56						74	76				121	124	128	132	132	66	66
57						77	79					128	132	136	136	67	67
58							82						136	140	140	68	68
m =	48	49	50	50	51	52	52		52	51	50	50	50	50	51		

* Let H = height, W = weight, n = age, and m = standard of years. The value of m is found from Table I. by the formula $\frac{H^2}{W} = m - n$. The bar — in each column represents the average H and W .

The mode of using these tables may be illustrated from cases which have come under observation.

1. A boy ten years old measures 53½ in. in height and is 73 lb. in weight (in his ordinary clothes). By reference to the table it will be at once seen that he is 2 in. in height above the average boy of his age, and is 2 lb. above the proportional weight. His development, therefore, is very satisfactory.

2. A boy thirteen and a half years old is 56 in. in height and weighs 68 lb. He is therefore nearly an inch below the average height; but, which is of more importance, he is 12 lb. too light. His physical development is therefore defective.

3. A boy fifteen years old measures 65 in., and weighs 94 lb. He is nearly 2½ in. above the average—a point of consequence when it is also seen that he is 20 lb. lighter than he should be. He had not suffered from any disease, and was in good health, but his condition called for special care.

The above investigation has been left as originally made. Since the inquiry has been carried further into the period of adult life some light has been thrown on the reason why the value of m ranges from 48 to 52. Though the factor $m-n$ might have been represented by a simple number, it is as well meanwhile to retain it, as showing the relationship to the age.

IV. THE RELATION OF WEIGHT TO HEIGHT IN ADULT LIFE.

The term "adult" is here used in the sense of the period after man attains his full stature. This age has been variously computed by different authorities from the twenty-third to the thirty-fifth year. So wide a variation is undoubtedly due more to the method of compiling statistics than to the differences in the various races of men. It is, in fact, a misstatement or misinterpretation of the statistics. The average height of men (American born) is, at twenty-three years of age, 68.01 in., and at thirty-five years it is 68.47 in. But this does not prove, as has been stated, that between these years men continue to gain nearly half an inch in height. Such a fact can be proved only by observa-

tions on the same individuals, and the difference can be accounted for otherwise. Fortunately, in the present investigation, we are not concerned in the exact determination of the point. For all practical purposes the full stature may be regarded as complete at the age of twenty; any increase thereafter is but fractional and rare. After this age, however, gain in weight continues. Unfortunately the statistics that have been collected, though large, have been tabulated in a manner that renders it impossible to ascertain the rate of growth per year in the same manner as during adolescence. Were we, moreover, in possession of data sufficiently extensive for each year, it would still be doubtful whether they would yield trustworthy results, so great are the differences of constitutional tendencies to increase in weight as age advances. By a different method, however, we can obtain the means whereby we may readily judge of the relation of weight to height in individual cases, and compare one set of observations with another. The law that weight is proportional to the height squared, which above was found to hold good regarding the period of active growth, may be assumed to be true also in adult life. We can thereby, leaving out of consideration at present the influence of age, obtain a scale of physique by which we can judge of the character of the build of any person, and compare him with others differing from him in height. By the

formula $\frac{H^2}{W} = C$, or by proportion $W : H :: H : C$, we get a number which represents the relation of weight to height, whatever the stature may be. The method generally employed of representing this relation is by dividing the weight by the height, thus getting the value in pounds of each inch. This ratio, however, steadily increases with the height, so that for 66 in. we have a different ratio from that of 69 in.; the one may be 2.06, the other 2.15. But the mind cannot at a glance tell from these numbers whether or not the shorter person is of equally good weight proportional to his height as the taller man. When, however, by the method proposed it is found that both have the same coefficient of weight—viz., 32,—it is at once evident that they are equally well favoured in weight. Again, two men are each 69 in. in height, but the one is 148 lb. and the other 168 lb. in weight. Here the difference is represented by the coefficients 32 and 28. In recording the above cases, the physique may be represented respectively by 66.32, 69.32, 69.32, and 69.28, the first number giving the height and the second the coefficient of weight. In the previous portion of this paper the same method might have been followed, and simple C have been substituted for $m-n$, but the influence of age would not have been so well indicated. Including the earlier years now we may form the accompanying scale of physique. The age equivalent has been placed at the side, so far as has yet been determined:—

Table of Coefficients of Weight for the respective years of age (typical standard) by formula $\frac{H^2}{W} = C$.

Age (Male).	C.	Age (Female).
—	28	—
—	29	—
—	30	—
Non-labouring 20-30	31	—
Labouring	32	—
18	33	17, 18
17	34	16
16	35	15
—	36	14
15	37	13
14	38	12
12, 18	39	11
10, 11	40	10
8, 9	41	9
7	42	8, 9, 10
5, 6	43	5, 6, 7
—	44	—

By this method we have the means of comparing more accurately different series of observations, and of ascertaining facts which are otherwise not apparent. Thus the average height and weight of the non-labouring classes of society are known to be greater than those of the artisan or labouring class. The data are given in Table IV., taken from Roberts.

TABLE IV.—Showing the Mean Height and Weight and Coefficient of Weight for Males of the Professional or Non-labouring Class, and of the Artisan or Labouring Class, from ten to thirty years. (British Statistics.)

NON-LABOURING.				LABOURING.		
Age.	Height in inches.	Weight in pounds.	Coefficient.	Height in inches.	Weight in pounds.	Coefficient.
10	53.0	67	41.9	50.5	66	38.6
11	54.5	78	40.6	51.5	70	37.9
12	56.5	80	39.9	53.5	74	38.6
13	58.5	88	38.8	55.5	78	39.4
14	61.0	98	37.9	58.0	84	40.0
15	63.5	110	35.7	60.5	94	38.9
16	66.5	128	35.1	63.0	106	37.4
17	68.0	140	33.0	64.5	116	35.8
18	68.5	148	32.1	65.5	122	35.1
19	68.75	148	31.9	66.0	128	34.0
20	69.0	159	31.7	66.25	132	33.2
21	69.0	152	31.3	66.5	138	32.5
23-30	69.0	—	—	66.5	138	32.0
25-30	69.0	154	30.0	66.5	140	31.6

Comparing the heights and weights for the respective years, it may be stated as a general fact that the more favoured class are both taller and heavier than the less favoured, or labouring class. But whilst this is true in actual weight, it does not hold good relatively—i.e., when the weight is compared with the height. Reference to the respective third columns of figures, giving the coefficients of weight,¹ shows at a glance that, under thirteen years of age, the artisan class are relatively more favoured as to weight—that is, they are heavier in proportion to their height. From the thirteenth year of age onwards the condition is reversed—they are now lighter. We have here made apparent the influence of manual labour on development as to weight—a fact which was not observable in the first two columns of figures, and has not been before so clearly determined. From this table it may be stated that, for a man between twenty and thirty years of age, his place in the scale should be between 30 and 32; or, taken otherwise, what his weight should be normally can be found by dividing his height squared by 31 or 32, according to his station in life. If above this weight, it shows excess; if below, there is deficiency. What range may be allowed within physiological limits can only be ascertained by future observation. In confirmation of this view, we would refer to a table given in the first volume of the Medical Statistics of the United States Provost-Marshal-General's Bureau (1875), in which Dr. Baxter gives the mean height and weight of "1000 men, taken at hazard from the records of the State of Maine." They are recorded for each year of the age from twenty to forty-six. It may be assumed that these men corresponded more closely with our labouring than with our non-labouring class of this country. Examining this table by our method—i.e., dividing the square of the height by the weight,—we found that from the twenty-first to the thirty-fifth year, inclusive, the uniform result was 32; in the subsequent years 32 occurs four times, 33 twice, 31 four times, and 29 once—at forty-six. We now see the reason why the value of m , used in the previous section, should range about the number of 50; it has reference to the fact that the typical coefficient of weight in adult life is 30 to 32. Below eighteen years the yearly coefficient is inversely as the age, $18 + 33 = 51$, $17 + 34 = 51$, and so on. The above examination of the subject applies to men only. We have not yet statistics sufficient to enable us to estimate the coefficients for women of adult age.

From the above examination of the subject, the following method of estimating the relation of weight to height, and of comparing one individual with another, or one series of statistics with others, may be formulated. 1. The square of the height in inches, divided by the weight in pounds, gives the coefficient of weight. 2. Applied to the mean or average of a series of observations, the rule gives the mean or average coefficient of the class or race of persons; applied to individuals, it gives the personal coefficient. 3. By the series of mean coefficients a scale of physique is formed by which we can compare the physique of individuals, of classes, or of races.

¹ In using these numbers it must be remembered that they are divisors, so that the smaller number is more favourable than the larger.

4. By dividing the square of the height by the mean coefficient, the *typical weight* for any height can be found. (See Tables II. and III.) 5. The mean coefficient varies with the age, but can be represented for the various years by side columns in the scale of physique (see scale). This method has for its recommendations, that it is based on a law of physical development. It enables the anthropologist to compare accurately one race with another, and one class of the same race with others; and to demonstrate the influence of the various causes which affect development. It also supplies the physician with the means of accurately recording the physique of his patients and comparing one with another, and may thereby reveal, in the course of future observations, important facts concerning the correlation of physique and disease.

PERINEAL LITHOTRITY.*

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IN view of the splendid results which have been obtained by Bigelow's operation of litholapaxy in all parts of the world, one naturally feels some hesitation in drawing attention to any other method of removing a stone from the bladder in which crushing forms a part. Let me, however, justify my advocacy of an exceptional proceeding, as applied to exceptional circumstances, by a few preliminary or explanatory observations.

One great advantage lithotomy possesses over lithotritry is that it permits the operator to ascertain the condition of the bladder and prostate, and to satisfy himself, by the use of his finger, that every fragment of stone has been withdrawn. The absence of this process in lithotritry is an important circumstance in explaining why recurrences or relapses should be more frequent after crushing than cutting operations. In a personal experience of lithotritry which, though not large for statistical purposes, includes considerably over 100 examples in different males, I infer not only that the liability to relapses after lithotritry is greater than after cutting operations, but that such recurrences are, as a rule, traceable to some purely mechanical cause which either the operation or the operator fails to meet.

In a paper² by Mr. Donald Day of Norwich on Repeated Lithotomy, he analyses the cases of recurring stone, at the Norfolk and Norwich Hospital, in 1024 individuals. He divides these recurrences into four groups in the order of their frequency: viz., (a) stones formed quite independently of the previous ones; (b) stones undetected at the first operation; and (c) stones formed on a fragment left behind at former operations; group d includes stones of bladder formation, due to chronic cystitis. Though the figures from which my own conclusions in reference to this point are insignificant compared with those at Mr. Day's disposal, they tend to support his classification, with this difference, that as my stone cases have been drawn from an area which, unlike the eastern counties of England, is not favourable for the development of calculus, I should put the spontaneous recurrence of stone, independently of a previous operation or other assignable cause, at the bottom of my list instead of at the top.

Taking the fifty cases of recurring stone in Mr. Day's analysis, twenty of these belong to group a, where the stones appear to have formed independently of the previous ones, thus leaving thirty cases where the recurrences were due to local causes, including undetected stones, stones formed on a fragment left after the previous operation, and cystitis. It will thus be noted that three-fifths of the recurrences, or three out of the four groups, were traceable to purely local causes in which the bladder, including its outlet, was involved. Though these figures of Mr. Day's only include lithotomy cases, they will also apply to lithotritry, but with probably greater force. From the careful examination of evidence of this kind, as well as from clinical observation, it appeared that, if the advantages of litholapaxy could be combined with those of lithotomy, so far as the latter proceeding relates to the digital

exploration of the bladder, much advantage would follow the adoption of such a procedure in certain cases where a recurrence after lithotritry might almost with certainty be anticipated, by reason of the existence of structural complications, which the operation of crushing did not attempt to cope with. For this purpose perineal litholapaxy seemed to be well suited, inasmuch as it would permit of (1) the digital exploration of the bladder and associated parts, both before and after the removal of the stone; (2) the rapid evacuation of the stone; and (3) the drainage and irrigation of the bladder, should this prove necessary. It appeared that all this could be accomplished by a perineal urethrotomy without encroaching on the neck of the bladder, so far as the necessary incision was concerned. Such a proceeding is thus referred to by Dr. Gouley of New York,³ who, writing in 1873, says: "The name of perineal lithotritry was given in 1862 by Professor Dolbeau of Paris to an operation completed in one sitting, by which the membranous portion of the urethra is opened, the prostate and neck of the bladder dilated instead of being cut, and a large stone crushed, and the fragments immediately extracted."

I have now had occasion to perform this operation in a somewhat modified form, presently to be described, in four cases of stone in the bladder. In three of these the prostate was large, and I was desirous of draining the bladder after the stone had been removed. In two instances litholapaxy had been previously performed. In my fourth and last case the stone was very large; the following are the particulars:—

A young man, aged eighteen years, was under my care in the Liverpool Royal Infirmary during the past summer. He was suffering from a large phosphatic stone in the bladder, which it was thought could be removed by litholapaxy. The patient being placed under ether, I found it impossible to grasp the stone with the lithotrite in such a way as to enable me to crush it, for, though I could seize it easily enough, the blades could not be approximated sufficiently to permit of my locking the instrument. I therefore proceeded with a perineal lithotritry, making my superficial incision as for lateral lithotomy. I opened the membranous urethra, and readily passed my finger on into the bladder, as for ordinary exploration. Finding the calculus to be fully as large as anticipated, a strong pair of forceps was introduced into the bladder, with which the stone was crushed and extracted. When the finger showed the bladder to be free, the latter was well washed out with a perchloride solution, and then a large drainage tube was inserted. The tube was kept in for four days, and then withdrawn. The patient was well and up on the eleventh day, passing all his urine by the urethra. Though the stone weighed about three ounces, it was broken up and evacuated in something under five minutes. In the other three cases referred to, a similar proceeding was practised. In one of these the stone was uric acid, the remaining two being phosphatic; in two the ordinary median boutonnière operation was practised; whilst in the third a preliminary lateral incision was made, as in the case narrated in detail.

So far as dilating the neck of the bladder was concerned, I have been able to accomplish this with my finger, aided sometimes by Wheelhouse's small gorget. I would wish, however, to draw attention more particularly to the forceps. I employ for crushing and evacuating the stone. They consist of a strong pair of ordinary bladder forceps, with a cutting rib down the centre. They are sufficiently strong to break any stone which can be fairly grasped; they are, in fact, constructed on the same principle as the blades of a lithotrite, and are intended for use in the same manner.⁴ Looking at the fragments of the stone removed from the young man whose case I have just related, it can be judged what these forceps are capable of doing, both in crushing and extracting. In this instance they enabled me to break up and remove a calculus in a few minutes, a process which I do not think could have been safely accomplished under half an hour by the ordinary lithotrite and water evacuation.

I hardly think I need apologise for bringing under notice an operation which may, in some cases, be revived with considerable advantage. Circumstances are now very different from what they were twenty-five years ago, when perineal lithotritry had numerous advocates. Thompson had not then taught us the great value of digital exploration in

Read before the Congress of Physicians and Surgeons, Washington, U.S.A., September, 1888.

² British Medical Journal, Feb. 18th, 1886.

³ Diseases of the Urinary Organs, 1873.

⁴ They are made for me by Messrs. Krohne and Sesemann of London.

diseases of the bladder; Otis had not demonstrated the full capacity of all parts of the male urethra to dilatation; Bigelow had not shown us the tolerance of the bladder to prolonged but gentle manipulations; nor had we learnt the value of drainage and irrigation of the bladder, and how much operative surgery was capable of doing for the enlarged prostate when this was found to complicate stone. In the presence of these advances, I believe that perineal litholapaxy will be found of considerable service, and that its more general employment will tend to reduce the number of stone recurrences after litholapaxy as usually practised.

Liverpool.

ON PERFORATION OF THE VERMIFORM APPENDIX IN ITS RELATION WITH ATTACKS OF PERI-TYPHLITIS.¹

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AMONG the difficulties which pertain to the practice of medicine there is none greater than that at times attendant upon a correct differential diagnosis, and, although in certain cases it may not be absolutely necessary for the good of the patient that this should be at once decided, there are others in which such knowledge is essential for determining on that line of treatment which is the safest and the best. A correct diagnosis may prove of the highest importance where mere medical measures must suffice, and it assumes a higher value when, through a surgical procedure—itsself of some magnitude,—relief and recovery can alone be effected. The interest and the anxiety inseparable from attacks of severe abdominal pain are fully recognised as well as the difficulty, in many instances, of determining the exact condition which underlies them. And this difficulty is deepened and largely increased when we find that in one especial region of the abdomen there may arise three distinct morbid conditions, every one of them marked by the closest similarity in their symptomatology, but differing very widely in their prognosis and in their treatment.

Under the terms "typhlitis" and "peri-typhlitis" we have been accustomed to recognise a condition of localised abdominal inflammation evidenced by the presence of pain, of a sense of resistance and slight dullness on percussion in the right iliac region, by tenderness on pressure, and fulness, which fulness in a very considerable proportion of cases assumes the form of a well-defined tumour. This local condition is not usually attended by very grave constitutional manifestation, and a favourable prognosis may, as a rule, be given. The terms of this prognosis I can best render in the words of Dr. Hilton Pagge.² "I have, indeed, a strong conviction," he says, "that no case in which the disease can be diagnosed as being seated in the cæcum ever terminates fatally if judiciously managed." And, again: "Even when typhlitis presents itself clinically under the guise of intestinal obstruction or of *diffused acute peritonitis* [the italics are mine], I believe that it scarcely ever destroys life if judiciously managed." This favourable estimate of the risks attendant upon an attack of peri-typhlitis I read for the first time more than a year ago, and then, after some considerable experience of the disease, I would have fully endorsed it, but within the past eight months it has happened that four cases have come under my own observation; and of that of a fifth I have intimate knowledge, in which, apart, may be, from a history of greater severity in the subjective symptoms, the whole conditions, local and general, were at the beginning but those of a peri-typhlitis, and yet all these five sufferers are now in their graves. From a consideration of the morbidity which gave rise to such sad issues there spring these two questions: Wherein lies the difference between the simple and the fatal cases of peri-typhlitis? and have we any knowledge by which in their early days—for, as a rule, there is not much in their later—by which we may distinguish between them? Perhaps the best way in which we can approach a discussion of this subject is by bringing under notice, very concisely, the clinical features in three cases of peri-cæcal trouble, all

differing, I believe, in their etiology, and endeavouring through the relation of their symptoms, and their issue, to determine the features which distinguish the favourable cases from those of graver omen.

CASE 1.—The early progress of the first case I will give in the words of the sufferer herself, a lady who has had indifferent health, but who had at no period of her life any history of previous abdominal trouble: "I remember quite well that I got 'a chill' in going into a cold chapel at about 11 A.M. one day; it was a horrible day of east wind and wet. I never was warm again all day, but had no pain—just shivered and was miserable. I awoke with a pain at about 4 A.M. next morning, though not very severe, and it went on getting rather worse, until it grew very bad about 1 o'clock, and then it seemed as if a bolt of fire had been passed through me. I fainted, and was sick, and had no relief until I had that blessed opium." This lady, when I first saw her, was suffering much pain in the right iliac fossa, where there was tenderness on pressure, with a sense of resistance, but no dullness. The expression was good, the pulse quick (120), and the temperature 101° 2'. She had only vomited once, but felt nauseated. Next day the general condition was worse, the pulse was quicker and smaller, the temperature 102° 2', and there was distinct fulness in the fossa, but no tenderness beyond its limits. I need not record the daily progress, but will only add that the highest temperature was 103°, and that for three or four days its average was close upon 102°; that a distinct tumour formed in the course of the third day; that this tumour lasted for fully a fortnight, that it gradually subsided and disappeared, and that the line of acute tenderness never extended much beyond its limits. Four years have elapsed since this attack was recovered from, and she has had no return of pain or sense of discomfort in the affected region.

CASE 2.—An active healthy boy, aged fifteen, with no record of previous illness, and with no history of any previous attack of abdominal pain, was, six hours after eating a hearty meal of uncooked mussels, seized with sudden pain in the right iliac fossa. His doctor saw him some hours afterwards, and had no difficulty in satisfying himself that the lad had a typhlitis. His temperature rose to 102°; and, without increase in the region of tenderness, a well-marked tumour slowly formed. I saw him on the sixth day of his illness, for retention of urine had made its appearance and added to the anxiety of the case. He had then a good aspect, a pulse of 90, a temperature of 101°, and a well-developed peri-typhlitic tumour, with no tenderness beyond an inch or so from its edge. He had not vomited except in the beginning of his illness, but had some diarrhoea alternating with constipation. His recovery, as his attendant notes, "was steadily progressive, the tumour not disappearing for more than a fortnight after the cessation of pain." In neither of these cases was there any vomiting but that which accompanied the onset of the disease, and there was no general abdominal tenderness and no marked abdominal distension or rigidity.

CASE 3.—M. H.—, a healthy girl, aged twelve, was, within a short time of having eaten a hearty breakfast, seized with very acute pain in the right side of the abdomen, quickly followed by vomiting. She was in no way collapsed, but complained bitterly that the fomentations applied to the painful region aggravated her suffering, and that a dose of laxative medicine which was administered increased the tendency to sickness. In the twenty-four hours following she had severe pain and constant retching. When first visited on the morning of March 5th, she was found with a bright expression of face, making complaint of bad pain in the lower abdomen on the right side and of complete anorexia. Her pulse was 80, of fair character; her mouth temperature 99° 6'; her abdomen was somewhat full, but was only tender on pressure in the right iliac region, in which region a tumour having the characters of that observed in cases of peri-typhlitis was readily recognised. In the evening she was better; the vomiting had entirely ceased; the pulse was still 80, of somewhat fuller force; temperature 99° 6'; and the region of tenderness had not increased in extent.—7th: Has passed a good night; facial expression good; pulse 75; temperature 99°; tumour in iliac region more distinct, and no increase in the extent of abdominal tenderness. In the evening she was visited in my absence by Dr. Helm, who found that she had just returned to bed after having been at stool (a procedure against which her nurse had been warned), where she had strained a good deal, and this without effect. While in this position the severe iliac pain reappeared, and was

¹ Read at a meeting of the Carlisle Medical Society, April 12th, 1888.

² Principles and Practice of Medicine, vol. II., p. 175.

much complained of when she was examined. Apart from increase in suffering there was no difference in her condition otherwise. The temperature and pulse rate remained steady.—8th: To-day her aspect has changed; her face wears an anxious expression; her eyes are sunk, and she is evidently worse. Has had a bad night, with return of vomiting. The skin feels a little cold. The temperature in the mouth is 99°; her pulse is 140, feeble, and indistinct in character. The outline of the tumour is not nearly so plain, and there is considerable increase in the area of abdominal tenderness. The accident which had happened to her was very evident, and operation was spoken of, but was, unhappily, not entertained. Stimulants were administered, the opium pushed, and such means employed as are much useful in rallying from depression. In the evening she was in the same state. There had, however, been no return of the vomiting, and the abdominal tenderness had not undergone notable increase.—9th: This morning she is somewhat better; her temperature is still 99°, but her pulse has fallen in number, and is of fuller character. The abdominal condition was unchanged; but as it was now evident to her relatives that her best, and indeed only, chance of recovery lay in a surgical operation, they consented to its performance. Through a median abdominal incision there were not observed the evidences of a general peritonitis, but when the small intestine was gently pulled aside to admit of the introduction of the fingers, it was found to be intensely injected and coated at points with thick lymph. When the coils adherent to the abdominal wall were separated in order to reach the cæcum, a drachm or two of bad-smelling pus passed along the detaching fingers, and with it an orange pip and a raisin pip. An attempt to bring the cæcum forward failed on account of firm adhesions, and I therefore cut down upon it by a slightly curved incision external to the line of the deep epigastric artery. Then it was readily turned out, and in the middle of the appendix was found an ulcerated opening with greyish edges, through which the pips had passed. The proximal and distal ends were now examined through this opening, but without discovering the presence of concretions or other obstruction; the sloughing edges were cut away, and as the appendix was up to its extremity very closely adherent to the colon it was not removed, but its divided ends were thoroughly occluded by Lembert's stitch. The abdominal cavity was washed out with warm boracic lotion and the incision closed. She rallied well from the shock, and was in the evening easy and comfortable; but in the course of the night the vomiting returned, and became of that gulping character of such evil omen in cases of peritonitis, and she sank on the following day. Only after the removal of the pips were we told that at Christmas she had, after having eaten freely of raisins, had an attack of pain similar to that with which her fatal illness was ushered in, and that between that time and March 6th she had made occasional complaints of cramp in the right iliac fossa.

I have selected these three cases from a very considerable number that have fallen under my observation within the last few years, and I have done this because they will serve as examples of the various ways in which cæcal and peri-cæcal harm may be provoked.

(To be concluded.)

"IT IS TO THE LYMPHATIC SYSTEM AND CELL AGENCY THAT MOST, IF NOT ALL, FORMS OF DISEASE ARE DUE."

By W. GROOM, B.A., M.D. CANTAB., M.R.C.S.E., L.S.A.

IN every variety of disease to which the human body is liable we have a direct cause producing a definite result, and to determine the exact nature of the disease both the cause and its result have to be taken together into consideration. Thus fever is a symptom or result of some agency in the body producing that condition; but to constitute scarlet fever we must have these symptoms or results take a more or less definite course, be of a definite character, and dependent upon a specific agency. Hence in scarlet fever, and also every other variety of disease, we

have an agency or exciting cause and results or symptoms originating therefrom. Between these a definite period of variable duration exists, known as the latent period, and it is during this period that I believe highly important changes take place. For example, in the ordinary operation of vaccination a definite material is introduced into the body at a certain spot, and no immediate results are visible, and it is only after the lapse of a certain period of apparent quiescence that a definite local result manifests itself, and this gradually takes a progressive course, accompanied with a distinct constitutional effect.

The question arises, What is it that occurs between the inoculation and the commencement of the papular formation with its attending febrile symptoms? To arrive at a possible answer to this question, we must first bear in mind the nature of the lymph inoculated. This is a slightly viscid, clear, and transparent fluid, with alkaline reaction and little or no smell, and when viewed with the microscope is seen to have a clear liquid portion or plasma, and a solid portion made up of corpuscular elements which float in the plasma or lymph; these are few in number, of somewhat rounded but irregular outline, and correspond in all particulars to a description of the corpuscles found in the lymph of the lymphatic system, and both of these are not far removed in character from that of an embryonic protoplasmic cell. In the next place, we must recollect that the seat of inoculation is constructed of cells, arranged with varying regularity in layers; the lowermost of these, belonging to the epidermis, are elongated in shape and perpendicularly disposed upon the dermis, and with their extremities intimately connected with the corresponding irregularities of the dermis. Immediately above these, the cells are of more rounded shape and are furrowed, and so arranged that these furrows approximated together form little channels. Above these we have the flattened cells which form the upper and denser portion of the epidermis. With the exception, therefore, of these latter layers, the epidermal cells are sufficiently loosely packed together as to leave interspaces, however small, between them; and, moreover, in these spaces leucocytes or corpuscles similar in structure to those spoken of in vaccine lymph and the lymphatic system may here and there be observed, and they also contain a fluid plasma. The dermis or subcutaneous tissue also shows, on close examination, the existence of similar spaces, with their cells and plasma, and continuous above with those of the epidermis, and below in the closest contact, if not continuous, with the lymphatics. These spaces may therefore be looked upon as the very commencement of the lymphatic system. Now, in vaccination, these spaces receive some at least of the inoculated vaccine lymph; for, if the lancet wounds the bloodvessels in its course, it has first passed through spaces existing above them, and, as the blood current is rapid and therefore does not afford sufficient repose for developmental changes to take place in it, we must, I think, conclude that such changes as do take place occur in these lymph spaces. In their ordinary course of life the lymph cells grow and multiply, and in their growth assimilate materials from and modify the character of the plasma in which they live, in much the same way as a torula cell of yeast assimilates material from the saccharine solution in which it grows during the process of fermentation and converts that solution into alcohol. When, therefore, the plasma derived from a vaccine vesicle is deposited in a lymph space, it mixes with the plasma already existing there, and the cells in these spaces now live in material much of which is the product of vaccine lymph cells. In their growth and physiological functions they assimilate and build themselves up with this material, and so get impressed upon them the same characters as the cells of vaccine lymph—as Dr. Creighton has called it, become spermatized. These cells then, in their turn, modify the plasma of the next space (remembering that the spaces are virtually continuous), and so on, until, by an onward progress from the periphery inwards, varying in its extent and speed according to the virulence or specific strength of the inoculated cells or cell products, the whole lymphatic system becomes spermatized and brought into a similar condition to the foreign agency introduced. We need now only recollect the intimate connexion between the lymphatic system and the vascular system, to understand how the whole blood-vascular system generally becomes, in the more virulent varieties, infected. Since the vaccine lymph inoculated is foreign to its new situation, it acts as an irritative agent, producing a local and general inflammatory result, but tainted with the

1 Extract from Thesis for the M.D. Degree.

peculiarities of the disease from which it is derived. Looking further into the matter, let me again state that the vaccine lymph ultimately infects the whole system as above described, and so long as this general infection remains in the system, any subsequent inoculation with vaccine lymph is unable to bring about the same definite result, since it is no longer foreign to the plasma of the spaces then receiving it; but so soon as this influence has died away or been worked out, any subsequent vaccine lymph inoculated would have the same power again, varying in extent, however, with the greater or lesser loss of the influences. In vaccination the accompanying symptoms are weak in intensity on account of the weak spermatising influence of the vaccine lymph. They are febrile in character, and are no doubt due to an altered condition of the blood, brought about by the changes in the lymphatic system being conveyed by the lymphatics into the bloodvessels. As the contagium of variola can only produce variola of a like kind, so also the contagium of a definite exanthematous affection can only produce the skin eruption peculiar to its progenitor. It would seem that the specific fevers vary somewhat in the influencing power of their contagia; in many it seems to be life-long, and hence it is that one attack of these gives immunity from subsequent ones. But we must recollect that there is always a tendency for this influence to diminish by age, and that therefore in some cases it sufficiently disappears to render the subject liable to a further invasion of this particular disease. When from ill health the physiological activity of the lymphatic cells in the system is diminished in power, it is naturally even easier for a contagium to attack them than when in perfect health. Hence it is that women after parturition so readily contract scarlet fever. Also when so reduced in strength from nerve influence or other causes their products suffer and are weak, if not abnormal in constituents, and these may therefore develop diseases without any external agency whatever; hence the connexion between parturition and phlegmasia dolens.

Taking the above-stated view respecting the lymph spaces and their connexion with the lymphatic system, we are enabled to state that this system has an extremely wide distribution throughout the human body; existing, in fact, not only in the cutaneous and subcutaneous tissues, but also internally it is found in the follicles of the lymphatics, Malpighian corpuscles of the spleen, Peyer's patches and solitary glands of the intestine, follicles of the pharynx, tonsils, trachoma, glands of the conjunctiva, also around bloodvessels, in the pia mater, smaller bronchi, beneath the pleural endothelium and also that of the peritoneum, alimentary mucous lining, and medulla of bones. From this immensely wide distribution, therefore, we have no difficulty in understanding how easily the lymphatic system can be reached from without, and that the contagium of a disease need not necessarily be artificially inoculated to gain an entrance into it. Scarlet fever, for instance, seems to gain entrance by the throat and respiratory tract. In measles the conjunctivæ seem to have a very early primary connexion with the specific contagium. In typhoid fever it would seem to gain admission by the intestinal tract, judging from the lesions of the agminated and solitary glands and secondary involvement of the mesenteric glands. Passing from the so-called specific fevers, we may next mention syphilis; and here we also have a distinct inoculation in the neighbourhood of the lymphatic system, and the neighbouring lymphatic glands are soon involved; and further, before the characteristic eruptions make their appearance, there is a distinct latent period in which changes such as I have described can go on; moreover, we know also the beneficial effect of mercurial inunction on this disease. In syphilis, however, the specific influence seems extremely tardy in working itself out. Again, in pyæmia we find the seat of primary mischief to be some local abrasion or wound accidentally or surgically made, or after parturition, and in all of these the connective tissues and lymphatics are early involved; and although cases do occur in which no such lesion seems apparent, we may still suppose that the virus can reach the lymphatics by the respiratory tract. In elephantiasis græcorum, the cellular matter which infiltrates the affected tissues is probably developed from the connective tissue cells and leucocytes. In ague, the spleen is soon and sometimes permanently involved, and it will be remembered that this organ is intimately connected with the lymphatic system. In skin affections we can also show forth this lymphatic connexion. Thus in erysipelas the tonsils are often the

seat of premonitory inflammation; the erysipelatous swelling contains lymph and corpuscles, the neighbouring lymphatics are enlarged and tender, and the blood contains a distinct increase in the number of its white corpuscles. It would appear, therefore, that in those forms of disease, at least, which are recognised as the result of a contagium, the lymphatic system seems to be the chief seat of the more important changes which go on during the so-called latent period, and that the definite symptoms which follow are results of these changes conveyed by the medium of the bloodvessels to the several organs and other parts of the body. Taking now into consideration other varieties of disease, such as tubercle and tumours, we still find the lymphatic system connected with their development or spread, for there seems to be but little doubt that pulmonary tubercle has its origin in the inter-alveolar septa and parietes of the bronchioles, in which situations are found embryonic cells and leucocytes in large numbers; and, further, the spread of tubercle follows a lymphatic tract, as in those cases in which a caseous lymphatic gland is the source of generalised tuberculosis; also we know that the mucous membrane of the intestinal tract, a part most closely connected with the lymphatics, is a common seat of tubercle.

As I have stated, it is from the product of a cell's activity, in its turn affecting or spermatising other cells in its immediate contact by their assimilation of this abnormal product (ordinary lymph being the normal medium of a healthy leucocyte), that all the subsequent changes are probably due; it need not of necessity in every instance be the product itself that gains admittance into the body to act as the germ of a disease, but the particular cell manufacturer itself may in some instances enter and exert its direct influence, therein, or even the normal leucocytes or cell elements of the body may, by abnormal irritation or nerve influence, have their physiological characters changed, and the lymph therefore in which they grow will by their assimilative and productive process be likewise ultimately changed in a corresponding manner. It is by this latter method that I would explain the enlargements of lymphatics from distal irritation, and also the possibility of developing tubercle artificially by other material than the products of tuberculosis, as Sanderson and others have long ago shown. Also this will, I think, in some manner explain the connexion between a sudden shock and subsequent development of disease dependent thereon, such as we now see from railway accidents, and such as I believe to have been the case in a young patient of mine who died of localised meningitis, which gradually developed itself in a previously perfectly healthy person, with no trace whatever of tubercular history, soon after receiving a severe shock by witnessing the accidental death of a young friend whom he was chasing in the dark, and who, forcibly running against a water hydrant on the roadside, received such internal injuries as to cause rapid death. Again, there may be in some cases an hereditary tendency for leucocytes or cell elements to take on an abnormal growth at a fitting opportunity afforded by ill health or the decadence of life, implanted upon them by the parent just in the same way as features and peculiarities are implanted on the offspring of man and animals. Also the foregoing ideas do not exclude bacteria as a source of disease, they being equally living cells and bringing forth their own peculiar products. Finally, we know that tumours have a cellular origin, and in one class at least—viz., the carcinomata—the lymphatics are most intimately connected with their growth and spread, for the alveoli of cancers may be regarded as the dilated origins of the lymphatic system. Whether these can be derived from contagion seems as yet difficult to positively determine, but from cases which have come under my own observation I am personally inclined to believe it possible. Taking, then, into consideration the above ideas, I desire to maintain that it is to the lymphatic system and cell agency that most, if not all, forms of disease are due.

Wisbech.

NEW INFIRMARY, LANCASTER.—A long-needed want is about to be provided for Lancaster by the erection of a new infirmary. Mr. Williamson, M.P., has generously offered £5000 towards the building fund, and the committee, being thus encouraged, have determined to purchase a site eligibly situated in close proximity to the town, which forms a part of Springfield Park. To erect a suitable building and provide a permanent sustentation fund, it is expected that between £10,000 and £15,000 will be required.

A FATAL CASE OF POISONING BY MUSSELS, WITH REMARKS ON THE ACTION OF THE POISON;

ILLUSTRATED BY TWO SLIGHTER CASES OCCURRING AT
THE SAME TIME.

By W. PERMEWAN, M.B. LOND.,
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A MAN aged about forty was admitted into the Northern Hospital, Liverpool, on Aug. 29th, at 2.50 P.M., apparently dying. During the morning of the same day he had consumed a large quantity (from two to three quarts) of mussels, which he had scraped from the bottom of a barge in the Clarence Graving Dock, and had eaten uncooked. After the meal he loitered about the dock trying to find work, with one or two companions, whom he afterwards left. At 2 o'clock he was found by a police constable lying quite unconscious in one of the sheds of the dock. He was at once removed to the receiving house and efforts made to restore consciousness. These efforts failing, the ambulance of the Northern Hospital was summoned, and the man was conveyed to that institution.

On admission the patient was absolutely unconscious; his face was livid, his pulse was almost imperceptible, and he was giving one or two convulsive gasps at intervals of about a minute. In fact, he was apparently moribund. His pupils were widely dilated and did not respond to light, and there was no conjunctival reflex. Clearly he was in the last stage of asphyxia. Artificial respiration was at once commenced, and ether freely injected under the skin. This improved the heart's action considerably, and after an hour his pulse became fairly good. There was, however, not the slightest attempt at voluntary breathing, and on suspending the artificial respiration for a minute or two the face became blue and the pulse began to fail. The stomach was then washed out by syphon action, and a considerable quantity of undigested mussels removed. The symptoms did not, however, improve; the conjunctival reflex remained absent, and there was not the slightest reflex in the pharyngeal muscles on introducing the tube into the œsophagus. Ether, with three minims of liq. atropine sulph., were then administered hypodermically, which improved for a time the heart's action; this injection was assisted by an enema of brandy and beef-tea. Artificial respiration was continued for three more hours continuously by Silvester's method. An ounce of brandy was then introduced into the stomach, and two doses of $\frac{1}{15}$ th grain of strychnia were given hypodermically at intervals of an hour. The patient's condition remained practically unchanged for the next three or four hours. As long as respiration was kept up by artificial means the pulse remained fairly good, but if it was suspended the heart began to fail. There was at no time any attempt, even of the slightest, at voluntary breathing. About 11 P.M. the pulse began to get intermittent and weak, and, in spite of several injections of ether, finally stopped at 11.45, artificial respiration having been kept up for nine hours continuously. The pulse throughout was slow, averaging about sixty to the minute; the temperature remained fairly high till the circulation began to fail, when the surface became quite cold. There was no vomiting or purging. All the limbs were perfectly motionless and flaccid, and unconsciousness was absolute.

About 4 o'clock on the same afternoon another man was admitted who had eaten mussels from the same source, and on the following day a third patient suffering in the same way. Both these men had precisely similar symptoms; both had eaten largely of the mussels, but chiefly when cooked. They complained of giddiness, and staggered slightly in their gait; they had a feeling of numbness in both hands and feet, and there was anaesthesia of both hands. They had a feeling of great prostration, and evidently had loss of muscular power in both arms and legs. An emetic of mustard-and-water, which brought up large quantities of undigested mussels, and a night's rest in bed, were sufficient to relieve them of all symptoms.

Remarks.—This case is one of unusual interest for various reasons. The length of time during which artificial respiration was able to keep up the circulation, the fatal issue, and the fact that such grave symptoms supervened on the eating of such a common article of diet as the mussel, certainly make the case a remarkable one. The mode of action of

the poison and the cause of death seem pretty clear when the case is looked at in the light of the two slighter ones. The poison was evidently not a cardiac poison; the heart continued to beat many hours after all voluntary breathing had ceased. The most striking facts were (1) the paralysis of all the voluntary muscles, and (2) the absolute unconsciousness. The latter was not secondary to asphyxia, for it showed no alteration even when respiration (artificial) was fully established; it was apparently the result of some powerful poison acting directly on the cerebral convolutions. It will be noticed that giddiness and a staggering gait were present in the less severe cases, showing that the brain was directly affected. As regards the muscular paralysis, that of course was one of the phenomena of the comatose condition; but the muscular weakness, combined with the dysesthesia and anaesthesia noticed in the other two patients, would seem to indicate that the peripheral nerves were also directly acted on by the toxic agency. The respiratory failure might have been in the fatal case a result of this paralysis of the nerves, or, as the brain was evidently affected, might have been caused by poisoning of the respiratory centre. This latter hypothesis seems less likely from the fact that the neighbouring cardiac centres were unaffected. What the poison was in these mussels I am unable to guess. It was not the result of putrefaction, for the bivalves were quite fresh; it was not, as was suggested at the inquest, copper from the boat's bottom, for the barge was not sheathed in metal; nor was it any other irritant poison, for there were no irritant symptoms throughout. The fact that in the fatal case the mussels were eaten raw, whereas in the others they were for the most part cooked, only a few being eaten in the natural state, is certainly suggestive; but, on the other hand, the man who died took the mussels into a perfectly empty stomach, and had only had very little food for some days, and was thus more likely to succumb than his companions, who were fairly well fed, and had eaten breakfast that morning. I am not aware that any investigations have been made with a view to discovering why mussels are at times poisonous, and what the poison is. I can find no reference of any value to the subject in any of the ordinary books on poisons. I believe one observer has succeeded in isolating some principle which has produced symptoms like those detailed above, but I have not been able to get at his paper on the subject.

At the inquest on this unfortunate man, the coroner of Liverpool expressed his surprise that there was apparently no scientific knowledge as regards these bivalves, and also his hope that this case might be the means of having the subject investigated. Large quantities of mussels are consumed in Liverpool by the poorer classes; and it certainly seems desirable that some knowledge should, if possible, be obtained on the subject, in order to avoid on the one hand the deprivation of one of their few luxuries which the poor people of Liverpool will certainly, at any rate for the next few weeks, enforce on themselves, and on the other the occurrence of such unfortunate cases as that of the poor man who met his death through partaking of them.

Liverpool.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND
THERAPEUTICAL.

GUNSHOT WOUND OF THE PETROUS PORTION
OF THE TEMPORAL BONE, PRODUCING FACIAL
PALSY AND INTENSE PAIN, RELIEVED BY RE-
MOVAL OF PORTIONS OF THE BULLET FOUR
YEARS LATER.

By W. B. C. TREASURE, M.R.C.S.

F. H—, aged thirty-two, clerk, shot himself in the right ear on Oct. 29th, 1884. Two shots were fired, and the bullets entered the external auditory meatus, penetrating the bone about half an inch from the entrance. He became unconscious for about eight hours afterwards. On Nov. 11th an attempt to remove the bullets was made, and part of one extracted under chloroform. Further portions were removed on Nov. 21st and Feb. 1st following, the pieces with the

one first removed weighing within a grain or two of the corresponding bullet. During this time he was subject to intense pain, with nearly complete deafness, and a sensation of weight if he lay on the left side. These symptoms were partly relieved after the last operation, but a continuous discharge of pus remained, with an occasional powder grain in it, and facial paralysis gradually supervened. In August, 1885, he went into University College Hospital under Mr. Barker's care, at which time it was not considered justifiable to search by operation for the second bullet, but careful antiseptic treatment of the wound in the ear resulted in the Eustachian tube being freely opened, but no permanent relief was given. He came under my notice early this year with a discharge of muco-pus from the ear, which occasionally became obstructed, causing most acute pain in the ear, accompanied by tenderness over the mastoid bone, which were relieved when the discharge flowed freely again. There was facial paralysis, with difficulty in swallowing, and dribbling of saliva, worse when the discharge was retained. He was still unable to lie on the left side, was seldom free from pain, and was quite deaf in the right ear. Finding I could give him no permanent relief, and thinking there was another bullet in the temporal bone, I advised him to consult Mr. A. E. Barker again with a view to an operation, and he went into University College Hospital on June 14th. On June 22nd he was placed under chloroform, and Mr. Barker made an incision, beginning half an inch above and half an inch behind the external auditory meatus, running vertically two inches and a half upwards, joined by a horizontal one an inch long at the top. The flap, including the ear, was turned forward, the bone bared, and the periosteum raised. The front part of the base of the mastoid was widely gonged away, and three small pieces of lead removed, which were embedded beneath the mastoid antrum. The mastoid process was so densely sclerosed that it had to be cut out with the surrounding bone. The cavity of the antrum was opened, with a drop of muco-pus in it, syringed out, and made to communicate freely with the opening cut in the bone and with the external auditory meatus, which was almost impervious before. The wound was stitched top and bottom, a drainage tube placed in the antrum, and a dressing of iodoform and salicylic wool applied. The symptoms were relieved after the operation, the temperature never rose above 100°, and the patient made a rapid recovery. The wound in the antrum was kept open until the drainage tube was forced out by the growth of new bone. The facial paralysis was much lessened, and, beyond a slight discharge from the ear, the patient got well and resumed his occupation.

Remarks.—The interest in this case centres round the second bullet. It was not thought probable at the time that he could have discharged two bullets into the ear, and the room was searched for the second bullet; but though it was not found, no search was made for it after the pieces which seemed to correspond to one bullet had been extracted. Probably the second bullet fired, if the portions removed by Mr. Barker belonged to it, followed the track of the first one, struck its base and splintered; if so, the portions of bullet first extracted may have belonged to the second bullet fired. The extreme density of the bone probably saved the man's life, and concussion did not occur with sufficient rapidity to prevent him firing the second shot. The facial palsy is interesting, being probably due to pressure from the new material thrown out for the repair of the bone. I am indebted to Mr. Barker and to Mr. Sydney Holder, house surgeon at University College Hospital, for the notes of the operation and subsequent treatment.

Cardiff

CALOMEL AS A DIURETIC IN CARDIAC DROPSY.

By A. G. AULD, M.D.

IN no department of practical medicine have more brilliant results been achieved of late years than in that of cardiac therapeutics. This is partly owing to a more extended knowledge of more or less familiar drugs, and partly to the introduction of certain new ones of acknowledged excellence in their several spheres, of which the chief is strophanthus, the discovery of Professor Fraser. Within the past year or two, mercury, in the form of calomel, has specially engaged the attention of several observers. As a cholagogue purgative, indeed, notably in mitral stenosis with engorgement of

the liver, its beneficial properties have been long recognised, while blue pill is well known to increase the efficacy of digitalis and squill. Nevertheless, the powerful diuretic properties of calomel seem to have been overlooked until quite recently, when the investigations of Jendrassik, Stillé, Mendelsohn, and others directed attention to the subject. I have observed this action of the drug in causing a copious discharge of urine and dispelling anasarca; and it does not seem to be impeded by the complication of a certain amount of structural disease of the kidney. In two of the cases medium doses were employed till diuresis set in; in a third, in which the effect of mercury was known, a single dose of twelve grains was administered, which was quite as efficacious.

As to the mode in which calomel exerts this diuretic power, there seems to be some difficulty in determining. Mr. Locke,¹ guided by the researches of Dr. Noël Paton, suggests that the diuresis is caused by an increased production of urea, consequent on the supposed hemolytic action of mercury on the blood corpuscles. This view, however, is open to serious objection. It is no doubt true that urea acts naturally as a diuretic; but we find that those cases wherein the blood is loaded with urea are frequently just those in which the secretion of urine is diminished, but which nevertheless tends to increase after the administration of calomel. Also, if an increased secretion of urea be the cause of the diuresis, we should expect such drugs as antimony and salicylic acid to be even more powerful as diuretics, as their exhibition is followed by a greater excretion of urea than in the case of calomel. Again, it could hardly be possible for a few doses of calomel to have such a hemolytic action as that described, but rather the reverse, and, even granting that it had, the resulting anæmia would be accompanied rather by an increase than by a diminution of the dropsy.

In endeavouring to determine the *modus operandi* of calomel as a diuretic, its influence, if any, on the heart and bloodvessels may first be considered. In moderate doses it is found to have, after the manner of arsenic, a somewhat paralysing action on the vaso-motor nerves corresponding to a slight fall in the blood pressure. It is evident, therefore, that its action in this wise may be eliminated from the causation. It may next be considered whether calomel may not exert a stimulant action on the secreting cells of the kidney, after the manner in which certain other drugs, such as caffeine, appear almost exclusively to cause diuresis, according to the experiments of von Schroeder, Langgaard, and other observers. That it should do so, I think, probable, though only to a certain extent, as it is stated to have but a slight diuretic effect in health. In addition to this, its influence on the composition of the blood, in virtue of its alterative properties, has, doubtless, an important bearing on the phenomenon in question. In a few medicinal doses it causes an increased activity in the lymphatic system, and brings about the destruction of deleterious ingredients in the blood, with an improvement in its nutrition, and consequently renewed vigour in the kidneys.

It need hardly be mentioned that much discrimination is requisite in the employment of the drug, and trial should first be made of the effect of small doses. It is also useful to remember that mercury is best borne by dark-complexioned persons. In suitable cases, it combines the advantages of a purgative and diuretic, without leaving injurious effects on the heart or kidneys. To whatever extent it may ultimately be found useful, it is pleasing to note meanwhile that attention has been drawn *de novo* to one of the best of those of the old remedies which, like bleeding, have fallen, it is to be feared, into an unmerited neglect, in a too eager desire to adopt the latest novelty or to follow a shifting fashion.

Glasgow.

PROLAPSE OF THE FUNIS TREATED SUCCESSFULLY BY MANUAL REPOSITION.

By W. J. NICHOLLS, M.R.C.S., L.R.C.P.

ON Sept. 1st I was called to attend Mrs. F—, wife of a labourer, in her fifth confinement. The patient, though of small stature, was well built, with a normal pelvis. On making an examination, I found a large bag of membranes projecting half down the vagina through the partially dilated

¹ Practitioner, September, 1886.

os uteri. Within the liquor amnii I distinctly made out a large loop of pulsating umbilical cord. An examination between the pains discovered the vertex presenting within the os. Having unsuccessfully attempted to return the prolapsed funis with the membranes intact, I determined to try manual reposition more fully. Rupturing the membranes, I passed my hand into the vagina, and pushing back the vertex from the os, gradually returned the whole length of cord along the side of the head into the hollow of the nape of the neck, lying above the pubes of the mother, and retaining it there until, a pain coming, the vertex was forced down upon the now almost dilated os. Keeping my hand still within the vagina for some successive pains, and finding no further return of the prolapse, I left the remainder of the labour to nature, when in due course a living full-sized child was born, the cord following the birth of the head and shoulders. Both mother and child are doing well.

This same patient had been attended by me in July, 1883, with her second child. A long loop of the umbilical cord was then prolapsed, but upon my first examination the head was so low down that no reposition was effectual, the result being the birth of a stillborn infant. In her third confinement she was attended by one of my medical confrères, and again the cord was prolapsed and not returnable, with the result of another stillborn child. Her first and fourth labours, I gather from her, were natural, though difficult.

An interesting feature in this case, apart from the success of the artificial reposition of the prolapsed funis (which reposition, by the way, was exceedingly easily effected), is that three out of five pregnancies resulted in prolapse of the cord, which in each case was of unusual length, and not passed round the neck of the infant.

Somersham, Hants.

THE VALUE OF BELLADONNA AND HYOSCYAMUS IN DYSMENORRHEA.

BY JAMES SHAW, M.B. GLAS.

DURING the last year I have had occasion to treat several cases of that form of dysmenorrhœa vaguely and variously designated neuralgic or spasmodic, and occurring in young girls, whom it was of course very undesirable to examine. One of these cases was of marked severity, and, as it had continued for about a year, there was considerable nervous prostration. Morphine was the only drug that at all mitigated the suffering, but in consequence of its administration the patient was wretchedly troubled with headache and constipation, and so I was forced to abandon its use. I therefore prescribed the following mixture, one ounce to be taken three times a day, and it acted like a charm: val. belladonnæ, nine minims; val. hyoscyami, two scruples; syr. aurantii, two drachms; water, six ounces. The epoch has now been robbed of its terrors for her. Writing the other day from Germany to her mother, she says the last six months are the only happy ones she has known since the function was established. In the other four cases there was likewise considerable suffering, and in these also complete relief was afforded. I prescribe it to be begun a day before the period is expected, and continued while the pain requires it. The valoids I employ are those manufactured by Messrs. Burroughs, Wellcome, and Co., and for obtaining the characteristic actions of the drugs I know of no preparations that equal them. The old-fashioned tincture, though perhaps a trifle more elegant, is at once feeble, expensive, and unreliable. In the majority of them the spirit is the active ingredient.

Sheerness-on-Sea.

ENLARGEMENT OF THE GENERAL INFIRMARY, LEEDS.—The contemplated extension of this institution is about to be carried out, at an estimated cost of £30,000. An impetus has been given to provide the improvements and enlargement required by a donation from Colonel North of £5000 towards the erection of the building. Of late, subscriptions have rapidly come in, and a sum of over £30,000 has been received. The board of management, in conjunction with the Faculty of the Infirmary, are maturing their plans, which will comprise a children's ward, isolation wards, improved out-patients' rooms, a casualty ward, and new accommodation for the increasing work of the pathological department.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

THREE CASES OF POISONING (RED OXIDE OF MERCURY, CORROSIVE SUBLIMATE, AND DINITROTOLUENE);
RECOVERY; REMARKS.

(Under the care of Dr. ORD.)

AMONGST the other duties of the house physician at a large hospital is usually comprised the attendance on casualty cases, including those of poisoning by many and varied substances. There are few occasions in practice in which more depends on skill in rapid diagnosis, which, combined with a good knowledge of toxicology and prompt action, will often eventuate in the saving of life. The annexed cases are examples of such, where severe symptoms followed the swallowing of red oxide of mercury, corrosive sublimate, and of dinitrotoluene. In the two former the symptoms, though of a serious character, present little worth of comment, but the third deserves special attention, as the symptoms produced by this compound are almost unknown. For the subjoined notes and remarks we are indebted to Mr. H. J. Macevoy, B.Sc., late house physician.

CASE 1. Poisoning by red oxide of mercury; recovery.—F. W. R.—, aged fifty-one; tailor. Admitted on July 8th, 1887; discharged July 20th. He has enjoyed good health, but drinks a good deal. Is of a reticent disposition. It appears that shortly after coming home at midnight on July 7th, being somewhat drunk (according to the wife's account), he swallowed the contents of a small packet which he took out of his pocket. An emetic was administered without effect, and he was brought to the hospital in a cab, being apparently unable to walk.

On admission at 2 A.M., the man was in an unconscious condition, and vomiting. Pupils of average size, equal, and inactive to light. Face and hands cold and bathed in sweat. Pulse weak, not abnormally rapid. There were traces of a reddish powder on his beard, chin, and shirt resembling that found in a small packet (referred to above) brought up by a policeman. Does not answer questions put to him or put out his tongue, but keeps his teeth clenched. There is otherwise general muscular relaxation, and his evacuations are passed under him. The stomach was washed out with the stomach-pump. The vomit consisted of a watery fluid containing mucus, and holding a red powder in suspension; no blood. The red powder, subsequently examined by Dr. Bernays, turned out to be red oxide of mercury, of which the patient swallowed about a teaspoonful.

July 8th.—11 A.M.: The patient was ordered milk, lime-water, and eggs, beaten up, to be taken frequently in small quantities, but has kept very little down (vomit contains no powder or blood). He still takes no notice of questions put to him, but his pupils now act to light. Bowels have been opened twice, the first motion consisting of loose fecal matter with mucus; the second motion is fluid and greenish, contains very little fecal matter, but mucus and streaks of blood.—4 P.M.: Patient has been conscious for the last two hours; apparently cannot protrude his tongue beyond his teeth. He complains of pain in the epigastrium and tenderness, and also of cramps in the legs. On examination the abdomen is rigid in the upper part, and slightly distended. Pulse regular, fair.

9th.—Patient is quiet, and feels better. Still occasional vomiting and diarrhœa, and the abdomen is rigid in the epigastric region and tender. No particular tenderness of gums; no salivation. He gradually improved after this, the vomiting and diarrhœa ceased, and he left the hospital quite well.

CASE 2. Poisoning by corrosive sublimate; recovery.—W. B.—, aged forty-nine; surgical instrument maker. Admitted Aug. 31st; discharged Sept. 7th, 1887. Has had no serious illness, but suffered for about six years from

sciatica. He has drunk pretty heavily for some years, mostly ale. Has had domestic troubles, and had been out of work for a few months up to three weeks previously. He had been depressed a good deal for a week, and at about 10 P.M. on Aug. 30th, being under the influence of alcohol, he swallowed a small lump of corrosive sublimate (as determined by chemical analysis and subsequent confession of the patient). He was then brought to the hospital.

When seen after his admission at 12 midnight, the man was sitting up, quite conscious, and answering questions rationally. He vomited a greenish mucous fluid (without blood), and complained of burning in his throat, along the gullet, and in the stomach. Pulse regular, 100; skin perspiring; pupils equal; tongue slightly coated with white fur; back of throat congested; no erosion. Twenty grains of sulphate of zinc, and milk with white of egg beaten up, were given him. When seen in bed half an hour later, the extremities were cold, the pulse was 120, and he had been sick (nothing special in vomit). Complained a good deal of pain and constriction at the throat, and pain along the œsophagus and in the epigastrium.

Aug. 31st.—The patient spent a fairly quiet night, but slept indifferently. Still complains of pain as before. Has vomited four times, the vomit consisting of greenish fluid—i.e., bile-stained—and mucus. Bowels opened twice, motions consisting of greenish fluid, with a little fecal matter, and small flakes of mucus with blood. No marked epigastric tenderness. Pulse 96. Very thirsty. Gums are a little tender, but no salivation. Urine passed without trouble. Ordered milk, the white of six eggs, and lime-water.

Sept. 1st.—The patient slept better last night after taking forty grains of bromide of potassium; but still complains of great burning and tightness in the throat, and pain in the epigastrium. Occasional vomiting of bile-stained mucous fluid. Bowels altogether opened eleven times since admission, the motions being liquid, bile-stained, and containing small fecal lumps with mucus and blood. No albumen in the urine. Temperature 100°. Mouth dry; tongue coated with white fur. Ordered a mixture composed of ten grains of bicarbonate of potash, twenty grains of subnitrate of bismuth, and three minims of dilute hydrocyanic acid, to one ounce of peppermint water, to be taken three times a day; also bread-and-milk, and extra milk to drink.

2nd.—Pain less; still thirsty. Has vomited several times since yesterday. Temperature 97°; pulse 84. Bowels opened twice.

3rd.—Vomiting less. Bowels not opened since yesterday. Still complains of pain in epigastrium and thirst. Gums sore, but no salivation.

4th.—Has had three loose stools during the last twenty-four hours. Ten minims of tincture of opium to be added to the mixture of Sept. 1st. Fish diet ordered.

7th.—No pain in epigastrium. Slight soreness of gums. Vomited yesterday morning and this morning; but he has been subject to this on and off for the last two years. Bowels not opened since Sept. 5th, when they were opened once. Feels well, and anxious to go home.

CASE 3. *Poisoning by dinitrotoluene; recovery.*—A. L., aged three years. Admitted July 9th; discharged July 13th. Previous history good. On July 8th, at 7 P.M., the child picked up a small bit of a chemical salt, which he mistook for a sweet (so the mother says), and began sucking it; said to be the size of a pea. As a result of chemical analysis by Dr. Bernays, and on inquiry from the manufacturers of this salt (from whom the father of the child bought casks which contained the salt) this turned out to be commercial meta-linitrotoluene, which is employed in the manufacture of Bismarck brown. The mother says that within a quarter of an hour or twenty minutes of swallowing the salt the child foamed at the mouth, became black in the face, and was convulsed.

On admission at 8 P.M., the patient, a well-nourished child, was in an unconscious condition, with most intense cyanosis. He was said to have swallowed a small bit of crystalline substance ("about the size of a pea"), part of which was brought up by the mother for analysis. When first seen he lay like a log on the couch, with complete relaxation of muscles, rapid shallow breathing, very cold surface and extremities, and rapid pulse. A few minutes later the breathing became slower, and apparently also the pulse. Pupils moderately dilated, equal, not acting to light. Artificial respiration was resorted to, cold wet towels flapped about the face and chest, fifteen minims of ether injected subcutaneously, and fifteen minims each of aromatic spirits of ammonia and

spirits of ether given by the mouth. This increased the number of heart beats, and the child cried out. When artificial respiration was abandoned (after ten minutes) the child relapsed into its former state, and breathed slowly and irregularly. The breathing becoming no worse, the child was put to bed, the surface of the body rubbed, then blankets wrapped round it, hot bottles placed to the feet, and brandy in teaspoonfuls ordered to be given by the mouth, which the child swallowed. No loss of control over evacuations.—9 P.M.: The child has just had an epileptiform attack, beginning with a loud cry, followed by clenching of the hands, with flexion at the elbow joints and approximation of the arms to the side; the legs and feet extended. The spasms are tonic. Eyes widely opened, and the pupils fixed and dilated. After the fit the breathing became rapid (45 per minute); pulse 144; surface bathed in sweat; temperature 97.4°. —11 P.M.: Since 9 o'clock the child has had three fits similar to the one above described; but there was no cry during the last, which occurred at 10.50 P.M. During the attack the pupils were very widely dilated (equal). After the attack the pupils became about half the size. Respiration 56; pulse 160; surface, as before, bathed in sweat. The child is as much cyanosed as on admission, unconscious, and the pupils are fixed. Just swallows brandy when placed on the back of the tongue.

July 9th.—After about 2 A.M. the lividity gradually disappeared (the lips remaining blue longest apparently), and at 3 o'clock the child spoke. No vomiting. Temperature 99.8°. —11 A.M.: The child is now apparently quite well, can talk, and appreciate all that goes on. Takes milk readily. Pulse 132. Nothing abnormal detected in lungs or heart. He at first passed urine in bed; that subsequently saved did not give the reactions of carbolic acid or aniline; no sugar; no albumen.

The recovery was uninterrupted, and the child left quite well on the 13th.

Remarks by Mr. MACEVOY.—The first two cases call for no particular comment. The symptoms were such as are generally observed in these cases, and an early acquaintance with the nature of the poison, coupled with the circumstance that the patients were brought to the hospital soon after swallowing the poison, gave one the opportunity of administering appropriate and prompt treatment. The absence of signs of corrosive action on the mucous membrane of the mouth, tongue, and throat is worthy of note; this is, no doubt, to be explained by the fact that the patient swallowed a small lump rapidly. Salivation was absent, as is not uncommonly the case in acute poisoning by corrosive sublimate. The third case—poisoning by dinitrotoluene—is, so far as I am aware, unique. The symptoms resemble very much those which are described in poisoning by nitro-benzole and by aniline, and the most marked symptom was the intense cyanosis, equalling that seen in fatal asphyxia, and of a somewhat different hue. The occurrence of convulsions is also very interesting. The fact that only a small amount of the poison was swallowed and the urgency of the respiratory difficulty made one abandon the idea of using the stomach-pump, so that treatment was limited to purely combating the dangerous symptoms. The absence of any after-effect, considering the serious nature of the immediate poisonous effects, is, I think, a point of interest. By the next morning the child was sitting up in bed quite lively, and as though nothing had happened. With the exception that the insensibility was not immediate, and that the cyanosis came on gradually after a few minutes (and was probably more intense than in cyanide poisoning), the appearance of the child suggested poisoning by cyanide; and this suspicion was the first that crossed my mind. I dismissed the idea on finding that the child had taken the salt one hour before, and the appearance of the salt did not resemble any of the common cyanides.

NORTH LONDON HOSPITAL FOR CONSUMPTION.

CASE OF PYO-THORAX; PARACENTESIS; RECOVERY;
REMARKS.

(Under the care of Dr. EDWARD SQUIRE.)

FOR the notes of the following case we are indebted to Mr. P. M. O'Brian, late resident medical officer.

C. D—, a girl aged seventeen years, was admitted on Nov. 17th, 1887. The family history was stated to be good.

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Both parents are living and healthy, and the patient is their eldest child. The personal history was also good. Her only illnesses had been scarlet fever with dropsy when twelve years old, and a sore leg from injury. Latterly she had been a ward-maid at the Temperance Hospital, and had been in indifferent health. She had held that position for eight months, but had to give it up about a month before admission on account of continued bad health. She then returned to her home in Hampstead with a sore throat, and had been at home about a week when the present attack began. The present illness commenced three weeks before admission with a distinct rigor, purging, and vomiting. Severe pain in the right side of the chest was complained of, with dyspnoea and cough, but no expectoration. The patient continued very ill, and on admission seemed to be in a very precarious state, being unable to stand, indeed scarcely able to speak. There was still severe pain in the side, and frequent cough, with slight expectoration which presented streaks of blood. The breathing was very rapid (56 to 60 per minute), the movements of the *ala nasi* being very noticeable. The face was flushed; eyes sparkling; tongue moist and furred. The pulse was rapid, being 144 beats in the minute, full and soft. The bowels were free. Urine scanty; acid; sp. gr. 1022; no albumen. The temperature, which was 102.4° on admission, fell to 99.4° on the following morning. There had been free perspiration for the first time on the night before admission.

State on admission.—The patient is a small dark complexioned young woman, with an anxious expression of countenance. The face is long and narrow, flushed at present, and covered with cold perspiration. There is much distress on attempting to speak. The lips are dry. The fingers tapering and clubbed at the ends, with a slow return of colour after pressing the nails. The chest is well formed and covered, and, with the exception of slight bulging of the right side in the upper part, no inequality is noticeable. In the right axilla some dilated cutaneous veins are seen. There is hardly any movement in the lower half of the right side, and dulness of a wooden character exists from the level of the third rib downwards when the patient is in the sitting posture, and from the fourth rib when in the recumbent position. About this level a sound resembling the *bruit de pot fêlé* is heard on percussion in front. Breathing is harsh here also, but over the dull area breath and voice sounds are absent; there is no ægophony, and no vocal fremitus can be detected. On the left side the respiratory movements are good. The percussion note on this side is also good, and the breath sounds harsh on auscultation. The lower border of the liver is depressed about an inch. The heart sounds are weak and the beat rapid. There are no murmurs. The apex beats one inch below the nipple, and a quarter of an inch outside the nipple line, vertical.

A stimulant mixture and diet were ordered, and the side also to be strapped. This gave much relief, and the patient seemed more comfortable. The temperature still kept up, being always highest in the evening, and reaching 103° as its maximum. The pulse also remained about the same, and the respirations were about 56. A cyrtometer tracing of the chest showed the right side to be uniformly enlarged and unaltered in form by expiratory or inspiratory movements. On Nov. 19th, two days after admission, a soft murmur was heard over the third left costal cartilage, and a faint pericardial friction sound was audible over the sternum to the right of this. Three days later the pericardial sound had become very distinct and loud, and was audible all over the cardiac area. On this day (Nov. 22nd) a hypodermic needle was inserted in two places in the right side: the first time in the fifth space in the nipple line, without result; the second time in the back, an inch and a half below the lower angle of the scapula, this time drawing off a syringeful of purulent fluid, slightly tinged with blood. It was decided to remove the fluid by aspiration, and the needle was inserted in the same position as the second exploratory puncture. Only about half an ounce of fluid came away, but this had some influence on the percussion note, the dulness being now less by about three-quarters of an inch, and the patient seemed to breathe with slightly less embarrassment. The pericardial friction sound continued as before, and a thrill was felt on placing the hand over the cardiac area. Breath sounds were still inaudible over the dull area of the right side. The evening temperature was lower for the two days after aspiration than it had been, but then rose as high as before. On Nov. 30th it was noted that the breathing was

becoming audible, though distant and feeble, down to the nipple level on the right. The general condition remained much the same. The friction sound over the heart was now very loud and pain was complained of. A blister was applied and relieved the pain, and the sound also appeared to be less intense afterwards. A creaking crepitant sound was heard in the right axilla, which, however, was not persistent, but only occasionally audible. About the mammary region a tubular note was heard with expiration, and the voice sounds were much more clearly conducted. On Dec. 2nd a friction sound was heard in the left axilla, just outside the apex beat, and a dragging pain was complained of at this spot. A blister was applied. The temperature also rose higher than it had been since admission. Three days later, notwithstanding this new complication, the patient's general condition was improving. There was now dulness on the left side below the nipple level. The pericardial sound also began to diminish in intensity, and disappeared during the following week. There was never marked dropsy of the pericardium, the beat of the apex never receded from the chest wall, and there was no increase in the area of cardiac dulness. From this time there was a slow improvement on the right side, accelerated by a second aspiration on Dec. 7th, the needle being inserted about an inch and a half posterior to the previous puncture, and again about half an ounce of purulent fluid was withdrawn. The breath sounds now became audible down to the fifth space in front, but were very distant. At the back they never became distinct below the mid-scapular level, except just after the second aspiration. The percussion resonance also was never clear below this level, but in front an impaired note replaced the previously wooden one. Both in front and behind, above the level of the third rib, whispering pectoriloquy was heard for some days. On the left side a coarse friction sound replaced the scrape first heard. The dulness previously noted became gradually less, but some slight impairment of resonance continued. From this time onwards the patient progressively improved. The temperature fell to the normal by Dec. 20th, and never rose above 99.2° after this. The condition of the chest remained much the same as has been just described, but the patient, at first slowly and then more rapidly, gained flesh. The aspirator needle was inserted into the right side a third time on Dec. 21st, but with a negative result. The patient left the hospital much improved on Feb. 7th, and remains well, going out to work as a needlewoman at the present time (Sept. 1st).

Remarks by Dr. SQUIRE.—This case is of interest in many ways. What strikes one most markedly is the evident progress of the inflammation right across the chest from the right to the left pleura, the pericardium being the medium of transmission. The result also shows that aspiration is a proceeding which may still be employed with advantage in cases of pyo-thorax. In this case there was probably a thin layer of purulent fluid which was removed by the aspirator, and the patient recovered with a thickened pleura, but also with a useful lung. In young patients, I am against recommending free incisions into the pleural cavity for the purpose of draining off the fluid, unless the quantity of the fluid is very great and has persisted for some time. Such openings result in the collapse of the lung of that side, and they remain long (sometimes permanently) patent and discharging. The patient then becomes incapacitated from earning a living, and is in many cases a chronic invalid. Aspiration, on the other hand, gives a fair chance of many years of useful and even active life.

Medical Societies.

CAMBRIDGE MEDICAL SOCIETY.

At a meeting of this Society on July 13th, Mr. Stear, M.R.C.S., President, in the chair, the following communications were made.

Cerebral Softening and Basal Meningitis.—Dr. BRADBURY read the notes of this case. H. B.—, aged twenty-nine, a labourer, married, was admitted into Addenbrooke's Hospital on Dec. 7th, 1887, and died on Feb. 6th, 1888. There was no history of past illness, though the man had never been strong; and no history of syphilis. In March, 1886, he complained of weakness in the right leg, with

symptoms of paralysis of the third left nerve. He attended as an out-patient under Mr. Wherry, who noticed mental dulness, occipital pain, paresis of the right leg, diplopia, external strabismus, ptosis, and dilated pupil on the left side. Vision: Right eye $\frac{2}{3}$, pupil $3\frac{1}{2}$ mm.; left eye $\frac{2}{3}$, pupil $8\frac{1}{2}$ mm. Twelve grains of iodide of potassium were given him three times a day. He improved, but still had weakness of the right leg on May 23th. In July the mental symptoms increased, and there was much weakness of the arms and legs, with some loss of consciousness. The following was his condition when seen: Strongly built man, well nourished. Peculiar smiling expression about face. Talks with slight drawl, and does not always know what he is saying. Left eye shows slight external strabismus; no ptosis; left pupil dilated, and does not react; right normal. Movements of the left side of the face slightly impaired; sensation normal. Tongue protruded in middle line. Complaints of vertical headache. Heart and lungs normal. Sensation in arms and legs good, muscular nutrition normal. Knee jerks excessive; ankle clonus well marked on both sides. On the left leg there is a round scar from an old ulcer, but no other scars. Urine acid; sp. gr. 1010; containing phosphates. The notes taken were as follows:—Jan. 6th, 1888: Slight convulsive seizure followed by difficulty in articulation; had three similar attacks since. Patient lies in a dull, drowsy state; cheeks blown out with each expiration. Marked ptosis of right eye, pupils very unequal; right small, left medium, both react. Speech coherent, but very indistinct. Pain over right side of head. Clonus of right leg at times without any cause. Superficial reflexes increased on both sides. Slight left facial paralysis.—10th: General condition improved, but marked left facial paralysis, deafness in left ear, and loss of taste on left half of tongue.—31st: During last few days the patient has become less sensible, and moans as if in pain. Rigidity of limbs marked on both sides, and legs drawn up in bed.—Feb. 2nd: More drowsy; pulse feeble. During the last few days there has been ptosis of the right eye with external strabismus and dilated pupil. Tenderness over right side of skull. No obvious optic neuritis.—6th: Rigidity of all the limbs; stupor increasing and difficulty in swallowing and breathing. He died the same afternoon. The patient was treated constantly with iodide of potassium, taking as much as thirty grains three times a day, during the month of January. The following post-mortem examination was made by Mr. Griffiths:—Dura mater normal. Great accumulation of cerebro-spinal fluid in subarachnoid space and also in lateral ventricles. Right hemisphere depressed towards its centre, convolutions almost obliterated and replaced by smooth, soft-looking tissue. The superior frontal, upper third of ascending frontal, ascending parietal, and occipital convolutions still remained. Left hemisphere generally atrophied. On section the greater part of the white matter of the right hemisphere had disappeared, and in its place there was a large quantity of milky-looking fluid, with shreds of more resisting tissue, bloodvessels mainly, traversing it. The softening could be traced down to the anterior part of the internal capsule. The white substance of the right crus cerebri was much diminished. No changes were detectable to the naked eye in the pons, medulla, and cord. At the base there was some chronic meningitis in the intra-peduncular space, and this extended backwards and downwards to the region of the cranial nerves arising from the pons and medulla. The vessels at the base were thickened and cord-like, but the right middle cerebral was patent, although small. The basilar artery was small, and contained a partially organised thrombus. In the medulla the right pyramid was small and sclerosed, and also the corresponding direct and crossed pyramidal tracts. All the other organs were normal.

Pigmentation and other Cutaneous Affections in Graves' Disease.—Mr. F. W. BURTON read a paper on this subject. He said there had been lately in the hospital two interesting cases of exophthalmic goitre, one remarkable for presenting with the symptoms of Graves' disease many of those of Addison's also; the second—besides other things—in that it occurred in a man, in which sex the disease only occurs once to five times in women. Mr. Burton thought there was no doubt that exophthalmic goitre was particularly common in this part of the country, a fact due very likely to the prevalence here of anæmia and rheumatic fever, both of which diseases were thought to predispose to exophthalmic goitre. The first patient was a married woman, aged forty-nine, a native of Fenstanton, who was admitted

into Addenbrooke's Hospital on Jan. 27th, under Dr. Latham. Her father died of an affection somewhat allied to Graves' disease—viz., diabetes. The mother and her family were consumptive—a disease present in half the cases of Addison's. The patient had rheumatic fever twelve years ago. (Dr. S. West found that of thirty-eight cases of exophthalmic goitre eight were rheumatic.) Her illness began with indefinite symptoms of dyspepsia; these became worse, and she was unable to take anything but liquid food, frequently retching after this. Palpitation then began to trouble her: she became nervous and so weak that she could not walk alone; her friends meanwhile noticed that her skin was getting darker. On admission she was very weak and thin, in the usual excited and tremulous condition met with in the malady. There was no exophthalmos, but Stellwag's and von Graefe's signs were markedly present, the thyroid was a little enlarged, the right lobe especially so, to about the size of a walnut. The pulse varied from 116 to 130, was of good size, but very soft and occasionally irregular in force. There was great pulsation of the abdominal aorta along its whole course, of such force that it could be seen through the bedclothes. The patient complained greatly of palpitation of the heart, at the base of which a systolic harsh murmur developed during her stay in the hospital. She was treated by complete rest and by careful diet, but what produced most striking benefit was the administration of tincture of belladonna. This she has taken for upwards of three months in five-minim doses. She still, however, shows traces of her pigmented condition, the pulse ranges between 90 and 103, the thyroid has not much diminished, and there remains a trace of von Graefe's sign. What especially attracted attention in this case was the pigmentation; it was almost exactly the tint of dirty skin, and was most marked about the face, neck, axilla, back—especially at the waist,—the genitals, below the knees where the garters pressed, and below a ring on her finger. There was no glycosuria, but Mr. Wilde, of the Physiological Laboratory, was kind enough to examine the urine for the pigment described as being present by Dr. MacMunn in Addison's disease. The precipitate, obtained from the urine by acetate of lead, was dissolved in absolute alcohol, acidulated by sulphuric acid; and this solution, examined by the spectroscope, showed a dark band from 48–50, the position described by Dr. MacMunn as characteristic of acid hæmatoporphyrin; the same fluid rendered alkaline assumed a greenish fluorescence, and by the spectroscope answered to the characters of alkaline solutions of hæmatoporphyrin. Mr. Burton said the special interest of this case lay in the coexistence of exophthalmic goitre and some of the symptoms of Addison's disease—viz., pigmentation, stomach trouble, and great debility. In the *British Medical Journal* of last year Dr. Drummond reported six cases of this combination of symptoms; in the *Ophthalmic Review* Dr. Carrington described the case of a woman, some of whose relatives had died of phthisis, who at the beginning of her illness had vomited, and was much exhausted, with a small, feeble pulse. Dr. S. West, from an experience of thirty-eight cases of Graves' disease, had seen pigmentation once. On looking through the old hospital notes, Mr. Burton found in the case of a girl, under Dr. MacAlister, it was observed that her skin was very brown where exposed to the sun. Dr. Gowers mentions a case in which the exophthalmos disappeared, but was succeeded by pigmentation of the skin. Mr. Burton had recently heard of six other cases of Graves' disease presenting pigmentation. He thought that the opposite condition of leucoderma was a less common occurrence in Graves' disease, though its occasional presence is mentioned by Trouseau and Raynaud, and he had seen one case where, together with the more classical symptoms of exophthalmic goitre, there was leucoderma on both arms and a blotch of enlarged capillaries on one cheek. There was in the hospital at the same time as the woman whose notes had been read a man, under Dr. MacAlister, aged thirty-four, and who for five months had suffered from alternating sweats and cold chills, then from palpitation and dyspnoea, with great nervousness. No cause could be found for his illness, unless we allow that family troubles consisting "of a birth one year and a death the next" were sufficiently abnormal to be reckoned an exciting cause. On admission it was noted that the eyes were prominent, that he easily flushed and sweated, that the thyroid was slightly enlarged, and the pulse seldom under 116. The heart's action was tumultuous, the area of dulness enlarged,

and the first sound was followed by a short blowing murmur. Von Graefe's sign was marked, Stellwag's absent. In addition to these symptoms, the patient had glycosuria, which disappeared after a week, and slight jaundice, with bile-stained urine which lasted three days; he had also an erythematous blush and slight oedema of both ankles, unaccompanied by pain or other sign of joint affection. He likewise presented that extremely coarse jerky tremor, on movement especially, described by Dr. Gowers as a symptom of this disease. Dr. Macalister treated this patient with rest and increasing doses of liquor atropiæ sulphatis, beginning with doses of two minims, but the only slight improvement that followed seems to tally with Dr. Drummond's observation, that glycosuria is one of the more unfavourable symptoms of exophthalmic goitre. Mr. Burton said that the especial points in this case he wished to draw attention to were the temporary jaundice, the erythema and oedema of the ankles, and the ready sweating and flushing. A third case attending Mr. Wherry as an out-patient, by whose kindness Mr. Burton was allowed to mention it, had palpitation, slightly enlarged thyroid, and von Graefe's and Stellwag's signs, together with a cutaneous affection he had not found elsewhere noted—viz., urticaria—which comes out every morning, and, after lasting an hour or two and causing the patient great annoyance by its itching, disappears, thus corresponding with the form of urticaria thought to depend on nervous, probably vaso-motor, influence. Mr. Burton also found the following cutaneous disorders recorded as having occurred in Graves' disease. Dr. Cheadle, in the St. George's Hospital Reports, mentions a case complicated by marked acne rosacea, due, he supposes, to congestion of the skin from general vascular dilatation; Dr. Burney Yeo, a case with loss of hair of the eyebrows and lids; and Leibe, a case with sclerema of the skin of the face and backs of the hands; while Charcot, in the *Gazette des Hôpitaux* for 1885, makes the observation that in this disease the electrical resistance of the skin is much diminished. Mr. Burton concluded by attempting to show that these symptoms could all best be explained by the accepted pathology of exophthalmic goitre—a sympathetic neurosis.

Aural Cases.—Mr. DEIGHTON read notes of two cases. One in which a purulent discharge had existed for upwards of twenty years, and where there was almost complete loss of the membrana tympani. In this case, after the otorrhœa was cured, entire regeneration of the membrane took place. The second case was one of abscess in the mastoid cells, with high fever and delirium, in which perforation of the mastoid cells was performed with a successful result. Mr. Deighton remarked on the frequent fatal consequences of neglected ear disease, and insisted on the importance of a knowledge of at least the elements of otology by all medical men. This, he maintained, could only be obtained by it being made compulsory that all medical students should show a fair knowledge of aural disease before they are granted their diplomas.

Reviews and Notices of Books.

Fever: a Clinical Study. By T. J. MACLAGAN, M.D.
London: J. & A. Churchill. 1888.

So much attention has of late been devoted to the elucidation of the febrile process that we may fairly hope to arrive at an explanation of its phenomena which shall satisfy all parties. One reason, perhaps, for the state of uncertainty respecting its problems is that fever has seldom been studied with sufficient breadth of view. Its most prominent feature—abnormal excess of body heat—has been exhaustively scrutinised, and experimentation has almost wholly been restricted to it. All other symptoms and lesions of the febrile state have been considered subsidiary to this, the essential and constant symptom. Naturally, therefore, much has been left to the physiologist to determine what is the mechanism whereby the temperature of the body, which in health remains so constant under most varying external and internal conditions, can in disease be so greatly deranged. The monograph before us shows the subject as it presents itself to the mind of a practical physician, who is not only well

informed of all that has been advanced by others, but who holds very definite and clear opinions of his own, which he expounds in an authoritative manner. One cannot peruse this work—which is one well-sustained argument in support of the doctrines advanced—without seeing that its author has a considerable grasp of the subject, and that he widens the view considerably beyond the limits mostly assigned to it; so that, in spite of some obvious flights of scientific imagination, he has succeeded in exhibiting the question in as thorough and complete a manner as has hitherto been attempted.

Dealing, in the first place, with the theory of fever, he assumes the position that heat must, like urea and carbonic acid, be regarded as an excretory product, which may be formed and eliminated either by increased metabolism, an exaggeration of the normal process, or by the influence of the nervous system through relaxation of the normal inhibition that restrains the heat-producing process. Of these two views—the metabolic and neurotic—he himself inclines to the former; but at the same time he is careful to point out that they are not antagonistic doctrines. Indeed, he is bound himself to resort to the neurotic theory in explanation of hyperpyrexia, although he finds it inadequate for that of pyrexia. He discusses the neurotic theory with impartiality, and rightly avers that such experiments as those of Wood upon the effects of artificially heating the body are hardly applicable as explanations of the febrile process in man. Dr. Macalister's ingenious exposition of the nervous mechanism in its threefold aspect—thermotaxic, thermogenic, and thermolytic—is held to be too strictly physiological, and to neglect the etiological side of the question, which the physician has ever before him. "To say that heat could be directly brought about by stimulation of a heat-producing centre, without increased tissue change, would be to place heat as a product on the same level and in the same category as volition and emotion, which is absurd" (page 23). Nevertheless, Dr. Macalister's views have gone far to bring into harmony the facts of pyrexia with those of hyperpyrexia, as well as the temperature disturbances that obviously own a neurotic origin. We are by no means so sure as Dr. Macalagan is that the neurotic theory is inadequate, or that it of necessity implies a disregard of the processes of tissue metabolism. It is not antagonistic to the metabolic theory, repeats Dr. Macalagan; might we not rather say that it complements the latter, which may well be subsidiary to it. The metabolic theory is amply discussed by our author from all points of view. He refers the tissue changes to the action of the contagium, which requires material for its reproduction within the system. It finds this in the store-albumen—probably the constructive, rather than the retrogressive,—and hence the wasting of the nitrogenous tissues, the increased consumption of water, and the heightened elimination of urea and of potash salts. In brief, of the two hypotheses, which is the more probable? Is fever due to the action of the poison (contagium) on the thermal nervous mechanism, or is it due to the direct operation of the contagium vivum on the tissues of the body? Dr. Macalister, it may be remembered, declined to enter into the question of etiology, but it is only fair that the hypothesis he propounds should be supplemented by the introduction of the agent which plays so large a part in Dr. Macalagan's argument.

The book before us is not, however, by any means confined to the above questions. Dr. Macalagan discusses in turn the symptoms of fever, especially the nervous symptoms—as rigor, headache, delirium, convulsions, and coma, as well as typhoid symptoms; referring these to the impaired nutrition due to the reproduction of the contagium particles; and so assimilating these symptoms with the pyrexia, not as results of the latter, but as concomitants due to the invasion of the organism by the same agent. He has also some interesting sections upon post-mortem appearances in fever, which are brought under the same influence. From this he div-

tagia, and their relations to the specific local lesions. In some highly interesting chapters, he contrasts the operation of the specific viruses with that of ordinary poisons, and discusses the different degrees of contagiousness of the specific fevers. He finds in the local lesions evidence of the presence in the body of the "second factor" essential to the propagation of the contagium, and attributes the varying severity of attacks, the cessation of fever, the immunity from second attacks, and other characteristics of these diseases, in a certain measure, to the amount and activity of the contagium, but perhaps in greater degree to the amount of this hypothetical "second factor," and its exhaustion. The subject is well reasoned, as are the arguments in which he shows that relapsing fever is an exception to the general rule. For in that disease he maintains there is no evidence of a "second factor" other than in the blood. Lastly, he discusses the treatment of fever, dealing first with specific fevers, next with malarial fevers and rheumatic fevers, and then with the action of febrifuge remedies. As regards cold, he maintains that "its curing hyperpyrexia is no proof that cold can cure pyrexia," and he does not think the statistics adduced in support of the routine use of cold baths in typhoid fever to be of much value. At the same time, he admits that cold is beneficial by stimulating inhibition. He says: "In all cases of fever in which the temperature tends to rise, or in which the patient is restless or sleepless, cold or tepid sponging is of service" (page 158); and that "when the action and use of cold is better understood, as it some day will be, when it takes its proper place as a stimulant of inhibition, and not as a direct depresser of function, we shall probably use it more freely than we do now" (page 164)—an admission which those who remember the author's former opposition to this antipyretic measure will be pleased to note. We may well leave it to our readers to pursue Dr. MacLagan's arguments for themselves. We can promise them some pleasant reading, and an acquaintance with doctrines which have at least the merit of originality, besides being evidently the outcome of a close study of the subject.

Holden's Human Osteology. Edited by Professor CHARLES STEWART and Mr. R. W. REID. Seventh Edition. London: J. & A. Churchill.

WE gladly welcome a new edition of this well-known work on human osteology, and can cordially recommend it to those about to commence the study of anatomy. To the student who is introduced for the first time to the subject, the work is presented in an attractive form, and the custom adopted in it of using coloured lines (red for the origins or more fixed ends, and blue for the insertions or more movable ones) to indicate the attachments of the muscles is one which not only attracts the eye, but assists in impressing the exact attachment of muscles to a particular bone, or part of a bone, more firmly on the mind of the learner. It will be found that great care has been exercised in accurately placing these lines, and the student who, remembering this, makes himself master of their exact situation on a particular bone has obtained possession of a fact which will stand him in good stead during the years to come. Of course it is not intended that these illustrations should take the place of close and accurate study of the bones themselves, but if the student, holding the bone in his hand, carefully reads the text, and compares the illustration with the bone, possibly marking it to ensure greater accuracy, he will advance rapidly and surely in his work. In the present edition a somewhat more detailed description of the bones has been given by Mr. R. W. Reid, who is well known to be an accurate observer and skilled anatomist. A few alterations have been made in the account of the minute structure and development of bone. Some of the plates have been withdrawn, and several new ones added. The descriptions of the larynx and of the ear have been omitted, the

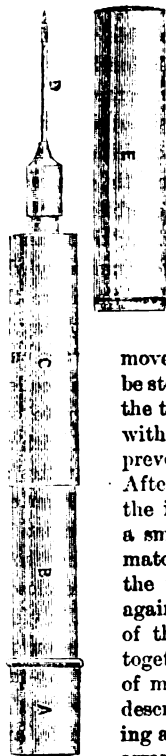
editors rightly thinking that they belonged rather to a work dealing with general anatomy than to one devoted exclusively to osteology. For a similar reason the description of the interossei muscles is left out. The references to specimens in the Comparative Anatomy Department of the Museum of the Royal College of Surgeons have been corrected according to changes in the Museum, under the charge of Prof. Stewart, to whom the book is also indebted, among other things, for excellent sketches of the parts composing the middle ear in the dry state. The work has been most carefully edited, and will undoubtedly continue to meet with great and merited success.

New Inventions.

NEW HYPODERMIC SYRINGE.

THIS newly patented syringe has been made in accordance with principles laid down by Mr. Lawson Tait. The following advantages are claimed for it: (1) it is portable and cheap; (2) there is no leather or other kind of piston to get out of order by becoming dry; (3) there is no glass barrel to be broken, and (4) if the soluble hypodermic tablets are carried, there is no need for the arrangement of a graduated barrel or piston. The syringe consists of three parts: the outer and lower, marked E, consists of a small tubular projection for the needle point, to be used as a boiler for dissolving the pellet by the aid of a match, candle, or gas flame. The pellet is put in it with

about twelve or fourteen drops of water and dissolved. The piston B is then removed from cylinder C; the latter is held with the needle downwards and the contents of the boiler are poured into it; the piston is then smeared with oil or vaseline, replaced in the cylinder, and, with the syringe reversed so as to bring the needle upwards, the piston is slowly pressed until the air is forced out of the cylinder and the solution begins to come out of the needle. It is then used in the usual manner. The piston B has a secondary use, for the screw-cap A at the top being removed, there is a place in which the pellets may be stored, a piece of cotton wool being placed at the top, the pellets then placed in and covered with a second piece of cotton wool, so as to prevent their being broken up by attrition. After use the piston should be wiped dry, and the inside of the cylinder dried by means of a small piece of cotton wool on the end of a match; a drop of oil is then to be drawn through the needle into the cylinder and passed out again; the point is to be wiped dry by means of the cotton wool, and the instrument put together. The whole apparatus is composed of metal, and, as will be seen from the above description, requires careful drying and cleaning after use. Much ingenuity is shown in the arrangement of the syringe, and it may be found



of service in cases where the necessity for its employment is not frequent; but we do not think that it will find favour with those who are familiar with the use of the conveniently graduated barrel and leather piston, with which, to commence the operation, it is only necessary to draw a ready-made solution into the syringe to the required amounts. Again, the needle is fixed, and cannot be removed for cleaning or replaced by a smaller one. It is sold by Messrs. Arnold and Sons, of West Smithfield, London.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 22, 1888.

THE treatment of the insane is a subject that penetrates our social and domestic life to the very core. We have long since ceased to smother the insane as incarnations of the devil or to burn them as witches; their chains have been struck off, and they are no longer herded together in gaols and outhouses. Palatial abodes have been constructed for them; much pains are taken to render the needful curtailment of personal liberty as brief and as little irksome as possible; and unceasing efforts are made to ensure their bodily comfort in diet and in clothing, just as the recreation of their minds is studiously catered for by both out-door and in-door pastimes, amusements, and entertainments. Yet we are told there is room for improvement; just as if any human effort could ever be called perfect under all circumstances.

Looking at the question in its broadest sense, it will be found that there are three great desiderata in the far-reaching problem of the treatment of the insane. 1. That the insane should be conducted to the recovery of their proper senses by the quickest, the most efficacious, and the most kindly means. 2. That the greatest possible amount of *teaching* as to what insanity is in all its relationships should be got out of the experience derivable from practical work in connexion with the insane; a kind of instruction that may be gained and utilised by all who come into relation with the insane, whether from a medical, official, domestic, or personal point of view. 3. That the confidence of the public should be established in the assurance that everything that can be done is being done for those members of the community who are insane, whether actually or potentially. Such are the issues upon which depends the attainment of what may be called the *summum bonum* in the matter of the care and cure of the insane. Taking these issues individually and collectively, are we able to say that, in our time and up to our lights, the attainment of this end has been pursued with an amount of success commensurate with the opportunities at our command, or such as might reasonably have been expected of us? In discussing this question, it must be observed that the issues involved, although they may each be taken independently, hang upon and are closely interwoven with each other in relation to the end in view. We think it may fairly be assumed that the returns on the first and third issues, those dealing with the recovery-rate among the insane, and the state of public confidence in lunacy matters generally, are on the whole creditable, and that they are more satisfactory than those returns which have reference to the present state of our knowledge as to what insanity is. No doubt our greater knowledge and experience of the insane are the means which enable the belief to be entertained that a remarkable advance has been made in the treatment and management of them, and that, as a consequence, the public confidence has largely risen. But we have, nevertheless, a consciousness that we are leaving to posterity a heavy legacy of exploratory work with regard to

the mysterious activities of cerebral and nerve matter and to the complex and intricate manifestations of mind in health and in disease. We have to acknowledge that the nature of the subtle processes going on at the point of contact between matter and mind is still unfathomed.

But although we are disposed to speak in a congratulatory strain upon the present methods of treating and managing the insane, we do not, ostrich-like, bury our heads and feel free from assault. We candidly admit that there is much yet to be done. The writer of a leading article in *The Times* of August 16th speaks as follows:—

"The places in which the insane are received are too much asylums and too little hospitals. The reform which is now chiefly wanted is to provide institutions like Bedlam, strictly hospitals for the treatment of the insane at the first appearance of the malady, hospitals out of which they may be drafted into asylums as soon as they were manifestly incurable. Such hospitals should have visiting as well as resident physicians, and the growth of knowledge about insanity should be encouraged by the same means which have been found so successful in the case of other diseases. Until this, or something like this, is carried into effect, it is only too probable that insanity will continue to increase, in spite of all that can be done to seclude and protect its victims."

We ourselves have often protested against the system of huge asylums, in which the aggregation of large numbers of chronic cases must prevent the possibility of the treatment which, call it "hospital" or call it "asylum," is desirable in the interest of the patients. The only real suggestion, however, made in the above quotation is the addition of visiting physicians to an asylum staff—a suggestion which in itself is proper enough. If the writer, addressing the general public, wished to discredit the asylum system in favour of a hospital system (whatever that may be taken to mean), it is a matter for regret that (apart from the exception referred to) he contented himself with setting out his scheme in a vague phraseology of statement and assertion that would apply to the existing asylum system, or to any other reasonably conceived system. And it would have been more considerate, not to say helpful, if, under the circumstances, he had taken care to tell, in clear language, what changes, administrative or otherwise, his "reform" involved or demanded. Is an insane person to be treated on the "hospital" system without a certificate of insanity, and, if so, on what grounds or by what right is he to be detained against his will? Does the writer in *The Times* expect that lunatics (who admittedly do many strange things, but who certainly do not readily own to the "soft" impeachment) will voluntarily go to a hospital and ask to be detained there against their will? If a lunatic is taken to what is called a hospital on a certificate of insanity, the presence and the advice of a visiting physician will not prevent the treatment being asylum treatment.

In the same article the writer says: "The truth is that the progress of knowledge more and more indicates that insanity is simply a disease subject to the same physical conditions as other diseases." If this quasi-definition of insanity be true, there is nothing to prevent the lunatic from driving to the nearest hospital for treatment just as the patient suffering from colic or renal

disease does. What further use is there for the trouble-giving certificate of insanity, or for the costly asylum with all its special and recreative appliances? Unfortunately, insanity is not simply "a disease subject to the same physical conditions as other diseases." It is a disease of this sort, no doubt; but it is, and it means, a great deal more. The hospital patient may be unfit to carry on his business, he may become a useless and sighing or irritable unit in the household, and he may become an inconvenience to himself, all on account of his physical infirmity. But what about the insane person? He is not only incapable of carrying on his ordinary duties; but, by reason of his disease, he rebels and fights against his own best interests; he is apt to bring the tranquillity of his family life into a state of disorder and confusion; he is a source of anxiety to his relatives and neighbours; and he finally becomes an antagonistic force, with an active power for mischief, in the midst of the community, a danger to himself or to others.

The right and proper treatment of the insane implies an investigation into, and an observation of, insanity from all standpoints; and we must regard a pathology which urges that it is *nothing* more than a disease like other diseases as a dangerous basis for treatment and management; for if we begin to deal with the insane on this footing, we are almost sure to find to our cost that it is a disease whose peculiarity is that it is so unlike other diseases.

FROM time to time a case of mismanagement in the treatment of disease occurs to disturb the vexed question of counter-prescribing in its relation to medical practice. This custom, indeed, is itself an evil which cannot be as easily cured as prescribed for, and which tends to reappear in spite of every remedy, as if it were some morbid parasite indigenous to the constitution of medicine. Space will not allow us to suggest a radical cure for an ailment so inveterate; but a short comparison of its various aspects, and a few hints as to prevention, will not be out of place. It is evidently as much a matter of public as of medical interest. A great many private persons who know nothing, or next to nothing, of disease are quite ready on occasion to undertake the treatment of what they take to be their minor illnesses, or, if they seek advice, it is to the chemist that they go, as if resolved to discover, not the source of their trouble, but if possible some drug that will reach and remove this unknown cause. They are willingly forgetful that the trifling ache may herald the attack of a serious illness in which delay is dangerous, or that the drug to which they vaguely turn may itself do harm. They care as little that their action places the chemist in a false and even an illegal position, since his licence does not extend to the treatment of disease. To a certain extent, the possible evil consequences of this practice are certainly counteracted by the caution of chemists in dealing with the charge thus thrust upon them, also by legal restrictions—such, for example, as those imposed by the Sale of Poisons Act. It would be impossible, however, to control effectually such indiscretions on the part of the public by legal measures. The law could only act with effect from the direction of the chemist, by obliging him to concede to the practitioner that immunity

from interference which he himself obtains at the hands of other tradesmen. This brings us to consider the position of the second factor in this problem. We are not unmindful of the difficulties of the chemist's position. There can be no doubt that a large amount of counter-prescribing is almost forced upon him. He is constantly called upon at a moment's notice to administer to some petty ailment, or to refuse his help at the risk of offending a customer, without, it may be, convincing him of his own true position in the matter; and his trade also is in these days encroached upon by a legion of patent medicine makers and store dispensers, without mentioning those medical men who, in accordance with a still prevalent custom, dispense their own prescriptions. His temptation to retaliate, by reaping when he can in his neighbour's field, is, therefore, no light one, though this does not of course excuse its illegality. In his case there is, however, no question as to what the law requires. The point at issue is the practical one of what is to be done. In spite of laws and logic, drug and symptom cross one another over the counter between chemist and patient, and will in all probability continue to do so, unless each can be made to see that health and fair trade are suited, as well as professional rule, when a more rational procedure is observed. It has been said (though the comparison is imperfect) that the prescribing chemist is the counterpart of the dispensing practitioner, and a necessary result of the struggle to make pharmacy pay. We are told that if medical men did not dispense we should hear very little of counter-prescribing. It is more than doubtful if the evil could be completely remedied even by such an arrangement. It certainly exists in districts where dispensing practice is virtually unknown. Still, the proposal is noteworthy. It promises at least a material abatement of this ancient abuse, and it would be wise, in dealing with a matter whose adjustment must greatly depend on the co-operation of those most interested, to remove all possible obstacles to a mutual good understanding. Dispensing practitioners think that they have good reason to exercise the traditional art of the apothecary. They maintain it for the convenience of their patients, and for their own advantage, as ensuring a permanent connexion with their prescriptions and with those who use them. A departure from their usual method would, they believe, imply a loss of income. These are doubtless matters of consequence to practical men. We are of opinion, however, that the change to which they demur would not, even in an economic sense, be as unprofitable as they think. The fact that practitioners in other countries not more favoured than our own are content to forego the work of dispensing is an argument in favour of this view. It is probable, therefore, that an extension of the prescriptive method would not entail such difficulties to the practitioner as some expect. If assisted by moderate charges on the part of chemists, it would not unduly tax a patient's means. Lastly, it would be of practical service in removing the *argumentum ad hominem* so freely used in his own defence by the prescribing chemist.

PROFESSOR TILDEN's address as President of the Chemical Science Section of the British Association was devoted

entirely to education. In the earlier portions he described the foundation of the great schools of practical chemistry which have had so great an effect on the cultivation of the science. Not one of these was in existence fifty years ago, the greatest, the Royal College of Chemistry, now merged in the Normal School of Science at South Kensington, having been founded in 1846. University College preceded it in order of time, but did not at first train any considerable number of advanced students. Many new colleges have since arisen; the older universities have been stimulated into greater activity, and the student who devotes himself to pure science can now obtain facilities for study in many parts of the country. Elementary chemistry has got not only into Board Schools, but with great difficulty into the higher private and public schools. Much of the elementary teaching is still unsatisfactory, partly because the ordinary schoolmaster has a natural tendency to regard science as an "extra" on which promising pupils should not be encouraged to waste time, and partly because imperfectly trained men have occasionally been selected as teachers. We all know the school science master of the old type. He has a smattering of all knowledge, and no real knowledge of anything. He teaches Latin, arithmetic, ancient history, and chemistry with equal facility, and often has to teach them all in the same day. It is said that at the present time teaching is more "earnest," but this generally means that the master is more earnestly anxious that his pupils shall pass some particular examination. The teaching is still in too many cases common in kind. For the examination test, with its defects and advantages, neither the school, the college, nor even the university is solely responsible. No one is satisfied with it; all would rejoice if some more satisfactory intellectual stimulus could be devised. All that can be said for it is that it is at present the only general incentive to exertion and the only sieve for the appraisal of merit that we possess. That it promotes tuition rather than education, most of us admit. The rarely occurring original mind is often cramped by it; but, then, it is clearly good for mediocrity and laziness.

There is at the present time considerable difference of opinion as to the mode in which chemistry should be taught and studied. Much of the confusion arises from imperfect recognition of the diverse conditions under which the study is undertaken. Students may be roughly classified as follows: First we have the purely chemical students, those who mean to be chemists, as an engineering student means to be an engineer. These students must be subdivided into those who can afford a long and expensive education and those who cannot. Then come the students who require chemistry as an auxiliary to some other branch of study or to practical work. In this class we have the students of medicine and of engineering and military science, and those who require some knowledge of chemistry for the manufacture or business which lies before them—as, for instance, dyeing, brewing, or soap-making. Finally, there is the very large class of students who do not want to learn chemistry, but only to pass some examination in which chemistry is requisite. However little sympathy we may have for such students, they cannot be ignored, for as long as the examination test lasts

no school or college can afford to neglect them. They have too great an influence on the pass list.

In these various classes and sub-classes the teaching requirements are evidently most various. As to the last unsatisfactory class, it is evidently the duty of the teacher, who is not responsible for the examination, to do all he can to help his pupils through it. It must be remembered that in many cases the pupil cannot fairly be blamed or accused of idleness because he dislikes science and works at it in a perfunctory manner. Take the case of the matriculation examination of the University of London. Hundreds, perhaps thousands, of boys who enter for this examination have a keen delight in literature, are excellent in languages, history, and poetry, and are perhaps intended by Nature to rival MACAULAY or TENNYSON. We do not complain of the examination, but we cannot wonder that such students are not sincerely interested in mathematics, mechanics, or chemistry, or that in reading for the examination they do as little in these subjects as in safety they can. As to those who require chemistry as an adjunct to other studies, the case is equally plain, and any unreasonable demand should be avoided.

Chemistry, and a good deal of chemistry, is essential to the intelligent study of medicine. But why should the student who already has a very extended curriculum before him be compelled to learn things that cannot be useful in his calling? Surely it is evident that the physician and the brewer need not understand the smelting of copper ores, or the mining engineer the derivatives of uric acid, or the chemistry of the carbohydrates. For all such students the main requisites are sufficient general knowledge to render an advanced text-book intelligible and a thorough mastery of all that relates to their own work in life.

In his address at Bath, Professor TILDEN devoted himself chiefly, as was natural, to the training of professional chemists as a means of promoting research and the development of chemical industries. He sketched the present and future requirements of the chemist in a style worthy of IMLAC, and most properly concluded that three years was a time quite insufficient for their fulfilment. He assigns five years as the period of training for a chemist; and, as mathematics, physics ("extensive and sound"), drawing, mechanics, steam, building construction, French, and German are necessary, the estimate is certainly not too low, especially as it is added that the greater part of the chemical student's time is to be devoted to chemistry. Of course, the speaker pointed out that much of this study should belong to the school education; but "a reform all round" is indeed wanted before a schoolboy can be expected to gain all that such a scheme involves. We have no fault to find with Professor TILDEN's curriculum, even though it includes an experimental repetition of the work of some classical investigations, such as those which he somewhat oddly selects as examples. But we cannot refrain from pointing out that such a course of study would not only be very tedious, but very expensive, and would practically shut out all whose purses were not as long as their heads must be.

This seems to us the great defect of Professor TILDEN's argument, and of many like it that we have heard before. It would be a grave injury to science if all were practically

excluded from it but those who by the accident of fortune could afford an expense of money and time practically equivalent to a university training. How many lads have had to earn their own livings in the laboratory at sixteen, or even at an earlier age, and how many have by patient evening work, after the scientific routine of the day was over, gained the higher qualifications required for the higher walks of science. Under such rigid rules as Professor TILDEN seems to favour, and which, we learn with regret, the otherwise valuable Institute of Chemistry has adopted, many of our most illustrious scientific workers in the past would have been excluded. A test which would certainly have shut out FARADAY ought to be viewed with suspicion.

WE notice with great satisfaction the scheme for an Intercolonial Medical Congress, to be held in Melbourne, Victoria, from Jan. 7th to 12th, 1889. It is altogether right and meet that the Australasian colonies should thus combine to organise a Congress in which medical men of the different colonies will stimulate each other to the cultivation of medical, surgical, and obstetrical science; and in which the representatives of State medicine and psychological medicine will be duly honoured. This Congress will coincide in point of time with the Centennial International Exhibition, which will be then in full progress. The Congress is a matter of importance, not only to the medical profession, but to the representatives of the State, and we are glad to see that it will have the countenance of the Governors of Victoria, of New South Wales, of New Zealand, of Queensland, of South Australia, of Tasmania, of Western Australia, of Fiji, as well as of the Hon. DUNCAN GILLIES, Premier of Victoria, and of Her Majesty's Ministers in Victoria. Nor is this patronage of statesmen to be a mere form. It takes the substantial shape of the Government placing a sum of money in the Estimates sufficient to cover the cost of publication of the Transactions. It augurs well for the colonies that its leading men show such a high sense of the respect due to a Medical Congress. We have heard much of late of the extent of quackery in these parts. The attitude of political leaders to the conference seems to show that they recognise in Medicine a science to be respected and encouraged as one of the most beneficent influences in civilised communities.

The harmonious action of the profession of the various colonies is another element in the outlook which promises well for the Congress. The Congress is to meet in the University of Melbourne, and the secretarial work will largely devolve on men in Victoria who love work and are known as workers. But with much good taste most of the chief posts of honour have been assigned to men of other colonies. The Presidentship of the Congress is assigned to Mr. T. N. FITZGERALD, of Melbourne. In the Section of Medicine, the Hon. CHARLES K. MACKELLAR, M.B., C.M. Glas., M.P. (Sydney), will preside; in Surgery, EDWARD CHARLES STIRLING, M.A., M.D. Cantab., F.R.C.S. Eng. (Adelaide); in the Section of Hygiene and Forensic and State Medicine, HENRY NORMAN MCLAURIN, M.A., M.D. Edin. (Sydney); in that of Anatomy and Physiology, Professor T. P. ANDERSON STUART, M.D., C.M. Edin. (Sydney); in the Section of Pathology, JOSEPH

BANCROFT, M.D. St. And. (Brisbane); in that of Obstetrics and Gynaecology, FERDINAND CAMPION BATCHELOR, M.D. Durh. (Dunedin); in Diseases of the Eye, Ear, and Throat, MARK JOHNSTON SYMONS, M.D., C.M. Edin. (Adelaide); in Psychological Medicine, FREDERICK NORTON MANNING, M.D. (Sydney); in Pharmacology, Baron Sir FERDINAND VON MUELLER, M.D., P.H.D., K.C.M.G., F.R.S. (this Section alone will be presided over by a representative of Victoria). There is a list of eighteen Vice-Presidents and an Executive Committee of eighty or more members. The Treasurer is Dr. GEORGE GRAHAM, of Church-street, Richmond; and the Secretary, Professor H. B. ALLEN, M.D. & B.S. Melb., Melbourne University. The Government of Victoria has, through the Premier, undertaken to show every courtesy to members of the Congress visiting Melbourne. Members from Europe will have free passes over all Victorian railways, and all members of the Congress will be entitled to return tickets at single fares. Shipping companies have agreed to special rates for passages by sea. We cordially commend the Congress to the profession in Europe as well as the colonies, and wish it every success. This success will depend, above all things, on the harmony and co-operation of the profession in Australia. But European members of the profession who can make it convenient to visit the colonies during the Congress will evidently have a very warm welcome.

Annotations.

"Ne quid nimis."

MIND AND MATTER.

IT was a happy choice of subject which led Principal Caird to discourse of mind and matter in the sermon which he preached before the British Medical Association at Glasgow, for the problem of the relation between them is not only of special interest to the student of the human frame, but it is precisely one of those topics which rise beyond the sphere of purely scientific discussion and demand examination by the aid of the broadest generalisations which it is possible to cull from all the sciences. No doubt it is to the physiologist and to the pathologist that men chiefly look to-day for new materials for the doctrine of mind. But at present we are far from having demonstrated a kinetic theory of thought. Between the facts of consciousness and the phenomena of vital functions there is some traceable parallelism, but there is as yet no provable identity. The proof may some day be forthcoming. The presumptive evidence is already both voluminous and striking. It has of late acquired additional impressiveness from the large conclusions which it has been possible to reach concerning the essential unity of energy in all its various manifestations, and there is nothing unreasonable in the hypothesis that brain function and consciousness, for example, are but the reverse and obverse sides of the same fact. There is nothing wild in the expectation that some day, and even shortly, this identity will be scientifically proved, and it is gratifying to find that among the recognised leaders of religious thought there are those who are prepared not only to consider such problems, but also to accept such solutions of them as advancing science may be able to discover. Principal Caird, however, although he displays the fullest appreciation of the strength of the argument which brings mechanical, chemical, vital, and probably mental activities under one comprehensive classification as various manifestations

of energy, is confident that materialistic theories are all open to one final and fundamental objection—namely, that they presuppose mental attributes in the very matter out of which they construct the theoretical mind. The objection, if objection it be, undoubtedly lies against that theory which the preacher had especially in mind, and is even its salient feature. Indeed, it may with equal truth be said that the tendency of modern thought is to materialise our views of mind, or that it is to enlarge and spiritualise our views of matter. The crude notion of something gross and inert no longer satisfies the most sceptical of scientists as a definition of the material part of the universe. He discerns vehement molecular action under the surface of its massive repose: there is heat in its polar ice, tension in its most mobile fluids, elasticity in its toughest solids, and an interpenetrating ether in the recesses of its most compact and coherent masses. Would it be surprising if the crowning discovery were still further to modify our opinion of this strange and ill-comprehended entity, and were to reveal in what we, “in our ignorance of its latent powers, and notwithstanding our professed reverence for its Creator, have hitherto covered with opprobrium,” a capacity, barely suspected heretofore, of unfolding the highest manifestations of life and thought? Are there not in heaven and earth more things than are “dreamt of in our philosophy”? From such materialism—if, indeed, materialism be an apt term by which to describe it—the Christian moralist has nothing to fear. For our own part, indeed, we hold that the authority of morals and the truths of religion are not in any case contingent upon the regnant physical philosophy. The inward needs which they satisfy, the outward facts which they serve to generalise, and the profound emotions to which they give expression, are as permanent as humanity itself. Their language may undergo modification, their sanctions may be subject from time to time to change, but the unquenchable thirst for truth, the inexpugnable reverence for right, will continue in the future, as in the past, to make morality something more than a way of reconciling opposing interests, and religion nothing less than the highest devotion of the noblest spirits among the sons of men.

TIGHT LACING.

AMONGST the various subjects to which the members of the British Association directed their attention at the late meeting at Bath, and upon which the ladies attending the Biological Section may fairly be regarded as competent to express an opinion, was the custom of women to wear stays. The discussion might have been considered a mere playful interlude introduced by Professor Roy and Mr. Adam to enliven the proceedings, were it not that trivial subjects—trivial, that is, from the Association's point of view—are most likely to excite the bitterest feelings. The wearing of corsets has really two aspects, which deserve separate consideration—the hygienic and the æsthetic. From the hygienic point of view, the question resolves itself into one of the degree to which the compression, or, as women say, the support, of the chest is carried, and the rapidity with which that degree is attained. The body as a whole, and the several organs composing it, have a wonderful power of accommodation to surrounding circumstances, permitting changes of form and even of position that appear at first sight incredible, without material impairment of function. If the form of so unyielding a part as the head can be greatly altered, with preservation of ordinary brain power, as occurs amongst many savage tribes, by pressure begun early and steadily continued, we may be sure that much more might be accomplished if similar pressure were applied to so mobile a part as the chest without greatly impeding the function of respiration. Such moulding of the

form of different parts is familiar to all as an effect of disease; and many a man or woman, after an attack of pleurisy, terminating in empyema and adhesions, possesses an unsymmetrical thorax, which nevertheless serves him or her well throughout a long and active life. The body, in other words, permits considerable liberties to be taken with it without serious impairment of health; and if pressure of the chest were commenced in early childhood, and steadily persisted in, no doubt still greater deviation than is commonly seen could be induced. As a matter of fact, however, in this country such pressure is not applied; the stays given to girls by sensible mothers up to the age of fourteen or fifteen are soft, and exert little more pressure than the waistcoat of a boy. At that age, when the figure naturally changes, the firmer support is taken into use, and the amount of harm it occasions is dependent on the degree to which support becomes compression. There are no doubt many girls who, desirous of making themselves conspicuous and, as they foolishly believe, attractive, tighten their waists to such an extent as to incapacitate them for taking exercise and for the necessary ingestion of food; they consequently become weak, pallid, and chlorotic. These evils are, moreover, intensified by the rapidity with which the compression has been applied, and all who are interested in their welfare should exert themselves to point out the egregious folly of such a practice. Upon the æsthetic side of the question there is little to be said; here, as in so many other controversial questions, *de gustibus non est disputandum*. Amongst the Greeks, for ages the arbiters of taste, the women wore an apology for stays, and we are told that at a very early period the girdle was strengthened by metal, and long before the Christian era a broad band or belt was worn next the skin to support the breasts. According to Planché, the practice of tight lacing appears to have been introduced by the Normans as early as the twelfth century, and has been in use ever since. We apprehend the ordinary Englishman, though he may wonder at, does not really admire, a wasp-like figure. Both hygienically and æsthetically, tight lacing is a mistake. Yet it must be remembered that, partly as a result of climatic conditions, partly from abundance of food and absence of severe work, and partly perhaps from the hereditary effect of sexual selection, a large proportion of the young women of England, of the middle classes at least, are disposed to the accumulation of fat in the breasts, and though from the age of seventeen to twenty-four the breasts may be firm and prominent, yet after that period they are apt, without artificial support, to become flaccid and pendulous. The advantage of support, however, is no argument for the employment of compression. Dr. Hoyle made a good hit in saying that no woman regarded herself as properly dressed unless she felt a little uncomfortable. He might have added that the proportion of discomfort experienced may be pretty safely taken as the measure of mischief being effected in the willing victim of tight lacing.

THERAPEUTIC METHODS.

WE take the following passage from a clever, if somewhat satirical, paper entitled “Therapeutic Nihilism,” by Dr. Maurice Clarke, which was read before the Massachusetts Medical Society.¹ “Some men are naturally disposed to look at disease from the standpoint of preventive medicine; some from that of hygiene; some with a reverence for the *vis medicatrix naturæ*; some with a belief in active medication. The latter position is certainly the most attractive to the average medical man, and, in the presence of any serious illness, it is the most acceptable to the laity, in spite of the popularity of that therapeutic *opéra bouffe*, homœopathy. Again, some men incline to run, after new

¹ Boston Medical and Surgical Journal, Aug. 80th.

fashions, treating all diseases impartially and indefatigably with the newest discoverable drugs, and endeavouring to keep up with the 'samples' of the manufacturing chemist; this is the experimental therapist. Others, too inert perhaps to shift for themselves, leave to these the practice of experiment, but borrow from them the suggestions their results afford; this may be called vicarious therapeutics. Others, again, settle back into the comfortable habit of always giving the same thing for the same disease, and thus, having once been in travail and delivered of a diagnosis, have nothing left to do but consult their books or their memories for the indicated remedy; this method of practice, I suppose by far the most common and certainly the most degrading of all, is routine therapeutics. There are a few physicians, however, who look upon each case as to a certain extent *sui generis*, and who bring to its relief not only the results of the experience of the past and the experiments of the present, but also a personal opinion of the needs of a particular case, and who, so far as they are let, endeavour to do what a sound training, an impartial judgment, and an active conscience command, and this seems to me rational therapeutics."

"IS MARRIAGE A FAILURE?"

It is very questionable if the correspondence which has lately made its appearance in a daily paper under this absurd heading is not really as aimless as it is abundant. To discuss with all gravity the *failure* of an arrangement which is simply indispensable to civilised and moral existence because it is, like every work in human hands, imperfect, is surely in itself suggestive of a fallacy. We do not say that such a discussion is wholly fruitless. It may in some cases prove useful, by enabling the discontented to air their grievances, and to exchange with fellow-sufferers, in a printed form, and, as it were, under new management, the old remedies for wedded strife, the old articles of the domestic faith. It will probably also do some harm by prejudicing unsettled heads in favour of hasty conclusions, and by opening up a taking theme for idle tattle. The cynical think-little, do-little, wordy believe-nothings who are always on the watch for languid sensations will regale themselves on its exposures. It is very unlikely, however, that any gain of real value will emerge from this mass of confessions which has not already been obtained over and over again from the simpler teaching of common daily experience. We have taken exception to the general title of this correspondence. It would, indeed, be difficult for any individual to prove out of a limited personal experience the plausible assertion that marriage has failed to attain its purpose. Scarcely any better success is to be expected from the published opinions of many contributors. We need not in this case look for more than a consensus of discontent and of remedial suggestion. It is hardly possible to conceive of any substitute arrangement by which the relations of the sexes could be regulated. Marriage customs and their consequences vary no doubt very widely among different peoples, and they are not by any means all equally beneficial. Still it must be allowed that the drawbacks to their observance are altogether trivial in comparison with the social anarchy which must follow their removal. We must remember also that the unhappiness which attends many unions is to a large extent avoidable. It is not, indeed, to be obviated by any merely formal arrangement of compromise between husband and wife, but it can hardly exist where mutual help and consideration are freely interchanged. Selfishness is the great destroyer of domestic peace. In spite of many follies and troubles, of the heedlessness of early marriage, of scanty income, of hereditary delicacy and actual illness, there is a strong vitality in the goodwill of

many families. The source of this is a sense of common interest. Contentment grows apace in the presence of this frank regard of each for the well-being of the whole, and if harmony is any proof of success, marriage is not then a failure.

HYDROFLUORIC ACID IN PHTHISIS.

DR. GAGER of Arco, near Gastein, has published in a Hungarian medical journal an account of seventeen cases of phthisis in which he employed the hydrofluoric acid treatment. From the results obtained he is led to think that this treatment is in some cases capable of exerting a really beneficial influence. His method of procedure differs somewhat from that employed by Dujardin-Beaumetz, Hérard, Garcin, Lépine, and other French physicians who have written on the subject. As an inhalation chamber, he made use of a compartment of a wooden hut, which was well boarded, and had a well-fitting window-sash and door. Its capacity equalled eight cubic metres. In this the patients—one, two, or three at a time—were seated, their clothes being protected from the injurious effects of the acid by sheets. The gas was manufactured in an adjoining compartment, and conveyed to the ceiling of the inhalation chamber by a leaden pipe. For the preparation of the gas, Dr. Gager at first employed Seiler's apparatus, but subsequently discarded it for one he devised himself out of a pair of bellows, a gas meter, a three-necked gutta-percha bottle of the capacity of a litre, with some indiarubber and leaden tubing. This apparatus (which is now obtainable from Herr Siebert of Vienna) answered so well that he has employed it constantly. A solution of hydrofluoric acid was used of the strength of 46 to 54 per cent.—i.e., of from 28° to 32° of Beaumé's hydrometer. Sometimes this solution contained minute quantities of sulphuric acid or of sulphuretted hydrogen, but no evil effects were produced by these impurities. They came off almost entirely in the first five or ten minutes, so that if after that time the inhalation chamber was well aired the gaseous contents were subsequently pretty pure. As the inhalation chamber was closed, the air soon became vitiated by the patient's breath. It was therefore always necessary to open the door and window for two or three minutes so as to ventilate the apartment from three to eight times during the hour the inhalation was continued. As a rule, the patients were ordered one sitting of an hour's duration daily; occasionally, however, two sittings were given. The volume of air impregnated with hydrofluoric acid driven into the chamber was, during the earlier sittings, from 80 to 100 litres per head during the hour. After the first five sittings, when the patients had become a little habituated to the gas, the amount was increased to from 100 to 600 litres per head. Into the gutta-percha bottle was poured 100 grammes of distilled water, and to this 30 grammes of the solution of hydrofluoric acid of the strength of 30° to 32° Beaumé added. The bottle was not emptied after the sitting, but before the next time it was required, a fresh portion of 30 grammes of the acid solution was added, and this was repeated until the amount of fluid in the bottle reached to nearly 300 grammes. It was then emptied, and 100 grammes of distilled water put in again, the acid being added as before. The external temperature appeared to influence the quantity of gas taken up by the air, as it was forced through the solution considerably. On warm days the patients always remarked that the "inhalation was stronger." On these occasions a little pure air was also pumped into the inhalation chamber. All the patients on whom this treatment was tried presented tubercle bacilli in their sputum, the author's investigation being specially directed towards the "antibacillary" property of the hydrofluoric acid. Care was also taken to examine the state of the kidneys

and the urine so as to exclude all cases with renal complications. All the patients complained during the first three sittings of smarting and itching in the nose, of smarting in the eyes, and often of sneezing, which lasted for days. Some patients had increased cough, and even streaks of blood in their sputum—the inhalations having, indeed, to be stopped for some days on that account. Thirteen of the seventeen patients found their appetite increased after the inhalations. In one case there was a slight epistaxis. The following is a *résumé* of the general results obtained:—(a) In five cases the bacilli disappeared from the sputum, a marked improvement of the symptoms being also noted. (b) In seven cases there was a distinct improvement in the physical signs. (c) The body weight increased in twelve patients, but the amount of the increase appeared to bear but little relation to the improvement of the general physical condition; e.g., in one case where the bacilli disappeared, and where the physical signs improved, there was no increase in the weight at all, and in another there was no improvement, though the weight increased nearly four pounds. (d) Three of the patients had pyrexia; of these, one lost it entirely, together with all the expectoration and bacilli; in the second case the fever decreased, but in the third it continued as high as ever. (e) One of the patients suffered from night sweats; these entirely disappeared. (f) In seven cases the vital capacity increased to the extent of from 100 to 600 cubic centimetres. (g) In two cases somewhat severe irritation of the laryngeal mucous membrane was set up, thus showing that this kind of treatment is contra-indicated in cases of laryngeal phthisis—at all events, only an exceedingly small quantity of the gas ought to be given. (h) In five cases, including one where laryngeal complications existed, no improvement could be noticed; one very advanced case died. (i) No evil after-consequences presented themselves in any of the cases.

THE ANALYSIS OF WELL WATER AT GREAT GRIMSBY.

In a recent report submitted by Dr. Page to the Local Government Board on the sanitary condition of the adjoining urban sanitary districts of Clew-with-Weelsby and Great Grimsby with reference to the prevalence of enteric fever there, the continuance of the use of well water in Great Grimsby, and the attitude of the sanitary authority in regard to the chemical analysis of waters obviously liable to the risk of contamination by soakage of filth, are especially adverted to. Wells to the number of some seventy or eighty are in use in different parts of the borough, and no comprehensive action is taken as regards them beyond the closure of such as have been actually condemned on chemical analysis, and this although the medical officer of health has reason to attribute frequent occurrences of enteric fever to the use of the water from these wells. Amongst some of the waters recently sent for analysis there were two deserving of some notice. One was from a pump well supplying ten houses, and into which the yard cesspool was discovered to leak; the other was from a pump supplying six houses, and which shortly before yielded a water of a "stinking and undrinkable character." The results of the analyses of these waters led to the following opinion on the part of the analyst: "Water of a very high degree of purity, and if drawn clear of deposit everything that could be desired." And again: "Seems to have received salt water to a small extent; fairly good water if allowed to stand to allow the slight deposit to settle." These are some of the many instances which have come before us from time to time, showing how dangerous it is for the chemist to express an opinion as to

the wholesomeness of a water supply when the formation of his judgment has to be based only on the chemical constituents of the individual sample which has been submitted to him. We would gladly see chemists limiting their reports to a statement of the actual chemical results obtained by them, leaving the interpretation of those results to those who know the local circumstances of the supply. If they did so, much more comprehensive action might result in the direction of getting rid of supplies drawn from dangerous sources. "The chemist can," to quote the medical officer of the Local Government Board, "tell us of impurity and hazard, but not of purity and safety. For information about these we must go, with the aid of what the chemist has been able to teach us, in search of the conditions surrounding water sources and affecting water services."

FRONTO-FACIAL ASYMMETRY IN EPILEPTICS.

IN the current issue of *Le Progrès Médical*, MM. Bourneville and P. Sollier direct attention to the frequency with which a certain degree of want of symmetry in the face and forehead is met with among epileptics. The point was originally noted by Delasiauve, and then by Lasègue, who regarded this asymmetry as an important element in the disease, suggesting even that the malformation of the base of the skull which must accompany such an asymmetry might actually be the cause of epilepsy. MM. Bourneville and Sollier do not discuss this point, but content themselves with a re-examination of the anatomical fact, the correctness of which was disputed by Garel in 1878, upon the results of his examination of a large number of epileptics, as well as of healthy individuals. But he did not apparently confine his observations to cases of idiopathic epilepsy, and he misinterpreted Lasègue's observation to be that facial asymmetry meant epilepsy, and not that epilepsy was always associated with facial asymmetry. Obviously the former proposition is by no means true, since facial asymmetry (to a certain slight degree) is probably the rule. Neither Lasègue nor Garel employed any definite method for testing the point, and accordingly the present attempt of MM. Bourneville and Sollier was made to obtain more exact information. Casts were taken of all epileptics dying at La Salpêtrière and Bicêtre, the limitation to fatal cases permitting of the exclusion of symptomatic epilepsy, and the casts allowing of very precise measurement and comparison. By a simple device tracings were taken around the head at different levels; so that accurate measurements could be made of the circumference at the frontal eminences, at 25 mm. above the eyebrow, and also at the level of the malar eminences. The detailed results of the series of thirty cases thus accurately measured are given in a thesis by M. Pisen, who worked under their direction. They were struck by the frequency with which the fronto-facial asymmetry occurred. In only one out of the thirty cases was there no real asymmetry, the forehead alone projecting rather more on the right side than on the left. In all the other cases, there was either frontal, facial, or fronto-facial asymmetry, associated often with asymmetry of the nose, mouth, or chin. Thus, these measurements completely confirmed the clinical observations of Lasègue. They noticed, furthermore, that young epileptics who died before the basis cranii was consolidated showed this asymmetry often to a very marked degree; and therefore it is suggested that the asymmetry is due to an arrest of development rather than defective ossification. The authors incline to the belief that the cranial deformity is directly associated with cerebral deficiency, so that in their view the asymmetry characteristic of the epileptic is practically the index of the lack of cerebral development, and not the cause of the latter.

Very often in such cases the cerebral hemispheres are of unequal size. The subject, however, is still open for further investigation in these respects. As a clinical fact, the observation that the majority of cases of idiopathic epilepsy present "fronto-facial asymmetry" is of considerable interest. It may even, as MM. Bourneville and Sollier point out, be employed as an aid to the differential diagnosis between such cases and those of symptomatic epilepsy.

HYGIENIC CONGRESS AT BOLOGNA.

A HOLIDAY contributor writes:—"Besides its Exhibition of Industry and the Fine Arts (still open) this grand old historic city is preparing another attraction, this time for the ever-increasing public which is interested in State medicine. The third assembly of Italian hygienists holds its meetings in the Archiginnasio, lately the scene of the commemoration of the eighth centenary of the University, and these will last four days, from October 6th to the 9th inclusive. The programme is of special interest, not too comprehensive and not too varied, but well selected and well calculated to evoke salutary discussion. It includes the following subjects:—(1) The Prophylaxis of Syphilis; (2) the Rag Trade in respect to the Public Health; (3) the Artificial Colouring of Alimentary Substances; (4) the *Matériel* of Construction in relation to Hygienic Architecture; (5) Artificial Butter; (6) the Provisions of the New Sanitary Code about to be presented to the Italian Legislature. The medical and hygienic authorities already announced to take part in the proceedings are numerous, and represent all European countries, Italy herself contributing her Ministers of Public Instruction and of the Interior. The organising committee cordially invites the participation of all who are interested, whether professionally or as amateurs, in the subject matter of the Congress, and *biglietti d'ingresso* (entrance tickets) will be forwarded freely to all applicants addressing themselves to 'The President, Royal Italian Society of Hygiene, 5, Via Clerici, Milan.' Reduced railway fares and other privileges in the matter of excursions and entertainments are among the liberal provisions vouchsafed by the committee to its guests."

MEDICAL INSTRUCTION FOR SEAMEN.

THERE is no class in any civilised people so far removed from the helping hand of the surgeon or physician as are its fishermen and sailors while at sea. In spite of the fact that the larger vessels usually have a medical man on board, there is a multitude of cases for which no adequate provision has been made in view of possible illness or injury. In consideration of this deficiency, a movement is now on foot for instructing sailors, whether officers or men, in such principles of treatment as might prove serviceable in cases of emergency. The St. John Ambulance Association has been mentioned as an appropriate medium for the proposed course of instruction, and the work is worthy of its efforts. It is a matter of some difficulty to say what should be the plan and limits of such a course. The ordinary principles which underlie all treatment must still be taught as heretofore; but details alike of principle and practice will have to be modified to suit the peculiar exigencies of a life at sea. The plan of instruction might even have to be extended somewhat. It has been proposed to instruct masters and men in surgery. To do this in any but a very imperfect way is, of course, impossible. Nevertheless, there are, and must be, occasions on which surgery and medicine also have, in the case of ship masters, a real and practical though a limited meaning. On land it certainly is most advisable, when "first aid" has been rendered, to summon medical assistance. At sea, did circumstances allow, no other practice could be so desirable.

But often this is not the case. Separated by days of ocean travel from any skilled practitioner, a ship captain is, in the event of illness, cast upon his own resources. There are times when he must act. He therefore carries with him a medicine chest of simple remedies, and a few indispensable instruments—as, for example, the catheter. It is needful that he should know, as far as it is possible to teach him, how to use without abusing these, when to treat, what to do, what not to do, and when to stand aside. We cannot make him a doctor, nor substitute him for one; but by thus instructing him we shall, with the least avoidable risk, prevent him from doing positive harm as an idler in times of urgent need. These remarks of course apply solely to the case of officers. For ordinary seamen, who exercise hardly any responsibility in comparison, the instruction comprised within the scope of the usual ambulance course is amply sufficient.

LOW TEMPERATURES IN LUNATICS.

DR. M. SCHÖNFELDT, one of the medical officers of the Röttenberg Asylum, Riga, communicates to the *St. Petersburger Medicinische Wochenschrift* notes of two cases of subnormal temperature occurring in insane patients, which he thinks it well to record, although there was nothing very special about these cases. Since the first paper by Löwenhardt on the subject was published, in 1868, some thirty cases have been recorded in medical literature and the course of the phenomenon discussed, though this is as yet by no means very clear. In Dr. Schönfeldt's two cases the following explanation of the lowering of the temperature is suggested. In one patient the cause was thought to be in the long and trying excitability which existed, together with insufficient clothing and nourishment, although experience teaches us that these do not always lead to a diminution of temperature. The other case was apparently susceptible of an explanation of a physical character. Numerous baths and a complete absence of clothing at a cold season of the year might easily result in a considerable loss of the warmth of the body, and a consequent diminution of temperature. The two cases have many features in common with those already recorded—viz.: the form of disease—dementia paralytica; continual irritability during the course of the disease; lowering of temperature, particularly after disappearance of adipose tissue; and the immediate cause of death (pneumonia), the cause of the pneumonia being probably septic infection. It is remarkable that the subnormal temperature of 29.5° C. was raised by the pneumonia to 37.2° C.

PUBLIC MORTUARIES.

THE Whitechapel tragedies are bringing to light more than one metropolitan want. The need for proper mortuary accommodation in the Whitechapel district was the subject of protest by Mr. Phillips, who complained of the impropriety of expecting medical men to make autopsies in places wholly unfitted for the purpose. His views were endorsed by the coroner and jury at the inquest of the unfortunate woman who has been recently murdered, the former stating that there was no public mortuary between the limits of the City of London and Bow. The absence of accommodation of this kind is an undoubted reproach to London, which would not have been tolerated had any sufficient system of sanitary administration existed in the metropolis. The method of leaving every district to manage its own affairs, without inquiry by any department of the State, is doubtless responsible for much of the default of local authorities. The position of London generally in respect of mortuary accommodation would make a fitting subject of investigation by the Local Government Board or Home Office.

NATIONAL DISEASE PROBLEMS IN SOUTH AFRICA.

UNDER the above heading, Dr. Charles F. K. Murray dealt, in his recent Inaugural Address to the South African Medical Association, with some of the problems which urgently call for solution by the Legislature, if the growing populations of the South African colonies are to be protected against the uncontrolled invasion of certain diseases which must be regarded as preventable, and proper to be placed under definite penal and other restrictions. Leprosy, for example, is acquiring a hold upon some portions of the population; but as yet a *laissez-faire* policy prevails, which allows lepers to carry on such trades as hawkers of fruit, vegetables, and fish, tailors, dress-makers, laundresses, butter-makers, and confectioners. Dr. Murray appeals to past history and to the attitude of other countries in support of his contention that segregation alone offers a solution of the difficulty which has to be faced, and he refers to a number of countries, including Great Britain and France, to show how freedom from leprosy was only brought about as the result of the establishment and maintenance of leper houses. The gaoles are, in his opinion, partly responsible for the spread both of leprosy and of syphilis; the syphilitic, the leprosy, and the intemperate being herded together under conditions of systematic overcrowding, in ill-contrived and badly-ventilated cells. The conditions under which syphilis is spread is a matter of very grave importance to the future population. Evidence is quoted in support of the statement that in some localities a large proportion of the lower classes are syphilitised, and details are given to show how the disease is communicated by nurses and others to children. Coloured nurses resort habitually as a favourite procedure to that most objectionable practice of themselves chewing the food of infants, and thoroughly insalivating it before giving it to the children; and when those children are found with condylomata in their mouths, the same condition can be detected in the mouths of their nurses. Alcoholism is the next disease touched on in the address, and it is appalling to contemplate the ultimate results which must ensue, especially to the coloured races, on the uncontrolled consumption of alcohol in a colony where wine is sold at 1d. and 1½d. a bottle, and brandy at from 4d. to 6d. a bottle. The task before the colonial Legislature, as regards the control of these three specified evils, is admittedly an onerous one; but if the national health is to be maintained, now is the time for considering how remedial action can best be applied. Other points beyond the medical bearing of the question will doubtless have to be held in view; but nothing can excuse delay, which will be the more fatal the more it is prolonged.

ERYSIPELAS AND TUBERCULOSIS.

As the result of experiments, M. Solles concludes that erysipelas retards the evolution of experimental tuberculosis in the guinea-pig; the animals may survive twice as long as when erysipelas is not produced in them. This survival is all the more remarkable since experimental tuberculation in the guinea-pig causes a general tuberculosis, which is much more rapid and much more serious than human pulmonary phthisis. The antituberculous action of erysipelas is double: it has a general influence, as shown by the prolongation of life; and it has a local influence limited to the erysipelatous area, causing the induration, ulceration, and lymphatic swelling due to the tubercle to disappear. This localised action, clearly antagonistic to tubercle, is of such a nature, argues M. Solles, as to encourage the search after some parasite which shall have the power of destroying the bacillus tuberculosis.

THE PEOPLE'S FOOD QUESTION IN SWITZERLAND.

THE Swiss Society for the Promotion of the Public Good has addressed to all the Working Men's Clubs, Mutual Co-operation Unions, and Agricultural Labourers' Associations, throughout the Confederacy, a circular inviting their support in the work of improving and cheapening the alimentation of the people. An important advance in this direction might, the Society urges, be made by the extension of the use of milk and cheese as articles of consumption. Strange as it may appear, such food—so satisfying, so sustaining, and, if properly produced, so accessible to the very humblest—has yet to be made the subject of special recommendation to the comparatively well-educated, undoubtedly intelligent, and industrious Swiss. Yet such is the case; and accordingly we read of an appeal to all branches of the above Society "to arouse in the popular mind an interest in the matter, as well as to open up the ways and means of extending the consumption of milk and cheese." For the furtherance of this object, proceeds the circular, "the local branches are requested to establish courses of culinary and household instruction (*Koch und Haushaltungskurse*), with immediate reference to the wants and circumstances of the labouring classes. For the conducting of such courses the pupils of the culinary school at Reussport, near Lucerne, are qualified and licensed. As has been done in the Canton Aargau, these branches can, in all the cantonal villages, establish depôts for the supply of genuine milk and unadulterated cheese, and, in cases where during the winter they furnish the poorer children living at a distance from school with the midday meal, they can make the said meal consist mainly of milk and cheese with bread." The agricultural branches of the Society are reminded that they are in a position to exert a salutary influence on cheese-production, and especially to diffuse the making of its household varieties which has recently been brought so near perfection. To the artisan branches, on the other hand, appeal is made to promote the consumption of cheese by rendering it as accessible as possible, and moreover, in the interests of their respective *clintiles*, to see to the purity of the milk concurrently supplied. This Swiss movement is one to which sanitarians nearer home might well give attention, and its results should be watched and noted by all who realise the daily-increasing urgency of the popular food supply in all countries.

A COUNTY COURT JUDGE ON A HERBALIST'S CLAIMS.

RECENTLY, at Bridgnorth County Court, a herbalist, Reuben Boulet, sued Mr. J. H. Sampson for £25 2s. 8d., the value of botanic preparations supplied to his wife. The plaintiff's attorney declared the herbalist had cured defendant's wife after hundreds had been spent on regular doctors. He said his client could only charge for herbs not in the Pharmacy Acts. The defendant refused to pay, alleging that his wife was worse instead of better for the herbalist's applications. The judge seemed a little puzzled as to what to do between a disposition to give the herbalist something and a doubt whether he was entitled legally. At one stage he said of the herbalist: "Well, he is just like a physician. A physician cannot recover his fee, therefore you pay the physician when he calls, and there's an end of it. If he can get people to have confidence in him, they should pay at the time." To defendant: "There may be some things here you will have to pay for. You have tried to avail yourself of this man's services, and you must not come to the conclusion that you should not pay anything, although I do not think you should pay a large amount. I know what I am about, and if you force me I shall ask you a few searching questions." In the end, and after an hour's

adjournment, his honour said he had no option but to non-suit the plaintiff, with costs. We should have thought the judge might have reached this conclusion sooner. A physician can recover his fee, like other registered medical men, unless there is any bye-law to the contrary in his college.

PARLIAMENTARY REPORTING.

"HANSARD" has come to be so familiar a word in connexion with Parliamentary reporting that probably to many people it sounds more like a technical term than like a publisher's name; and the idea that the privileged reporter is anything less than a great officer of Parliament will be new and strange. Yet so it is, as we are reminded by an interesting Blue-book just published, which contains the results of an inquiry, conducted by a joint committee of both Houses, into the present system and its improvement. "The committee are informed that due notice to terminate the present contract with Mr. Hansard has been given," and if their recommendation should be carried into effect, the next contract will be put up for tender, and given upon the result of competition. The production of an accurate report of Parliamentary proceedings is a matter of much more than merely historical interest, and we are glad to see that it has been considered by the committee with a due regard to the importance of condensation on the one hand and precision on the other. We have no doubt that the conclusion at which they have arrived is the right one, and in particular we wish to emphasise the important suggestion which they throw out that debates on private Bills be reported with the same fulness as debates on public questions. The great importance of private Bill legislation under our existing Parliamentary methods demands this provision; indeed, it is in this respect chiefly that an officially recognised report may be expected to excel those which are furnished to the public as the fruit of journalistic enterprise.

THE MANCHESTER SEWAGE SCHEME.

A PUBLIC inquiry is in progress as to the borrowing of money for the purposes of a sewage scheme for Manchester. Dr. Frankland supports the scheme proposed, which in many respects resembles that carried on at Coventry. As to the ninety-five acres of land which it is proposed to take in connexion with the system, he states that it is very appropriate; first, by reason of its conformation, which would enable the sewage to be taken to it under favourable conditions; secondly, from its chemical and physical composition; and thirdly, by reason of its comparative remoteness from human habitations. He also holds the view that the effluent could properly be passed into the Manchester Ship Canal, and he is sanguine enough to contend that, although something like two hundred tons of sludge would be precipitated daily, houses built up to within some fifteen or twenty yards of the tanks would not be injuriously affected. With so wide an area of site, it may be hoped that the tanks will not need to be so placed as to render building operations in such close proximity to them necessary.

NON-VACCINATION IN LEICESTER.

LEICESTER continues to glory in her shame, and to publish the most unblushing statistics of folly and disrespect for law in the matter of vaccination, such as the following: that whereas in 1873 there were 4460 births and as many as 3730 successful vaccinations, in 1887 the births reached 4693 and the successful vaccinations fell to 322! So that thousands of children are added yearly in Leicester to the number that depends for its safety from one of the most awful diseases on living in Leicester, and on the vigilance of Leicester sanitary authorities. Time will show who is right—Leicester or the world.

THE HABITUAL DRUNKARDS ACT.

THE eighth report of the Inspector of Retreats under the Habitual Drunkards Act (1879) for the year 1887, with appendix, is published. The material for such reports is short. Two new retreats were opened during the year. Montague House, Brook-green, was opened in April for ten female Roman Catholic patients. At the end of the year, a licence was granted to Dr. Westbury of Amesbury House, Amesbury, for three patients—two male and one female. There are now seven retreats. Sixty-six patients were received into the retreats in 1887, as against seventy-three in the previous year. No death has occurred, and the inspector reports that the patients have been kindly treated. In no case has the interference of the Secretary of State been necessary. The greatest number of admissions under the Act (17) was in Tower House, Westgate-on-Sea. The next greatest number (14) was in Dalrymple Home. In the latter establishment nineteen others were admitted, as female patients, and do not count in these returns.

THE CAUSE OF SEA-SICKNESS.

AT a recent meeting of the Paris Academy of Medicine a paper was read by M. Pampoukis (of Athens) and M. Dastro upon experiments on "sea vertigo" (*le vertige marin*). They show that, in spite of their peritoneal connexions, the abdominal viscera are considerably shaken in movements of the body, and that they impinge particularly against the diaphragm and anterior abdominal wall. Owing to this, contractions occur through irritation of sensory nerves, with the effect of limiting the visceral movements. It is suggested that the Pacinian corpuscles in the mesentery may be the structures which are stimulated by the dragging of the mesenteric nerves occasioned by the movements referred to, and that through their irritation motor impulses are excited reflexly. Abdominal belts which restrain the movements of the viscera against the wall do not, however, prevent those against the diaphragm.

FEMALE INFANTICIDE IN INDIA.

THE hardships to which many Indian women and girls are still exposed as a mere condition of their sex may well excite the pity of their fellow subjects in this country. Important changes have certainly been brought about, but much remains to be done. We seldom now, it is true, hear of the suttee. Fortunately for all those who were wont to be concerned in it, this barbarity of devotion is practically a thing of the past. Child marriage and widowhood, however, still continue to poison the very spring of Hindoo life, and are stoutly defended as essential to the social system. Female infanticide, as we are reminded in a statement by Surgeon-Major Pringle, is largely practised, and is even defended by its promoters on humanitarian grounds. It is a point singularly illustrative of the utterly false ideas upon which the life plan of Indian women is based that the observance of this detestable practice is, with many fathers of girl infants, a mere matter of paternal duty. The child is made away with in any convenient way in order to save her from the possibility of a dishonoured womanhood. The contagion of small-pox has often been invoked in the hope of obtaining a fatal result. Under a mistaken view of his powers the services of the public vaccinator were for a like reason popular in certain districts. Girls were subjected to the operation, but boys omitted until the discovery of its protective powers caused a reversal of the procedure, a practical testimony in favour of this measure which is all the more cogent because it was unwilling. The Indian Government, it is satisfactory to learn, is taking steps to suppress as far as possible the practice of infanticide in the

villages where it prevails. That it will meet with opposition is only to be expected. It cannot be supposed that ignorant and misguided men, jealous of a supposed duty, will at once agree to surrender it at the instance of reformers, however enlightened. That they will in time do so cannot be doubted. We would fully admit the value of tact in all measures of this kind, but we would also remember that native Indian opinion is even now becoming leavened with the spirit of reform. It is reasonable, therefore, to expect that, as with the practice of suttee, the exercise of a judicious firmness will in due course bring to the Government that success which its efforts deserve.

THE SANITARY INSPECTION OF BUILDINGS.

WE have received a copy of a report of the North-Eastern Sanitary Association, giving an account of the atmosphere of twenty-six buildings in Newcastle-on-Tyne. We note with pleasure that this branch of sanitary inspection is receiving attention. Hitherto the inspection of similar associations has been too much limited to an inquiry into conditions of drainage; and, important as that subject is, it by no means covers the whole question of the fitness of a house for habitation. We observe that the gentlemen who have conducted the experiments are opposed to what is known as natural ventilation. Unfortunately, no great success has hitherto attended the efforts of engineers to provide artificial methods for securing the adequate supply of fresh air. To use the words of the report, ventilation of public buildings "represents the most bemuddled branch of human knowledge extant." Perhaps greater thought will be given to this subject as its necessity is more recognised.

THE BRITISH PHARMACEUTICAL CONFERENCE.

THE British Pharmaceutical Association held the twenty-fifth annual meeting at Bath, under the presidency of Mr. F. Baden Benger. In his address, the President dwelt upon the great development of the Association, and the increasing interest shown in its proceedings by those attending the meetings. The relation of pharmacy to pharmacists, and the education and training most likely to improve this relationship, formed the main topics of the address. Considering pharmacy as a field for the practical application of science, Mr. Benger urged the need of a broader range of subjects in the preliminary examination. Several papers of interest were read, and the report of the Unofficial Formulary Committee was presented by Mr. W. Martindale, F.C.S.

EXPERIMENTAL PHYSIOLOGY IN FICTION.

MATTERS of medical interest often get whirled into the vortex of fiction, and frequently mystify the general reader while they amuse the profession. In "Tracked Out" (Arrowsmith's Bristol Library) the author has very ingeniously made experimental physiology lend valuable service. In fiction an author may well be allowed to obtain results beyond those of the laboratory, but Mr. Arthur à Beckett is to be congratulated upon his moderation. He has only made a head speak *four* words after its severance from the body, hence there is much to be elucidated after these post-mortem utterances.

DR. WOLTERING ON GLUTEN BREAD.

DR. WOLTERING, of Münster, in Wurtemberg, writing in the *Allgemeine Medicinische Central-Zeitung*, strongly recommends the more extensive use of gluten as an article of diet, both on account of its extremely nutritive qualities and of its very low price. He shows, by means of tables of analyses, that pure gluten bread is some three times as nourishing as meat, and that bread made with the addition of 40 per cent. of gluten contains more albumen than *hare* or *chicken* of the best quality.

YELLOW FEVER IN FLORIDA.

THE epidemic of yellow fever at Jacksonville is reported to be increasing, and during the twenty-four hours ending at 6 P.M. on the 18th inst. 150 fresh cases of the fever and 20 deaths were recorded. Since the outbreak of the epidemic 1203 cases and 153 deaths have occurred. The United States Senate has voted 100,000 dollars for the relief of the sufferers. The disease is so far confined to the city, and for the comfort of the relatives and friends of the many Englishmen resident in the State it is satisfactory to be able to add it is likely to remain so. The vast majority of Englishmen in Florida are settled in the pine woods, and here the disease has never yet occurred.

ACTION OF CHLORIDE OF ETHYLENE ON THE CORNEA.

CHLORIDE OF ETHYLENE is often used by physiologists abroad to anaesthetise dogs. M. Dubois has observed that the cornea of the animal thus anaesthetised undergoes a change some hours after recovering consciousness, a bluish opalescent appearance being developed. This opacity is not followed by necrosis, and at the end of some months the cornea clears from the periphery towards the centre; the change is believed to be due not to inflammation, but to a true oedema.

FOREIGN UNIVERSITY INTELLIGENCE.

Basle.—Dr. F. Siebenmann has qualified as *docent* in Laryngology and Otiatry.

Bonn.—Professor Fr. Schultze, of Dorpat, has been offered, and has accepted, the chair vacated by the death of Professor Rühle.

Greifswald.—Professor Bardenhauer, of Jena, is to be offered Professor Budge's chair.

Helsingfors.—Dr. Wahlfors has been nominated Professor Extraordinary of Ophthalmology.

Innsbruck.—Dr. Hermann Klotz has been promoted to the rank of Professor Extraordinary.

Jena.—Dr. Wilhelm Biedermann, Extraordinary Professor in Prague, has accepted the chair of Physiology vacated by the resignation of Professor Preyer.

Naples.—It has been decided by the Minister of Education to establish a Professorship of Laryngology.

Rome.—Dr. Pagliani, Professor of Hygiene in Turin, has been appointed Director of the Institute of Experimental Hygiene.

THE Roman cemeteries, recently the subject of animated controversy in some of our lay contemporaries, are about to receive an addition—the Monte Mario on the Janicular, to the north-east of the city, being the spot selected. A hygienic commission has just approved the acquisition of the ground; and one objection to it—namely, the possible filtration from the cemetery into the Acqua Paolina—has been shown to be futile by the special investigations of the engineer, Signor Vescovali, and of the geologist, Signor Zensi. The view commanded from the Monte Mario is in some respects the finest in Europe.

THE Italian Commission on the Prevalence of Pellagra in the Provinces has just concluded its report, with the gratifying announcement that (thanks to the intervention of the State) the disease is greatly on the decrease. In 1882 the *pellagrosi* were 13,663, in 1886 they amounted to 8734, and in 1887 to 6653—and this notwithstanding the augmented population.

THE death is announced of Dr. Josef Fabricius, Professor of Ophthalmology in Buda-Pesth, at the age of fifty-three.

THE Professorship of Anatomy at the Dundee Medical School has been filled by the appointment of Andrew Melville Paterson, M.D., C.M. Edin., M.R.C.S., Lecturer on, and Senior Demonstrator of, Anatomy in the Owens College.

MR. JORDAN LLOYD, M.S. Durh., F.R.C.S. Eng., has been appointed Assessor in Anatomy for the First M.B. (September) Examinations in the University of Durham.

PROFESSOR VIRCHOW is in Milan, writes a correspondent on Sept. 13th, and the leading physicians of the city have given him a more than professional welcome.

Pharmacology and Therapeutics.

CONCENTRATED PREPARATIONS.

We have had forwarded to us by Messrs. Fletcher, Fletcher, and Stevenson trial specimens of Liquor Aurantii, Buchu, Gentian, &c. Some of these solutions, when diluted eight times with proof spirit, are of the strength and quality of the Pharmacopœial tinctures; others are for preparing infusions by diluting twenty times with distilled water. They are valuable preparations, and most serviceable under many circumstances. We have tested all the preparations: their purity and strength are unquestionable.

TABLOID TRITURATES.

In a neat cigarette-like case sixteen tubes of tabloid triturates can be carried in the coat pocket. These specialities of Messrs. Burroughs, Wellcome, and Co. consist of a small dose of medicine incorporated with sugar of milk, and present the advantage over pills in being much more soluble. The dose, being small, has to be frequently repeated, according to the favourite method of some therapeutists. The tabloids may be dissolved in water at the time of administration, or they may be swallowed like pills with a draught of water. The tabloid triturates seem specially convenient because they are so portable. For children and fastidious patients they are elegant preparations. The annexed is a list of the tabloids in use, with their strength:—Aconite tinct., 1 min.; arsenious acid, $\frac{1}{16}$ and $\frac{1}{8}$ gr.; belladonna tinct., 1 min.; calcium sulphide, $\frac{1}{8}$ gr.; capsicum tinct., 1 min.; digitalis tinct., 1 min.; hydrarg. perchlor., $\frac{1}{16}$ gr.; hydrarg. cum creta, $\frac{1}{8}$ gr.; hydrarg. subchlor. (calomel), $\frac{1}{16}$ gr.; hyoscyamus tinct., 1 min.; nux vomica tinct., 1 min.; tinct. camph. co. (paregoric), 2 min. Anti-constipation: aloin, $\frac{1}{8}$ gr.; belladonna ext., $\frac{1}{8}$ gr.; strych., $\frac{1}{16}$ gr.; ipecac., $\frac{1}{8}$ gr. Apomorphia mur., $\frac{1}{16}$ gr.; atropia sulph., $\frac{1}{16}$ gr.; digitalin, $\frac{1}{16}$ gr.; enonymin resin, $\frac{1}{8}$ gr.; hydrarg. iod. rub., $\frac{1}{16}$ gr.; hydrarg. iod. vir., $\frac{1}{8}$ gr.; morphia sulph., $\frac{1}{16}$ gr. and $\frac{1}{8}$ gr.; opium tinct. (laudanum), 2 min.; pilocarpine mur., $\frac{1}{16}$ gr.; podophyllin resin, $\frac{1}{8}$ gr.; santonin, $\frac{1}{8}$ gr.; strophanthus tinct., 2 min.

SULPHATE OF SODA.

A specimen of purified sulphate of soda has been forwarded to us by Mr. J. B. Barnes, of Knightsbridge. Its use was prescribed in a case of marked melancholia with obstinate constipation (two teaspoonfuls in a cup of hot milk and coffee before breakfast). The result was entirely satisfactory. Of 100 parts of this very soluble preparation fifty-three are composed of anhydrous sodium sulphate, the remaining forty-seven being water of crystallisation. The formula is given as $\text{Na}_2\text{SO}_4 + 7\text{H}_2\text{O}$.

SOLUBLE ANTISEPTIC LOTION-PELLETS.

Mr. C. H. Milburn, M.B., of Hull, has forwarded to us samples of the above which have been prepared for him by Mr. F. Earle, chemist, of the same town. He writes as follows: "All that has to be done is to put one of these

pellets into 10 oz. of water (hot or cold), and on its dissolving, which will occur in less than a minute, one has a lotion of sal alembroth of the strength of 1 in 1000. If that is too strong, more water can be added. Each pellet contains five grains of perchloride of mercury and five grains of chloride of ammonium, held together by a harmless and perfectly soluble basis." They are issued in a tube suitable for the pocket, and at a cheap rate. Mr. Milburn has tried them in surgical and obstetric work, and speaks highly of them. We have also tried them during the last few months and have found them useful; they melt quickly, take up very little space, and are efficient. The bottle, however, in which they are sent out is too brittle, whilst the tabloids rapidly deliquesce if exposed to the air, and will then discolour things in contact with them.

EUCALYPTIA.

This oil of eucalyptus globulus is an exceedingly volatile and aromatic preparation. The sample forwarded to us by Messrs. Burroughs, Wellcome, and Co. was utilised in a case of chronic bronchitis with free expectoration, a teaspoonful being added to half a pint of boiling water; it was used as an inhalation. There is no doubt that it possesses deodorant, stimulant, and antiseptic properties.

CHLORIDE OF METHYLE.

Lubelski of Varsovia has recommended ether sprays along the course of the spine in chorea, and has obtained good results therefrom. Chloride of methyle as a spray has been tried in chorea and in "spinal irritation," where the symptoms consist of pains and multiple neuralgic. In certain peripheral nervous affections it is held that the correct treatment is to act upon the nervous centres.

SALOL

has also been used with success in cases of lumbago, abdominal neuralgia due to rheumatism, gout, and uterine affections. It is given internally in doses of from five to ten grains frequently. An ointment is also made of equal parts of salol and vaseline, which is rubbed into the seat of pain.

FERMENTED MILK.

An interesting note by Mr. T. R. Powell in the *Pharmaceutical Journal* gives some reasons for the indigestion and nausea so often produced by a milk diet, even when this diet is desirable. Koumiss is probably retained because coagulation has already taken place; the precipitated casein is in a very fine, almost gelatinous, condition; the carbonic acid is present in a free state, and exerts a sedative action; and the free lactic acid still further stimulates and aids digestion.

SABATIA ANGULARIS.

A member of the gentian family, this plant grows in the United States. All its parts have a bitter, non-astringent flavour. It is employed in America in cases of intermittent and remittent fevers during the intervals of the attacks, and as a tonic. As a bitter stomachic, it is useful in dyspepsia and in convalescence from acute diseases. An infusion may be prepared from thirty grammes of the plant to one litre of water, and the dose is sixty grammes, repeated every two hours during the febrile remission. The powder, in doses of one to four grammes, is also prescribed.

ELIXIR OF BLACK CURRANT.

Mr. Creuse, in the *Druggists' Circular*, recommends an elixir of black currants made from four pounds of currants, alcohol (95 per cent.) four pints, sugar four pounds, water sufficient for sixteen pints. Crush the currants with a wooden pestle, introduce them into a wide-mouthed bottle, add about two pints and a half of alcohol, and set the whole aside for a week, with an occasional agitation. Then press out the liquid, reserve the first maceration, and add to the dregs the remainder of the alcohol. After another week's maceration, express the liquor with strong pressure, mix the two macerates together, add the sugar, complete the measure with water, and after forty-eight hours' contact filter the finished elixir. It contains a certain quantity of free citric acid, and its natural acidulous taste renders it an acceptable vehicle for acid phosphates, pepsin, quinine, and alkaloids generally, also for most iron preparations.

THE INSALUBRIOUS CONDITION OF MADRID.

THE energetic measures Señor Moret has determined to enforce so as to moderate the excessive death-rate at Madrid will be welcomed by all sanitary reformers. The Royal order emanating from the Spanish Ministry of the Interior contains regulations for the inspection of live stock destined for the markets, the supervision of public laundries, the better ventilation and enlargement of the existing hospitals, and the erection of separate hospitals for infectious disease. Something is to be done so as to encourage the growth of trees and shrubs in the capital, the gratuitous medical services for the poor will be increased, and theatres and places of amusement generally will be closed at an earlier hour. The fact is that the death-rate at Madrid this year amounts to 45 in the 1000. During the cholera epidemic of 1885 it was 47·62 per 1000, but the average of the last seven years, including the cholera year, is 41·20 per 1000. This average is in itself scandalous, but when we find that there is no improvement, that, on the contrary, matters are getting worse and worse, there is just cause for alarm and indignation. Señor Moret, who, as ambassador from the Spanish Government, has lived a considerable time in London, evidently feels the stigma attached to Spain in respect to sanitation. He has seen how, in spite of its immense size, its millions of population, its misery and its vices, the great metropolis of London boasts of a death-rate only half as high as that of Madrid. For one death in London there are two in Madrid, and yet there is a far larger proportion of children in London. If it were possible to make due allowance for infants, it would be found that the difference in the death-rate was even greater than what is shown by the figures given above. On the other hand, it can be argued in defence that the population returns are under-estimated. There are in Spain a number of persons who purposely avoid registering the birth of their male children, but all deaths are of necessity registered, otherwise the bodies could not be buried. The object, of course, of avoiding the registration of male children is to escape the compulsory military service. Still this can only make a slight difference in the number of the population, though, when last in Madrid, several eminent authorities assured our representative that this laxity in the registering of births was sufficiently widespread to be worth taking into consideration.

In the high death-rate prevailing in Madrid may be found a solemn warning against headlong and thoughtless sanitary enterprise. It has been the fashion to clamour for sewers, and to conclude that a sewer was the cure for all evils. Theoretically Madrid should be much more healthy than most continental towns. It has an excellent water supply, and cesspools have been abolished. This is more than can be said for Paris. Madrid houses receive their water supply direct from the main; there are no domestic cisterns, and there are no dustbins. This is more than can be said for London. In Madrid there is a bye-law rendering the trapping of soil pipes obligatory. No such law exists in any part of France. In Madrid great carts go through the streets at night. A man rings lustily a big bell, and all the domestic refuse is brought out and carried away, so that there is no dustbin nuisance. The drinking-water supply comes from the sources of the Lozaya, a stream captured in the mountains at a distance of thirty-two miles from Madrid. A part of the canalisation bringing this water to the town is not covered over, and, fearing it might be accidentally contaminated, some 300 soldiers were employed during the great cholera epidemic to watch and prevent anyone approaching. At that time this good supply was not provided to all the houses and public fountains, though doubtless the older and less reliable water sources are now almost completely abandoned. The careless way the water is taken at the fountains should be made the subject of some regulations, as perfectly pure water may be contaminated at the fountain itself by the people who come with dirty buckets &c.

It is not the water supply, but rather the overcrowding, insufficient ventilation, and atrocious drainage that are, we should imagine, the principal causes of the high death-rate. The sewers of Madrid are built with exceptionally porous bricks. The fall is stated to be, as a rule, sufficient; but the inverts encourage accumulations and stagnation.

They generally consist of flat flagstones, and are not concave. The sewers are nearly six feet high and more than two feet wide—that is to say, in the majority of cases. There is therefore plenty of space for the accumulation of sewer air, and an immense volume of water would be required to wash out such large sewers, particularly as the inverts do not facilitate a rapid and easy flow. The sewers are not provided with any special means of ventilation; like the sewers of Paris, they ventilate through the openings existing in the streets, and which receive the gutter water. Down these apertures people sometimes throw rubbish, and this gives rise to many offensive odours. Some strict regulations are necessary to check this abuse. A careful watch should be instituted and offenders severely dealt with, so as to stop once and for all such pernicious habits.

The connexion between the houses and the sewers is quite as defective as the sewers themselves. Instead of a small water-tight pipe that can be easily flushed, there is generally a huge square brick drain, big enough, if not to let a man through, at least to admit the passage of a boy. Drains thus constructed generally pass under the house, for the closets are usually at the back of the dwellings, and of course they generate foul air in the basements. The soil pipes are for the most part made of very thin cast iron, and communicate with closets that are supposed to be trapped. It is highly probable, however, that, in spite of the municipal bye-law, there are a great number of closets that are not trapped at all. Even where they are trapped there is no adequate contrivance for the flushing and cleaning out the trap. Finally, no measures are taken to ventilate the soil pipes, and there are no precautions to prevent syphonage.

Such, briefly, are the principal features of the sanitary defects which in Madrid have helped to produce the present scandalous death-rate. To remedy such defects will be a gigantic undertaking. So far as the sewers are concerned, it would be too much to ask that they should be entirely rebuilt. The cheapest way out of the difficulty would be, perhaps, to adopt the separate system. The large sewers might still be employed for carrying away the surface drainage or rain water. Inside these sewers small metallic or earthenware glazed pipes might be placed to receive the sewage proper. The brick drains under the houses must of course be done away with, and pipes substituted, which should be continued above the roofs of the houses for purposes of ventilation. The means of interception between a house and the sewer will of course depend on the system of drainage employed; but some method, involving the separation of the sewage from the rain water, seems self-indicated by the circumstances of the case. This much done, a staff of inspectors must be appointed to visit every house and see that the soil pipe and all other pipes are effectively trapped and ventilated. All this would not involve so great an outlay as has already been incurred in building the abominable sewers that at present exist.

In the poorer quarters of the town a more severe measure must be adopted to prevent overcrowding; and there it is imperatively necessary to close up all private wells. These are generally in the inner courts or *patios* of the tenement dwellings. Even if the water within was not contaminated by the surrounding subsoil drainage, it would be in danger from the dust that falls into the mouths of the wells. Though the inhabitants, as a rule, protest that they do not drink the well water, and only use it for washing, cleaning, &c., there is no reliance to be placed on such assurances. There is evidence to show that such well water was occasionally drunk in Madrid, even during the height of the cholera epidemic. Then an entire system of disinfection and of isolation for stamping out infectious disease has to be organised. All this might be done in Madrid as it has been done in other towns. The Government would doubtless grant the necessary laws, which public opinion and the Legislature would approve, at least in theory. But, in practice, there is a total lack of men possessing the indispensable technical qualification for carrying out such enactments. That is really the greatest of all difficulties which such men as Señor Moret will have to encounter. Perhaps the opening of a school of practical hygiene is the first of all requirements. We do not mean a school for the propagation of mere scientific theories; a good deal of theorising is done already. But a school and a museum are wanted where a corps of nuisance inspectors may be created; men who know how a closet should be built, how a drain pipe may be tested for possible leakage, who will at a glance guess where a pipe is likely to create syphonage,

who are skilled in detecting a waste-water pipe or a bath pipe that is the means of admitting sewer gas into a house. It is these essentially practical questions that are neglected. Theoretically, the necessity of having sewers, and of draining into sewers, has, we have seen, been admitted long ago; but the lack of practical knowledge has led to the building of sewers that are probably the cause of more harm than good.

Finally, the vexed problem of disposing of the sewage has to be solved. At present, it drains into a stagnant ditch, situated at but a short distance from the town. Madrid is built in the centre of a vast and arid plain. It would be easy to create a sewage farm, where the barren soil might soon be rendered fruitful. But then some trouble must be taken to carry the sewer to a considerable distance outside the town, instead of being furnished with an outfall close to dwellings and in proximity to a brook which for the greater part of the year contains no other water than the sewage it receives from Madrid. All these reforms—and, taken together, they make up a considerable programme—present no insurmountable difficulty if the will and the technical knowledge are forthcoming. But it would not be safe to conclude that when all this is accomplished the death-rate of Madrid will be as low as that of other cities that are well drained. The climate is exceptionally bad; and the excessive heat and cold will always have disastrous results. Nevertheless, the death-rate, if proper sanitary works and measures were undertaken, could certainly be reduced to the extent of one-third, if not one-half. This is a result well worth trying for, and no sacrifice is too great when there is the certainty of saving so many lives.

HEALTH OF THE ARMY IN 1886.

No. IV.

THE appendix to the report contains, as usual, a number of cases of more or less interest. There is also the list of operations performed at the Royal Victoria Hospital, Netley, with short abstracts of the most important cases. These amounted to 34 in number, 26 of which were completely and 8 partially successful; there were no deaths. It may be noted that only three of the operations were necessary as a consequence of gunshot wounds. The details of seven of the operations are given by Brigade-Surgeon C. H. Y. Goodwin, the assistant professor of military surgery: two of amputation, and one of the removal of the end of the bone in a conical stump; two excisions of joints; one for traumatic aneurysm of the temporal artery; and one perineal section for urinary fistula. We observe with regret that this is the only contribution from the staff of the medical school. The illness of the late Professor De Chaumont may be a sufficient reason for the absence of any report on the subject of hygiene, but it is not to the credit of the school that no use has been made by the other professors of the abundant material which doubtless is to be found in the hospital.

A report on an outbreak of pythogenic pneumonia, which occurred at Richmond Barracks, Dublin, in 1884, is given by Surgeon-Major Robinson, of the Coldstream Guards. It does not appear why this report has been so long delayed, but, taken in connexion with the recent inquiry into the prevalence of enteric fever in the Royal barracks, it is of importance as showing the very unsatisfactory condition of the barracks in Ireland. Between March 11th, when the epidemic began, and May 25th there were 41 cases, of which 28 occurred in the Scots Guards and 13 in the 1st Battalion East Kent Regiment; 2 of each died. There had been 3 cases of pneumonia in the Scots Guards previously to the outbreak of the epidemic. Mr. Robinson has given the details of the outbreak, and the post-mortem appearances in the 4 fatal cases. He has also discussed the nature of the epidemic, and has given his reasons for concluding that it was pythogenic pneumonia. The Richmond Barracks are stated to have been built on a good plan, but with several objectionable surroundings, and the drainage was reported as bad. This was clearly proved in 1885, when one of the drains, on being opened, "was found to contain solid sewage to a depth of six inches throughout its entire length." Another drain from the canteen "goes underneath the men's barrack rooms. It has not yet been

found coming out on the other side"; where its contents go is not explained. The main drain across the barrack square was found to contain "a deposit of semi-fluid sewage to the depth of nearly two feet." It is stated that the drains were all masonry ones, with nearly flat bottoms, and often in bad repair. They have since been replaced by ordinary drain pipes; but we must agree with Mr. Robinson that "the condition described was one calculated to produce the septic poison required to give rise to an epidemic." He is of opinion that, notwithstanding the improvements then made, septic influences are still at work; for in 1886, when again quartered in these barracks, he had in the first half-year 8 cases of pneumonia and 25 of continued fever.

Surgeon Wardroper has given a report on hill diarrhoea in India, which he believes to be more frequently the result of a chill than of malarious origin. But he says: "I regret not to have been able to throw any further light upon the causation of this remarkable lesion, which is to a great extent still wrapped in mystery. That it has a distinct specific cause and origin of its own is more than probable, but that cause remains to be discovered." He has found ipecacuanha, with an occasional dose of castor oil, the most successful remedy, with very careful attention to the diet, which, for some time at least, should be milk "and nothing but milk." He gives some judicious advice as to the clothing of the soldier going to the hills, and as to the avoidance, as far as possible, of anything which would cause a chill.

THE PRISON REPORTS.

THE reports made by the Prison Commissioners for Scotland and for Ireland respectively have been published, and give upon the whole a satisfactory account of the state of the public morals. In both countries the commissioners are able to speak of a reduction in the number of persons in custody and of the punishment which it has been necessary to inflict for the maintenance of order and good behaviour within the prison walls. At the present time, when we have been compelled to witness in the east of London an outbreak of savage violence that is perhaps without a parallel in the annals of metropolitan crime, it is pleasant to find that a comprehensive statistical review points on the whole to a diminution, not only in the number of crimes, but also in their seriousness. Thus the Scottish commissioners remark that, "although the daily average number in custody gets gradually lower, the actual numbers sent into prison do not decrease in the same way. . . . The natural deduction from this is that sentences are becoming shorter and probably the crimes lighter."

With respect to the health of the prisoners under their charge, both bodies report in favourable terms. A serious outbreak of dysentery occurred during the year at Perth, respecting which Sir Douglas MacLagan reports that it "was clearly traceable to a disordered condition of the meat furnished to the class of prisoners affected." Of 117 persons who were attacked, it is stated that only 2 died, and a change in the contract for meat supply was made in consequence of the occurrence. Such an incident as this may well have been accidental, and, seeing that it appears to have been promptly and effectively dealt with, it calls for no particular comment; but it certainly ought not to be necessary for the commissioners to formulate such a complaint as the following from the Irish report: "We have again to express regret at the large number of persons committed while insane to our local prisons, instead of being sent direct to district asylums. The number of cases of insanity dealt with in local prisons during the past year amounted to 85, and of these only 2 cases can be considered to have occurred under circumstances admitting of the possibility of prison life having contributed in any degree towards the development of the disease." It is not alone the inhumanity of subjecting lunatics to the unsuitable discipline of an ordinary prison which calls for remark, but also the waste of power involved in providing by means of makeshift arrangements for their safety. When it is considered how easily and rapidly the separation of criminal lunatics is effected in other parts, it will appear that such negligence on the part of the Irish prison authorities as can alone explain the unfortunate condition of the Irish prisons in this respect must be quite inexcusable.

INQUEST ON A DIPHTHERIA CASE IN ST. PANCRAS.

ON Wednesday last, Dr. George Danford Thomas held an inquest at the Coroner's Court, St. Pancras, on the death of Alice Lydia Eldridge, aged three years. The coroner explained to the jury that the inquest had been held in consequence of the medical attendant having reported that he had suspicions that this death and two others in the same tenement had resulted from defective sanitary arrangements.

The mother gave evidence to the effect that the child had died on Friday, the 4th instant, and on that day Mr. Whitefoord had been called in, but the child was dead before he arrived. The child had been under treatment at University College Hospital. The buildings in which the death occurred are at the back of the Gower-street Station, and are known as Euston-buildings. On Tuesday, the 4th instant, the mother's sister came to stay with her for the night, and stayed the following day. She was suffering from a sore throat, and it was a few days after this that the children became ill with sore throat.

Mr. Whitefoord said he had been called in as stated by the mother, and he found two other children very ill with diphtheria. He attended these children until they died of the disease, and the circumstances of the case led him to suggest to the coroner that an inquiry ought to be made into the cause.

Mr. Mark H. Judge, A.R.I.B.A., sanitary surveyor, said that he had made a careful examination of the buildings, and reported that the drainage was taken into a "common drain" at the back of the buildings, and suggested that, as to this "common drain" and a large gully pit in the road near to the entrance, the sanitary authority should be asked to give evidence.

Mr. Peter Fulton, sanitary inspector for St. Pancras, concurred in the evidence given by Mr. Judge, and said that the common drain and the gully pit were in a satisfactory condition.

Dr. John F. J. Sykes, medical officer of St. Pancras, also concurred in the report of Mr. Judge, and said that, finding no cause for the outbreak in the sanitary condition of the buildings, he had made inquiries, which led to his visiting the house in Sutherland-avenue, Paddington, where the aunt of the children had been living. He found that, not only had the aunt had diphtheria, but that there had been four other cases in the house at the same time. He was persuaded that the disease had been brought from the house in Sutherland-avenue to Euston-buildings.

The coroner, in summing up, suggested to the jury that they might consider the desirability of adding a rider to their verdict calling attention to the importance of hospital accommodation being provided for cases of diphtheria.

The jury, after consultation, returned the following verdict: "That the deceased expired from diphtheria, which they say is from a preventable cause; and they are further of opinion that the disease, having terminated fatally in three cases in the same family, was introduced by a servant who had just left her situation in Sutherland-avenue, Paddington, suffering from the same disease from which inmates of the same house were also suffering; and the jurors further say that the sanitary arrangements of Euston-buildings are in good order. They have also heard in evidence that there is no hospital for the reception of diphtheritic patients, and they would strongly urge upon the Metropolitan Asylums Board the necessity of making provision for such cases at once; and they further desire to call the special attention of the Local Government Board to the case, in order that immediate action may be taken."

FOOTBALL CASUALTIES.—During a football match on Saturday last, between the St. Helens Recreation and Aspull (A teams), John Pendlebury had his collar bone broken. In a match at Parr, between the Globe Recreation and Thatto Heath, a player named Hart had his leg fractured. A man named Howard sprained his knee while playing for St. Helens against the Rochdale Hornets. Stewart Milne, captain of a local team, while playing a match at Cowie, Stonehaven, last week, sustained a bad dislocation of his collar bone.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sittingbourne Urban District.—Notwithstanding some prevalence of enteric fever and of scarlatina, Dr. Sutton reports a death-rate of 14·7 per 1000 living in this urban district. The infectious hospital rendered useful service; but some parents had no medical attendance, and the cases in their houses did not become known in time; whilst others, for reasons of their own, kept the disease a secret, and even avoided, until the occurrence was detected, applying for disinfectants. In all, eleven patients were admitted for scarlatina, and twenty-one for enteric fever, the only deaths being two fatal cases of the latter disease. Care is being given in the district to the sanitary state of the various dairies, cowsheds, and slaughterhouses, and nuisance removal is being steadily maintained.

Milton Rural District.—In this district Dr. Sutton states that the death-rate from all causes in 1887 was 12·11 per 1000, and apart from deaths amongst outside cases of infectious disease in the Sittingbourne and Milton joint hospital, which lies in this rural district, the zymotic mortality was very trivial. Wells found to be polluted have been closed, and, where necessary, proceedings have been threatened and taken to secure abatement of nuisances, dampness of houses, and other conditions tending to injure health. Extension of the Sittingbourne waterworks supply is going on, and thus one of the greatest sources of danger to a rural district—namely, resort to shallow wells—is steadily being diminished.

Epping Rural District.—A detailed account is given by Mr. T. Fowler as to the occurrences of infectious disease during 1887, together with the action taken in each case and the result attained, the principal diseases prevalent having been scarlatina and enteric fever. The district is now much more free than it was from diphtheria; improvements which have taken place by opening up the forest about dwellings, together with increased sunlight and freedom from dampness, being believed to have had a restraining influence upon the disease. Water supply is steadily improving in the district, the East London supply being gradually extended. New works of sewerage have also been in progress throughout Chingford parish, and the cesspools have been filled in. So, also, similar improvements are going on at Buckhurst Hill and Chigwell.

Busford Rural District.—This district contains a number of populous places, and its inhabitants are now estimated at over 51,000. The vital statistics for 1887 are carefully discussed by Dr. Boobyer, the total death-rate being 14·7 per 1000. Of the so-called zymotic diseases there were 18 deaths from enteric fever and 27 from diarrhoea, but the rate, both as regards separate diseases and as a whole, is decidedly below the average. Each of the several outbreaks of infectious disease is fully reported on, and an account is given of the preventive measures adopted. There is also an excellent account of the current sanitary work, which includes an explanation of the principles on which overcrowding needs to be dealt with.

Birkenhead Urban District.—In dealing at length with the vital statistics of this borough, Mr. Francis Vacher gives the estimated population at 97,703, the number of persons per acre as 25·3, the birth-rate per 1000 as 32·35, and the death-rate from all causes as 21·01. The zymotic rate was 3·16 per 1000, which is excessive, the main cause of the excess being a fatality from scarlatina and measles. Fever was below the average in point of mortality; typhus caused 3 deaths, but by the aid of the fever hospital this disease was checked. No less than 2435 cases of infectious disease were notified under the local Act dealing with this subject; but of these only 58 were isolated in the infectious hospital. A special report on the working of the system of compulsory notification is included in the annual report, and amongst the practical difficulties met with in its administration there is one which is due to a charge being made for disinfecting bedding &c., an arrangement under which people do their utmost to secure certificates from their medical attendants to the effect that such disinfection has already been satisfactorily carried out. To some extent

this difficulty has been met, but the proper practice of using a public staff and a public disinfectant, the cost of which is defrayed out of the rates, for public purposes, and apart from payments, has not yet been resorted to. Speaking generally, Mr. Vacher is of opinion that the mortality from diseases required to be notified has much decreased since 1882. Household-ers, it is stated, rarely notify direct to the authority, but the requirement that they should do so is still regarded as necessary to meet those cases in which no duly qualified medical practitioner is called in; and it is regarded as otherwise helpful, because it probably assists the medical practitioner by making easy and simple that which otherwise might be an invidious task.

Portsmouth Urban District.—Beyond seeing the ultimate scarring of the faces of such unvaccinated persons as contract small-pox but escape death, the general public have little notion of the hideous character of that disease as it appears when uncontrolled by vaccination, and Dr. Mumby seeks to inculcate the lesson of the desirability of vaccination by reproducing in his report photographs of the faces of two patients at the eleventh day of the disease. The unvaccinated patient exhibits the well-known features which result from confluent small-pox; the face of the vaccinated patient of itself tells of the lightness of his attack. Every case, except two, was taken to the infectious hospital, and this isolation, aided by vaccination, rapidly put an end to the epidemic which occurred. As regards enteric fever, 1249 cases were reported in 1886, 554 in 1887; the corresponding number of deaths being 124 and 53. Kingston suffered exceptionally, and Dr. Mumby cannot dissociate this from the erection of houses on sites where formerly lay mounds of town refuse, deposited there before being used for brick-burning. Faulty sewers have also been responsible for its occurrence; but the new system will, it is hoped, before long, secure a large and substantial abatement of this preventable disease. The general death-rate in a population of 137,916 was 19.45 per 1000, it having varied between 9.48 in the Southsea and 26.69 in the Kingston divisions.

Margate Urban District.—Quarterly returns for comparatively small populations cannot, as a rule, be taken alone as having much weight in the sanitary history of a place; but in view of the special circumstances which have attached to Margate, we note that for the second quarter of this year the death-rate stood at only 12.4 per 1000, and the zymotic rate at 0.6. This, if in any degree maintained, would be a valuable record; but, standing alone, its significance must not be over-rated. Fortunately, there was no death from typhoid fever between April and August, both inclusive, and we hope the same immunity will be maintained during the autumn months, which are those when that disease tends mostly to prevail. Dr. Scarthiff refers to the value of the infectious hospital. Such an institution is a great safeguard, but we can hardly apply the term "excellent" to a hospital which has for years past been admitted to need amendment in several important respects.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5610 births and 3187 deaths were registered during the week ending Sept. 15th. The annual rate of mortality, which had been 18.1, 17.6, and 17.8 per 1000 in the preceding three weeks, declined again last week to 17.7. During the first eleven weeks of the current quarter the death-rate in these towns averaged but 16.7 per 1000, and was 4.4 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 13.2 in Oldham, 13.4 in Wolverhampton, 13.9 in Leicester, and 14.2 in Hull and in Sunderland. The rates in the other towns ranged upwards to 25.7 in Manchester, 25.8 in Preston, 25.9 in Blackburn, and 26.2 in Norwich. The deaths referred to the principal zymotic diseases, which had been 582 and 638 in the preceding two weeks, were last week 622; they included 391 from diarrhoea, 67 from whooping-cough, 57 from scarlet fever, 39 from measles, 35 from diphtheria, 32 from "fever" (principally enteric), and only 1 from small-pox. The lowest death-rates last week from the aggregate of these zymotic diseases were recorded in Oldham and Huddersfield, and the highest rates in Leeds, Norwich, Brighton, and Preston. Diarrhoea showed the greatest mortality in Brighton, Leeds, Sheffield, Leicester,

and Preston; whooping-cough, in Halifax and Norwich; scarlet fever, in Derby and Blackburn; and "fever" in Birkenhead. The mortality from measles was, generally speaking, low. The 35 deaths from diphtheria included 18 in London, 3 in Manchester, 2 in Brighton, 2 in Portsmouth, 2 in Salford, and 2 in Sheffield. Small-pox caused one death in Preston, but not one in London or in any of the twenty-six other large towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 1 small-pox patient at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 826 at the end of the week, against numbers increasing from 774 to 805 in the preceding three weeks; 93 cases were admitted during the week, against 93 and 79 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 130 and 148 in the preceding two weeks, further rose last week to 184, and exceeded the corrected average by 2. The causes of 47, or 1.5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Hull, Leicester, Newcastle-upon-Tyne, and Portsmouth, and in seven other smaller towns. The largest proportions of uncertified deaths were registered in Huddersfield, Liverpool, and Manchester.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 17.3 to 16.0, was again 16.0 in the week ending Sept. 15th; this rate was 1.7 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged last week from 10.1 and 13.9 in Greenock and Edinburgh, to 22.4 in Perth and 26.1 in Paisley. The 405 deaths in the eight towns corresponded with the number in the previous week, and included 29 which were referred to diarrhoea, 8 to "fever" (principally enteric), 7 to whooping-cough, 4 to scarlet fever, 4 to measles, 3 to diphtheria, and not one to small-pox; in all, 55 deaths resulted from these principal zymotic diseases, against 42, 44, and 51 in the preceding three weeks. These 55 deaths were equal to an annual rate of 2.2 per 1000, which was 1.3 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 16 and 25 in the preceding two weeks, further rose last week to 29, but were 26 below the number referred to the same cause in the corresponding week of last year; 15 occurred in Glasgow, 5 in Edinburgh, and 3 in Dundee. The 8 deaths referred to "fever" showed an increase of 6 upon the number in the previous week, and included 2 in Edinburgh, 2 in Aberdeen, and 2 in Paisley. Five of the 7 deaths from whooping-cough, 3 of the 4 from scarlet fever, and 2 of the 3 from diphtheria were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 56 and 71 in the previous two weeks, were last week 69, and were 8 below the number in the corresponding week of last year. The causes of 45, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 17.9, 20.4, and 21.7 per 1000 in the preceding three weeks, declined again to 19.4 in the week ending Sept. 15th. During the first eleven weeks of the current quarter the death-rate in the city averaged 19.9 per 1000, the mean rate during the same period being 16.2 in London and 15.5 in Edinburgh. The 131 deaths in Dublin showed a decline of 16 from the number in the previous week; they included 10 which were referred to diarrhoea, 3 to scarlet fever, 3 to whooping-cough, 1 to measles, 1 to "fever" (typhus, enteric, or ill-defined), and not one either to small-pox or diphtheria. Thus 18 deaths resulted from these principal zymotic diseases, against 19 and 21 in the preceding two weeks; these were equal to an annual rate of 2.7 per 1000, the rate from the same diseases being 2.9 in London and 1.4 in Edinburgh. The deaths attributed to diarrhoea, which had been 7 and 12 in the previous two weeks, were last week 10. The 3 fatal cases both of scarlet fever and of whooping-cough showed a slight increase upon recent weekly numbers, while the fatality from "fever".

was smaller than in any recent week. Three deaths from violence and only 1 inquest case were registered; and 31, or nearly a quarter, of the deaths occurred in public institutions. The causes of 26, or nearly 20 per cent., of the deaths in the city were not certified.

SPANISH PUBLIC HEALTH STATISTICS.

Among the many recent evidences of progress in Spain it is satisfactory to note an awakening interest in public health matters, and generally in vital statistics, without which effective sanitary administration is impossible. A huge volume of more than a thousand pages has recently been issued by the Geographical and Statistical Institute of Spain, which contains, among various statistical information relating to the movement of the population, tables showing the marriage-rate, birth-rate, and death-rate in that country during the ten years 1861-70, and in the more recent seven years 1878-84. Between 1870 and 1878 the government of the country was so disorganised that no vital statistics for those years have ever been published. The enumerated population of Spain at the last census in 1877 was rather more than 16,500,000, showing an unusual equality between the sexes, there being only 104 females to each 100 males. The marriage-rate, or rate of persons married, which had been equal to 15·2 per 1000 in the ten years 1861-70, declined to 13·0 in the seven more recent years 1878-84; it may be noted, however, that the marriage rate in Spain touched the lowest point (12·0) in 1882, and that it had increased to 13·4 in 1884. The birth-rate has in recent years also declined, but not in the same proportion as the marriage-rate; the birth-rate, which averaged 37·5 in the ten years 1861-70, was 36·6 in the seven years 1878-84. The proportion of illegitimate births, which had been 5·50 per cent. of the total births in the earlier of these two periods, declined to 4·67 in the later period; the proportion of illegitimate births in England is now about 4·80 per cent., but in other European countries it ranges from 1·22 in Greece to 15·24 per cent. in Bavaria. The proportion of still-births in Spain in the five years 1878-82 is stated to have been but 1·32 per cent.; but the accuracy of this ratio may well be doubted, since in most of the other European countries in which statistics of still-birth are published the proportion ranges between 4 and 5 per cent. The mean annual death-rate in Spain in the ten years 1861-70 was 30·1 per 1000, while in the more recent seven years the rate rose to 31·0; in this last period the lowest rate was 30·2 in 1880, and the highest 33·1 in 1883. Without more precise knowledge of the system of registration prevailing in Spain than that supplied by the volume before us, it is impossible to estimate correctly the true value of these vital statistics; but it may safely be assumed that the death-rate is not overstated. It may be stated that the population of the kingdom in each year since the last census in 1877 appears to have been estimated by the addition from time to time of the excess of registered births over registered deaths, no account being taken of the effect of emigration and immigration upon the population of the country, which, however, may not very seriously affect the population of the whole kingdom. The serious import of a mean annual death-rate of 31·0 per 1000 in Spain during the seven years 1878-84 will not, it may be hoped, fail to impress upon the Government of that country the urgent necessity for sanitary reform, for the highest death-rate in England and Wales during the last fifty years was 25·1 in 1849, when a severe epidemic of Asiatic cholera prevailed. A mean death-rate of 31 per 1000 for the whole of Spain, moreover, necessarily implies that rates of mortality from 40 to 50 per 1000 prevail in some of the urban aggregations, for we may be assured that in the sparsely populated rural districts the death-rates cannot nearly approach 31 per 1000.

POPULATION OF ST. PETERSBURG.

The population of St. Petersburg entitles it to rank as the fourth European city, London, Paris, and Berlin being the only cities that in this respect can claim precedence to it. A census of the population of St. Petersburg taken at the end of June last resulted in the enumeration of 842,883 persons, showing a decline of 86,133, or more than 10 per cent., from the enumerated number at the previous census in 1881. It should be stated that the census in 1881 was taken in the winter, which, it is urged, partially accounts for the decline of population. It would appear to be somewhat

doubtful, however, whether the population of St. Petersburg is larger in winter than in summer, for it is admitted that the census number enumerated in June last includes 41,696 workmen from the provinces engaged on building works which can only be carried on in the summer. That the population of the city is declining has long been admitted, moreover, by the municipal authorities. A noticeable feature of the St. Petersburg population is the excess of males, in striking contrast to the excess of females in nearly all other European cities. Of the population enumerated in June last, the males were in the proportion of 138 to 100 females; and, of persons aged upwards of sixteen years, the males were as 146 to 100 females. In this remarkable excess of males the sex proportion of the St. Petersburg population somewhat resembles that of the great Indian cities, where the males almost invariably show a large excess. In the population of London, enumerated at the last census, in 1881, the males were but 89 to each 100 of females.

Correspondence.

"Audi alteram partem."

THE USE OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—As a subscriber to and a reader of THE LANCET since I entered the profession, I ask your permission to state some objections to your leader on chloroform, which appeared in your issue of the 15th inst. Your paper is so much read both by the profession and the lay public, and your opinion on all that concerns the art of medicine is so much valued, that any exaggeration on your part would be productive of serious results, particularly so if such exaggeration is likely to alarm the public and prejudice them against a powerful and, I think, most valuable anæsthetic. If, by exciting a popular prejudice against chloroform, you make the practice of operative surgery more difficult, you do a grievous wrong to the surgeon, and you inflict an injury on the public.

The following passage appears to me as particularly objectionable: "We have before us the records of at least six deaths which appear unnecessary, since in none of the instances does it transpire that any cause existed which prevented the employment of ether rather than chloroform." And a little further on the following passage, which you quote as if dissatisfied with its accuracy: "The patient 'succumbed owing to failure of the heart, brought about by struggling whilst being chloroformed.'" And you finally conclude that "beyond cavil chloroform is a dangerous anæsthetic." May not some of the six deaths have been due to idiosyncrasy? Experience has taught surgeons that there is an ether as well as a chloroform idiosyncrasy. Can none of the six deaths be ascribed to incompetence of the administrator, or to shock from imperfect anæsthesia? Does not the fact of struggling during the administration of the agent tell of want of due care being taken not to hurry the chloroform narcosis? Do you think that because six persons died under chloroform anæsthesia you may fairly imply that if ether had been used they would all six be alive to-day? You set up the question of ether *versus* chloroform because of "the ever-increasing mortality from" the latter. If the agent was of itself dangerous, the mortality would have been equally high, if not more so, when it was first introduced as an anæsthetic by Professor Ives, of Yale College, in 1832. More care is now taken with its purification, and we are better able to combat untoward symptoms. Therefore, if we have "an ever-increasing mortality" from its use, the increase must be due to incompetent administrators.

You give, in support of your unqualified condemnation of chloroform, a summary of Nothnagel's and Ungar's experiments on rabbits and frogs, and I place before your readers some extracts from two very valuable pamphlets that appeared in America during the autumn of last year, which, in my opinion, prove beyond all cavil that chloroform is the safest and best of anæsthetics. The pamphlets to which I refer are: "The Choice of General Anæsthetics," by Hunter M'Guire, M.D., LL.D., Richmond, Virginia, being a reprint of a paper read before the Medical Society of Virginia in

October, 1887; and "Chloroform, the best of Anæsthetics," by Julian J. Chisolm, M.D., being a reprint of a paper read before the Baltimore Academy of Medicine.

Dr. McGuire, whose experience as medical director of the 2nd Army Corps of the Army of Northern Virginia has been very large, writes: "In the beginning of this paper I said that I thought chloroform the safer agent in cardiac troubles. I wish to except from this class a nervously weak heart. In organic valvular disease of the heart, with the usual compensative muscular hypertrophy, I have given chloroform hundreds of times, and never had cause for alarm. On the contrary, the heart's action became usually more quiet and regular, and chloroform is safer here than ether. But in a heart weak from fatty degeneration, or from loss of blood, or great anæmia from other causes, any anæsthetic is hazardous; but chloroform, I believe, is more dangerous than ether." And again: "In all operations about the face or throat, where blood or other fluids may escape into the windpipe, ether is the more dangerous, and chloroform the safer agent to use. I do not think I ever saw the irritability of the larynx or trachea entirely lost in anæsthesia from chloroform, but I have seen this happen in ether cases; the sensibility or reflex irritability is for the time abolished, and foreign substances easily find their way into the windpipe." Further on the following sentence occurs: "It is a significant fact, too, that Nussbaum has seen in military life 40,000 administrations of chloroform without an accident; and that in the Confederate Army Corps to which I was attached as medical director chloroform was given 28,000 times without a death ascribed to its use." Of ether, Dr. McGuire writes: "In ether, several minutes after the vapour is taken away and all danger from the anæsthetic is supposed to have passed, when all ether vapour we would think had escaped from the lungs, dangerous symptoms suddenly present themselves, from which the patient is with difficulty rescued, or even death itself takes place. Or, again, hours, or even days, after ether has been given, acute nephritis or pneumonia, directly traceable to the ether, occurs, threatening the life or causing the death of the patient." Further, of chloroform he writes: "In either young or old, or in cases where cardiac, renal, or pulmonary trouble is suspected, as a rule, I think, chloroform is safer." Such is the opinion of this great surgeon, who sums up the evidence with the impartiality of an English judge and the candour of a Virginian gentleman.

Dr. Chisolm, whose pamphlet, "Chloroform, the best of Anæsthetics," from which I quote, was issued this year, writes: "At the Edinburgh Infirmary, during a period of twenty-eight years from the introduction of chloroform into surgical practice, only two deaths had been attributed to chloroform, which, according to Kerr, is one death in 36,500 administrations. Elser of Strasburg had used chloroform 16,000 times, and had never seen a fatal case; Kidd of London 10,000 times, without a death; Dr. Bardeleben of Berlin 30,000 times before meeting with a death; French surgeons in the Crimea 30,000 cases, and not one fatal issue; English surgeons in the Crimea 12,000 times, with one single death reported as attributed to it; McGuire, of Jackson's corps, 28,000 times, and no death; Richardson had seen it used in the London hospitals 15,000 times before he met with the first fatal case; Billroth of Vienna 12,500 times before he met with his first accident." He further states that in the Federal army it was administered in 80,000 cases. In thirty-seven cases fatal results have been ascribed to its use. The Federal authorities make the following comment: "Considering the great number of cases in which chloroform was applied principally during and after the exciting circumstances of a battle, when expedition was a matter of necessity, it is remarkable that not more cases of death from this agent have been recorded. With what justice the fatal issue in these cases here cited is chargeable to the anæsthetics the reader must judge for himself." To this Dr. Chisolm adds his own experience of fully 10,000 cases without a single death. He collected an array of 300,000 administrations of chloroform, with forty-three deaths; even attributing them all to idiosyncrasy, which calls for a most unbounded charity, and we only have one death in 70,000 cases. Can any stronger proof of the excessive rarity of the fatal idiosyncrasy in chloroform be needed? And just one more quotation: "Bronchial troubles are also (with renal) considered antagonistic to the safe administration of sulphuric ether, not directly, but indirectly. In such cases, after the operation has been completed and the resuscitated patient has been put to bed a fatal pneumonia has

developed; which follows too often the administration of ether to be considered a mere coincidence. This fatal pneumonia has not been noticed as a sequel of chloroform anæsthesia. Using chloroform exclusively, I have never thought it necessary to examine the urine or the chest for lung diseases, and have had no occasion to regret my seeming neglect in this connexion. From the standpoint of my own personal experience, I know of no organic lesion which contra-indicates the careful and thorough administration of chloroform. Chloroform, when judiciously used, is one of the safest active remedies of the materia medica, supplying nearly every good and avoiding nearly every danger."

Allow me just to add that from the earliest days of surgery anæsthetics were known, and that with and without anæsthetics brain and abdominal surgery were practised. Moulins, O'Hallaron, and Dupuytren made a reputation in the former, and McDowell of Kentucky revived laparotomy, following—perhaps unconsciously—the incisions pictured in the "Armentarium Chirurgicum" of Senectetus, of 1661; and the successes of Anthony de Pozzi and Fontanus, both of whom excised successfully the spleen, are recorded in the second volume of the folio edition of Morgagni, and they may also be found in William Cooke's abridged translation; and I have no doubt that you are aware of the fact that, in 1549, Zaccarelli and Fioravanti at Naples successfully performed splenectomy. Anæsthetics gradually became disused during the eighteenth century; but, as late as 1775, Dr. Colin Hossack of Colchester, physician to Frederick, Prince of Wales, translated the formula of Boerhaave's celebrated anæsthetic powder, of which half was "to be taken one hour before the operation." But I quite agree with your article that Guthrie's discovery, chloroform, facilitates surgery and allows the operator more leisure for the completion of the peritoneal toilet. I, however, hold that the high mortality, when it does occur, is due to the faulty administration of the chloroform, and cannot rightly be ascribed to any unsuitability of the agent as the best of anæsthetics. I am, Sirs, yours obediently,

GEORGE FOY, F.R.C.S.

Lower Gardiner-street, Dublin, Sept. 5th, 1883.

* * Mr. Foy's letter affords proof of the accuracy of our remarks; while his quotations, when read by the light of more recent knowledge of the subject, invalidate Mr. Foy's argument. Those who are familiar with American methods of ether-giving will naturally repudiate any conclusions based upon the experience of American surgeons, since the routine drenching with ether in vogue in the United States has no counterpart amongst skilled anæsthetists here. Sequelæ such as those described by Dr. McGuire are practically unknown in England. Dr. Chisolm may not have lost any patients from chloroform, but he has published accounts of several cases in which he confesses he thought death was imminent. The statistics quoted by Mr. Foy, and borrowed from Drs. McGuire and Chisolm, are really out of date, and unhappily give too low a percentage of deaths. Even accepting them, they show a far higher death-rate than can be obtained from ether. It matters nothing, if the patient dies, whether we attribute the fatality to "idiosyncrasy," "incompetence," or what not, for by Mr. Foy's own showing the same conditions obtain for ether as for chloroform, and yet far fewer deaths result from the former than from the latter agent. Putting aside statistics and individual preferences for chloroform, we are bound to admit its dangers as compared with ether, by the proofs given of its physiological action in mammals.—ED. L.

THE CONTAGIOUS DISEASES ACTS.

To the Editors of THE LANCET.

SIRS,—When trying to promote legislation to protect the community from venereal disease, it is a mistake to point to men in the army and navy as the chief sufferers, for those who denounce all attempts to hold the State responsible for the evils of prostitution care nothing for the sufferings of soldiers and sailors, and even maintain that in the interests of liberty every man must be free to contract disease or

not as he pleases; and, besides, the "unco guid," in their detestable pharisaical malice, will even rejoice to learn that the victim to vice is the victim to disease, while many of those who are not blinded by self-righteous brutality will argue that the good old principle, "let the buyer beware," must hold good in all the dealings between adults. It is a mistake to appeal to the pockets of the ratepayers and to urge the magnitude of the national loss from disablement of soldiers and sailors by disease, for the opponents of legislation have then the advantage of posing as the champions of morality against those who would treat virtue and liberty as mere questions of money or expediency, and they will rightly denounce all attempts to decide questions of morality by a computation of the number of pounds to be gained or lost. It is a mistake to lay all the blame for defective legislation on the public or the Government, for the public can only be held responsible according to their knowledge, and the Government can only act as representatives of the people. It is also a mistake to ask for special legislation for the prevention of any particular disease, since it is similar to a request for special legislation to prevent one man from assaulting another with a hammer.

Having pointed out the methods of procedure which cannot be advocated with success or reason, it is necessary to lay down those which cannot be objected to by any intelligent man. The fact must be made known that thousands of innocent women and children in London are at the present moment suffering from the effects of syphilis, although they are very seldom aware of the cause of all their misery. The healthy blooming girl marries a man who is apparently in perfect health, and yet within a year of marriage she has a miscarriage of a putrid child, or she has a pining shrivelled child prematurely born, or she has an apparently healthy child which in a few weeks becomes afflicted with some skin disease, and probably remains a pallid, unhealthy victim of vice for life; and no matter how sound the constitution of the mother may have been, she has in some way suffered injury from which she will never perfectly recover. How often is the husband or the wife or the children taught the truth by the medical practitioner? I have not the moral courage to tell some people plainly that they are the victims of syphilis, and if I did, an action for libel might result. The real culprit is the medical profession as a body, for it has kept the public in ignorance of the facts, and has thrown a cloud of mystery around venereal diseases as if they must belong to some different category from all other diseases. The sufferers from syphilis in London are in every street and in every grade of society, but in most cases the symptoms are so slight that the chronic skin diseases, the chronic eye diseases, the miscarriages, and the pallid feeble children are supposed to be sent by Providence. I attempted two years ago, in my work on "Disease and Sin," to convince both divinity and medical students that it is blasphemy to say that any disease is sent by God, and that everyone who assists to maintain a condition of disease, or who neglects to assist in preventing it, is not only a sinner but a criminal. The man or woman who propagates a contagious disease, the preacher who interferes with any means of prevention, and the Government which neglects to adopt all practicable means of prevention, are all to be regarded as engaged in warfare against the happiness of mankind. We require honesty enough to call a spade a spade, and when a man dies from small-pox or typhoid fever, instead of profanely saying that it was the will of God that the death should occur, we ought to demand an investigation in order to discover the cause.

The demand for special legislation is illogical, since a man is a criminal whether he injures another with a hammer, or with vitriol, or with poison; and everyone is a criminal who knowingly injures another with small-pox, or with scarlatina, or with syphilis. The general principle ought to be laid down that he who wilfully or culpably injures another is a criminal, who must be liable to damages for the injury, and must be punished by imprisonment or fine besides. The punishment must be in proportion to the injury inflicted and to the power over the cause, so that, while the propagator of scarlatina may sometimes be dismissed without punishment owing to his inability to know with certainty that he was a propagator of infective material, there can be no excuse taken for him who disfigures another with small-pox. The victim of scarlatina or small-pox may enjoy as good health for the remainder of his life as if he had never suffered from disease, and his children will be unaffected;

but the propagator of syphilis is guilty of the greatest crime that can be perpetrated, since the constitution of the victim is not only ruined, but his children are often murdered and the happiness of his wife destroyed. Hence it is the plain duty of every civilised Government to sentence the man or woman who propagates syphilis to a prolonged period of penal servitude; and every man or woman who attempts to inflict the grievous bodily injury of syphilis upon the other, whether by solicitation or by yielding to solicitation, ought to receive a punishment of not less than one year's imprisonment with hard labour. Any man or woman who is found suffering from syphilis, and who has wilfully neglected to report the evil to the constituted authorities, ought to be punished. Thousands of children in London are calling to Heaven for vengeance against preachers, doctors, legislators, and parents who by their ignorance, perversity, or neglect are guilty of murdering the innocent by years of torture, and of denying to future generations the health which Providence intended should be the birthright of every human being. The remedy for the evil is so plain and simple that the nation which does not adopt it is not worthy of the blessing of health; but it seems that thousands of years of evolution and education cannot produce a man with as much common sense as Moses. I am, Sirs, yours very truly,

Sept. 15th, 1888.

A MEDICAL MUSER

To the Editors of THE LANCET.

SIRS,—As you have given publicity to a portion of my letter, and have criticised it rather severely, I ask you to publish this reply, as otherwise some misunderstanding as to my opinions may arise. I think, if you refer to my letter, you will see that I consider "that nothing could be done on the basis of the late Acts during the existence of the present House of Commons," not that I consider that nothing can ever be done. I cannot admit that I have fallen into two errors. With regard to the first of these, I do not think that it is untrue "that the Acts were directed against one sex—i.e., the female." Anyway, they were largely supposed to be so, and this was the principal cause of the successful opposition to them. Also, I do not accept the theory of spontaneous generation, and therefore for the present I must decline to admit that the "greater amount of venereal disease is created by prostitutes." No woman can create specific disease, and she cannot even "propagate" it unless she has herself been infected by a previously diseased person, presumably a man. Again, I submit that it is not an "untenable proposition" that "men are equally guilty with prostitutes in spreading disease." Anyone who knows how comparatively respectable servants girls are infected by soldiers and sailors would consider that the men are more guilty; and as these men are not driven by want of money to "spread disease," morally they are much worse than the prostitute, who is condemned to "spread disease" or starve. I say, without fear of contradiction, that if the men of the army and navy were periodically examined, especially before being allowed leave, an immense reduction of disease would be effected.

I am, Sirs, your obedient servant,

Southsea, Sept. 15th, 1888.

ALBERT BENTHALL.

TREATMENT OF ECZEMA.

To the Editors of THE LANCET.

SIRS,—In June of this year a communication by me appeared in THE LANCET on the treatment of eczema simplex as affecting the fingers and backs of the hands especially. Since then I have had suggested to me, and tried with excellent results, a new method of treating eczema of the palms of the hand and soles of the feet. This I wish strongly to commend to the consideration of the profession. In eczema sclerosum we find the skin thickened and hard. Large dry flakes of epidermis are firmly adherent to the corium below, projecting only at their periphery. The primary lesion, however, is *always* a vesicle; but this is seldom seen, its life history being very evanescent. Let us follow the plan adopted in the article referred to, and proceed to consider—

1. *The medicinal treatment.*—(a) External. Well soak the hands for several minutes in soft hot water; cleanse them with "lanoline eucalyptine," or lanoline coal-tar soap. Then get some fresh hot water. Now place on the palms

some of the animal fat, and rub it well in with a piece of pumicestone. However brittle and hard the epidermis may be, it is quickly removed, sometimes in large pieces, leaving the subjacent skin smooth, soft, and supple. This causes no contracture of the skin, and consequently no cracks or fissures. The skin does not accumulate for twenty-four hours, more or less. We repeat this procedure every second or third day, after each sitting smearing the surface with a little naphthol lanoline pomade. The same object as the above can be achieved by using the salicylic plaster muslin of Unna, but it has this fatal disadvantage—it requires constant application, whereas my method requires no strapping or bandage whatever. (b) Internal. Small doses of liquor potassæ—half a drachm or less soon after food—prove of great service. How this acts I am not in a position to explain. It may be that it helps the assimilation of the food by emulsifying fats, or perhaps it prevents those fermentative changes which I believe take place in the blood of many eczematous patients.

2. *Dietetic medication.*—Regular meals should be adopted, and in the majority of cases three a day. Tea should be partaken of only once a day, cocoa supplanting it at breakfast. Meat, not with too much indigestible fat to it, and with fresh vegetables, followed by fruit, should be allowed once, and this at dinner. Take old bread in place of potatoes, and brown instead of white. It matters not what the diathesis of the patient—he should avoid alcohol in any form, all pastry, sugar, and such other circulatory excitants.

3. *The hygienic and general indications* are to clothe the sufferer in woollen garments, whatever the season, the light materials being worn in summer. An equable temperature of the whole body is thus maintained, and the deficient fluid secretions of the hand accounted for. Proper and sufficient exercise must be indulged in, a pair of kid gloves being worn during the day. The patient should sleep in a well-aired and lofty room, with the window slightly open, in a woollen sleeping suit. Some cases have undoubtedly some relation to incontinence in sexual matters; therefore the moral surroundings should be looked to. I generally tell my patients, whatever portion of the body the eczema affects, that they are to wash the parts once only every three days, so necessary is it to keep them absolutely dry. More frequent ablution is not necessary—nay, is positively hurtful. These minor details are collectively and individually of great importance, though at first sight they may not seem so. They assist the local treatment to a large degree, and, unless we pay attention to every one, we must expect what in any case is likely to happen—namely, a relapse of the eczema palmaris. The statements under headings 2 and 3 are applicable to all forms of eczema, and whatever their position.

I am, Sirs, yours obediently,

Stokesley, Sept. 1888.

J. A. WETHERELL, M.B.

THE PROTECTION OF THE MEDICAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—I think it is decidedly for the profession, as a body, to take steps to protect themselves, as it is perfectly futile to expect the Medical Council to take direct steps on our behalf—that would be altogether out of their sphere; they may help and direct, but I do not see how they can go beyond that. Of one thing, however, I feel sure; and that is, that THE LANCET at least will render a very ready and helping hand, as in my experience it has always done, to any really good cause. Now as to the question what is to be done, and how best to do it. I think the onus lies on the rank and file of the profession to take action, for if some joint and hearty action is not taken, we had better let things remain as they are, and be content to grin and bear it. I myself have had now over a quarter of a century's hard work in the profession, and I have only to look back and contrast the present state of the profession with its state twenty or thirty years ago to see how it has fallen in status. Acts are now unblushingly done which no gentleman would have dared to do in former times. Further, we see, owing to the unnecessary competition, the beneficent influence of sanitary science, and other causes, our emoluments gradually year by year getting less, while every day numbers beyond the real wants of the public are crowding into the profession, and so reducing incomes to a starvation point. I could bring forward endless grievances and abuses as they now exist, but it is out of

the question to ask you for space for that—that can be better done by and by. I will, however, do this: if any reasonable number of the profession will help me, I will try to establish a league to bring about a more healthy state of affairs, so that we may happily become again a body respected and remunerated as we once were—a state of matters that will be for the joint benefit of us as a profession and of the public at large.—Yours truly,

September, 1888.

J. H.

PULMONARY TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—Your leaders in to-day's issue on tuberculosis and inhalations are refreshing. Tuberculosis is not a contagious disease—at least in the same way that syphilis or typhus is contagious. A man in good physical health cannot contract tuberculosis. This disease arises when every possibility of contagion is excluded. A diligence driver died of phthisis at Wiesen. There was no history of phthisis in his case, and there had been no death from this disease in the village for years before. An insanitary dwelling-house, indiscretions, and more bad native wine than wholesome food caused his disease. We all know instances of phthisis in country patients where contagion was impossible. The friends of the phthisical in the large Swiss Kursaals do not contract phthisis, and during winter about nineteen hours of the twenty-four are spent in-doors. We send a patient in the early stage of phthisis to Davos or Wiesen. His sputa are full of bacilli. He takes no physic, uses no inhalations, but lives well, and exercises freely. He returns after several months completely restored in health, and there are no bacilli in his sputa, if there be even any sputa. Bacilli come on the scene during an abnormal constitutional state, and they disappear on the return of the normal condition of health. Where is the evidence that the bacilli cause the phthisis? We do not require guinea-pigs in the debate. We have the disease in man plentiful enough. *Bacilli are present when phthisis is active.* This is the sum of our knowledge of these organisms. If we crenate all the phthisical animals in the world, there is no reason why phthisis should not go on afterwards, as it does now.

Koch would have us all bacteriologists. Verneuil holds that inoculation would be better, and suggests that we should all keep a supply of guinea-pigs for the purpose. Perhaps the bacilli scare is best treated by ridicule, and to arm each of us with a microscope and some guinea-pigs, as the Frenchman advises, is a distinct step in this direction. Rectal injection of sulphuretted hydrogen is another. If anyone will charge a chamber of air impregnated with bacilli, I shall breathe it as long as he likes. I sent you a paper several days before the Glasgow meeting in which I repudiated inhalations in phthisis, and I am pleased to be supported by authorities like Williams, Lindsay, and Denison. I do not think you are warranted in thinking Listerism a success. Lister attacks the germs. Lawson Tait would remove or change the pabulum on which they feed. In my experience Tait's teaching is right in surgery, no less than in medicine.

I am, Sirs, yours obediently,

Southport, Sept. 1st, 1888.

JOHN LOWE.

MEDICAL EDUCATION IN FORMER DAYS.

To the Editors of THE LANCET.

SIRS,—The pages of THE LANCET will soon be replete with accounts of the present state of medical education, and advice as to how it should be conducted. Could you find room for some account of medical education a century ago, copied from manuscripts in my possession? They were written in reply to inquiries from St. George's Hospital in 1792, when a controversy on this subject had arisen between John Hunter and his colleagues. With your leave I will forward the Report from St. George's Hospital on this subject later on. I have copied the manuscripts without any change, orthographically or otherwise, as they show the style of writing at that time.

I am, Sirs, your obedient servant,

CHARLES HAWKINS.

Sept. 10th, 1888.

"Hatton-garden, Dec. 20th, 1792.

"DEAR SIR,—When I first became acquainted with the two hospitals of St. Thomas and of Guy, which was in December, 1794, the established rules of those hospitals, at that time were that each surgeon was per-

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mitted to receive four pupils and four dressers at a time, inclusive of apprentices. For instance, if a surgeon had one apprentice only, in such case he, the surgeon, might take three dressers; if he had two apprentices, two dressers only; if he had three apprentices, one dresser only; if he had not any apprentice, he might take four dressers. No apprentice or dresser was ever known to pay a pupil fee. The names of the pupils were, upon their admission, entered in a book at the steward's office; and it was expected that every pupil should bring with him a certificate from his late master, signifying that he, the pupil, had served five years with diligence and sobriety. If any pupil or dresser conducts himself improperly during his attendance upon the business of the hospital, such pupil or dresser renders himself liable to be reprov'd or even expelled by the treasurer, according to the nature of the crime. Until of late years it was not customary to enter the names of the apprentices or dressers at the steward's office; but now it is. For many years past the pupil money has been and is still equally divided betwixt the six surgeons and the two apothecaries of both hospitals, but previously to this each apothecary was limited to three pupils only.—N.B. All the money received from apprentices and dressers is the whole and sole property of the surgeon, or surgeons, with whom such apprentices and dressers are entered at the steward's office of the respective hospitals. The number of pupils at these hospitals has for many years past been unlimited, but the number of apprentices and dressers is not unlimited. These rules and orders are made and ratified by a Grand Court of Committee of the Governors of the Hospitals, and are liable to be altered by them at pleasure. It is with pleasure I now comply with your request, and with respectful compliments to yourself and to every part of your family,

"Dear Sir, your most obedient and very humble servant,

"JOSEPH WARNER.

"To John Gunning, Esq., Old Burlington-street."

"SURGEONS.

"Mr. Guy's Hospital, being modelled from St. Thomas's, differs very little in discipline. Each surgeon sees the whole number of his patients once a week, when he presents out those who are cured, and gives directions for the rest. Particular bad cases are seen every day if necessary, because, by a rotation, one surgeon at least visits the hospital every day. On Saturday, the physicians and surgeons all meet and go in pairs to visit all their patients. The hours of business are from 11 to 1 o'clock. There is no house surgeon. One of the dressers is in waiting for a week by rotation to take the care of accidents, and the surgeon of the week is always in readiness to be called on if wanted for an operation. Friday is the general day for operations, and for grand consultations. The physicians nor their pupils have any concern with the surgeons' theatre. Notice of operations is put up in each surgery, and sent to the surgeons only. The hours of attendance at both hospitals are the same.

"SURGEONS' PUPILS.

"Formerly they brought certificates of their apprenticeships, but now they only bring their money. There are customs understood, but no rules; in the case of misconduct, beyond the power of the surgeons, application would be made to the grand committee of governors, who have the power of expulsion. The fees of apprentices and of dressers belong to the surgeon under whom they enter. When a body is opened to inspect disease, anyone may be present. The time for opening a body is usually early in the morning, or after lecture at noon. All the pupils within a reasonable distance from the hospitals are called to accidents. The pupils are considered as belonging to the hospitals, not to one particular surgeon. The surgeons and physicians are only officers of the hospitals, and receive a salary of £40 per annum. They are never present at courts or committees. The surgeons receive no other monies from the charity, and are amenable to the general court of the governors for their conduct. The pupils do not bring any certificate, but the gentleman's name with whom they served an apprenticeship, and the place of his abode, is entered in the steward's book at the time of his entry. They are obliged to submit to the rules that regulate the hospital, and are subject to be expelled for any misbehaviour by the committee. All the fees for the admission of the apprentices and dressers are the sole property of the gentlemen under whom they enter. All the profits arising from the admission of pupils are shared equally between the surgeons of St. Thomas's and Guy's Hospitals with the apothecary of each, so that there are eight claimants on each division, which takes place on the first Monday in every alternate month. The dressers and pupils cannot be admitted for a less term than six months. On leaving the hospital there is a certificate signed by each surgeon of St. Thomas's and Guy's Hospital, specifying the time for which they entered. In that certificate, the word diligently is expressed, which, I think, should be omitted, and a blank left for the surgeon to fill up if it meets with his approbation. The hand-writing of the surgeon would carry more weight with it, and we should be less liable to advance what was not a fact. The dressers pay £50 per annum, or £31 10s. for six months; the pupils 24 guineas per annum, or 18 guineas for six months. The pupil's business is only to look on, and to make such an enquiry as he shall chuse of the surgeon who is then attending. There are not many bodies opened for examination; but where we can obtain leave for an inspection it is the business of the surgery man to acquaint the pupils with the intention, and all those that wish may attend. The time for doing it is not by any means fixed, but is generally done after the practice is over, and before the anatomical lecture for that day. It is the business of the surgery man to make them acquainted with every accident immediately on its entry, for which he receives 2s. 6d. per quarter. They may quit the hospital whenever they please, and return again when they chuse. When a pupil enters at either of the hospitals he is considered as belonging to both, and has the same privilege at each. It is the business of the surgeon who attends to give them the best instruction he is able without considering to whom they entered. The apothecary enters the greatest number of them, not for himself, but for the surgeons. The surgeons do not receive any gratuity for operations. They find their own instruments, and keep them in good condition. They cannot become governors during their attendance as officers. There is not any contribution levied on them. There is not any difference in the manner of conducting the business at either hospital. At St. Thos. Hospital the days of attendance are Tuesday, Thursday, and Saturday at 11 o'clock. At Guy's Hospital the days are Monday, Wednesday, and Friday, at the same hour. At Guy's we visit the whole house every Monday and Friday. At St. Thos., I believe, every Tuesday and Saturday. The Thursday morning is employed in the admission and discharge of patients with them, and the

Wednesday with us. The time in visiting the whole house is nearly one hour and a half. There is not any house surgeon at either of the hospitals. We have not any fixed days for consultations and operations. If the former should be thought necessary it may be done with us either Monday or Friday, as the physicians should attend at the same time and on the same days. The operations are generally appointed at twelve o'clock on one of those days that is usual to see the whole house. If there should be any case that requires an operation which would be more conveniently performed at any other time of day than the Monday or Friday, it is always done by giving a notice. When any operation is to be performed the day is fixed that is most agreeable to the surgeons, and notice is stuck up at the surgery of each hospital mentioning the operation and by whom performed. There is not any notice given to the physicians, and it rarely happens that you see a physician in the theatre at the time. When any accident is brought in, the surgeon whose week it is receives notice, and according to the nature of such accident he either goes immediately over, or trusts the management of it to the dresser who is waiting there. The hours of attendance are the same, but the days being different it gives the pupils the opportunity of attending every surgeon at each hospital. There have been lectures read in anatomy in which observations in surgery have ever been introduced from the beginning, first by Mr. Girt, then Mr. Sharp, Mr. Warner, Mr. Elze, and at present by Mr. Cline. The fee for these lectures and for the dissecting room is twelve guineas. There are lectures read every morning at half-past seven on Midwifery by Dr. Lowder in the borough; they continue until half-past eight. At ten o'clock in the morning Mr. Babington, the apothecary at Guy's, gives a lecture on Chymistry, which continues until eleven, when the practice begins. Those mornings that pass without the lecture in Chymistry Dr. Saunders supplies with one on the Practice of Physic. The Chymical lectures continue until there has been two courses given, which employs them from the 1st of October until the month of May. The anatomical lectures are every day from one o'clock until three. These are read at St. Thomas's Theatre by Mr. Cline, the former in Chymistry, and the Practice of Physic at the Theatre at Guy's. All the pupils that enter for the anatomical lectures pay seven guineas; if they chuse to dissect and attend the dissecting-room they pay five guineas extraordinary. The terms for the Chymistry, Materia Medica, and Practice of Physic are ten guineas. I cannot take upon me to say when they were first instituted, but there were lectures read before the year 1750. There are not any Chirurgical lectures given but those that finish each anatomical course by Mr. Cline. They have amounted hitherto to twelve in number to each course. The lectures have always been delivered *à la roce*."

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

ROYAL ALBERT ASYLUM, LANCASTER.

THE quinquennial festival and opening of the new recreation hall of the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Lancaster, will take place to-day under the presidency of Lord Herschell. The new building, which has been erected from the designs of Messrs. Paley and Austin, combines a suitable and commodious hall for the associated entertainments and a spacious play-room for the use of girls and junior boys in inclement weather. There are 500 children from all parts of the north of England under training, and the committee wish to increase that number to 600. In connexion with the festival there is to be a public banquet.

HARTLEPOOLS.

At the last meeting of the Hartlepool Town Council the resignation of Dr. Morrison of the office of medical officer of health was accepted, and at the same time the hearty thanks of the Council were voted to that gentleman for his past services. At a meeting of the governors of the Hartlepool Hospital, among other donations acknowledged was that of £100 from the workmen of Messrs. W. Gray and Son, being their first quarter-day's pay, and which they have decided to give annually to the hospital. It was stated by Dr. Gourley that the foundation stone of the proposed hospital extension would be laid on the 22nd inst., the structure costing £3500. It may be added that the old historic vicarage has been almost wholly demolished to clear the ground for the extension.

DARLINGTON.

A sad case occurred at Darlington last week, showing the danger of entrusting infants in perambulators to children. An infant fifteen months old was being wheeled by a sister seven years of age, when the girl momentarily left the perambulator to look at a steam roller. A strong gust of wind caused the perambulator to run off the pavement and topple over and strike the legs of a horse which was standing in a corporation water-cart at the edge of the kerbstone. The animal swerved to one side and pulled the cart over the child, causing its instant death. The cart was filled with water and weighed a ton.

IMPURE LARD.

Several successful prosecutions of tradesmen in the north have lately been instituted for selling impure lard. It was shown that in some cases the adulteration consisted of from 25 to 30 per cent. of cottonised oil and beef stearine. The presiding magistrate properly stated that "the production of an analysis from a manufacturer in America was not worth twopence. No doubt the dealers had been taken in, but the poor people must not be taken in likewise."

THE LATE DR. LUKE ARMSTRONG.

It is supposed that the chair of Operative Surgery rendered vacant at the Newcastle College of Medicine by the death of Dr. Luke Armstrong, will not be filled up at present. The surgeoncy at the Royal Infirmary will, however, soon be declared vacant. Messrs. Dodd and Williamson are the assistant surgeons, and have held the posts for several years. A meeting of the professional and other friends of the late Dr. Luke Armstrong has been called at the Royal Infirmary this week to take steps to perpetuate his memory. Most likely it will take the form of a scholarship in comparative pathology, as the subject was one in which, as is well known here, he took much interest.

LEAD POISONING IN NEWCASTLE.

Since my last letter another sad case of fatal lead poisoning has occurred in Newcastle. The patient was a female aged thirty-four, and had worked at a white lead factory for several years, but during the past five years she had frequently suffered from its effects. At last she was seized with convulsive fits, from which she never recovered. The surgeon to the works, Mr. H. W. Newton, at the inquest, deposed that proper respirators were provided by the firm, and also that combs, towels, and baths were provided to ensure cleanliness, so that they need never leave the works with a particle of lead upon them, and also, seeing the importance of the female workers not commencing without a good meal, the firm had offered to liberally subscribe to such a meal, but the *employes* had not responded to the offer, and there was great difficulty in getting them to use the efficient means provided for the purpose. A verdict of "Death from lead poisoning" was recorded. The coroner said he had been informed that the respirator introduced by Mr. Newton was one of the best for minimising the effects of lead. In connexion with the effects of lead on the system, Dr. D. Drummond, of this city, in some papers which he has just collected and printed on peripheral paralysis, has recorded some most interesting cases of lead neuritis observed and treated by him at the Newcastle Royal Infirmary. In one case various organs were found contaminated with lead after death, but the spinal cord had no structural change. While the posterior interosseous and other nerves showed very pronounced morbid changes, the paralysed and healthy muscles showed lead in about the same quantity. Dr. Drummond's papers will repay study.

Newcastle-on-Tyne, Sept. 18th.

DUBLIN.

(From our own Correspondent.)

DUBLIN MEDICAL SCHOOLS AMALGAMATION SCHEME.

ONLY a fortnight now remains before work commences in the various schools, and a good deal has yet to be done before the scheme is an accomplished fact. A special meeting of the Fellows has to be convened to consider the scheme as passed by a majority of the Council, and to adopt it or refer it back to the Council for reconsideration. Many consider that the scheme should have been brought on earlier in the year than it was; some believe the time is now too short to allow it to come into operation this year; while others are of opinion that if not carried now it will never be adopted. Possibly another week will decide definitely the probability of the scheme being adopted this year or not at all.

RICHMOND DISTRICT LUNATIC ASYLUM, DUBLIN.

This institution, containing 1176 patients, is stated by the inspectors of lunatic asylums in their recent report to be

overcrowded by nearly 100 inmates, and as the monthly admissions are in excess of the discharges, some new provision is obviously needed. The existing accommodation would be sufficient for its normal population in regard to area and general requirements, such as hospitals, infirmaries, chapels, and refectories; but day-rooms and apartments for the staff are daily becoming more pressing, and should speedily occupy the consideration of the board of governors. Dysentery and some other zymotic affections having been prevalent, large sanitary operations were recently undertaken, not only within and immediately around the buildings, but through a considerable portion of the grounds and adjoining conduits. The cost is estimated at about £9000, a large outlay no doubt, but one which was imperatively demanded.

A SINGULAR CASE.

A medical student named Gannon, who had been subject to delusions for some time, recently removed both his eyes, and has refused to give any explanation of the occurrence. The injured man was removed to the Mater Misericordie Hospital, and was placed under the care of Mr. Hayes. In the field where the act was committed were found a blood-stained walking-stick and a piece of wire, both of which were probably utilised to remove the organs, which were found about one hundred yards distant from the place where Gannon was lying down when first discovered.

HEALTH OF IRELAND DURING 1887.

The births last year were 112,400 and the deaths 86,585, both absolutely, and in proportion to the estimated population, being under the annual average of the past ten years. The excess of births over deaths was 23,815, and the loss by emigration amounted to 82,923, thus accounting for a decrease of 59,108 in the population; but against a portion of this decrease there is a set-off in immigration, of which no official record has been obtained. It is a very melancholy fact that the average reduction of the population per year since 1877 has been close upon 40,000. The four highest counties having the highest birth-rates were Antrim, Dublin, Down, and Mayo; and the lowest, Monaghan, Meath, Tyrone, and Longford. The death-rate for 1887 was 18.3, which was slightly under the average rate for the previous decade. A large proportion of the deaths occurred among infants under one year old and of children under five years. The figures relating to pauperism in 1887 are not of a satisfactory nature. The number of in-door poor was 46,442, and of out-door 65,607. This is an increase as compared with 1877, although the population has been sensibly decreased since then. Out-door relief has doubled during the last ten years, while in-door support has increased.

Dublin, Sept. 18th.

BELFAST.

(From our own Correspondent.)

THE ROYAL HOSPITAL.

AT the quarterly meeting held on August 27th, it was reported that during the previous quarter 519 intern patients had been treated in the hospital; of these, 318 were surgical and 201 medical, while during the same period there had been 3067 extern patients. The financial condition is not satisfactory, as at the end of July the balance due was £1233, while at the beginning of the quarter it was £869. The total expenditure for the eleven months ending July 31st was £8016 6s. 4d. (this including an amount due at the beginning of the year). From three sources—(1) general subscriptions, (2) *employes'* subscriptions, and (3) church collections—there has been a diminution as compared with the same time last year of £207. All the ordinary sources of income have diminished, while the demands made upon the hospital have steadily increased. The general arrangements of the hospital in all its departments are encouraging. Dr. J. W. T. Smith was re-elected physician, and Dr. T. K. Wheeler, surgeon, each for a period of four years.

HOSPITAL SATURDAY.

The annual street collection on behalf of the Royal Hospital took place on the 1st inst., the amount realised being a little over £200, which, considering the claims the hospital has upon the sympathy of the public, and its absolute non-political

and non-sectarian character, is anything but a satisfactory amount, and little creditable to the town of Belfast.

Belfast, Sept. 17th.

PARIS

(From our own Correspondent.)

ACTINOMYCOSIS.

M. NOCARD, the well-known veterinarian, recently brought to the notice of the Academy of Medicine a case of human actinomycosis, the first observed in France. The case was communicated by M. Lucet, veterinary surgeon at Courtenay, and the following is a summary of his note. A young man, a groom, after injuries on the nates and on the thigh of the left side, which took place in the months of March and April, 1887, presented in the left lower limb a species of deep phlegmon, slow in its course, which was incised in the month of July, and again, after the occurrence of new foci, in October and November. The pus obtained, when the first abscess and the subsequent ones were incised, contained a considerable number of small granulations, which, examined by the microscope, were observed to be formed by a cluster of actinomycetes. A fistula was formed, from which escaped pus mixed with small white bodies (granulations containing clusters of actinomycetes). At the end of July, 1888, the fistula still existed, and under it a new focus was formed; it was at first hard, and then became soft. When opened, this new abscess gave issue to only a little pus, presenting always the same characters as those of the pus which escaped from the opening of the previous abscesses. The patient is better, walks, and does not suffer, but he is not cured.

FILARIASIS.

In a note on this subject, Dr. Lancereaux defines filariasis to be a malady determined in the economy by the presence of the filaria sanguinis, in the same way that trichinosis results from infection by trichinae. The anatomical disorders caused by the filaria are numerous, and are to be found on the glands and lymphatic vessels in the serous cavities and in the blood. But the symptoms are not in relation with the extent of these disorders, as often the patients do not experience any appreciable derangement of health. There are, however, three symptoms which characterise the malady: soft tumefaction of the inguinal glands, hæmatochyluria and the presence of the filaria in the blood. These three symptoms constitute the diagnosis. Demarquay was the first to bring to notice the presence of the filaria in a tumour of the scrotum. The prognosis is of little gravity, although filariasis is a malady of long duration, and it generally terminates in spontaneous cure, the subjects of it sometimes attaining an advanced age. When death takes place, it is generally due to an inflammatory complication arising from a bad state of the general nutrition. It is a malady of hot climates, and mosquitoes are said to be the agents of transmission of the parasite. The treatment of the malady is very unsatisfactory, as almost every drug has been employed, but without success. In the case under notice Dr. Lancereaux employed hydrotherapy and mercurial innctions to the seat of the engorged glands of the groin. The patient was cured.

THE TYPHOID EPIDEMIC AT CLERMONT-FERRAND.

About two years ago an epidemic of typhoid fever reigned at Clermont-Ferrand. Dr. Nivet, a distinguished practitioner of the place, forwarded a complete report of the epidemic to the Academy of Medicine. The report, which was drawn up from 500 cases carefully observed, tends to prove that, contrary to the opinion of certain authors, it is not only to the contamination of drinking-water that the propagation of typhoid fever must be attributed. Dr. Nivet admits the frequency of the transmission of the typhoid element; but he believes that the typhogenic bacillus often penetrates into the healthy organism by the air breathed, notably in the habitations the atmosphere of which is vitiated by overcrowding; and that at other times it is simply transported by persons who have been nursing patients affected with the disease.

PULMONARY TUBERCULOSIS.

In a statistical report relative to the frequency of pulmonary tuberculosis and to its curability, Dr. Vibert, in

looking over the register of the necropsies made at the Paris Morgue, was struck with this fact—viz., that in 131 individuals of from twenty-two to fifty-five years of age, having all succumbed to violent deaths or sudden deaths, it was noted that the existence of pulmonary tuberculosis was recognised in twenty-five individuals, in seventeen of whom the malady was in a cretaceous or fibrous state; that is to say, of tubercles cured.

DISINFECTION.

The General Council of the Seine has caused to be placed in each of the cantons of the department movable stoves for the purpose of disinfecting the body and bed linen and other articles that have been used by patients affected with contagious diseases. These will be placed gratuitously at the disposal of the public. The circular draws attention to the fact that none of the material subjected to the process will be deteriorated, as the disinfection is obtained simply by the vapour of water under a pressure of from 108 to 115 degrees. Numerous experiments have shown that this mode of disinfection ensures the destruction of pathogenic germs without injuring the hair, feathers, or the tissues.

Paris, Sept. 18th.

INDIA.

(From a Correspondent.)

TEA IN ASSAM.

THE history of industry in Assam tea last year records steady progress. Some 7000 acres more than in the previous year were in full bearing, and the yield reached the huge figure of 68½ million pounds, being 6½ million pounds greater than in 1886. It is anticipated that the out-turn during the current year of Indian tea will be 96 millions. The supply would seem to be in excess of the demand, and thus the low rates. The United Kingdom is the chief market. Even with the low rates good profits are made, which fact is explained by tea being turned out now for less than was possible a few years since. The use of machinery of an improved character is now largely extended, with the invariable result that everything is done cheaper, while the freight and cost of transport are less. The fall of the prices is also, in a measure, due to over-production.

CHILDREN'S HOSPITAL: PHARMACOLOGICAL LABORATORY.

There are two worthy objects which at the present moment are advancing their claims upon the sympathy and purse of the Government and the philanthropic and opulent public. These are a hospital for sick children and a pharmacological laboratory in Bombay. In honour of Her Majesty's jubilee, Sir Dinshaw Manockjee Petit has come forward with a munificent donation of a lakh and a quarter (125,000) rupees. I may say that it is now an open secret that the idea of the new children's hospital will soon be realised, and will be called after the donor. The establishment of a pharmacological laboratory has been warmly advocated, and may ere long be an accomplished institution.

A NEW FACTORY ACT FOR BOMBAY.

This, it would seem, is necessitated mainly out of regard for the health and well-being of juveniles employed in the local mills and manufactories. Children have hitherto had to work for nine and ten hours a day, even in the hottest weather, in close steamy atmospheres. Human nature revolts against such an outrage, whereby, even in the cases of adults, strength is exhausted, and digestion is seriously impaired. The evil does not end here, for at twelve years of age a child is legally held to become an adult in India. He or she is then a full-time worker for even thirteen hours out of the twenty-four. A new Factory Act is required, as the mill-owners of Bombay appear to drive their willing horses off their legs.

CHOLERA AMONG COOLIES IN ASSAM.

Mr. Vincent Richards writes some long letters to the Calcutta *Englishman* in vindication of attacks made on him, it would appear, by Mr. De Renzy, when sanitary commissioner of Assam, in respect of the causes of outbreaks of cholera on board the Assam steamers. Mr. Richards enumerates the following as circumstances under which outbreaks occur:—1. When cholera is prevalent either among the people from where the emigrants are obtained

or in the districts through which they pass *en route* to the embarkation stations. 2. Embarkation during certain months when cholera is most rife: these are February, March, April, July, and August. 3. When coolies are principally inhabitants of Chota Nagporee district. 4. The longer the passage and the larger the batches of coolies the greater will the mortality be if they have embarked with the disease among them. 5. The non-inspection and detection of cases. He, differing from Mr. De Renzy, indicates that the diminution of cholera on shipboard of late years is due to the fact that the trips which in years gone by used to occupy twenty-one and twenty-two days, now take only seven. Mr. De Renzy, on the other hand, holds that the diminished prevalence on board these Assam steamers is due to improved water supply. This is discarded by Mr. Richards, who quotes from the report of Sir B. Simpson, sanitary commissioner with the Government of India. This official writes that while coolies, who get filtered water on board, are attacked by cholera, other passengers, for whom there is no such provision, and who draw their water over the side of the vessel from the river Bramaputra and the landing places, which are most polluted, *never get it!* Moreover, crews, who are also "unprotected," are *never attacked!* The italics are mine. Mr. Richards points out that, besides a better water supply, there is need for improved ventilation, larger cubic space, more hospital accommodation for segregation of the cholera sick, and improvement of the dietary scale.

SANITATION OF AHMEDABAD.

This city claims the unenviable position of having the highest death-rate of any civilised city in the world. Last year the ratio was 36.36 per 1000, and in 1885 it was 50.85 per 1000. About two months since the Government of Bombay, observing the masterly inactivity which characterised the municipality, administered a sharp rebuke, and warned them that if they did not look after sanitary matters better their constitution would be suspended.

UNIVERSITY OF BOMBAY.

Mr. J. B. Lyon, M.R.C.S., F.C.S., F.I.C., has been proposed for the office of Dean of the Medical Faculty of the Bombay University.

CONTAGIOUS DISEASES ACTS.

The recent Parliamentary agitation has already resulted in the carrying out of the repeal of this piece of legislation, and the substitution of voluntary examination and treatment of women. This is proving to be a deal letter and a veritable *fiasco*. In not one of the Lock hospitals, I understand, has a single person presented himself for examination, or is likely to do so as long as it remains optional.

Bombay, Aug. 28th.

THE SERVICES.

MADRAS STAFF CORPS.—Surgeon-Major Daniel Robert Thompson, M.D., C.I.E., Madras Medical Establishment (dated May 14th, 1888), has been permitted to retire from the service.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Samuel Parsons Smith, 1st Volunteer Battalion, the Royal Fusiliers (City of London Regiment), to be Surgeon-Major, ranking as Major (dated Sept. 19th, 1888); Acting Surgeon Alexander Duncan Fraser, M.D., 4th Volunteer Battalion, the Princess Louise's (Argyll and Sutherland Highlanders), to be Surgeon, ranking as Captain (dated Sept. 19th, 1888).

ADMIRALTY.—Staff Surgeon St. Lawrence French-Mullen, M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Sept. 7th, 1888).—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeons John Thomson Comerford, M.D., and Charles Alexander Lees, M.D., have been placed on the Retired List at their own request, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets.

The following appointments have been made:—Mr. James McGaw, to be Surgeon and Agent at Killybegs and Tribane (dated Sept. 14th, 1888); Surgeon Francis H. Julian, to the *Royal Adelaide*, and Surgeon Jeremiah Sugrue, to the *St. Vincent* (both dated July 19th, 1888).

VOLUNTEER CORPS.—*Artillery*: 5th Lancashire: Charles William Dean, Gent., to be Acting Surgeon (dated Sept. 15th,

1888).—*Royal Engineers*: 1st Gloucestershire (the Western Counties): Surgeon S. Smith is granted the honorary rank of Surgeon-Major (dated Sept. 15th, 1888).—*Rifle*: 4th Volunteer Battalion, the Durham Light Infantry: Surgeon and Honorary Surgeon-Major W. C. Blackett resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated Sept. 15th, 1888).

Obituary.

SIMONE DE BELLO.

THE quaint old Norman seaport Trani, in Apulia, lately lost an able physician in Dr. de Bello, who reached the venerable age of eighty-one in practising chiefly among the poor of that populous city and neighbourhood. The doctor was of a remarkably fine presence and benevolent address, and of latter years came to resemble, in a way that struck everyone who could make the comparison, the Moses of Michael Angelo in the Eudoxian Basilica. His professional skill did credit to the Neapolitan school of which he was a distinguished graduate, and he was never weary in devising and, as far as he could, effectuating means for making healthier and happier the lives of the people among whom he lived.

A funeral, attended by literally thousands of mourners, chiefly the very poor, attested the place he had won in the hearts of his fellow-citizens, and a monument, for which all, according to their means, subscribed, has just been erected over his grave. The epitaph is from the pen of Giovanni Bovio, the celebrated Neapolitan professor and publicist, whose speech on the second day of the commemoration of the eighth centenary of Bologna University was reckoned one of the most memorable that the occasion evoked. Professor Bovio, himself a native of Trani, is well known as an enthusiastic Mazzinian, and Dr. de Bello's adhesion to the same politico-religious culte is pointedly indicated in the inscription:—

MDCCCLXXXVIII.
Fui Simone de Bello,
Medico concio di mio ministero.
Ai miseri
Intelletto e averi.
Alla patria
Abbandonai me e i miei ultimi anni.
Securo
Entrai nella casa de' morti,
E un popolo piangente
Questa pietra
Pose
Dite dite ai viventi
Che ai moribondi
Scienza stato oro lacrime
Tutto par vano
Tranne il dovere.

(MDCCCLXXXVIII. I was Simon de Bello, physician, conscious of my high calling. To the poor I gave up intellect and worldly means, to my country I devoted myself and my last years. Fearless I entered the house of the dead, and a weeping population erected this stone.—Say say to the living that, to the dying, science, gold, tears, all appear vain, except duty.)

Medical News.

UNIVERSITY OF CAMBRIDGE: SANITARY SCIENCE EXAMINATIONS.—The examination in State Medicine will commence on Tuesday, Oct. 2nd. The names of candidates should be sent to the Registrar of the University on or before Sept. 28th.

MEDICAL MAGISTRATE.—We are pleased to state that Mr. D. B. Balding, F.R.C.S., of Royston, has been placed on the Commission of the Peace for Cambridgeshire. Mr. Balding, whose name must be well known to the profession, has for many years held the office of coroner to the district in which he resides.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD.—A grand evening concert in aid of the funds of this hospital was given at Myddelton Hall on Monday last. It was one of a series of efforts now being made by the working men's committee in connexion with the hospital.

MR. H. HARVEY-GEORGE has given a site for the erection of a permanent cottage hospital at Gorleston.

VACCINATION GRANT.—Mr. H. Wickham, of Rufford, Ormskirk, has received the Government grant for efficient vaccination (third time in succession) in his district.

THE Camberwell board of guardians on Monday last, after a prolonged discussion, sanctioned an outlay of £14,000 for erecting the first block of a new infirmary.

SWEATING.—At the last usual monthly meeting of the Liverpool United Trades' Council it was resolved to collect evidence in this district for the purpose of being placed before the Royal Commission of Inquiry as to "Sweating."

COUNTY HOSPITAL, YORK.—The governors have decided to erect additional rooms over the Watt ward, and to appropriate for this purpose the residue and accumulated interest of the legacy left in 1874 by the late Mr. Richard Watt, of Bishop Burton.

A COTTAGE HOSPITAL FOR DUFFTOWN.—Sir George Stephen has announced his intention of building and endowing a cottage hospital in Dufftown for the benefit of the Dufftown and Glenrines parishes. For this purpose he has resolved to set aside the sum of £5000.

ENTERIC FEVER IN THE LINLITHGOW DISTRICT.—The epidemic of enteric fever which broke out some time ago appears to show no signs of abatement. Some twenty cases have been reported between the burgh and parish, but only one death has as yet resulted.

THE ANGLESEY INFIRMARY EXTENSION.—The new wing of the Anglesey and Carnarvonshire Infirmary at Bangor was formally opened on Wednesday last. It has been erected by public subscription as a memorial to the late president of the institution, Lord Penrhyn. A medallion of the deceased peer in the principal ward was unveiled by the Dowager Lady Penrhyn.

No less than fifteen persons are said to have been poisoned at Wetwang, near Driffield, by eating veal. The meat is stated to have been quite fresh, but everyone who partook of it was seized with serious illness, many with colic, sickness, and diarrhoea. Fortunately no deaths have resulted. An inquiry into the matter by the medical officer of health has not resulted in any satisfactory solution of the mystery.

THE NORTH-EASTERN HOSPITAL FOR CHILDREN, HACKNEY-ROAD, E.—The following statement was omitted from our Students' Number:—This hospital contains 55 beds. Last year the number of in-patients was 654, and of out-patients 13,882 new cases. Attendances 52,320. Consulting Physicians: Sir Morell Mackenzie, M.D., Dr. Sansom, and Dr. Cayley. Consulting Surgeons: Mr. J. Hutchinson, F.R.C.S., and Mr. R. J. Godlee, M.S., F.R.C.S. Physicians: Dr. F. C. Turner, Dr. Semple, and Dr. Pasteur. Surgeons: Mr. Waren Tay, F.R.C.S., and Mr. Bilton Pollard, F.R.C.S. Clinical Assistant: Major Greenwood, junr., M.D., L.R.C.P. House Surgeon: Mr. W. Blake. Junior House Surgeon: Mr. E. L. De Chazel. Secretary: Mr. Alfred Nixon. City Office, 27, Clement's-lane, E.C.

THE RIVER IRWELL PURIFICATION.—The representatives of a large number of rural and urban sanitary authorities met the chairman and deputy-chairman of the Manchester Ship Canal Company on Tuesday, to consider the reports received from the various local authorities, and also to discuss what further steps might be taken to give effect to the resolutions passed at a conference of local authorities which was held in Manchester in January last. Lord Egerton reported that sixty-seven of the local authorities were represented at the conference out of the seventy-five invited to attend, and stated what steps had been taken subsequently by those authorities in respect to the disposal of sewage. After some discussion, it was decided—in consequence of no information having been obtained from some of the local authorities invited to attend the conference—that the committee should communicate with those authorities which have not hitherto dealt with their sewage and the pollution of the streams in their districts, urging them to either construct works themselves or take advantage of other undertakings in their vicinity which might be available.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. Allen Fletcher, of Lord-mayor's-walk, York, has bequeathed £25 each to the York County Hospital and the York Infirmary.—By the will of Mr. John Beale, of Belle Vue, Southsea, legacies are left of £500 each to the London Hospital for Incurables and the Cancer Hospital, London.—A donation of £1000 to the Endowment Fund of the Convalescent Home of the Royal Infirmary, Dundee, has been received by the treasurer from Miss Symers, of St. Helen's, Dundee.—A legacy of £400, bequeathed by the late Mr. Henry Dipnall, of Greenhill, Owslebury, to the Royal Hants County Hospital, has just been paid to that institution.—The treasurer of the Children's Hospital, Pendlebury, has received £40, part of the proceeds of the athletic festival held by the *Old Guard* Theatrical Company at Old Trafford.—A donation of £11 13s. 6d. from the workmen of the Cheshire Lines Engineering Department, Warrington, has been handed over to the Warrington Infirmary and Dispensary.—£54 (the net amount), collected by a house-to-house canvass at Rastrick for the local charities, has been thus distributed—namely: £44 to the Huddersfield Infirmary, £5 to the Bradford Eye Hospital, and £5 to the Halifax Infirmary.—The London Broderers' Company has granted a donation of ten guineas to the funds of the Consumption Hospital, Brompton.—The late Mr. J. P. C. Starkie, of Ashton Hall, Lancashire, has bequeathed £100 each to the Royal Albert Asylum for Idiots, Lancaster, and the Lancaster Infirmary.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BAIN, D. B., M.D., M.B., C.M. Edin., has been appointed Honorary Assistant Physician, Royal Infirmary, Dundee.
BARFORD, A. M., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the Liverpool Northern Hospital, vice V. Milligan, M.B., C.M. Aber., promoted.
BELL, J. A., M.R.C.S., L.S.A., has been appointed Police Surgeon for Rochester, Kent.
CAMPBELL, GEORGE, L.F.P.S. Glasg., has been appointed Medical Officer of the Fifth District, Bridgewater.
CHEVES, J. T., M.R.C.S., L.S.A., has been appointed Medical Officer for the Sixth District of the Liskeard Union.
DAVIES, H. A. B., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health, Newton Abbott Rural and Wolborough and Dawlish Union Combined Districts.
DEVONALD, ALFRED, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of the Bonvilston District, Cardiff Union.
GARRETT, J. H., M.B. Durh., has been appointed Resident Medical Officer to the City of London Infectious Diseases Hospital.
GOUGH, H. E., M.R.C.S., has been appointed Assistant Surgeon to the Liverpool Dispensaries.
HUGHES, SAM., M.B., C.M. Edin., M.R.C.S., L.S.A., has been appointed Resident Medical Officer to the New Infectious Hospital, Grafton-street, Liverpool.
JOHNS, W. S., L.R.C.P., L.R.C.S., L.M. Edin., has been reappointed Medical Officer of March, Cambs.
MORTON, WILLIAM J., L.R.C.S. Edin., L.R.C.P. Edin., has been appointed Surgeon to the District Hospital, Queanbeyan, New South Wales, vice Dr. Louis Fitz Patrick, resigned.
MOXON, WILLIAM, L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Matlock and North Darley Union Districts, and Matlock District of the Bakewell Union.
NESBITT, ROBERT, L.K.Q.C.P., L.M., L.R.C.S.I., has been reappointed Medical Officer of Health for the Sutton-in-Ashfield Union District.
NEVINS, ARTHUR E., M.R.C.S., L.R.C.P. and S. Edin., has been appointed House Physician to the Hospital for Women, Soho-square, W., vice G. H. Burford, M.B. Aber., resigned.
PHILLIPS, EDWARD ENGLAND, L.R.C.P., M.R.C.S., L.S.A., J.P. for County of Essex, has been reappointed Medical Officer of Health to the Rochford Rural Sanitary Authority, Essex.
RODGERS, J. H., L.R.C.P., L.R.C.S., Surgeon to Nottingham Friendly Societies, has been appointed Surgeon to the Colar Gold Mines, Mysore, India.
RUSHTON, J. L., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health, Macclesfield Rural Sanitary District.
TUCKEY, T. ST. PATRICK, M.B., M.Ch. Dub., has been appointed Medical Officer of Health for the Fowey Port Sanitary District.
WALES, T. G., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Downham-Market Union District.
WATKINS, J. W., M.D. Edin., M.R.C.S., L.S.A. Lond., has been reappointed Medical Officer of Health, Newton-in-Makerfield and Haydock Union Districts.
WHYTE, JOHN M., M.A. Edin., M.B. and C.M., M.R.C.S., has been appointed Honorary Pathologist, Royal Infirmary, Dundee.
WILLIAMS, A. F., L.F.P.S., L.M. Glasg., L.S.A. Lond., has been reappointed Medical Officer of Health, Brixworth Rural District.
WISKEN, HENRY, L.R.C.P., L.M. Edin., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the Borough of Heywood.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £50, with board, lodging, and washing, also fees for certifying infectious cases.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's-inn-road.—Three Clinical Assistants. Six months' attendance on two afternoons a week.

CITY OF LIVERPOOL: CITY HOSPITAL, Parkhill, and CITY HOSPITAL, Grafton-street.—Visiting Physician. Salary at the rate of £100 per annum.

COUNTY ASYLUM, near Dorchester.—Assistant Medical Officer. Salary £120 per annum, with board, washing, &c.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Physician. Salary £50 per annum, with board and lodgings in the Hospital. Physician to Out-patients.

GUILD OF S. LUKE, Galeston, Eton-avenue, South Hampstead.—English Churchmen to take charge medically of Mission Stations in Eastern Africa, New Westminster, and North China.

HOSPITAL FOR SICK CHILDREN, Penderbury.—Night Superintendent. Salary £30, with uniform.

MANCHESTER ROYAL INFIRMARY (Monsall Fever Hospital).—Assistant Medical Officer at Monsall Fever Hospital. Salary £100 per annum, with board and residence.

NORFOLK AND NORWICH HOSPITAL.—Assistant to House Surgeon. Board, lodging, and washing provided, but no salary.

NORTH SHIELDS AND TYNEMOUTH DISPENSARY.—House Surgeon and Dispenser. Salary £130 per annum, with a furnished house, gas, coals, &c.

SALOP INFIRMARY.—Assistant House Surgeon. Board, lodging, and washing.

SOUTH-EASTERN DISPENSARY, Bermondsey.—Medical Practitioner, to attend at the Dispensary every evening. Salary according to work done.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.—Assistant Physician.

ST. MARY'S HOSPITAL, Paddington, W.—Medical Superintendent. Salary £150 per annum, with board and residence in the hospital.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £130 a year, with furnished rooms, coals, and gas, and extra allowance for horse hire.

TOWNSHIP OF MANCHESTER.—Assistant Medical Officer at the Workhouse at Crumpsall, near Manchester, and Resident Assistant Medical Officer at the Workhouse Receiving and Casual Wards in New Bridge-street, at a joint salary of £150 per annum, with furnished apartments, fire, light, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

JENNINGS.—On the 18th inst., at 33, Rue Marbeuf, Paris, the wife of Oscar Jennings, M.D., of a daughter.

RUSSELL.—On the 13th inst., at The Pirs, Waltham-cross, the wife of John H. Russell, M.R.C.S., L.S.A. Lond., of a daughter.

TURLE.—On the 14th inst., at Cliffe House, Enderby, Leicester, the wife of Arthur Turle, M.R.C.S., of a daughter.

MARRIAGES.

BOWER—RIDER.—On the 15th inst., at Trinity Church, Hampstead, by the Rev. G. F. Head, M.A., Vicar of Christ Church, Hampstead, assisted by the Rev. T. C. Storrs, B.A., Curate of Trinity, David Bower, M.D., of Springfield House, near Bedford, to Marian, daughter of William Rider, of 22, Belsize Park-gardens, Hampstead, N.W.

DAY—BLAXLAND.—On the 11th ult., at St. John's Church, Erith, Donald Douglas Day, F.R.C.S., of Norwich, second son of Archibald Day, of Blackheath, to Henrietta Sarah, youngest daughter of G. Blaxland, of Belvedere, Kent.

GEORGE—BERNARD.—On the 4th inst., at Christ Church, Forest-hill, Kent, Henry George, M.B.C.S., L.R.C.P., second son of C. F. George, M.R.C.S., &c., of Kilton Lindsey, Lincolnshire, to Barbara Mary (Birdie), eldest daughter of William Leigh Bernard, Esq., Barrister-at-law.

MORGAN—EASTWOOD.—On the 12th inst., at Seaford Parish Church, William Pringle Morgan, B.A., M.B., Trinity College, Dublin, Hurdie House, Seaford, to Ethel Mary, second daughter of Wm. Eastwood, Esq., The Crouch, Seaford.

DEATHS.

DAVIE.—On the 14th inst., at his residence, Warrior-square, St. Leonards-on-Sea, suddenly, David Davies, M.D., aged 79.

JOLLIFFE.—On the 13th ult., at Kohat, Punjab, India, Albert Robert Jolliffe, Surgeon Indian Medical Service, youngest son of John Jolliffe, of Portwood, Southampton, of cholera, aged 26.

ROSS.—On the 11th inst., at Alderney, William Abraham Ross, M.R.C.S., L.R.C.P., only son of the late Rev. Wm. Bathgate Ross, formerly Rector of Alderney, aged 39.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, September 20th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Sept. 14	30.28	S.E.	59	57	106	71	61	..	Hazy
" 15	30.18	E.	56	55	98	75	55	..	Foggy
" 16	30.21	E.	62	58	89	65	54	..	Cloudy
" 17	30.27	N.E.	57	55	89	64	55	..	Overcast
" 18	30.29	N.E.	59	55	78	63	54	..	Bright
" 19	30.31	E.	60	57	114	67	65	..	Overcast
" 20	30.26	E.	58	56	106	69	62	..	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

ST. AUGUSTINE AND HIS MEDICAL GUIDE.

THE most celebrated among the ancient Christian fathers relates in his "Confessions" how in Carthage, while yet in early manhood, he was a votary and teacher of rhetoric, and had entered the lists for a theatrical prize. Asked by an astrologer what he would give him to win, Augustine indignantly declined all dealings with the man, but admits that the "mystery" of nativity-casting had great charms for him. Indeed, he might have become an astrologer himself but for the old Vindicianus, whom he calls "the great physician of our time" (circa A.D. 375), who had, "with his own pro-consular hand," put the Agonistic garland on the youth's head, and thereafter admitted him to his society—a favour which seems to have been instrumental in saving to the Church one of its most brilliant lights. Vindicianus (who, like Celsus more than three hundred years before, appears to have been a Roman gentleman who acquired a knowledge of medicine through love of an ennobling study, and who practised it, like the great physician and scholar Littre, for its own reward), fascinated the young African with his vivid, lively, and earnest discourse, and on learning that Augustine was devoted to astrology, he gave him the fatherly and kindly advice to shun the pursuit and bestow his care and diligence on objects really worthy of them. Vindicianus had once, by his own confession, taken to nativity-casting, in hopes to make a livelihood by it, and, as he had already made a study of Hippocrates, he had no doubt that he would master the secrets of the spurious science like an easy game; but the nobler claims of the healing art won the day, and he abandoned the profession which thrives by deluding the people for that which lives to keep them in life and health. So in the end Augustine yielded to his medical counsellor, and began the study of Heaven, not in the Chaldean, but in the Christian sense, with results which have left on the world an impress only to be effaced with Christianity itself.

Doubtful.—It is not compulsory on the County Council to appoint a medical officer of health. They may do so if they see fit, and his services may be made, with the consent of a District Council, available in a district of the county; but he would be to all intents and purposes the officer of the District Council, who would still remain the sanitary authority. County Councils will therefore not assume the sanitary administration of the country.

Hopeful.—The Scottish preliminary examination is not accepted by the English universities.

"TOUTING AT HOME AND ABROAD."

To the Editors of THE LANCET.

SIRS,—I beg to forward you a copy of the explanation I have submitted to the President of the Royal College of Physicians, Edinburgh, on the subject of the comments made by you regarding my alleged unprofessional conduct, in your issue of July 14th last, in the hope that you will be good enough to consider my side of the case with your usual impartiality.—I beg to remain, Sirs, yours faithfully,
Bombay, Aug. 7th, 1888.

J. MUNDAY, L.R.C.P., &c.

"To the President and Fellows, Royal College of Physicians, Edinburgh."

Bombay, 7th August, 1888.

"GENTLEMEN,—Being a licentiate of your College, and likewise of the Royal College of Surgeons, Edinburgh, I beg to be allowed to submit to you my explanation regarding certain remarks made against my professional character in THE LANCET of the 14th July, 1888, under the heading 'Touting at Home and Abroad; Bombay.'"

"Having come to know that there was a good practice to be had in the Bombay Harbour, I therefore commenced practising there in April last. I tried to obtain a share of it by introducing myself to the captains of vessels on their arrival. This seems to have given considerable umbrage to the only other two practitioners in the said harbour (who had monopolised the practice), one of whom is a European, the other a Parsee. To such extent did these gentlemen proceed in their endeavours to prevent me from getting a footing in the practice that they did not hesitate through their agents (runners employed by them to board steamers, &c. outside the harbour) to openly charge me with being a 'quack'; and when I produced my diplomas to refute this charge, they had, I regret to have to state, the hardihood to say that those diplomas belonged to my father, and that I was making a dishonest use of them. This they said to captains in my presence. In consequence of these misrepresentations, several captains who would otherwise have placed themselves and crews under my treatment declined to do so. Having thus failed to obtain a legitimate practice, I asked one of the captains to advise me as to the best course to be taken under the circumstances to counteract the very unprofessional and improper means employed to keep me out of the practice. He advised me: 'Write to the shipowners at home, stating your qualifications and terms; ask them to inform their captains there were no objections to employing you if they wished.' Believing, in my then distressed state of feelings, that this was the best course to take, I, without any more advice, sent 'private letters' (printed) to some of the shipowners, from which extracts have been published in THE LANCET, which has so severely censured me. It never was my intention to advertise myself, well knowing such a course was utterly improper and unprofessional. Nor do I admit that, under the circumstances, writing to shipowners was a breach of professional etiquette. It was the very grave provocation I had received in my honest endeavours to obtain a livelihood that led me to write in a way I should never have done otherwise. And if your honourable Society thinks that I have used words or expressions which are unbecoming in a professional man and a member of your Society, I leave you to consider whether the gross insults heaped upon me by these two gentlemen aforesaid for their own selfish purposes would not be my excuse, especially as I wrote the private letter (from which the others were printed) in question in a moment of irritation. As a further proof of my entire bona fides in the matter, I may add I sent a copy of the letter (printed) to Sir William Guyer Hunter long before any letter appeared in the Bombay Gazette or elsewhere. This gentleman was the Principal of the Bombay College when I passed, and subsequently he was made Surgeon-General of the Bombay Presidency. If I had the least notion I was doing anything improper, I submit to you that I would not have sent a copy of my letter to that gentleman, of such respectability and position in the medical profession.

"Hoping this will convince you of my innocence,

"I am, Gentlemen, yours obediently,

"J. MUNDAY, L.R.C.S., L.R.C.P."

Family Doctor complains severely of the system of prescribing through the columns of a newspaper, and its donations to the different London hospitals. Prescribing in this way, and without reference to the peculiarities of individual cases, cannot be of much use, and may cause great injury. It should be discountenanced by all medical men and by hospitals.

M.D.—We are not acquainted with any trustworthy work on the subject.

"AMBULANCES."

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. F. R. Humphreys, would have experienced no difficulty in the removal of his patient if application had been made to John Furley, Esq., hon. manager of the Invalid Transport Corps, St. John's-gate, Clerkenwell. In several instances I have taken this course, and obtained the removal of sick and injured with every satisfaction to all concerned. Skilled attendants and proper apparatus are sent with the ambulances, and the cost is very moderate and fair.

I am, Sirs, yours faithfully,

Sept. 17th, 1888.

G. CARRICK STREET, F.R.C.S.

UNITED HOSPITALS ATHLETICS.

To the Editors of THE LANCET.

SIRS,—In the Students' Number of THE LANCET it is stated that the hospital cricket ties were started in 1884, and that Guy's have been victorious on every occasion except one. Will you allow me to correct this? The Cricket Challenge Cup was started in 1882, and won the first two years by King's beating Guy's and Charing-cross. Being a member of the winning team on each occasion, I ought to know. I am glad to see hospital cricket is prospering, as formerly it was not so.

I remain, Sirs, yours truly,

September, 1888.

OLD KING'S MAN.

CAVOUR'S ILLNESS AND DEATH.

AT length history possesses a clear and authentic narrative of the fatal illness of the great subalpine Statesman. "Ricordi di Michelangelo Castelli" (Turin: L. Roux, 1888) is the title of the book from which, for the first time, the medical reader can form an intelligible notion of that illness—its predisposing causes, its nature, and its course. Signor Castelli (perhaps Cavour's most intimate friend) writes that the Count inherited a fine constitution; that he was rather short of stature, of florid complexion, sanguine temperament, and inclining with years to be stout; that he was most vivacious in all his movements, and that when apparently lost in meditation he would suddenly take to rubbing his hands together with almost convulsive energy, after which his brow would clear, his expression grow animated, and his whole appearance become that of one from whom a painful load had just been lifted. In 1847 (when in his thirty-seventh year) he suffered from intestinal inflammation, which affected his head, and sometimes made him delirious; but each recurrent attack of this always yielded to bloodletting. In 1852 a more serious visitation of his malady, treated as usual by venesection, induced his physician, Dr. Tarella, to counsel a radical change in the Count's mode of life, which was one of far too intense and continuous thought on that most exciting of subjects, *la haute politique*. Knowing, however, Cavour's disregard of all medical advice, Dr. Tarella made Signor Castelli the medium of his wholesome admonition, with the effect that the patient gave up political speculation for a time, and betook himself to the Certosa di Pesio in the Maritime Alps. The Count returned in three weeks to Turin an altered man—altered greatly for the better. But next year began the events which he utilised for the consummation of his wonderful policy—"a series of diplomatic feats unparalleled in modern times"—and Dr. Tarella resigned himself with a sigh to the conviction that further advice was useless, and that "presto, un giorno o l'altro, succederebbe qualche disgrazia" (soon, one day or other, a disaster would befall his patient). In June, 1861, when the Count's policy had culminated in the freedom and unity of Italy, all except Venice and Rome, which, however, when ripe, were, thanks to the same prolific policy, to drop like mellowed fruit into the lap of the kingdom, the Count became ill, and a visit to a country house in the mountains above Turin sent him back to town no better. The intestinal inflammation had returned, and a substitute for Dr. Tarella bled him as before. The same night he was delirious, and on Castelli's being admitted to his bedside the Count's symptoms and aspect impressed him gravely. He and the faithful valet did all they could to keep political visitors aloof from the patient, but in vain. On the fourth day of his illness, after five bloodlettings, he appeared calmer, and the momentary, really superficial, improvement was utilised for the holding of a Cabinet Council in the sick chamber! This lasted several hours (Sunday, June 2nd), and was followed by prostration, delirium, and high temperature. A consultation of physicians was thereupon held, and the opinion arrived at was that the malady was "pneumonic fever." Drs. Riberi and Maffione ordered large doses of quinine; but the symptoms showed no abatement, while Cavour insisted on being bled from time to time. No physician enjoyed his confidence, and the consultants shrank from the responsibility of opposing his will, all the more that they knew he would take his own way, not theirs. Latterly no outsider was admitted to his bedside but Castelli, and the physicians besought him to keep sponging the Count's head with iced water. The narrative of this faithful friend is too detailed to be even summarised. It represents the dominant feature of the malady to be recurrent delirium, for the treatment of which the patient did not allow himself a chance. His wanderings invariably took a political turn, till early on the morning of June 6th, 1861, he passed away with the word "Italia" on his lips. The last scenes of all—the visit of King Victor Emmanuel; the crowds of people of all grades of life in the street; their monacles to the priesthood, which was suspected of reluctance to administer the sacraments to the virtual destroyer of the temporal power; the anxiety of all the European States, manifested in hourly inquiries by telegraph as to the patient's condition; the consternation of the civilised world when the fatal issue was known; the *oraisons funèbres*, among which the noble speech of Lord Palmerston in the British House of Commons was by universal admission the tribute to the deceased most worthy of subject and speaker alike—all are given with powerful effect in Signor Castelli's pages. Medicine, too, has her comments to make on the nature and treatment of the malady, the most baffling features in both being the self-will of the patient and his persistent resort for years to bloodletting when the last thing his overwrought brain could tolerate was depletion! "Tant comprendre," says Madame de Staël in a famous passage, "ce serait tout pardonner"; and Signor Castelli's luminous and impartial pages show how lightly, and yet how unjustly, physicians may be condemned when the disease they had to combat found its most effective ally in the illustrious patient himself.

REGULAR CASE OF WORMS IN INFANTS.

SIRS.—I would be greatly obliged if any of your readers would favour me with the treatment of the following case.

I am attending two brothers, aged respectively thirteen months and two years and six months. The former has never had any previous illness, and has been bottle fed on warm cow's milk and boiling water. About a month ago it was remarked that his diapers were covered with small clusters of eggs, of a whitish colour, which in twenty-four hours became white worms about a quarter of an inch long, and gradually increased to half an inch, the colour becoming a kind of dirty fawn. The head is small, continuous with the body, which is covered with small hairs, and which becomes larger from before backwards, terminating abruptly, as if the back part had been cut with a knife. As many as fifty of these worms may be seen wriggling on the child's mattress in the morning. When these worms were first discovered, the child was seized with what resembled cerebro-spinal meningitis, except that the temperature was always normal. It was then observed that he had dropsy of both legs from the knees downwards, with paraplegia. He passes a great quantity of urine, and some having escaped on to the floor under him and become dried was found to contain crystals of sugar. The stools are frequent, about six or eight in twenty-four hours, and of a most offensive, earthy odour; the colour resembles milk; they do not contain any worms. The other child, aged two years and six months, was similarly seized in a modified degree at the same time, and also passes the ova of these parasites by the urethra.

I should be glad to be informed of any book treating on the above, and the means of removing them, also the prognosis, &c.

I am, Sirs, yours faithfully,

BABBIN.

September, 1888.

THE BRITISH MEDICAL ASSOCIATION MEETING AT GLASGOW.

Messrs. BURROUGHS, WELLCOME, & Co. have issued a pleasing souvenir of the recent meeting of the British Medical Association at Glasgow, in the form of a series of photographs of various points of interest in the city. The views are remarkably clear and will deservedly be valued by those who attended the meeting, and who may become possessed of them. A copy of each one of the series will be presented by Messrs. Burroughs, Wellcome, & Co. to any medical man on application.

Mr. J. W. Joshua, L.R.C.P., &c.—It is generally right, and altogether pleasant, when a medical man is called to attend the patient of a neighbour in his unavoidable or holiday absence, to regard his attendance as given in his neighbour's stead and temporarily, and to transfer the patient to his ordinary adviser on his return. We entirely agree with our correspondent on this point. On the other hand, we think he should have called on his neighbour to receive and to make explanations.

A Surgeon has not enclosed his card.

THE WHITECHAPEL MURDERS.

To the Editors of THE LANCET.

SIRS.—Possibly before your next issue the theories as to the sanity or insanity of the perpetrator or perpetrators of the Whitechapel murders will be set at rest. I venture to trespass on your valuable space to express most emphatically my opinion that these murders were committed by some person or persons who were perfectly sane. Some years ago I was consulted as to the state of mind of one Frederick Hunt. This man had murdered his wife and two children. It was proved beyond doubt that the prisoner was on terms of the greatest affection with the victims of his impulse. He had nothing to gain by the act, and he had at the time a balance of over £160 at his bankers. After the deed was done, he attempted suicide by placing his head on the line of a railway, from which position he was rescued by a guard, and immediately given up into the hands of the police. He made no attempt to escape, or to conceal his crime, the details of which he minutely described to the authorities. I had several interviews with him in Horseman's-lane (sic), and I had no doubt whatever from symptoms, which it would take too long here to enumerate, that the man was a victim of homicidal impulse. He was tried before Justice Brett at the Croydon Assizes, and found not guilty by the jury, on the ground of insanity. Subsequently, Dr. Orange, of the Broadmoor Asylum, confirmed my diagnosis in a paper he communicated to a medical contemporary on criminal responsibility, in which Hunt's case was described at length.

Now as to the Whitechapel murderer. He was most probably a stranger to his victim, and not bound to her by the ties of blood as was the criminal Hunt. In all probability he was a poor man. The fact that the jewellery he stole from the woman was false goes for nothing. It is not likely that at such a time even an expert would be able to make these distinctions. The deed of the first Whitechapel murderer was complicated by a subsequent mutilation of the body of his victim, which was of so barbarous a nature as to make one of our own profession shrink from describing it. And this statement would also apply to the second murderer. It is well known to experts in insanity that although the anticipation of the ultimate result of the act is often sudden, unexpected, uncomplicated by any subsequent mutilation, or

attempt to conceal the act, and very frequently followed by some suicidal attempt. As far as we have yet heard, there have been no suicides in Whitechapel lately. And any reader of the daily papers must be well aware how common is this tendency when an insane person has committed a murder.

From these data, imperfect as they must necessarily be, I have no hesitation in giving an opinion that should the Whitechapel murderer or murderers be apprehended, it will be proved that he or they are of perfectly sound mind, that at the time the act was committed they were evidently in want of money, which they imagined could be obtained from the sale of their victims' jewellery, and that if there be any necessity to explain away the mutilation of the corpses, it will be found in the fact that such mutilation was effected with a view to the concealment of the crime, which there is every reason to believe was committed before the murders took place.

I am, Sirs, your obedient servant,

Richmond-terrace, Sept. 16th, 1888. HENRY SUTHERLAND, M.D.

To the Editors of THE LANCET.

SIRS.—Being more or less responsible for the original opinion that the individual who committed the wholesale slaughter in Whitechapel was a lunatic, I beg to trouble you with this communication.

In the interview I had with the officials at Whitehall-place I gathered that this was also their theory. In your issue of the 15th inst. you say, "The theory that the succession of murders which have lately been committed in Whitechapel are the work of a lunatic appears to us to be by no means at present well established." Of course, it is impossible to give a positiveness to the theory unless some more evidence can be established; nevertheless, to my mind the case appears tolerably conclusive. The horrible and revolting details, as stated in the public press, are themselves evidence, not of crimes committed by a responsible individual, but by a fiendish madman. You go on to add that "homicidal mania is generally characterised by one single and fatal act." Having had extensive experience in cases of homicidal insanity, and having been retained in the chief cases during the past twenty years, I speak as an authority on this part of the subject. I cannot agree with your statement. I will give one case which recalls itself to my recollection. A gentleman entered my consulting-room. He took his seat, and, on my asking what it was he complained of, replied, "I have a desire to kill everyone I meet." I then asked him for further illustration of his meaning. He then said: "As I walk along the street, I say to myself as I pass anyone, 'I should like to kill you'; I don't know why at all." Upon my further pressing him on the matter, he jumped up and attempted to seize a weapon from his pocket, and to give me a further, more practicable, and more realistic illustration. I was enabled, however, to frustrate him in this desire. Another case in which I was retained as expert was that of Mr. Richardson, who committed murder at Ramsgate (his homicidal tendency was not confined to one individual) and was tried at Maidstone this year; and there are many others that I could mention. Homicidal lunatics are cunning, deceptive, plausible, and on the surface to all outward appearance, sane; but there is contained within their innermost nature a dangerous lurking after blood, which, though at times latent, will develop when the opportunity arises. That the murderer of the victims in Whitechapel will prove to be such an individual is the belief of

Your obedient servant,

L. FORBES WINSLOW, M.B., LL.M. Camb., D.C.L. Oxon.

Wimpole-street, W., Sept. 19th, 1888.

"OFFICIAL AMENITIES."

To the Editors of THE LANCET.

SIRS.—Every assistant medical officer is indebted to "An Assistant Medical Officer" for his letter in THE LANCET of last week under the above heading. Committees as a rule know absolutely nothing of the assistant medical officers, and are dependent altogether on the superintendent for information respecting them. The time has surely come when assistant medical officers should be placed on a surer and better footing, when their salaries should be in proportion to that of the superintendents, and when they should be, in greater part at all events, directly responsible to the committee; this, now that asylums are vastly increasing in numbers, deserves the consideration of every committee of management. I am, Sirs, yours faithfully,

Sept. 19th, 1888.

JUSTICE.

THE RELATION OF POPULATION TO THE BIRTH-RATE.

To the Editors of THE LANCET.

SIRS.—May I suggest that the uncertainty and error which arise from year to year between one census and the next owing to the uncertain change of population in any given town can be to a great extent checked and corrected if the number of births in any week or month is compared with the standard birth-rate of the place or county as ascertained at the last census? The births being absolutely known from week to week, an estimate of the population based upon that would give but a very small error at any time. I am, Sirs, yours truly,

Sept. 13th, 1888.

M. D.

Senior editor.—We regret we cannot at the moment give the information desired.

M. B. L. should consult his medical attendant. We do not give advice.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Suckling, Birmingham; Mr. L. Humphry, Cambridge; Mr. Roger Williams, London; Dr. Forbes Winslow, London; Messrs. Peters, Bartsch, and Co., Derby; Dr. Handford, Nottingham; Dr. Sutherland; Mr. Mark Judge, London; Mr. F. Treves, London; Mr. Bamford, Uxtoeter; Mr. G. G. Hamilton, Liverpool; Dr. Schnée, Carlsbad; MM. Muratte et Cie, Constantinople; Mr. J. Macevoy, London; Messrs. Pugh and Phillips, Northampton; Mr. A. M. Sheild, London; Messrs. Bush and Co., London; Mr. A. J. Popert, Southport; Mr. J. Cantlie, Hong Kong; Mr. C. Hawkins, London; Dr. Auld, Glasgow; Mr. Harrison Cripps, London; Dr. W. R. Smith, London; Messrs. Burroughs and Wellcome, London; Dr. H. B. Allen, Melbourne; Mr. Joshua, Great Malvern; Mr. A. Nixon, London; Mr. C. Roland, Barcelona; Mr. H. de Méric, London; Dr. Wetherell, Stokesley; Mr. J. B. Pike; Mr. E. Ady, London; Mr. Marshall, Hastings; Mr. Duckett, Manchester; Mr. Benthall, Southsea; Dr. D. Mowat, London; Dr. McDonald, Dorchester; Mr. S. C. Steet, London; Mr. Hall, London; Mr. Eagar, Lancaster; Dr. Scatliff, Brighton; Dr. Staff, St. Ives; Mr. Hawkins, London; Mr. Daly, Worcester; Mr. Brooke, Birkenhead; Mr. Nance, Norwich; Mr. Macdonald, Manchester; Old King's Man; P. O., Coventry; Doubtful; H. S.; Babbitt; J. H.; M. R. C.; Justice; Manchester Royal Infirmary; M.D.; Perplexed; Medicus; Prudentia; Salop Infirmary; A Medical Muser; Senex acidus; Hopeful; Temperance, London; E. S. B., Manchester; B. A., London; Edina, London; D., Newcastle; Surgeon, London; J. M. W. H., London.

LETTERS, each with enclosure, are also acknowledged from—Messrs. Lee and Nightingale, Liverpool; Mr. Lee, Leeds; Mr. Sutherland, Fence Houses; Mrs. Howlett, Hove; Mr. Tate, Runsey; Messrs. Battle and Co.; Dr. Ellis, Norfolk; Mr. Crassweller, London; Messrs. Crossley and Co., London; Dr. Reifsnnyder, Shanghai; Mr. Corbridge, Rotherham; Mr. Wadekar, Dhar; Mr. Oldham, Liverpool; Mr. Sacker, London; Mr. Oakley, Gloucester; Dr. Moore, London; Mr. Brooks, Salop; Mrs. Jones, Hants; Mr. Partridge, Kent; Messrs. Van Houten and Zoon, Holland; Dr. Brooks, London; Mr. Haywood, Notts; Mr. Ford, Ireland; Mr. Heywood, Manchester; Mr. Wells, London; Mr. Dearden, Yorks; Mr. Wormald, Manchester; Medicus, London; Hope, London; Scot, London; co. Durham, London; Exor; College of Preceptors; Aristos, London; C. J., London; O. T., London; Lady Superintendent, Kent; S. H., Hull; Physician, London; Queen's College, Belfast; Iota, London; A. W. K. M. D., Yarmouth; Nurses' Home, Newcastle; M. S., London; Medicus; Sister-in-Charge, North Wales; Omega, London; Hakim, London; E. H. S., London; G. Z., Bath; Yorkshire, London; Surgeon, London; J. Peckham; Q., London; Seaford, Coventry; D. G., London; E. D., London; V. T., London; Matron, London; R. E. D., London; Mens, London; Lady Superintendent, Manchester; L. B. B., London; G., Derby; Foebery, Bath; H. W., Ipswich; B. B., London; Mona, London; Nurse, Brighton; North, London; L.R.C.P., London; Capricorn; Statim, Kensington; A. R., Kelso; Doctor, London; Milo, Aberdeen; L. C., Yorks; L. M., London.

Berwick Journal, North China Herald, Leigh Chronicle, Hertfordshire Mercury, Herald and Weekly Free Press, Reading Mercury, Gravesend Journal, Isle of Wight Express, Acerington Gazette, Surrey Advertiser, Surrey Times, Windsor and Eton Express, West Cumberland Times, Reverley Recorder, Hastings and St. Leonards News, Louth and North Lincolnshire Advertiser, The Stock Exchange, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.80.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 25.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 2.30 A.M.
THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M. Dr. George Vivian Poore: General History, Principles, and Methods of Hygiene. (Introductory Lecture.)

Wednesday, September 26.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, September 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, September 28.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M. Prof. Henry Robinson, M.Inst.C.E.: Drainage and Construction.

Saturday, September 29.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Clinical Lecture

ON THE

BIRTH AND PARENTAGE OF CHOREA IN A HUNDRED CHILDREN.

Delivered at the Hospital for Sick Children,

By OCTAVIUS STURGES, M.D.,

PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—I put before you to-day some analysis of a hundred examples of St. Vitus's dance which have been under my care during the past four years. They will serve as the text of my discourse, and in all that I now say I shall quote them for authority. They were all hospital patients; all but three (taken from another source in order to complete the century) are from the Alexandra ward of twenty-one beds in this hospital, and form part of a total of, say, a thousand patients received during the time mentioned. Chorea is thus shown to be a very common disorder in London. But it is not so everywhere. There are parts of England where it is quite a rarity, as it is also in some quarters of Europe and of the world. And this striking inequality of geographical distribution is in no correspondence with the variations of rheumatism. Here is one of the many interesting problems of the disorder as yet imperfectly studied. It awaits solution at the hands of some international committee of investigation which has yet to be organised.

The chorea of which I now speak is the chorea of children. It excludes choreiform movements of the old and the middle-aged, which have but slight connexion with the child's disorder. These, unlike true chorea, are apart from rheumatism; associated with insanity and mental weakness; often hereditary; incurable; and in their fatal termination exhibit certain gross cortical changes in the brain. Of such so-called chorea in later life you will find an excellent account in *Brain* of April last by Dr. Herringham, and the examples he quotes serve to show how essentially it differs from the disease we are now to discuss.

There is a rough clinical classification of chorea in children, which, whatever its pathological value, may here be followed. It divides the disorder by reference to its supposed etiology, into four classes: 1. Chorea intimately connected with rheumatism. 2. Chorea in rheumatic children, but having its immediate cause in psychical disturbance. 3. Chorea in nervous children excited by some "nervous" cause, and without rheumatism. 4. Chorea unconnected, so far as appears, either with rheumatism or nervous shock.

Of late years, as you are aware, much pains have been taken to ascertain with accuracy the nature and extent of the relationship between chorea and rheumatism, and the precise position of the two respectively in reference to heart disease. But while information upon these points has been accumulating, far less attention has been paid to other features in the natural history of chorea, which are not less interesting or important—namely, the nervous and psychical elements of the disorder. It is to these mainly that I would now call your attention. But before doing so I may refer for a moment to the evidence of these hundred cases in respect of rheumatism. The figures are before you; they are abstracted, like those that are to follow, from clinical notes by Dr. Penrose and Dr. R. Priestley, medical registrars in succession. The table shows one hundred consecutive cases of chorea, the boys numbering twenty-four, and the girls seventy-six. The ages varied from twelve to three.

I. Rheumatic Connexion.

Family rheumatism in 25.

Personal rheumatism in 30 { 15 near.
15 remote.Both family and personal in 5 { 4 near.
1 remote.

Of the 16 cases where rheumatism is remote, 9 have for immediate cause distinct nervous shock; 7 have no known immediate cause.

The personal allowance is here larger than in any of my previous calculations of the kind. It exceeds that of the Collective Investigation Committee, which is 26 per cent., and largely exceeds that of Dr. Osler of Philadelphia, which is only 15 per cent. It is impossible here to particularise in each instance the grounds on which articular pain has been accepted in my tables as probably rheumatic. The larger rheumatic proportion is perhaps due to my growing belief

that cardiac disease in children—disease, not disorder merely—is hardly ever choreic, and almost always (putting aside the congenital) rheumatic in its origin. From an extensive survey of statistics, it would seem that 25 per cent., or one-quarter, expresses, as nearly as can be reached, the proportion of rheumatic children who get chorea, whether in immediate or in remote connexion with their rheumatism. In other words, about three-fourths of the examples of chorea have nothing to do with rheumatism, while the fact that pain, sometimes articular and sometimes not, is frequently present both in chorea and hysteria, must make it for ever impossible to extract from the past histories of children any exact estimate of the rheumatic proposition. This is at least as likely to be overrated as underrated. In my present enumeration, for example, only nineteen of the thirty-five attributed to rheumatism get chorea in immediate connexion with that disease. Seven others get it from no known direct cause, and we assume that in every one of these cases the effectual cause is rheumatism. But, in the nine that remain, the direct cause of the chorea is known; and it is not rheumatism, but nervous shock. No one will contend that all of these nine are to be put to the rheumatic account. Upon analysis, therefore, my percentage should sink at least to 25, a proportion corresponding nearly with the figures just quoted. It is asserted, on the other hand, that the rheumatic element is in part overlooked, because in some children chorea comes first and rheumatism afterwards. But the statistics of rheumatism do not sanction this view. The claim to kindred with rheumatism which is made on the part of chorea is not reciprocated. Thus, in Dr. Whipple's analysis of 635 cases of rheumatism, chorea preceded in only thirteen, or less than 2 per cent.¹

The second part of the table before you shows, in addition to the numbers charged with rheumatism upon evidence more or less complete, twenty-three choreic children who have prominently in their past history some form of pain which is almost certainly not rheumatic. Pain of great variety would thus seem to be so common in chorea as to make it probable that it would sometimes select the joints quite apart from rheumatism.

II.—Pain (non-rheumatic) Connexion.

Twenty-three	Headache	...	...	...	...	8
of the sixty-five	Growing pains, not articular	...	...	...	...	10
non-rheumatic	Backache	...	...	...	...	2
have	Cardiac pain, vertigo, hyperæsthesia	...	...	...	...	3

Without dwelling further upon such matters, I turn now to what is my main purpose—namely, the nervous relations of chorea. These may be considered from the point of view both of the individual and of his inheritance. As regards the latter, it must be borne in mind that family history goes for much less in the case of children than of adults, for it is the history of people who are still young, and whose disease roll is as yet incomplete. Hence, in making inquiry in respect of diseases that do not especially affect early life, it goes for little that the parents have not so far suffered as the children are suffering. On the other hand, when the disease in question is one special to early life, as is chorea, the lives of the parents and of the elder children may very properly be expected to speak conclusively for or against inherited predisposition in regard to the particular disease; but it will be less trustworthy in reference to other neuroses, such as insanity and epilepsy. With this in mind, observe how bare is the family history of the 100 children now under review:—

(a) Family:— III. Neurotic Connexion.

Father insane in ...	...	...	...	1
Mother insane in ...	...	...	...	2
„ had chorea in ...	...	...	...	2
„ hysterical in ...	...	...	...	1
„ epileptic in ...	...	...	2 (or 1)	15 (or 14)
„ very drunken in ...	...	...	...	1
„ worried or mentally distressed in ...	...	...	...	3
Brothers or sisters had chorea in ...	...	...	...	3
Grandmother insane in ...	...	...	...	1
Aunt insane in ...	...	...	...	1
Uncle insane in ...	...	...	...	1
Aunt had chorea in ...	...	...	...	3
Cousin had chorea in ...	...	...	...	1
Family neuroses in ...	...	...	...	22 (or 21)

¹ Report upon Rheumatism by the Collective Investigation Committee, prepared by Dr. Whipple, *Brit. Med. Journ.*, Feb. 25th, 1888.

Observe especially the rarity of epilepsy which is not certainly present in more than one mother and is in no father. Observe of chorea itself that only two mothers had it out of 100 children, a proportion corresponding with that of Dr. Osler, who found but seven choreic mothers among 410 choreic children. Similarly insanity is hardly represented. What most appears—and this but rarely—is chorea itself in brothers or sisters. We know not, indeed, and it is a fact that takes largely from the significance of all statistics of this sort, what proportion of insane, epileptic, and drunken relatives we are each entitled to upon a fair average; certainly in the list before you no particular neurosis comes out. You would hardly expect that 100 choreic children, or indeed that 100 children taken anyhow, should have so few unsound people—men, women, or children—for their near relatives.

And much the same is true of the personal histories. I do not, indeed, claim that all the nervous antecedents of the 100 children stand upon record in the table before you. Whooping-cough, for example, is not entered, nor are infantile convulsions. As regards the former, I have convinced myself, upon careful computation,² that my early conclusions as to the excessive frequency of whooping-cough in choreic children were erroneous. Of infantile convulsions it has never been alleged, so far as I know, that it is exceptionally common with children who afterwards get chorea, nor have I found it so. As for epilepsy, it is absent from the table because there was no example of it among the 100. The table is, in fact, a writing out of whatever is prominent in the Registrar's notes concerning the nervous antecedents of the children in question. And the most striking feature of the record is this: That the chief nervous disease of choreic children is chorea itself, and that temperament plays a much larger part than nervous disease in their personal histories.

(b) Personal :— III. *Neurotic Connexion.*

Chorea had occurred before in	29
Reported as of emotional temperament	26
" as showing irritability or change of	
temper before the attack	6
" as irritable during the attack	2
" as complaining of headache before	
attack	8
" as complaining of hyperæsthesia of	
forearm (not elbow)	1

This branch of the inquiry is of such importance that it may be well not to trust solely to a bare enumeration of categories, but to make some further search into the individual histories, with the aid of one's own personal observation, of the children themselves. Fifty-five of the eldest patients are so analysed—that is to say, those over six years old. The result is before you.

IV. *Nervous Antecedents in fifty-five Choreic Children.*

Were by nature irritable and nervous, or		
had become so by change of temper pre-	17	} 42
ceding attack		
Were made choreic by some special nervous		
disturbance	25	} 25
Leaving (of rheumatic or unknown causa-		
tion)	13	

It would take too long to enumerate here the special disturbances in the twenty-five examples above mentioned. All were carefully investigated. They may be classified thus: nine are causes connected with schooling, school punishment, overwork, preparation for examination, and such-like; sixteen are definite sources of alarm, such as "locked up in a cupboard," "nearly run over," "stepped on a snake," "chased by men, boys, dogs," &c.; in every instance the chorea following immediately upon the alarm. But of my fifty-five children, I would claim as the proportion suffering from chorea due to mental causes, not twenty-five only, but forty-two, both those that were known to have been alarmed and those that were known to be nervous and timid. We have to allow something for our own deep ignorance of what moves children, sleeping or waking. Even if our modes of inquiry were quite intelligible to the patients, or the means and the pains we take to invite confidence always quite the best, it still seems absurd to suppose that every agitating event in the life of a little child should come

within our comprehension. If we are but assured that a child differs from its fellows in respect of timidity or sensitiveness, it follows that often and often, by reason of such temperament, it must be exposed to terrors and injurious experiences without our knowledge, and past our finding out. If this be so, the fact must find expression in the occurrence here and there of chorea from unknown causes, yet causes which, in the case of over-sensitive children, may be fairly assumed to be of the nature of nervous shock. Now as regards twenty-five of my fifty-five choreic children, nearly half, I have particular information that in each instance their motor stability has been overcome by some special and obvious cause. But there are seventeen more who are specially noted as of emotional temperament, and in these the occurrence of chorea, otherwise inexplicable, is sufficiently explained upon the supposition of some trivial alarm or excitement, sleeping or waking, acting upon their exceptionally weak natures. "Night terrors," for example, are so common with such children that they have a place in child nosology. Yet how often do we know, or seek to know, the precise nature of such terror. I do not say (or believe) that every case called chorea exhibits emotion or is due to mental causes. But I say that, while three-fourths of the cases are altogether apart from rheumatism, much more than a half (nearly three-quarters) are in close connexion with mental shock or overstrain. Such is the result of actual computation, and it accords with the more general observation that chorea prefers the sensitive sex and the sensitive age.

From the antecedents of chorea let us go on to its earliest symptoms. In hospital practice, unfortunately, clinical observation is almost confined to the later stages of disease, and no affection suffers more from this curtailed study than does chorea. For it has two distinct phases, and is first a disorder of the mind and afterwards a disorder of the body. In its early development, chorea shows itself in waywardness, inattention, excitability, ill temper; by such signs, in fact, as come under the care of the teacher rather than of the doctor. It needs moral correction, and not drugs. Presently, however, when the motor part of the affection becomes apparent, and when along with this, as often happens, the mental excitement subsides, this changed form of the malady is met by a changed treatment, which of itself emphasises and makes more complete the striking contrast between the earlier mental and the later motor disturbance. What seemed depravity is suddenly recognised as physical infirmity, and the naughty child becomes the pitied and indulged patient, getting sympathy and allowance in place of rebuke and punishment. The successive stages of his one infirmity are thus made the more distinct because treatment aggravates the one and soothes the other. It is true that these two elements of chorea, emotion and movement, are not displayed in every instance, and that they are not always in this sequence. There is chorea which from first to last seems quite without emotion, and chorea in which mental and motor disturbance are intimately blended. But what I would point out is that the mental excitement stage of the disorder is largely overlooked, partly because it is the earliest, and partly because it is a symptom of that sort which parents and teachers do not readily recognise as disease.

And even in its motor part, in the earliest limb and face restlessness, chorea still preserves some trace of its mental origin. Everyone is familiar with the manner of these movements; but in respect of the parts moved, I venture to think that our observations have not been altogether impartial, and that certain localities and forms of choreic movement and paresis have been made prominent, not because they are the commonest, but because they seem to favour and to illustrate certain anatomical theories of the disorder. But, putting this aside, how and where does chorea—or, as I should prefer to put it, does the motor stage of chorea—begin? It is not easy, or perhaps possible, to answer this question with exactness. Children tumble about, they have temporary fidgets, just as they have temporary attacks of evil temper, and their higher muscles are now more and now less trustworthy. As regards facial movement and speech difficulty, it is impossible to make sure of the exact beginning of either in chorea. Excluding these, the main facts in regard to the starting-place and the comparative frequency of choreic movements in different parts of the body stand out clear enough. They are indicated—I do not say with numerical accuracy—in the table before you :—

² THE LANCET, Jan. 21st, 1888.

V. Starting-place of Chorea in 100 Cases.

Division A (50) the elder.
Division B (50) the younger.

	A	B	Total	
Right hand ...	7	11	18	Hands in 46.
Left hand ...	8	4	12	
Both hands ...	9	7	16	
Right side ...	2	4	6	One side in 14.
Left side ...	5	3	8	
Both sides ...	8	17	25	Both sides in 25.
Right leg ...	1	2	3	Legs in 6.
Left leg ...	1	1	2	
Both legs ...	0	1	1	
Right arm ...	3	1	4	Arms in 12 (?)
Left arm ...	0	2	2	
Both arms ...	4	2	6	

Summary (not including arms): Right side, 27; left side, 22; both sides, 25; upper limbs, 46; lower limbs, 6.

Modes of commencement not included in above: "Shaking head," "twitching eyelids," "shrugging shoulders," "throwing himself about," and some others.³

Making large allowance for error, and leaving the arms as well as the feet out of question (because in the one case arm movement is generally first noticed in the hands, and in the other foot movement is unobserved so long as the child is up and the feet covered), it is at least obvious that chorea prefers the upper to the lower limbs, and that it selects the hands, one or both, rather than any other part of the body (the face excepted) for its earliest attack, while as between right side and left there is no appreciable difference. There are other points in reference to choreic movement which cannot easily be put in tabular form—such as its habit of shifting from one limb or one side to the other, of affecting one set of muscles in the first attack and a different set in the second, and again in the third. It may suffice to quote some selected examples of this sort. In Case 15 it began in the right hand, went next to the legs, and thence to the left arm. In Case 1 it began in the hands and then went to the feet. In Cases 38 and 72 it attacked first one side and then the other. In Case 9 it affected the right leg in a first attack and both hands in a second, and similarly of others. Neither the time nor my present plan would admit of any lengthened comment on these statements. It will be conceded that, if trustworthy, they point to no anatomical basis of chorea, and that no general expression as to the muscles concerned in the disorder would better convey the facts (be the underlying explanation what it may) than to say that the parts which suffer first and most are the same as are used to express emotion, and subjected to the highest, longest, and most complicated training.

It is impossible, unfortunately, to estimate the frequency or the time of appearance of paresis in chorea; for unless this symptom is very prominent, infirmity of volition will mask it, and it may easily escape notice. I have not thought it worth while, therefore, to count up the cases amongst my hundred where paralysis was specially noted. But I can say that in no case was there hemiplegia or wasting of the paretic muscles; that the recovery from the paresis, once begun, was very rapid, especially as regards the lower limbs, the power of walking being regained almost at once. And much the same may be said of the progress of chorea generally. There is a time of standstill and a time of rapid amendment, subject, unfortunately, to not infrequent relapse. The slow and equable stages of paralysis in organic disease are not seen in chorea, so far as my experience serves.

Altogether, in the sex, age, and temperament it favours, in its occasions and exciting causes, in its transient paresis and nervous pains, in its complete, uneven, and practically invariable recovery, even in its modes and stages, chorea has always seemed to me most like hysteria. "Its essential character is an exaggeration of involuntary motility, a

diminution of the power of the will; the emotional, sensational, and reflex movements are in excess, the voluntary are defective." These words are not mine; they are those of Dr. Russell Reynolds, and applied to hysteria. But do they not describe chorea as well? The likeness is, indeed, less striking than it should be, because, as I have urged, the beginnings of chorea, its pectulance, inattention, and waywardness, are habitually overlooked. But put these two functional disorders side by side, compare them from start to finish, allowance being made for difference of age and precise motive, and the caprice, weeping, and oversensitiveness, which in hysteria culminates in a convulsive fit, seems analogous to the disturbed mental state which in the child presently develops in choreic movement. There is, in fact, a time of life when chorea and hysteria so mix together in the same subject that it is hard to tell one from the other. It may be objected that it is but a partial view of chorea that takes account only of its emotional element and its extravagant movement, leaving out of account its heart symptoms and its paresis. Yes; and it would be a partial view of hysteria also. The definition I have just quoted from Dr. Reynolds does not account for it all—for its paralysis, for hysterical ptosis, or hysterical laryngeal spasm simulating laryngitis.

But I leave these speculations to notice, in the last place, that which is the end and object of my discourse to-day—namely, the practical lesson which an impartial view of child's chorea, in its subjects, causes, and progress, seems to teach. Such chorea is, of all diseases—if you please to call it disease,—the most preventable, the most directly due to ignorance, neglect, and want of observation. I do not say preventable always, for it may occur in close connexion with rheumatism, or appear in full-grown proportions after some sudden accident or alarm. But I do say that in the bulk of cases the premonitions of chorea in altered temper, disturbed sleep, inattention, unhandiness, and impatience are obvious enough. Even in its later development there is a stage of the disorder, still short of the fully formed chorea we see in hospital, where these mental defects blend so intimately with those that are motor that for a while it is quite impossible to say whether particular faults, such as the dropping of slates or books, are due most to inattention, or most to real inability to maintain grasp. Now in the vast majority of instances this early stage of chorea is not merely untreated by the doctor (that might be a small matter), it is acutely aggravated by undeserved punishment. It is as though intestinal obstruction were treated with drastic purgatives, or urinary retention with the most active diuretics. Much of the chorea of London and other large cities might be prevented, or, as I would rather say, cut short, were there a wider knowledge of the way the disease first comes, and a nicer discrimination of the various tempers and capacities of children of like age. As regards school work (a fruitful source of chorea, as we have seen), the blame is not so much with the teachers as with the system: the system, I mean, which insists that children shall move up from standard to standard year by year, which assumes that mental capacity is to be measured by age, and encourages by money grants the pushing on of the whole body of pupils at one uniform rate. It is of this plan of "payment by results" that the teachers themselves bitterly complain. They know the harm that comes of it as well as we do, and it is for us to co-operate with them in bringing about such reform as shall remove the reproach, to which this Hospital for Sick Children bears witness unceasingly, that national education is for some of our children a source of harm and physical injury.

ANCOATS HOSPITAL, MANCHESTER.—The annual meeting of the subscribers to the Ancoats Hospital and the Ardwick and Ancoats Dispensary was held at the Manchester Town Hall on Tuesday, Mr. J. Jardine, the president, in the chair. The proposed extension of the hospital by building a new wing will provide the additional accommodation long required for patients and nurses, and render the institution in every way suited to its work. The contract for the new building has been let, and its erection will be considerably advanced by the 20th proximo., when the foundation-stone is to be laid by Prince Albert Victor. The cost of this enlargement is estimated at upwards of £11,000. The financial statement showed that the expenditure had increased upon that of the previous year by £341, while the subscriptions were about the same.

³ In some rare instances of young children the heart is the place of commencement, a loud cardiac bruit (which afterwards disappears) being shortly followed by choreic failure on the part of the limbs. In a former inquiry upon the starting-place of chorea ("Chorea," p. 136) 132 of my own patients were reviewed; in 24 of these there is no mention of place of origin, and in 36 the disorder was general from the first. Of the cases tabulated, 26 were right-sided and 26 left-sided. The upper limbs commenced in 36 (hand or hands in 25, arm or arms in 11); the lower limbs in 2.

An Investigation INTO THE PATHOLOGY OF PERNICIOUS ANÆMIA.

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(Continued from p. 559.)

CHANGES IN THE LIVER.

WE have seen that the changes in the spleen, red bone marrow, and lymphatic glands are not sufficiently constant to be regarded as the essential anatomical changes in this disease. The case is very different when we come to consider the changes in the liver. More or less marked fatty degeneration, found especially in the centre of the lobules, as noted in one case by Coupland, is the only change in this organ to which attention has been hitherto directed by observers in this country. In the earlier cases published by Quincke¹ in 1876, the interesting observation was made that in three cases the liver contained a great excess of iron, as determined both on microscopic examination and chemical analysis. The value of the observation was detracted from in his eyes by the circumstance that in two of the cases the kidney and pancreas also contained an excess of iron; and, further, that the possibility of the condition being due to the administration of that drug during life could not be entirely excluded. In the following year this observation of Quincke was confirmed by Rosenstein,² who also, in a case in which no changes were to be found in any other organ of the body, found a great excess of iron in the liver. The same doubt, however, attached in this observer's mind to the significance of this observation, his patient also having been under treatment with iron for some time before death. At first, therefore, little or no importance was attached to these observations, especially at the hands of English observers, both Stephen Mackenzie³ and Coupland⁴ in their able lectures expressing themselves with caution regarding them. They both considered that the condition of the liver was probably connected with the administration of the drug medicinally. In one case, indeed, the former found an excess of pigment in the liver, the result of what he considered local extravasations in that organ, and he expressed the opinion that in Quincke's cases the excess of iron was perhaps due to a similar cause.

Subsequent observations, however, especially of Quincke⁵ and his scholar, Peters,⁶ have shown that this excess of iron in the liver is a more or less constant condition, and apparently by no means an accidental one. My own observations in nine cases of pernicious anæmia enable me fully to confirm these observations of Quincke. In all cases, without exception, I have found a great excess of pigment in the liver, differing entirely in its distribution and its character from that sometimes found in that organ as the result of extravasation, or as the result of chronic venous congestion. The presence of this pigment is the only constant morbid change to be met with in this disease. As such it seemed at the very outset of my observations to deserve special attention. The result of these observations with regard to the significance of this condition of the liver I shall now give.

The possibility of it being due to the administration of iron before death may be at once set aside. The observations of Kobert,⁷ Cahn,⁸ and Glavecke⁹ all agree in showing that the richness of the liver in iron is in no way affected by the administration of that drug by the mouth, and is but slightly affected even when the drug is injected subcutaneously (Glavecke). The source of the pigment in the liver in cases of pernicious anæmia can only, therefore, be the hæmoglobin of the blood.

The question then arose, how far this excess of iron in the liver stood in any causal relation to the peculiar features of the anæmia, or was merely the result of some general weakness of the red corpuscles common to this and other forms of

anæmia. I therefore made a large number of observations on the liver in various diseases with a view to determine how far an excess of pigment in the liver was common to all forms of anæmia alike, varying merely in different cases according to the degree of anæmia present. If the richness of the liver in iron was merely an indication of some weakness on the part of the red corpuscles common to the corpuscles and other tissue elements of the body, it might be expected that in other conditions of anæmia—e.g., wasting diseases,—marked by failure in nutrition, a similar condition of the liver would be found.

The various conditions in which these observations were made as to the richness of the liver in pigment included many examples of each of the following diseases: phthisis, empyema, chronic suppuration, malignant disease, &c.,—conditions all marked by profound anæmia; also typhoid fever, chronic Bright's disease, leucocythæmia, Addison's disease, diabetes, cardiac disease, tubercular and syphilitic diseases, and various morbid conditions of the liver itself—viz., acute yellow atrophy, toxic poisoning, portal cirrhosis, chronic venous congestion, and fatty degeneration.

A similar investigation made by Peters¹⁰ at the instigation of Quincke had yielded some interesting results. Out of seventy-seven cases examined, he found that, according to the reaction of iron given on micro-chemical examination, the cases could be divided into three groups. 1. In seventeen cases, including cases both of acute and chronic disease—e.g., croupous pneumonia, scarlet fever, tubercular disease, carcinoma,—no iron reaction was obtained either in the liver, spleen, or bone marrow. 2. In twenty-seven cases, including more especially all forms of wasting disease, a slight reaction was obtained only in the spleen and bone marrow, none in the liver. 3. In thirty-three cases, including four of granular atrophy of the kidneys, four in which the liver showed changes the result of congestion, five of chronic lung disease, twelve of intestinal catarrh in children, and the remainder of diseases partly subacute, partly diseases of the blood, such as pernicious anæmia, purpura hæmorrhagica, &c., some reaction of iron was given by all three organs—liver, spleen, and bone marrow. In most of the cases the reaction obtained in the liver was, however, extremely slight, merely appreciable; whereas in pernicious anæmia the reaction was very marked.

These observations of Peters appear to show that some excess of iron in the liver, recognisable even on micro-chemical examination, is a condition by no means peculiar to pernicious anæmia, but is one met with in a very considerable proportion of cases (44 per cent.). The method of grouping the cases adopted by Peters is, however, faulty in this respect—that it has no regard to the amount of pigment or to its situation within the liver, but merely to its presence or absence. Thus cases of cirrhotic Bright's disease are grouped on the one hand with cases of pernicious anæmia, and on the other with cases of purpura hæmorrhagica, the amount of pigment in the first of these diseases being so small as scarcely to give any appreciable reaction, while in the latter the liver often contains a very large quantity of pigment. Even the two latter conditions are easily distinguishable from each other on microscopic examination. In purpura hæmorrhagica the pigment is found in large irregular heaps, scattered irregularly throughout the liver. In pernicious anæmia the pigment is in form of fine granules, lying for the most part within the liver cells and distributed uniformly throughout the liver, and confined for the most part to the outer two-thirds of each lobule. The observations of Peters are therefore likely to lead to a wrong conclusion if they are regarded as indicating that in 44 per cent. of cases the liver contains some excess of iron. At the same time his observations are of importance, in so far as they clearly show that the anæmia of wasting disease is not accompanied by any weakness of the red corpuscles and consequent accumulation of pigment in the liver, such as is implied in the view generally held that the condition of the liver in pernicious anæmia is due to this cause.

Micro-chemical Methods for detecting Iron.—The richness of the liver in iron is most easily determined by placing a piece of the tissue in a fresh solution of sulphide of ammonium. The reagent at once darkens all pigment, whether in diffuse or granular form, in which iron is contained more or less loosely bound up—most usually in the form of an albuminate. Iron as it is found intimately bound up in the hæmoglobin molecule is not affected by this reagent. Hence the colour

¹ Med. Times, vol. ii., 1876, pp. 874, 428.

² Berl. klin. Woch., 1877, p. 113.

³ THE LANCET, vol. ii., 1878, p. 836. ⁴ Ibid., vol. i., 1881, p. 531 et seq.

⁵ Deutsch. Archiv f. klin. Med., Bd. xxv., p. 567; Bd. xxvii., p. 202; Bd. xxxiii., p. 22. ⁶ Ibid., Bd. xxxii., p. 132.

⁷ Archiv f. exper. Pathol. u. Pharmak., Bd. xvi., 1883, p. 800.

⁸ Ibid., Bd. xviii., 1884, p. 146. ⁹ Ibid., Bd. xvi., 1883, p. 460.

¹⁰ Op. cit.

reaction obtained is in no way affected by the richness of the organ or tissue in blood—a matter of the greatest importance where, as is often the case, the organ is congested. An equally good micro-chemical reagent is ferrocyanide of potassium, which in the presence of dilute hydrochloric acid gives with such pigment a beautiful reaction of Prussian blue. In using this reagent, however, two precautions are necessary to be borne in mind: (1) that the solution of ferrocyanide of potassium be freshly prepared; and (2) that a very dilute acid be employed, since under prolonged contact with strong hydrochloric acid a blue reaction may be developed even with iron in hæmoglobin. With either of these reagents there is no difficulty in at once recognising the extraordinary excess of pigment in the liver in cases of pernicious anæmia.

Results of Micro-chemical Observations.—The results of my own observations go to show that this excess of pigment in the liver in pernicious anæmia is neither the result of extravasation, nor yet can be regarded simply as the result of the profound anæmia. On the contrary, it is a feature so constant and so marked that it must be regarded as standing in direct causal relation to the peculiar features presented by the anæmia itself. In no disease presenting clinically any resemblance to pernicious anæmia does the richness of the liver in iron approach in its degree that characteristic of pernicious anæmia. This is specially true of those forms of anæmia associated with wasting disease regarded by Coupland as the *symptomatic* variety of pernicious anæmia. My observations show—in entire agreement with those of Peters—that in this form of anæmia the liver usually contains no excess of iron at all. This difference is, I find, sufficient to enable me at once to distinguish post mortem between a true case of pernicious anæmia and one which has only resembled it during life.

The amount of pigment naturally varies in different cases, but in all cases it is distinguished by two peculiarities: (1) its distribution—always most abundant in the outer two-thirds of the lobule; (2) its situation—always most abundant within the liver cells. In well-marked cases the whole appearance of the liver lobules is transformed. The liver cells in the outer two-thirds of the lobule are usually filled with minute pigment granules, all giving the characteristic reaction of iron; while the cells in the central third of the lobule are usually markedly fattily degenerated and atrophied, and the yellow pigment granules often found within them fail to give any reaction of iron. The peculiar distribution of the pigment above noted serves to distinguish this pigment accumulation in the liver from that found in cases of cirrhosis, where extravasations of blood are so often met with. The pigment is there found in irregular masses, made up of granules and globules of pigment of the most varying size, lying around the lobule in the periportal connective tissue. The distribution of the pigment masses is simply determined by the site of the original extravasations. The situation of the pigment in cases of pernicious anæmia serves at once to distinguish this condition of the liver from that found in chronic venous congestion. In this latter condition it is also common to find pigment in the liver; but it is found most abundant around the central vein of the lobule, and may be entirely confined to this situation, the liver cells at the periphery of the lobule being free from pigment. Moreover, an even more marked distinction exists—viz., that in chronic venous congestion the pigment never gives any reaction of iron with the ordinary micro-chemical reagents.

Results of Chemical Analysis.—Having satisfied myself, as the result of my micro-chemical observations, that the excess of pigment in the liver, taken in conjunction with the peculiar distribution and situation of the pigment, might be regarded as a characteristic feature of pernicious anæmia, it became a matter of interest and importance to determine how far the conclusions arrived at were borne out by the results obtained by actual chemical analysis. It was conceivable that the apparent richness of the liver in iron in pernicious anæmia, as compared with other diseases, might be solely due to some difference in the form in which the iron was present in the various conditions. In other diseases the liver might contain an equally large proportion of iron—so intimately bound up, however, as not to give the reaction of iron with ordinary micro-chemical reagents.

I have therefore collected all the analyses which have been made of the liver in various diseases, including pernicious anæmia. These are thirty-three in number, made by various observers. In Table I. the analyses have been arranged in

two columns: the one showing the percentage of iron in the liver per 100 parts of dried substance in various diseases other than pernicious anæmia; the other showing the percentage of iron in cases of pernicious anæmia. In Tables II. and III. these results are summarised.

TABLE I.—Analyses showing Percentage of Iron in the Liver and Spleen in Health and various Diseases.

No.	Various diseases.	Anæmia.	Percentage composition per 100 parts dry substance.		Observer.
			Liver.	Spleen.	
1	Burn, with marked anæmia; spleen enlarged.	—	0.031	0.252	Stahel (a)
2	Fracture of base of skull.	—	0.167	0.217	"
3	Fracture of sternum, and injuries.	—	0.201	0.268	"
4	Marasmus; nutmeg liver; congested spleen.	—	0.075	0.062	"
5	Pneumonia; diphtheria.	—	0.041	0.183	"
6	Pneumonia; gangrene of lung.	—	0.048	0.103	"
7	Pleurisy; bronchitis; nutmeg liver; congested spleen.	—	0.038	0.125	"
8	Hæmorrhage medulla oblong.	—	0.044	0.084	"
9	Leukæmia.	—	0.102	0.329	"
10	—	Anæmia.	0.614	0.091	"
11	Mental disease.	—	0.081	—	Oldtmann (b)
12	Syphilis neonati.	—	0.103	—	"
13	Leukæmia.	—	0.065	—	v. Bemmelen (c)
14	(?)	Anæmia.	0.306	—	Granboom (d)
15	Pneumonia.	—	0.009	—	"
16	Burn.	—	0.039	—	"
17	Phthisis.	—	0.114	—	"
18	Nephritis.	—	0.129	—	"
19	Carcinoma uteri.	—	0.023	—	"
20	—	Pernicious anæmia.	1.886	—	Quinke (e)
21	—	"	0.539	—	"
22	—	"	0.364	—	"
23	—	"	0.1	—	"
24	—	"	0.6	—	"
25	Cachexia.	—	0.294	—	"
26	Typhus; hydroceph.	—	0.581	—	"
27	Diabetes mellitus.	—	3.607	—	"
28	Human fetus (8 months).	—	0.147	—	Zaleski (f)
29	Diabetes mellitus.	—	0.068	—	" (g)
30	Purpura hæmorrhagica.	—	0.086	—	"
31	—	Pernicious anæmia.	0.023	—	"
32	Purpura hæmorrhagica.	—	(1.24)	—	Hindenlang (h)
33	—	Pernicious anæmia.	0.518	0.237	Rosenstath (i)

(a) Virch. Archiv, Bd. lxxxv., 1881, p. 26.

(b) Oldtmann u. Zaleski: Zeitschrift für physiol. Chemie, Bd. x., 1886, p. 477.

(c) Ibid., Bd. vii., 1883, p. 497.

(d) Archiv für exper. Pathol. u. Pharmac., Bd. xv., 1882.

(e) Deutsch. Archiv für klin. Med., Bd. xx., 1877, p. 1; Bd. xxv., p. 567; Bd. xxvii., 1880, p. 193; Bd. xxxiii., 1883, p. 22.

(f) Zeitschrift für physiol. Chemie, Bd. x., 1886, p. 474.

(g) Virch. Archiv, Bd. civ., 1886, p. 91.

(h) Ibid., Bd. lxxix., 1880, p. 492.

(i) Berl. klin. Wochenschr., 1877, p. 113.

TABLE II.—Summary of above Analyses, showing Percentage of Iron in Liver in various Diseases other than Pernicious Anæmia.

Observer.	No. of analyses.	Average percentage composition in iron per 100 parts dry substance.	Highest and lowest percentages.
Stahel	9	0.083	0.031 to 0.201
Oldtmann	2	0.092	0.081 to 0.103
V. Bemmelen	1	0.065	—
Granboom	5	0.081	0.023 to 0.129
Zaleski	3	0.083	0.068 to 0.147
Total	20	0.078	0.023 to 0.201

TABLE III.—*Summary of Analyses showing Percentage of Iron in Liver in Pernicious Anæmia.*

Observer.	PERNICIOUS ANÆMIA.			OTHER DIS. EXAM. BY SAME OBSERVERS.	
	No. of cases.	Average percentage composition in iron per 100 parts dry substance.	Highest and lowest percentages.	No. of cases.	Average per cent. comp.
Stahel ..	1	0.614	—	9	0.083
Rosenstein ..	1	0.518	—	—	—
Zaleski ..	1	0.623	—	3	0.083
Quincke ..	5	1.098	0.364 to 2.01	2	0.437
Total ..	8	0.713	0.364 to 2.01	14	0.203

Excluding five analyses, which for various reasons are not suitable for purposes of comparison, the analyses in the first group are twenty in number. The average percentage of iron in twenty diseases other than pernicious anæmia was 0.078 per cent., varying from 0.023 to 0.201. In no fewer than seventeen of these cases, in which the analyses were made by three observers (Stahel, Graanboom, and Zaleski), the average percentage obtained is, remarkable enough, almost the same—viz., 0.083, 0.083, and 0.081.

In eight analyses of the liver in pernicious anæmia the average percentage was 0.713, varying from 0.364 to 2.1. In no fewer than five of these cases the percentage varied from 0.518 to 0.623. The highest and lowest percentages recorded are both by Quincke.

If we compare the average percentage of twenty cases other than pernicious anæmia (viz., 0.078) with the average of eight cases of pernicious anæmia (viz., 0.713), it is at once evident that the difference in the two cases represents a more than ninefold increase in the percentage of iron in the liver in pernicious anæmia. Comparisons of this nature are only of value, however, when the analyses in both cases have been made by the same observer. As is well known, the percentage richness of the organ in iron is to some degree determined by the richness of the organ in blood at the time the chemical analysis is made. Hence the results obtained may be expected to vary considerably in the hands of different observers; according to the degree of care taken to remove all the blood from the organ previous to the analysis being made. This, however, is a matter of the greatest difficulty in the case of most organs, and can only be successfully accomplished by the method adopted by Zaleski of washing out the fresh organ through its vessels. The necessity for thorough and complete removal of the blood has not been equally present to the minds of all observers, and, if one may judge from the results of his analyses, it has been less present to the mind of Quincke than to that of any other observer. In nearly every case his analyses give a higher percentage than that obtained by other observers. For purposes of comparison, therefore, I prefer to exclude Quincke's analyses altogether, and have regard merely to those of other observers; and although this reduces the number of analyses available for purposes of comparison by more than one-half, two or three analyses of a trustworthy nature are of more value than a number of possibly very unequal weight. Hence I am inclined to attach most importance to the analyses of Stahel and Zaleski. In twelve analyses made by these two observers the average percentage of iron in the liver in various diseases was precisely the same—viz., 0.083. In two cases of pernicious anæmia the percentage obtained was also much the same—viz., 0.614 and 0.623; and the analysis of Rosenstein gave a closely similar result—viz., 0.518 per cent. This represents a more than sevenfold increase in pernicious anæmia, and this result I am inclined to regard as more probably representing the average extent of increase in this disease than the one arrived at when Quincke's analyses are also included.

These observations must, I think, be regarded as establishing conclusively—(1) that the amount of iron contained in the liver in pernicious anæmia is far in excess of that met with in any condition at all resembling it; and (2) that the presence of this excess can no longer, as hitherto, be regarded as an accidental condition—the result of some weakness of the corpuscles common to all forms of anæmia alike, and only varying in degree in different cases. On the contrary,

this condition of the liver appears to me clearly to indicate—and this I would regard as one of the most important results of my study of the morbid anatomy of the disease—(1) that a destruction of blood occurs in this disease far greater than is met with in any other form of anæmia, and notably much in excess of that occurring in the anæmia of wasting disease; and (2) that the liver must be regarded as playing an important part, if not in the destruction itself, at least in the disposal of the pigment remains.

Relation of this Pigment Accumulation in Liver to that in Spleen.

Further evidence of the importance of the rôle taken by the liver in the disposal of the products of this blood destruction in pernicious anæmia is afforded when the percentage richness of the liver in iron is contrasted with that of the spleen, the other organ of the body most concerned in the disposal of pigment remains. I find from Stahel's analyses (Table I.) that in most diseases, as in health, the relation between the liver and spleen as regards their percentage richness in iron is maintained unaltered—viz., that the percentage richness of the spleen usually considerably exceeds that of the liver. His analyses (nine in number) give an average of 0.171 per cent. for the spleen, as compared with 0.083 per cent. for the liver. In only one case was the percentage in the spleen slightly less; in most cases it was more than double, and in a few cases it was five or six times greater than that in the liver.

This relation between the liver and spleen appears to be disturbed, and that, too, in a very striking way, in pernicious anæmia. I have already stated that, as determined by micro-chemical examination, the spleen in my own cases of pernicious anæmia contained little excess of iron, and that in three cases it appeared to contain less iron than usual. Only two analyses have been made of the spleen in cases of pernicious anæmia; but the result of these analyses is so strikingly in harmony with the results obtained on micro-chemical examination that they may be regarded as sufficient to establish the fact that a marked disturbance in the relation of liver and spleen to each other is to be found in this disease. Thus in Rosenstein's case, in which the percentage of iron in the liver was 0.518, that of the spleen was only 0.227 per cent.—less therefore than one-half; and in Stahel's case, in which the liver contained 0.614 per cent. of iron, the spleen contained only 0.091 per cent.—less, therefore, than one-sixth. It is necessary to bear in mind that these analyses express merely the percentage of iron per 100 parts of dried substance of the organ; and that, if the spleen be enlarged, it is quite conceivable that a considerable excess of iron might be contained in that organ as compared with the normal, without that excess in any way appearing in the percentage of iron obtained by analysis. Without attaching too much value, therefore, to the results of these analyses, they must, I think, be regarded as pointing to the conclusion that the iron present in the liver in pernicious anæmia is not only absolutely, but still more relatively, greatly increased.

The result must appear not a little surprising. As we have seen, little or no importance has hitherto been attached to the presence of pigment in the liver in this condition. It has been held to merely indicate some general weakness on the part of the red corpuscles and their premature decay, the accumulation of their pigment remains taking place in those organs—such as the liver—usually concerned in the disposal of such products. On such a view we should naturally expect to find an increase in the amount of pigment in the spleen at least in some degree proportionate to that found in the liver. All observers are agreed that the spleen plays an important part in storing up pigment particles circulating in the blood (Ponfick); and my own observations after transfusion of blood show that the spleen is even more concerned than the liver in getting rid of the excess of red corpuscles circulating in the blood under such circumstances. So far from the increase in cases of pernicious anæmia being proportionate, the sevenfold increase in the amount of iron contained in the liver is unaccompanied by any increase at all in the amount contained in the spleen. So far as I am aware, this disturbance in the relation of the two organs to each other as regards their richness in iron has not before been drawn attention to; and it must undoubtedly serve, in conjunction with the great increase in the amount of iron in the liver, to accentuate considerably the importance to be attached to

this peculiar condition of the liver as one of the most essential, if not the most essential, pathological changes to be found in the body in this disease.

Changes in the Kidney.—To the anatomical changes already described it remains to be added that in certain other organs some excess of pigment is occasionally to be found in cases of pernicious anæmia. This is specially true of the kidney. It is only, however, in a certain number of cases that any pigment is to be found in the organ. Its presence is by no means constant. When present, the pigment is in the form of small yellow spherical granules or globules, lying for the most part within the cells of the convoluted tubules, rarely within the lumen of the tubule itself. Nor is it found in all the convoluted tubules. The pigment, both in its appearance and in its situation, differs entirely from that the result of extravasation. It only gives a somewhat imperfect, though easily recognisable, reaction of iron with micro-chemical reagents. The quantity present varies much in different cases, and in some, in which a very large excess is contained in the liver, it is absent altogether from the kidney. In no case have I found it lying within the glomeruli; and within the renal cells of the convoluted tubules it presents the appearance of colouring matters of the blood in process of excretion.

Summary of foregoing Anatomical Observations.

These, then, are the anatomical changes to be found more or less constantly in patients dying of pernicious anæmia. It will be seen that they are most constantly to be found in those organs of the body concerned either in blood formation or blood destruction—viz., the spleen, bone marrow, and liver; or in those organs concerned in excretion—viz., the liver and kidneys. Of these changes, the most marked are those which point to some disorder of blood destruction as the characteristic pathological feature of this form of anæmia. In their order of frequency, these changes are to be found constantly in the liver, more or less constantly in the spleen, very frequently though not constantly in the bone marrow, not unfrequently in the kidneys, and occasionally in other organs, such as the pancreas and thyroid gland. In the case of the liver, bone marrow, and kidneys, the changes consist in the presence of an excess of pigment derived from the blood; in the case of the spleen and bone marrow, the evidences of this blood destruction are best recognisable on examination of the fresh tissue, and consist for the most part of changes in the corpuscles themselves.

Nature of Pernicious Anæmia.

We are now in a position to consider what is the true pathology of this form of anæmia. Are the changes in the blood, which are certainly one of the most marked features of the disease, the result of a profound disturbance in hæmogenesis, or are they to be traced to some equally marked disorder of hæmolysis? The answer to this question has already been in part supplied by the consideration just given to the anatomical changes most commonly found. As regards the blood-forming organs, we have seen that there is nothing to show why pernicious anæmia should differ so markedly from other forms of anæmia. In the case of the spleen and lymphatic glands, there is no evidence at all of any disturbance in blood-forming function. In the red bone marrow the evidences of some such disturbance are much more marked—viz., the presence of large numbers of nucleated red corpuscles. The presence of these corpuscles in such large numbers has been interpreted as pointing to some failure or imperfection in blood-forming function on the part of this tissue—some interference with the proper development of the red corpuscles. It is obvious, however, that the appearances may be interpreted in another and entirely different way—viz., as pointing to an excessive activity on the part of this tissue in blood formation, such as is met with, for example, after loss of blood. So far from pointing to any interference with blood formation, the presence of such large numbers of nucleated red corpuscles rich in hæmoglobin seems rather to indicate that the conditions are by no means so unfavourable to blood formation as is implied in the view that this form of anæmia is essentially hæmogenic in its nature. While their presence in such number points to some marked necessity for increased blood formation, their large size in many cases and their richness in hæmoglobin, along with the richness of the individual corpuscles of the blood in hæmoglobin, seem equally to indicate that the demand is being always met by the bone marrow, even up to the time of death. Unless the conditions were very favourable, we should expect

to find less evidence of blood-forming activity in the bone marrow. And if we look for any conditions which might be supposed specially to favour blood formation in this form of anæmia, we shall find them in the presence within the body in this disease of a large supply of material suitable for purposes of blood formation. So far from there being any want of iron in this disease, as is the case in chlorosis, the evidence I have already adduced shows that there is a great excess; and although this is found for the most part in the liver, an organ not concerned in blood formation, it is also found in excess in the bone marrow. It is this tissue which, as all my observations show, must be regarded as the chief seat of blood formation both in health and disease. In this fact we find a ready explanation of one of the most characteristic features of the blood in pernicious anæmia—viz., the relative richness of the blood in hæmoglobin, a condition the very reverse of that found in chlorosis. Failure in blood formation plays, therefore, little or no part in pernicious anæmia.

The foregoing observations must, I think, be regarded as clearly establishing that the essential nature of the disease is excessive blood destruction. When the fact is clearly established, we find an explanation of many of the most characteristic clinical features of the disease.

I have already shown how the relative richness of the blood in hæmoglobin can be at once explained on this view. I have now to add, as regards the other changes in the blood, that my experiments with destructive agents—such as pyrogallie acid and toluylendiamin—clearly show: 1. That a profound degree of oligocythæmia is more readily producible in animals by means of blood-destroying agents than by repeated losses of blood. 2. That the destruction is accompanied by changes in the form and size of the red corpuscles, similar to those constantly met with in pernicious anæmia. 3. That in certain cases the destruction is accompanied by the appearance of small yellow spherical microcytes in the blood, resembling in all respects those so frequently found in pernicious anæmia. In their most typical form, I am therefore inclined to regard these bodies as products of blood destruction, not as stages in the evolution of young red corpuscles.

Further, the establishment of the fact that the liver has a specially prominent part to play in this disease, either in the blood destruction itself or in the disposal of the products of this destruction, serves at once to account for the disturbances in liver function so constantly found in this form of anæmia, and evidenced chiefly by recurrent attacks of jaundice or the persistence of a certain degree of jaundice throughout. The observations of Stadelmann and Afanassiew have shown how frequently some degree of jaundice is associated with the increased destruction of blood induced by the action of such drugs as toluylendiamin. Their observations also afford, in part at least, an explanation of the jaundice. The increased flow of bile (polycholia), which always in the first instance results, is soon followed by increased consistency of the bile, greater viscosity, and consequent stagnation in the bile ducts. A similar explanation doubtless applies in many instances to the case of man; and it is in this fact, as I shall show elsewhere, that we find an explanation of this peculiar feature so often associated with pernicious anæmia.

(To be concluded.)

ON PERFORATION OF THE VERMIFORM APPENDIX IN ITS RELATION WITH ATTACKS OF PERI-TYPHLITIS.

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(Concluded from page 566.)

To typhlitis stercoralis I make no especial reference; its causation and its characteristics are so readily recognised that it cannot, as a rule, well hold a place in the solution of a differential diagnosis. It is otherwise, however, with the conditions of which I have furnished illustration, each one of which possesses a family likeness which is readily appreciated, but the underlying cause of which it is at times most difficult to determine. If we could accept the belief of some "that every case of so-called peri-typhlitic abscess must be regarded as primarily one of a perforating appendicitis unless proven to the contrary," then our quest would

be an easy one and the surgical treatment of the disease be as imperative as it would be readily determined upon; but when we know that chill, that indigestion, and that excessive muscular exercise may all give rise to an inflammation in or around the cæcum, which inflammation may not necessarily terminate in the formation of pus, nor indeed by its presence seriously jeopardise life, then the consideration of the etiology and the symptomatology of a localised peritonitis in the region of the cæcum is absolutely necessary in the determination of a proper line of treatment. That chill should be capable of producing a peri-typhlitis or paratyphlitis, some other well-recognised forms of connective tissue inflammation would lead us to believe. Peri-nephritis is not a very rare disease; peri-proctitis is even more common; while ever and again we meet with a non-puerperal peri-metritis or para-metritis, which has its apparent origin in what, for lack of a more scientific and may be better expression, we call "a chill." That the anatomical characters of the cæcum and of the rectum and the nature of their contents should predispose to the readier occurrence of harm in the cellular tissues in which they are embedded is not unlikely, for the conditions of alternate dilatation (which may be extreme) and of contraction must at times produce considerable changes in the fulness of their blood supply, while the occurrence of any slight abrasion in their lining membrane will permit of the absorption of such septic matters as are ever apt to induce harm in planes of connective tissue. That the depressing effect of a chill should exercise a notable influence in situations where such conditions exist and tend to produce an ever-threatening evil is, I take it, not improbable. That a certain number of such cases terminate in suppuration and ultimately do well there can be no doubt; indeed, I believe that in the majority of instances in which abscess follows inflammation, and which after incision quickly recover, owe their origin to a simple para-typhlitis. That the formation of the typhlitic tumour—for in typhlitis it is the mucous membrane of the cæcum and the enveloping peritoneum which are affected¹—can be traced to the result of an attack of indigestion is well recognised; and although the question asked lately by a very distinguished surgeon² as to why "the cæcum any more than other parts of the colon should be selected for inflammation of a relapsing character" is, on the face of it, a pertinent one, there are, I venture to believe, certain likely reasons why such inflammations may occur. That a *secondary* digestion (gastric) should take place in the cæcum, as some contend, is as improbable as it is impossible to support by physiological observation; but in the anatomical position, and in the character of the mucous lining of this part of the intestine, and in the nature of its secretions, we may perhaps find an explanation of its proneness to catarrh.

The dependent position which the cæcum occupies must tend to influence somewhat the balance in its circulation, permitting of a readier congestion; its mucous membrane is singularly vascular, and the secretion which comes from it is alkaline in its reaction.³ That this alkalinity should have a direct chemical effect upon the acid chyme which pours into it from the small intestine is fairly certain. Chyme which, from faults in primary digestion or from the nature of the food taken, is acrid in character is not likely to undergo the quiet transformation which here in normal conditions occurs, and as a direct result of this we have a catarrhal irritation excited which in its course may develop the clinical features of a typhlitis. This catarrh at times involves the appendix also, and may there produce the first step in those changes in its mucous membrane which, owing to the feculent nature of the fluids which bathe it, may eventuate in a sloughing form of ulceration, and, it may be, in perforation of its walls. In this way a dyspeptic typhlitis, simple enough in its primary character, may eventually produce important and possibly grave results. That the occurrence of a marked catarrh in the cæcum should induce a tendency to its recurrence is but what we might expect when reasoning from an experience of this morbidity in other situations. That inflammatory trouble in the cæcal region does follow severe muscular exertion I have good knowledge, for I have thus been a sufferer.

The discussion of the influence of chill, of indigestion,

and of muscular exertion leaves this matter of etiology but half considered, for there remains this even more important relation, the possible results attendant upon the presence of concretions and foreign bodies in the vermiform appendix. The mention of these pathological facts will best indicate them. Toft⁴ claims to have discovered disease of the appendix in 110 out of 300 post-mortem examinations made upon the bodies of persons dying between the ages of twenty and seventy (a large number of them showing traces of past and present inflammation), and that ulceration existed in 5 per cent. of all bodies examined. Matterstock,⁵ in 169 fatal cases of perforating appendicitis, found fecal concretion present in 53 per cent. and foreign bodies in 12 per cent. With evidence like this, the importance of which is increased by the fact to which I have already made reference, that ulceration may exist independently of any obstruction in the canal of the appendix, it is impossible to escape the conclusion that a very considerable proportion of cases of peri-typhlitis are due to perforation of that body, and that in a certain number of them—greater, may be, than we reckon—nature fails through force of adverse circumstances to form a protective barrier of lymph, and a general and rapidly fatal peritonitis ushers in an illness which quickly ends a vigorous life. Fortunately this is the rarer event; more frequently the symptoms which mark the occurrence of perforation are those characteristic of peri-typhlitis, but with some possible differences in their expression which it seems well to emphasise.

Of all the indications which note the advent of inflammation, there is none so striking as that of pain, and there is, may be, no situation in which this is more strongly pronounced than when the great sac of the peritoneum is involved. This is exemplified when perforation occurs, for although the pain attendant upon typhlitis and peri-typhlitis may be, and is at times, severe, it is neither so sudden in its onset nor so agonisingly acute. The way in which in some instances it doubles up the patient and changes the aspect of the face is strong proof of this. It makes its appearance suddenly and acutely; it is not heralded by the premonitory cramp-like feeling and dull aching which often immediately precede its coming on in the other form of inflammation in the iliac region, and it has, as its usual accompaniments, vomiting, and probably rigors. The situation of the pain is in many instances fixed at a distance from its true point of origin. It may be referred to the epigastrium, to the neighbourhood of the umbilicus, or to the left iliac fossa. That this is apt to lead to errors in diagnosis is well recognised, but as in most cases a limited local inflammation must have preceded rupture, careful examination will at times elicit a measure of tenderness in the cæcal region, and thus aid in differentiation.

The relation which this sudden pain bears to the taking of food is of moment. In four cases, of which the notes are mine, intense pain made its appearance within a very short time of a meal, and I believe that the fact that, as the cavity of the appendix is usually filled with mucus, the secretion of its lining surface, an out-pouring of this, probably occurring coincidentally with the commencement of digestion, may explain the sudden giving way of a limiting layer of very thin tissue. A clinical observation lends some support to this idea because we know that in cases of cæcal cancer severe pain in the seat of the disease is apt to appear *immediately* after food has been taken, thus pointing to the existence of an intimate relationship between somewhat distant parts of the alimentary system. Yet another point in the history of pain is that in a proportion of cases it will be found, on careful inquiry, that attacks of a similar kind, less severe in character, have occurred previously; and it is likely that the acquisition of the knowledge that fruit seeds may have been inadvertently swallowed, or that attacks of gall-stones have occurred, may help to strengthen the diagnosis of a perforative appendicitis. I refer to gall-stones because in a case upon which I was called upon to operate, and which was under the care of Dr. Lockie and Mr. Brown, the former gentleman not only diagnosed the occurrence of perforation of the appendix, but expressed the opinion that, in view of the patient's history, an impacted gall-stone probably lay at the root of the mischief, and this opinion we were enabled to verify.

When once developed, the pain accompanying perforation is more persistent and acute than in the simple cases, and

¹ Habershon: *Diseases of the Abdomen*, 3rd edit., p. 394.
² THE LANCET, Feb. 18th, p. 323. ³ Habershon: *op. cit.*, p. 394.

⁴ Quoted by Fitz, *International Journal of Medical Sciences*, No. clixiii. (new series), p. 324.
⁵ Fitz: *op. cit.*, p. 326.

the vomiting may be, as in one case detailed, *continuous*. Vomiting occurring in this way is, as far as experience serves me, quite unusual when there is no gross lesion. It not unfrequently takes place at the time of onset, and it may reappear at intervals, but it is not generally continuous. As a necessary accompaniment of pain there is tenderness on pressure, and as this is localised, or elicited over a wide area, so may we reckon the severity of the existing inflammation. Acute general tenderness following the onset would probably point to a widely spread involvement of the peritoneal sac; and *sudden* increase in its area, notable hours or days after the primary pain, that leakage had taken place from the portion encysted, and that a universal peritonitis was being lighted up. With pain and with tenderness there is in most inflammations rise of temperature, and so there is here; but whereas in typhilitis and perityphlitis proper this usually ranges between 101° and 103° or 104° (and the range of temperature is high according to the severity of the attack), where the escape of feculent matter or of acrid effusion lies at the root of the morbid process, the average temperature is not much, if at all, above 101° . I have made a careful analysis of a number of reported cases in addition to those whose records I possess, and I have found that in most of them the temperature did not reach 100.4° as its maximum point.

It is possible that in a certain number of instances the very rapid development of the iliac tumour may mark perforation. In the case of M. H.—it was well developed at the end of twenty-four hours, and a sudden diminution in its fulness was one of the events which pointed the story of its rupture. True it is that the sufferer was but in her childhood—a period of life in which peritonitis is ever quickly developed,—and so with her it may have been the existence of this vital tendency, more than the cause which gave it origin, that brought the pathognomonic feature of perityphlitis into premature existence. Be this as it may, the very rapid development of this tumour formation would in future render me more alive to the fact that perforation had probably occurred.

Age and sex have an important influence in the discussion of those cases which depend upon perforation. In adolescent male life it is most frequently seen: after forty it is uncommon; and in women at any age it is rather rare. In the years of childhood there are many sufferers, and in them especially may its beginning and its march be insidious. I have seen it recognised by one feature only—that of the child walking in a bent position, and crying when making the effort; this, and the existence of anorexia alone, leading to the recognition of a well-marked peri-typhilitic effusion, which underwent a suspiciously slow resolution. Useful as the rule is to examine with care the right iliac fossa in every case of abdominal pain in which the cause is not evident elsewhere, it is strikingly so in early life; for I have a belief that in some of the cases in which death has rapidly succeeded symptoms of acute peritonitis there has been in existence previously a latent peri-cæcal effusion.

By an anatomical peculiarity—the attachment of its mesentery to the pelvic brim—the appendix may be pendent in the cavity of the pelvis. Should, in these circumstances, appendicitis occur, its *local* manifestation will then become *pelvic*; there will probably be no tumour in the iliac fossa. I have seen, I believe, one such case in which all the previous history and the acute symptoms of appendicitis existed, with pronounced iliac tenderness and fulness below the level of Poupart's ligament, and where, through bimanual examination, a mass of phlegmon could be detected very high up in the pelvis lying in the direction of the right acetabulum. The lady had no previous history of any pelvic harm, although she had that of recurring pain in the iliac fossa. The illness, which began with singular severity, occurred after a sudden muscular effort, and the mode of disappearance of the pelvic swelling, coupled with the gravity of her sufferings, made me incline to the diagnosis of an appendicitis, probably perforative in its nature. I mention the case now as indicating the necessity in some instances of suspected appendicitis of a pelvic exploration through the vagina or the rectum; for, apart altogether from the difficulties which may attend the diagnosis of peri-typhilitic harm from that of various other abdominal ailments, it is of the highest moment that no method of examination should be left untried by which it may be possible to determine early the existence of perforation of the appendix.

Given, then, a case in which with a previous history of recurrent iliac pain there is an attack of *intense* pain in the

abdomen, having, it may be, close association with the taking of food, attended by vomiting, and probably rigor, with very early tenderness on pressure in the cæcal region, and a sense of resistance with modified dullness on percussion, with comparatively little febrile reaction, and with the formation of a distinct and very tender tumour in the iliac fossa, what is the wisest plan of treatment to follow? That in a certain proportion of cases in which perforation has occurred recovery has attended the judicious use of opium in association with *rest*, postural and alimentary, there can be no doubt; but as these form the small minority, and the dread dangers pertaining to an attack of general peritonitis, which must be suppurative in its character, are always present as a sequence of these lesions, it seems that through surgical procedure alone can safety best be found. It was no doubt knowledge gained as a pathologist that made Mahomed advise, as he did a good many years ago, the incision of the appendix or its removal in cases of recurrent peri-typhlitis, for he argued that, as the presence of a concretions was the usual exciting cause, it was only through its removal that relief and safety could be found. And now Mr. Treves is following in the same lines, and has recently demonstrated how thoroughly practical and successful the procedure may prove.⁶ But the originator of this form of treatment and the surgeon who has lately carried it out have associated it with a condition of quiescence in the local state, and when therefore it is not only, may be, more possible to determine the true cause of the attacks, but when, in the absence of inflammatory harm, there is a surer prospect of success. The great obstacle to early and successful treatment in the cases we are considering lies in the difficulty of a *certain* diagnosis, for, could this be surely determined, there is no surgeon who would for a moment hesitate as to his course of action. Should the attack begin, as a percentage of them do, by signs of collapse and early general peritonitis, then the rule should be that, after the patient has somewhat rallied, the abdomen should be opened, the seat of the lesion sought for, and, after this has been dealt with, the cavity thoroughly cleansed and, if necessary, drained. When, on the other hand, the mode of invasion is that of a dangerous perityphlitis, we must, I take it, in the beginning at least, wait and watch. General peritonitis appears most frequently from the second to the fourth day, and with evidence of its advent hesitation and doubt should disappear. If, after the third day from the appearance of the illness there should be any detectable sense of fluctuation in the tumour, or the existence of pus be determined by the use of the aspirator needle, then again the way is clear and incision is imperative. Any gradual extension in the area of abdominal tenderness should increase our anxiety and watchfulness, for the peritoneal sac may be involved through a slowly spreading inflammation as well as through a sudden conflagration. The importance of this watchfulness is dictated by the knowledge that a large proportion of all such cases perish within the first week of their illness, and that the value of timely action, ever precious in the treatment of acute disease, is greatly enhanced when the race with death is so close a one. Fitz,⁷ who has written with much ability and authority on this subject, inclines to think that operation should not be delayed beyond the third day; but in this opinion it is not quite easy to acquiesce. At that date we may still, despite all care, be in some doubt as to the true nature of the case, and I cannot therefore believe that, with constant and unrelaxing observation, and in the absence of any evidence of spreading peritonitis, further delay should seriously compromise the chances of recovery. We cannot always then be able to discover the presence of pus; the adhesions, upon the existence and the importance of which⁸ Mr. Willard Parker lays such stress, can hardly yet be fully developed, and the peritoneal cavity safely shut off; while the dread of rupture is then, as he believes, but beginning to be imminent. Between the fifth and the twelfth day Parker regards incision as practicable, safe, and justifiable, and he well points his contention by the fact that success attended three out of four cases submitted to operation by him. The advantage in delay, when it is permissible—for I would not advise or follow it in every case (the record of M. H.—teaches this),—is that you have an encysted abscess which can be freely opened, in the cavity of which lies the diseased organ with which we have to deal, and the whole con-

⁶ THE LANCET, July 18th, 1888, p. 322.

⁷ Ibid.

⁸ New York Medical Record, 1817, vol. II., p. 25.

dition of which permits of the satisfactory employment of antiseptics. I have operated with success on the ninth day after the occurrence of perforation, and that this success was largely due to the manner in which the general peritoneal cavity was sealed I have no doubt. When there is suspicion that leakage from the lymph-formed cyst has already occurred (and the occurrence of tenesmus may aid in indicating this) immediate operation is a necessity. As to the manner in which this should be carried out, the condition with which we are dealing should determine.

Early operation, whether demanded by intra-peritoneal rupture, by slower extension, or by leakage from the abscess sac, can best be managed by a median incision supplemented by one in the iliac region. By this means irrigation of the peritoneum can be thoroughly carried out, and the local condition satisfactorily dealt with. When it is determined to operate before the formation of strong adhesions, say within the first five days, I believe that direct incision over the tumour, with careful cleansing and separation of the adherent intestines (for pus may lie in their folds), the examination of the cecum and the appendix, and the thorough cleansing of the parts, followed, if necessary, by free drainage, will be very satisfactory. When abscess formation has fully declared itself, I have found that a free incision made as for ligature of the common iliac artery, and long enough to admit of an examination of the parts concerned, followed by antiseptic irrigation and drainage, give satisfactory results. How valuable early operative treatment in one form or other is, the post-mortem records of many cases of pyæmia clearly establish. Free incision may not only save a life which is in imminent jeopardy at the time at which it is made, but in it alone lies escape from dangerous sequela. Surgery has in late years done much to add to the measure of human life, and it has been enabled to do this largely through increase in our diagnostic skill. When this is so developed that perforative appendicitis can be at once recognised, then the quickly widening field will grow broader, and one other condition, which in the past has too often had the saddest issues, will in future by its records serve to point another lesson as to the increasing value of our art.

Carlisle.

ON

SIX CASES OF SUPRAPUBIC LITHOTOMY.

By ARTHUR NEVE, F.R.C.S. &c.,
SENIOR SURGEON TO C.M.S. MISSION HOSPITAL, KASHMIR.

THE position and value of suprapubic lithotomy is still *sub judice*, and will probably remain so for several years. We can hardly estimate either from the small contributions supplied by numerous operators. When surgeons shall be able to report their suprapubic lithotomies by the score, and contrast them with an equally wide experience of other methods treated under the same conditions, then we shall have advanced within measurable distance of judging the operation apart from personal bias and other misleading elements. In the meantime, it is a duty to report the few cases that one has had. From the first I took a keen interest in the subject, and practised Petersen's modification early in 1884, when, as far as I know, no English cases had been reported. In the autumn of that year I published an article on the subject in the *Indian Medical Gazette*. I have up to date had six cases, varying considerably in their nature; of these one ended fatally. They were as follows.

CASE 1 (1884).—R—, aged forty. A small uric acid calculus diagnosed. As the lithotrite was being repaired lithotomy had to be performed. I injected twelve ounces into the bladder, stuffed the rectum with a large plug of lint, and dissected down on to the anterior surface of the bladder, incised it, and removed a calculus of the size of a large filbert, weight 1 dr., 20 gr. I stitched the bladder walls at two points, and also closed the abdominal wound. A few drops of urine came by the wound for a day or so, and then stopped; a small quantity of pus collected behind the wound, then escaped, and a few drops were pressed out daily; at the end of three weeks this stopped, but the sinus did not close till the end of a month. Stay in hospital forty-three days.

CASE 2 (1885).—A—, aged twenty-five. The bladder

was injected with twelve ounces and the rectal bag was equally distended. After incising the skin, I inserted a curved, sharp-pointed bistoury about one inch and a half above the pubes, and, entering the bladder, cut down to that bone, inserting my finger and forceps as I withdrew the knife, and removed a uric calculus weighing 1 oz. 1 dr. Thus performed, the operation itself was as prompt as the perineal method; the peritoneum was not seen; and no bleeding ensued. I put three deep stitches through the bladder and muscles, leaving the skin open. The man suffered for two days from violent, even dangerous, hiccup; but the wound progressed very favourably; in a week it was merely a fine sinus through which urine escaped when he micturated. This closed in about a fortnight more. The patient was thirty-four days in the wards, but for the last three weeks was going about in perfect health.

CASE 3 (1886).—S—, aged about twenty-five. The preliminaries were as above, except that only nine ounces were injected into the rectal bag. I dissected down to the bladder in the usual manner. The peritoneum was not seen. After removing the calculus, an oxalic acid one, weighing 13½ dr. and the size of a bantam's egg, I made a *boutonnière* incision in the perineum and inserted a tube in the bladder; then stitched the bladder walls. In spite of the tube and the stitches, most of the urine came by the abdominal wound. For two days the patient had fever ranging from 101° to 103°. The opening, however, closed very rapidly, and on the twenty-first day was quite closed, and the patient went home. The *boutonnière* incision, being useless, was allowed to heal on the fourth or fifth day.

CASE 4 (1887).—S—, aged forty-five. From this patient in 1883 I removed a 7 oz. calculus, measuring 9 in. in circumference, by a double lateral perineal incision. He returned on March 23rd, 1887. The whole bladder seemed full of stone and grit. With some difficulty a few ounces of fluid were injected, and the rectum distended. In dissecting down, the peritoneum was seen and drawn aside. With much difficulty, on account of adhesion to the bladder walls, a large calculus 4 in. long by 3 in. thick, and irregularly pear shaped, was removed. The bladder walls had to be scraped, but the grit could not be removed. With Dr. E. F. Neve's help I stitched the bladder margins to the muscles, partly closed the wound, and inserted a large drainage tube. The fragments weighed 4½ oz. In three days he began to get better, and the urine became less offensively ammoniacal. He remained seven weeks in the hospital, and improved in every way. The wound entirely closed, and the urine became more normal. He was treated for some time with one drachm of boracic acid a day in a quantity of water. This set up very great pain in the kidneys, and had to be stopped. The wound, except a small sinus, healed in less than ten days; slight superficial ulceration afterwards occurred.

CASE 5.—Atma R—, aged forty. This was a stout, well-to-do Hindu. The stone was not large, but was not freely movable in the bladder; this prevented lithotripsy being performed. The bladder was injected, and the rectal bag dilated as usual. There was nothing unusual about the operation. The stone (1½ in. by 1 in.) was fixed in a sulcus, but was easily removed. The bladder incision was closed by stitches, and the upper margin of the abdominal wound also. A large tube was inserted. For several days the patient did very well. He then had fever, apparently malarial; and the abundant fat about the wound began to slough. Fourteen days after the operation some of the urine began to come per urethram. The patient then had diarrhoea, which his friends concealed from the hospital attendants. He daily got weaker, and suddenly the whole subcutaneous tissue of the penis became infiltrated with urine, and sloughed. He was removed by his friends, and died a few days later, about three weeks after the operation.

CASE 6. — M—, aged twenty-five, has suffered from symptoms of stone for seven or eight years, and has repeatedly been to hospitals in the Punjab, but at none was any calculus discovered. On sounding, a stone of large size was struck. The operation was performed, with my assistance, by my house surgeon. The bladder and rectum being distended, a dissection was made above the pubes; during its progress the fastening on the penis loosened, and, unperceived, the fluid escaped, leaving the bladder nearly empty. Thus the peritoneum came in sight—occupying, indeed, the whole wound; it was on the point of being incised when I discovered the mistake. The bladder being reinjected, we saw the peritoneum gradually drawn upwards

until it could be hooked on one side, exposing the bladder. A very large incision was required for the passage of the stone, which weighed 4 oz. 5 dr., and measured in circumference $7\frac{1}{2}$ in. by $6\frac{1}{2}$ in. It was so smooth and hard that the forceps did not grasp it. I removed it with the scoop and by pressure from the rectum. The bladder wound was partially closed, and also the upper part of the abdominal wound. The operation was performed on June 17th. Although emaciated to a degree, he daily improved for a fortnight, the urine all flowing by the wound. After July 5th he had fever, and ten days later was reduced to death's door, with a huge chasm in the site of the wound, diarrhoea, and daily fever. On the day of my return, after a few days' absence, the diarrhoea was arrested, and again slow improvement began. Peptonised foods were given, and quinine and resorcin administered. The wound granulated up, and finally healed by August 6th. It left him, however, very weak, although convalescent.

Remarks.—Few conclusions can be drawn from so few and varied cases. For Cases 4 and 6 the suprapubic method was doubtless the best; there was difficulty in removing the stone, even with free access to it. At the same time, in Case 4 a still larger stone had been previously removed by the perineum, and doubtless this could have been thus dealt with. This was the only case in which the peritoneum was visible in the wound. The hiccough in Case 2 was probably due to over-distension of the bladder or rectum, or both; on subsequent occasions I have not injected more than nine ounces into the rectum. From Cases 5 and 6 it appears that the chief danger is derived from the fatty and fascial structures in front of the bladder. If the patient is very stout or is very weak, these tissues are apt to break down, and even if they do not do so primarily, at any check in the progress of recovery the granulations may begin to give way, and there is danger of sloughing, extravasation of urine, putrid absorption, &c. This is due simply to the bladder draining through the wound. Can this be prevented? A catheter does not appear to act efficiently. By its syphon action it empties the bladder, but does not again act until the bladder is full—that is to say, till the urine is on a level with the highest point of the catheter and a syphon action is again set up, as in the intermittent springs of Derbyshire. The bladder may, indeed, be drained through a small perineal incision with a tube in the bladder; but the same incision slightly enlarged would suffice for small stones, so why complicate it with a suprapubic wound? For large stones it appears to me that such a combination is advisable. Finally, cannot the bladder wound be primarily closed? In all my cases I have aimed at doing so, but in none have obtained complete union. This is chiefly owing to the difficulty of suturing the flaccid bladder walls through a deep small incision. Yet there is no doubt that it is practicable. In my next case I shall proceed as follows:—After exposing the surface of the distended bladder, before incising it, I shall pass long silk sutures on the Lembert principle; that is, having fixed a line of incision, I shall enter the needle half an inch outside it, bring it out one line outside it, cross over to the other side, leaving a long end and a long loop over the site of the wound, re-enter it one line outside, and bring it out half an inch outside, again leaving a long end. The sutures should not include the mucous coat. I think with three stitches to the inch (remembering how the wound contracts) the incision in the bladder ought to be thoroughly closed. Having applied all the stitches, an assistant would draw the central loops aside and hold up the bladder by them and the ends. The incision would then be made and the stone withdrawn. The stitches would then require careful arranging and ligaturing. The bladder should be distended, to test the security of the suturing. The abdominal wound might then be closed, with a small drainage tube left in, and the catheter be tied in or passed every few hours. However the details may require modifying, I am sure that the principle is sound—to aim at primary union of the vesical wound; and that the sutures can best be applied before the bladder has been incised. If primary union or something akin to it can be attained, then the suprapubic operation will be on a par, to say the least, even with the small median perineal incision; but, unless it occurs, the suprapubic incision is attended by many dangers and by protracted healing, and is not likely to continue in favour with the majority of surgeons, except in the case of quite the largest class of stone.

Kashmir

ON SUPRAPUBIC LITHOTOMY.

By F. M. SANDWITH, M.R.C.S.,

HONORARY SURGEON, KASR-EL-AINI HOSPITAL, CAIRO.

CHILDREN in Egypt become the possessors of calculi in their bladders at a very early age. Lately, for instance, I performed lateral lithotomy on a boy, aged eighteen months, whose calculus weighed 201 grains. The following case is that of a boy whose symptoms commenced at two years of age with itching of the penis and anus.

A—, an Egyptian, aged six, was admitted into the Kasr-el-Aini Hospital from the out-patient room with a history of great pain at night, difficult urination and mucous discharge, but never blood from the urethra. His penis was abnormally developed, while that of other boys of his age in the hospital measured only $1\frac{1}{2}$ in. It appeared that a year previously a native doctor had removed with forceps a small stone from the meatus of the penis.

On May 13th, 1888, I performed suprapubic lithotomy. The boy nearly died under chloroform before the operation was begun, but afterwards took a mixture of ether and chloroform fairly well. This is an exceptional instance, for Egyptians usually take chloroform without any difficulty. The rectum was distended by an indiarubber ball, which was filled with water by a tube attached to it; the bladder was filled with a solution of boracic acid and the penis ligatured by tubing. An incision about two and a half inches long was made reaching to the symphysis pubis; the peritoneum was not seen; the bladder, when reached, was fixed with a hook, and the stone, weighing 162 grains, was easily extracted with ordinary dressing forceps. Two wire sutures were used for the upper part of the wound, and no drainage tube or catheter was employed.

May 14th: Vomiting yesterday after chloroform. Is now thirsty. Sucks ice. Tongue white. Lies on his side, and urine dribbles from the wound. Temperature $98^{\circ}6'$.—15th: Constipation. Bronchitic rales at both bases of the lungs. Temperature $102^{\circ}2'$; pulse 150; respiration 40. Ordered enema, and ipecacuanha mixture for cough.—16th: Tongue white and moist. Cough better. Temperature $100^{\circ}4'$ A.M., 101° P.M.; pulse 150; respiration 34. Wound looks healthy. Never pain or tenderness in abdomen.—17th: Ordered enema. Feels hungry. Temperature $100^{\circ}4'$ A.M., 101° P.M.; pulse 144; respiration 28.—18th: Bronchitic rales still present. Temperature $101^{\circ}2'$ A.M., $101^{\circ}8'$ P.M.; pulse 136; respiration 28.—20th (eighth day): Sutures removed. Upper part of wound united, and lower part healthy. Temperature $99^{\circ}4'$ A.M., and $99^{\circ}2'$ P.M.; pulse 120; respiration 32.—24th (twelfth day): A few drops of urine from penis for the first time. Temperature 102° , in consequence of pain in a carious tooth and tonsillitis; pulse 128; respiration 32.—26th: Urinates now by penis and wound. Temperature 99° ; pulse 98; respiration 32.—28th: Urine from penis only. Cotton-wool dressing on wound quite dry since yesterday. Wound quite superficial now.—June 1st (twentieth day): Wound healed, and child running about ward. To go home.

The fever and other disquieting symptoms in this case were not in any way the result of the surgical wound, though, perhaps, due to the anæsthetic.

Five other cases of suprapubic lithotomy have been done in this hospital during the last twelve months. Mr. Milton's first case was that of an old man, from whom a large stone was removed, but the operation was immediately followed by complete suppression of urine and death. At the necropsy sixteen calculi were found in the two kidneys, and both ureters were blocked by them. His second case was that of a boy aged four, in whom rectal examination discovered the presence of a soft tumour. On opening the bladder on May 4th two small polypi were removed. A month later urine still flowed involuntarily from the penis and the wound, but at the end of two months and a half the boy was discharged cured. The third case operated on by a native colleague was on a middle-aged man on April 28th. The stone weighed $7\frac{1}{2}$ oz., and the patient was discharged cured on June 25th. The remaining two cases were operated on by another native surgical colleague, without distension of the rectum. The stones were large, and caused some bruising during extraction. One man had a stone removed by suprapubic operation, and left the hospital with a

fistulous opening. Two months later he returned, and was operated on for a second stone, and died of peritonitis. The last case was that of a man who also died of peritonitis two days after operation.

The favourite operation for stone among native surgeons is lateral or median lithotomy, but English surgeons, especially those in the Egyptian Army, prefer lithotripsy.

Cairo.

THE MECHANISM OF FETAL FORMATION.

By FRANCIS E. CANE, L.R.C.P., L.R.C.S. EDIN.

A CLEAR knowledge of all that goes to the building up of the human frame during its complete cycle is of vital importance to the practical physician and surgeon. But he cannot have this clear knowledge unless he possesses the right interpretation of every fact of fetal life. A misapprehension concerning the significance of embryonic organs will develop into a misunderstanding of the perfected embryo or mature man. In the mature man we find many arrangements of tissue which under the name of rudimentary organs have been a puzzle to the physiologist and the biologist. The greater number of modern authorities explain these organs as remnants inherited from a former ancestry who possessed them in their full development. Some writers go so far as to say that these organs have either this meaning or no meaning at all. The practical medical man will not be satisfied with explanations which are meaningless personifications of physical action, such as that these organs are the result of inheritance from a former ancestry by natural selection, through the survival of the fittest. He wants a better, more philosophical, and clearer explanation, in place of misty phrases which simply cover ignorance and satisfy only superficial minds. The puzzle of rudimentary organs has occupied my attention for many years, and I have collected a host of facts concerning them, which convince me that the biologists have put the cart before the horse, and have made a complex mistake in scientific interpretation. They tell us that the platysma myoides and other superficial muscles of that system show descent from the panniculus carnosus of the cow and horse; that the rudimentary tail and ear muscles prove a pithecoïd ancestry; and that the so-called rudimentary branchiæ indicate that the fishes were amongst our forefathers. I am of opinion that the reason is plainer and nearer at hand.

An examination of the means by which man acts on the external world or on himself shows that the voluntary, involuntary, or rhythmical contraction of muscular tissue is the sole mechanical power made use of. The muscles are his means of action in moving limbs, in locomotion, speaking, masticating food, swallowing, digesting, defecation, and micturition. Muscles are necessary for seeing, hearing, smelling, breathing, and the circulation of the blood. The heart is a great muscular organ, and all the arteries are surrounded with muscular fibres. Even perspiration is dependent on the muscular tissue distributed throughout the skin. Finally, generation, gestation, and parturition, by which we begin our being, are all the result of muscular work. Thus, without muscle we could not comprehend or in any way communicate with our surroundings, and therefore it cannot be illogical or unreasonable to carry the system a step further, and claim for it the chief power and the great mechanical means by which the fœtus is constructed, moulded, and formed into the shape it afterwards assumes. Then, in place of these puzzling tissues being rudimentary ancestral heirlooms without a clearer meaning, they are in reality the remains of the constructive machinery common to all animals, and whose philosophy has yet to be investigated, not only in mechanical means, but in the special potentiality which acts through the nervous system by trophic, hypertrophic, and atrophic influences in guiding the development of individuals, sexes, varieties, and species. The umbilicus, the vestiges in the heart, the urachus, and the Wolffian body are clearly remnants of embryonic function, and why not the vestigial muscles of the ear, scalp, skin, and coccyx? At the end of fetal life some of these constructive organs become absolutely useless, and are cast off, like the placenta and the amniotic sac; others more or less useless are retained, like

the ductus venosus, the urachus, the Wolffian body, and the thymus gland. These facts show that external constructive organs no longer useful are completely separated, but internal constructive organs no longer useful are necessarily retained and slowly atrophy, or remain more or less vitalised, to prevent decomposition.

We know the effects of muscular action in bringing badly-set bones or the legs of rickety children more nearly to their proper form; and the shape of bones may also be altered by spasmodic muscular action, as exemplified in nervous diseases. We know that muscular tissue is constantly contracting and performing work under voluntary, involuntary, and rhythmical stimuli. Rhythmical muscular contraction is proportionately more marked in foetal than in adult tissues, and the work it does must be appreciable. While the heart from its earliest formation is propelling fluid according to the great mechanical law of equal pressure on all sides, the muscular tissue is rhythmically busy modifying that force and moulding the conveyed materials by the resultant of the arrangement, direction, number, and power of its fibres. In this way the force developed and propagated by muscle is modified, governed, and stayed by muscle also. In the human embryo the so-called rudimentary muscles of the ear would be occupied forming the pinna and moulding the bones beneath. The occipito-frontalis would be shaping the skull to its rounded form. The spinal and coccygeal muscles would be employed rounding and curving the spinal column and causing the coccyx to curve inwards. All the muscles would be at work until the fœtus was finally formed for its course through life; but those muscles and organs whose function it was to bring it only to a certain lower stage in its formation would be cast off like the placenta or retained like the ductus venosus and the muscles of the ear.

I have now briefly shown how vastly important in embryonic growth are the great mechanical agencies of muscular contraction and blood pressure—agencies hitherto almost completely overlooked in all our great works on embryonic physiology. If my principles are correct, it will become evident that embryonic man possesses so-called rudimentary branchiæ, not because his ancestors were, but because he actually is, a fish living in water. He is placed in similar conditions to a fish; his blood must have oxygen, and, as the placental connexion is not yet completed, the dissolved oxygen from the amniotic water passes through the attenuated membrane of the branchial folds and permits him to live. It will also be seen that when a great naturalist said the mammae of male quadrupeds are "absolutely useless," he quite overlooked the extreme likelihood that these organs are of the greatest possible use to the embryo in the elaboration of fluids and substances for its nourishment and growth, in the same way that glands like the liver have functions like the glycogenic function. He also overlooked the likelihood that in mature life these organs might continue their function, and be of great use as blood glands. Rudimentary limbs will also be found not absolutely useless, but will take their place in the system of embryonic construction. Many of the limb muscles are connected with and have their action on the trunk, and therefore rudimentary limbs are plainly not meaningless heirlooms, but heirlooms of the physiological mechanism by which force was distributed and applied. A limb will be found to have not only its use as a means of voluntary action, but also its use as an architectural device in connexion with the building of the being.

I have not here considered the part played by the nervous and glandular systems, nor the action of ligaments in the fœtus and the mechanism by which bones are moulded and divided. Neither have I considered the potentiality of the primary cause acting on, in, and through the constructive mechanism. But I have endeavoured to briefly show how wide, interesting, and untrodden a field is opened up in the study of the mechanism of the making of man.

Leeds.

WADHAM AND HOLMES TESTIMONIALS.—A general meeting of the subscribers will be held in the Board-room of St. George's Hospital on Thursday, Oct. 11th, at 4 P.M., to decide what forms these testimonials shall take. Gentlemen who have not yet paid their subscriptions are requested to be kind enough to do so at or before the general meeting.

NEW APPARATUS FOR FRACTURE OF THE LOWER MAXILLA.

By JOHN WARD COUSINS, M.D. LOND., F.R.C.S.,
SENIOR SURGEON TO THE ROYAL PORTSMOUTH HOSPITAL AND TO THE
PORTSMOUTH AND SOUTH HANTS EYE AND EAR INFIRMARY.

IN many cases of fracture of the lower jaw the great mobility and displacement of the fragments render them difficult to manage. In double fracture the separate pieces of bone are much dragged out of place by the muscles attached to them, and it is often not easy to maintain the broken parts in apposition. In difficult cases of this kind I have employed my apparatus with very great success. It is especially adapted for fracture of the condyle or ramus, and for double fracture of the lower jaw. In ordinary cases it may be used for the sake of lightness and comfort.

The apparatus consists of a steel splint which encircles the neck. It is horseshoe-shaped, and the ends on either



Splint applied for fracture of body of lower jaw.

side terminate in a loop which supports a movable pad. The pressure of the pad is regulated by a screw. A piece of webbing, extending from loop to loop, is fixed under the chin with a buckle, and another piece passes from side to side over the forehead, and is supported in position by a central strap attached behind to the splint. The apparatus can be regulated to fit the patient. The splint is made in several sizes by Messrs. Arnold and Sons, West Smithfield. It can be readily fixed with ordinary padding and bandages. When in position it acts as a lever with the fulcrum at the



Splint applied for fracture of condyle or ramus.

occiput. The pad presses forwards the ramus, and the bandage elevates and secures the jaw. The position of the bandage under the chin must be regulated according to the seat of the fracture.

CASE 1. Fracture of both condyles of lower jaw.—A gentleman, aged twenty, was thrown off a bicycle in June, 1886, in descending a steep hill near Portsmouth. He was brought to the Royal Portsmouth Hospital with a severe contusion of the chin and fracture of both condyles of the lower maxilla. The pain and swelling were severe, and

the backward displacement very great. The ordinary splints and bandages were applied, but they were of very little service, and they failed to steady the bones. The application of my splint gave him complete relief; the line of the teeth was restored, and the bones fixed. He left the hospital in five weeks without any deformity.

CASE 2. Multiple fracture of lower jaw, with severe head injury.—During April, 1888, I was summoned to Hambledon to see, in consultation with Dr. Jeram, a groom who had been severely injured in the head and neck by the kick of a horse. For some days he remained in a very critical condition, labouring under symptoms of cerebral compression. The jaw was broken at the angle on the right side, and an oblique fracture had also occurred near the symphysis. The neck and side of the head were distended with subcutaneous extravasation. In eight days he regained consciousness, but continued very excitable and troublesome, with well-marked paralysis of right arm and leg. My splint was now carefully applied, and it completely controlled the fractured parts, and gave much comfort to the patient. At first it was put on very lightly and well padded. In six weeks union was complete, and the result very satisfactory.

These cases are examples of troublesome forms of fracture, in which the fragments are difficult to maintain in apposition. In one case the injury was caused by a severe fall on the chin. The condyles were unevenly broken, and the displacement on the left side required very careful adjustment. The splint proved a very effectual contrivance, and at once gave great relief. In the other case a double fracture of the lower maxilla complicated a dangerous injury of the head. The extravasation of blood and confusion of the soft parts were very severe. The fracture at the angle was irregular, and the fracture near the symphysis oblique. The central fragment was depressed and loose.

Southsea.

CASE OF OBSTRUCTION TO RESPIRATION; TRACHEOTOMY; ULTIMATE RECOVERY.

By EDWARD ARTHUR WRIGHT, M.B.

THE following case presents points of interest which, in my opinion, deserve publication.

I was called, on Saturday, March 10th, 1888, to see H. T—, a lad aged twelve. On my arrival, I found him an apparently healthy boy, suffering from marked dyspnoea, brassy cough, more or less aphonia, and great restlessness. The history was that three days previously he was out playing, without an overcoat, in an extremely cold east wind, and on coming home had three or four well-marked rigors, the symptoms which I noted when I saw him gradually developing. The appearance of the throat from the mouth was normal; examination with the finger revealed no retro-pharyngeal abscess. The lungs were quite healthy, and the temperature only 101°. I ordered linseed poultices to the front of the throat, inhalations of steam, an aperient, and milk diet. The symptoms for the next few days became increasingly aggravated; every now and then paroxysms of dyspnoea came on, which threatened to quickly terminate his life. There was no membrane, the only expectoration being frothy, and no history of any foreign body being swallowed. The patient's great restlessness and dyspnoea rendered a laryngoscopic examination so imperfect as to be practically useless. On the following Thursday I urged tracheotomy, but without avail. On Sunday, March 18th, I found him on the point of suffocation, bathed in cold perspiration, and almost pulseless. Having obtained the mother's consent, with the kind assistance of Dr. Walker, I performed tracheotomy without chloroform, choosing the lowest possible situation for the operation, as I was in great doubt regarding the exact nature of the case. The operation was rendered somewhat difficult by the extremely engorged condition of the veins, which protruded through the incision like a bunch of worms. On introducing the tube into the trachea, I found that, though it worked well, the obstruction was evidently below. A feather soaked in oil introduced freely into the trachea brought away nothing but blood-stained mucus. The patient was put back to bed, and we told the mother he could not last more than a few hours.

I saw the lad again in the evening, and found that imme-

diately before my arrival, in a paroxysm of dyspnoea, he had pulled out the tube, which was lying by the side of the wound, from which air and mucus were issuing freely. The lad was nearly pulseless, gasping for breath and evidently dying. I introduced a gum-elastic catheter armed with a stylet into the wound, and, passing it downwards, came upon an obstruction above the bifurcation of the trachea. Feeling that I could do no harm, and having in my mind the possibility of a foreign body, I pushed it forcibly onwards, when, to my infinite pleasure, there was a gush of pus from the tracheal wound—in all about an eggcupful of most offensive matter. The breathing became gradually easier, and the boy's condition at once began to improve.

It being evidently of no use to replace the tube, I simply applied warm fomentations freely sprinkled with sanitas over the wound, and left him comparatively comfortable. From that time to the present he has had no bad symptom. The discharge from the wound continued pretty free for some days, and the expectoration with the cough was also free. On April 10th he walked to my surgery. The tracheal wound was quite superficial, and the only thing he complained of was weakness and occasional loss of voice.

The question naturally arises, What was the ailment from which the boy suffered? I have little doubt in my own mind that it was an abscess arising in one of the bronchial glands pointing into the trachea, which I, fortunately for the boy, ruptured with the end of the catheter. On mentioning the case to Dr. Cameron some ten days afterwards, he suggested that I might possibly throw more light upon it by the introduction of a mirror through the tracheal wound—a most excellent idea, which, however, I found impossible to carry out, owing to the contraction which had already taken place.

The fullest account of inflammation of the bronchial glands I have been able to find is in Quain's Dictionary of Medicine, but neither there nor in any of the surgical works I have consulted have I come across any suggestion for operative interference. The difficulty of course lies in the diagnosis, but, arriving at it by a process of exclusion, the simple operation of tracheotomy seems to me not only justifiable, but eminently the line of treatment to be adopted to aid us in our diagnosis, and, by getting nearer the site of mischief than we otherwise could, help us, if possible, to save our patient from the horrors of suffocation. The age of the patient in my own case of course negatived the fear of an aneurysm.

Huddersfield.

CYSTIC TUMOUR OF OVARY; OVARIOTOMY; RECOVERY.

By ROBERT TORRANCE, F.R.C.S.E.,

CONSULTING SURGEON TO THE THROAT AND EAR INFIRMARY,
NEWCASTLE-ON-TYNE.

THE patient, M. H.—, aged thirty-five, had been married ten years, during which period she had six living children and two miscarriages, the first occurring between the second and third pregnancies, and the second between the fifth and sixth. Generally speaking, she had always enjoyed good health till about ten months ago, five months after the birth of her last child, and two months later than this date thought herself again pregnant. She had never been conscious when she quickened with any of her children, but decided in her own mind she was pregnant, from the gradual development of the abdomen, and her power of locomotion becoming somewhat impeded. She consulted me on Feb. 23rd, 1888, in order to ascertain the probable date of her accouchement, when I found her very much emaciated. On examination, the urine contained no albumen, but the abdomen was found to be very large, measuring sixty-one inches in circumference, and filled by a tumour which gave well-marked fluctuation in all directions, the flanks being clear on percussion.

She was seen by me on the following day in consultation with Dr. Philpott, when we placed the patient under chloroform, and he agreed with me as to the nature of the ailment, and was also of opinion that it was a case for surgical interference. I then wrote to Mr. Gould, to whom I am very much indebted for the publishing records of the case in every way,

justified the high character given her by the matron at the Nurses' Home, Ellison-place. The weather was most inclement, the temperature being several degrees below freezing point, with violent snowstorms and a bitterly cold north-east wind blowing, which caused me some anxiety for the future of the patient. However, an operation being necessary, I enlisted in my service Dr. Cook, of Gateshead, who kindly undertook to administer chloroform for me; the patient being extremely weak, and her heart's action very feeble, it was necessary to have a person of experience for the administration of the anæsthetic. This opinion was borne out, as during the operation the chloroform had to be suspended twice on account of faintness, which in my opinion was due to the relief from pressure, as is experienced in tapping in ascites, but merely draw attention to this as one of the additional dangers with which we are surrounded in operations of this character. The patient was under chloroform one hour and ten minutes, and Drs. Wakefield, Wicks, and others ably assisted. The temperature of the room was raised to 98° F. The spray from two steam kettles conducted to make a favourable moist atmosphere for warding off any bronchial irritation, which the outside weather so favoured. The first incision, which was six inches in length, was made along the linea alba, but it was found necessary to extend it two inches higher above the umbilicus. Anteriorly the cyst wall had been so thin that it had ruptured, the contents of which were of the consistency and colour of calf's-foot jelly. This must have taken place a week previously, as, in the patient's own words, she then "felt as if a child had moved or twisted over and tied itself up in a knot," and from that time she had no rest till the day of the operation, not being able to sit, stand, or lie, and was completely exhausted for want of sleep during the whole of that time. The peritoneal cavity was cleaned out as effectually as possible by means of sponges, but not so thoroughly, perhaps, as some would have liked it to be, thus acting on the instruction given me in the wards of the Edinburgh Royal Infirmary, from which I had so often seen successful results. The pedicle was then sought for and reached; being rather short, it was torn a little on obtaining access to it; but when secured, it was tied in two divisions externally, and was allowed to ulcerate off, this being in my opinion the most favourable mode for the success of the operation; the tender parts by this means are allowed to accommodate themselves, more so than when suddenly released from the clamp. The only instruments used were a pedicle and clamp and compression forceps, Key's broad director, Adams' peritoneum hook and Nélaton's cyst hooked forceps, with catgut and China silk. No carbolic spray or adventitious aids of this kind were used, my only dressing being iodoform and iodoform gauze. The tumour weighed 46 lb. Two hours after the operation an enema of three-quarters of a pint of beef-tea, and two tablespoonfuls of brandy were administered, followed by a morphia suppository.

The operation, though tedious, was borne well, and for the next five days the patient far exceeded my expectation, the temperature generally being 101° and the pulse 109. There was very little restlessness, and on the eighth day she had begun to take food by the mouth. The clamps came away on the thirteenth day, and the deep sutures were all removed on the following day. The wound healed by first intention, and at the close of the sixth week the patient was able to be downstairs, and is now outside enjoying carriage exercise.

Feb. 29th: Passed a good night. Had ice to suck. Catheter passed in the morning. Temperature 101°; pulse 114.—March 1st: Passed urine freely, but did not sleep so well. Complained of heat of the room. Temperature 100°; pulse 98.—2nd, 3rd, 4th, 5th, and 6th: Had good nights, and slept well. Temperature 99.4°; pulse 100.—9th: Had a little solid food for the first time, all the secretions being nearly normal. Matters continued favourable until April 7th, and on the 14th the patient was able to be out of bed all day, excepting a short sleep in the afternoon, and was taking her food well.—April 16th: Patient able to be downstairs for the first time.

Remarks.—This case appears to me to be deserving of special notice from the fact of the cyst having ruptured at least a week before the operation. The abdominal cavity was quite filled with fluid (probably partly ascitic), in which the tumour floated freely, just as a foetus floats in utero when the liquor amnii is abundant. There was complete procidentia uteri for some weeks, but causing painful micturi-

tion every twenty minutes or half-hour, only a few drops coming away, thus giving but partial relief, while it was with great difficulty the catheter was passed previous to the operation. She suffered from more than ordinary diarrhoea during the greater part of the ten months, but since the date of the operation the improvement has been most marked, as she looks healthier, feels stronger, and is much stouter.

Newcastle-on-Tyne.

A CASE OF SUPRAPUBIC LITHOTOMY.

By A. J. POPERT, M.R.C.S. &c.

ON the 20th of January last I was consulted by a young man aged twenty-two, who gave the following history. For eight or nine years he had suffered from irritability of the bladder and painful micturition, with occasional bloody urine. He could not remember having passed a night without having to micturate at least once, and during the last three months he had been called upon to relieve the bladder four or five times every night. During the day he could as a rule hold the urine for three or four hours. At irregular intervals he had suffered such severe pain as to incapacitate him for work and send him to bed. Under the influence of rest and opiates these paroxysms of pain usually subsided, and he would be able to return to his work in three or four days. Although the frequent micturition was constant, he was sometimes so free from other symptoms as to be able to play football. Lately the attacks of pain had become more severe and the intervals of freedom shorter, and he was losing flesh and getting worn out from pain and want of sleep.

When I saw him the urine contained a large quantity of albumen, but no casts, and his temperature was 102°. He was obviously suffering from stone and cystitis. His general condition was feeble and by no means encouraging. Quinine and opium improved matters somewhat, and on the 24th I decided to remove the stone by suprapubic incision. It was quite impossible to distend the bladder with water, for the organ would only tolerate from two to three ounces; so I contented myself with washing out its cavity with a solution of boro-glyceride; and having made an incision in the skin about three inches long in the middle line immediately above the symphysis, I had no trouble in dissecting down upon the bladder, guided by the point of a sound passed down the urethra. Two catgut ligatures were passed through the bladder in a vertical direction and parallel to each other, and by traction on them the bladder wall was steadied and brought fairly into view; but the entire organ was so contracted and small that the incision, which was made midway between the ligatures, had to be most limited. The stone was easily found, but considerable difficulty was experienced in removing it owing to the smallness of the vesical aperture. After its removal the edges of the wound were drawn together by tying the catgut ligatures to each other. A large rubber catheter was passed into the bladder through the lower part of the wound, and the superficial wound sutured with silk. The stone was composed of oxalate of lime, weighed an ounce and a quarter, and was a good specimen of the mulberry calculus.

During the next four days some peritonitis developed, but was subdued by large doses of opium—six grains in the twenty-four hours. The urine flowed freely through the catheter into a bottle which was secured between the patient's thighs. Seven days after the operation the catheter was withdrawn from the wound, and one was passed per urethram. The abdominal wound had closed in its entire extent, except at the lowest part, which had been kept patent by the catheter; three days later it was perfectly healed, and on Feb. 10th, seventeen days after the operation, the urethral catheter was removed, and the patient had the satisfaction of passing fourteen ounces of urine *per vias naturales*. The albumen disappeared from the urine a fortnight later, and the patient is now a fairly robust-looking man, enjoying, as he says, better health than he ever did in his life. The bladder has retained its normal capacity, and all symptoms of irritability are gone.

Dr. Baidon kindly administered chloroform, and assisted me at the operation; and I am indebted to Mr. J. Todd of Banks for much useful help in the subsequent treatment of the case.

Southport.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

PASSAGE OF GAS AND FÆCES THROUGH THE URETHRA; COLOTOMY; RECOVERY; REMARKS.

(Under the care of Mr. HARRISON CRIPPS.)

MUCH may be urged in support of the views of Mr. Cripps as to the advisability of performing inguinal in preference to lumbar colotomy in cases such as this, the nature of the disease and the exact point of communication of the bowel with the bladder being unknown, and only to be determined by means of an actual abdominal exploration, the opening for which, though small, can be used for the further stages of the operation. For the following notes we are indebted to Mr. Gow, house surgeon.

W. J.—, aged thirty, first noticed pain in the hypogastric region about eighteen months ago; this was felt before passing a motion, never at any other time. This pain became worse, sometimes lasting the whole day. For some months prior to admission he had passed blood and slime with his motions. For the last few weeks the urine has been thick, and passed with much scalding pain; during the same time he has noticed flatus pass by the urethra.

Present condition.—A fairly healthy-looking man. Complains of constant dull aching pain in the pubic region. He requires to pass urine nearly every quarter of an hour, and after the urine is passed flatus often escapes with considerable noise. The urine varies in character; it is generally turbid, having an abundant yellowish granular precipitate, with distinct faecal odour. Under the microscope the deposit is seen to consist of pus cells, vegetable fibres, and granular debris. The amount of faecal material in the urine is always greater when the bowels are loose. The motions are semi-solid, and urine is not passed by the rectum. The patient complains greatly of flatulence, and says he feels it descend into the left iliac fossa, where it seems to stop, and escape into the bladder. Nothing definite can be felt either through the abdominal wall or by the rectum.

For some weeks the patient was kept at rest in bed on a milk diet, with ten grains of compound soap pill at night, no material improvement following. Mr. Harrison Cripps, after consultation, decided to explore the abdomen, and open the bowel above the site of communication.

Operation.—The abdomen was opened by a two-inch incision in the left inguinal region. A search was then made with the finger, and a firm mass suggestive of malignant disease discovered binding the sigmoid flexure to the bladder. The bowel was traced upwards from this, and a loop of the lower part of the descending colon drawn out and carefully united to the parietal peritoneum and skin. The bowel was opened on the fourth day; the wound healed rapidly, and the patient left the hospital within the month. From the time of opening the bowel neither air nor fæces passed into the bladder, and the urine became clear, the cystitis disappeared, and the patient expressed himself as greatly relieved. When last seen, three months later, he still continued well, the artificial anus giving very little trouble.

Remarks by Mr. HARRISON CRIPPS.—Cases in which the prominent feature consists in the passage of air and fæces with the urine are comparatively rare, but yet of extreme interest as regards their pathology and treatment. In a recently published paper I succeeded in collecting the notes of over sixty such cases. An analysis of these showed that cancer or inflammation was the cause of these communications, the latter being far the more frequent. The bladder may communicate with either the large or small intestine, the former greatly predominating; the site of the fistula being nearly always the upper part of the rectum or the sigmoid flexure. The actual formation of the fistula is often preceded by symptoms from which a differentiated

diagnosis between cancer and inflammation can be generally made. The earliest sign that an opening has actually formed between the bowel and bladder is the passage of gas from the urethra. The quantity at first is small, and sometimes only shows as a few bubbles at the end of micturition. After a while the symptoms become more marked, and cystitis makes its appearance, while at the same time portions of foreign matter may be detected in the urinary sediment. As the disease progresses this increases in quantity, the urine becoming like pea-soup. Occasionally nearly all the faeces are passed through the urethra in ribbon-like motions resembling macaroni. The prognosis whether the condition is due to cancer or inflammation, when untreated, is most unfavourable, death occurring sooner or later after intense suffering, due to cystitis and frequent blocking of the urethra with feculent matter. The treatment is surrounded with difficulty. The idea of an abdominal section, with a view to separating the intestine from the adherent bladder and closing the openings, might at first be thought possible, but, after investigating museum specimens and the accounts of post-mortem examinations, the proceeding, I fear, will be seldom practicable. The intestinal coils are often so firmly matted to each other and to the abdominal parietes by inflammation that even after death the exact point of communication cannot be found amidst the densely matted tissue, and an attempt to do so during life will be almost certainly fatal. Colotomy affords an efficient means of treatment, by cutting off the supply of faeces from the bladder, the effect of the operation on the bladder being most satisfactory, the urine again becoming clear and the symptoms of cystitis disappearing. The chief question, however, prior to colotomy, is one of diagnosis. Should the fistula be in the small intestine, the operation will be worse than useless. It will be usually possible by careful observation of the general symptoms to form a correct opinion on this point. When the communication is with the large intestine, the opening is in the great majority of cases in the sigmoid flexure or upper part of the rectum. Having decided to operate, the question arises as to whether the bowel should be opened in the inguinal or lumbar region. There can be no possible question in ordinary cases of colotomy that the lumbar method is far the better and safer of the two. In the class of case under consideration there is no doubt that there might be a difficulty in drawing out the sigmoid flexure if adherent to the bladder. In these circumstances it would be possible to trace the bowel upwards and attach part of the descending colon to the wound, as done in the case narrated. An advantage of the inguinal operation is that it allows of thorough intra-abdominal exploration, and is thus a means of certainly ascertaining the portion of bowel in communication with the bladder, so that under no circumstances could the error be made of opening a wrong part of the intestine. The condition of the patient after inguinal colotomy is far more comfortable than is generally supposed. If care be taken to make the opening a moderate size, the patient has surprisingly little trouble in managing the artificial anus.

LEEDS GENERAL INFIRMARY.

A CASE OF SCIRRUS OF THE PYLORUS, WITH EXCESSIVE VOMITING; REPEATED INTRAVENOUS INJECTIONS OF SALINE SOLUTION; REMARKS.

(Under the care of Dr. CHURTON.)

THE following abstract is made from the notes taken chiefly by Mr. Althorp, house physician, and Mr. J. Robinson, clinical clerk.

Charles E—, aged fifty-four, an Irishman, with large head, light-brown hair turning grey, grey eyes, voluble and excitable, was admitted on March 31st, 1888, for excessive vomiting, apparently from malignant disease of the pylorus. The vomiting occurred almost immediately after taking food. A small tumour could be occasionally felt in front of the spine, in the epigastric region. He had been vomiting for five weeks, wasting for four months, and ailing slightly for two years.

After a week of treatment by extract of collinsonia, bismuth, and morphia, and a tablespoonful of milk every quarter of an hour as his only food, with the addition of a nutrient suppository every four hours, the vomiting gradually subsided, and at length entirely ceased on April 6th. During the absence of Dr. Churton the drug treatment was

discontinued; he did not vomit, however, until April 15th, though he took milk and other light food. On the 15th vomiting recommenced, and could never afterwards be checked when any food requiring digestion was given. He had now great pain on taking food; it was relieved immediately by vomiting. This state continued until May 14th, when he had become very feeble, the evening temperature being 96° 6'. On the 16th he seemed moribund. It had been observed that on many days he vomited more fluid than was taken by the mouth. Careful measurement proved that this excess was sometimes more than twenty ounces. The vomit was on most days, however, less by a few ounces than the ingesta. But on May 14th, after a trial of solid food for two days, he vomited 238 ounces, chiefly fluid; he had not taken 100 ounces. When therefore, on May 16th, he became prostrate and pulseless, he was ordered transfusion of "normal saline" solution,¹ in order to restore the fluid thus lost. This was done by Mr. Turner and Mr. Althorp (residents) at 10 P.M.; thirty-four ounces were injected into the right median cephalic vein. Immediately after the transfusion the pulse at the wrist was full and regular, and the general condition of the patient very much improved. In the evening of May 17th it was stated that he had had a fairly good night, but had vomited seventy-five ounces during the day, though he had only taken twenty-four ounces and a half of fluid during the same time. About 8 P.M. the pulse again failed, and he seemed almost dead. Mr. Turner, having opened a vein in the left arm, thirty-eight ounces of the solution were rapidly injected by means of Aveling's instrument. The improvement in his condition was immediate and striking; he became cheerful, the pulse was full and regular, and he remained in good condition for a period of five days. During those days he vomited little; he took no food by the mouth, but merely some whisky and soda-water. On the three days from May 17th to 19th he passed urine more freely (thirty-eight, thirty, and twenty-nine ounces); sp. gr. 1012 and 1015. During this time he was fed by an enema of one tablespoonful of Barff's kreochole, with as much water, every two hours; he took aerated water with whisky or wine by the mouth as before. On May 20th the rectum became irritable and rejected the enemata. On the 23rd the pulse failed at 4 A.M. Thirty-eight ounces of the solution were injected by Mr. Turner into a vein of the left arm, and he again revived, but less conspicuously than before. Temperature at 7 A.M. 99°; previous evening 97°. Six hours later the transfusion was repeated, the result being still less marked. In the evening the temperature was again 97° 2'. Early next morning the patient died.

The pyloric portion of the stomach was found to be thickened by scirrhous growth for nearly two inches from the duodenum; at the posterior part and most distant from the orifice was a mass as large as a walnut, projecting so as to form a ball valve; it was not ulcerated. The stomach was somewhat injected. No other gross disease. Microscopically the mucous membrane was atrophied, the submucosa thickened in the vicinity of the growth; the muscle was also somewhat hypertrophied.

Remarks by Dr. CHURTON.—1. In two cases of gastric cancer in which the diagnosis was verified I have found hydrochloric acid absent from the vomit. In other cases not supposed to be cancerous I have usually, but not always, found the acid. The constant absence of hydrochloric acid from vomited food which has been retained half an hour or more inclines the balance in a doubtful case towards the diagnosis of cancer. 2. It curiously happened that the quantities of food taken and the quantities vomited between May 3rd and 11th were in total amount exactly equal—773 ounces. During five of those days the patient passed fifty-eight ounces of urine, or nearly twelve ounces daily; so that there was a net loss of fluid by the stomach and kidneys alone, without taking into the account the lungs and the skin. On the previous eight days (April 25th to May 2nd) he had taken 619 ounces, and vomited only 590 ounces. In the subsequent five days he vomited 603 ounces, and took much less—not 500 ounces. During these five days there was a daily passage of about thirteen ounces of urine, of sp. gr. 1020 or higher. From May 17th to 23rd careful measurements showed 241½ ounces of fluid taken (by mouth and rectum), 127 ounces vomited, and 123 ounces of urine passed (sp. gr. 1012 to 1020), equal to 250 ounces. Some

¹ The formula is three drachms of chloride of sodium, eighteen grains of chlorate of potash, nine grains of phosphate of soda, and sixty grains of bicarbonate of soda, in three pints of distilled water.

urine was lost on the 22nd. The enemata were returned subsequently to the 20th, three or four motions being daily recorded; on previous days only one as a rule. 3. Four or five years ago I had two cases of pyloric obstruction in the Leeds Infirmary, in which visible peristaltic movements were extremely well marked and very readily obtainable. At that time I found, upon repeated trials, no trace of such visible movement in ordinary dilated stomachs, though slight occasional audible gurglings gave evidence that a little movement does occur, probably due to the intrinsic ganglia; the gastric branches or terminals of the pneumogastric nerves, both sensory and motor, being paralysed (from neuritis?). I have since been accustomed to rely upon the degree of peristaltic movement obtainable as a differentiating sign between obstructive and paralytic cases of dilatation of the stomach, and have had many opportunities of demonstrating the difference. In the present case of obstruction, however, increased peristalsis was not shown for the reasons above mentioned. 4. I did not propose pylorotomy; the operation has never, I believe, been successful in this country. About three years ago Mr. Jessop operated upon a patient who was under my care in the infirmary, but although the operation was in itself completely successful, and appeared to promise well, the patient sank on the next day. Jejunostomy or duodenostomy might have been applicable, but experience hardly yet warrants the belief that in such a case life would have been much prolonged; it might of course have been much shortened. Some years ago I attempted to pass a long specially made œsophagus bougie onward through the pylorus in a very thin patient, whose stomach was dilated and hypertrophied from probably simple or non-malignant stenosis of the pylorus. The attempt was not successful, and the patient declined any cutting operation. My colleague, Dr. Eddison, has since suggested that, the tube or bougie having been introduced into the stomach, the abdomen should then be opened and the tube guided and pushed through the pylorus without opening the stomach itself. I have tried this plan on the dead subject, and believe it could be accomplished on the living subject, if the resistance was not very great. 5. The absence of blood from the vomit and the motions, or any history of its occurrence, might perhaps have been more strictly relied upon to exclude ulceration and its results from the diagnosis. 6. Feeding by enema was maintained for eight weeks—March 31st to May 24th; but for eight days—April 7th to the 14th—there was no vomiting. Even after this time probably some food was at times absorbed from the stomach. The success of transfusion of a so-called normal saline solution to replace the lost water and salts of the blood was more permanent than in cholera, where there is a poison; or in cases of hæmorrhage and anæmia, where blood cells are also wanting. In this patient, the blood which escaped, after the transfusion, from a small artery, was of a remarkably good colour and consistence. It is probable that by intravenous injection of a saline solution, or a mixture of such a solution with blood, strength might be obtained to endure or to rally after an operation (of any kind) from which some exhausted patients could not otherwise recover.

Notices of Books.

A Text-book of Biology, comprising Vegetable and Animal Morphology and Physiology. By J. R. AINSWORTH DAVIS, B.A. With numerous Illustrations, Glossary, and Examination Questions. Pp. 462. London: Charles Griffin and Co. 1888.—As the title shows, this book is of an ambitious character, and aims at familiarising the student with the whole circle of biology, both animal and vegetable. There can be no question that the student of biology should commence his work by devoting some time to the careful observation of the simplest forms of organised matter. It is only in this way that he can learn the intimate connexion which exists between animals and plants, can recognise the difficulties that are experienced in drawing hard-and-fast lines separating one from the other kingdom, and can appreciate the gradual process of specialisation that is observable in passing from the lower to the higher forms. The ability of the writer of such a text-book as this is to be estimated

by the selection he makes from the immense mass of material at his disposal, the plants or animals he takes as types, and the importance of the facts in regard to their structures and functions he considers the student should be taught and made to comprehend. The plants selected by Mr. Davis have, we think, been judiciously chosen, and include the Yeast Plant, Bacteria, and White and Green Mould, amongst Fungi, to which one of the higher forms might have been added with advantage; *Protococcus*, *Pluvialis*, *Spirogyra*, *Fucus*, *Chara*, and *Nitella* amongst the Algæ; *Funaria* and *Polytrichum* amongst the Mosses; Bracken and Male Fern amongst the Ferns; *Pinus* amongst the Gymnogens, and various well-known and easily obtainable plants amongst the Angiosperms. In the animal kingdom the examples chosen are *Amoeba* and *Vorticella* amongst the Protozoa; *Hydra* as a type of the Cœlenterata; *Distoma* and *Lumbricus* amongst the Vermes; the Crayfish as a representative of Arthropoda; *Anodonta*, *Unio*, and *Helix*, of Mollusca; and amongst Vertebrata the Frog, Pigeon, and Rabbit, to which a *Coluber* might have been added. In each case—as, for example, in the case of the Crayfish—the external morphological characters are given in a highly compressed section, which is followed by a description of the digestive, respiratory, excretory, and reproductive organs, the muscular and nervous systems, and, finally, the physiology, including the development of the animal. Two good and original chapters are introduced on Comparative Vegetable and Comparative Animal Morphology and Physiology, in which the principal features of the several groups are succinctly given. Thus, in speaking of contrivances for securing cross fertilisation, Mr. Davis describes the cases of wind pollinated, insect pollinated, water, bird, and snail pollinated forms. Taking one of them, the insect pollinated, he remarks that “entomophilous flowers include the vast majority. They exhibit many peculiarities, the most important being irregularity, and other structural features, as well as the possession of colour (other than green), odour, and nectar. The last three features serve to attract insects; the others cause them to effect the purpose in view. The colours may attract insects generally or only special insects. Bees, for example, prefer blue, flies yellow or flesh colour; white flowers are often pollinated by night insects. The effect of colour is augmented in many cases by aggregation, as, for example, in the capitulum of the daisy.” He then proceeds to explain the structural peculiarities by which pollination is assisted, as in labiates, orchids, and papilionaceous flowers. To render the work more useful to students a very good index glossary is added, in compiling which the author was aided by Mr. Marshall. The work is illustrated very well by 158 woodcuts. Many of the examination questions at the London University are given at the end of the work. If thoroughly digested, we do not doubt that a student of this work would pass a very creditable examination on Biology.

Landmarks: Medical and Surgical. By LUTHER HOLDEN. Fourth Edition. London: J. & A. Churchill. 1888.—The new edition of this work is based upon the same lines as those which have preceded it, and there are comparatively few changes. The work is, however, improved and somewhat enlarged by the introduction of a few additional “landmarks.” These are chiefly indications for finding the principal nerve trunks in the various parts of the body, with directions as to the placing of the poles of the battery when galvanism is required. Amongst the nerves which are specially mentioned in this edition are those of the scalp, the seventh, the spinal accessory, phrenic, anterior crural, sciatic, popliteal, and median and ulnar. More special attention is drawn to the position of the carotid artery in the neck, whilst the point of commencement of the inferior vena cava is alluded to in the

landmarks of the abdomen. The anatomical peculiarities of suppuration under the tendon of the occipito-frontalis muscle are pointed out, and there are new paragraphs on the fontanelles, and their alteration under conditions of disease. The changes produced by tight lacing on the abdominal viscera &c. are brought forward. Indications for the placing of the incisions used in various operations are given with needful accuracy, except in the case of Syme's amputation at the ankle joint, where the plantar incision is said to terminate at the tip of the internal malleolus, instead of a "point exactly opposite its commencement" from the outer side—that is, about half an inch below and behind the tip of the malleolus. The variations as to extension of the pleura below the last rib might be more fully given in the indications for the incisions in lumbar nephrectomy. The diagram showing the relation of the thoracic viscera to the bony framework of the chest is retained, but no other diagrams are given, the author maintaining that the living model should be studied with the book, and the reader thus become practically acquainted with the normal feel and situation of parts. One who works in this way to learn his surgical anatomy not only does well in examinations, but gains that knowledge of the human body so essential to one who is about to enter the profession. The general character of this work, to which we have alluded in reviews of previous editions, is so well known that it is not now necessary to say more than that the book fully maintains its position in the front rank of those on the subject of which it treats.

The Bombay Materia Medica and their Therapeutics. By R. N. KHORY, M.D. BRUX., M.R.C.P., &c. Bombay: Printed at Ránin's Union Press. 1887.—This is a book to which we should be glad to extend every indulgence if only from the dread of discouraging native medical science in India, but, while making every allowance for the disadvantages under which the author has worked, we regret that we can accord the book only very qualified praise. It is a compilation from Persian, Urdu, and Sanscrit medical works, and is an attempt to popularise the use of native drugs. So far as it carries out this intention it is sufficiently laudable, but it is a matter for regret that Dr. Khory should appeal not only to medical students and practitioners, but also to the public at large. This, however, being the aim of the book, our remarks upon it are made upon the broader basis—the consideration of its probable influence for good or evil upon the general public. In its general arrangement it is true to its title, but at the end three appendices reduce it almost to the level of a book on domestic medicine. One appendix consists of an alphabetical classification of diseases, with numbers referring to the prescriptions given in the body of the work; another gives an alphabetical classification of drugs used as substitutes for other English drugs; and a third is an alphabetical classification of drugs used as specifics in certain diseases. It is difficult to gather the value assigned by the author to the term "specifics"; to judge from his employment of it, he uses the term in a sense which is new; thus the table includes "specifics" for heart disease, for fever, for liver diseases (*sic*), for apoplexy, and for cholera. It is to be hoped that the author has carefully considered the question of the substitution of native drugs for English drugs; he mentions substitutes for digitalis and quinine, although in European therapeutic work true substitutes are practically unknown. The printing and paper leave much to be desired.

Austrian Health Resorts, and the Bitter Waters of By W. FRASER RAE. Pp. 292. London: [illegible] and Hall. 1888.—This volume consists of a series of articles reprinted from *The Times* and the *Nineteenth Century*, but with considerable additions made as the result of revisiting several of the places. We called attention to the articles in *The Times* at the period of their publication.

The work is not intended as a guide to medical men in the selection of a health resort, and therefore, with the single exception of Roncegno, of the waters of which Mr. Rae could find no description in any English work, there is no information given respecting the chemical composition of any of the springs or the cases in which their use would, from a medical point of view, be advisable. Its purpose is rather to afford useful information to persons who may be recommended by their medical advisers to resort to any of them, or to those who may wish to visit them without any intention of taking a course of the waters. The book is very readable, and brings to notice a number of places which are practically unknown to the English, and which may be advantageously visited by holiday makers who are desirous of enjoying fine scenery and thorough change without finding themselves in the not very desirable position of being a unit in an English crowd at a foreign health resort. It will also be found an interesting book by stay-at-home travellers.

Modern Education, its Defects and Remedies; or, How to Cope with Foreign Competition. By JOHN GIBSON, M.A. Pp. 32. London: Cornish and Sons. 1888.—This brochure is intended as an aid to the solution of the difficult and important problem, "what to do with our sons." We are not prepared to endorse all the author says on the subject, but he clearly points out important defects in the present system of education, and especially during the earlier years of a boy's life. His remarks on the duties of parents in this respect, and on the importance of care in the selection of schools, preparatory and advanced, deserve the attentive consideration of all who have anything to do with the education of the rising generation. The necessity for an adequate knowledge of French and German by young men intended for a mercantile career is at last beginning to be better understood and appreciated in this country.

Sick Diet and Applications. By F. W. CORY. Pp. 8. Second Edition. London: Simpkin, Marshall, and Co. 1888.—This is intended as a pamphlet for every home, and is published at a penny. It contains a useful collection of instructions for making some of the more necessary articles of sick diet. It states clearly the quantities of the various ingredients required, and the time necessary for the cooking. The directions for making oatmeal porridge are very good, but the additional boiling for fifteen or twenty minutes should be imperative instead of permissive. The method of cooking eggs is on the principle of the old-fashioned "egg-coddler." We can recommend the pamphlet as containing good practical directions for the preparation of sick diets.

On the Treatment of Rupture of the Perineum. By GEORGE GRANVILLE BANTOCK, M.D., F.R.C.S. Ed. Second Edition. 1888.—The first edition of this little book appeared ten years ago. The details of the operation have been slightly modified by the author, and the matter somewhat rearranged, while the course of time has furnished additional cases.

The Asclepiad.—No. 19, Vol. V., contains the following articles: Methylene as an Anæsthetic; the Art of Embalming, including the latest methods, with three illustrations; Opuscula Practica; Lænnec and the Discovery of Mediate Auscultation by the Stethoscope; Some Original Observations in Physiological Therapeutics made on the Fresh-water Jellyfish or Medusa; Items from Contemporary Practice and Literature.

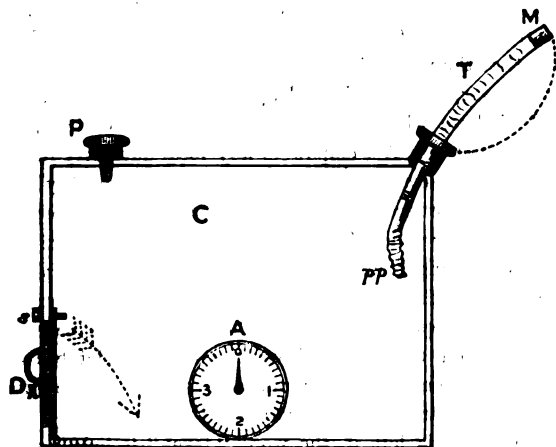
QUARANTINE.—The Board of Trade have received through the Secretary of State for Foreign Affairs information that quarantine has been imposed at Alexandria upon arrivals from Madras and Bombay. The Port of Dia is infected with cholera, and all the other ports of Portuguese India are suspected of the same disease.

New Inventions.

NEW PNEUMO-DYNAMOMETER AND SPIROMETER.

THE new instrument differs essentially from the "spirometer" in this particular: it affords a test of the power for expansion and contraction of the different sets of muscles which control the lungs. It is not sufficient for a speaker, a singer, or a performer on a wind instrument that the chest should contain much air; a smaller capacity united with a greater dynamic muscular power will prove superior to mere volume without power of compression. In sickness a greater power of compression will generally coincide with an improving condition of the patient. To measure that dynamic power and register its increase or diminution by means of precise figures, and to allow travelling patients to send such records to their physicians, is the aim of the instrument herein described.

A case (air-tight) contains an instrument like an aneroid barometer, the divisions of the dial being in the proportion of 1 in. to 90° of the circumference. This dial is visible through a glass. The case ought to contain at least 5000



C, Case (air-tight) containing 5000 cubic inches of air. A, Aneroid register. D, Trap-door opening inside; A, handle of trap-door; S, screw to fix trap-door. P, Plug. T, Tube. M, Mouthpiece. PP, Thin collapsible pipe, acting as a valve.

cubic inches. It is the precise figure adopted, but it may be increased. Air is blown into the case by means of a flexible but undilatable tube of a diameter of 6 lines all through, including the mouthpiece. The air contained in that tube must be reckoned as part of the 5000 cubic inches of the case. The tube screws on the box, and a thin collapsible pipe of indiarubber is tied on the end of it, which is inside the box, where it acts as a valve to prevent the egress of the air when compressed by blowing through the tube; a small screw acts as a plug to let the air out of the case after each test. By blowing through the tube after a first and deep inspiration until complete expiration has taken place, the air introduced in the case produces a pressure shown by the index on the dial, the position of which must have been registered beforehand. This first test gives the amount of air expired at the rate of 166 cubic inches of air for every inch of pressure indicated by the index on the dial—that is to say, by the displacement of it from its starting point; and 16½ inches for every tenth of an inch displacement of the index. By dividing the inch pressure into hundredths (a hundred divisions to ninety degrees), one gets for every ⅓ inch 1 cubic inch and ⅔ths (or about two-thirds) of an inch. This is only true for a case containing 5000 cubic inches. The general formula would be:

Additional volume of air equals volume contained in case divided by 30 (or addit. $V = \frac{V}{30}$) for every inch pressure.

By inch pressure is meant, as explained above, *barometrical inch pressure*. By blowing again, after this first test, until no more air can be introduced by any effort of the subject experimented upon, the hand moves on, until it stops at the maximum pressure indicative of the dynamic power of the muscles employed in the act of inspiration. When testing the lungs of a singer, a physician ought to test separately the volume and dynamic power of clavicular, costal, and abdominal breathing. To prevent a mixture of these, sitting on a hard chair, erect, holding firmly the lowest bars one can reach, will prevent clavicular breathing. A leather belt (non-elastic) around the lower ribs, tightened during expiration, will prevent costal breathing. And the same strapped around the waist—the body being bent a little forward if necessary, the legs drawn under the chair—will oppose abdominal breathing. A note of the strength of each of these, and of costal and abdominal breathing combined, will be a great assistance to all singers or speakers, who, knowing their weak parts, will strive to improve their deficient breathing. I conclude from my investigations that clavicular breathing ought not to be employed, as a rule, any more than breathing through the mouth; but there seems no doubt that it ought to be made a possible mode of breathing, since it is, after all, one of the three modes allowed for inflating the lungs, and, in dramatic effects, for professional people, or for pathologic, traumatic, or obstetric reasons, it may become a necessity.

E. SAYARY D'ODIARDI,

President of the General Society for the Welfare of the Blind.

PROSECUTION UNDER THE MEDICAL ACT.

AT the Cannock Petty Sessions, Sept. 24th, an unqualified and unregistered man, named P. F. O'Kelly, practising at Hednesford, and holding appointments to collieries, friendly societies, and other clubs, was summoned under the Medical Act for unlawfully pretending to be a surgeon.

For the prosecution, it was pointed out that they could bring hundreds of cases against the defendant in which the Act had been broken, but they would content themselves with one—the case of Thomas Newell, to whom the defendant gave a certificate, on which he styled himself surgeon. The defendant was enabled to maintain his position by keeping a qualified assistant as cover.

The Secretary to the Hednesford Colliery Sick and Accident Club said the certificate produced was on one of the forms belonging to the club, and was signed by O'Kelly in the capacity of surgeon to the club. He produced also a cheque, endorsed by O'Kelly, in payment of services rendered by him to the club; also his receipt for such medical attendance. He knew O'Kelly was unqualified.

Thomas Newell said he had been ill for twelve months; the certificate produced was given him by O'Kelly.

For the defence, it was urged that everybody knew O'Kelly was not a surgeon, and that when he put his name to the certificate he would not think of any deception, and would not think of crossing out the printed "surgeon."

Lord Hatherton, the presiding magistrate, said it would be a good thing if it were better known that such men as O'Kelly could not claim payment for their work. It was the unanimous opinion of the Bench that the case against O'Kelly was clearly proved. He would be fined £10 and costs.

THE CLOSURE OF SCHOOLS DURING EPIDEMICS.—At a general meeting of the Chester branch of the Church School Managers and Teachers, held in that town on Sept. 22nd, a report from the committee on closing schools during epidemics was considered. After considerable discussion it was resolved: "That a memorial be sent to the Committee of Council on Education praying them to take the subject into consideration, with a view of arranging an extra grant to meet the cases of schools which have suffered through their compulsory closing during epidemics."

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 29, 1888.

AT this season of the year attention is directed to the wants of London in regard to the isolation of infectious disease, and in a short period it will be possible to predict with some certainty whether one or another of these maladies will assume epidemic proportions.

The various hospital reports read at the meeting of the Metropolitan Asylums Board last Saturday show that as yet there is no indication of a demand for hospital accommodation for scarlet fever equal to that of last year. There is evidence of the usual autumnal increase of this disease, but the number of cases admitted during the preceding four weeks was less than one-half those admitted during the corresponding period of last year; so, also, the returns of the Registrar-General give evidence of a diminished prevalence. It must be admitted that death returns form no absolutely correct indication of the amount of provision the managers must make, and that other circumstances may affect this demand. It is, for instance, possible that the publicity given to the proceedings of the Board during last year may have aided, as Dr. TIDY points out, in creating an increased demand for isolation. It is, however, noteworthy that the cases admitted into the hospitals bear roughly the same proportion to the numbers of deaths registered as during last year, and the lower death-rate may therefore be regarded as warranting the expectation that fewer cases will seek admission into the hospitals. The actual demands for accommodation at the present time are not great. At the time of the meeting there were in the hospitals 786 cases of scarlet fever, 83 of enteric fever, and 1 of typhus fever; not one case of small-pox had been admitted during the previous month.

A further subject, and one of much public importance, also engaged the attention of the meeting. The question whether the managers of the Metropolitan Asylums Board should receive cases of diphtheria into their hospitals has again obtained publicity, as the result of certain observations made by the medical officer of health of St. Pancras at a recent inquest. His remarks appear to have wounded the susceptibilities of the managers, who have taken an early opportunity of defining, for the information of the public, their position in the matter. Before passing to a consideration of the question of the isolation of persons suffering from diphtheria, we may state that we fail to see any grounds on which the managers could take exception to Dr. SYKES's statements, which have been made in the public interest, and which will serve a useful purpose if they should lead to some better arrangement than now exists for the hospital treatment of persons suffering from this disease. The Metropolitan Asylums Board was created for the purpose of providing institutions for the reception of paupers suffering from fever and small-pox. But the word "fever" has been held to include only scarlet, typhus, enteric, and relapsing fevers; hence diphtheria was only exceptionally

received within their walls. The determination to exclude cases of this disease was not arrived at without inquiry as to the proper interpretation to be put upon the wording of Section 69 of the Metropolitan Poor Act of 1867, and the opinion of the President of the Royal College of Physicians was obtained by the Local Government Board as to whether the word "fever" could be properly held to include diphtheria. The President's opinion was that, inasmuch as small-pox was specially distinguished from fever, the latter word seemed "intended to include only fevers of a special type—those cases, that is to say, to which the word fever specially applied, as scarlet fever, typhus fever, typhoid fever." The Local Government Board had therefore decided that express legislation would be necessary for the purpose of justifying the Asylums Board in receiving cases of diphtheria.

It is obvious that there is room for more than one opinion on this subject. If instead of the President of the College of Physicians the Registrar-General had been asked to define the meaning of the word "fever," he would have interpreted it in a much narrower sense, for statistical purposes scarlet fever not being included within its scope. Seeing, then, that the intention of the Poor-law Act of 1867 is doubtful, it is not unreasonable for an officer of health to claim that the widest interpretation should be put upon the word "fever," and this indeed appears to have been in the mind of those who drafted the Poor-law Act of 1879, for Section 15 of this Act empowers any local authority in the metropolis to contract with the Metropolitan Asylums Board "for the reception and maintenance in any hospital belonging to or under the management of such Board of any persons suffering from any dangerous infectious disorder." It cannot be thought that the Legislature would authorise the Metropolitan Asylums Board to receive cases of diphtheria on the order of vestries and district boards, and refuse them the opportunity of according the same privilege to boards of guardians; yet this is the only conclusion which is left if the word "fever" is held not to include diphtheria.

Diphtheria is undoubtedly a dangerous infectious disorder, which should not be treated in the same ward with persons suffering from other ailments. General hospitals cannot properly be expected to do more than afford opportunity for the temporary treatment of such cases as are accidentally introduced, and should always be enabled to transfer these to an institution specially arranged for infectious disorders, and, further, the Metropolitan Asylums Board alone can adequately provide the accommodation which is necessary. The hospitals of this Board have now become available for all classes in the metropolis, and it is necessary that their usefulness as public health defences should not be limited by any obscurity as to the intention of an Act of Parliament; this, indeed, appears to be the view both of the Metropolitan Asylums and the Local Government Boards, and it remains for the latter to determine the course which must be taken to enable the managers better to meet metropolitan requirements. For our part, we believe that to hold that the word "fever" includes diphtheria would not be an unreasonable interpretation of the Act of 1867, especially in view of the wording of the Act of 1879, to which we have directed attention; the sense of the one may surely be interpreted by the meaning of the other.

The subject is one of pressing importance, and if it be still held that further legislation is necessary, we trust that this may be effected without loss of time.

A subject concerning the management of these institutions was also discussed at the last meeting of the Clerkenwell vestry, held on Sept. 22nd, when a member of that body complained that a child with scarlet fever, which had been removed first to Homerton and then to Winchmore-hill, had, shortly after her return home, given rise to another case in her family. He urged that the fact that the child was not sent direct to her home from Winchmore-hill, but was in the first instance brought back to Homerton, was responsible for her bringing home infection. Dr. GRIFFITHS, medical officer of health, gave instances of other cases in which this procedure had apparently been attended with unfortunate results. It is not obvious why children should not proceed to their homes direct from Winchmore-hill, but there is no reason to doubt that at Homerton they are kept under conditions which do not expose them to infection. It must, moreover, be remembered that the return of a child to its home may not unlikely be the occasion for the reproduction of clothing previously worn, and that a circumstance of this sort may serve as the origin of re-infection of the family.

THE return from the annual holiday is apt to be a somewhat trying time to all busy workers, and in a special degree to the medical practitioner. The resumption of hard work after luxurious idleness is not always agreeable, nor can the stern routine of daily toil be by everyone cheerfully re-entered upon after the pleasant variety and distractions of travel. More than other men, the medical practitioner returns to find that much has happened in his absence over which he would like to have exercised his usual oversight, and he is at times tempted, more than his fellows, to question whether he has not bought his holiday too dearly. While this conclusion would no doubt be generally erroneous, the moment of return seems opportune for inquiring how far his holiday has been planned and carried out so as to secure from it the maximum of advantage. We must judge of it, as of other things, by its effects; and no amount of theoretical reasoning upon the advantages of rest and change can be half so convincing as practical proof and experience of their value. If the holiday-maker returns home jaded and fatigued after much railway travelling and constant excitement, his store of vitality rather reduced than augmented, he will soon awake to the disagreeable consciousness that his time and money have been worse than wasted. If, after a year of sedentary occupation, with a weak muscular system and a flabby heart, he hurries off to the Swiss valleys and spends his holiday in arduous mountaineering, it will be small matter for wonder if he returns to work, not refreshed and reinvigorated, but with all his physical powers reduced by the abnormal and injudicious output of energy. These are considerations the practical importance of which can only be forecast by the medical man, but any intelligent person may after actual trial come to a reasonable conclusion regarding their bearing upon himself and his own personal experience.

We would therefore urge the very obvious but frequently neglected duty of taking stock, as it were, of our annual

holiday, balancing profit and loss (to continue the metaphor), and in the end arriving at conclusions which may on future occasions be turned to wise account. One of the most frequent errors has already been glanced at—viz., the mischief of attempting too much, especially in the way of physical effort, or, in popular phrase, the unwisdom of "making a toil of a pleasure." This is a mistake even for the young and vigorous, but it is doubly so for those whose years are advancing, or who have any weak vital organ. The opposite error may easily be made, and the desire to secure a restful holiday may end in obtaining one that is intolerably dull. Children can spend week after week at the seaside, bathing, boating, roaming over the sands, and collecting hosts of heterogeneous curiosities; but such a holiday would almost infallibly prove irksome to the professional man, whose mind could not by these simple means succeed in finding the necessary release from its usual channels of thought. It is from this point of view that we see the wisdom of our continental neighbours in developing their holiday resorts with all the accessories of art, and combining so many things to catch the eye and charm the ear as helps to a rest that will not degenerate into *ennui*. Music is one of the prime aids to this end, and the well-appointed band should be a necessary element at every popular resort.

It will be a satisfaction to the holiday-maker if, after the pleasures of the moment are over, he can reflect that in his hours of idleness he has added to his stores of information, and acquired experience that may be pleasurable and profitable to him hereafter. Hence it is in most cases desirable that he should not year after year make the same stereotyped trip to his favourite watering-place, or follow the beaten round of the well-known continental tour. Variety is both more recreative physically and productive of more intellectual interest and advantage. Happily, it is easily obtained. Our coasts swarm with well-appointed watering-places, and hardly a year passes that some new region is not opened up abroad for those who are weary of the trite and familiar haunts. Norway and Spain have in late years become accessible through improvements in railway, steamer, and hotel; while Morocco, Algeria, and the Canary Islands have all begun to offer great attractions to those who wish to travel after the usual summer and autumn season has passed by. The traveller should rely as little as possible on books, and as much as possible on observation and personal contact with men and things. The holiday is no time for study, but it is the time *par excellence* for learning many things that the eye alone can teach.

The annual rest will have afforded one of its highest ends if it be the means of starting the mind upon some new and fruitful line of thought and inquiry. Many a distinguished biologist can trace his first genuine taste for botany or zoology to some observations upon plants or animals casually made during the hours of weakness and enforced rest. The world teems with wonders, but the sense requires training and directing before it becomes conscious of them. These wonders may well engage our attention when the daily strain is withdrawn, and our minds are receptive to influences to which at other times the cares of the day almost inevitably render us oblivious.

THE importance of an exhaustive study of pharmacology was, in our columns, recently impressed upon students at the

commencement of their medical career; but the relationship between medicine and pharmacy, between doctors and chemists, has been the subject of endless letters in the lay papers during the vacation months, and it was re-echoed in sarcastic terms in Mr. BENDER's presidential address at the Pharmaceutical Conference. We do not propose to wander outside our province, censuring in dictatorial terms those given to counter-prescribing, but many medical men are too apt to consider that details concerning drugs are "shoppy" and unprofessional, and to ignore, or affect to ignore, the progress of pharmacy. It scarcely needed Mr. BENDER's address to demonstrate the vast strides which pharmacy has recently been making, or to show the attention now devoted to the scientific training of the rising generation of pharmacists. The medical profession cannot afford to disregard these facts, or to fail to profit by the judicious employment of the results of pharmaceutical research. The swing of the pendulum has carried us from the polypharmacy of the past to the opposite extreme. In place of the long list of drugs which formerly so often composed a prescription, there is a tendency to render prescriptions as simple as possible, to employ a single active remedy of established reputation and well-defined action. Doubtless this method is the more scientific and the more satisfactory, but in the hands of young prescribers we believe that this simplicity is frequently fraught with danger. The remedy may be directed merely to be mixed with or dissolved in water, when perhaps the relative absence of taste and colour may lead to scepticism and the consumption of an overdose; or, on the other hand, the taste may be so nauseous or the appearance so repellant that the mixture is left untouched. Facility in the avoidance of mawkish mixtures or nauseous compounds can only be attained by experience. Those who, by the conditions of their practice, are practically forced to dispense their own drugs speedily become acquainted with many devices which escape the observation of other members of the profession. They learn to modify many of their prescriptions which appeared sufficiently promising on paper.

We do not wish to be understood to urge that it is necessary for a medical man to be practically conversant with all the difficulties connected with the manufacture and preparation of the substances in the Pharmacopœia. A general knowledge of the various modes of drying and powdering, of crystallisation, of sublimation, of filtration or percolation, may be regarded as of comparatively little importance to the busy medical man, even though these processes supply the drugs he employs. But as it is desirable that a student should be practically acquainted with dispensing and prescribing, so it is necessary that medical men should keep fully abreast of the valuable hints to be derived from consideration of the work of the practical pharmacist. Many of the new remedies suggested from time to time are possessed of strong and disagreeable odours and tastes. While the pharmacologist is busily engaged in tracing the possible scope of application of these substances, the pharmacist is no less actively employed in devising means whereby the new drugs may be rendered as palatable as possible, or forms in which they can be introduced into the system with greater facility. We believe that in the medical profession the work of the pharmacist is not sufficiently studied and appreciated, and that many

fall into disrepute from an insufficient consideration of the numerous suggestions for aiding their administration and toleration. Members of the general public are not slow to avail themselves of the proprietary remedies, which so often combine the advantages of being agreeable in taste, smell, and appearance. It is our fault if, by lack of attention, the drugs we prescribe are one whit more nauseous and repellant.

THE development and functions of the tonsils have scarcely received the attention to which they are justly entitled. BENNETT, DALTON, M'KENDRICK, CARPENTER, FOSTER, HERMANN, MUNK, BEAUNIS, WUNDT, and FUNKE do not condescend to notice them in their several works on Physiology at all, and VALENTIN and RANKE very briefly, apparently because they are not important enough to have a separate section to themselves, whilst it is not clear under what head they should be described. FLINT in his excellent text-book observes that they are an aggregation of from ten to twenty compound follicular glands, held together by fibrous tissue, and that they secrete a greyish viscid mucus, containing a number of leucocytes and desquamated epithelial scales. LANDOIS, repeating the above statements, adds that large lymph spaces communicating with lymphatics occur in the neighbourhood of the tonsils, though no direct communication between the spaces in the follicles and the lymph vessels outside has been shown to exist; and further, on the authority of STÖHR, that an enormous number of leucocytes wander out of the tonsils. In regard to their development, KÖLLIKER states that they appear in the fourth month of intra-uterine life in the human embryo in the form of a little fissure on each side, on a line with or above the opening of the Eustachian tube. In the fifth month each tonsil is a flat sac with a slit-like opening. The outer wall is thickened and contains numerous leucocytes, which are not, however, contained in separate follicles. At a later period the follicles are formed by the growth of connective-tissue septa. The whole subject of the growth and development of the tonsils has just been carefully studied by RETTERER, who gives the results of his researches in the September number of POUCHET'S *Journal de l'Anatomie*. RETTERER'S statements are to the effect that the tissue elements of the tonsils proceed both from the epiblast and from the mesoblast, the former supplying the cellular elements, the latter the connective-tissue septa, the bloodvessels, and probably also the lymphatics; whilst in most glands the basilar layer of the epithelium forms the whole of the involution; in the tonsils, the whole thickness of the epithelial investment proliferates. In most glands, again, the primitive invagination remains as the excretory canal, but in the case of the tonsils the primitive involutions form the crypts or diverticula lined by a layer of pavement epithelium. Another curious point is that the tonsils are homologous with the Bursa Fabricii of birds, both as to their origin, development, and structure. During the greater part of their existence the epithelial elements of the tonsils preserve the general form and characters of the basilar cells of the epithelium, but towards the close of life they disappear by fatty degeneration, and alveoli make their appearance. In the adult the lymphatic system occupies the whole thickness of each lobule; it forms a network of canals lined with endothelium. The walls of these lymphatics are everywhere perfectly closed, and do

not open into the connective-tissue reticulum either by stomata or by open extremities. The memoir is accompanied by many well-executed drawings of the tonsillar region of the horse, pig, dolphin, cat, dog, rabbit, and other animals, as well as of man.

It would be difficult for Sir JAMES PAGET to make even a short speech without saying something of importance. And even if he said nothing very new, he could scarcely fail to say it in that characteristic way which would command almost as much interest as if he had said a new thing. He has been making a speech at the opening of a new hospital at Yarmouth, a locality evidently sacred to him from early and unalterable associations. It is not the least of the notes of a great man that he turns to the home of his earliest associations with a reverence not diminished by fame or the wider environment of the metropolis.

"Fool that I was, I thought Imperial Rome
Like Mantua."

And yet Sir JAMES'S estimate of Yarmouth is, if not the same as his estimate of London, founded on the same principles. The capable surgeons and the men of character of Yarmouth and Norwich figure just as much and as honourably in his mind as the great surgeons of the capital, amongst whom he has stood so conspicuously for a generation and more, and who have yielded their respect to him so richly. It is a lesson for the younger men who are coming into the profession and getting their first and perhaps their only education from provincial teachers to see that Sir JAMES PAGET reverts with reverence, after fifty-eight years, to Yarmouth and Norwich; to the school of botany and art maintained by Yarmouth and Norwich, to which HOOKER and LINDLEY belonged; and especially to his old heroes in surgery—MARTINEAU, CROSSE, DALRYMPLE,—who ranked as the best surgeons in the kingdom, and whose representation was well maintained at the present time by their old friend Mr. CADGE. If there was no monopoly in medical art then, still less is there now, when every great provincial town has its highly careful and educated practitioners, who, in spite of facilities for locomotion undreamt of in earlier days, are equal to any difficulty in diagnosis, or almost any refinement of surgery.

Sir JAMES PAGET'S chief theme was "Hospitals," and it is well to have his opinion of them in his own words, which we report elsewhere. We live in an age which is nothing if it is not critical. Even hospitals have had to run the gauntlet of a sharp criticism; and even persons whose benevolence is beyond suspicion have come to criticise hospitals. Sir JAMES PAGET does not even suggest that they are abused. He probably has not seen in late years, of a morning, the out-patient and casualty department of St. Bartholomew's, or scanned the patients with the eye-glass of an officer of the Charity Organisation Society, or of one of those medical critics who say that they are disposed of at the rate of one a minute. We should have been grateful to him if he had glanced at this aspect of the hospital question, and told us whether it was in any way essential in medical education. But we attribute small blame to him that he did not. These departments are not the essence of hospitals; they are rather its excrescences, which scarcely existed, or were only in embryo, in Sir JAMES PAGET'S

Yarmouth days, or perhaps even in his early Bartholomew ones. Hospitals, in spite of these, are, as he said, real charities. And very highly does he appraise them. Their accommodation, their skilled medical advice, especially their resident medical officers and their trained nursing, are the elements in their value, and constitute, in his opinion, advantages which are beyond the reach of persons with much less than £2000 a year. It is a high estimate; and provided such service is reserved for fit cases, where poverty, and difficulty, and pain combine to do their worst on frail man, it is worthy of all the praise that Sir JAMES PAGET bestows on it, and constitutes, as he says, a true charity. If this be not so, there is no such thing, and men may give themselves up to selfishness. The very interest of the rich requires it to be maintained, as well as the interest of the poor and the medical student. The inequalities of society have some redress here, where the whole skill of a hospital can be gathered to debate the diagnosis and treatment of a costermonger. Let us not grudge this advantage to the poor. We have said nothing of the advantage to medical education. Perhaps medical teachers, in their eager zeal and competition, slightly overlook the risk of doing harm by hospital charity, and in so doing accentuate the feeling of some that hospitals are inimical to the profession. This is an error so clumsy as to be unpardonable. Medical educationists should be the first to protect hospitals from all inferior and objectionable uses, and reserve them for those cases which demand at once the deepest pity and the highest skill. So reserved, they constitute the most impregnable and Christian form of charity, and deserve the eulogy bestowed on them by Sir JAMES PAGET.

Annotations.

"Ne quid nimis."

ENGLISH MEDICAL MEN IN SWITZERLAND AND ENGLISH VISITORS.

THE letter of "L. L. D." in *The Times* complaining that English visitors in Switzerland cannot have English medical men who do not possess Swiss diplomas to attend them will do good. But for the circumstantial details given, one would think such a state of matters incredible in an enlightened and friendly country, especially one so enriched by English travellers as Switzerland. A lady having sustained a slight injury to her eye, her husband asked the hotel keeper to send to an English physician whom he knew, and who was residing in the same place in the Canton de Vaud, where they were staying. The hotel keeper raised every obstacle, declined to send the message, and said the physician in question could not act, not having a Swiss diploma. Thereupon the husband sent direct for the physician, who kindly came and did what was immediately necessary. But he declined a fee, and said it was no use prescribing, as the local chemist would be committing a misdemeanour in making it up. This is monstrous on the part of any country, and especially one related to us as Switzerland is. It has been suggested that the Medical Council should remonstrate. But it is a case for the serious remonstrance of the Government. Our fellow citizens visit Switzerland in thousands, and the very least that Switzerland can do is to allow the subjects of Queen Victoria resident in Switzerland to have medical men whose competency is such as to satisfy the demands of

English law. Our police authorities would never think of interfering with Swiss doctors attending their own countrymen in England, and our law is already such that even Swiss diplomas might obtain recognition under certain conditions, without the holders having to submit to an English examination. But the English grievance here is urgent and serious, and we cannot doubt that Lord Salisbury will see it rectified.

THE HEALTH OF MILAN.

THIS great *entrepôt* of travel between Northern Europe and the South-east is now free—as its Syndic, the Commendatore Negri, assures us—from the typhoid and small-pox with which it was so sharply visited last summer. We are glad of the announcement, and we hasten to record it on such eminent authority, only regretting that the Commendatore's courteous letter is too long and too detailed for insertion in our columns. Between July 7th, when we drew attention to the visitation, and Sept. 7th, the date of the Syndic's letter, the municipality have not been idle, and, thanks to the full and candid discussion of the situation at the extraordinary meetings of the Communal Council on the 11th and 12th of July, the well-advised measures adopted have had their legitimate reward in the sanitary rehabilitation of Milan. For the suggestion of these the chief credit is due to Dr. de Cristoforis, an accomplished hygienist and philanthropic citizen, of whom the Milanese are justly proud; and the clearness with which, at the extraordinary meetings referred to, he traced the typhoid, which was at its worst near the railway station, to the pollution of the wells from the earth disturbance occasioned by the recent works, and the cogency with which he proved that the Rotonda or house of isolation for variolous cases was "per sè stesso un' elemento di infezione, come appare da un' accurata statistica" (by itself a means of infection, as is apparent from accurate statistics), put his brother councillors on their mettle and the health officers on the alert with the gratifying results, which have just been tabulated and communicated to us by the chief magistrate of the city. At the same time it would be doing Dr. de Cristoforis and his colleagues injustice to suppose that their remedial measures—successful for the time—are anything more than an instalment or earnest of what is expected from them. In population and industrial life Milan must soon outgrow the sanitary regimen temporarily provided for her. Vaccination, for one thing, must not be the haphazard institution it has hitherto proved, and Dr. de Cristoforis, like all Italian hygienists, looks eagerly forward for a State-provided system, which, under the Bertani Code, now awaiting the reassembling of Parliament, will put Italy on the same prophylactic footing with other powers of Europe. Even under a perfect system of vaccination and revaccination the need for isolation houses for casual outbreaks will never be superseded, and in the lazaretto now so tardily advancing to completion outside her gates Milan will have a hospital free from the defects which Dr. de Cristoforis and the majority of her physicians find in the Rotonda. Again, in the matter of drinking water, the supply must come, not as at present from subsoil wells, but by an aqueduct from the neighbouring Alps, in accordance with one or other of the schemes which have been for some time before the municipality. To a foreigner it seems strange that Milan—the Manchester or Birmingham of Italy—should be content to sink wells in her flat plain and draw her drinking water from sources which, as the recent typhoid explosion showed, may be any day polluted by the movement of the soil, while her far poorer sister, Florence, has imitated Rome, and now enjoys a pure and abundant supply from the surrounding hills. It may be, however, that the magnitude of the undertaking, and the wish that, once completed, it should be final, explain its otherwise unaccount-

able postponement; certainly the correspondence columns of Milan's leading journal, the *Perseveranza*, attest the profound interest the project has for her physicians, her engineers, and publicists of every kind. But we have such faith in the energy and intelligence of the city of Borromeo and Rasori that we hope soon to be able to congratulate her on a prophylactic system, and, above all, on an aqueduct which her lately deceased son, Bertani, would be proud to own as a better monument to him than even the masterpiece of Vela.

THE ANIMALS' INSTITUTE.

THE support of public opinion is asked for a novel extension of the hospital system, namely, an establishment for the relief of suffering among domestic animals. This may appear at first sight a somewhat curious effort of philanthropy. In view of the fact that there is already in existence a numerous and competent body of practitioners versed in veterinary medicine, and furnished with necessary appliances, the new project is at first sight suggestive of a too sentimental solicitude. The mind is apt to recall and linger over such seeming analogies as those presented by the history of Egyptian animal worship, and to harbour a doubt lest the claims of the suffering beast might sometimes, through an excess of zeal, be placed almost on the human level. The plan and practice of the Animals' Institute, it is to be hoped, will not justify a suspicion so uncomplimentary to the judgment of its promoters. It is further desirable that here, as in the case of the superior human being, the hospital will not be allowed to serve the purposes of a privileged minority of domestic pets or well-to-do cattle, but will be worked as a genuine charity in the interest of "the poor." Thus managed, it will not only best fulfil its proper purpose, but, in some cases at least, will even confer a reflected security on the members of the genus *homo*, since various diseases which are communicable to man are most prone to arise in animals exhausted by overwork or privation, the poor of the lower creation.

HOT AIR INHALATIONS IN PHTHISIS.

TWO German observers, or, to speak more correctly, two observers in Germany, have, independently of one another, been engaged in investigations on the bactericidal property of heated dry air, and on the methods of utilising this property for the practical treatment of phthisical patients. Dr. Weigert, who appears to be an American living in Berlin, finding that tubercle bacilli outside the body die at a temperature of 41° C., and are adversely affected by one of 38°, had constructed an apparatus for the inhalation of heated air, and commenced to make trials on phthisical patients in the early stage recommended to him by other medical men, he himself not being in practice. At first a temperature of from 40° to 60° C. was employed, the air for inhalation being quite dry. This temperature was gradually raised as high as 80° C. The patients bore this hot dry air exceedingly well, and continued to inhale it for three or four hours a day during a month, the only unpleasant effects produced being hyperæmia and dryness of the mucous membrane. The general effects are represented as having been remarkable, patients who had been falling away picking up strength and becoming quite robust, the physical examination showing at the same time that the dulness and râles had perceptibly decreased. The bacilli in the sputum, which had been very numerous, rapidly diminished in number, and finally disappeared altogether. These observations were confirmed by several other medical men. Dr. Halter, of Lengerich, Westphalia, seems to have gone even further than Dr. Weigert, he having himself inhaled, and caused patients also to inhale, dry air heated to 190° C., with satisfactory results.

MURDER-CULTURE BY THE PICTORIAL ART.

No fact is more patent to science than the direct effect of influences exerted through the medium of the senses upon the brain—that particular part of the organism whose functioning we call “mind.” Darwin, Ruskin, and all the great students of development have laboured to bring this fact within the cognisance of the general thinking public; that they have failed is only too painfully evidenced by the persistence and surprising ingenuity of the practice of cultivating homicidal propensities, and collaterally murder, by a refined use of the art of mural decoration. While we empower the police to put down with a strong hand the exhibition in shop windows, and the censor of stage plays and spectacles to interdict the parade in theatres, of pictures and scenes of an “immoral” character, because it is recognised that these have a tendency to corrupt the mind of youth—and age, too,—nothing whatever is done to restrain the daily increasing evil of pictorial placards displayed on every hoarding, and of highly wrought scenes produced at nearly all the theatres, which not only direct the thoughts, but actively stir the passions, of the people in such way as to familiarise the average mind with murder in all its forms, and to break down that protective sense of “horror” which nature has given us, with the express purpose, doubtless, of opposing an obstacle to the evil influence of the exemplification of homicide. It cannot be disguised that even the most sensitive nature is to some extent brutalised by the display of these pictures. We are none of us as shocked at the spectacle of a knife driven into the chest of a young woman, and do not recoil as violently from the idea of this form of murder as before the display on all sides of an elaborate, nearly life-size, picture of the deed. Nor do two men grappling together and stabbing each other, or one man shooting another with a revolver, strike us as presenting spectacles of such hideous enormity as they would have done had we not been familiarised with these scenes by impressive placards staring us in the face at every turn. It does seem, strange—passing strange—that this murder-culture by the educational use of the pictorial art has not been checked by public authority. We have no wish to make wild affirmations, but knowing what we do, as observers of development, we can have no hesitation in saying that the increasing frequency of horribly brutal outrages is by no means unaccountable. The viciously inclined are, in a sense, always weak-minded—that is to say, they are especially susceptible of influences moving them in the direction their passions incline them to take; and when the mind (or brain) is impressed through the senses, and particularly the sense of sight, in such manner as to produce mental pictures, either in waking thought or dreams, of homicide, the impulsive organism is, as it were, prepared for the performance of the deeds which form the subjects of the consciousness. We are, of course, writing technically, but the facts are indisputable, and we trust they will be sufficiently plain. It is high time that this ingenious and persistent murder-culture should cease.

A PHILANTHROPIC PROPOSAL.

THE old saying that “one-half of the world does not know how the other half lives” is to-day as true and as pathetically fresh as when it was first uttered. For facts in support of its truth we have not far to seek. It will suffice for the present purpose to mention but one of these. The pitiable, destitute condition of the unemployed labourers who assemble daily at the gates of the London dockyards is graphically described in the pages of a contemporary. Beggared, starving, and exposed to all weathers, shoeless and ragged, yet patient in their hard lot and eager with an almost inevitable selfishness for the work which only a few

can obtain, it needs no title to describe their picture of forgotten poverty. It is, of course, impossible by any communistic measure to meet and permanently remove the difficulties of their position, but something can at least be done towards relieving the tension of present need, and the following suggestion must commend itself as one of practical value in dealing with the subject. Mr. Moses Davis, of 41, Upper East Smithfield, has expressed his willingness to co-operate with others in providing a suitable shelter near the dock-gates for the waiting unemployed, where bread and coffee might be had at the cost of a penny. He suggests, also, that the dock officials, in order to prevent the unseemly hustling which now prevails and the better to select their workmen, should keep a list of applicants, and refer to it when vacancies occur to be filled up. We cannot do better than commend these timely and eminently simple proposals to any who may have the means of lending to Mr. Davis a helping hand in his deserving work.

THE MEAN COMPOSITION OF NORMAL URINE.

MM. YVON and BERLIOZ have published (*Rev. de Méd.*, Sept.) a series of tables of the analysis of normal urine. Their observations were very numerous, and made on healthy adults, male and female. Their results are contrasted with those of other authors, and in each case they give the maxima and minima, as well as the means. The latter are summarised thus:—

	Male.	Female.
Volume (cub. centim.)	1360.0	1100.0
Density (sp. gr.)	1022.5	1021.5
Urea (in grms.) per litre	21.5	19.0
“ “ per 24 hours	26.5	20.5
Uric acid (in grms.) per litre	0.6	0.55
“ “ per 24 hours	0.6	0.57
Phosphoric acid (in grms.) per litre	2.5	2.4
“ “ per 24 hours	3.2	2.6

Thus, with the exception of uric acid, the amounts are higher on each head among males than among females; but with uric acid the quantities eliminated are almost precisely the same for the two sexes. MM. Yvon and Berlioz desire also to correct, as resulting from these observations, the proportionate quantities of urea and uric acid given in their *Manual of Urinary Analysis*, which should be as 40:1 instead of 30:1; and of urea and phosphoric acid, which should be as 8:1 instead of 10:1.

REGISTRARS AND MEDICAL PRACTITIONERS.

IN order to secure the reference to the coroner of all deaths directly or indirectly due to violence, of all sudden deaths of which the cause is not certified by a registered medical practitioner, and of all deaths “attended by suspicious circumstances,” it is impossible to avoid leaving some discretion to the registrar of births and deaths; for in the interest of public safety it is obviously better that too many rather than too few deaths should be brought to the notice of the coroner, with whom alone rests the responsibility of deciding upon the necessity for holding an inquest. Under these circumstances, it is not surprising that friction occasionally arises between registrars and medical practitioners, who are sometimes apt to resent the action of the registrar, and to forget that this official is bound by strict instructions which leave him the least possible scope for the exercise of discretion, or it may be of indiscretion. It appears from the local press that a medical practitioner in Oldham recently took exception to the action of a registrar in reporting to the coroner the case of a quarryman, aged forty-two years, certified by such practitioner to have died from “exhaustion, seven days.” The registrar, on receiving this certificate, and hearing from the sister of the deceased that he had been drinking heavily for some weeks, declined to register the death without further

information, which the certifying practitioner refused to give. While fully sympathising with the difficult position in which a medical practitioner is placed in such a case, we cannot agree that the practitioner in this case acted wisely, by simply stating that the death resulted from "exhaustion." Neither can we see how the local registrar could fail to report such a case to the coroner without deliberately neglecting his implicit instruction to report all cases "attended by suspicious circumstances." There are several ways of describing the cause of a death from intemperance which would not offend the relations of a deceased patient, and yet would be perfectly intelligible to the Registrar-General for classification purposes. It would appear that the practitioner in question defends his certificate on the ground that the term is approved by the Nomenclature of Diseases issued by the College of Physicians. On the strength of this assertion "exhaustion" might be returned as the cause of more than half the deaths from all causes registered in England and Wales, or any other country.

EFFECT OF COFFEE ON THE URINE.

DR. DUMONT, of Louvain, has undertaken a series of researches on the effect of coffee drinking on the urine, from which it appears that, though the diurnal quantity of urine is not seriously interfered with, the composition undergoes a very decided change. Dr. Dumont kept the subjects of his researches for some days on ordinary diet, the constituents of which were determined. During part of the time only was coffee added; the quantity being three cups—corresponding to about two ounces of roasted coffee—per diem. By regular and careful analyses of the urine, it was found that during the days when coffee was taken the urea passed was increased by about seventy-five grains. The effect on the urea was produced immediately the coffee was commenced, and as soon as it was omitted the quantity of urea returned to that which it had exhibited previously.

POISONING BY MUSSELS.

TOWARDS the end of August three very remarkable cases of poisoning by mussels occurred at Liverpool, ending fatally in one instance. Although we have received a very considerable number of letters on this subject, and although numerous comments and suggestions have appeared in the lay press, we have refrained from expressing any opinion upon the scanty data furnished by the report of the inquest, waiting an opportunity of supplying our readers with a fuller scientific account of the symptoms presented. Mr. Permewan's report, which we published last week, shows that in the three cases which came under his care there was marked absence of local irritative symptoms; in the fatal case, unconsciousness was complete from the time when the man was brought under observation, a few hours after having eaten a quantity of uncooked mussels, until his death nine hours later. All voluntary muscles were paralysed, and reflex actions in the conjunctivæ and the pharynx were absent. Owing to the paralysis of the respiratory muscles, artificial respiration was maintained the whole time the patient was under treatment. In the other two men nervous symptoms also predominated, giddiness, prostration, anaesthesia, and some loss of muscular power being the most prominent symptoms. In the correspondence which followed the brief report of the inquest, numerous suggestions were offered for "musselling" and its prevention, but none appear to apply to these cases. The symptoms do not correspond with those which ordinarily follow poisoning by copper, and the mussels appear to have been quite fresh, although poisonous properties have frequently been attributed to the ingestion of dead mussels in which putrefactive changes have commenced. Upon the whole,

although the above theories may account for some cases, we are forced to admit that they are not the sole causes. In Mr. Permewan's cases the symptoms point rather to the influence of a special toxic agent, which in its effects bears a striking resemblance to the reported influence of various ptomaines. A letter which we publish this week shows that under similar conditions Brieger succeeded in isolating a ptomaine, which seemed to develop when ordinary mussels were placed in stagnant water. Meanwhile it is worth remembering that in the fatal case the mussels were uncooked, and that in the other two cases which ended in recovery only a few had been eaten in the raw condition.

PUBLIC HEALTH IN SOUTH AUSTRALIA.

THE Central Board of Health for South Australia maintain a systematic inspection of towns and sanitary districts under the jurisdiction of local boards, which now number 171, 132 new boards having been created under the provisions of the District Councils Act, 1887. The reports of the inspectors deal mainly with ordinary sanitary defects, which are often due to lack of efficient water supply or of means of drainage and sewerage, and to the want of a proper system for the disposal of excrement and refuse, and of adequate supervision of butchers' and farm and dairy premises. In most instances, the central interference consists in supplying details as to the defects, together with a request that measures may be taken to remedy them. The Board is advised daily as to deaths from contagious and infectious diseases, and, when needed, action is taken on the information obtained. Small-pox is very stringently dealt with by means of isolation and quarantine, and, in view of its occasional importation by means of Chinese sailing from Hong Kong, an effort was made to induce the Government of that colony to pass regulations compelling ships leaving their ports with immigrants for Australia to carry a duly qualified medical practitioner, and it was further sought to secure the vaccination of all embarking. The reply received was regarded as unsatisfactory, and restrictive measures against Chinese ports were in consequence maintained.

PLURALITIES IN THE PROFESSION.

PLURALITIES in the Church have been wellnigh abolished by the action of law. They still survive in the medical profession. There has been a sharp discussion on the subject by the trustees of the Manchester Infirmary, and the following resolution has been passed almost unanimously: "That no assistant physician or surgeon appointed after Sept. 17th, 1888, shall, after becoming a physician or surgeon, hold any other hospital appointment." The italics are ours. The framers of the resolution were tender in regard to the interests of the junior members of the staff, and framed it so as to exclude them from its operation. The resolution was justified on the ground of the increasing gravity of the cases, and that the Board was bound to take steps to ensure that the patients, as hitherto, had the very able services of the honorary staff, which could not be done if those gentlemen held other hospital appointments. The motion was strongly opposed by Mr. James Hardie in an able speech. He did not see why medical officers should be required to devote their entire spare time to the work of the infirmary. If the cases received careful and due attention, he did not see on what ground a lay body or any other body should interfere with their time outside. So long as there was no complaint, such interference was uncalled for. Mr. Hardie speaks with a strong grasp of the argument, and of the principles on which medical men filling honorary offices should claim liberty of action. It is surely very unusual to bind honorary officers in this way. Even paid officers of institutions are allowed liberty to do

external work which does not interfere with the discharge of the duties for which they are paid. We cannot say that Mr. Hardie's arguments have been met. There may be a feeling that work is not done, and yet there may be no actual complaint. Mr. Hardie speaks as one who does not fear that any such complaint can be made against him. We are not defenders of wholesale pluralism. There is evil in it. A man may have so many duties that he cannot do them all well. It is hard, too, on other members of the profession who feel equal to the duties, and who are highly competent to discharge them. Our higher medical education is having the effect of multiplying greatly the number of men who are equal to the higher branches of practice, and who naturally look for honorary appointments; and when a few men monopolise many appointments it is apt to hinder progress and a healthy difference and rivalry. But it would be monstrous to lay down an iron rule, and say that an eminently deserving man shall not be free to serve one institution honorarily because he serves another. The late Dr. Murchison, for example, was one of the ablest physicians and teachers of St. Thomas's, and at the same time physician to the Fever Hospital. The Manchester rule would have been very injurious in such a case.

COLLEGE OF MEDICINE FOR THE CHINESE, HONG KONG.

It is very gratifying to be able to report the beginning of regular medical education, or rather examinations, in China and for the Chinese. The first professional examination of the College of Medicine for the Chinese, Hong Kong, was held during the second week in August. The subjects of examination were botany, chemistry, physics, elementary anatomy, elementary physiology, *materia medica* (first examination), and clinical observations. The written examinations extended over four days; and the *vis-à-vis* examination, held in the City Hall, was open to the public. Twelve students presented themselves for examination, of whom seven passed. Two scholarships, of the value of sixty dollars a year, were awarded to the first students on the list. The following is the result of the examination:—

J. Wong.. .. .	83 per cent.
Trong Wing Wan	75 "
Sün Yat Sen.. .. .	71 "
U. J. Trai	69 "
Trong Ying Wa	65 "
Trwan Tring Lennng	55 "
Lan Sze Fuk.. .. .	50 "

The highest marks obtained in individual subjects were:—

J. Wong, in botany	90 per cent.
Sün Yat Sen, in chemistry	92 "
Lan Sze Fuk, in <i>materia medica</i>	90 "

We have received a copy of the questions in the above subjects, and of the names of the examiners, amongst which we are glad to notice that of Mr. James Cantlie. We hope it is a case in which the *ex uno* principle applies. The questions are sound and sensible, and eminently creditable to the examiners, as the answers must have been in the case of the successful candidates. The winter session opens on October 1st, when the prizes will be distributed, and the Rector will deliver his public address.

The *Hong Kong Herald* of July 27th gives an interesting account of the presentation of three Chinese gentlemen, educated by Dr. Wykeham Myers (of Formosa) in medicine, to Mr. Wood, chairman of the Municipal Council, to receive from him certificates of qualification to practise medicine in all its branches, after having been duly examined by a board at Shanghai composed of medical practitioners there of various nationalities. It cannot be maintained that medical education by one man is equal to that obtained in a school of medicine like the College for Chinese in Hong Kong.

But in China we must be thankful for even one-man education where that of a school cannot be obtained; and his Excellency Li Hung Chang, the Viceroy of Chihli, is so satisfied with the education given to those gentlemen and the examinations they have passed that he has promised them commissions as surgeons in the imperial army with literary rank. All honour to the Viceroy, as well as to Dr. Myers.

THE INSANITARY CONDITION OF PADDINGTON.

THE Sanitary Committee of the Paddington vestry have called attention to certain cases of death from preventable disease occurring under circumstances which suggest that the cause was due to defective sanitary condition of the houses in which these deaths took place, and the committee expressed the opinion that in all such cases application should be made to the coroner to hold an inquest as to the cause of death. The action of the committee may be expected to give rise to some interesting complications, for we understand the coroner for Central Middlesex approved the holding of an inquest when there was evidence of gross sanitary neglect; we may anticipate, therefore, that the members of the Sanitary Committee themselves may be called upon to justify their own position in relation to some faulty condition which they may have neglected to prevent or to remedy. If the statement be true that the condition of Westbourne Villas is a disgrace to civilisation, it would be worth while to inquire how this has been brought about. We presume the statement relates to the drainage of these premises, and if so, we may remind the vestry of Paddington that they have very considerable powers to ensure that the drainage is properly constructed, and have further powers for remedying conditions that are found to be faulty. They surely cannot require the censure of a coroner's jury to stimulate them to do that which is necessary. The Sanitary Committee, in their report, suggested that the proposal to utilise the coroner for investigations of the kind indicated should be sent to every vestry and district board. We do not, however, anticipate that the proposal will meet with a favourable response. Whether London is suffering from the absence of such systematic inquiry as takes place in other parts of the country through the medical inspectors of the Local Government Board is altogether another question; but the latter system has the advantage that it aims at the prevention of disease, whereas the machinery of a coroner and his jury can only be brought into action when death has already occurred.

YELLOW FEVER.

THE epidemic of yellow fever in Florida, which at present shows no signs of abating, will doubtless stimulate research into the nature of a disease which has hitherto defied the efforts of scientists to unravel. At least it should afford the opportunity to test the results arrived at by Dr. Domingos Freire, who, it will be remembered, claimed not only to have discovered the microbe that causes the disease, but also to have introduced with success a method of prophylactic vaccination. Dr. Freire's researches date from 1880, and the "organism" that he describes was first termed by him the "*cryptococcus xanthogenicus*," a name which he has since replaced by "*amarillus*." In spite of the extent of his observations, the elaboration of his methods of research, cultivations and inoculations after the methods of Pasteur and Koch, it is noteworthy that, in Europe at least, but little credence has been given to the value of his alleged discovery. For, in the first place, the "microbe" described by him exhibited characters hitherto unknown to bacterial organisms. Commencing as a minute spheroid, he traced its development into a larger body which became provided with a granular membrane, the rupture of

which is said to lead to the reproduction of the microbe. Moreover, he declared it to bechrogenic, and differentiated masses of yellow and of black pigment as its products; whilst he further announced the isolation of ptomaines having a toxic influence on the sympathetic and vagus nerves. When, too, he referred the jaundice to the liberation of the yellow pigment in the blood, and the characteristic black vomit to the presence of the black pigment above mentioned, and further attributed the anuria to obstruction of the renal tubules by masses of this material, it was felt that on pathological grounds alone his discoveries must have exceeded the limits which the cautious scientific observer would naturally impose. Nevertheless, Dr. Freire's observations do at present hold the field. Analogy points strongly to yellow fever being a bacterial disease; and it is incumbent on bacteriology to spare no efforts to determine the question. Unhappily, the risks incurred by the investigator into a malady which is especially prone to seize upon the new comer are too great to warrant the recommendation of a European commission of inquiry. The research must be left to those who, dwelling in the regions where yellow fever is endemic, have become more or less protected by acclimatisation.

POISONING BY CARBOLIC ACID.

THE recent frequency of accidents and suicides with carbolic acid has been the subject of inquiry by the Liverpool Health Committee. It appears that, although the local chemists always label carbolic acid as a poison, it does not fall under the restrictions of sale, since it is not included in the schedule of poisons under the Pharmacy Act of 1868. Early in 1882 the Pharmaceutical Society recommended that carbolic acid, together with sulphuric, hydrochloric, and nitric acids, and some other active substances, be deemed poisons within the meaning of the Pharmacy Act. This resolution having been sent to the Privy Council, it was decided to approve the addition of nux vomica to the poison schedule; but it was deemed inadvisable to add to the restrictions on the sale of the acids and other articles referred to. In view of the suicidal mania in Liverpool, the town clerk was instructed to write to the Privy Council, urging the desirability of placing restrictions upon the sale of carbolic acid. Under present conditions many violent poisons can be obtained for a few pence at oil shops, without any indication of their properties.

DEATH CERTIFICATES AND UNQUALIFIED MEDICAL ASSISTANTS.

THE prosecution of an unqualified medical assistant at Oldham, at the instance of the Registrar-General, for issuing a false certificate of the cause of death, in contravention of the 40th section of the Births and Deaths Registration Act of 1874, raises some important points bearing upon the relations of medical practitioners and their unqualified assistants. The assistant in the case under notice pleaded guilty to issuing a certificate which had been signed in blank by his principal, and in which he had inserted the cause of death, and words stating that the deceased person had been attended by the practitioner whose signature was appended thereto. At the hearing of the case, the Superintendent Registrar, who acted as prosecutor by authority of the Registrar-General, stated that he had communicated with the medical practitioner, who informed him that he kept a supply of certificate forms signed in blank for his own convenience, but that he had given no authority to his assistant to use them. It was obvious, however, that the assistant had access to these signed forms, and it was also in evidence that four of these false certificates had been issued within a few days by this assistant relating to deaths in the same locality. After a long deliberation, the Chairman of the bench of magis-

trates expressed himself strongly upon the importance of the case, and announced that he should adjourn it for a month in order that the Registrar-General might be communicated with and be informed of the opinion of the magistrates with reference to the medical practitioner. At the present stage of the case, therefore, we will abstain from commenting upon its merits, except fully to endorse the opinion of the magistrates of its far-reaching importance, in connexion not only with death registration and mortality statistics, but with the credit of the profession, and with the dangerous facilities thus offered for the concealment of crime.

THE WEST LONDON HOSPITAL.

SOME of our readers will have recently observed in the daily press charges which have been made against this hospital—charges rendered more serious from the number brought forward. We cannot understand how it is that hospitals are about the only institutions attacked in the coroner's court and elsewhere, and only too often condemned without a hearing in their own defence. It has been stated that a man was taken to the West London Hospital after receiving an injury to his leg, but was sent home without treatment, and that a fracture was found five days afterwards by a medical man outside. The facts are that this man refused to go to bed in a ward, remained on the couch in the accident-room all night, and left at half-past seven in the morning, without permission, before the house surgeon had a chance of seeing him. In other words, he refused treatment. In a second instance, it is alleged that the medical officer wished to send home a woman suffering from a severe scalp wound during the height of a snowstorm. The beds at this hospital on the female surgical side are very limited as regards number, and are always full, and, unless there is something very urgent, the house surgeon is not justified in admitting a case of scalp wound. The patient was bleeding from the temporal artery, which had been only partially divided; on complete division the hæmorrhage stopped, and after the application of a dressing she was judged able to go home safely. The head could be warmly covered and a cab procured, if necessary. Other charges have been made in a similar reckless manner. It is difficult to understand the motive. In the case of the man who is said to have had a fractured leg, it is evident that the question of paying a fee to the medical man for setting the leg had something to do with the complaint. We wonder how much the parish pays to this hospital yearly for looking after fractures for the proper treatment of which the guardians are responsible, and how much is saved the ratepayers by the treatment bestowed daily on its paupers. Instead of endeavouring to damage, the guardians should help in every way those who are daily helping them, and not allow statements to be brought forward calculated to do great harm without previous investigation into their truth.

ALLEGATIONS AGAINST MEDICAL MEN.

ON the 18th inst. an inquest was held at Ringwood on the body of a man who died on the 14th inst., and touching whose decease a certificate of death had been given by a medical man. The deceased's relatives, however, considered that his medical adviser's treatment of him demanded an investigation, and the inquiry was accordingly held. The proceedings lasted four hours, and, after exhaustive evidence had been taken and considered, the jury returned a verdict that the deceased died from lockjaw, and exonerated the medical man from all blame. Mr. Henry Dyer, on whose head most, if not all, of the obloquy and insult arising from this death has been poured, has our sincere congratulations on his triumphant vindication from the unfounded and unwarrantable charges brought against him.

THE YELLOW FEVER EPIDEMIC IN JACKSONVILLE.

HER MAJESTY'S representative at the Hague has officially reported to the Home Government, by a despatch dated the 15th inst., that Jacksonville has been declared infected with yellow fever. By the stringently enforced "shot-gun quarantine," nearly all the railway trains in Alabama and Mississippi have been stopped. A correspondent of *The Times*, writing from Brussels on the 22nd inst., on this outbreak of yellow fever, states that he is in receipt of official reports by every mail, and the prevailing idea that the scourge exists not only locally but generally throughout the whole State of Florida is erroneous. It is practically and closely confined to Jacksonville and its environs. Frosts are recorded in various parts of Tennessee, Georgia, and Alabama, and the scare in the south is subsiding. Railway travelling is being, partially at least, resumed; one route having been opened to New Orleans.

EFFECT OF DUST IN FLOUR MILLS ON ANIMALS.

IN order to test the effect of constant inhalation of dust in flour mills on the animal organism, M. L. Poincaré kept guinea-pigs for two years in the most dusty part of a flour mill—that is to say, the department where the corn is cleansed from all extraneous matter by a special machine before being ground. Of twenty animals, ten remained alive at the end of two years. Those that died were mostly young ones. None of these showed traces of tuberculosis, but catarrhal pneumonia with profuse desquamation of epithelium; also in some cases localised interstitial pneumonia and extravasation of blood. Dust, consisting of grains of starch, &c., was found, more particularly on the nasal mucous membrane, but only to a small extent in the bronchi.

MEDICAL REGISTRATION.

IN our advertising columns this week is an announcement by the Registrar of the General Medical Council, of which due notice should be taken by all registered medical practitioners. Much inconvenience has occasionally been experienced and great risk incurred by inattention to the requirements of the Medical Act in regard to change of address, and the necessity of answering at once any letter of inquiry that may have been sent in respect thereof.

THE CASE OF DR. GLOSTER.

ON this case, a full summary of the facts of which is given in another column, we must reserve comment until next week. Meanwhile we have to express our sincere sympathy with Dr. Gloster in the painfully trying circumstances in which he has been placed, and our regret that the turn taken by the course of the prosecution should have prevented him from bringing forward the overwhelming amount of rebutting evidence which he had at his command.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Dr. Trautmann, *privat docent* in Otology, has been raised to the rank of Extraordinary Professor.

Greifswald.—Dr. Otto Beumer, *privat docent* and District Physician, has been raised to the rank of Extraordinary Professor.

Vienna.—The Minister of Education has made the following appointments in the University of Vienna, ignoring the selections of the professorial Senate, which he considers were dictated by motives of personal liking rather than of public utility. Professor Emil Zuckerkandl, of Graz, to

the chair of Anatomy; Professor V. Ritter von Ebner, of Graz, to the chair of Histology; and Professor Theodor Puschmann, of Vienna, to the chair of the History of Medicine.

THE first Congress of Italian Medicine, in which consultants and practitioners will meet with clinical teachers of the various schools for friendly communication and discussion, will assemble in Rome on the 15th, 16th, 17th, and 18th of October. Already an influential array of names of intending participants is announced by the organising committee, and the proceedings, it is hoped, will prove as advantageous for Italy as the corresponding Congresses which have had their seat at Wiesbaden have been for Germany.

INTELLIGENCE has been received of the death by drowning, at Kingussie, Inverness-shire, of Mr. Claude Taylor, a well-known and much respected Nottingham surgeon. The deceased, who was about forty-five years of age, was one of the surgeons to the Nottingham General Hospital, and surgeon to the South Notts Yeomanry Cavalry.

THE Camborne Local Board has called the attention of the county coroner to the large number of inquests recently held by him at which no medical evidence has been called, suggesting that in future cases, if he have the power, he should call such evidence.

MR. JONATHAN HUTCHINSON, F.R.S., is to preside at the Old Students' Dinner in connexion with the London Hospital Medical School, to be held in the College Library at 7.30 on the opening day, Oct. 1st.

THE Harveian Oration will be delivered at the Royal College of Physicians by Dr. Latham, on Thursday, Oct. 18th next.

THE HOUSE OF LORDS' FIRST REPORT ON THE SWEATING SYSTEM.

IF quantity be a criterion of merit and value, then the Minutes of Evidence just issued by the House of Lords Commission on the Sweating System should exercise a widespread influence. On the other hand, the report, if such it may be called, is startling in its brevity. The evidence takes up 1032 pages, and constitutes one of the most ponderous Blue-books ever issued as a single volume; but the report itself does not fill more than half a page. Practically, the report amounts to a confession that, for the moment, the Commission cannot report, that the condition of trade in London is influenced by the state of affairs in the provinces, and that the evils of the sweating system are extended over a much broader area than the East-end of London. Consequently the Lords Commission conclude that the scope of the inquiry must be so extended as to embrace the whole of the country. This is the point on which we have all along insisted; and that the Lords have come to this decision was known some time ago. We have therefore at present only to consider the enormous mass of evidence now laid before us. Some of the most startling and sensational facts were published by the press at the time the evidence was taken; but for a serious study of the subject it is necessary to refer to the Blue-book. The brief summary of evidence given in the daily papers dwelt rather with the facts that were considered most remarkable or extraordinary, and not with what might best assist in forming a scientific opinion on the subject at issue. For those who are anxious to find a suitable basis for a constructive policy the Blue-book is indispensable. It would not be safe to judge merely by the synopsis published occasionally in the daily papers.

The Blue-book has not yet been put into general circulation.

tion, and has only been in our hands for a day or two. We cannot profess, therefore, to have read through the thousand and odd pages of evidence; but what we have seen, and we have carefully studied a great portion of the report, goes a long way to confirm the opinions we have expressed when dealing with the problem. The evidence collected by the House of Lords Commission coincides, in a great measure, with the information we ourselves procured, and it points to the necessity of enforcing those reforms we have advocated.

First, and certainly not least, in importance, among the witnesses, is the testimony of Mr. Stephany, the secretary of the Jewish Board of Guardians. He clearly showed that the grievance, so far as the influx of Jews is concerned, is not increasing. A great confusion has arisen in this respect, with the result of creating a cry against foreign pauper emigrants. Undoubtedly in Whitechapel and Spitalfields the Jews are in an immense majority; but why expect that it should be otherwise in what is practically the Ghetto of London? The question, when viewed from a national standpoint, is not whether the Jews monopolise the tailoring trade in Whitechapel, but whether their number throughout England is increasing in undue proportions, and this is scarcely the case. On the other hand, from a sanitary point of view, a large colony of foreigners living together in any one particular district does create dangers and difficulties that must be met by special measures. But this does not apply to foreign Jews only. The Italian organ-grinders, penny-ice vendors, &c., who have formed densely populated colonies in Hammersmith and on Saffron-hill, are even more difficult to deal with. These Italians, a great proportion of whom come from the Calabrian mountains, are more barbarous, and more difficult to educate, than the Polish-Russian Jews. We have seen some Jewish homes admirably clean; we have seen Jewish sweaters' workshops equally well swept and clean, both with regard to the workshops and the closets. The foreign Jew is not more difficult to teach than any other class of foreigner.

The fact that tailoring, from the sanitary standpoint, is the most important of all trades in which sweating is practised the Minutes of Evidence before us fully confirm. Of the Jews relieved in London by the Jewish Board of Guardians in 1887, no less than 698 were tailors out of a total of 3313 applicants. In 1886 the proportion was greater—namely, 947 out of 2565 applicants. Mr. Stephany thought that the number of Jews arriving in London only increased when there were special persecutions instituted in Russia or Germany, and this extra influx ceased in 1886. The notion that a law preventing the advent of foreign pauper immigrants would check this is disproved by the evidence of the secretary of the Jewish Board of Guardians. He asserts that, as a rule, the emigrants can maintain themselves without regular or sufficient work for six months on arriving. They generally go to live with their friends till they are able to get some sort of employment, and not a few of them are sent back to their own country. The witness, S. Rosenberg, a Jewish journeyman boot-finisher, had £9 on arrival in England; and, in 1887, 305 families were sent back to their own country, and 231 families to America and Australia. Mr. Charles Booth, of the Statistical Society, estimates the number of Jews living in the East-end of London at 45,000. His estimate is based on the School Board returns, and this does not constitute a very populous Ghetto for a town like London, with its population of more than four millions.

It is only when we come to the "Christian" worker and to the women that we reach the worse phase of the sweating system. The Rev. J. Munro speaks of women who are eager and glad to work all the week for 4s. He believed that there are 25,000 seamstresses in London who, for the most part, work in their own homes. So poor and wretched are they that they are unable to clothe themselves sufficiently, and he had seen garments finished while on the shoulders of these poor women, so as to keep the workers warm. It is also a common practice to use the clothes as bed covering at night, and he had seen children with measles lying under half-finished garments. Not only do the clothes thus become impregnated with the germs of disease, but they are often invaded by vermin, and the "takers in" have to overhaul these articles in order to kill such insects. Mr. Munro showed a coat that had been made for 7½d., and mentioned 4½d. as the common price very generally paid for making trousers. A poor woman named Lavinia Casey came forward and testified that she made shirts at 7d. to 8d. per dozen. She had to pay 2s. 6d. a week for her sewing machine and 1s. 3d.

for thread, and at best could only make two dozen shirts, or 1s. 2d. per day. There is, in fact, more evidence than enough to show how inhuman is the rate of wages paid for work that is often prolonged into the small hours of the night. There is also considerable evidence to prove that the principal sufferers are Christians; while the Jews, on the contrary, generally obtain much better pay. It is said, however, that these Jews, while earning more themselves, have, through organising the sweating system, brought down the rate of wages. Certainly, it seems as if wages, in the sweating workshops, have fallen about 25 per cent. during the last few years; but this is not so much due to the foreign Jews as to the competition of the English clothing factories that have been recently built in the provinces. Mr. Hoffman, who is technically well acquainted with the boot trade, remarked that the increase of shoddy articles was such that the colonial trade had in a great measure been destroyed. The colonies now used their own raw materials and made their own boots, which, though less elegant, had the advantage of being all leather and of wearing well. It is evident that the development of provincial manufactories and the making of shoddy goods will not be checked by preventing the arrival of foreign paupers. We insist on this point with some emphasis, because the present movement against the sweating system is being led astray on this issue. The actual agitation may result in great good, in great moral and sanitary improvements, if we can prevent the waste of energy and of legislative effort on unlikely and unreal causes.

Public health is compromised by the grinding poverty and consequent hardship endured by those who receive altogether inadequate wages. It is further endangered by the insanitary, filthy, and overcrowded condition of the workshops and the homes of the workers. All that we have said about bad sanitation is amply confirmed by the Minutes of Evidence now published. The Rev. W. Adamson, vicar of Old Ford, describes, for instance, a very small room where he found three machines and a bedstead. The bed and floor were covered with boots and shoes in all stages of progress. The window was shut, while the paste and other materials emitted a very foul odour. There were three people working and living in the room. Though accustomed to such scenes, Mr. Adamson was overpowered by the stench, and felt giddy when he regained the street. He did not think the public knew how much sickness prevailed in such places. He had traced scarlet fever from house to house, from upstairs lodgers to downstairs lodgers, spreading by the constant communication of article with article, of person with person. He had known an epidemic raging off and on for eighteen months in the East-end of London. Work was taken into these places in spite of the fever, and the children were sent to school.

Many more similar cases could be quoted, but what we have already described shows that our views are confirmed by the general tone of the evidence collected by the House of Lords Commission.

THE PARKES MUSEUM.

THE first lecture of the fifth course of twelve lectures especially intended for the benefit of sanitary inspectors was given on Tuesday, the 25th inst., by Dr. Poore, who took for his subject the "History, Principles, and Methods of Hygiene," the lecture being introductory and intended as a preface to the more technical discourses and demonstrations which are to follow. This was the first lecture given since the amalgamation of the Museum with the Sanitary Institute, and the numbers attending seem to augur well for the utility of the new Institute. For the course preceding the present one there were ninety entries. For the present course eighty-seven have already taken out tickets, and the officials at the Museum confidently predict that the number will reach a hundred. The lecturer insisted that the greatest of all sanitary evils was overcrowding, and were it not for the fatal tendency of populations to concentrate in towns the professional sanitarian would scarcely be needed. The science of sanitation was practically the science which enabled persons to live in crowds with the least amount of damage to themselves, and the fact must not

be lost sight of that big schemes of water supply and sewerage tended indirectly to cause a concentration of population which in itself was most undesirable. It was very doubtful if this overcrowding of buildings could be prevented, but unless it could one must have serious doubts as to the permanency of the improvement which has taken place in the health of our great towns. A law applicable to the whole kingdom, compelling all houses to be provided with a minimum curtilage bearing a fixed ratio to the cubic contents of the building, seemed absolutely necessary. It was becoming daily more and more necessary, because a community of water supply and drainage was taken advantage of by builders to cram as many houses as possible on to a given area. The conversion of the garden of Northumberland House into a sunless gully flanked by ten-storied barracks, inhabited by thousands in place of tens, was a notable instance out of many which could be quoted. Sanitary measures, to be effective and permanent, must be based on scientific principles, and, if the principle be wrong, no amount of ingenuity in practical details will put it right. The provision of pure and sufficient air to breathe, pure water to drink, and good food to eat, were the three chief ends to be aimed at, and these ends had been to a great extent attained, and a comparison of the bills of mortality of 1861 with the last return of the Registrar-General would show how many diseases had practically vanished from among us. The death-rate was undoubtedly lower, but where so many facts conspired to the same end it was difficult to say which among them was the most important and was most operative. Death-rates were often very misleading, and the lecturer warned his audience that the conditions of the London population (probably the most mobile in the world) were quite peculiar, and that unless this fact were taken into account and corrections made for the abnormality of age distribution the weekly figures would only lead us to a fool's paradise. Among the most important of sanitary principles was the prevention of putrefaction in refuse and excremental matters. This was only to be done by fire or burial. In London we washed the filth out of our houses, which so far was good; but the difficulties of dealing with London sewage had not by any means been surmounted. The condition of the Thames at Barking constituted a loose end to our sanitary measures which it was impossible to regard with complacency. It was a principle of sanitation as well as of economics, that it was always advisable to "make both ends meet." We were very far from this at present, but until this were done it was not possible to believe in the permanence of many of our sanitary efforts.

THE CANTOR LECTURES.

MR. BANNISTER'S lectures upon our Milk, Cheese, and Butter Supply, which have just been published in the *Journal of the Society of Arts*, ought to have a marked effect upon the industry to which they relate. From a wide survey of both physical and economic facts he has drawn conclusions of the greatest importance and illustrations of striking force. It is to dairy farmers that he chiefly speaks, but not to them alone. Every consumer of milk, for instance, is interested in the enforcement of sanitary regulations controlling its collection and distribution. To some extent these are enforced by Act of Parliament, and accordingly we find striking testimony in these pages to the good results of the Sale of Food and Drugs Act. But the chief effect of that statute is attained by imposing upon the dealer the necessity of protecting himself by carefully guarded contracts, so that private enterprise comes in to aid and supplement the law. Thus we have a form of contract cited here in which the consignee insists on the milk being delivered by certain trains twice a day, that each meal of milk is to be sent away fresh, that no mixed milk of two separate meals is to be sent, that milk is to be properly strained, and that it must be thoroughly cooled over a refrigerator immediately after milking, the temperature on its arrival at its destination being a presumptive proof whether it has been so cooled; and then, to make security doubly sure, the last stipulation is that the milk must contain a minimum quantity of "fat" and "solids not fat," as determined by the purchaser's analyst, whose decision shall be final. In addition to these regulations as

to the quality and condition of the milk, the contract is made subject to the sanitary conditions of the farm being entirely satisfactory to the contractor's inspecting engineer and the local medical officer, and to be so maintained. The value of such arrangements in maintaining the purity of the milk supply of large towns cannot be over-estimated, and it may be hoped that the adoption of conditions equally stringent will gradually become universal.

Milk itself is, under the hygienic point of view, a much more important commodity than any of the milk products; but, as the perishable character of fresh milk protects the British producer from foreign competition, it was most natural that the Cantor lecturer should devote a large part of his discourse to the discussion of butter and cheese production, which do not enjoy a like immunity. In pointing out the defects in British and Irish methods, which have given to Swedish and other foreign producers a great advantage even in the British market, he has done a service not to the dairy farmer alone, although the commercial importance of what he said is very great, but also to the community at large, since the production of food stuffs at once wholesome and cheap is a matter of the greatest general importance. Nor must it be overlooked in this connexion that uniformity of quality is a great guarantee of excellence. It is not that the most excellent butter or the most excellent cheese is necessarily of uniform quality; the fact is quite otherwise. The best will vary with the season and other conditions so as to differ considerably at one time from what it is at another. But the point is that the consumer's palate gets educated by the supply of food of uniform quality to the appreciation of minute deviations from the standard of quality, and in that way the standard comes to have a market value which no mere excellence of quality would otherwise secure. It is popular appreciation which is the criterion of market value; and popular appreciation in the matter of food depends upon the palate, and not directly upon the excellence of the food in question as scientifically ascertained. Thus, in the case of food which, as supplied, continually varies in flavour, the palate test is practically worthless; it is almost entirely matter of chance whether the better or the worse quality shall be preferred, and the consumer easily tolerates a wide departure from the mean quality. But when once uniformity of quality has been attained, consumers speedily acquire both an accurate knowledge of it and a definite preference for it, and the producer finds his account in perfecting the details of his manufacture so as to attain the market standard with the utmost nicety. These are exactly the conditions which promote the production of the best qualities of food, and hence, as we say, uniformity of quality is a very important step in the direction of securing excellence. It is well known that the manufacturing processes of the Continent have attained this most desirable result, and have thereby acquired a reputation which enables them to rule the market. The almost total absence of dairy schools among ourselves makes it extremely difficult to disseminate among our own population the art of producing butter or cheese of given quality, but the matter, whether viewed in its economical relation to the future of agriculture, or in its hygienic aspect as a question of food supply, is one of such vast importance that we trust effective measures will be adopted, if necessary, by the Legislature to place the requisite instruction within the reach of those who can turn it to account. The Society of Arts is doing a great work, and none more useful than that which these lectures upon agricultural topics represent; but it is too much to expect even of the best equipped and most influential voluntary society that it can create the organisation which this particular task demands. Either the Government or the Legislature will certainly have to take this problem up, and the sooner the better.

FOOTBALL.—It is proposed at the conclusion of the annual general meeting of the Rugby Football Union, to be held on the 4th proximo, to consider a number of new rules and alterations of rules, and to deal especially with what are known as "wing" players, and generally with foul and rough play.

A REPORT from the Weybridge Drainage Committee, recommending a system of drainage for Weybridge and Oatlands, at a cost of £15,000, has been adopted by the Chertsey rural sanitary authority.

THE QUEEN v. GLOSTER.

THE trial of Dr. James Gloster, of Upper Phillimore-place, Kensington, for the wilful murder of Eliza Jane Schummacher, who died at 21, Moreton-place, Pimlico, on June 27th, was concluded on Tuesday, the 25th inst., and ended in a verdict of acquittal, the Crown withdrawing the charge, after the direction of the judge (Mr. Justice Charles) that the statement of the deceased, on which Dr. Gloster was incriminated, could not be received as a dying declaration. The facts of the case are as follows: Mrs. Schummacher, age thirty-nine, was married for eight years, but had been separated from her husband for the past seven years. She had during this time one living child, and is said to have had other pregnancies. And there was a sworn statement for the prosecution that, even so late as the Saturday night previous to her death, her paramour visited her and remained with her for the entire night. She made no mention that night of Dr. Gloster's name or of any operation having been performed on her. This was June 23rd, the night after but one of the day she was first seen by Dr. Crane of Pimlico. She had been to see Dr. Crane early in April, to ascertain if she was pregnant, stating that she believed she was *enceinte* for a period of at least some weeks. He, on a digital examination, assured her that she was not pregnant. But she returned after some days, requesting him to give her medicine to induce the catamenia. This he refused to do. Dr. Crane did not see her again from this date until the occasion of her fatal illness in June. Nothing is known of her movements from this time until the night of June 5th, when she came at a rather late hour to Dr. Gloster's house during his temporary absence, when she was seen by Mr. Meredith Townsend, who was sent for to see her, he being in the habit of acting for Dr. Gloster in the absence of the latter. Dr. Gloster some few years since had attended her child for some trivial illness. She solicited Mr. Townsend to procure abortion, who decidedly refused to have anything to say to her. Just then Dr. Gloster returned, and heard Mr. Townsend's report. She repeated the request to Dr. Gloster, but he emphatically refused and sent her away. From her own statement it appears she next visited a "Dr." Tarico, of Wardour-street, an unqualified practitioner, who has, since the investigation before the magistrate, disappeared from the locality. She represented that it was on Dr. Gloster's suggestion (which he denies) that she went to Tarico. But she also subsequently admitted in her statement that he passed what she termed a "*small instrument*," which, she asserted, did not hurt her. This was on the 8th of June. She again appeared at Dr. Gloster's house on June 11th, stating that she had gone to Tarico, and said nothing at that time of Tarico's examination, but urged Dr. Gloster to "help her," which he for the second time refused to do. It may be right here to state that Mrs. Schummacher was not in good circumstances, and that there has been no motive of any kind ascribed by the Crown, or any that can be conceived to have induced Dr. Gloster to gratify the deceased, and risk the penalty for such an act. It would seem from the evidence that at this visit to Dr. Gloster she must have secured possession of a scrap of paper, portion of a used envelope, that Dr. Gloster had on that morning given his servant. It had on it a request to his grocer to change a cheque for £5. The servant, however, had the cheque changed without giving this order, she being well known in the shop. This circumstance was used by the Crown against Dr. Gloster with the view of proving a certain degree of familiarity with the deceased. She again called at Dr. Gloster's on the 17th, at 9 P.M., in his absence, stating that she would call the next morning. She did call at 12 o'clock on that day, June 18th, Dr. Gloster being again from home; she left to return at 1.30; when she waited for him until nearly 2 P.M. Dr. Gloster had then, in the presence of his housekeeper, to direct her to leave his house and not to come again. She was only for a few minutes in the house after his return, and neither on this nor on any other occasion was she allowed into his study. His housekeeper was prepared to swear that as the deceased was leaving the hall door she used words to the effect that he might regret not having helped her. Several witnesses

were prepared to account for Dr. Gloster's movements from this hour until 5 P.M. of that day, the time during which the alleged operation at Moreton-place, a considerable distance off, was performed. The next he heard of her was through a telegram summoning him at once to Moreton-place, which he received about 3 P.M. on the following day. He hesitated to obey the summons, but on consideration determined to visit her, which he did, arriving at her house about 4 P.M. He found her in bed, evidently very ill, complaining of great abdominal pain. He was shown into her room by a party not produced at the trial, and not to be found at the inquest or at the magisterial investigations. He expressed surprise at the receipt of the telegram, made a digital examination, found the abdomen tender, and a slight sanguineous discharge from the uterus. He refused to continue to attend, advised her to have some medical attendant living conveniently near, or to go to a hospital. He also charged her with doing or having had something done to herself. This she did not deny. No one was present during this interview save a workwoman, and she only for a portion of it, who is acknowledged to be of intemperate habits. Some recriminatory remarks passed between the women, the deceased declaring that, as Dr. Gloster would not help her, she should do the best she could for herself. Her sister, a Mrs. Baker, called at his house the next day, requesting him to attend, but he declined to do so. From this time until his arrest on July 1st he heard nothing of the case. Dr. Gloster was at first bailed for £25 by the magistrate, but after the verdict of the coroner's jury he was re-arrested and confined in Holloway from July 4th to August 15th. It appears that on June 22nd Mrs. Schummacher sent for Dr. Crane, whom she had previously visited in April. He found her dangerously ill, so much so that he summoned to his assistance Mr. Frankish, especially in consequence of the incriminating statements of the patient with regard to Dr. Gloster. Both made a digital examination and concurred in the serious view of the case. It would appear from Dr. Crane's evidence at the trial that no accurate clinical observations or records were made, either with regard to temperature, pulse, or treatment. Dr. Crane continued to attend until the 27th, when the alarming state of the patient induced him to summon Dr. Fincham, who confirmed the fears of Dr. Crane. The latter went then to the police station with the view of having dying depositions taken. Not being able to find a magistrate, he returned with Mr. Frankish, and "told the deceased that he wished her to make a statement." In this latter she accused Dr. Gloster of having, both at his own house, on other occasions, and at hers, on the 18th, passed instruments, causing great pain, and also of having twice applied cotton wool to relieve her of the pain. Neither Dr. Crane nor Mr. Frankish told her the purport or serious nature of the statement she was making, nor did they lead her to believe that it was a dying declaration. The deceased died about midnight the same day. It is right to say that the identification of Dr. Gloster on the 18th at the house of the deceased depended on the evidence of a woman who it was known did see him going in on the 19th, and who stated she saw him from the kitchen window of a deep area passing out on the 18th, yet hesitated to recognise him when taken for that purpose to the police court, only going as far as a certain similarity of appearance, and using the words "I am not sure," "it is like him," &c. The post-mortem examination, conducted by Mr. Bond, revealed these facts:—A normal, multiparous, healthy, unimpregnated uterus, with a wound two inches long, commencing at the isthmus, running through the posterior wall of the uterus, and emerging close to the summit of the fundus. Lying in the peritoneal cavity, and resting on the uterus, was a piece of wadding, such as that used by dressmakers, two inches in length by a quarter of an inch in thickness. There was present, covering the wound and surrounding the wadding, some lymph and purulent matter. The uterus was subsequently submitted for Dr. Gloster to examination by Dr. Macnaughton Jones, Mr. Bland Sutton, and Dr. Hamilton Bland. Dr. Lombe Athill, a letter from whom is published in another column, was present in court, ready to testify from personal knowledge to Dr. Gloster's character and capacity, having come specially from Dublin for this purpose. Dr. A. Routh, for whom, at the Marylebone General Dispensary, Dr. Gloster has acted while resident, was to have been called; while Dr. Robert Barnes and Dr. Macnaughton Jones, to whom all the facts of the case were submitted, were also prepared to give evidence on his behalf.

THE WHITECHAPEL MURDERS.

THE revolting tale of the Whitechapel murders has been further embellished by the astounding statements which the coroner deemed fit to make public in his summing up of the case of the unfortunate woman Chapman. The public have supped full of horrors, and now there is added thereto a suggestion which, in spite of its plausibility, is almost too horrible to be credited. It seems, on the face of it, to dispel all previous theories and explanations of a series of crimes which are happily almost unique in our annals. It supplies a motive for the deed, which has been compared to that of Burke and Hare, but which, in fiendish greed and disregard for the sanctity of human life, almost surpasses the villainies of those miscreants. In presence of this suggestion it is futile to discuss any other hypothesis until this has been thoroughly probed. Mr. Wynne Baxter did not withhold any of the information which came to him from an unexpected source on the day of the publication of Mr. Phillips' evidence respecting the mutilation of the body. It will be remembered that at his first examination, Mr. Phillips did not enter into these details. He acted on his own responsibility in stating only such facts as should enable the coroner's jury to arrive at a correct conclusion as to the cause of death; whilst he took care to inform the police authorities of all those facts which might give them any clue as to the object the murderer had in view, and thus lead to his detection. However, when the coroner insisted upon Mr. Phillips being recalled to add these further facts to his previous evidence, he stated that the mutilation of the body was of such a character as could only have been effected by a practised hand. It appears that the abdomen had been entirely laid open; that the intestines, severed from their mesenteric attachments, had been lifted out of the body, and placed by the shoulder of the corpse; whilst from the pelvis the uterus and its appendages, with the upper portion of the vagina and the posterior two-thirds of the bladder, had been entirely removed. No trace of these parts could be found, and the incisions were cleanly cut, avoiding the rectum, and dividing the vagina low enough to avoid injury to the cervix uteri. Obviously the work was that of an expert—of one, at least, who had such knowledge of anatomical or pathological examinations as to be enabled to secure the pelvic organs with one sweep of a knife, which must therefore, as Mr. Phillips pointed out, have been at least five inches long.

The theory based on this evidence was coherent enough. It suggested that the murderer, for some purpose or other, whether from a morbid motive or for the sake of gain, had committed the crime for the purpose of possessing himself of the uterus. There could be little doubt that he first strangled or suffocated his victim, for not only were no cries heard, but the face, lips, and hands were livid as in asphyxia, and not blanched as they would be from loss of blood. Then, with one long and deep incision he must have severed the poor woman's throat, so that almost all the blood from her body drained out of the divided vessels, accounting for the almost bloodless effect of the subsequent incisions in the abdomen and pelvis. If the evidence of Mrs. Long is to be credited, the victim was seen alive at half-past five in Hanbury-street, and about six o'clock her mangled corpse was discovered in the yard of the lodging-house. We confess to sharing Mr. Phillips' view that the coldness of the body and the commencing rigidity pointed to a far longer interval between death and discovery than this; but, as he remarked, the almost total draining away of the blood, added to the exposure in the cold morning air, may have hastened the cooling down of the body. Certainly the murderer must have done his work quickly; and this, again, points to the improbability of anyone but an expert performing the mutilations described in so apparently skilful a manner. The similarity between the injuries inflicted in this case and those upon the woman Nicholls, whose body was found in Buck's-row a few days before, gave from the first

the idea that they were the work of the same hand. But in the Buck's-row case the mutilation did not extend so far, and there was no portion of the body missing. Again, this is explained by those who think that the possession of the uterus was the sole motive, by assuming that the miscreant had not time to complete his design in the Buck's-row case, where, owing to the publicity, he was probably disturbed; and it was given in evidence that only a quarter of an hour before the discovery of the body the row had been traversed by others.

In the face of these facts, the statement made by Mr. Wynne Baxter presents great *prima facie* probability, but we must deprecate strongly any tendency to jump at a conclusion in a matter which may admit of another interpretation. Mr. Baxter said: "Within a few hours of the issue of the morning papers containing a report of the medical evidence given at the last sitting of the Court, I received a communication from an officer of one of our great medical schools that they had information which might or might not have a distinct bearing on our inquiry. I attended at the first opportunity, and was informed by the sub-curator of the Pathological Museum that some months ago an American had called on him and asked him to procure a number of specimens of the organ that was missing in the deceased. He stated his willingness to give £20 apiece for each specimen. He stated that his object was to issue an actual specimen with each copy of a publication on which he was then engaged. He was told that his request was impossible to be complied with, but he still urged his request. He wished them preserved, not in spirits of wine, the usual medium, but in glycerine, in order to preserve them in a flaccid condition, and he wished them sent to America direct. It is known that this demand was repeated to another institution of a similar character." Although this statement seems to afford a satisfactory explanation of the motive for the deed and mutilation of the corpse, it is impossible to read it without being struck with certain improbabilities and absurdities that go far to upset the theory altogether. We do not for a moment question the possibility of an application being made to museum curators for specimens of uteri. This is not an unnatural or unreasonable request to be preferred by a medical man engaged in the study of disease of that organ. But does it not exceed the bounds of credibility to imagine that he would pay the sum of £20 for every specimen?—whilst the statement that he wished for a large number, because "his object was to issue an actual specimen with each copy of a publication on which he was engaged," is too grotesque and horrible to be for a moment entertained. Nor, indeed, can we imagine that an author of a medical work to be published in America should need to have uteri specially procured for him in England and sent across the Atlantic. The whole tale is almost past belief; and if, as we think, it can be shown to have grown in transmission, it will not only shatter the theory that cupidity was the motive of the crime, but will bring into question the discretion of the officer of the law who could accept such a statement and give it such wide publicity. The plea that the interests of justice will be furthered thereby is one that cannot be sustained. Such information as was given to the coroner would have been far more appropriately placed at the disposal of the Home Office and the police; for the clue, if there is one, was for them to follow up. In our opinion a grave error in judgment was made by the coroner's informant in this respect. The public mind—ever too ready to cast mud at legitimate research—will hardly fail to be excited to a pitch of animosity against anatomists and curators, which may take a long while to subside. And, what is equally deplorable, the revelation thus made by the coroner, which so dramatically startled the public last Wednesday evening, may probably lead to a diversion from the real track of the murderer, and thus defeat rather than serve the ends of justice. We believe the story to be highly improbable, although it may have a small basis of fact, which will require the exercise of much common sense to separate from the sensational fiction that surrounds it.

TRIPLETS. — A widow woman, in poor circumstances, residing at Bradford, was safely delivered of three male children on the 20th inst. The mother and infants are reported to be doing well. The Queen's bounty has been forwarded to the mother of triplets recently born near Oswestry.

EGYPTIAN CIGARETTES.

OUR correspondent at Cairo supplies us with the following information on the employment and manufacture of the cigarettes exported from Egypt:—

EGYPTIAN CIGARETTE SMOKING.

The irresponsible writer who succeeded in starting a correspondence on this subject in the leading lay journal, before he was promptly disowned by Middlesex Hospital, informed the public that this form of smoking was productive, in his opinion, of malignant throat disease. His experience is not borne out by European doctors here, who see men smoking every day their forty or fifty cigarettes without harm, and without a single recorded case of cancer occurring in the throat. Most of the succeeding letters of this correspondence call for no remark until we come to one signed by "M.D.," containing a warning that the heat from the burning cigarette paper, or possibly the quality of the paper used, may have influence in keeping up an irritable form of chronic bronchitis. Now in this favoured country we are debarred from seeing much bronchitis, but we do occasionally see cases of obstinate pharyngitis not yielding to drug treatment. In some such cases I have persuaded Englishmen to substitute cigars for their thirty or more daily cigarettes. They thus smoke a greater and stronger supply of tobacco, but they lose their pharyngitis. This looks as if the paper, or possibly the chlorine used in bleaching it, was the direct cause of the chronic inflammation. The only other evil I have ever seen from cigarette smoking during five years' hospital and private practice is a mild dyspepsia, patients complaining of perpetual furred tongue, taste in mouth, &c. These will generally be found to smoke thirty or more cigarettes a day, and their dyspepsia will vanish when they resolutely cut down their maximum to ten. The more severe symptoms of tobacco poisoning so well known in England are not seen among those devoted to the mild Turkish tobacco. By such I mean tobacco amblyopia, irregular heart and pulse, dilatation of pupil, nervousness, insomnia, &c. The last letter of the correspondence which has reached us here is signed by three initials, and gives the opinion of a medical officer who served during the last Egyptian campaign. He states that it is "undoubtedly the case that opium is largely introduced in their (native cigarettes) manufacture." He bases his belief upon the fact that he used to be asked at shops whether he wished his cigarettes to be "highly or moderately flavoured." The explanation of the flavouring is very simple. Smyrna tobacco, which constitutes about 20 per cent. of a second-class cigarette, is recognised by the trade as being inferior to Yenidje tobacco, and is called in Egypt perfumed or flavoured tobacco, while Yenidje is called natural tobacco. The question therefore is a harmless one, meaning, Do you want much or little of the Smyrna leaf in your cigarettes? The question of adulteration with opium is worth a reply. Obviously, if the tobacco is mixed with opium, it must either be done in Turkey, where the plant is grown, or in Egypt, where the leaf is made into cigarettes. Now at Smyrna, where opium could easily be bought, its wholesale price varies from £2 to £3 per pound; and as the best tobacco only costs there 6s. per pound, it is not likely that either cultivator or buyer will go out of his way to doctor the leaves. At Yenidje and Cavalla opium is not grown, and must therefore be dearer than at Smyrna. In Egypt opium is practically not grown now, and the quantity imported, as shown by the Customs reports, is only sufficient for dispensing chemists; moreover, its price is again prohibitory, the cheapest opium fetching nearly three times the price of the most expensive tobacco. All the sellers here indignantly deny that their cigarettes are doctored with opium or any other drug, and unanimously affirm that good Turkish tobacco is so delicate that it will not admit of the least perfume or flavour of a foreign nature without becoming at once so changed as to be unsmokable. Yesterday I visited the four largest factories without warning, and was shown every stage of the process, and satisfied myself that there is certainly no doctoring of the tobacco at any of the four establishments.

HOW TURKISH TOBACCO IS GROWN.

No first-class tobacco is grown in Egypt, and the Egyptian cigarettes now smoked all over the world are made from *Nicotiana glauca*, *N. glauca*, *N. glauca* (Dunal), and *Nicotiana glauca* (Linn.), of which the finest plants are grown at

Yenidje and Cavalla. The Egyptian merchants, who are all Greeks, maintain that they buy the best of the crops, and ship the produce off to Cairo to avoid the monopoly of the Tobacco Regie, the remainder being sold by the Regie. The proper time for sowing in Turkey is in December; goat's manure on the land gives the best perfume ultimately, and the delicate plants must be protected by matting from cold and snow. In April the seedlings are transplanted; and in August the leaves are ready to be gathered. The quality varies according to the part of the plant from which leaves have been taken; the lowest are rank and very inferior; the small upper leaves furnish tobacco of the best quality, and the middle leaves mixed with a percentage of the smallest constitute afterwards the cheapest varieties of cigarettes. The gathered leaves are therefore kept in three lots, and when they have been well dried in the sun, they are pressed and made up into bales of not less than 100 lb. Before pressing the leaves they must be slightly damped by water in Smyrna, but this is not necessary in Yenidje, and Cavalla. The two great points to strive for are colour and scent, and these are dependent on careful picking, seed, and climate. The seed ought to be renewed every second year. The Cairo merchants buy the bales on the spot about March or April, carefully sort the leaves again, and then ship them to Alexandria after they are once more dried, so that they may be ready for use in Cairo the following October.

CIGARETTE MAKING IN CAIRO.

The bales are opened as required, and the various leaves mixed so that four different priced qualities result, the best kind being that in which there is the least Smyrna tobacco and the least percentage of large leaves. If cigarettes are made exclusively of the best leaves, which are light yellow-brown in colour and measure only four by two inches, the aroma is very pleasant, but the smoker gets a headache after about five of them. The middle leaves, when dry, measure about seven by four and a half inches, and the lowest leaves of all are considerably larger. Cairo air is so dry that the leaves must be damped with water here before being cut; but in Alexandria this is not necessary. English-made machines cut up the leaves, and on the following day the cigarettes are rolled by Greek, Syrian, or Jewish workmen. A clever workman can roll as many as 1500 a day. The cigarettes are then carefully overhauled by an expert, left a week to dry, and then packed in tin boxes ready for sale. They should of course be smoked directly, instead of being kept, as is too often the case in England. So much for the tobacco; now for the paper. All large Cairo firms employ one kind of paper only, which is made by a half-English company at Fiume, near Trieste. It comes to Alexandria in foolscap sheets, and is there cut up to the required size. It is not known how it is made, or whether it is chiefly rice straw; but the merchants here all vow that it is the best they can get. If one is right in suspecting the paper instead of the tobacco, it might be well to try to get cigarettes rolled in tobacco leaves instead of paper. The only other ingredient left to consider is the starch for joining the paper. This is used with a thin stick by the men who roll the cigarettes. I may say that each workman is allowed to smoke as many cigarettes (say forty) as he likes during his work, and is presented with ten every night to take home with him. The first establishment that I visited only came into being five years ago, but now it has three branch shops in London, and one in Bombay, Berlin, and New York. The proprietors sell only 1 per cent. of their cigarettes in Egypt, but export 600,000 a week to England, besides 400,000 weekly to India, Europe, China, Australia, &c. My second visit was paid to a well-known purveyor, who exports 250,000 a week to England alone, where I saw 100 men rolling cigarettes and bales full of the best tobacco leaves. At the third house I was shown several bales of Jobeck tobacco from Yenidje. This consists of specially selected leaves, and is the finest possible from Turkey. This proprietor sends about 125,000 every week to England. My fourth visit was to a man whom I had never heard of before, but who was keenly alive to the correspondence in the English newspapers. He sends every week more than 80,000 cigarettes to England, and a greater quantity to Germany. Although in a smaller line of business than the others, he gets his leaves and his papers from the same spots as his competitors. There are, of course, many other reputable establishments in Cairo besides

these four, which, as I have shown, supply every week 1,000,000 cigarettes to England alone, and about the same number to other parts of the world. My opinion is that no opium or other drug is mixed with the tobacco, and even in hasheesh dens the devotee buys a bit of the cannabis indica extract and mixes it himself with the tobacco. In conclusion, one practical hint from a wise old Oriental who smokes seventy or eighty cigarettes a day, his wife smoking almost as great a number. Always use a cigarette holder, and in the holder a tiny plug of cotton wool previously dipped in lemon juice and changed every time with the cigarette.

Cairo, Sept. 9th.

OPENING OF THE YARMOUTH HOSPITAL.

THE new hospital at Yarmouth, to take the place of the one founded in 1838, was opened on the 20th inst., Sir James Paget, Bart., being requested, as one who had received his early professional training in the institution, to perform the ceremony. Sir James, in the course of his remarks, said that it would have been very difficult at any time to have had a greater honour bestowed upon him than had been conferred that day by his being asked to open the new hospital. He was one of the Yarmouth medical students, and he began to study there fifty-eight years ago. None of his fellow students were alive now, and none knew so well as he did the medical and surgical history of Yarmouth. The hospital was based upon charity, and there could not be a charity greater than that of taking a poor man suffering from injury or some dangerous disorder and placing him in a condition most favourable for the preservation of his life and his restoration to health. This was the very essence of charity, and this is what they now proposed to provide in a better manner than it had been provided before. But this was only a very partial view of a hospital's charity and good work, for as they provided in this manner for the poor, so they provided for the rich; for they showed the rich what were the very conditions best for health, and how in their own sickness or accidents health might be best obtained. It had been his happiness to be associated with the largest and oldest—and, as he said, the best—hospital in the kingdom, St. Bartholomew's, and he had said repeatedly that the provision for the poor there was such as could not be obtained by the rich unless the patient had an income of at least £2000 a year. The poor patients had the best diet, the purest atmosphere, the best medical attendance, and, above all things, a constant resident medical attendant never absent, and the best possible forms of nursing. These were conditions that could not be commanded in any private house. Hospitals possessed the very best methods of regaining health that existed at the present time, and, so far as he had seen of the Yarmouth Hospital, it would be a blessing to the town and surrounding district. More than this, hospitals such as he had opened that afternoon were the very best places in the world for medical teaching. The physician or surgeon had to do all his work in public; the whole of his work was liable to be watched and criticised by those who were able to judge whether he was doing right or wrong, and sometimes by critics who did not know whether he was right or wrong. There was no better place to begin a medical education than in a hospital in a small locality, for then the most minute attention could be given to the cases under treatment. Sir James then referred to the fact that in his youth Yarmouth was a great school for medical teaching, and one of the best in the kingdom in which men had begun the study of medicine. Yarmouth and Norfolk formed the great school of botany under the late Sir James Smith, a Norwich man, and Mr. Palgrave was one of his (Sir James's) first teachers of botany. Sir William Hooker, Lindley, and other distinguished men belonged to the same school; and he regarded botany as most important to the student in medicine. Then, again, they found Yarmouth partaking in the work of Norfolk in the great school of art. In his young days he remembered old Crome, young Crome, Stark, Cotman, Vincent, and others who had made themselves famous; while in the school of Surgery they had Martineau, Crosse, and Dalrymple. In conclusion, Sir James said it behoved the medical staff of the new hospital to maintain the medical reputation achieved by Yarmouth in the past, and if they were disposed to give their hearts to their profession and

study hard, the prosperity of the hospital would be assured. "Prosperity to the hospital" was not a mere sentiment; it should take the form of an earnest prayer that by God's blessing the institution might have the greatest prosperity, and then they should make a clear and distinct personal vow that the hospital should prosper.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Islington.—In reporting on the health of the parish of St. Mary Islington for the year 1887, Dr. Meymott Tidy gives the birth-rate as 28.9 and the death-rate as 16.0 per 1000, the latter rate being the lowest to be found in the records of Islington. Zymotic diseases were somewhat excessive, this being chiefly due to 331 deaths from measles. Scarlet fever was also epidemic, 588 attacks and 63 deaths having been recorded. Adverting to this disease, Dr. Tidy expresses an opinion which many will read with astonishment. He strongly deprecates the forced removal of very young children to hospital when suffering from this disease; and, in stating his objection to such isolation, he says that if we live long enough we shall all sooner or later, with few exceptions, be sure to have this disease, and perhaps at an age when it will be less convenient and more dangerous to suffer from it. Surely Dr. Tidy cannot have forgotten that the age predisposition to this disease, both as regards attack and death, does not justify such a view; and yet we find that he expresses surprise that in the epidemic he is considering a larger number of adults were not attacked. By far the largest amount of isolation carried out by sanitary authorities in this country is that of young children suffering from scarlatina. In Islington hospital treatment seems to have had advantages apart from mere isolation, for the rate of mortality in hospital was 4.6, whereas that amongst those treated at home, in so far as they were heard of, reached 16.3 per cent.

Sunderland Urban District.—In submitting his report for the year 1887, Mr. A. E. Harris gives an interesting summary of a report on the sanitary state of Sunderland in 1843, and he is thus enabled to point out the respects in which the borough has made sanitary progress, and those matters which still remain much as they were after an interval of forty-five years. The methods of dealing with the filth and refuse of the population have, in the interval, undergone vast improvement, whether the solids or the liquids are considered. Between 1882-85, during a rapid increase in the population, the death-rate of Sunderland reverted to one of the worst stages in its sanitary history; but great efforts were made to cope with the conditions which brought this about, and the rate during the past two years has been 19.5 and 19.7 per 1000 respectively. Much has been done to reduce the evils of back-to-back houses, narrow streets, and general crowding of dwellings on area; and with the opening up of areas needing improvement other changes conducive to health and decency have been brought about. Sunderland has done a good deal in connexion with the prevention of infectious diseases, and an excellent new hospital has only just been created by the corporation in order the better to control such diseases, this institution having been found necessary on account of the very proper unwillingness which the independent poor have exhibited to removal to the workhouse hospital when the old borough sanitary hospital was full. We trust that Mr. Harris's fear, that the hospital may not be fully equipped and furnished, will not be realised, for the experience derived from other hospitals is that such unreadiness results either in failure or in unnecessary expense on the occurrence of a panic. Small pox was fortunately absent from Sunderland during 1887, but Mr. Harris takes the opportunity to urge people to protect themselves against this disease in advance, and he refers all who may have any fears or doubts on the subject to Dr. McVail's excellent work entitled, "Vaccination Vindicated." The general sanitary report, the appended tables and statistical records, and the excellent disease chart go, amongst other things, to show that all the circumstances calculated to influence health in the borough

are carefully looked into, and the method of reporting adopted is eminently that which is calculated to do good, and to ensure a complete sanitary history of the district under review.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5509 births and 3242 deaths were registered during the week ending Sept. 22nd. The annual rate of mortality, which had been 17.8 and 17.7 per 1000 in the preceding two weeks, rose last week to 18.0. During the first twelve weeks of the current quarter the death-rate in these towns averaged but 16.8 per 1000, and was 4.2 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 11.1 in Bristol, 11.4 in Huddersfield, 11.7 in Oldham, and 13.9 in Brighton. The rates in the other towns ranged upwards to 24.7 in Sheffield, 25.8 in Salford, 27.6 in Manchester, and 27.8 in Preston. The deaths referred to the principal zymotic diseases, which had been 638 and 622 in the preceding two weeks, further declined last week to 544; they included 325 from diarrhoea, 61 from whooping-cough, 50 from measles, 40 from scarlet fever, 38 from "fever" (principally enteric), 29 from diphtheria, and only 1 from small-pox. The lowest death-rates last week from the aggregate of these zymotic diseases were recorded in Bristol, Nottingham, and Huddersfield, and the highest rates in Leicester, Sheffield, Cardiff, and Preston. Diarrhoea showed the greatest mortality in Cardiff, Bolton, Sheffield, Leicester, and Preston; whooping-cough, in Birmingham, Bolton, and Norwich; scarlet fever, in Salford and Blackburn; and "fever" in Portsmouth, Brighton, and Cardiff. The 29 deaths from diphtheria included 24 in London and 2 in Manchester. Small-pox caused one death in Hull, but not one in London or in any of the twenty-six other large towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital did not contain a single small-pox patient at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 850 at the end of the week, against numbers increasing in the preceding four weeks from 774 to 826; 115 cases were admitted during the week, against 79 and 93 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 130, 148, and 184 in the preceding three weeks, declined last week to 184, and were 21 below the corrected average. The causes of 50, or 1.3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Bradford, Salford, and in seven other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Liverpool, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16.0 per 1000 in each of the preceding two weeks, rose to 17.3 in the week ending Sept. 22nd; this rate was 0.7 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged last week from 9.8 and 12.8 in Leith and Perth, to 19.2 in Glasgow and 27.0 in Paisley. The 436 deaths in the eight towns showed an increase of 21 upon the number in each of the previous two weeks, and included 29 which were referred to diarrhoea, 10 to measles, 6 to scarlet fever, 6 diphtheria, 4 to "fever" (principally enteric), 2 to whooping-cough, and not one to small-pox; in all, 57 deaths resulted from these principal zymotic diseases, against numbers increasing in the preceding four weeks from 42 to 55. These 57 deaths were equal to an annual rate of 2.3 per 1000, which was 0.7 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 16, 25, and 29 in the preceding three weeks, was again 29 last week, and exceeded the number in the corresponding week of last year by 1; 15 occurred in Glasgow, 7 in Edinburgh, and 3 in Dundee. The fatal cases of measles, which had been 8 and 4 in the previous two weeks, rose last week to 10, and included 8 in Paisley and 2 in Glasgow. Of the 6 deaths from scarlet fever, an increase of 2 upon the number in the

previous week, 4 occurred in Glasgow and 2 in Dundee. Four of the 6 deaths referred to diphtheria were returned in Edinburgh, and two of the 4 deaths from "fever" in Paisley. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 71 and 69 in the previous two weeks, rose last week to 81, and exceeded by 19 the number in the corresponding week of last year. The causes of 51, or nearly 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 21.7 and 19.4 per 1000 in the preceding two weeks, further declined to 18.5 in the week ending Sept. 22nd. During the first twelve weeks of the current quarter the death-rate in the city averaged 19.7 per 1000, the mean rate during the same period being 16.2 in London and 15.6 in Edinburgh. The 125 deaths in Dublin showed a further decline of 6 from the numbers in the preceding two weeks; they included 18 which were referred to diarrhoea, 3 to "fever" (typhus, enteric, or ill-defined), 1 to scarlet fever, 1 to whooping-cough, and not one either to small-pox, measles, or diphtheria. Thus 23 deaths resulted from these principal zymotic diseases, against 21 and 18 in the preceding two weeks; these were equal to an annual rate of 2.4 per 1000, the rate from the same diseases being 2.3 in London and 2.4 in Edinburgh. The deaths attributed to diarrhoea, which had been 7, 12, and 10 in the previous three weeks, rose last week to 18, and exceeded the number in any previous week of this year. The 3 deaths referred to "fever" showed an increase upon the low number in the previous week. Two deaths from violence and 4 inquest cases were registered; and 31, or a quarter, of the deaths occurred in public institutions. The causes of 17, or more than 13 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

THE QUEEN v. GLOSTER.

To the Editors of THE LANCET.

SIRS,—As I went to London to give evidence in the above case, at the earnest request of Dr. Gloster's friends, and as the abrupt termination of the trial prevented any witness for the accused being examined, I think, in justice to Dr. Gloster, I should state what the nature of my evidence would have been. I should have stated that I had known him for years, and that I believed, from my knowledge of his high moral character, that it was most improbable that he could be guilty of the crime imputed to him. That, in addition to his general professional education, which was of a high standard, he being an A.B., M.B., and M.Ch. of the University of Dublin, he had studied midwifery and gynaecology in the Rotunda Hospital; and had, in consequence of his industry and attention, been awarded by me a special certificate in gynaecology. That, assuming Dr. Gloster had from some motive been induced to attempt the production of abortion with criminal intent, it is impossible to suppose a man of his standing and superior education would have done this in such a bungling manner, for the instrument used never entered the cavity of the uterus at all; it had penetrated the cervix, just inside the lip of the os uteri, and had been forced upwards through the substance of the uterus, till it emerged into the cavity of the peritoneum near the fundus, thus producing a wound quite two inches long. A piece of cotton wadding of considerable size was found in the peritoneal cavity; this had evidently been forced through the wall of the uterus, and must have enveloped the point of the instrument used. The uterus was found, at the post-mortem examination, to be perfectly healthy and unimpregnated. Dr. Gloster, further, must necessarily have been supposed to be so ignorant of his profession as to mistake an unimpregnated uterus for one in the fourth month of utero gestation, and this in a very thin woman on whom the bimanual method of examination could be easily practised. I am of opinion, from all the facts of the case, that the attempt to induce abortion was made by an unskilled

hand, or more probably by the patient herself. The rib of an umbrella found in her room might have been the instrument used; and it should be borne in mind that the muscular tissue of the uterus bears rough treatment without its producing pain. I have frequently used the thermo-cautery freely to the cervix uteri without causing the patient any pain. Though not medical evidence, it is but right to add that no motive was imputed which could explain why a man in Dr. Gloster's position could have been supposed to attempt the crime alleged against him. He attended this woman's child five years ago in some trifling illness, and from that day till the month of June last, when she called on him and requested him to induce abortion, he had admittedly never seen her or any of her family, and she was so poor as to be unable to pay a fee—indeed, it was admitted that no money had been offered.

I am, Sirs, yours obediently,
Merrion-square, Dublin, Sept. 28th, 1888. LOMBE ATTHILL.

"TREATMENT OF THE INSANE."

To the Editors of THE LANCET.

SIRS,—There is one point that occurs to me, on reading the admirable leading article on the above subject in THE LANCET of Sept. 22nd, which I would like to direct particular attention to, the more especially as the point in question is probably not unconnected with the series of horrible crimes, homicidal and suicidal, which have recently shocked readers of newspapers almost daily. The point is suggested by the consideration of two paragraphs. The first is a quotation from *The Times* article, which reads as follows: "The truth is that the progress of knowledge more and more indicates that insanity is simply a disease subject to the same physical conditions as other diseases." The second paragraph, quoted from THE LANCET leading article, immediately follows the other in these words: "If this quasi-definition of insanity be true, there is nothing to prevent the lunatic from driving to the nearest hospital (which term, of course, is intended to imply hospitals for the insane or asylums generally) for treatment just as the patient suffering from colic or renal disease does. What further use is there for the trouble-giving certificate of insanity," &c.

Unfortunately, Sirs, this is exactly what the desponding and often self-conscious sufferer from incipient mental disorder cannot do under the existing law, however much he may be inclined voluntarily to place himself under care and treatment. The law requires that such a sufferer, unless he has within the previous five years (a very unlikely condition under the circumstances referred to) been certified as insane, must now undergo the ordeal of certification before he can be received; and even if he is willing to submit to this, as not unfrequently happens, a new difficulty arises, for he cannot find medical men who are able or willing to certify him. He is thus of necessity, and against his own wish, left uncontrolled to the influence of his own disordered senses, often with disastrous results either to himself or others as long, as I, and I suppose many other alienist physicians, are only too well cognisant of. Surely there is no good reason why any person wishing to place himself under care and treatment voluntarily should not be allowed to do so, especially if the consent of the Commissioners in Lunacy or Visitors is previously obtained.

I am, Sirs, your obedient servant,
West Malling, Kent, Sept. 24th, 1888. JAMES ADAM, M.D.

VISITING PHYSICIANS FOR ASYLUMS.

To the Editors of THE LANCET.

SIRS,—In quoting the opinion of a writer who in a contemporary advocates the introduction of visiting physicians in asylums, and who probably writes without knowing what he is writing about, you are surely raising a question which has long since been settled.

The proposal to appoint visiting physicians is by no means a new idea. There are now in existence in England several asylums in which the system has been tried and given up, and there is still one English county asylum where a venerable remnant of an exploded fallacy still remains. In Ireland visiting physicians abound; but no one will venture to say that, in rendering assistance,

medical, moral, or scientific, they have been proved to be a success. The old asylums which arose out of legislation early in this century all started with a staff of visiting officers; and it is rather curious to note the fact that it was while such persons flourished that the glorious games of restraint, seclusion, ducking, rotating, chaining, manacling, and caging were so freely indulged in. It was as the *resident* medical officer at Hanwell that Conolly began his work as a reformer; and his philanthropic scheme was all but completed before he became, as he afterwards did become, the visiting physician. Tell me, Sirs, can as many names of visiting physicians be found who have made a mark in the scientific investigation of insanity as would cover the five digits of a hand? Look at the progress which has been made in the last thirty years, and say how much is due to visiting physicians. It is very well, indeed, to talk about the need for visiting physicians, but where are they to be found? What especial advantages for training has an ordinary medical man over those who fill the chief offices in asylums? Who at present is, in fact, the visiting physician in a county asylum? The medical superintendent, of course. How has he reached that position? By severe training in a field which is exclusively restricted to a few. How many medical men within, say, thirty miles of any county asylum, who are not engaged in similar work, would venture to pit their knowledge and opinion against his? The visiting physician trick has been duly weighed in the scale of experience, and disposed of; and the day is far off when it will ever be heard of again.

I am, Sirs, yours faithfully,
Stapleton, Sept. 22nd, 1888. GEORGE THOMPSON, M.D.

SENSATIONAL PLACARDS INCENTIVES TO CRIME

To the Editors of THE LANCET.

"Segnius irritant animos demissa per aures
Quam quæ sunt oculis subjecta fidelibus, et quæ
Ipse sibi tradit spectator."

SIRS,—I have often, in the course of my daily rounds in the practice of my profession, been struck and impressed with the truth and justness of the above remarks of the Venetian bard, and it is with the view of obtaining your powerful aid and co-operation to modify, if not to suppress, the evil that I now address you on the subject of what appears to me a crying, and, if not checked, an increasing, mischief. I allude more particularly to my own district, where the practice exists of exhibiting to the public gaze, adorned with all the flaming adjuncts of the most gorgeous colours, the sensational scenes taken from the most sensational theatrical representations of the day, all life size, in most of which representations, if not in all, murder or suicide occupies a prominent part. If you could only observe, as I have frequently done, the greedy and anxious looks of the crowds who positively devour these representations, you would at once be convinced that they must have a most demoralising effect upon the minds and future conduct of those to whom they appear so full of interest; and when it is considered that the "imberbus juvenis cernens in vitium flecti" forms the greater part of the crowd of spectators, it must be evident what must be the effect of such representations, with which they are made so familiar, on the minds of this class hereafter. We all know the imitative habits of the young; and if these, which are only theatrical representations, are indulged in, the desire to see the original performances will be created, and when seen, as they will be without fail, the mind will become morbidly affected, and the ideas suggested by these representations will some day bear fruit and become developed in action. As a practical illustration of this imitative habit, I may mention that I was walking with a friend in Whitechapel, and we were looking at one of these representations, in which a curate was firing a revolver at (we will suppose) his rector in a churchyard. I said to my friend, "Depend upon it, this scene will suggest the idea, and will be imitated some day." And so it happened; for about a week afterwards the case occurred in which a curate actually cut the throat of his rector while he was in bed, though I believe the rector afterwards recovered from the injury. Having drawn your attention to the evil, I will endeavour to provide what seems to me a very simple and effectual remedy. I would suggest that, inasmuch as all indecent publications or prints which have an immoral tendency are prohibited, a

similar prohibition should be extended to all these representations, which, though perhaps not having, strictly speaking, an immoral tendency, certainly have a tendency to suggest and create deeds of violence of the worst description, and that as such they should not be allowed to be publicly exhibited, but should be submitted to the censorship of some responsible person in authority, whose written permission to exhibit theatrical or other scenes should be previously obtained.

I remain, Sirs, your obedient servant,
September, 1888. CORONATOR.

POISONOUS MUSSELS.

To the Editors of THE LANCET.

SIRS,—Mr. Permewan, in his report of a fatal case of mussel poisoning in THE LANCET of Sept. 22nd, states that he could find no reference of any value in the ordinary text-books on toxicology, and also that the coroner expressed his surprise at the absence of scientific knowledge as to these bivalves. Mr. Permewan is quite right as to the paucity of information in text-books, but, notwithstanding this, the subject has received much attention in Germany, and an extensive literature of quite recent origin will be found in Virchow's *Archiv*, vols. 102-3-4; *Berliner klinische Wochenschrift*, 1885-6; Brieger, "Ueber Ptomaine," Part 3; and elsewhere. Amongst the investigators are Virchow, Salkowski, Max Wolff, Lohmeyer, Brieger, Schmidtman, and several others whose names I cannot at present remember. The literature in question owes its origin to the occurrence of a wholesale poisoning by mussels which took place at Wilhelmshaven about three years ago. Dr. Schmidtman carefully observed and described the symptoms, which, together with the results of experiments on animals, showed that the poison was analogous in its action to curare. From a sample of the mussels obtained from the same locality Brieger isolated a ptomaine which he called "mytilotoxine" (from *Mytilus edulis*, the common mussel), and also, amongst other bases, betaine (oxycholine). There is a difference of opinion amongst authorities as to whether the poisonous mussels are or are not identical with the ordinary edible mussels. Virchow, Schmidtman, and Lohmeyer contend that the poisonous mussels have lighter-coloured, striped shells, yellowish soft parts, a sweetish, repulsive smell, and that they colour the water in which they are boiled bluish. The non-poisonous mussels have uniformly blacker shells, whiter soft parts, smell of sea-water, and do not colour the water in which they are boiled. Most zoologists, however—amongst whom are Schulze, v. Martin, and Möbius,—deny the existence of a poisonous variety, and attribute the differences in appearance to the age and surroundings of the bivalves.

The older view that the poisonous qualities were the outcome of incipient putrefaction is favoured by the statement of Schmidtman, that mussels grown in still water are liable to take on poisonous properties. This he proved by placing harmless mussels in the stagnant water of the docks at Wilhelmshaven; within fourteen days they developed poisonous qualities, but again became harmless on being placed in running water. The dock water was not in itself poisonous. Virchow also admits that some of the poisonous mussels lost their toxic properties after a four-weeks' stay in a sea-water aquarium. According to Wolff, the poison first appears in the liver of the mussel, but later on it pervades the whole of the soft parts. It is asserted that placing poisonous mussels for an hour or two in fresh salt water renders them innocuous. Mussels grown in harbours, docks, or basins are dangerous.

The subject of poisonous mussels was energetically discussed at several meetings of the Berlin Medical Society, condensed reports of which are contained in the *Berliner klinische Wochenschrift* for 1886.

I am, Sirs, yours very truly,
J. DIXON MANN.

Toxicological Laboratory, Owens College, Sept. 25th, 1888.

To the Editors of THE LANCET.

SIRS,—In reference to the fatal case of poisoning by eating mussels, stated in last week's LANCET by Mr. Permewan, I was informed by a fishmonger lately that those mussels which are poisonous contain a crab-shaped

substance attached to the interior of the shell. Those free of this parasite are quite safe to eat. I may also add that milk is considered an antidote to mussel poisoning, though in the case named, owing to the large quantity consumed, I do not suppose it would have been of any use.

I am, Sirs, yours faithfully,
Watford, Sept. 25th, 1888. JNO. WRIXON.

THE CONTAGIOUS DISEASES ACTS.

To the Editors of THE LANCET.

SIRS,—I am glad to see an indication in the pages of THE LANCET that there are some members of the profession who differ from you in your unqualified laudation of the late Contagious Diseases Acts. I have, since studying the question a few years ago, been of opinion that, although the Acts having for their object the lessening of the spread of venereal diseases were ones that all medical men must commend, yet that the method of their application was based too much upon the assumption that woman was the party who spread the disease, and must be the only one to suffer by law; men being under no penalty, and being allowed to propagate disease as much as they like. You say that it is possible for a woman to spread much more disease than a man. I think this assertion is open to question, for it is certain that a very small proportion of the men who have connexion with diseased women are themselves attacked by disease, whilst, from the physical conditions of the two sexes, it is much more likely for a woman to catch disease from a man than vice versa. As Mr. Benthall points out, the cases of congenital syphilis are mostly due to men infecting virtuous women, for prostitutes do not, as a rule, have any children. Your argument that prostitutes, earning their livelihood by prostitution alone, make themselves a special class quite distinct from the men who make use of them occasionally, is not of much value. It is simply a question of "demand and supply," and the men who create the demand are just as much a special class as the women who supply it. It is a mutual arrangement between certain members of the community, and, if any means are adopted by law to check ill results, both parties should be treated equally. It is the question of the degradation of the female sex by compulsory examination that has raised up nearly all the agitation against the late Acts. Women feel that it is unfair to them, and treats them as the only culprits. If men were liable to be compulsorily examined in the same manner much of the dissatisfaction of the female sex would disappear. It is, of course, a difficult matter to suggest precise methods of carrying into practice the principle that in any State regulation of vice men who support prostitutes should be liable to the same penalties as the prostitutes themselves; yet I feel certain that the British public, which at present looks at the question from a sentimental and not a medical point of view, will tolerate no such unequal laws as the late Acts. I also agree with Mr. Benthall that, if men were examined, it would diminish vice very materially. When prostitution is under State control, in course of years men forget that the primary intention of any such control was to diminish venereal disease, and they come to imagine that the women are provided for their safe gratification; whereas, if they were liable to a compulsory examination, it would remind them of this fact, and also act as a deterrent to many, for the male sex objects to be examined just as much as the female.—I am, Sirs, yours very truly,

September, 1888.

M.D. DURH.

MEDICAL EDUCATION IN FORMER DAYS.

To the Editors of THE LANCET.

SIRS,—I send you my last contribution to "Medical Education in Former Days." It is a copy of the proposals made to the Committee of Governors of St. George's Hospital by John Hunter's colleagues, and his remarks thereon. I will only add their opinions on lectures, from a reply by these gentlemen to Hunter's protest against the teaching at the hospital at that time, the greater part of which I have already forwarded to THE LANCET, and which appeared in your journal of July 3rd, 1886.

"On the subject of lectures, to take leave of this point which has been so much insisted on, we must declare our joint opinions, and they are incontrovertible. If they had been practical and contained principles

and rules founded upon judgement and experience, with a regard to the authority of others as well as our own, they would have been highly useful; if, on the contrary, they had leaned to physiology and experiment, with a contempt for all other opinions but their own, they would have been pernicious. The good, therefore, arising from lectures, unless under certain regulations, must be at least problematical."

I am, Gentlemen, yours obediently,

Sept. 22nd, 1888.

CHARLES HAWKINS.

"To the Committee (at St. George's Hospital) appointed to examine the Laws relative to the Surgeons' Pupils, and to consider of the best methods of Improving their Education."

"We, the undersigned, beg leave to make the following statement."

"GENTLEMEN,—In moving for the present Committee we have two principal objects in view; the one is a restoration, as far as may be useful, of the ancient discipline of the hospital respecting the surgeons and their pupils. The other is, the introducing such improvements for the purposes of instruction as are now, and have been for some time, adopted by hospitals of the first consequence. In the first place, therefore, as far as relates to themselves, they leave all such rules now existing as are not become useless, *in statu quo*, but they are of opinion that it will be indispensably necessary for the four surgeons belonging to this hospital to visit all their patients twice a week, and to be present themselves at the dressing of them once, and to visit them on the remaining days of the week as often as may be necessary. They further think that they ought to meet every Friday in consultation without being summoned, and that any defaulter ought to be reported to the weekly board, and from thence referred to a general court, to be dealt with for such breach of duty as they shall see proper; the surgeons being perfectly satisfied that such a regulation is of the utmost importance for the good of the patients; and that the close attendance of the surgeons is indispensably necessary for the instruction of the pupils. They wish also to have it resolved that no operation shall be performed but on extraordinary occasions, such as accidents, except on Mondays, Wednesdays, and Fridays, and that no summonses shall be sent out for that purpose. If any particular day is assigned for operations, as was formerly the practice, and is common now at other hospitals, the pupils are ready to attend on that day; but frequently discontinue or relax in their attendance on other days, and by that means are ignorant of many essential parts of that knowledge which can only be attained by a general attendance at an hospital. The pupils, therefore, should be taught that a sufficient knowledge of their profession cannot be acquired without a constant and daily attendance. They hope the Committee will determine that there shall be two hours allowed for the surgical business of the hospital—from eleven o'clock till one—that the dressings shall be finished at a quarter after twelve, and that the time that remains shall be apportioned for extra business if there be any. By extra business is understood the attendance on the board, on operations, on consultations, and the examination of morbid bodies. They hope the Committee will direct that every surgeon shall examine, or cause to be examined by some other surgeon of the hospital, the morbid bodies in the presence of all their pupils, of which notice shall be given on the preceding day unless there be a convenient time for the examination on the immediate day. We are further of opinion that it will be proper for the Committee to resolve that an operation shall be performed on a dead body, attended with explanations, or a lecture be given on some of the principal parts of surgery once a week by one of the surgeons in rotation during nine months in the year, and that *gratis*. We recommend it further to the Committee, and propose it as a matter of great utility, that they will direct that a book shall be kept by the house surgeon for the instruction of the pupils, wherein shall be entered the material cases, the admission of the patients, their treatment, and the event, together with the appearances on the examination of morbid bodies, that each pupil shall be allowed to take a copy of such entries at his leisure, and that Saturday in every week shall be set apart for that purpose. In the second place, respecting the pupils, we wish that the Committee will resolve that to whomsoever the pupils pay the fee for attending this hospital, they shall bring certificates of their having been bred up to the profession, and of their good behaviour, as till of late has been customary there, and in some degree the practice at other hospitals; that they shall be entered at the weekly board by the junior surgeon, and that they be told that if they do not comply with the rules enjoined them, they may be reprimanded or expelled without returning any part of the fee paid down on entering. This rule ought to be strictly enforced, as it will cause good behaviour and subordination, and prevent ignorant and improper persons from intruding themselves into the profession. We wish the Committee further to resolve that no pupil shall be entered for a less period than one year, or half a year, except during the time of war, when it may be necessary for young men destined for the sea or land service to get what knowledge they can, and such as the usual short notice will admit of. The last regulation, allowing the attendance of quarterly pupils, is of a private nature, and was never sanctioned by the board; it was first adopted in the time of war, and afterwards improperly continued, as it must be readily admitted that no material knowledge can be acquired within so short a space of time as that of a quarter of a year. We are further of opinion that it will be proper for the Committee to resolve that every pupil shall be considered as receiving his instructions from the hospital at large, and consequently under the care of all the surgeons alike. That no pupil shall be allowed to dress the patients unless he has attended the hospital three months. That no pupil shall be capable of being chosen the house surgeon unless he has been a dresser for six months, and unless he is at the time of his election a yearly pupil of the hospital. That they dress in turn, and according to seniority. That their time of attending the hospital shall be every day from the hour of eleven till one. That they shall be sent for in case of operations arising from accidents if they lodge within a reasonable distance. That no leave of absence shall be granted for a longer time than three months. That no pupil shall be allowed a certificate but in cases of strict attendance, and that it be applied for at the time of his leaving the hospital, unless he is absent on foreign service. Our first object, the restoration and the melioration of the ancient discipline of the hospital being thus effected and straightened by the addition of the rules above mentioned, we will pass to our second object, and consider the improved state of other hospitals, and compare it with our own as far as relates to lectures and the establishment of medical schools, which are now so universally prevalent, and which have been allowed and provided by the governors of other hospitals. In St. Thomas's and Guy's Hospitals, which are contiguous and united for common instruction and emolument, in St. Bar-

tholomew's and in the London, the whole course of lectures for the improvement of pupils in chirurgical and medical knowledge, except the lectures in Midwifery at St. Thomas's, which are not yet brought home, are concentrated within the verge of the respective hospitals. They consist of Midwifery, Surgery, the Materia Medica, with the Practice of Physick, of Chymistry, and Anatomy. The fees arising from an attendance on either or all are appropriated to the different professors only (for none are read *gratis*), and are not shared by either the physicians or surgeons belonging to the hospitals. The obvious advantage of such an arrangement is this, that the pupils designed for either profession have not only set before them a complete class of such lectures as they may choose to attend, but do not lose a very considerable portion of their time in the morning now appropriated to these pursuits, by running about perhaps at great distances from one lecture to another and to the hospital; always inconvenient, and sometimes impracticable. They have formed there a complete school, at each of which, with respect to the arrangement of time, it is a principal object amongst the surgeons, however the lecturers may divide theirs, that there shall be an allowance of two hours, from eleven to one, for the attendance of pupils at either hospital. The number of patients at St. Thomas's and Guy's is about 700, at St. Bartholomew's about 400, at the London Hospital about 140. As to fees for attendance—those for apprentices excepted, which are always private, as are those for the dressers, indeed, at the Hospitals of St. Thomas's and Guy's and St. Bartholomew's, and belong to their respective surgeons,—for dressing they pay £50 each or guineas for one year; for general attendance only, £25; for the half year, £18. The fees for the pupils at large are divided amongst the surgeons alike. They admit no quarterly pupils. At the London Hospital, where the patients are not so numerous as at our own, and the discipline the same with respect to pupils and dressers, they are higher by one-third in their price, and take quarterly pupils as we do. They receive 80 guineas for the year, 18 guineas for the half, and 12 guineas for the quarterly, compensating, we suppose, for the inferior number of their patients by the regularity and instruction of their school. With respect to our own hospital, the price for the yearly pupil is 20 guineas; for the half yearly, 15 guineas; for the quarterly, 10 guineas. We are then upon the lowest footing of all with respect to price. As to the attendance of our pupils on lectures, they have to go for their Anatomy to Windmill-street, for their Midwifery to Queen-street, Golden-square, for their Chymistry, Materia Medica, and Practice of Physick to Leicester-fields. There are other lectures likewise, we believe, but all a considerable distance from the hospital, and there is probably an hour and a half lost every morning in the course of this diffused attendance; and it is but seldom that three-quarters of an hour or an hour, and this at an average not above three or four times a week (by the dressers excepted), can be allotted for their chirurgical attendance at the hospital,—a space too short for acquiring this kind of knowledge, or even of any knowledge at all. The barely seeing operations in a theatre at a distance, half of which perhaps they will never be called upon to perform, is but a trifling advantage, but this in general is what they content themselves with; and hence it is that it is possible, and even probable, that they may pass through an hospital after a year of such attendance without acquiring any substantial knowledge at all. The mode of attending so many lectures at a time, and those crowded and compressed within the morning, cannot add much to this superficial knowledge. However, they are not under the necessity of attending them all, and it must be confessed that there is an advantage in having them all to choose from. A great part of this inconvenience you may remedy, by giving them the time they so much want; it will be giving them in reality a three years' attendance for one. To finish, therefore, this detail: it is obvious from the above statement, and comparing the course of improvement adopted by the different hospitals with our own, which has been hitherto simply chirurgical, and was at its first institution excellent, but is now become inferior from the causes we have explained, that we cannot stand our ground, and much less advance, unless the governors will give us leave to adopt the mode of discipline and instruction used by other hospitals whenever it shall be found superior to our own, and unless they give us leave likewise to bring home the different professors to the hospital as soon as they can be engaged; and, in one word, to permit us to act upon that extended plan which has been so wisely established and so fortunately executed by others.

"J. GUNNING.
WM. WALKER.
T. KEATE.

"May ye 27th, 1793."

"To the Chairman of the Special General Court, St. George's Hospital."

"MR. CHAIRMAN,—Having on most occasions been desirous of promoting the surgical education at the Hospital, my name not appearing to the present proposals may give an idea of my being less zealous than usual on that subject. I beg leave to say that this is not the case; but not having been consulted by my colleagues who drew them up, nor the Committee by which they were approved, my assistance has been supposed unnecessary."

"They certainly appear to me in many respects very incomplete, and in some altogether impracticable; but if they meet with the approbation of the governors, it is my business, as a servant of the charity, to do the duty of my situation. Your most obedient servant,

"Leicester-square, June 14th, 1793."

"JOHN HUNTER."

LIVERPOOL.

(From our own Correspondent.)

OPENING OF TWO HOSPITALS FOR INFECTIOUS DISEASES.

ON Saturday last two hospitals were opened by the Mayor of Liverpool in the presence of members of the City Council, medical practitioners, and others. Of these hospitals, one, known as the Netherfield-road Hospital, was built some years ago, and was supposed to be erected and provided in accordance with modern sanitary science. But such has been the progress of the latter that it was found necessary to reconstruct the hospital at an enormous ex-

pense. And this has been done under the direction of the Hospitals Committee of the Corporation. The other hospital, known as the Grafton-street Hospital, is a new structure, recently erected under the same authority. These two hospitals are for the reception of all infectious diseases except small-pox, cases of which will still be received in the Park-hill Hospital. The provision thus made, though very valuable, is no more than what is required in such a city as Liverpool, and an epidemic of scarlatina, typhus, diphtheria, or measles would probably necessitate the providing of additional hospital accommodation.

PRESENTATION TO MR. ROBERT HAMILTON, F.R.C.S. ENG.

During the proceedings the Mayor presented Mr. Robert Hamilton, chairman of the Hospitals Committee, with a solid silver key, gilded, with which to open the door of the Grafton-street Hospital. It has the following inscription: "City of Liverpool. Presented to Robert Hamilton, Esq., F.R.C.S., Chairman of the Hospitals Committee of the Corporation, on the occasion of the opening of the City Hospital, Grafton-street, Saturday, 22nd Sept., 1888." The reverse side of the key bears the city arms.

OUTBREAK OF SCARLATINA IN AN ORPHANAGE.

Scarlatina having appeared among the boys of the Seamen's Orphanage, the committee have very wisely resolved to postpone the annual sermons in the Chapel, although there is no cause for alarm. Still, the action of the committee shows a caution which the public will appreciate.

DEATH FROM IMMERSION.

A man jumped into the river while in a state of intoxication last Saturday night. He was rescued and removed to the receiving house, where he was attended to. He was then removed in a cab to the workhouse, but on his arrival there was found to be dead. He had been drinking heavily some weeks before his immersion, which probably accounted in great measure for the fatal result.

BURIAL REFORM.

A conference is about to be held in the Liverpool Medical Institution on the subject of burial reform, which was advocated from the pulpit on Sunday last by the Rev. F. Lawrence. During the present year many meetings have been held throughout the country with a view to inducing determined and united effort on the part of ministers of religion, members of the medical profession, sanitarians, and persons of influence generally, to put a stop as far as possible to the prevalent repulsive and utterly indefensible practice of storing up, in the neighbourhood of great populations, vast accumulations of human remains in every stage of arrested and prolonged decay. A memorial to the Home Secretary has also been drawn up, and will shortly be presented by an influential deputation, praying for an inquiry into the condition of cemeteries, and the mode of burial adopted, with a view to legislation.

Liverpool, Sept. 25th.

MANCHESTER.

(From our own Correspondent.)

ROYAL INFIRMARY.

By the resignation of Dr. Morgan, and the promotion of Dr. Ross to be physician, a vacancy has been caused for an assistant physician to the infirmary. There is no lack of candidates for this appointment, which will now shortly be made, but, in the face of recent very unexpected results in the filling of medical posts here, it is perhaps wise to abstain from giving any guess as to who the successful candidate is likely to be. One question in connexion with infirmary appointments, which for some time past had been the subject of considerable controversy, was settled at a special meeting of the trustees on the 14th inst.—namely, that of the physicians and surgeons holding any other hospital appointment in addition to that of the infirmary; and a resolution was carried almost unanimously, notwithstanding opposition from some of the medical staff, "That no assistant physician or surgeon appointed after Sept. 19th, 1888, shall, after becoming a physician or surgeon, hold any other hospital appointment." The infirmary has lately had several

welcome legacies, amongst them being £2000 under the will of the late Mrs. Platt, and £1000 from the residuary legatees of Sir Joseph Whitworth.

BENEFACTIONS TO MEDICAL CHARITIES.

In addition to the princely sums already announced to be devoted to public objects under the will of Sir Joseph Whitworth, upwards of £35,000 has lately been distributed to various charities &c., amongst these being £2000 to the Derby Infirmary, £2000 to the Clinical Hospital, £1000 to the Children's Hospital, Pendlebury, £1000 to St. Mary's Hospital, £1000 to the Ardwick and Ancoats Hospital, £1000 to the Salford Royal, £1000 to the Nursing Institute, £1000 to the Stockport Infirmary, and £500 each to the Lock and Southern Hospitals. Under the will of Mrs. Platt the Salford Hospital receives another £1000, and from the late Mr. Worrall Walker £1400. The theatrical company from the Avenue Theatre, London, with Mr. Arthur Roberts as the great attraction, conducted some athletic sports during their recent visit to Manchester, and as a result handed over £40 to the Children's Hospital and £5 10s. to the fund of the soup kitchen at Old Trafford.

SEWAGE SCHEME FOR MANCHESTER: OFFICIAL INQUIRY.

For nearly a fortnight this inquiry before the Local Government Board inspector has dragged its weary length along, with a large array of legal gentlemen, engineers, chemists, doctors, and other experts. The project is one which will, without doubt, have an important bearing upon the future health of the city, as its main *raison d'être* is the prevention of pollution of the Irwell and the future Ship Canal. It is proposed to construct, at a cost of nearly half a million of money, a system of enormous sewers, whereby the sewage shall be entirely diverted from the river and conveyed to Davyhulme, situate some miles below the city, beyond the boundaries of the township of Stretford: there it will be received into tanks and subjected to chemical treatment, whereby a large proportion of the solid matters will be precipitated; it will then be filtered through a certain quantity of land obtained for the purpose, and the resulting effluent is expected to be such as may be safely turned into the canal or river without nuisance arising therefrom. Considerable opposition is being made to the scheme by almost all the surrounding townships, chiefly, though, it must be said, because the corporation will not allow them to participate in the scheme unless they agree to become amalgamated with Manchester as parts of the city. One or two districts in the neighbourhood of the proposed works, however, raise objections on the ground of the nuisance that must, they say, be inseparably connected with the work, and the enormous amount of "sludge" to be constantly removed from the tanks.

RIVER POLLUTION AND SMOKE NUISANCE.

Considerable activity has been displayed by the Ship Canal authorities with a view to compelling the numerous sanitary authorities along the watershed of the river Irwell to take prompt steps to discontinue polluting the river. At a conference lately held between the directors and these authorities, it was stated by the chairman (Lord Egerton) that sixty-seven out of seventy-five local authorities had responded to the invitation to discuss this matter, so that it looks as though we are within a measurable distance of the time when our river shall be something better than an open sewer. At the same time, our local authorities are showing commendable activity in endeavouring, in some small degree, to purify our atmosphere. No less than seventeen offenders were summoned lately in one morning for permitting a smoke nuisance, and were fined in all nearly £40.

INFANT MORTALITY

Perhaps in few large towns does the subject of infant mortality show up worse than with us. The coroners for both Manchester and Salford are seldom a week without one or more cases of death from suffocation before them; and recently cases of the most shocking cruelty to little children, resulting in death, have formed the subject of inquiry in our police courts. How far the system of infantile life insurance, whereby the wretched parents obtain sums varying from £3 to £10 on the death of an infant, is responsible for this waste of human life, a special inquiry only can determine. But if half be true that has lately appeared in the local press, some startling evidence should be forthcoming from such an inquiry.

Sept. 26th, 1888.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE.

THE House Committee of the Royal Infirmary have unanimously adopted a vote of condolence with Mrs. Armstrong and family, in remembrance that Dr. Luke Armstrong was a member of the honorary staff for twenty-one years, first as assistant surgeon for two years, and afterwards as surgeon for nineteen years, and in both offices rendered valuable services to the institution. With reference, also, to Dr. Armstrong's death, a meeting of his professional and other friends was held in the library of the infirmary on Tuesday evening last, at which it was unanimously resolved that a memorial be raised whereby his memory may be perpetuated. The feeling of the meeting was in favour of a scholarship in the Newcastle College of Medicine, in which he always took such a deep interest, and for which he worked with so much zeal; but it was ultimately decided to leave the determination of the form of the scholarship to the Council of the College of Medicine. About £300 have been already subscribed.—The promoters of the Newcastle Hospital Sunday Fund have held their eighteenth annual meeting, the mayor presiding. The report showed that the total collections in 1887 amounted to £3744 (£299 less than in the previous year). Mr. R. H. Holmes, the hon. sec., and one of the originators of the fund, explained that the loss was in some measure more apparent than real, the infirmary authorities having made urgent appeals to the workmen asking them to pay their contributions to the institution direct. The church collections had, however, fallen off to the extent of £134. The infirmary representatives asked for exceptional treatment in the distribution of the funds, on the grounds that it deserved the thanks of the city for doing away with the "letter system," and, after some discussion, a committee was appointed to examine the whole question of distribution and to report. It should be remembered that in some of the minor but useful medical charities of the city the "letter system" has never been adopted, and it is to be hoped that their interests will be duly guarded by this committee.—A fatal fire, due to the upsetting of a paraffin lamp, took place on Friday night at Ashington, a large colliery village in the Morpeth district and about twenty miles from Newcastle. The lamp was standing on a table, and, when upset, its contents spread all over the floor and took fire, setting the house in a blaze. An alarm was raised, but before assistance could arrive the fire reached the upper part of the house, where two children, aged five and four, were sleeping; they were got out, but they had both perished in the fire and smoke.

SUNDERLAND.

The report of the Sunderland Infirmary has just been printed, which shows one point deserving of notice, and which is creditable to the workmen of the borough—namely, of the total subscriptions, amounting to £6467, no less than £2842 had been contributed by the workmen and their organisations. The Hartley Memorial Wing is approaching completion; this, and the taking over of the Children's Hospital, will give increased work and responsibilities to the honorary medical staff and other officials.—A public meeting was held in Sunderland last week under the presidency of the mayor, when Mr. Morgan moved, and Mr. Maling seconded, a motion, which was carried unanimously: "That the meeting, having heard of the proposal to establish a nurses' home for Sunderland, are of opinion that steps should be at once taken to carry out the proposal."

Newcastle-on-Tyne, Sept. 24th.

PRESENTATION.—The members of the Ladies' St. John Ambulance Classes, Driffield branch, Yorkshire, have just presented Dr. A. T. Brand with a handsome silver cigar case, in recognition of his honorary services as their instructor.

THE FLEMING HOSPITAL FOR SICK CHILDREN, NEWCASTLE-ON-TYNE, which is built on the north side of the Moor, is ready for formal opening; and the College of Medicine, adjacent to Northumberland-street, is approaching completion as a medical school in Newcastle.

EDINBURGH.

(From our own Correspondent.)

EDINBURGH WATER SUPPLY.

THE recent heavy rainfall has averted what in many of our large towns at one time threatened to be a serious water famine. Immediate danger is past, but the threatened danger has opened the eyes of the Edinburgh authorities to the fact that their water supply will probably very shortly be quite inadequate to meet the requirements of the rapidly increasing population of Edinburgh and its suburbs. Although somewhat extensive additions to the water-storage capacity were made in 1879 by the construction of the Moorfoot Waterworks, the present daily supply is only about 16,000,000 gallons; the daily consumption is, however, over 15,000,000 gallons, so that the margin is already sufficiently fine. It has been pointed out that during the last nine years the population has increased something like 29 per cent., whilst during the same period the consumption of water has increased more than 100 per cent. Should the population continue to augment at the present rate—and there is every reason to suppose that it will continue to do so—it is evident that the water supply must be increased, and that very materially. Those who remember the tremendous battle of the "lochs," which terminated in 1871, when the St. Mary's Loch scheme was defeated, may now recall the grounds on which the opposition to that scheme were based. The first of the reasons—that the scheme was too large for the requirements of the city—need not now be mentioned, as experience has settled that point against the objectors. It is to be hoped, however, that the experience so gained may not now be cast aside. The second objection was that the water contained "fleas," and, strange as it may appear, scientific men were found who were willing to state that the presence of these "fleas" rendered the water quite unfit for drinking purposes. The objectors to the scheme placarded the streets with elaborate diagrams of most wonderful monsters. "Drops of water magnified" so many thousand times were illustrated on walls and on boards carried by sandwich men, and the local newspapers had diagrams of the "St. Mary's Loch fleas." Some medical men contended that the water was full of organic matter, and others affirmed that no child could be allowed to take such water unless the parents were fully prepared that it should have an attack of "rickets." Party feeling ran extremely high, and the Town Council elections were decided entirely on the merits of the water question. After the question had been settled, many found that the St. Mary's Loch water was well fitted for the supply of Edinburgh, and that the agitation had been kept up in great measure by a very small party of malcontents. Now that the matter has come up again, those who have the health of the population at heart will do well to consider the question in the whole of its bearings. Let all the available sources of supply be carefully examined and reported upon, and then let competent authorities decide what is necessary for the welfare of Edinburgh. It is scarcely possible that a "bogey" flea can be made to do duty on the present occasion, but it is probable that a good many crotchet-mongers will take part in the discussion that must ensue before the question is finally settled.

POST-GRADUATE COURSE.

A considerable number of busy practitioners have arrived in Edinburgh to take part in the post-graduate classes which Professor Chiene and Dr. Muirhead have organised for this the third session. The first meeting in most of the classes was on Monday, the 24th inst., when the attendance was very fair indeed, though in some of the classes, especially in those where a special fee is charged, the rooms were not so crowded as in former years. One great advantage of the new arrangement is that men will attempt to cover less ground than before, but will cover it more thoroughly. From the enthusiastic manner in which the teaching staff, both of the University and of the Extra-mural Medical School, have entered into the work of preparation, and from the earnestness and activity of those who come to meet both old teachers and old friends, there is every promise that the third session will be productive of as good results as were either of its predecessors.

Edinburgh, Sept. 26th.

DUBLIN.

(From our own Correspondent.)

LUNATIC ASYLUMS REPRESENTATION.

His Excellency the Lord-Lieutenant, as mentioned on a previous occasion, has caused a communication to be sent to the boards of lunatic asylums throughout Ireland with reference to a new scheme giving these bodies a larger share in representation on the governing bodies of asylums than heretofore. The Corporation of Dublin, by a committee of the whole house at a meeting held last week, recommend that, so far as the Municipal Council are concerned, it would be satisfied with the power to nominate a number of governors of the board of the Richmond Lunatic Asylum bearing the same proportion to the total number of governors as the city contribution does to the total annual cost of the asylum. The committee also claim that the nomination of governors annually by the Council shall be absolute and final. I believe that the suggestions of the Corporation are premature, and that body, as I understand it, has no *locus standi*, inasmuch as the circular in question applies only to county asylums.

OPENING OF NEW WARDS AT THE MEATH HOSPITAL.

The "John Barber wing" and the "Bury wards" were to-day (Tuesday) formally opened by their Excellencies the Lord-Lieutenant and the Marchioness of Londonderry. About eighteen months since, a sum of £4500 became available from the estate of a gentleman named Barber, and the wing as now completed comprises two wards, each 70 ft. by 30 ft., light and ventilation being carefully attended to. The two lower landings contain the board-room of the hospital and a medical board-room, also apartments for the resident officials. Each ward contains sixteen beds, ten of which are permanently endowed by the "Bury bequest." Their Excellencies having arrived, a procession was formed of the stewards, nurses, medical and surgical staff, and members of the standing committee, which proceeded to the Bury ward. Viscount Powerscourt took the chair, and, having made a few introductory remarks, called on Mr. Ormsby, hon. sec., to read an address, and at the termination his Excellency replied, and formally declared the wards open for the reception of the sick poor. Sir George Porter moved, and Sir G. B. Owens seconded, "That the special and marked thanks of this meeting be hereby given to the Viscount Powerscourt for his kind and dignified conduct in the chair," and, being carried, their Excellencies were conducted by the Reception Committee and Sir William Stokes into the Children's ward, the Gervas Taylor ward, and the Grattan ward, and afterwards were shown the male and female accident wards, the operating theatre, and other portions of the institution.

POISONING BY OPIUM.

A lady was found insensible in Phoenix Park last week, and was removed to Steevens' Hospital, where she died the next day. She had taken a large quantity of laudanum with a suicidal intent, and, although every means at the disposal of the hospital authorities was used, including artificial respiration for seventeen hours, she remained unconscious until her death.

AN EXCISE PROSECUTION.

An apothecary residing near Dublin was last week summoned by the Excise authorities for having sold essence of ginger capable of being used internally as a medicine, in the preparation of which methylated spirit had been used, in contravention of the Act of Parliament. The minimum penalty (£25) was imposed, and the magistrate who tried the case recommended a further reduction.

Dublin, Sept. 25th.

PARIS.

(From our own Correspondent.)

ETIOLOGY OF TETANUS.

WHEN a few years ago Dr. Gustave Richelot wrote his thesis for the "Agrégation," he upheld the nervous origin of tetanus, which was then the reigning opinion in the profession. Professor Verneuil, who lately introduced a

different theory, was also a "neurist" at that time; but since then things have changed, and from our knowledge now of infectious agents, and of their evolution in the organism, the arguments lately furnished are decidedly in favour of the infectious and contagious nature of tetanus. But whilst admitting this, Dr. Richelot is not in accord with Professor Verneuil and others as to the equine origin of tetanus. In support of his view of the subject, Dr. Richelot recently made a communication to the Academy of Medicine in which he related the cases of two young women, aged respectively twenty-one and twenty years, who were admitted into his ward at the Hôpital Tenon, and who were operated on for a salpingo-ovariitis at an interval of about three weeks. The first patient underwent the operation on June 15th, and, without any incident, was affected seven days later with tetanus, which carried her off in forty-eight hours. At the necropsy all the organs were found healthy. It was difficult to trace the source of the infection. One circumstance, however, struck Dr. Richelot—namely, that from June 16th to June 19th some manure which was in the hospital courtyard was turned up and spread out on the flower beds. The operation on the second patient took place on July 5th. On the 11th she was suddenly seized with acute pain, arising from a sort of aura on the left side of the abdomen. At the same time she was affected with a sore throat, trismus, and tonic convulsions. The patient succumbed on the 13th—that is, two days after. At the necropsy nothing abnormal was found. Dr. Richelot considers this second case of tetanus as being the consequence of the first. And yet every antiseptic precaution was taken, and the room reserved for laparotomies only was thoroughly disinfected. In spite of these precautions, a toxic agent had been transmitted from one to the other. How the transmission took place it was difficult to say. It nevertheless resulted from these two cases, in placing them in juxtaposition, that tetanus was an infectious and contagious malady; but what the horse had to do with it in the present case he could not see. He then cited the observations of divers naval surgeons reporting cases of tetanus occurring in conditions where the horse could not easily be implicated; but, observed Dr. Richelot, as this source might exercise its influence in different ways, and as the duration of its influence was absolutely unknown, researches in that direction would prove of the highest interest.

ELECTRICAL TREATMENT OF INTESTINAL OCCLUSION.

At a recent meeting of the Academy of Medicine, Dr. Larat read a note on the treatment of intestinal occlusion by electricity. According to the author, galvanic electricity of the intestine deserves to be employed in all the cases of occlusion where medical means had failed, and where the obstacle has become insurmountable by the action of purgatives. Moreover, purgatives are useless when the intestine is impermeable, and become injurious in exciting vomiting, which would aggravate still more the condition of the patient. Dr. Larat says that it is essentially of importance not to lose time, and that electricity should be employed as early as possible: in the first place, the procedure would have a better chance of success; and, secondly, if it should fail, surgical intervention would still be possible and have some chance of success. One application of electricity only is often powerless to obtain movement of the bowels; four or five sittings on an average are necessary, and at intervals of several hours. Of sixteen cases, Dr. Larat removed the occlusion of the intestine by electrification in ten.

MORTUARIES.

In a note forwarded to the Academy of Medicine, Dr. Bénard of Saint-Germain-en-Laye, in referring to precipitated inhumations, indicated one only certain sign of real death—viz., cadaveric decomposition. In order to prevent a person being interred alive, the author proposes, as Tardieu had already done more than thirty years ago, the creation of mortuaries. These mortuaries should be established, as much as possible, in the proximity of the centre of each quarter, in a separate building, and to each of them should be annexed an apparatus of disinfection by hot air, to which the body and bed linen of the deceased patients should be submitted.

THE ARCACHON MARITIME SANATORIUM.

On Sunday last the Maritime Sanatorium at Arcachon, due to the initiative of Dr. Armaingaud, of Bordeaux, was inaugurated in presence of the official authorities of the

Department, at which ceremony Dr. Gavarret, of Paris, and several medical men were also present. The sanatorium is intended for rachitic and scrofulous children, for which the climate of Arcachon is well suited.

Paris, Sept. 25th.

THE SERVICES.

ARMY MEDICAL STAFF.—The promotion of Surgeon-Major Robert William Troup, M.B., to the rank of Brigade Surgeon, which was notified in the *Gazette* of July 10th, 1888, is cancelled; Surgeon-Major Robert William Troup, M.B., is granted retired pay (dated Sept. 26th, 1888); and Surgeon Arthur Charles James Rudd Lundy, M.B., retires from the Service, receiving a gratuity (dated Sept. 26th, 1888).

MADRAS MEDICAL ESTABLISHMENT.—Brigade Surgeon William Howland Roberts, M.D., to be Deputy Surgeon-General (dated July 1st, 1888); and Surgeon-Major Lewis Charles Nanney, to be Brigade Surgeon (dated July 1st, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon and Honorary Surgeon-Major Wm. Harford Glover Phelps, M.D., 3rd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry), to be Surgeon-Major, ranking as Lieutenant-Colonel (dated Sept. 26th, 1888); Surgeon Patrick Kynoch, to be Surgeon-Major, ranking as Lieutenant-Colonel (dated Sept. 26th, 1888); Acting Surgeon James Moir, 2nd Volunteer Battalion, the Royal Scots Fusiliers, to be Surgeon, ranking as Captain (dated Sept. 26th, 1888).

VOLUNTEER CORPS.—*Rifle*: 1st Volunteer Battalion, the Prince of Wales's Volunteers (South Lancashire Regiment); Joseph Adams, M.B., to be Acting Surgeon (dated Sept. 22nd, 1888).

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon John N. Stone, to the *St. Vincent* (dated Sept. 30th, 1888), and Staff Surgeon Thomas D. Gimlette, to the *Brilliant*, additional, temporarily (dated Oct. 1st, 1888).

Obituary.

REV. DR. FLOOD.

THE death is announced of the Rev. Dr. Flood, who was for some years in practice as a surgeon at Leeds, but who afterwards took orders and was appointed to the living of Beaminster, in Dorset. In 1852 he was appointed to the benefice of St. Matthew's, Leeds, a post which he held for twenty-eight years, during which period he was for nine years member of the Leeds School Board. In 1880 he succeeded Canon Duckworth as vicar of St. Mark's, Hamilton-terrace, London, on the nomination of Lord Beaconsfield, and subsequently Lord Selborne presented him to the living of Dinton, in Buckinghamshire, which he retained up to his death. Dr. Flood, whose honorary degree was conferred by the University of Cambridge some fourteen years ago, began to show signs of failing health a few years since, but it was only during the last month that the internal ailment from which he suffered obtained a serious mastery, and under it he rapidly sank. Dr. Flood leaves a widow and seven children—two daughters and five sons.

Medical News.

ABERDEEN UNIVERSITY.—At a meeting of the Aberdeen University Court held on Sept. 24th, the following were appointed for one year as extra-professional examiners in Medicine: W. D. Halliburton, M.D. (London); D. Lawson, M.D. (Hull); Robert W. Philip, A.M., M.D. (Edinburgh); W. Robert Smith, M.D. (London); Seymour Taylor, M.D. (London); and F. Buchanan White, M.D. (Perth). It was unanimously resolved to minute that there is no implied understanding that in future the medical extra-professional examiners are to be continued as a matter of course for more than one year. At the same meeting the Court took up considera-

tion of the applications which had been sent in for the chair of Chemistry, vacant by the retirement of Professor Brazier. There were in all nineteen candidates. After lengthened deliberation the Court resolved to meet on Tuesday, 2nd proximo, for the purpose of making the appointment.

THE treasurer of the Leeds Infirmary announces that the £30,000 considered absolutely necessary for the extension project of that institution have been subscribed.

A SUCCESSFUL meeting in furtherance of the objects of the British Nurses' Association was held on the 19th inst. in the Board-room of the Sheffield Hospital.

MEDICAL MAGISTRATE.—Dr. Percy John Rendall, assistant colonial surgeon, has been appointed Justice of the Peace and Commissioner of the Court of Requests for Gambia.

ST. GEORGE'S HOSPITAL.—The prizes will, by permission of the governors, be distributed in the Board-room on Monday, Oct. 1st, by Professor Humphry, F.R.S., after the conclusion of the introductory address.

AT a special meeting of the Camberwell Guardians on the 17th inst. formal resolutions sanctioning the building of the first block of the new workhouse infirmary at an estimated cost of £14,000 were agreed to.

LORD ARMSTRONG opened on Wednesday the Fleming Memorial Hospital for Sick Children, Newcastle, which has been erected by Mr. John Fleming, in memory of his wife, at a cost of £23,000.

DR. FREYER, a civil surgeon in the N.W. Provinces of India, has received a fee of £10,000 in recognition of his successful treatment of the Nawab of Ranpur and General Azimudeen Khan, the largest fee probably ever received by a medical man.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ARNOLD, R. ORLANDO, L.F.P.S. Glas., L.S.A.I., Porthleven, Cornwall, has been appointed Medical Officer and Public Vaccinator for the Sithney District of the Helston Union, vice Walter Wearne.

BUCK, JOSEPH, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glas., has been appointed Resident Assistant Medical Officer to the Union Infirmary, Leeds.

FIELDEN, W. E., M.D. Lond., M.B., M.R.C.S., L.S.A., has been appointed Honorary Surgeon of the Chesterfield Hospital, vice Walker, resigned.

FOSTER, R. H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Knowle District of the Solihull Union.

MACGREGOR, ALASTAIR, M.B. and C.M. Edin., has been appointed Medical Officer for the Fulston District, Huddersfield Union.

MOORHEAD, G. A., M.K.Q.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Tullamore Dispensary District, vice Bidley, deceased.

NEALON, J. A., B.A. Qu. Univ. Irel., M.D., M.Ch. Roy. Univ. Irel., has been appointed Medical Officer for the Desford District, Market Bosworth Union.

REID, THOMAS, M.D., Lochmaben, has been appointed Medical Officer of Health, Parochial Medical Officer, and Vaccinator for the Parish of Kirkmichael, Locherbie, N.B., vice J. M. Davidson, resigned.

SHAW, HUGH GROSVENOR, L.R.C.P., M.R.C.S., has been appointed Assistant Medical Officer to the Lambeth Infirmary, vice G. L. Rugg, L.R.C.P., M.R.C.S., resigned.

SPENCER, H. ALEX., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Royal United Hospital, Bath, vice T. Stuart, resigned.

TURNER, ALFRED, M.B. and C.M. Edin., has been appointed Assistant Medical Officer to the West Riding Asylum, Menston, near Leeds.

WATKINS, FRANK AUGUSTUS, M.R.C.S., L.R.C.P. and L.S.A. Lond., has been appointed House Surgeon to the Newport and County Infirmary, vice Dr. W. F. Clarke.

WILSON, THOMAS, L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health, Wallend.

WILMETT, G. G. D., M.R.C.S., L.S.A., has been appointed Medical Officer for the Marksburys and Bitton Districts of the Keynsham Union.

WYLLIE, WILLIAM, M.D., M.B. and C.M. Glas., has been reappointed Medical Officer of Health for the Kirby-Lonsdale Union District.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

- BOROUGH HOSPITAL, Birkenhead.**—Junior House Surgeon. Salary £50, with board, lodging, and washing, also fees for certifying infectious cases.
- BRISTOL DISPENSARY.**—A vacancy in the Medical Staff.
- CHELTEMHAM GENERAL HOSPITAL.**—House Surgeon. Salary £80 per annum, with board and apartments.
- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.**—Resident Clinical Assistant.
- COOKHAM UNION.**—Medical Officer for the Union Workhouse and the Cookham district. The salary for the Union Workhouse is £50 per annum, and for the Cookham district £65 per annum. These salaries to include all fees under articles of the General Consolidation Order.
- COUNTY ASYLUM, near Dorchester.**—Assistant Medical Officer. Salary £120 per annum, with board, washing, &c.
- LOUGHBOROUGH DISPENSARY AND INFIRMARY.**—Resident House Surgeon. Salary 60 guineas per annum, with furnished rooms, attendance, and board.
- NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.**—Senior House Physician. The present Junior House Physician is a candidate for the appointment, and is eligible for election. Applicants should state whether they are prepared to accept the Junior appointment if elected to it. Salary for the Senior post is £100 per annum, and the Junior £50, with apartments and full board in each case.
- NORFOLK AND NORWICH HOSPITAL.**—Assistant to House Surgeon. No salary, but board, lodging, and washing provided.
- ROYAL SOUTHERN HOSPITAL, Liverpool.**—Junior House Surgeon. Salary 60 guineas per annum, with board, residence, and washing.
- SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.**—Junior Assistant House Surgeon. Salary £50 per annum, with board, lodging, and washing.
- ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.**—Assistant Physician.
- ST. OLAVE'S UNION.**—Resident Medical Officer. Salary £300 per annum, with furnished apartments, fuel, and light.
- STOURBRIDGE DISPENSARY.**—House Surgeon and Secretary. Salary £130 a year, with furnished rooms, coals, gas, and extra allowance for horse hire.
- WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.**—House Surgeon. Salary £80 per annum, with board and residence in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

- HARINGTON.**—On the 20th inst., at Sherborn Lodge, Cheltenham, the wife of H. N. V. Harington, Surgeon, I.M.D., of a son.
- OLIVER.**—On the 25th inst., at Consett Hall, Co. Durham, the wife of Thomas Oliver, M.D., Newcastle-upon-Tyne, of a daughter.

MARRIAGES.

- AUDLAND-SHOURBRIDGE.**—On the 25th inst., at St. Saviour's, Pimlico, William Edward Audland, M.R.C.S., L.R.C.P., of Brooklands, Wellingborough, Northants, younger son of John Audland, Esq., Ackenthaite, Minthorpe, to Anna Laura, elder daughter of Harry Shourbridge, of Belgrave-road, S.W.
- BAGNELL-DU PRE.**—On the 16th inst., at the British Embassy, Paris, Irving Bagnell, M.D., to Georgiana Louisa, eldest daughter of the late C. G. Du Pre, Esq., of Wilton-park, Beaconsfield, Bucks.
- HAZEL-SMITH.**—On the 20th inst., at St. George's, Tufnell-park, William Francis Hazel, M.R.C.S., of Oakley-square, to Florence Christian, eldest daughter of David Smith, of Carleton-road, Tufnell-park.
- WILLIAMS-GILLOTT.**—On the 18th inst., at St. Saviour's, South Hampstead, by the Rev. J. C. Hose, B.A., Henry Williams, M.R.C.S., L.R.C.P. Lond., Colston Bassett, Notts, to Annie Elizabeth, only daughter of the late Thomas Gillott, of Orston Manor, Notts.

DEATHS.

- CHAPPLE.**—On the 3rd inst., at Bombay, coming home on sick leave, Deputy Surgeon-General R. A. Chapple, Army Medical Staff, aged 66.
- DUNN.**—On the 22nd inst., at Ardleigh-green, near Romford, R. W. Dunn, M.R.C.S., of Surrey-street, W.C.
- KIDD.**—On the 20th inst., at Brook-street, Grosvenor-square, Gertrude Hilda, infant daughter of Percy and Gertrude E. Kidd, aged 16 months.
- LIDDERDALE.**—On the 24th inst., at Harrogate, of diphtheria, Rosalind Marion, only daughter of E. Lidderdale, M.D., Sanitary Commissioner for Bengal, aged 7 years and seven months.
- MOSS.**—On the 24th inst., at Marylebone-road, Edwin Moss, M.R.C.S., aged 84.
- PINDER.**—On the 22nd inst., at The Terrace, Camberwell, Edward Pinder, L.R.C.P., L.R.C.S. Ed., aged 73.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, September 27th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Sept. 21	30.22	E.	57	55	92	69	52	..	Hazy
" 22	30.24	E.	55	53	92	69	50	..	Overcast
" 23	30.12	E.	56	55	..	61	52	..	Foggy
" 24	30.00	E.	59	58	90	63	55	..	Foggy
" 25	29.98	N.E.	58	58	..	60	56	10	Raining
" 26	30.24	N.	55	53	96	63	50	35	Overcast
" 27	30.20	E.	55	51	97	65	50	..	Fine

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

SERIOUS BLUNDER AT A BACTERIOLOGICAL STATION.

A serious blunder seems to have been committed at the Odessa Bacteriological Station, which, though fortunately it entailed no loss of human life or health, has resulted in a loss of something like £3000 to an enterprising farmer, who sent 4700 head of sheep to be protectively inoculated against the Siberian plague. So far from their being protected, the inoculation killed 4400 of them in about twelve hours. The only explanation which has as yet been forthcoming is that the "vaccine," which should not have been used till the second inoculation, was by some mistake injected at first. It is not surprising to hear that the farmer contemplates an action at law against the bacteriological station. Whether he gains it or not, it is probable that all such institutions will find that the confidence of farmers in the value of preventive inoculation for various diseases has received a somewhat severe shock.

Question.—We believe the course can be fully followed out either at Cambridge or in connexion with the College of State Medicine in London. There is no laboratory at the Parkes Museum, nor is any course of instruction given there for the examinations in question.

Enquirer will find the information he seeks in Hartridge's "Refraction of the Eye," chap. II., and more at length in Landolt's "Refraction and Accommodation of the Eye," p. 196 *et seq.*

Mr. H. E. Bridgman (Burton-on-Trent).—THE LANCET, March 26th, 1881.

"DIPHTHERIA CASE IN ST. PANCRAS."

To the Editors of THE LANCET.

SIRS,—The grounds I submitted to the coroner for Central Middlesex for inquiry into the death of the child Alice Lydia Eldridge were:—(1) No medical attendance, as this child was not taken to the University College Hospital; (2) cases of scarlatina having been previously removed from the same house; (3) the existence of an open grating facing the door of the house, respecting which complaints were made to myself, and in support of which George Eldridge, a plumber, father of the deceased children, when placed in the witness-box at the inquest, read a specification of sanitary defects and shortcomings at 47, Euston-buildings. As regards hospital treatment, the aunt of the deceased children, aged twenty-six years, the mother, aged twenty-eight years, Florence Louisa, aged seven years, Auguste, aged five years, were treated as out-patients, both adults recovering. The youngest child, aged two years, sent away from Euston-buildings by my advice, remains under my treatment.

I am, Sirs, obediently yours,
Albany-street, N.W., Sept. 24th, 1888.

C. C. WHITEFOORD.

A WORD OF SYMPATHY TO A LONDON PHYSICIAN.

We have a word of sympathy to offer to a physician who is the subject of a by no means oblique puff in an evening contemporary, whose pronounced Irish sympathies may explain, but cannot excuse, such a questionable service even to an Irishman. To do Irish members of the profession justice, they are acutely sensitive to its best traditions. We are aware that the gentleman in question is neither in any way answerable for such a proceeding nor gratified with it. We trust, however, his panegyrist will appreciate the fact that a repetition of such a kindness would be a grave injury.

Mr. S. R. Lidiard.—The publication should be brought to the notice of the body whose diploma its author holds.

Mr. J. A. Feeny.—We fear we shall be unable to find room for the paper.

Mr. O'neagh (Port Nolloth).—The affection is probably of gouty origin.

ENTERIC FEVER AT BRIERLEY HILL AND THE SANITARY AUTHORITY.

To the Editors of THE LANCET.

SIRS,—On the 14th of April, 1887, I was called to see a case of typhoid fever near the Fish-pits, Commonside, in the rural district of Kingswinford, Staffordshire. I found that the only water for use was that of a well, highly polluted with sewage. I personally reported the fact to the inspector of nuisances, who visited the place and said that the water was perfectly good. No further steps were taken. On Sept. 4th, I had another case at the same place. I took water from the well, sent it with the report on it to the Local Government Board, who, in due course, requested me to report to the local sanitary authority. This I refused to do on the ground that it was perfectly useless, and no further steps were taken; since which time, partly from personal experience and partly from information, I believe that enteric fever has not been absent from the district. During the present year the fever has increased, eight deaths having occurred since July 4th, a period of eleven weeks. I know of seventeen cases of enteric fever during this same period, six of which have been under my care, the other cases have been under the charge of other practitioners. The water supply for the most part is obtained from wells and pumps. The South Staffordshire Waterworks Company's mains come through the district, and a few of the houses derive their supply from this source. No drains exist, the sewage water from the houses being thrown into the road in front or on the gardens at the back, very often on the ground round the wells. Up to the present no steps have been taken, to my knowledge, by the sanitary authority to have the matter inquired into. All these cases have occurred in a very limited space.

I am, Sirs, yours obediently,
Brierley Hill, Sept. 25th, 1888. E. SAINTHILL PEARSE, Surgeon.

THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—The General Medical Council are often accused of apathy where the interests of registered practitioners are concerned—i.e., prosecuting quacks &c. But there is one branch of this business in which they are indefatigable—viz., collecting fees. I had occasion a few days ago to write on behalf of the orphan daughters of a surgeon who died about twenty years ago to ask the date and nature of their father's qualifications. I stated fully the circumstances of the case, and added that the particulars were required by a medical charity in order to be enabled to relieve them. The reply was a printed form, and a demand for a fee of 2s. 6d. before the information could be given, so that this wealthy body, to which the father of these unfortunate ladies had paid a good deal in fees, refuse to answer a simple question, which would not have taken two minutes, for the date of death was given, unless the penniless orphans paid them half-a-crown. Comment is needless.

I am, Sirs, your obedient servant,
September, 1888. J. SWAIN SCRIVEN, R.N., M.D.

ANTIPYRIN IN HEADACHE.

To the Editors of THE LANCET.

SIRS,—I have used antipyrin for two years; but I cannot say that I have been as favourably impressed by its efficacy in various forms of headache as many of your correspondents have been. I have used it in doses of from seven to twenty-five grains, repeated every hour or two hours, according to the severity of the symptoms; but in every case I have had to fall back on some narcotic to relieve the urgency of the symptoms. It certainly seemed inferior to caffeine.

I am, Sirs, yours faithfully,
Plymouth, Sept. 26th, 1888. M. D. KEILY.

DALRYMPLE HOME.

To the Editors of THE LANCET.

SIRS,—A clerical error occurs in your article on the Habitual Drunkards Act in to-day's issue. The last sentence reads: "In the latter establishment (Dalrymple Home) nineteen others were admitted as female patients, and do not count in these returns." It should read "private patients," as the Home is licensed for male patients only.

I am, Sirs, yours faithfully,
R. WILSH BRANTHWAITTE, Med. Supt.
Rickmansworth, Sept. 22nd, 1888.

DISTRIBUTION OF HANDBILLS AND PRIVATE DISPENSARIES.

A CORRESPONDENT sends us the following handbills, which have, he says, been circulated in large numbers. The author of one (Mr. Howard) is a Licentiate of the Royal College of Physicians, London, and a Member of the Royal College of Surgeons of England. The author of the other is also probably a Licentiate of one of the English examining bodies. We recommend our correspondent to forward the handbills to the respective bodies whose duty it is at least to remonstrate with the parties.

"Private Dispensary, 197, Stewart's road. Medical Officer: Dr. Heaton C. Howard (of 185, Clapham-road). Hours of attendance: 9 to 10, morning; 7 to 8.30 evening. Terms: Advice and medicine, 6d.; Single visit and medicine, 1s.; Visiting for the week, 3s.; Midwifery, from 10s. 6d. Letters for the necessitous poor, on reduced terms, can be obtained of the local clergymen, or of the Secretary, Mrs. Pratt, 167, Stewart's-road, who will be pleased to give any information."

"Self-supporting Dispensary, 67, Larkhall-lane, Clapham, conducted by Dr. Heubock, of 185, Stewart's-road, Wandsworth-road. Hours of consultation: Mornings, 11.15 till 1; evenings, 5 till 7. Sundays: Mornings, 10 till 11; evenings, 7 till 8. Terms (payable in advance): Advice and medicine, 6d.; or weekly, 1s.; Home visitation and medicine, weekly, 3s.; or single visit and medicine, 1s.; Midwifery, from 10s. 6d. Operations. Vaccination. Teeth Extraction. No letters of recommendation required."

M.D.—Custom varies in different localities. Our correspondent's best guides will be the custom of the place and the advice of his partner.

Teapot.—It can be obtained of any of the larger ironmongers—e.g., Slack's, Strand.

Mr. A. Ross is thanked, but the article is not suited to our columns.

W. J. M. (Sutton).—Queen-square, Bloomsbury, W.C.

MEDICAL INSTRUCTION FOR SEAMEN.

To the Editors of THE LANCET.

SIRS,—I can fully endorse your valuable remarks in an annotation in your last issue in reference to medical instruction for seamen, and beg to inform you that Dr. Stephen Nockolds of this town, having on different occasions to visit yachts, invariably found the medicine chest, but the captain totally unacquainted with its use; and on finding such to be the case, he formed a class for captains, and delivered the five lectures under the auspices of the St. John Ambulance Association in "First Aid to the Injured," and afterwards invited those members who had obtained the Association's certificate to attend a second course of instruction, consisting of five lectures on the medicine chest, including the use of the catheter, mixing poultices, &c., and gave us many valuable hints as to when and how to act in cases of emergency, and with such excellent results that during the late yachting season the captains in more than one instance, through having some knowledge, have been enabled to relieve members of their crews considerably until the arrival of professional assistance. I think that Dr. Nockolds is the first medical gentleman who has come forward in taking the first step to enlighten the shipmaster in that truly important point to which you allude.—I am, Sirs, your obedient servant,

ONE OF THE GRATEFUL MEMBERS OF THE SAID CLASS.
Cowes, I.W., Sept. 26th, 1888.

THE "MEDICAL BLACK LIST."

To the Editors of THE LANCET.

SIRS,—In the present day it is simply astounding when one reflects on the variety of forces that are insidiously and surely depriving medical men of their rights. It therefore behoves every medical practitioner at the present time to further to his utmost any object that can help him to maintain his income. During the last twenty-five years I have lost many hundreds of pounds, by patients leaving my district without paying their medical bills, and my falling to obtain their whereabouts. Now Mr. W. F. Taylor's "Medical Black List" deserves the support of the whole profession, as it will enable all of us to recover our unpaid accounts from those patients who leave without giving any clue as to their new residence. I would ask every medical man to carefully peruse the prospectus of the "Medical Black List," published by Mr. W. F. Taylor, Publisher, Woodlands, Harrow.

I am, Sirs, yours obediently,
Sept. 25th, 1888. A "SCHOLAR OF HIS COLLEGE."

URTICARIA.

To the Editors of THE LANCET.

SIRS,—I should feel greatly obliged if any of your readers could suggest a remedy for chronic urticaria in a lad of seventeen. The boy works exceedingly hard at his books, but gets enough sleep. There is no evidence of dyspepsia. He is pale, with cold extremities, but has very good health generally. The urticaria has lasted over a year. It raises large wheals suddenly, is very irritable for a few hours, and then disappears. I have tried all sorts of remedies, including attention to diet, bran baths, and medicines of various sorts. Liq. potassæ for a time worked like a charm, setting the patient free for a month or two. Rest and change of air do not seem to do any good. I am now trying liq. potassæ in rather large doses, with bromide of potassium, tincture of nux vomica and ammonia, and the continuous current.

I am, Sirs, your obedient servant,
Sept. 24th, 1888. ENQUIRER.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Pearce Gould, London; Mr. Vincent Jackson, Wolverhampton; Sir Dyce Duckworth, London; Mr. C. Hawkins, London; Dr. Barron, Southport; Mr. C. Heath, London; Dr. Cheadle, London; Dr. Clifford Allbutt, Leeds; Mr. Torrance, Newcastle-on-Tyne; Prof. Brown; Mr. Lidiard, Hull; Mr. W. M. Beaumont, Bath; Mr. J. W. Taylor, Birmingham; Dr. H. Williams, Oswestry; Mr. Foy, Dublin; Dr. G. Thompson, Stapleton; Dr. Freyer, Allahabad; Mr. Feeny, Maplethorpe; Mr. Stone, Newport; Mr. Pooley, Bettws-y-coed; Dr. Prosser James, London; Mr. Humphreys, London; Messrs. Maclehoose and Co., Glasgow; Dr. Ewart, London; Mr. Day, Sheffield; Dr. Churton, Leeds; Mr. F. Treves, London; Mr. Hawkins, London; Dr. F. G. Marshall, Dover; Dr. Murrell, London; Mr. Staveley; Dr. Forbes Winslow, London; Mr. Watson, Glasgow; Mr. E. S. Pearce, Brierley Hill; Mr. Whiteford, London; Dr. Silk, London; Dr. Adam, West Malling; Dr. Ramsay, London; Mr. P. H. Davis, London; Mr. Dixon Mann, Manchester; Mr. Williams, Liverpool; Dr. C. Steele, Croyde Bay; Dr. Savage, London; Mr. Eminson, Rotherham; Mr. Nelson Hardy; Mr. Norris, Weston-super-Mare; Dr. E. P. Thurstan, Tunbridge Wells; Mr. Clarkson, Aston; Miss Howe, Itchin; Dr. Green, Gateshead; Mr. Stock, Bristol; Mr. Gurner, London; Messrs. Hopkinson and Co., Notts; Mr. Nance, Norfolk; Dr. Atthill, Dublin; Mr. Lowe, Southport; Dr. Watson, Woolwich; Mr. Kingsford, Bolton; Mr. Kelly, Plymouth; Messrs. Pearce and Son, Darlington; Mr. Robinson, Sheffield; Mr. H. Graham, Dakota; W. D. London; D. L.; B.A., London; Poylact; Enquirer; M.D.; J. H. T.; Scot, London; Cheltenham General Hospital; Disgusted; M.D. Durham; M.A. Cantab.; Merthyr General Hospital; One of the Grateful Members of the said Class.

LETTERS, each with enclosure, are also acknowledged from—Dr. Popham, Dulwich; Mr. Matheson, Berwick; Mr. Bell, Notts; Messrs. Birch and Co., London; Mr. Peet, Ireland; Mrs. Lackey, Bristol; Mrs. Bell, Liverpool; Mr. Woodcock, Bradford; Dr. Wise, Devon; Mr. Ockwell, Wilts; Mr. Kidd, London; Mr. Whisham, Clifton; Dr. Hatrishaw, Paris; Mr. Campbell, London; Dr. Abbott, Tunbridge; Mr. Davis, Wales; Dr. Anderson, Lincolnshire; Mr. Heywood, Manchester; Mr. Lewis, Wingham; Mr. Howitt, London; Mr. Fitzgerald, Pontypool; Mr. Hancock, London; Mr. Lawrence, Kent; Messrs. Pugh and Phillips, Northampton; Mr. Dumaresq, London; Mr. Partridge, Kent; Dr. Skelton, Bristol; Dr. Williams, London; Dr. Lidderdale, Cheltenham; Mr. Berridge, Loughboro'; Mr. Upson, Maidenhead; Dr. Oliver, Newcastle; Rev. Adcock, Leeds; Pilula, London; H. M., London; M.D., Manchester; Argyll Baths, London; Lady Superintendent, Kingston; Capel, London; C. E. H., London; Avis, London; Denmark, London; J. W., London; F. L. S., London; M., Manchester; A. B. C., Dewsbury; Septem, London; M.D., Herefordshire; F.R.C.V.S., Salop; M.D., Yorks; B. C., London; X. L., Penzance; Final, London; Deaconess, Chester; Alpha, London; Fides, London; A. B. C., London; Chirurgus, London; D., London; J. K., London; Ashton, London; Omega, Mon.; Medicus, London; G., Derby; M. G., London; A. B. P., London; R. H. Y., London; Lady Superintendent, London; J., London; W. A., London; Fidelis, Manchester; R. J. T., London; E. B., London; H. W., Ipswich; X. X., London; R. A. H., London; Alpha, Derby; D. G., London.

Lancaster Observer, Windsor and Eton Express, Surrey Advertiser, Herald and Weekly Free Press, Reading Mercury, Bournemouth Guardian, Illustrations, Royal Cornwall Gazette, Hull Daily Mail, &c., have been received.

Medical Diary for the ensuing Week.

Monday, October 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, October 2.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour
Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M.
Dr. Louis Parkes: Water Supply, Drinking Water, Pollution of Water.

Wednesday, October 3.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M.
Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. John Phillips, Mr. Bland Sutton, and others. Dr. Champneys: Description of a New Operation for Vesico-uterine Fistula.—Dr. John Phillips: On the Value of Pilocarpine during Pregnancy, Labour, and the Lying-in State.

Thursday, October 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, October 5.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M.
Sir Douglas Galton: Ventilation, Measurement of Cubic Space, &c.

Saturday, October 6.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Clinical Lecture

ON

TYPHILITIS, ITS NATURE AND TREATMENT.

By SIR DYCE DUCKWORTH, M.D. &c.,

PHYSICIAN TO, AND LECTURER ON CLINICAL MEDICINE AT, ST. BARTHOLOMEW'S HOSPITAL.

GENTLEMEN,—In to-day's lecture I propose bringing under your notice the particulars of some cases of typhilitis which have lately been under my care. The subject is one of importance, and one which you must familiarise yourselves with, because you will be certain to meet with cases of the disease in question when you enter on practice, and they will sometimes give cause for much thought and anxiety.

Let me very briefly recall to your memory the essential features of the anatomy of the caput cæcum coli and its vermiform appendix. It is commonly described as situate in the right iliac fossa, and as invested by the peritoneal coat everywhere but posteriorly. Mr. Treves has, however, pointed out that the cæcum is most frequently situated, not in the right iliac fossa, but on the psoas muscle, or rather on its fascia, and that it is generally completely invested by the peritoneum. A meso-cæcum does, however, sometimes exist; hence you may meet with a caecal or appendicular hernia. The arrangement therefore varies, the cæcum being sometimes comparatively fixed. The relation to the psoas muscle is important, because, as I have observed, a degree of lameness sometimes follows typhilitis, due to implication of this muscle, whereby the thigh is hampered in flexion on the pelvis. The vermiform appendix of the cæcum is of supreme importance in relation to inflammatory mischief affecting this portion of the bowel, inasmuch as the majority of cases of typhilitis originate here. So often is the vermiform appendix a source of trouble that I have sometimes thought it were well if it could be removed in early life as a supernumerary organ. You are aware that it is but a rudiment of the long cæcum met with in most mammals. It lies, you remember, behind the cæcum or behind the ileum and its mesentery, arising from the lower portion of the cæcum and taking a direction upwards and inwards, coiled on itself and terminating in a blunt point. Its length is from one to nine inches, being commonly about three inches in the adult. It opens by a small orifice into the cæcum, has similar coats, and possesses abundant solitary follicular glands on its mucous lining.

Before relating to you the particulars of my cases I would allude very briefly to the causes and morbid anatomy of typhilitis. Even in clinical lectures it is difficult to avoid discussing causation and morbid anatomy. All cases cannot be sufficiently made plain to you at the bedside, though, as you know, I endeavour, when possible, to bring the subjects of my clinical lectures into this theatre. It is, I hold, no part of a clinical teacher's duty to discuss causation of disease or intimate morbid anatomy at the bedside. This is done in some schools, especially abroad, but I think it highly inhuman and improper. We have no right to discuss the horrors of the deadhouse in the presence of the patients committed to our charge. Such discussions do not shock us, and they are very necessary, but we may greatly shock and injure our patients thereby, and we may never forget that our first duty is to be humane, and to regard our patients' interests as first and paramount. In this school we follow the example of our great predecessor, the late Dr. Peter Mere Latham, who always withdrew his class aside to discuss these matters. And you will pardon me, I hope, if I digress so far as to add in relation to this that I am strongly of opinion that at the present time a great deal of apprehension and unnecessary suffering is entailed on our patients, especially in the upper classes of society, by the details and clinical minutiae that too often and most improperly find their place in the bulletins issued respecting important persons. Such a practice should be firmly discountenanced on every account, and it is certainly satisfactory to know that it does not emanate from the highest ranks in our profession. I believe, further, that many of our patients suffer nowadays more, and are actually less amenable to treatment, than was formerly the case, both because there is so much widely spread knowledge

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of disease conveyed in lay periodicals, and because so many advertisements of vaunted specifics and new remedies are puffed before the public.

The vermiform appendix must, even in its rudimentary state in man, be practically regarded as a part of the alimentary tract. In most cases, after death, faecal matter is found in it. Without doubt, the most common cause of typhilitis is ulceration of the appendix. In discussing causation I employ the term "typhilitis" as a generic one, to indicate all inflammatory affections of the cæcum, appendix, and their immediate investments; and I do not commend to your acceptance the barbarous terms, sometimes used, of "appendicitis" and "peri-cæcal inflammation." The ulceration may arise in various ways. Note, first, that no symptoms comparable with typhilitis, as clinically recognised, arise in the course of enteric fever, where, as you know, ulceration is usually abundant in the neighbourhood of the cæcum. Ulceration sometimes occurs in the appendix in this fever, as also in dysentery, and may lead to rupture, but this is of rare occurrence. Tubercular disease with ulceration is found in the same positions and glands as in enteric fever, and it may occur, too, in or near the cæcal appendix and lead to perforation, though this also rarely happens. A boy, aged eleven, died after less than a week's illness under Dr. Southey's care here in 1880. He had peritonitis, grass-green vomit, and brought up a lumbricus. In the appendix was found a faecal concretion locked in by a constriction. The latter was caused by inflammatory change resulting from a caseous gland near it. The appendix was twisted on itself as well as constricted. The peritonitis was confined to the lower part of the abdomen. No iliac tumour was found during life. Syphilitic ulcers are not met with in this situation. Typhilitis then, as commonly known, has nothing to do with any of these conditions. I consider the causes of ordinary typhilitis to be mainly two: first, *the presence of some irritant concretion or foreign body in the appendix*; and secondly, *intestinal catarrh*, the result of exposure to cold, or irritation from improper diet. Both causes may, I believe, operate together.

Very little is known as to inflammatory conditions of the cæcum leading to ulceration and perforation. Cases of true cæcitis are met with clinically, and do not prove fatal. Pus may penetrate the cæcum from abscess elsewhere, as in the pelvis, but this is not typhilitis. In the fatal cases we are almost certain to find ulceration and perforation of the appendix. Distension of the cæcum by hard faecal matter may sometimes give rise to symptoms of cæcitis, and ulceration with perforation may occur in this part. If perforation occurs into the peritoneal cavity the case will prove fatal. If the ulceration opens into the part of the bowel uncovered by peritoneum where such part exists, which is not always the case, a peri-typhilitic abscess is formed, which may open in various situations, as into the pelvis and rectum, passing along the psoas and iliacus muscles into the thigh, out into the buttock with the pyiformis muscle, or into the urinary bladder, groin, or scrotum. Or sometimes, as I have known, or rather suspected, the abscess discharges itself into the bowel by the opening which led originally to its formation, leading to favourable issue.

In the case of the appendix the series of events may be as follows: Foreign bodies—such as a pin, nail, bristle, fruit-stone, shot, gall-stone, or a mass of indurated faecal matter—may by their presence set up inflammation and ulceration, which finally perforates. I show you a series of preparations from the museum which illustrate some of these disasters. Again, a catarrhal state of the mucous membrane may be induced by exposure to cold or by intestinal dyspepsia, which leads to occlusion of the opening between the appendix and the cæcal cavity. Tumefaction here leads to stenosis and closure of this, and hence any contents which in health are simply faecal become inspissated and act as a foreign body. As a result of catarrh alone, the appendix thus shut off may become filled with thick mucus and a waxy-like matter, probably formed from faeces, or be distended so as to contain several ounces of mucus, reminding us of a similar occurrence sometimes met with in the gall-bladder when the cystic duct is closed. The appendix in this condition is liable to such ill-nutrition of its walls that ulceration with perforation is imminent. In one case I found a caseous gland near the appendix, which had led to inflammatory changes round it, and caused it to bend on itself, be constricted, and so to imprison a plug of hardened faeces, which acted as the exciting cause. This was in a boy aged eleven years.

The perforation varies in size, and may fail sometimes to be discovered. It is usually large enough to admit a goose-quill, but may be smaller or much larger, and with subsequent sloughing a large part of the substance of the appendix may be removed, leaving a mere tag to hold the dependent portion, or, again, the slough may entirely divide the structure. The result of the perforation is invariably an abscess at its site, and hence you find a swelling in the right iliac fossa of greater or less size, according to the amount of pus formed, which may vary from an ounce or two to a pint or more. In the abscess-cavity is found the ulcerated point, with or without the foreign body or concretion, according as it is present or not. Sometimes a layer of lymph may hide the perforation. I will urge you to verify all these statements for yourselves in the dead-house, and you have no lack of opportunities, since a session rarely passes without our having several of these untoward cases. I can enter at no greater length into this part of the subject, and must now proceed to mention the symptoms of typhlitis.

The first and most urgent is that of pain in the right iliac region, usually very severe. Next follow the ordinary symptoms of peritonitis, more or less extensive in various cases, with distension, perhaps vomiting, and pyrexia, not usually exceeding a temperature of 102° F. The bowels are generally confined, this being due, as I believe, to the peritonitis. The face is flushed; the expression anxious. The pulse is rapid and soft. There is dorsal decubitus, and the legs may be drawn up. A hard, phlegmonous, and tender tumour involving the cæcum is not infrequently found. The pain may be referred to other parts of the abdomen, and if there is distension there may be no distinct indications of the locality primarily affected, so that we may be thrown off our guard, and not suspect mischief at the cæcum or appendix. In some cases there may be no appreciable fullness or tumour in the right iliac region, and this is explained by the fact that the trouble being in the appendix, and not due to distended cæcum, is situate deep down in the abdomen and below the caput coli. You will in such a case, however, hardly fail to observe an important sign which helps to localise the mischief. I refer to resistance on the part of the right oblique, transversalis, and rectus abdominis muscles, which are called into action to protect the subjacent sensitive parts, contrasting thus very markedly with their fellows on the left half of the abdominal parietes. This is very significant. Failing this sign, you may in some cases suppose you have to deal with either intestinal obstruction from some cause, or with general peritonitis in association with this, or excited by some other lesion. When the bowels act, as they sometimes do freely, you will have no anxiety as to obstruction. If there is constipation, you will next proceed to do what you must always do in such cases—viz., examine for any hernie, and also explore the rectum with the finger. With the existence of tenderness and tumour in the right iliac fossa, the diagnosis is almost complete in the presence of the other symptoms just referred to. That you may be guided to proper treatment in any case requires that you know the outcome of cases of this nature; and before I proceed to read to you the particulars of my cases, and go on to allude to treatment, I will mention the usual courses followed by the different disorders which are included under the term "typhlitis." In any case we are in presence of a grave disease, and we can never be quite free from anxiety about it until signs of distinct resolution occur. Many cases of typhlitis happily terminate favourably. It is probably true that those which are least dangerous are those which early present an iliac tumour involving the caput coli and not the appendix. These are cases of cæcitis, due to impaction of indurated faeces, and there may or may not be perforation of the coats of the bowel, although inflammatory material is thrown out around its serous coat—a true perityphlitis. With simple treatment and careful dieting such cases often resolve and do well. The gravest cases are those involving the appendix, when perforation and consequent abscess occur. There is generally a tumour present, and the patient is obviously very ill. The symptoms here may supervene suddenly. There may have been none previously of any moment indicating disease of the appendix, but at once the patient is in peril. If the contents of the appendix have reached the peritoneal cavity directly, death is certain within thirty-six hours, unless bold measures are tried with success. In such a case, there is incoercible sour vomiting, generally of

grass-green bile, thready pulse, low temperature, suppression of urine, cold clammy skin, and collapse from general peritonitis, the mind remaining clear. If the contents of the appendix have not reached the peritoneal cavity, the abdomen becomes blown up, vomiting ensues, and pyrexia occurs. General peritonitis usually sets in, and a fatal issue occurs in a few days. Dr. Pepper has observed that the pain of perforation is apt to radiate to the middle line of the abdomen, and sometimes into the genitals, and in many of these cases he has noted free urination when vomiting has been absent. Such, then, are the courses taken by the two principal forms of typhlitis. Let us now note briefly the features of the three cases we have lately had under care, and to these I will add a fourth, which I saw recently in private, and which also affords a useful lesson.

I take first the case of F. W. P.—, aged twenty-one, a butcher, who was sent in on June 18th, from the country. He was a strong, healthy-looking man. He complained of pain and swelling in the abdomen and vomiting. On inquiry it was found that he had two attacks similar to the present one, first in October and next in November last, but had, as he believed, recovered completely from each. The pain was in the suprapubic region in those attacks. The bowels were confined at the beginning, but afterwards became loose. The present illness began on June 11th, just before his dinner, when sudden pain came on in the right iliac and anterior lumbar regions. He took an aperient dose and went to bed. Soon afterwards vomiting of green matter set in and has continued frequently ever since. From the outset the bowels were confined. Nothing unusual had been eaten previous to the attack. Before admission the diet consisted of milk; belladonna in pill was given as medicine, and several leeches had been applied over the right iliac region. After admission, there was no nausea, but frequent vomiting of sour bilious matter. There was no pain. The tongue was clean, and there was no loss of appetite. The pulse was 112, of good volume and soft; respiration 24, thoracic; temperature 99.2°. The abdomen was uniformly full and rather tense, tender on pressure in the umbilical and left lumbar regions, and slightly dull to percussion in the right iliac and lumbar regions as compared with the tympanic note elsewhere. The thorax was encroached on, the heart being pushed up, and abdominal resonance extended to the fourth left intercostal space. The hepatic dullness was abolished. No hernie were detected, and the rectum was found free. Enemata of olive oil were ordered, and opium given every four hours. The injections brought away nothing, but a good deal of flatus was passed. In Mr. Langron's absence, Mr. Marsh saw this patient with me on the next day (19th), and it was determined that as nine days had elapsed since the attack began, and no urgent signs of obstruction were present, no operative measures should be taken. Food by the mouth was discontinued, and nutrient suppositories were used. Another oil enema brought away a little faecal matter. The pulse had risen to 120. On the 20th (tenth day of illness) he was in much the same state; in no pain. During the past night the bowels had acted twice without enema, and the vomiting had greatly diminished. Allowed milk and lime-water by mouth. On the 21st (eleventh day) he was lying on his back. Face and hands dusky; capillaries filling slowly when emptied. Temperature 99.2°. Abdomen more tense. Heart's beat pushed up to second left intercostal space. Pulse becoming thready, 144; respiration 44. Died quietly. Opium and morphia were given regularly, and successions of poultices applied to the abdomen. At the necropsy there was found general suppurative peritonitis. At the lower part of the ileum much inflammatory lymph. Intestines much distended; faeces in descending colon and rectum. Mucous surface everywhere healthy. The vermiform appendix terminated in a globular mass, with a neck of cicatricial tissue. A probe passed along perforated the coats at the seat of stenosis, whether from rottenness or ante-mortem rupture could not be determined. The mucous surface was healthy up to the neck. The walls of the globular extremity were thickened and the mucous surface ulcerated. No concretion, foreign body, or faecal matter was found in it or in the peritoneal cavity. Other organs healthy.

In this case, as often happens, we are wise after the event. The mischief clearly arose in the appendix, and was probably of catarrhal origin, occurring in the manner already described. There was little difficulty in making the diagnosis. You will notice that there was little pyrexia in a case of this

gravity, and, as is often found, purulent peritonitis existed with a very moderate degree of fever. The evil signs, therefore, were the continued vomiting and progressive distension of the bowels. It may be that if the abdomen had been opened soon after admission, about the seventh day, the appendix removed, and inflammatory exudations drained away, this young life might have been spared. We did not see fit to urge this either then or later, for Mr. Langton conferred with me on the seventh day and Mr. Marsh on the tenth day of the illness. And it must be borne in mind that cases in all ways apparently similar sometimes recover without operation. Mr. Treves has done good service in directing attention to operative treatment in cases like this, and it is certain that brilliant success sometimes attends bold measures of this kind; Dr. Morton of Philadelphia has recorded one. It must be told, however, that failures occur, perhaps not always recorded, and that no real relief is afforded, the patient sinking after operation. Thus, Mr. Marsh lately operated in the case of a woman and removed the appendix, but without benefit. We must not regard operative interference as the only method of treatment, although the risks of abdominal surgery are now, happily, greatly diminished. If a measure of this kind be attempted, it must be done early, and the existence of continued vomiting and increasing distension without or with little pyrexia are the most urgent indications for it. After the operation it is important to prevent accumulation of gas in the intestines. This is best secured by passing an indiarubber tube into the rectum and retaining it there.

I will add a few remarks on a plan of preventing peritonitis which is recommended by Dr. Morton of Philadelphia, following, I believe, the practice of Mr. Lawson Tait. The present practice of opiates is condemned as leading to paralysis and congestion of the bowels; and moderate purgation by salines, such as sulphate of magnesium, is advised. I must mention this suggestion to condemn it. Mr. Tait's practice, I presume, applies to cases where ovariectomy or operation on other than bowel structures has been practised. In such the walls of the intestine are intact. The case is surely very different in typhilitis when the bowel is inflamed, ulcerated, and ready to burst. To set up peristalsis here must be most dangerous.

The next case was that of F. G., aged thirty-one, a porter, admitted on May 28th. He was a strong man. He came complaining of pain in the abdomen, which was found distended and resistant over the right side. Temperature normal. His family history was good, and there had been no similar previous attacks. His history was that nine days before he had eaten three pounds of whelks. Next day he had pain in the abdomen, and could not work. Opening medicine was given, and the bowels acted. Two days later hacking cough came on. There were signs of effusion in the left pleura, a hand-breadth of dulness being found at the base. He spat up bronchial mucus, and his cough frequently induced sickness. The temperature varied from 101° to 103°. The pulse was 82. His tongue was coated. Opium was given regularly, poultices applied, and liquid diet given. No change took place for many days. The intestines were inflated and apparently matted together on the right side of the abdomen, and the muscles contracted over them. The bowels were frequently moved. No blood, pus, or mucus was passed till June 25th, when a clot of blood was found in a motion, and afterwards some shreds of sloughy matter. Vomiting came on, and diarrhoea was troublesome; loss of power and wasting supervened, and death occurred on July 1st. We could not obtain an inspection of the abdomen, hence the exact features of this case remain in doubt. It may have been primarily one of enteritis leading to localised peritonitis, or the mischief may have begun in the caecum or appendix. The question of opening the abdomen was discussed in this case also with Dr. West and Mr. Langton, but we decided against it.

The third case is now in bed 10, in the John ward—that of J. H., aged twenty-three, a carman, admitted on June 24th, complaining of pain in the abdomen. His family and personal history were good; and no similar attack had occurred before. On the 22nd he ate a kippered herring. The same night pain came on, and he vomited several times. Next day his bowels acted, and he passed a solid motion. That day he came to the surgery complaining of severe colicky pain, and had a dose of castor oil and opium, which he soon rejected. On admission next day, the pain was localised in the right iliac region. He was a strong

man, with flushed face and furred tongue; pulse 64, good volume, and rather tense; skin hot and moist; temperature 101·2°. A firm swelling was detected in the right iliac fossa, dull to percussion. No distension of the abdomen; other organs natural. He was ordered poultices and opium regularly, with liquid diet. For two days he had retention of urine. The temperature kept up to 102° at night till the ninth day of his illness, when it fell suddenly below normal, and remained so for several days. On the sixth day herpes labialis appeared, but no rigor occurred, and no special symptoms in association with it. An enema of three ounces of olive oil was ineffectual to relieve the bowels, which were not moved after June 23rd. On July 3rd he took half an ounce of almond oil, which acted well, an enema of a pint and a half of olive oil having been previously rejected. This man is now convalescent, and, being hungry, is allowed custard pudding. (He went out well two weeks subsequently.)

In this case there is no doubt as to the diagnosis of typhilitis, but can we be sure whether the mischief began in the caecum or in the appendix? I believe in the latter, judging by the early severity of the symptoms, and by the fact that the great majority of such cases have their origin in disease of the appendix. We may hope that perforation has not occurred, and that the inflammatory changes around the part will subside.

The last case I will tell you of occurred in a young woman, aged seventeen, whom I saw with Mr. Barton. She was in her usual health till March 16th, when she was seized with colicky pain. She was able to do her work till the 19th, being treated domestically in the meantime, in the belief that the pains were due to onset of the menses, which were due. On the 20th she was found eating her dinner in bed. On the 22nd she became suddenly collapsed, with distended abdomen and incoercible vomiting. Opium was given. I saw her twelve hours afterwards, restless, tossing in bed, with cold extremities, dusky face, hurried breathing, and almost pulseless. She was constantly vomiting acid bilious matter. The abdomen was not blown up then. There was suppression of urine. Pain was elicited on pressure over the right rectus muscle, and some obscure fulness was found on the right side. In four hours she died, relief being obtained from morphia subcutaneously given. At the necropsy suppurative peritonitis was found, the intestines being much injected. The vermiform appendix was perforated and almost gangrenous. No foreign body was discovered. The intestines were otherwise healthy.

This case illustrates the very severe and sudden onset of symptoms due to disease of the appendix which was practically latent. The diagnosis was not easy, for the same symptoms might have been set up by ruptured gastric ulcer or uterine hæmatocele. I ventured on the diagnosis of ruptured appendix, but it was rather a guess than a diagnosis.

From these cases you may learn the following lessons: They occur mostly in males, and are common in boys and in the earlier decades of life. In the majority you may suspect disease of the appendix rather than of the caecum. Simple treatment by opium and liquid food, with poultices, is proper at first, and if pain is considerable you may apply from four to eight leeches over the part. Later, you have to consider the propriety of operating so as to reach pus, if it be present, and to remove the appendix. As a rule, you must carefully avoid all forms of aperient medicine. The best guides to surgical interference are the persistent vomiting and tympanites, having always due regard to the general condition of the patient. If you believe that perforation and suppuration have occurred, an operation is warrantable, sometimes even when appearances are very unfavourable, for death is almost certain to ensue. It is a very nice determination to make, but in the present state of surgery one may have fewer apprehensions than formerly. It is important to guide you in the subsequent treatment of such cases as happily recover from urgent symptoms. Great care is necessary in diet for a long time afterwards—for, I shall say, not less than twelve months. Only soft and bland food must be taken, and every particle that is hard and indigestible must be withheld. In particular, no crude vegetables or fruits containing seeds should be taken, and the skin and hard parts of all food should also be with-

1 Dr. Norman Moore has kindly examined the records of the inspections he has made here during the last eight and a half years, to determine for me whether any fatal cases of typhilitis occurred without affection of the vermiform appendix. He reports that he has had none.

held. The patient must be taken into full confidence, and be made to understand the possible risks of carelessness in these respects.

Relapses are frequent in cases of typhlitis, and the reason probably is that complete recovery is not established, and the parts are left prone to irritation on slight provocation. Exposure to cold will cause relapse—possibly from intestinal catarrh, which leads to renewed trouble in the appendix; hence great care must be taken to avoid chills and exposure. Irregular meals are amongst aggravating causes of typhlitis in a predisposed subject, improperly cooked food being perhaps hastily taken, or too large quantities at unwonted times. In many cases there is a history of a heavy or indigestible meal having led to sudden onset of symptoms sooner or later. Care is also necessary with respect to aperient medicines, which should be of simple and unirritating character. Castor oil alone, or with olive or almond oil, is one of the best, and cascara sagrada is likely to prove helpful for occasional use.

I have said enough to convince you that typhlitis is a serious disease both in its course and because of its sequelæ. The question remains, as urged by Mr. Treves, whether in the interval after an attack the appendix should be cut down upon and removed. It is possible that this practice may more and more commend itself as time goes on, and so relapses be effectually prevented. I may as well tell you of other sequelæ of typhlitis which are serious enough. Our museum contains specimens illustrating these, which I show you here. Here in No. 1961A is a case with ulceration, perforation, and destruction of the appendix, in which death took place from hepatic and splenic abscess. In No. 2032 is shown the appendix of a man aged forty-three years, who died of abscess of the brain and liver induced by typhlitis, the result of a pin lodged in the appendix. There were no signs of ulceration or of old or recent peritonitis in this case. The pin protruded into the cæcum, and its head was impacted in hard fæces. In No. 2033 a nail is seen to perforate the appendix, its head lying at the end of the cavity, which is filled with firm material. There was pus round the nail, but no peritonitis. Several cerebral abscesses resulted in this case, also some in the lungs, and purulent infarcts in the liver. Septical complications may occur from neglected perityphlitic abscess. The phlegmonous swelling tends to break down and form a purulent collection. From this a chronic form of pyæmia may result, with deposits in the lungs; this is not necessarily fatal, but its possibility enforces the necessity of seeking for purulent collection and having it evacuated without delay. The following fatal case I once saw here. A man over forty had typhlitis, and died of pyæmia and pyæmia. The appendix was found adherent to the colon, and opened into it by an ulcerous channel. Thence followed abscesses in the pancreas, liver, lungs, and no less than six in the brain. A clot was found in the inferior cava pointing into the right auricle. Lastly, I should tell you that the phlegmonous induration around the cæcum has before now been mistaken in adults for malignant growth, for such swellings may occur here, and be, like simple phlegmon, associated ultimately with abscess. The earlier clinical features of such a case are, however, very different from those of acute typhlitis.

THE CLINICAL SOCIETY OF MANCHESTER.—The annual meeting was held on Tuesday, Oct. 2nd, when the following office bearers and committee were elected for the year 1888-89:—President: Dr. Leslie H. Jones. Vice-Presidents: Drs. W. J. Sinclair and J. M. Pierce. Treasurer: Dr. C. H. Braddon. Librarian: Dr. A. Wahlthorn. Members of Committee: Drs. W. H. Boddy, Richard Crean, A. Hill Griffith, James Holmes, W. N. MacCall, E. Rayner, W. Alfred Renshaw, T. Smith, and William Thorburn; Messrs. E. Stanmore Bishop, A. Hirst, C. J. H. Kitchen, H. Lund, Wm. Walter, and J. Westmorland. Secretaries: Drs. T. C. Railton and S. H. Owen.

SOCIETY FOR THE STUDY OF INEBRIETY.—A quarterly general meeting was held in the rooms of the Medical Society of London on Tuesday last, the President, Dr. Norman Kerr, in the chair. Dr. F. J. Gray, of Old Park Hall, Walsall, Staffordshire, read a paper on the various classes of inebriates and their treatment. The diseased condition of the inebriate was laid down, and the need for sound therapeutic treatment enforced. A discussion ensued, in which Dr. Joseph Smith, Surgeon-Major Poole, Dr. Arthur Jamison, and the President took part.

In Investigation INTO THE PATHOLOGY OF PERNICIOUS ANÆMIA.

By WILLIAM HUNTER, M.D., F.R.S. EDIN.,
JOHN LUCAS WALKER, STUDENT OF THE UNIVERSITY OF CAMBRIDGE.

(Concluded from p. 611.)

II. EXPERIMENTAL.

THE foregoing observations may be regarded as conclusively establishing that pernicious anæmia is essentially *hemolytic*, not *hemogenic*, in its nature.¹ Its true nature, however, is by no means thereby elucidated. Increased destruction of blood is characteristic of other diseases, notably of paroxysmal hæmoglobinuria, and to a less extent of malaria. How does the increased blood destruction of pernicious anæmia differ from that found in these diseases? Some difference there must be, since the diseases otherwise present little in common with each other. Is this difference one of kind, or merely one of degree?

Such were the questions which presented themselves very early in the course of my inquiries. It was probable that this destruction of blood in pernicious anæmia was merely an exaggeration of that occurring in health. At this point, however, the greatest difficulty of all presented itself. Of the nature and seats of blood destruction in health, or of the conditions which regulate it, our knowledge hitherto has been as vague as it is limited.

Nature of the Experiments.

My experiments were therefore undertaken with a two-fold object: (1) To ascertain the nature and seats of blood destruction in health; and (2) to endeavour to produce a condition of the liver and other organs of the body similar to that found in pernicious anæmia. The nature of the experiments was to induce in various ways an increased destruction of blood in the body. The methods used for this purpose were transfusion of blood, and the injection of various destructive agents. The chief agents employed were distilled water, glycerine, pyrogallie acid, and toluylendiamin. The changes in the blood in different parts of the circulation and in the different organs of the body during the progress of the destruction were then observed, and a careful study afterwards made of the changes presented by those organs specially concerned in the disposal of the products of this destruction—viz., the liver, spleen, and bone marrow.

My observations and experiments were made on animals representative of the different classes: on dogs and cats, as representing the omnivora; on rabbits, as representing the large class of the herbivora; on pigeons and ducks, as representing birds; and on frogs, as representing cold-blooded animals. The experiments in all have numbered over a hundred. The largest series were made with pyrogallie acid and toluylendiamin. They were varied in a number of ways. The effects of large toxic doses, as well as the cumulative effects of smaller doses administered over longer or shorter periods of time, were studied. With the object of determining what part was played by certain organs in blood destruction, other series of experiments were made. In a number of experiments the spleen was excised; and the effects of certain of the destructive agents then noted, and compared with the results obtained after the administration of the drug in the healthy animal. In a few experiments on pigeons the liver was similarly removed or cut off from the circulation, previous to the administration of the drug.

These experiments, bearing on the nature of blood destruction in health and disease, with special reference to the true pathology of pernicious anæmia, have engaged my time and attention during the last three years. The results obtained will be published in detail elsewhere. In the present paper

¹ These conclusions as to the hemolytic nature of the disease were arrived at early in the course of my investigations, and were communicated by me before the Medico-Chirurgical Society, Edinburgh, early in 1887, in a paper on "The Pathology of Blood Destruction within the Liver" (Trans. Med. Chir. Soc. Edin., April, 1887). A paper on "The Pathology of Pernicious Anæmia," embodying the results of my investigations, anatomical and experimental, was read before the Pathological Club, Edinburgh, in May of the present year.

it is impossible for me to do more than refer to such of them as seem fitted to throw light on the true nature of the blood destruction characteristic of pernicious anæmia. My object will, perhaps, be best attained if I refer to two conditions—malaria and paroxysmal hæmoglobinuria, of which excessive blood destruction is also an important pathological feature,—and contrast the blood destruction found in them with that found in pernicious anæmia.

1. *The excessive blood destruction of pernicious anæmia differs essentially in its nature from that which occurs in malaria.* In the latter it is a death of the individual corpuscles; in the former it is a disintegration of the corpuscles with liberation of their hæmoglobin. That an increased destruction of corpuscles occurs in malaria is evidenced by the number of pigment remains found in various organs of the body in that disease. This destruction is the result of actual morbid changes in the red corpuscles themselves.² What the nature of this morbid change is need not at present concern us. The result of it is that even while circulating the blood the red corpuscles present evidence of diminished vitality and gradually become effete. The fate of their pigment remains is that of all other foreign pigment particles circulating in the blood. They are taken up by the leucocytes of the blood, and carried to various organs of the body, notably the liver and spleen, where they become ultimately stored up. In the liver this pigment is often found very abundant. It lies for the most part within the capillaries enclosed in leucocytes. It is always more abundant in the capillaries than in the liver cells. In all cases it is also found abundantly in the spleen.

A similar distribution of the blood pigment is sometimes found after transfusion of blood in dogs.³ The red corpuscles under such circumstances, as my observations have shown,⁴ do not break down at once. They remain for a longer or shorter time⁵ in the circulation, only gradually losing their elasticity and becoming effete. The blood pigment into which they ultimately become converted is always found most abundant in the spleen, the liver sometimes containing none at all.

In pernicious anæmia, on the other hand, the liver is the chief, sometimes the only, seat of the pigment accumulation which occurs. As has been seen, the spleen sometimes contains little or none. Further, within the liver the pigment is always found most abundant within the liver cells themselves, not within the capillaries as in malaria. In some cases the pigment is found within the liver cells, and there alone, none being present in the surrounding capillaries.

Source of the Pigment within the Liver Cells.—The peculiar distribution of the pigment granules in pernicious anæmia has been held by Quincke, Kunkel, and Peters to indicate that the pigment has been originally conveyed to the liver in granular form, probably by leucocytes, and afterwards stored up within the liver cells. I am unable to accept this explanation as to the source of the pigment in such cases. It is opposed to what we know of the fate of pigment particles, such as carmine or ultramarine blue, after injection into the blood. Under such circumstances the particles are never to be found within the liver cells, however abundant they may be in the surrounding capillaries. The original observations of Ponfick⁶ on this subject I have repeated and confirmed. Further, my observations show that the pigment is sometimes to be found within the liver cells and there alone, none being found in any other organ, an appearance irreconcilable with the view that the pigment has been carried to the liver within leucocytes. We must conclude, therefore, that the pigment found within the liver cells has been formed *in situ*; and that the colouring matter of the blood from which the pigment is derived has passed into the liver cells in soluble form—in the form of hæmoglobin. I was at first inclined to believe that the red corpuscles themselves might pass into the liver cells. I have found no evidence, although it has been carefully looked for, that such is the case. Their disintegration, so far as it occurs within the liver, takes place within the capillaries. It is only their colouring matter which passes into the liver cells themselves.

Important differences thus exist between the excessive

blood destruction characteristic of pernicious anæmia and that found in malaria. In the latter, the nature of the destruction is mainly a death of the red corpuscles, their pigment remains, as in all such cases, being afterwards found abundantly in the liver and spleen; sometimes also in other organs. Within the liver the pigment lies enclosed within leucocytes, and is found therefore, for the most part, in the capillaries. In the former, the nature of the destruction is a liberation of the colouring matter of the corpuscles occurring in some part of the circulation, and not a death of the individual corpuscles as such. This is evidenced by the constant presence of a large excess of pigment material within the liver cells, as also by the occasional entire absence of similar pigment from the spleen. The two diseases resemble each other, and differ from the disease about to be considered—paroxysmal hæmoglobinuria—in this one respect, that in both the increased blood destruction which occurs is a chronic process extending over a varying period of time.

2. *The excessive blood destruction in pernicious anæmia differs both in its nature and its seat from that which occurs in paroxysmal hæmoglobinuria.* In paroxysmal hæmoglobinuria and other forms of hæmoglobinuria the destruction of blood corpuscles is excessive while it lasts. This is evidenced by the large quantity of hæmoglobin excreted by the kidneys during the attack. This destruction of corpuscles is only of short duration. In this respect, therefore, it differs markedly from that occurring in pernicious anæmia.

This is, however, by no means the only or the chief difference between these two diseases. In pernicious anæmia hæmoglobinuria never occurs, although the actual amount of blood destruction during the progress of the disease is greater than that met with in any other disease. The absence of hæmoglobinuria cannot be solely ascribed to the fact that, while in paroxysmal hæmoglobinuria the destruction is rapid, in pernicious anæmia it is more gradual, and perhaps at no time equals that which occurs in the former disease. It is indeed true that pernicious anæmia is a chronic disease. It is none the less true, however, that its progress is often marked by exacerbations more or less acute, in which, as evidenced by the diminution in the number of corpuscles, a destruction of blood occurs, probably as great as that occurring in certain cases of paroxysmal hæmoglobinuria. Nevertheless, pernicious anæmia is never at any time attended by hæmoglobinuria. Hæmoglobin is never found in urine in a form recognisable by the ordinary tests, chemical or spectroscopic. How are we then to explain the presence of the pigment found in the kidney in many cases of pernicious anæmia? Hæmoglobin in some form or other has been excreted through the kidneys. Why is it not recognisable in the urine by the ordinary tests?

Why is Hæmoglobinuria absent in Pernicious Anæmia?—The presence or absence of hæmoglobin in the urine has been hitherto regarded by all observers as simply dependent on the quantity of hæmoglobin present in the circulation. When hæmoglobin appears in the urine, it has been regarded as an indication that the amount set free in the blood is greater than can be disposed of by the liver and other organs of the body. Thus, according to Ponfick,⁷ hæmoglobinuria occurs when the quantity of free hæmoglobin exceeds the sixtieth part of the whole of the hæmoglobin contained in the body. How are we, on this view, to explain the differences in the behaviour of the colouring matter of the blood in the two diseases, pernicious anæmia and paroxysmal hæmoglobinuria? In both hæmoglobin in great excess is set free in the blood; but while in paroxysmal hæmoglobinuria the hæmoglobin is at once excreted through the kidneys, and appears as such in the urine, in pernicious anæmia hæmoglobinuria is absent.

These differences can, I find, be simulated experimentally. The injection of a small quantity of glycerine into the blood of rabbits is followed by hæmoglobinuria, although the destruction of corpuscles may be so slight in amount that scarcely any evidence of it is to be found, either in the blood or elsewhere. The injection of even large doses of toluylendianin, on the contrary, in the same animals, is never attended by hæmoglobinuria, although the appearances presented by the liver, spleen, or other organs may clearly show that a great destruction of blood has occurred.

7 Ueber Hæmoglobinurie. Berl. klin. Woch., 1883, No. xxv., p. 1.

² Marchiafava and Celli. Fortsch. d. Med., 1.

³ Quincke: D. Archiv f. klin. Med., Bd. xxv., p. 587; Bd. xxviii., p. 100.

⁴ Hunter: Journal of Anatomy and Physiology, vol. xxi., p. 139 et seq. 1887.

⁵ Hunter: Brit. Med. Jour., vol. i., p. 102, 1880.

⁶ Studien über die Schicksale körniger Farbstoffe im Organismus. Virch. Archiv, Bd. xlviii., 1869, p. 1.

How are these differences in the results to be explained? The answer is supplied by my observations, which show that the occurrence of hæmoglobinuria is dependent not so much on the quantity of hæmoglobin free in the blood as on (1) the seat of its liberation and (2) the form assumed by the hæmoglobin after being liberated.

It is necessary to premise that in the process of blood destruction two stages must be distinguished—(1) disintegration or death of the corpuscles; (2) the disposal of the products of this disintegration, free hæmoglobin or blood pigment. The seats of these two processes are not necessarily the same. The former may occur in the circulation itself or in certain organs; the latter is effected chiefly by the liver, the spleen, and the bone marrow, and sometimes also by the kidneys.

Seats of Blood Destruction in Health.—Contrary to the view usually held that disintegration and death of the corpuscles occur in all parts of the circulation alike, I find that in health the chief seat of disintegration of the red corpuscles is the portal, as distinguished from the general, circulation. The chief seats of this disintegration within the area of the portal circulation are, in their order of importance, the spleen, the liver, and, lastly, the portal blood itself outside the liver and spleen. The conditions within the portal system, and especially within the spleen, are peculiarly favourable to this destruction. Elsewhere they are much less favourable; so much so that the amount of blood destruction which occurs in health outside the confines of the portal circulation may be disregarded as of little or no moment. Within the bone marrow a certain amount of blood destruction does occur, favoured doubtless by the conditions of the circulation in that tissue, as also by the nature of the tissue itself. The bone marrow, however, is more concerned in the disposal of old and effete red corpuscles and their pigment remains than in the actual destruction of red corpuscles. In health, therefore, no evidence of the constant daily destruction of corpuscles, which undoubtedly occurs, is obtainable outside the limits of the portal circulation. The chief evidence of this destruction is, in fact, that afforded by the liver—viz., the formation of the bile and urinary pigments. The amount of destruction which takes place is constantly varying in health, and still more in disease. Nevertheless, what may be termed *physiological hæmoglobinuria* never occurs. However great the destruction may be, hæmoglobin never appears in the urine. And this is the case so long as the disintegration of the red corpuscles and the liberation of their hæmoglobin is limited to the portal circulation. The products of this destruction are successfully disposed of by the liver before reaching the general circulation.

Seat of Blood Destruction in Paroxysmal Hæmoglobinuria.—On the other hand, the liberation of hæmoglobin in the general circulation, even in small quantity, is at once evidenced by the appearance of hæmoglobin in the urine. This is the condition typically exemplified in paroxysmal hæmoglobinuria, as also after the injection of distilled water, glycerine, or pyrogallic acid in animals. The occurrence of hæmoglobinuria in such cases depends not so much on the quantity of hæmoglobin set free as on the seat of its liberation. We have seen that in animals the injection of even small doses of glycerine is followed by hæmoglobinuria, although no other evidence of blood destruction may be found. The glycerine acts locally on the red corpuscles, withdrawing their hæmoglobin. So also in man, the mere dipping of the fingers for a short time in ice-cold water will suffice in some cases to bring on an attack in those subject to paroxysmal hæmoglobinuria, the actual disintegration of the corpuscles, according to Boas,⁸ being confined to the small portion of the general circulation exposed to the influence of the cold.

Seat of Blood Destruction in Pernicious Anæmia.—In pernicious anæmia, as in health, this destruction is confined to the portal circulation. No hæmoglobinuria ever occurs. In paroxysmal and other forms of hæmoglobinuria the liberation of hæmoglobin occurs in the general circulation; hæmoglobinuria then results. So important is this difference, that after the administration of poisons, such as pyrogallic acid, having an intensely destructive action on the red corpuscles, the destructive action is limited in the first instance to the spleen, even in cases in which the drug has been injected directly into the general circulation. When small doses are given, the destructive action of the drug is

then limited entirely to the portal circulation; and chiefly to the spleen. The products of this destruction are disposed of by the liver, no hæmoglobinuria occurring. When larger doses are given, the destructive action of the poison is no longer confined to the blood within the portal circulation and its anæmia; an excessive liberation of hæmoglobin occurs both in the portal and general circulation, and marked hæmoglobinuria ensues.

The excessive destruction of blood characteristic of pernicious anæmia is mainly confined to the blood within the portal system, chiefly to that within the spleen and the liver. It is this fact which explains why, in all cases alike, whatever be their severity, the one constant anatomical change—viz., excess of blood pigment—is to be found within the liver, the pigment being always most abundant in the outer two-thirds of the liver lobule. Evidence of any excessive blood destruction may be wanting in every other organ of the body. But in no case, however slight the destruction may be, can the liver escape. The products of this destruction must in all cases pass through it. Provided that the destruction is within limits, the whole of the products are disposed of, no pigment being found either in the kidneys or elsewhere. If these limits are passed, hæmoglobin then passes into the general circulation, and is excreted through the kidneys. The evidence of this is the presence in certain cases of pigment within the renal cells of the convoluted tubules, apparently thrown down in granular form in the process of being excreted.

Change in the Character of Hæmoglobin under the Action of Certain Agents.—The absence of hæmoglobinuria under such circumstances is explained by my observations, which show that the occurrence of hæmoglobinuria also depends on the form assumed by the hæmoglobin after being liberated from the corpuscles. Hæmoglobin set free in the circulation by the injection of such reagents as distilled water or glycerine is excreted as such by the kidneys, and chiefly through the glomeruli of the kidney, only in part through the epithelium of the convoluted tubules. Under certain circumstances, it would appear as if the hæmoglobin, on being set free, effects a combination with the albuminous constituents of the plasma, and is then no longer excreted as ordinary hæmoglobin. Instead of passing through the glomeruli, it is mainly excreted by the cells of the convoluted tubules, and is no longer recognisable in the urine by the ordinary tests applied for the detection of hæmoglobin.

This change in the character of the hæmoglobin, I find, is characteristic of the action of certain destructive agents, notably of toluylendiamin. I have already stated that the injection of even large doses of this drug into the blood of rabbits is not attended by hæmoglobinuria, although the appearances presented by the liver and spleen show that there has been a great destruction of blood. Although hæmoglobin is not discoverable in the urine by the ordinary tests, spectroscopic and otherwise, on microscopic examination small globules of yellow colouring matter of varying size are to be found abundantly in the urine, and are easily recognisable as products of blood destruction by their bright yellow colour. These globules are always spherical in form, and they so closely resemble at first sight ordinary spherical red corpuscles that they may, on cursory examination, be mistaken for such. They have more usually been regarded as fragments of red corpuscles. The interesting point regarding these globules of colouring matter—for such they are—is that in size, form, and colour they exactly resemble the granules of pigment found in the cells of the convoluted tubules of the kidney in certain cases of pernicious anæmia.

Source of the Pigment in the Kidney.—What, then, is the nature and source of this colouring matter or pigment? The answer to this question is, I think, supplied by some observations of great interest which I made while studying the action of toluylendiamin on the blood outside the body, which show that under certain circumstances hæmoglobin in solution can assume a corpuscular form. If a small quantity of blood (5 c.mm.) be added to a perfectly neutral 5 per cent. solution of toluylendiamin, the following changes may be observed. At the end of twelve or twenty-four hours the corpuscles will be found to have all disappeared. On microscopic examination not a single corpuscular element of any sort is to be found in the perfectly transparent, slightly hæmoglobin-tinted solution. After this time a deposit begins to form at the bottom of the vessel, found on examination to be made up, not of the original red corpuscles, but of innumerable spherical bodies,

⁸ Beitrag zur Lehre von der paroxysmalen Hæmoglobinurie. D. Archiv f. klin. Med., Bd. XLII., 1888, p. 571.

of deep yellow colour and of the most varying size; identical, in fact, in all respects, with the bodies found in the urine after the administration of the drug. The bodies are of viscous nature, the smaller fusing readily with one another to form larger. The uniformly spherical form, and deep yellow colour are, however, always retained. A solution of pure crystalline hæmoglobin does not throw down bodies of this nature. I therefore conclude that the hæmoglobin has formed some combination with the albuminous constituents of the plasma.

It is extremely probable that a change of this nature occurs in the hæmoglobin in cases of pernicious anæmia. Its removal from the blood is then effected chiefly through the cells of the convoluted tubules. While in process of being excreted, it may be thrown down in the form of globules within these cells, the colouring matter gradually becoming reduced, and giving afterwards more or less perfectly the characteristic reaction of iron in albuminate form.

As we have seen, it is only in certain cases that the kidney contains this pigment. This is explained by the above observations. So long as the destruction is slight, the products of it will be disposed of almost entirely by the liver and before reaching the general circulation. If it is excessive at any one time, then hæmoglobin in its modified form passes into the general circulation, and is excreted as such through the kidneys. The most likely cases, therefore, in which to find pigment in the kidneys will be those in which the progress of the disease has been marked by exacerbations of the destructive process more or less acute, and in which, therefore, the destruction from time to time has been very great. Microscopic examination of the urine under such circumstances will probably reveal the presence of colouring matter in the form of small spherical globules similar to those just described. I have not yet had an opportunity of seeing such a case. In the light of these observations I shall watch for one with interest.

Explanation of the varying Size of the Spleen.—I regard these observations as establishing that pernicious anæmia is due to an excessive destruction of blood occurring in the portal system, especially that portion of it contained within the liver and the spleen. How is this conclusion reconcilable with the fact that in certain cases of pernicious anæmia the spleen apparently shows no changes either to the naked eye or on microscopic examination? In some cases it is described as of small size, firm, and red, or small and pale; while in others it is found enlarged, swollen, soft in consistence, and of deep violet colour, as in a case which recently came under my notice. The explanation of these variations in the size of the spleen I find to be that *the size of the spleen cannot be taken as an indication of the amount of blood destruction which may have recently occurred in it.* While active disintegration of the corpuscles is in progress the spleen is usually found enlarged. On the other hand, two or three days later, while the blood still contains remains of red blood-corpuscles and other evidences of blood destruction are numerous, the spleen may be found small, shrunken, and contracted, containing little blood and showing little evidence of having been at all concerned in the process.

Now we have seen that the course of pernicious anæmia towards the fatal termination is usually marked by relapses alternating with periods of convalescence; also, that these exacerbations are always followed by further deterioration of the quality of the blood and by more marked oligocythæmia. This must be taken as an indication that the excessive blood destruction occurring in pernicious anæmia is not constant. The process is marked by periods of activity alternately with periods of quiescence. The condition of the spleen found after death will vary according as an exacerbation of the destructive process has recently occurred or not. It is this fact which explains, in part, the extraordinary variations in the size of that organ in different cases. If destruction is in active progress at the time of death, the spleen will be found enlarged.

Explanation of the Absence of Pigment from the Spleen.—As regards its other characters, we have seen that in the hardened tissue microscopic examination usually fails to reveal any changes at all, and that in most cases the amount of iron contained in it is by no means proportional to the great excess constantly found in the liver. I was for a long time inclined to regard this as an indication that the part played by the spleen in the destruction of blood in this

disease was altogether secondary to that taken by the liver, and for the following reason:—

My observations showed that after transfusion of blood the spleen always contains much more pigment than the liver, and this organ is the chief seat of the disintegration of the red corpuscles in such cases. The conditions of the circulation in the spleen are specially favourable to the accumulation of effete red corpuscles and their conversion into pigment. I found, however, that the presence or absence of pigment in the spleen is dependent to a great extent on the nature of the blood destruction which has occurred. If the corpuscles are broken down entirely and their hæmoglobin liberated, the amount of pigment found in the spleen may be very slight, although the destruction of corpuscles may have been great. After poisoning with pyrogallie acid little or no pigment may be found in the spleen, although marked hæmoglobinuria has occurred; and the appearances presented by the red corpuscles within the spleen itself show that a great destruction of blood has taken place. The hæmoglobin of the corpuscles has been set free and carried to the liver to be disposed of, or into the general circulation to be excreted by the kidneys.

The conclusion I ultimately arrived at on the ground of these experiments was that, as regards the spleen, much more importance was therefore to be attached to the recent appearances, both naked eye and microscopic, than to those presented by the organ after hardening. In many cases the spleen was found apparently normal on being examined after hardening, while examination of the fresh organ had shown that blood destruction had been in full progress at the time of death. This conclusion was confirmed in a very striking way in a case of pernicious anæmia which came under my observation recently. The appearances presented by the spleen in particular were extremely well fitted to explain why in so many cases that organ after hardening shows so little change. The spleen was much enlarged (weight 13 oz.), soft and flabby in consistence, and, on section, presented an extremely deep violet-red or dark-purplish colour. It seemed to be extremely rich in blood, and in this respect presented a marked contrast to the other organs, which were exceedingly pale and anæmic. On microscopic examination of scrapings from the fresh organ the red corpuscles were found few in number. The colour of the splenic pulp was almost solely due to the presence of free hæmoglobin, the red corpuscles being in no greater number than in the other organs of the body. The splenic tissue gave little or no colour reaction with sulphide of ammonium. It contained no excess of blood pigment.

The explanation of these appearances is at once evident. Blood destruction had apparently been in active progress at the time of death, and the spleen was the chief seat of the disintegration of the red corpuscles. The hæmoglobin was carried to the liver to be disposed of, the evidence of this being, in the present case, not only a great excess of pigment in the liver cells in the usual situation—the outer two-thirds of the lobule,—but also the presence of a very large quantity of thick, intensely deeply stained bile found both in the gall-bladder and in the upper part of the small intestine. The absence of any iron reaction is explained by the circumstance already alluded to, that iron, as it is contained in the form of hæmoglobin, gives no reaction with micro-chemical reagents.

Nature of the Blood Destruction.

What, then, is the nature of the blood destruction in this disease? I have satisfied myself that it cannot be regarded simply as a dissolution of the red corpuscles in the general circulation, such as occurs periodically in paroxysmal hæmoglobinuria, and such as may be experimentally induced by the injection of such reagents as distilled water, glycerine, or pyrogallie acid into the circulation. Hæmoglobinuria then occurs, and hæmoglobinuria is always absent in pernicious anæmia.

In this relation the condition of the liver is of the greatest importance. As the result of my observations with distilled water and glycerine after injection into the blood, I have been led to conclude that *mere excess of hæmoglobin free in the blood is not capable of giving rise to a condition of the liver such as is found in pernicious anæmia.* Nor can it be produced by the action of a destructive agent such as pyrogallie acid, which, in addition to its action on the blood, has a distinctly poisonous action on the liver cells, evidenced by the occurrence of intense fatty degeneration of the liver cells, especially in the centre of the lobules.

My observations, however, show that, by the action of a drug such as toluylendiamin, a condition of the liver as regards (1) *richness in iron*, (2) *situation of the pigment within the liver cells*, and (3) *occurrence of fatty degeneration in the cells in the central third of the lobule*, can be produced closely resembling, although never so marked as that found in, pernicious anæmia. A similar condition of the liver has been found by Stadelmann after chronic poisoning with toluylendiamin in dogs.

Now, the peculiarity of the action of toluylendiamin, as distinguished from that of a poison such as pyrogallie acid, I find to be this—that it combines with its destructive action on the blood a *specific action*, not necessarily a poisonous action, on the liver cells. I find that a similar specific action is to some degree exerted on the liver cells by phosphate of soda, a salt well known to be a stimulant of bile secretion. I therefore conclude that the agent (or agents) which induce the excessive destruction of blood in pernicious anæmia is one whose action on the blood and on the liver cells is the same as that of toluylendiamin; and this conclusion is strengthened by the consideration that the form assumed by the hæmoglobin after its liberation from the corpuscles is, in cases of pernicious anæmia, similar to that assumed by it after poisoning with toluylendiamin.

Nature of the Poison.—With regard to the precise nature of the poison thus generated in cases of pernicious anæmia and responsible for the blood destruction which is at the basis of the anæmia, my observations do not as yet supply me with any definite information. The frequency of gastro-intestinal symptoms is a well-known feature of the disease. This finds its parallel in the frequency with which gastro-intestinal lesions are apparently the only, or at least the chief, lesions discoverable after death. It is therefore probable that the poison is of a cadaveric nature, produced within the gastro-intestinal tract—in excessively small quantity, however, and not necessarily constantly. On such a view, we can at once explain (1) why changes in the gastro-intestinal tract—malignant disease, atrophy of gastric glands, presence of intestinal worms—may all be important etiological factors in the production of this form of anæmia; and (2) why, on the other hand, they may all exist without giving rise to the disease. They merely, under certain circumstances, favour the production of the essential pathological changes underlying the disease—viz., an excessive destruction of blood, limited for the most part to the portal circulation and its important anæmia—the spleen and liver.

Summary of Results.—Let me, in conclusion, briefly summarise the results of my observations.

1. Pernicious anæmia is to be regarded as a special disease both clinically and pathologically. It constitutes a distinct variety of *idiopathic anæmia*. 2. Its essential pathological feature is an excessive destruction of blood. 3. The most constant anatomical change to be found is the presence of a large excess of iron in the liver. 4. This condition of the liver serves at once to distinguish pernicious anæmia post mortem from all varieties of *symptomatic anæmia*, as also from the anæmia resulting from loss of blood. 5. The blood destruction characteristic of this form of anæmia differs both in its nature and its seats from that found in malaria, in paroxysmal hæmoglobinuria, and other forms of hæmoglobinuria. 6. The view can no longer be held that the occurrence of hæmoglobinuria simply depends on the quantity of hæmoglobin set free. 7. On the contrary, the seat of the destruction and the form assumed by the hæmoglobin on being set free are important conditions regulating the presence or absence of hæmoglobinuria in any case in which an excessive disintegration of corpuscles has occurred. 8. In paroxysmal hæmoglobinuria the disintegration of corpuscles occurs in the general circulation, and is due to a rapid dissolution of the red corpuscles. 9. In pernicious anæmia the seat of disintegration is chiefly the portal circulation, more especially that portion of it contained within the spleen and the liver, and the destruction is effected by the action of certain poisonous agents, probably of a cadaveric nature, absorbed from the intestinal tract.

SUCCESSFUL TREATMENT OF SEWAGE.—At the meeting of the Sutton Local Board last week the medical officer, Dr. Jacob, gave the results of the report of Sir Henry Roscoe, M.P., F.R.S., on the treatment of the sewage at Acton, which treatment had been examined by the board. It showed that the system was of a high character in cleansing the sewage, the effluent being highly satisfactory.

Introductory Address

ON

SOME REFORMS NEEDED IN MEDICAL EDUCATION.

Delivered at the Westminster Hospital Medical School,
October 1st, 1888.

By CHARLES STONHAM, F.R.C.S.,
ASSISTANT SURGEON TO THE HOSPITAL.

GENTLEMEN,—My first and most pleasant duty at the commencement of a new session is to offer, on behalf of my colleagues and myself a most hearty welcome to all here who to-day commence or renew their studies. We hope that those who have already embarked on medical work may be fortunate in the ordeals which await them at another place, and so arrive perceptibly nearer the goal of their ambition. We hope that those who shall during this year pass away from the hospital as qualified practitioners into a wider sphere of action may be successful in winning the confidence of a large and remunerative section of a confiding public. Lastly, but by no means least, we would give our most cordial greetings to those who enter to-day—it may be with fear and hesitation—on the threshold of their medical career. For each of you we hope that every month of work may unfold something of fresh interest, and show what an inexhaustible source of mental gratification and interest is to be found in the study of human beings in health and disease. For each and all of you we wish a pleasant and successful course of study, so that when student life is ended, and all who are here to-day as freshmen shall in turn have entered on the routine of daily practice, the continual anxieties and cares, perhaps the occasional vicissitudes and disappointments, which you will then encounter may in some measure be rendered easier to bear by the memory of happy hours spent, and by the more constant satisfaction and permanent enjoyment of life-long friendships formed during your student life at the Westminster Hospital.

Fortunate had it been for me, gentlemen, still more fortunate for you, if this were the termination of my task to-day; but the stern and inexorable law of ancient custom decrees that one more lecture shall be added to the number which will wellnigh overwhelm you before the session is ended; and even the most radically inclined amongst us must for the present bow to the tyranny of that antiquated custom, which would assuredly be "more honoured in the breach than the observance." The selection of a suitable subject for this annual address is a matter of constantly increasing perplexity, as year by year the torrent of eloquence poured forth from the theatres of our metropolitan Schools of Medicine adds its increment to the difficulty—I might almost say to the impossibility—of finding a fresh subject for discussion, or of shedding any new light on old and familiar topics already so well thrashed out. The old man, with the privileged garrulity of years, might refer back to the days of his youth, and reflect—not perhaps altogether with satisfaction—on the changes which have occurred and on the progress which has been made since his student days; but the young man must look to the present and to the future, regarding the days of old, not with an admiration increased by distance, but only to see what relics of an effete past still survive which demand abolition or reform in the altered circumstances of the present; or which will soon be rendered obsolete by the rapid oncoming of changes impending in the near future.

Thoughts such as these lead me to devote the time at my disposal to-day to that hackneyed subject—Medical Education; for, much as is constantly being said and written about it, it should still be considered worthy of thoughtful discussion, when we see, on the one hand, how thickly the traditions of the past cluster around it, rendering slow and laborious all efforts at effecting a change; whilst, on the other, the rapid development of medical science during the past few years shows how essential it is that we should adapt, and be prepared still further to alter, our curriculum to meet ever-varying necessities and ever-increasing requirements. The modern student may, indeed, well stand

aghast at the amount of knowledge which he is expected to acquire, compared with that which had to be mastered by his predecessor of a generation ago—an extent and variety of knowledge beside which that of Macaulay's typical school-boy may well sink into insignificance. He must be prepared with the latest methods of staining the tubercle bacillus; must be able to diagnose under the microscope an alveolar sarcoma from an alveolar cancer; should be accustomed to recognise with the ophthalmoscope the earliest stage of an optic atrophy, and to diagnose with the laryngoscope paralysis of one vocal cord; to describe fully the electrical reactions of a degenerated muscle; to explain the relative merits of a D-trap or a syphon trap in a water-closet; and, withal, to keep accurately in mind the process of karyokinesis of a nucleus, the differences between East Indian and Alexandrian senna leaves, and the life history of *filaria sanguinis hominis*; whilst he may think himself fortunate at not yet being expected to be able to examine the interior of a bladder with an endoscope, or to dissolve a uterine fibroid by electricity; until, bowed down with the weight of facts to be acquired, he is ready, heartily and sorrowfully, to agree with the wise man of old that "in much wisdom is much grief, and he that increaseth knowledge increaseth sorrow." Moreover, as if to add insult to injury, the public still look upon the unfortunate medical student as the same social pariah as he was pictured long ago in the pages of "Pickwick." Peccant young gentlemen incontinently brought before a police magistrate still seem to think that to call themselves medical students is to induce the representative of the law to regard their offences with a more lenient eye, as being only an inevitable part of the nature of the brute. Many of the general public would transfer to the much-abused medical student the trenchant essay of the school-boy on the customs and manners of the South Sea Islanders: "Their customs are beastly; manners they've none"; whilst, as a fitting complement to the whole, a recent novel, the real *raison d'être* of which it would perhaps be better not to investigate, writing in true accord with the general veracity of its other statements, describes the typical medical student's room as decorated with knockers, bell-handles, &c., whilst, in reality, a microtome, stethoscope, books, and a few specimen bottles are infinitely more likely to furnish its adornments, if its owner is to develop into a fully fledged practitioner within the allotted time. But the crowning woe of the modern student's existence has yet to be mentioned; in spite of the increase in every branch of medical science, in spite of fresh means of investigation and of the elaboration of instruments for increasing the diagnostic power of our special senses, he is still expected to acquire all this immense accumulation of skill and knowledge in the space of four years—that is, within the same period as when the term "walking the hospitals" might be taken in a more literal sense than at present, and when the final at the college was a pleasant afternoon's chat with amiable elderly gentlemen, who even in the very last resource could always be propitiated by the statement of the candidate that it was his intention to practise only in the West Indies.

In considering the whole subject of medical education, we naturally commence with the preliminary examination, the passing of which is necessary previous to registration. It is in this examination that we find what cannot but be regarded as serious shortcomings—shortcomings which exercise a demoralising effect not only on the entire course of after-training, but also on the social status of the entire profession. Rightly and properly, the first examination ought to be of a character to ensure that the mental capabilities of the man who passes it are sufficient to enable him with an ordinary amount of industry and perseverance to acquire a competent knowledge of his profession, and to get through his after-examinations with credit; it should be of such severity that the general public may know that men who have passed it have at least received the education of gentlemen. Above all, it should as far as possible render it a matter of certainty that those who get through it have had such a general training as to fit them to belong to one of the most important of the professions, lowered unfortunately to no slight degree in social prestige by the insufficient means taken to purify its ranks at their sources.

It is grossly unfair to let youths of inferior ability become medical students: it is unfair to themselves, because they only waste years of life and energy in vainly trying to do work for which nature has never fitted them, when their powers might have been usefully turned in other directions;

it is unfair to their parents or guardians, who have to provide the money for their education, in the fond hope that it is being profitably employed, whilst, in reality, it is being utterly wasted; it is unfair to the schools to whom such students belong that a constant series of predestined chronics should be provided, to demoralise others, and to hamper the efforts of the teachers; it is unfair to the public that anyone should be allowed the chance of attaining even the most inferior professional diploma who has only just been able to scrape through, little by little, the lowest preliminary examination as it now exists; finally, it is unfair to the profession as a whole that persons should be allowed to become recognised members of it who ought to have been extinguished at the very earliest stage of their career—for the old saying, that a chain is only as strong as its weakest link, applies, to some extent, even to the profession. The only person who benefits is the indefatigable and persevering coach, and even he must feel that, after all, his most successful efforts are misspent, and that his energies might be devoted to much more useful ends than that of trying to get unsuitable men entrusted with the lives of their fellow-creatures. The fault is, perhaps, not so much in the actual standard required as in that demoralising system which has gradually been permeating all medical examinations—that of allowing men to pass in one subject only at a time,—the result being that, as I have actually known to happen, a youth will devote about eighteen months to his preliminary, passing in one, or at the most two subjects at a time until the whole are completed. And the further result is that we not infrequently meet with students utterly ignorant of even the rudiments of their own language, who spell flea-bites "flee-bights," and make other grievous errors, and who gravely decline to punctuate their written papers on the ground that punctuation is a dangerous thing, and, wrongly employed, has led to serious lawsuits. The standard demanded of men before commencing their professional studies should be little, if at all, lower than that of the matriculation for the University of London; and especially should the example of the University be followed in compelling the candidate to pass the whole examination at one time, and so abolish that degrading "dot-and-go-one" system, by means of which any man outside the range of imbecility may eventually get through if only he have enough perseverance and a sufficiently long suffering coach. It is true that in this way we might occasionally exclude someone who might ultimately develop into a good or even extremely able medical man; but we cannot legislate merely for exceptions, nor have we any occasion to do so, seeing how easy it is by legitimate means to obtain an ample supply of excellent practitioners. The hundreds, now rapidly developing into thousands, from schools and colleges all over the country who annually pass the London matriculation are a sufficient demonstration, if any were needed, that the ordeal is not too severe for those who have had a proper modern education, certainly not too severe for those who aspire to enter one of the professions, for, seeing how frequently it is passed by those who afterwards devote themselves to trade, business, or commerce, surely we have a right to expect that medical men should have gone through at least an equally severe test. A man can only fail to pass such an examination for one of three reasons. Either he has not been properly educated, or he does not possess the requisite mental power, or he is not sufficiently industrious to take the necessary amount of trouble. Now, if he has not been properly educated, he is certainly unfit for, and has not been adequately prepared to enter, the ranks of medicine, which, although in many ways so much higher in its objects and methods than the kindred professions, yet takes undeniably a much lower position on account of the inferiority in general culture of so many of its members. If he fail from want of cerebral power, still less is he suited to begin medical work—work which demands in its study and its practice such constant application, such quickness of resource, such logical methods of thought, readiness in eliminating fallacies, and such a degree of intellectual ability even to get through the various professional examinations. Lastly, if the failure be due to want of industry and perseverance, it would assuredly be far better for candidate and public alike if he were to devote his future to something demanding less mental effort and less continual perseverance than the entire career of a medical man.

The only objection which could be made to raising the standard of the preliminary examination is that it might

considerably diminish the supply of medical practitioners. Now, leaving out of account altogether the fact that it would prevent many from entering who, as things are at present, commence, but never qualify—leaving this, I say, out of account altogether, what stronger argument could be advanced in favour of a strict preliminary examination? What better result could be attained than to check the present overcrowding in the profession? And in what better manner could that overcrowding be prevented than by dealing with it at its very fountain head, where vigorous measures can do no injustice to anyone. Overcrowding is the chief cause of all the evils from which we at present suffer. Why is it that the average country medical man only gets from £300 to £400 a year—so that in case of death his widow is too often dependent on private charity, and his daughters on their own exertions? Why is it that professional advertising goes on to a most terrible and ever-increasing extent; that men with good qualifications, and of recognised professional ability are content to settle down for years in resident hospital posts at a salary of at most £100 or £200 a year, and that even such a pittance excites the greatest competition? Why is it that in some of the northern schools men are only required to attend six midwifery cases; that attending a case often means merely touching the bedpost; and that in some schools a single patient is often allotted to two or even three clinical clerks? Why is it that, in spite of the indignities to which the army medical officers are subjected at the varying caprice of successive war ministers, appointments in the service are eagerly contended for? The medical profession is least respected as a profession by the public; while the lawyer, who grows fat on human vices, and the soldier, who is paid to commit legalised murder, are promoted to high places and honoured by all. Why are these things? I say it is because the profession is overcrowded, because its portals are thrown too widely open and undesirable members thereby admitted; and the greatest blessing that anyone could bestow upon the profession, both for the present and the future, would be to narrow these portals, and by a searching discrimination at the very beginning to lessen the number of those flocking in, who think, doubtless, that they are going to float quickly down the golden stream of fortune, whereas they have only to encounter the stern and stormy billows of adversity and disappointment.

Safely through his preliminary, the student finds himself confronted during the next four years with an enormous number of lectures on every subject of the medical curriculum; in fact, so closely does lecture succeed lecture, that we are in danger of arriving at the climax to which they have attained at some of the German Universities, and which is so admirably described in Mark Twain's "Tramp Abroad" that the passage deserves quotation. He says: "I entered an empty lecture-room one day just before the clock struck. The place had simple unpainted pine desks and benches for about 200 persons. About a minute before the clock struck, 150 students swarmed in, rushed to their seats, immediately spread open their note-books, and dipped their pens in the ink. When the clock began to strike a burly professor entered, was received with a round of applause, moved swiftly down the centre aisle, said 'Gentlemen,' and began to talk as he climbed his pulpit steps, and by the time he had arrived in his box and had faced his audience the lecture was well under way, and all the pens were going. He had no notes, he talked with prodigious rapidity and energy for an hour; then the students began to remind him in certain well-understood ways that his time was up; he seized his hat, still talking, proceeded swiftly down the pulpit steps, got out the last word as he reached the floor, everybody rose respectfully, and he swept rapidly down the aisle and disappeared. An instant rush for some other lecture-room followed, and in a minute I was alone with the empty benches once more."

Happily for you, gentlemen, there are already signs that the system of lectures has reached its maximum, if indeed it be not on the decline; for at the meeting of the General Medical Council in May last it was resolved: "That in order to afford due time for clinical work, it is desirable that the number of systematic lectures be restricted, and that it be referred to the Education Committee to consider in what cases and to what extent this restriction should be applied, and to report to a subsequent meeting of the Council." All interested in medical education will watch

with interest the results of this report. The literature of medicine is now so complete that there can be no difficulty for the student in getting from books nearly all the information which he can learn from lectures; and very much he must always so obtain, for medical subjects have so greatly increased of late years that even the longest courses of lectures have to leave large parts untouched, and the student very naturally thinks that as he has to learn, at any rate, a part of the subject from books, why should he not similarly learn the whole? Some men undoubtedly profit more by systematic lectures than others; the advantage is probably chiefly gained by taking careful notes, which are thus impressed upon the memory and are useful for rapid future reference in revising the subject. But exactly the same purpose is gained by a carefully written abstract of the contents of a text-book; and to compel those, in my opinion the very great majority, who habitually learn little or nothing from lectures, to waste very many hours of valuable time on course after course is surely a grave mistake. Some long courses are apt to mislead students into thinking that they can learn well enough from the lectures, without paying much attention to practical work; this is especially the case with anatomy. Who learns anatomy from lectures? Surely any real knowledge of this important subject is learnt in the dissecting-room, from demonstrations and museum specimens, and anything which detracts from the absolutely vital importance of these should be regarded with extremely jealous eyes. Lectures can at most only play a very subsidiary part in the teaching process; yet how much time is taken up with them! Furthermore, there is a tendency, both with lecturers and examiners, in the early subjects of the curriculum, to regard them as sciences *per se*, and to dissociate them from their practical bearing on pathology and treatment, really the only object with which they are studied by the future medical man. This tendency is well shown in the physics portion of the preliminary scientific examination of the London University, where pure physicists set highly scientific questions, having little or no bearing on any future medical or even physiological work. Anatomy again, is often studied as though surgery were a thing unheard of, the result being that the dry bones of anatomical facts, not being enlivened by their practical bearing on future studies, make no permanent impression on the memory, and when preparing for his final the student has to learn his anatomy over again from a totally different standpoint, having found by bitter experience that to know the exact extent of the synovial cavity of the knee joint is of more importance than to be able to tell at a glance to which side a trapezoid bone belongs, or to describe precisely the articulations of the sphenoidal process of the palate bones; and that it is far less important to know accurately the intercommunications of the cranial nerves at the base of the skull than the course and distribution of the lymphatics and lymphatic glands, of the very existence of which he may have been scarcely aware during his first two years.

In physiology and histology matters are often even still worse. Physiologists bring before their classes all the latest theories and discussions upon various obscure points: theories, most if not all of them, destined within a few months or years to be consigned to a well-deserved oblivion—unfortunately for you, gentlemen, only to be succeeded by others equally untenable; whilst the facts which have any special bearing on medicine and pathology are apt to be passed carelessly over as not of much importance, instead of the student's attention being carefully drawn to them. Thus the varieties of epithelium to be met with throughout the body are carefully described, but their importance is never impressed on the student's mind by any reference to the different forms of cancer to which they may give rise. Of what use to students are long discussions on electrotonus; on the microscopic changes which take place in muscular tissue during contraction; on the α , β , γ forms of albumen, albumose, or peptone produced during digestion; or on the changes undergone by the nucleus of a hen's egg immediately after fertilisation? When physiologists have come to some definite conclusion as to the points over which they now theorise and dispute, it will be time enough to bring the facts at which they arrive to practical physicians and surgeons to make use of them. As it is, they advance an indefinite number of theories, guarantee none of them, and leave you to take your choice. I have heard a physiologist gravely defend his course by quoting the truism that "all knowledge is useful," the obvious answer being that some facts and observations are much more useful than

others, and that, seeing how short life is, and how much the medical student has to learn, he had better devote his time to acquiring as far as possible that which is likely to be of the greatest value afterwards.

In connexion with the primary examination in anatomy and physiology, I must again note with regret the recent regulations allowing the two subjects to be taken up separately. Of course such a plan is a most merciful consideration to those who have passed the preliminary by a similar system of instalments, but it is surely not too much to expect of anyone that after nearly two years of study he should be able to show at one and the same time a competent knowledge of two such closely allied subjects as anatomy and physiology. The plan of separating the two tends to produce inferior work, for undoubtedly many men now go up in April or July in both subjects, often very badly prepared in one from the consciousness that, if referred in either, they can readily take it up again three months later; whereas, if failure in one involved re-examination in both, the preparation would become proportionately more careful, as the punishment resulting from ill success would be more severe.

Occupying a sort of intermediate but ill-defined position in the curriculum of study, and a still more uncertain place regarded from an examination point of view, come the twin subjects of *materia medica* and therapeutics. Now, botany, upon which the very foundations of *materia medica* in great measure depend, has already been removed from the curriculum, and we may venture to hope that the time has come when the greater part of *materia medica* itself might, not only without loss but with distinct advantage, share the same fate, a course of therapeutics only being retained. The introduction of the microscope, with the consequent rapid development of histology and pathology; the immense number of new experimental results which are constantly being arrived at in physiology; the ever-extending knowledge of old diseases, with the discovery of new ones; the bold operations now successfully performed by surgeons, and which were undreamt of a few years ago; the increased facilities of communication by which any fresh advance in medicine or surgery in one part of the world soon becomes the common property of the whole,—all these things render it imperative that those subjects which have no real importance as regards the future of a medical man should no longer be allowed to waste the time and energies of the student to the detriment of those matters upon which both his living and reputation will in after-life depend. In looking at any work on *materia medica* intended for students, even at the most recent and best, one notices, first, that the vegetable drugs are still classified according to their natural orders. Surely a classification founded on therapeutic or physiological principles might be substituted. Now that even the fond pretence of teaching any scientific botany has been abandoned, the student is certainly not much the better for knowing that cinchona is one of the Umbelliferae, and digitalis one of the Scrophulariaceae. In some instances, no doubt, plants belonging to the same natural order have certain properties in common, but frequently also this is by no means the case, but rather the reverse. For instance, liquorice, kino, the balsams of Peru and tolu, broom tops, Calabar bean, senna, and copaiba—about as miscellaneous a collection of drugs as could well be got together—are all derived from the natural order Leguminosae. It would surely be better for every one that drugs should be grouped according to their general action on the entire body, or on some particular organ or tissue.

Next as regards the geographical source. This, with the possible exception of a few such drugs as opium and quinine, is surely quite unnecessary for the student to learn. Does any student, no matter what line of medical work he may eventually take up, derive any advantage whatever from knowing for a few days or months that calumba comes from the forests of Eastern Africa between Ibo and the Zambesi, or that bael fruit is brought from Malabar and Coromandel? Still greater the folly of learning from what port the drug is exported. Perhaps with a little more refinement of knowledge we shall be expected to know the line of vessels by which it is carried, and to what port of this kingdom it is most frequently conveyed.

Next we come to the description of the drug, and an important question arises as to whether it is requisite to be able to recognise the different medicinal articles which are officinal, and to be able to distinguish them from the bodies

with which they may be adulterated. I venture to think that this is a branch of knowledge no longer necessary for medical men at the present day, but more suitable for herbalists, who may still wander forth into the fields and procure their drugs from nature's manufactory. Some things no doubt a student should be able to easily recognise, but they are, I think, so few in number, and with such very distinctive characteristics, that the knowledge can be acquired very quickly; but there are, on the other hand, many substances which the student is barely able to recognise when the acme of his *materia medica* knowledge is reached. Again, it is admittedly impossible to distinguish many of the white powders which are officinal, and therefore, if a medical man is able to succeed in life without this highly important accomplishment, why should it not be equally possible to do so without, even as a student, having had to spend his time in learning to distinguish between Socotrine and Barbadoes aloes, tannic and gallic acids, ammoniacum and galbanum, the leaves of the different plants in the order Atropaceae?—and so on, for examples might be multiplied almost indefinitely.

Another point to be noted is the mode of preparation of such drugs as are derived from the mineral kingdom. This is surely one of the most unnecessary things to learn in the whole of *materia medica*; and I imagine that hardly anyone can think it needful for a student to know, for instance, the mode of preparing tartaric acid from argol, or of phosphorus, tartar emetic, carbonate of soda, and of any other similar bodies. The only portions of *materia medica* which it is necessary to learn are better not acquired from a course of lectures at all, but by practical experience in the dispensary and hospital wards. A little practice in the dispensary, aided by some previous knowledge of chemistry, will very soon familiarise men with all the leading facts as to solubility and incompatibility, and with the appearances and chief physical properties of such drugs as have any easily recognisable characteristics.

It is, too, only by dispensing and by the frequent study and writing of prescriptions that it is possible to obtain anything more than a parrot-like knowledge of doses. What can be more ridiculous than to expect men to know the doses of all the officinal drugs before they have any real notion of the practical uses of the preparations. They are supposed to learn that the dose of iodide of potassium is from two to twenty grains, without having the remotest idea as to when to give the minimum or maximum doses; that the dose of grey powder is from three to eight grains, and of Donovan's solution from ten to thirty minims, though in after-years men will find that a half or quarter of the minimum quantity may often be given with advantage. Though it is true that to write a prescription without knowing the doses is impossible, yet the prescribing of one who only knew the strict Pharmacopoeial doses would be such a sorry business that surely it would be far better that this knowledge should be acquired in the wards and out-patient rooms, as really they ultimately are, rather than that they should even professedly be acquired by rote from a book in the same way as a boy learns the multiplication tables. By similar practical experience the student should obtain sufficient knowledge of the composition of the Pharmacopoeial preparations to prevent him falling into the error of a gentleman—qualified, sad to say—who spent nearly two hours trying to anaesthetise a parturient woman with spirits of chloroform, the child unfortunately being born before he had fully succeeded in his well-meant but misdirected efforts.

If we dismiss *materia medica* almost entirely from the curriculum, and absolutely from any course of lectures, we are left with pharmacology and therapeutics only, and already in many instances it is to these subjects solely that the so-called course of *materia medica* and therapeutics has by a sort of process of natural selection been reduced. The result, however, is that therapeutics takes an utterly anomalous and artificial position. One of the most difficult and complicated, certainly one of the least advanced, subjects of the whole medical course, it is studied, or supposed to be studied, almost before the student has entered the wards, or even attended the out-patient department. In all rational medical work, whether in student life or in practice afterwards, diagnosis is supposed to precede treatment; yet in our present system of teaching the process is reversed: the student is expected to know all about the action and uses of drugs before he has learned to distinguish the dyspnoea of mitral disease from that of acute bronchitis, or the rigors of

ague from those of pyæmia—before he has any notion of pathology, or has seen a tubercular lung or psoas abscess in the post-mortem room. He is treated to elaborate dissertations on the physiological, therapeutical, and toxicological action of all our remedial agents before he has seen opium given to relieve pain or taken to terminate life, before he has seen iron prescribed for anæmia or digitalis for heart disease. If blessed with a good memory, the student knows by heart long lists of all the medicines acting on the stomach before he has diagnosed a case of dyspepsia or seen sulphate of zinc given to empty that organ of an excess of alcoholic fluid. He is told the action and uses of every drug in the Pharmacopœia at a time when the range of his practical knowledge of their effects is limited to the peculiar and specific action of Epsom salts and compound rhubarb pill, with possibly some experience of the virtues of tincture of hyoscyamus and balsam of copaiva. What wonder that a bewildered student, when requested to enumerate the officinal aperients, should not only have laudanum amongst them, but that, unfortunately, when further questioned, he should mention twenty minims as a purgative dose. Could any system be devised more likely to lead to empiricism in treatment, and more calculated to make the best works on therapeutics appear nothing more than a book of tips? Instead of being placed at the very commencement of what, for convenience, we may call the second part of the curriculum, it ought surely to come at the very end, where its study would be attended with the greatest amount both of interest and profit, and where it could be worked at intelligently and rationally, instead of being regarded as a mere tax upon the memory.

Fairly started on his clinical work, the student should keep well in mind during the whole of his hospital career the fundamental importance of pathology, particularly of that branch known as morbid anatomy, which is to be learned in great measure by the observant naked eye and the trained finger in the post-mortem room. Beyond perhaps other reasons, the peculiar necessity of attending to this during hospital life lies in the fact that practically only during this period can it be effectively studied. In medicine, surgery, and midwifery, the practitioner may, and probably does, go on improving and learning with each additional year of his experience, but his opportunities of acquiring a knowledge of pathology, certainly of dead-house pathology, almost ceases abruptly with the termination of his hospital career, and only thoroughly taking advantage of his chances during student life will prevent him, when called upon to make a necropsy, upon which perhaps the life of a fellow creature may depend, from mistaking post-mortem staining, or the congestion of dependent parts for inflammation or the effects of a corrosive poison, or from doing what has actually been done—viz., remove a brain, and from external inspection only pronounce it perfectly normal, without so much as making a single incision into it. In every case with which we have to deal, we ought as far as possible to form a mental picture of the pathological conditions present, and though, unfortunately, in a great number of instances in pure medicine our therapeutic resources are not adequate to meet the pathological changes with which we have to deal, yet in surgery much more can be done; and if only we form an adequate conception of the changes which are occurring in diseased tissues and organs, we should not so often see cancer of the breast treated with iodine and allowed to cause distinct enlargement of the lymphatic glands before a definite diagnosis is made or any radical treatment suggested.

I have already dwelt at some length upon the advisability, I would almost say the necessity, of abolishing altogether that unnecessary subject of the curriculum, *materia medica*; and I did so more especially because we have now to consider a less congenial, and to you doubtless a much less acceptable topic—viz., the consideration, not of non-essential subjects which have still to be studied, but of highly important ones which are either not studied at all or only in a very inadequate degree. I would refer, first of all, to what may be called the special branches—diseases of the skin, eye, ear, and throat, and, perhaps I might add, of women. Undoubtedly the great advances which have been made of late years in nearly all of these departments, and particularly the elaboration of a number of special instruments requiring considerable skill and practice for their efficient use, tend more and more to deter the busy student from working at them, as he is naturally and very reasonably inclined to

think that they require much more time for their profitable study than any which he can spare from hours which would otherwise be devoted to what seems more urgent and important work amongst general medical and surgical cases. Moreover, the ordinary routine in the London general hospitals is only too apt to confirm the student in these unfortunate impressions. Inevitably, from the high degree of specialisation attained by London consultants, all the skin, ear, throat, and eye cases met with in the general wards or out-patient rooms are at once sent on to the special departments for these diseases, and are thus usually lost sight of by the student. The result is that, remaining in ignorance of these particular branches, the student, when he qualifies and comes into residence, finds it an easy and natural thing to follow the example of his seniors, and—so far as he has opportunity—refers to others all cases of diseases of special organs. So much is this habit likely to acquire the sanction of tradition, and pass into one of those unwritten laws which it is the grossest violation of etiquette to break, that I have even known the resident officers in a large hospital seriously discuss whether the house surgeon or house physician would be justified in making a vaginal examination on one of his patients without getting the resident accoucheur to do so first! This state of things would be but of small moment, if all through life the practitioner were able to work on the same principles as during his hospital career. Unfortunately for the great majority, this is of course impossible, for the medical man will find that no inconsiderable proportion of his patients suffer from diseases of those organs which only too often in his earlier days he has been accustomed to neglect. Treat them, then, in some way or other, rightly or wrongly, he must; only too often the treatment is not of the best, to the detriment alike of doctor and patient. In this regard some of the smaller provincial hospitals present what is, in some respects at least, and particularly to the resident officers, a distinct advantage over the large London schools, in having examples of deafness or otitis media, of iritis or glaucoma, of psoriasis and pemphigus, uterine fibroids or pelvic cellulitis, mixed up with other cases in the general wards. Of course no one can be expected to become an all-round specialist, to be able with equal ease and facility to make out slight pigmentary and degenerative changes in the macula lutea, to accurately correct a case of mixed astigmatism, to recognise an adhesion of the membrana tympani to the promontory, to diagnose and treat a case of xeroderma pigmentosum, or to paint an ulcer of the vocal cord. But, on the other hand, every medical man ought at least to be able to recognise the common abnormal conditions of the special organs, and know how to treat them. It has been well said that no one at the present day is fit to practise who cannot see the optic disc and the epiglottis. Certainly such an important diagnostic feature as optic neuritis should not be overlooked, even though we do not go so far as one enthusiastic gentleman who, when asked to give an example of the value of the ophthalmoscope in general medicine, observed that visible pulsation of the retinal vessels would be an important means of diagnosing aortic regurgitation. Even though a man may not be willing to operate for cataract, he can hardly be considered as less than culpably negligent or ignorant if he be unable to recognise or do not know how to treat a case of acute glaucoma; and he certainly fails in his duty to his patient if he does not trace a headache due to hypermetropia to its right cause.

Furthermore, without wishing to injure the specialist, we must bear in mind that even a comparatively small knowledge of the subjects referred to would result in great gain to the practitioner, both in money and reputation. Besides many well-to-do people who at once spend one or two guineas or more on a specialist for any trivial affection of sight or hearing, there are in London a great number of the lower middle class who for the same affections go to hospitals, and unfortunately too often to small special hospitals, where their ailments cannot be utilised for educational purposes; in fact, some of these institutions are rendered almost self-supporting by the contributions paid by such patients—contributions which ought really to have gone into the pockets of medical men. We cannot blame the public for this, for not only do medical men fail to treat eye, ear, or skin cases with any success whatever, but they frequently themselves send their patients to these very hospitals.

A well-known physician says that all ear cases are divisible into two classes: those which are curable by syringing, and those which are not. It is to be feared that this only ex-

presses the far too general consensus of opinion among members of the profession as to the prognosis and treatment of cases of ear disease. Unfortunately, even syringing is capable in unsuitable cases of doing such an amount of harm that, if men only learnt in their student days when and when not to syringe, they would not only in after-life often be able to benefit their patients very considerably, but would probably themselves derive quite a commensurate advantage.

At the present time, the student preparing for his final regards the special branches, and particularly eye diseases, as a sort of bugbear, upon which he may perchance be questioned during some portion of the examination; but if he is, he regards it as a signal instance of his usual bad luck, if not of unfair behaviour on the part of the examiners. It will be fortunate for him if he escapes the fate of a certain gentleman who had been told that if an eye question were set it would probably be on glaucoma. Unfortunately, unpropitious destiny induced the examiners to take him to a case in the *visi voce*. He examined it fully, ophthalmoscoped with care and deliberation, and, after a complete investigation, stated with a cheerful and confident air that it was a well-marked and typical case of glaucoma. The fates had played him false: the correct diagnosis was optic atrophy. Probably in a few years, diseases of the eye, at least, if not of the ear, will form a regular and acknowledged portion of all final examinations, instead of being taken up in an irregular and haphazard fashion, as at present. Already the much-abused corporation at Blackfriars is taking much "kudos" to itself for having appointed an ophthalmic specialist as one of its examiners in surgery.

The members of the General Medical Council have lately been devoting much of their valuable time and deliberative power to the consideration of other points in which they think the student's education is deficient, and to the way in which these deficiencies are to be remedied. Amongst other recommendations passed was one that students should, as far as possible, study cases of lunacy, and another that they should devote three months to the study of acute specific fevers. With regard to the latter, there can be no doubt that the present curriculum does not supply any sufficient opportunities of seeing such cases, particularly small-pox and scarlet fever. At the meeting to which I have referred, Dr. Banks stated that not 50 per cent. of candidates for examination had ever seen a case of scarlet fever; and with regard to small-pox the percentage is probably still worse. An eminent hospital teacher, when asked to recommend a *locum tenens*, said that there were plenty of able men about, but that they could not be expected to recognise the first few cases of measles which they might meet with.

The result of this inefficient training in these highly important diseases is well shown in the statistics of the hospitals of the Metropolitan Asylums Board, for only last year something like one-third of the patients sent in by medical men as cases of small-pox were found not to have small-pox at all, but to be suffering from measles, chicken-pox, syphilis, acne, and a variety of other conditions. Undoubtedly also, within recent years, severe epidemics of small-pox have arisen in different parts of London and the country, owing to the earlier cases having been diagnosed as chicken-pox. It is easier to dwell on this great evil than to find an adequate remedy for it. The Medical Council has advised students to spend three months in a fever hospital, but this is relatively a very long period to devote to a few diseases, involving, as it does, severance to a great extent from the outside world, and certainly from all other medical work, and the agreeableness of the prospect is not enhanced by the brilliant suggestion of one speaker that a long vacation should be given up to the undertaking. On the other hand, a member of the Council doubted whether three months was sufficient time to learn much of fever. If the learned doctor who made this remark were to allow a similar time for all other branches of medical study, the final examination would have to be postponed until the Greek Kalends. Probably, the difficulty will ultimately have to be met by throwing open the London fever hospitals more or less widely for teaching and lecturing purposes. At present the Metropolitan Asylums Board has got as far as admitting qualified men as clinical assistants, with board and lodging as remuneration; but a man (particularly if qualified) does not care to undergo social ostracism for several months solely

in order to study scarlet fever and small-pox. What students, or newly qualified men, really need is to have an opportunity of seeing and having explained to them a fair number of typical fever cases, so that they may have some practical knowledge of these important cases before going into practice. The objection raised to any such plan is that its adoption would tend to disseminate infection; but surely, if proper precautions were taken, there would be no greater danger than there is through medical men attending their own private cases. Even if this danger be at all appreciable, it is at the worst only a choice of two evils, and I venture to think that it would be far better to run any slight possible risk that there might be rather than permit the great majority of young medical men to go out into practice having little or no acquaintance with the most important of the infectious fevers, leaving them to acquire their knowledge at the expense of the public in more senses than one, and through errors of diagnosis which may, and often do, lead to severe and widespread epidemics. Those short-sighted people who vehemently denounce the mere idea of admitting men inside a fever ward are of course, with the usual inconsistency of such highly intelligent and public-spirited persons, the first and loudest in their denunciations of a medical man who, never having been allowed to see infectious cases, quite naturally makes errors of diagnosis when first brought in contact with them. A few years ago a praiseworthy attempt was made by at least one metropolitan school to combine instruction at the fever hospital with the course of lectures on medicine. A sad climax ensued. A considerable number of students journeyed down to the small-pox camp then in full swing at Darent. After a long and fatiguing walk from the nearest railway station, they reached the entrance of the camp only to find themselves sternly refused admission and their further progress barred by a force of commissionaires. The promptitude of an official who induced the irate students to execute a strategic movement to the neighbouring imbecile asylum, where they were entertained with light refreshments and the sights of epileptic idiots, averted any disastrous consequences, but any further idea of demonstrating infectious cases came to a sudden and untimely termination.

Under the old system of apprenticeship the student learned to diagnose and treat cases of measles and scarlet fever, often also small-pox, at a very early stage of his career. We have chosen deliberately, and no doubt rightly, to substitute a different form of education; but the new system, like any other which could be devised, has its inevitable drawbacks, of which this is one of the greatest, and it behoves us as far as possible to meet and overcome the difficulty which we have ourselves created. It is true that occasionally the reluctance to become acquainted with infectious diseases is on the part of the student, who is perhaps as fearful of seeing fever cases as the most nervous member of the Asylums Board. I have known a man just commencing hospital work inadvertently follow one of the physicians into the diphtheria ward. Impressed somehow by the novel character of the ward, and by seeing only one bed occupied, he anxiously asked the sister in charge what the case was. Instantly on being told it was one of diphtheria, he rushed panic-stricken down the stairs and out of the hospital, and did not venture to re-enter its portals for some days. Fortunately, however, such cases are uncommon, and may be ascribed to the timidity of inexperience.

With regard to acquiring a familiarity with mental disease, we must remember that the medical man is entrusted by law with the tremendous power of absolutely depriving a person of his liberty—a power which, however, as some practitioners have good reason to know, cannot be exercised, even in the most urgent cases, without considerable risk. It is therefore highly desirable that students should have increased opportunities of acquiring some practical knowledge of lunacy, seeing that in the future such cases may involve them in the most serious responsibilities. But how this is to be done to any extent it is indeed difficult to say, and probably it will be a long while before mental disease forms a compulsory portion of the curriculum, though few would be found to deny the propriety of its doing so.

The foregoing remarks, which indicate how many branches of medicine there are which it is impossible, however desirable, to teach adequately or even at all, naturally bring us to the last, and in many respects the most important, topic upon which I wish to dwell this afternoon: viz., the

advisability, or rather I should say the necessity, of extending the curriculum over a period of five years—a measure which would certainly do more than anything else to remedy the present defects and the insufficiencies in the training of the future practitioner.

I have already referred to the recent enormous and ever-increasing additions to all branches of medical science, with which the student is expected to make himself acquainted. If a generation back four years was not considered too long to be devoted to medical study, surely it must be utterly impossible to compress into the same time all the subjects which have now to be worked at and understood, even allowing a very great deal for increased industry and mental capabilities on the part of the student. The very suggestion to which I have already alluded, that a long vacation should be devoted to the study of fever, shows how terribly inadequate as regards time the present curriculum must be. At present the time of an industrious student is already sufficiently or more than sufficiently occupied, so much so that he is obliged to leave many special subjects to take care of themselves, for he naturally feels that he cannot give time to their study without serious detriment to other and perhaps more important subjects. Only by at least a year's extra work would it be possible for the most energetic man, before getting qualified, to obtain the minimum adequate amount of knowledge of all the various diseases which he may at any time be called upon to treat on his own responsibility. Without this all-essential additional year, the recommendations of the Medical Council as to studying fever, lunacy, &c., must necessarily remain almost a dead letter. It is an indispensable preliminary to any real and effective scheme of improvement. Every year renders it more necessary, as the labours of innumerable workers all over the world add to the constantly accumulating store of medical facts and achievements. But the greatest inconsistency in the whole question still remains to be mentioned. Two years, or nearly so, is considered by no means an excessive time in which to learn anatomy and physiology; and yet the whole of medicine, surgery, obstetrics, and pathology, with all their minor subdivisions and branches, are to be acquired in almost the same limited period! On the one hand we have anatomy, a subject the limits of which are definitely fixed, and which necessarily has made but little progress for many years—and physiology, also advancing comparatively slowly; while on the other are medicine, surgery, and pathology, all rapidly progressing, each of them furnishing study sufficient for a lifetime, and each one full of the most complex and varied problems. Surely, even whilst allowing much for the mental training of the first two years of study, it must necessarily follow that, if a man require two years of preparation for his primary examination, he must need much more than that time for the final; and, further, that if he needed this time a generation ago, he must need much longer now. A very serious objection, if not the most serious, to the present short curriculum is that it encourages, and in fact almost compels, a system of cramming most demoralising in its effects and certainly most detrimental to the practitioner in after-life. In order to prepare for his examination within the allotted time, the student is obliged to work up and remember a vast number of facts which he has not time to assimilate or even to think about; the result is, that not only are the facts so obtained very soon forgotten, but the intellectual and reasoning faculties, which more than others are so essential to a good medical man, are stunted from absolute want of use and development; so that, as things are at present, we run an ever-increasing and by no means imaginary danger of training a race of practitioners whose knowledge has been acquired by a forcing process, and who have never been accustomed to exercise their higher mental faculties, so that in matters of diagnosis, prognosis, and treatment they are little more than automata, without power of spontaneous thought and independent reasoning. Lengthening of the curriculum would necessarily involve greater expense in the education necessary for medical students; but this, I think, would be in itself a decided benefit, for it would tend to limit the great number of men now annually crowding into the profession.

It may be objected that the remuneration which medical men receive does not increase in anything like the proportion in which the amount of knowledge required of them increases; and that, such being the case, it can hardly be expected that the majority of men should devote more time

and money to their education, especially seeing how small is the average income of a medical man. But, as I have already said, this depends in great measure upon the overcrowding from which we at present suffer; and if by any means this can be remedied, while at the same time the social status and professional attainments of medical men are raised, they would be able to demand and obtain better fees. Moreover, by lengthening the term of study, the student would have time to gain some practical information on the so-called special branches, and would therefore probably secure many patients quite able to pay who now receive gratuitous advice at hospitals. For it is an unquestionable fact that very many patients who attend special hospitals or special departments are not such as should be entitled to hospital relief. Money expended in the acquirement of valuable practical knowledge must necessarily eventually bring in a full remuneration. "Cast thy bread upon the waters, for thou shalt find it after many days." Minor difficulties in the way of lengthening the curriculum there might probably be; but I venture to express the opinion that medical education will not be established on a firm and satisfactory basis until the curriculum has been sufficiently lengthened and adapted to meet the requirements of an ever-progressing science such as medicine.

Gentlemen, I have dwelt at length, perhaps at too great length, on what appear to me to be the chief defects and shortcomings of our present system of medical education; but far be it from me to leave anyone, and more particularly the freshmen here to-day, in a state of profound dissatisfaction or discouragement with the medical course upon which he has embarked; and in my concluding remarks I would raise your thoughts and aspirations to a higher level and wider sphere. Thomas Arnold, in his "History of English Literature," finishes a long and minute criticism of Milton's *Paradise Lost* with these words: "After all, it is easy to be hypercritical in these matters. The defence, however, of such a minute analysis lies in the fact of its being exercised on a work truly great. We notice the flaws in a diamond because it is a diamond. No one would take the trouble to point out the grammatical or metrical slips in Blackmore's *Creation*. It is from the conviction that the renova of the *Paradise Lost* is and deserves to be imperishable that critics do not fear to show that it is wrong to regard it with a blind indiscriminate admiration. Of the father of poetry himself it was said, 'Aliquando bonus dormitat Homerus.'" So, gentlemen, is it with medicine. We criticise it so minutely because we value it so greatly. Its study is already so attractive that we desire to see it as perfect as possible. We should not let our admiration for the science of medicine blind us to any flaws in the method of studying it, but rather should we be determined that our fondness should not permit us to tolerate anything which could interfere in the slightest degree with the fullest possible acquaintance with every branch of it both as an art and a science. So far from discouraging, I would congratulate you upon the calling which you have embraced. In medicine you will find a never-ceasing pleasure—a pleasure that will only end with life itself. Whether you are called upon to treat a bruise or a catarrh, a compound fracture or a case of typhoid fever, whether your advice is asked as regards the disposal of a week's holiday or the advisability of a journey to the antipodes, whether you have to deal with the sanitation of a vast city or with the hygiene of an isolated country dwelling, in each and every case you will be confronted with fresh problems and fresh subjects for study and deliberation. To you will belong the rare and valuable privilege of being able to find in medicine alike the work of your life and the solace and recreation of your leisure hours. The lawyer, the soldier, the merchant, and the tradesman are only too ready to forget their respective callings, and throw off as irksome their daily avocations. The statesman is only too glad to enter on a theological discussion in the magazines or to write a translation of the *Iliad*. The medical man is said to betray his profession sooner than anyone else, because his whole mind is so engrossed and permeated by the intense interest of his work that he finds it impossible to divest himself of it. Lastly, to the medical man alone belongs the unique pleasure of increasing his own store of knowledge and experience, whilst at the same time benefiting others, so that his work can never become really monotonous or his toil a mental weariness. Under whatever varying circumstances suffering man is met with, there the doctor has the certainty of being able to relieve a

fellow-creature, and at the same time add to his experience and resources. We welcome you to-day, therefore, into the great fraternity of medicine with the full assurance that, in whatever circumstances your lot in the future may be cast, your lives, if imbued with a true love for your profession, cannot fail to be rendered happy by the double consciousness of at the same time doing and receiving good.

THREE CASES OF

INTESTINAL OBSTRUCTION DUE TO MECKEL'S DIVERTICULUM.

By G. GIBSON HAMILTON, M.B., F.R.C.S.E.

CASES of acute intestinal obstruction due to Meckel's diverticulum in which abdominal section has been performed are sufficiently rare to warrant the publication of two cases which came under my care—the one in May, the other in October, of last year.

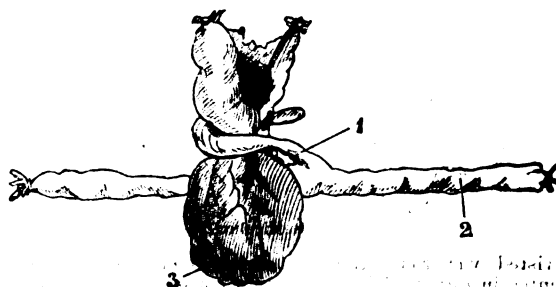
CASE 1.—On the first Sunday of May, 1887, Dr. Barr asked me to see, with a view to some surgical interference, a boy aged six years, who had been that morning admitted to the Liverpool Northern Hospital suffering from symptoms of very acute intestinal obstruction. The boy had been put to bed the previous evening (that is to say, Saturday evening) apparently in his usual health. He had had no motion for four days, although on more than one occasion he had felt inclined to have the bowels moved. At 3 o'clock on Sunday morning he woke up, complained of severe pain in the lower part of the abdomen, was very ill, and vomited pretty continuously until his father brought him to the hospital at noon. When admitted, Dr. Thompson, the house physician, described his condition as one of severe collapse, the expression being anxious, the lips livid, and the pupils dilated. The patient was restless, vomited frequently, lay on his left side with his knees drawn up, and complained of great pain in the lower part of the abdomen. Enemata, atropine, and other remedies were tried, but by 4 o'clock on the same Sunday afternoon the vomited matter had become stercoraceous, and he was much worse.

Late in the afternoon I saw him with Dr. Barr. His condition then was one of grave collapse, the tongue being dry, the pulse very weak and rapid, the expression anxious, the temperature 98.4°, and the patient still very restless. On examination, the abdomen was found to be apparently normal, with the exception that on deep palpation an ill-defined hardness was discovered in the lower part of the umbilical region. No distended portion of intestine could be made out, even with the aid of an anæsthetic. The case was diagnosed as one of acute intestinal obstruction, and I decided to operate the same evening. I therefore asked my colleagues, Mr. Puzey and Mr. Damer Harrison, to see the boy with us, and this they did between 8 and 9 o'clock. The state of the patient was then much more serious; the pulse was imperceptible at the wrist, the hands were blue, and the skin was covered with a cold perspiration, the patient lying in a semi-conscious condition. So ill was he that one of the surgeons present remarked that there was great risk of his dying on the operation table.

Operation.—At 9 o'clock, or eighteen hours after the first appearance of acute symptoms, a small quantity of ether was administered. An incision four inches in length was made in the middle line extending downwards from immediately below the umbilicus; only one small vessel had to be tied. On opening the peritoneum, it was at once noticed that one knuckle of bowel was deeply congested, as compared with the others which presented. It was soon evident that this dark-coloured bowel ran downwards into the pelvis, and was constricted by a band which crossed more or less transversely. I first explored the caput cæcum coli and vermiform appendix, but these were found to be normal. The ileum was now traced from the ileo-cæcal valve, and very soon the constriction was come upon. The transverse band above mentioned was found to be Meckel's diverticulum, which was about three inches in length, and had become attached to the mesentery behind, close to the spine. The diverticulum sprang from the ileum, two feet from the ileo-cæcal valve. A loop of about two feet of small intestine was firmly constricted by the diverticulum, as shown in Fig. 1. The dark, distended portion (3) beyond

the constriction occupied the pelvis, and had to be emptied of gas before it could be withdrawn from between the bladder and rectum, thus accounting for our inability to discover it before the abdomen was opened. The attachment of the extremity of the diverticulum was ligatured with catgut in two places and divided, and the constriction was easily relieved. The diverticulum itself was not re-

FIG. 1.



1, Diverticulum. 2, Ileum. 3, Dilated small intestine.

moved. The abdominal wound, being closed with thick silk sutures, was dressed with a dry pad of iodoform wool, over which a quantity of oakum was placed. The patient made an uninterrupted recovery.

CASE 2.—A boy of the same age and very much like the previous patient, also came under Dr. Barr's care, with a somewhat indefinite history of intestinal obstruction. Similarly, on a Saturday night he was put to bed apparently in his usual health, but on Sunday morning complained of griping pain in the abdomen and passed a small motion. He vomited continuously, it seems, until he was admitted to hospital on the following Wednesday. The day before admission the mother had given him an enema, which had resulted in a small motion.

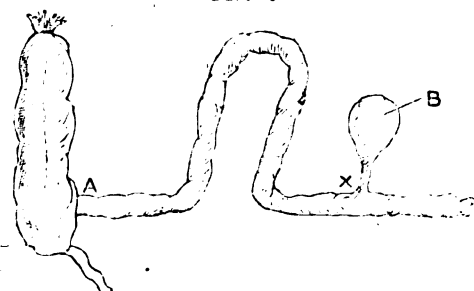
When admitted, on the fourth day of his illness, Dr. Heswall, the house physician, unfortunately found it very difficult to obtain a definite history as to the state of the boy's bowels previously. The following is Dr. Heswall's note of the patient's condition shortly after admission: "Complains of pain over the abdomen, which is greatly distended and tympanitic. The tongue is coated with a thick brown fur behind, but clean and moist in front. Has vomited twice since admission, the vomited matters being copious, and consisting of curdled milk and altered bile; no fecal odour. Distension of abdomen so great that little can be discovered on palpation." Three coils of intestine could be made out running transversely.

Mr. Puzey saw the boy with Dr. Barr on Thursday, but they did not then consider it advisable to operate. The patient remained in much the same condition, vomiting four times on Thursday and twice on Friday. Late on Friday night Dr. Barr saw him, and he then seemed a little better. On Saturday morning, however (the seventh day of his illness), Dr. Barr found him very much worse, and sent for Mr. Puzey with a view of operating at once. The boy was then practically moribund. Mr. Puzey was unable to go, and in his stead I opened the abdomen about mid-day. An incision was made four inches in length midway between the umbilicus and pubes. What looked like a loop of small dark intestine was found to be adherent to the anterior abdominal wall a little to the left of the centre of the incision. This protruded between, and was adherent by recent lymph to, two transverse coils of healthy small intestine. The adhesion to the anterior abdominal wall was divided, and, after breaking down the adhesions by lymph, the portion of dark bowel was returned. I was not satisfied that the constriction was completely relieved, as I felt something at the neck of the discoloured portion of bowel. I was proceeding to investigate this, when my attention was called to the boy's condition. He was pulseless, and it was thought advisable to get him into bed at once, trusting that this partial operation might relieve the constriction. This, however, was not the case, and the boy died in six hours.

After death the portion of bowel which had been adherent to the anterior abdominal wall was found to be really the club-shaped and dilated extremity of Meckel's diverticulum, round the neck of which 2½ ft. of ileum had become twisted. I can best illustrate this by referring to

Fig. 2. The diverticulum was found to spring from the ileum 3 ft. from the ileo-cæcal valve (A), so that from A to X would represent 3 ft. of ileum. Of this 3 ft., $2\frac{1}{2}$ ft. became

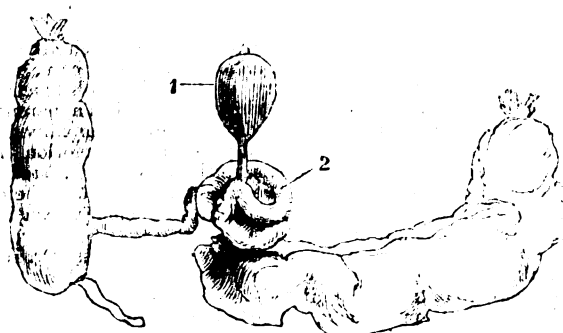
FIG. 2.



B, Diverticulum.

twisted twice round the neck of the diverticulum, as represented in Fig. 3. The bowel was constricted by the diverticulum, and the neck of the diverticulum was constricted by the two turns of bowel which encircled it.

FIG. 3.



1, Diverticulum. 2, Ileum twisted round neck of diverticulum.

Remarks.—It is evident, in comparing these two cases, that the acuteness of the symptoms in the first boy's case saved his life through early operative interference, and had Case 2 been operated upon as early, there is every probability that he also would have been alive. It is an easy matter, however, to be wise at the termination of such cases. I had recently under my care a young girl who had symptoms very similar to those in Case 2, and she made a good recovery at the end of ten days without any operative interference.

It has often been remarked how, especially in hospital practice, now and then there is "a run" of a particular class of cases. And, by the permission of my colleague (Mr. Puzey) and of Dr. Caton, I am enabled to append a short account of a case of intestinal obstruction, caused by an unobliterated vitelline duct (of which Meckel's diverticulum is a variety), which occurred about a year before the first of my cases.

CASE 3.—R. J., a sailor, aged thirty-three, was admitted into the Liverpool Northern Hospital on Feb. 20th, 1886, under the care of Dr. Caton, suffering from intestinal obstruction, the chief symptoms being pain about the umbilicus, constipation, and vomiting. The patient had an attack of "gastric fever" some seventeen years before, and "dysentery" three years ago; otherwise his health had been good, and there was no history of any strain or rupture or of habitual constipation. His bowels had been opened on Feb. 14th; and later the same day, after a draught of water, the patient was seized with sudden pain in the abdomen. Bilious vomiting occurred from the 14th to the 17th, and on that day it is said to have become feculent. No passage of faeces or of flatus by the bowel had occurred since the 14th.

On admission he did not look severely ill. His countenance was tranquil; his tongue moist; the abdomen was not much distended, the colon easily delimitable by percussion; in the right iliac fossa, dulness, with resistance, and some tenderness, were discovered; vomiting occurred about twice

daily. He had taken various purgatives before admission. An enema was administered without effect, and the patient was put under the influence of opium and belladonna.

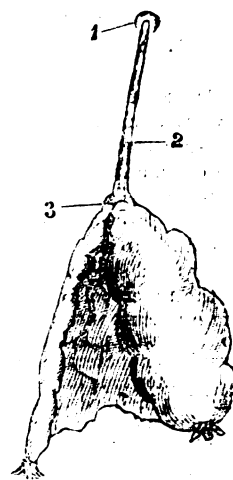
On Feb. 22nd, the patient having had no relief, but showing signs of becoming weaker, and the vomit being feculent, a consultation was held; and it was decided to operate without further delay. Ether was at once administered, and Mr. Puzey opened the abdomen in the middle line between the umbilicus and pubes. The site of obstruction was readily discovered to the right of the umbilicus.

Here the ileum was found constricted and pulled upon by a thick cord (about the size of the umbilical cord in an infant), so that above the constriction the intestine was greatly distended, whilst below (or beyond) the gut was flaccid and empty. (See Fig. 4.) This cord ran up in the direction of the umbilicus, becoming thinner and harder as it approached the abdominal wall. It was ligatured about two inches from the umbilicus and about an inch from the bowel, and the intervening portion was removed; then it was found that the lower portion had been pervious, and the cut surface required strict cleansing and disinfecting. The twist of the bowel having been thus relieved, the fluid contents of the distended part of the bowel readily flowed through the narrow portion into the hitherto collapsed gut below. There was hardly any bleeding, consequently very little cleansing of intestine was required. The operation had been conducted under the spray. The wound was closed in the usual manner, and dry antiseptic dressings applied. The patient, who had been in a very weak state before the operation, gradually became weaker, and died thirty hours after it. That the obstruction had been relieved was evidenced by the fact that all vomiting ceased from the time of the operation.

The post-mortem examination showed that the diverticulum arose about eighteen inches from the ileo-cæcal valve; the ligatures were quite secure; there was no general peritonitis, but a small quantity of sticky lymph over the portion of bowel which had been manipulated. The obstruction had been entirely relieved.

Note by Mr. PUZEY.—An earlier operation would probably have been successful. But in a similar case, where the diverticulum is cut across, the safer plan would be to treat the cut surface as wounded intestine, and to close it by Lembert's suture or in some similar manner.

FIG. 4.



1, Umbilicus. 2, Remains of vitelline duct. 3, Constriction.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON THE FOOTBALL ACCIDENT CALLED THE "POOP."

BY GEORGE WHERRY, M.C. CANTAB., F.R.C.S.

THIS is a name familiar to football players, given by them to an injury in the front of the thigh, which disables at the time and often brings the athlete to the surgeon for treatment after the accident. Usually the man says "he was pooped"; now and then "my pope was taken." It does not appear to be a local term. The phonetic spelling is given because the best classics among the football players will not hazard an orthography or a derivation. During the game a player receives a blow on the front and outside of the thigh: there is at once a feeling of utter helplessness, but he may recover so far as to be able to continue the play after a short

rest, and feel little of it next day, except that he cannot run. The patient comes to consult me the day after the injury, with little pain. He limps in walking. On examination there may be effusion into the knee-joint, a soft and somewhat tender area over the quadriceps extensor femoris, and the patient cannot lift the limb when it is kept extended. Ecchymosis is not common. The amount of knee-joint effusion depends on the position of the injury with regard to the bursa behind the quadriceps tendon, and whether the man has tried to continue his sport, or walked much after the accident. The blow may be in the middle of the thigh, and cause an effusion into the joint; the patient may have forgotten the "poop," and come to complain of the swollen knee. The recovery of the damaged muscle is generally complete, and not as after rupture without a blow, which leaves weakness and a gap easily felt when the muscle is put into action. It seems probable that in the "poop" the muscle is more bruised than broken, so that restoration is complete.

For the treatment a splint is seldom needed. The patient should rest on the bed or couch, using an evaporating lotion until all swelling or effusion has disappeared and the extended limb can be lifted easily. Before he is allowed to walk the front of the thigh should be supported with transverse bands of strong adhesive plaster.

To prevent this accident a protector would be worn for the thigh, just as players often wear shin pads, if it were not so difficult to keep it fixed during the game. I am more frequently consulted about "poops" than about bad "hacks" on the shins. It is with the hope of gaining some information from the experience of others that I write thus early in the football season.

Cambridge.

NIGHT TERROR AND SCREAMING IN A CHILD CURED BY REMOVAL OF THE TONSILS.

By J. M. ELBOROUGH SCATLIFF, M.D., M.R.C.S.,
SURGEON TO THE BRIGHTON AND SUSSEX THROAT AND
EAR DISPENSARY.

A. B—, a boy about seven years of age, to all appearance in good health, was brought to me for treatment some four years ago. His parents said they could not think what was the matter with him. They feared he was going out of his mind. He seemed to be quite well all day, took his food with appetite, and had good spirits; but every night, after he had been asleep some little time, he used to wake up in a state of great terror and alarm, cry out, and refuse to be comforted (his cries frequently alarmed the neighbours). In a short time he got over the attacks and became composed and rational, and would lie down quietly to sleep again. I examined the boy with care, and could find nothing the matter with him, except that he had very large hypertrophied tonsils; these I at once decided must be the cause of the alarming symptoms, and (having some similar cases in my mind recorded by Mr. J. Warrington Howard) I asked permission to remove them, as I believed that by so doing I should cure him. This was readily assented to, and I at once removed them both, very little hæmorrhage following. To my great satisfaction I learnt that my conjecture was evidently correct, as my little patient got quite rid of his night terror and screaming. I presumed that in deep sleep, when he lay in some unfavourable position, the tonsils obstructed the respiration so as to cause imperfect aeration of the blood and the disturbed mental condition.

Brighton.

ANTE-STERNAL DISLOCATION OF THE CLAVICLE.

By C. ALEX. DUCKET,
JUNIOR HOUSE SURGEON, ANCOATS HOSPITAL.

J. S—, aged twenty-eight, a strong, well-made man, of active habits, applied at the Ancoats Hospital on Aug. 28th. He stated that, while swimming upon his left side, he endeavoured to turn upon his back, during which action he "felt something give way in his neck." When I saw him, there was a marked projection of the sternal extremity of the left clavicle forwards, inwards, and somewhat downwards upon the anterior surface of the sternum, over which

the integuments were tightly stretched. Scarcely had I placed my hand upon the swelling, when the bone suddenly flew back into its place, with which the deformity disappeared. As there seemed to be no tendency for the clavicle to again leave its socket, the only treatment I adopted was to keep the man's arm at rest by placing it in a sling. I have lately seen the patient, and the joint is in its natural position, but it will be interesting to note whether it will remain so as soon as the man resumes his ordinary avocation.

The above case appears to me worthy of mention, apart from the rarity of the dislocation: firstly, on account of its singular causation; and, secondly, from the ease with which the parts were kept in position.

Ancoats, Manchester.

DISPLACED CYSTIC OVARY CAUSING PERSISTENT PELVIC PAIN; REMOVAL; RECOVERY.

By W. K. McMORDIE, M.D.

M. H—, married, aged forty-four, no children, was admitted into the Samaritan Hospital for Women, Belfast, on July 17th. She stated that for eighteen months she had suffered from persistent pain in the left ovarian region, which was quite unbearable, preventing her from sleeping at night and attending to her ordinary household duties by day. During the early part of her illness she had been under the care of Dr. McHarry, of this town, for some time, and in the spring of the present year she had been treated as a hospital patient by Dr. John Byers. In the early summer she had been a patient in the Samaritan Hospital for some weeks. I had no doubt that the pain was ovarian, and everything that could possibly be done by medicinal treatment and rest had been done by these gentlemen. For some time she had fallen into the habit of taking large doses of opium to relieve the pain—as much as 120 drops of laudanum at one dose. She was in a very feeble and broken-down state of health. I recommended removal of the ovary as giving the only hope of relief from her sufferings. Accordingly, on July 18th, assisted by Dr. Henry O'Neill, I removed the left ovary. It was found behind the uterus, low down in Douglas's pouch. Recovery from the operation was in every way most satisfactory; from the day of the operation she had complete freedom from pain. She was discharged from hospital on Aug. 20th in excellent health, and has reported since at the hospital that she has never had a trace of the old pain since she left.

The justification for the operation in this case is found in the fact that before the operation she was quite unable to attend to her ordinary household duties or prepare the food for her husband, an industrious poor man, a timekeeper in a weaving factory. She is now able to perform all her household duties, and enjoys a healthy and happy existence.

Belfast.

Abstracts

OF

INTRODUCTORY LECTURES ETC.

DELIVERED AT THE

MEDICAL SCHOOLS OF LONDON

AT THE

Opening of the Session 1888-89.

ST. GEORGE'S HOSPITAL.

INTRODUCTORY ADDRESS BY DR. EWART.

DR. EWART selected for his address the "Training of the Medical Man in the Future." The first remarks were devoted to the changes which had occurred in the school, and especially to the long services rendered by Dr. Wadham and Mr. Holmes, both recently added to the consulting staff. The Hunterian Lectures on Clinical Surgery, to be inaugurated this year by Mr. Holmes, brought to mind both the long interval which separates us from John Hunter and the directness of the traditions handed down from him,

through Home and Brodie, to the late Caesar Hawkins and to the present staff. The election of Dr. Gamgee and of Mr. George Turner was a subject for congratulation. Dr. Delépine was now occupying the chair of Pathology; Dr. Gamgee that of Therapeutics; Dr. Buckmaster the chair of Physiology; and to Dr. Slater was entrusted the management of the new Bacteriological Laboratory opened this day. After welcoming old and new pupils and congratulating the latter upon their choice of a profession and of a school, the lecturer said: "Two problems are pressing themselves upon our attention with growing urgency. They are respectively concerned with the science and with the practice of our profession within a fast-approaching future. In what manner is the medical mind to deal with the enormous increase of knowable facts? How, on the other hand, are medical practitioners to survive if their numbers maintain their present rate of expansion? The answer to both these problems appears to me to be intimately connected with medical education (an old and well-worn subject, but one of ever-changing complexion), and I therefore propose to submit to you certain views on the training of the medical man. A moment ago I was complimenting our students that they had joined a school which in no sense could be called overcrowded. The same may no longer be said of our profession. Its previously serene regions are fast becoming another scene for the struggle for existence. Year by year the increasing popularity of medicine as a calling is becoming a more onerous compliment to receive. Among the youths who elect to follow this calling, many do so in ignorance of what the choice implies. Had they a foreknowledge of their coming hardships, not a few might pause; what could be fairer to them, before they engage upon their long curriculum and resign their opportunities in other careers, than an adequate test whereby they might try their strength and ascertain their fitness? Of no other profession is it more true that an easy entrance examination is unkind. Ours, nowadays more than ever, is an exacting profession. Although neither genius, nor brilliancy, nor even talent is wanted, she claims energy, physical and mental; capacity for sustained effort; earnestness; and a high moral tone. 'Tis vain to reckon upon the development of these qualifications in the man if they have not even budded in the youth. He who, having failed to do justice to his early studies, is further incapable of the effort to retrieve, at the last hour, the neglect of former opportunities, is not a fit wooer of the medical art; and to lower the standard of the preliminary examination that he may be admitted is not only a doubtful service to him, but may mean an injury to others. A great deal has been advanced in favour of the substitution of a scientific training for the old-fashioned classical education, and the latter is gradually being sacrificed in the preliminary tests. Already Greek has been struck off the list of subjects, or rendered optional. This, in my estimation, is a fatal concession. Our medical, nay, even our surgical, nomenclature is daily becoming more Greek. It is not for me, and least of all in this place, to renew the discussion as to the educational value of Greek and Latin; much less am I prepared to defend the wasteful methods of teaching which have hitherto prevailed. But the day is distant when Greek will cease to contribute to the education of the polished classes. Meanwhile, let the future medical student enjoy the same advantages as other boys, and be free from the stigma of a second-rate education. From the civil service, from the army, from the navy, we hear accounts of steady improvement. In spite of evil prophets, the standard of general education has been raised, and is rising. Can we boast of any analogous rise in the standard of our preliminary examinations? From evidence, both extensive and recent, I am compelled to reply in the negative. The second problem which I would venture to discuss has reference to our attitude towards the ever-growing burden of professional studies. It may be taken as a postulate that, even with the advantage of an improved synthesis, trained minds only can successfully cope in the future with science and with medicine. In its present condition the medical curriculum may already be looked upon as a feat of endurance—one of the many feats which, within the recollection of living men, have become possible by dint of training. Since the task is growing, and must continually grow, day by day greater calls must be made upon the latent energies of the human mind, and the training of thought will become a more urgent need. The purpose of

general education will have to be extended from a mere collecting of weapons to a conscious study of their uses, and to assiduous drill in their employment. The art of thinking will have to be taught and practised on the foundation of the science of psychology, which is nothing else than the anatomy and physiology of consciousness. For this important end materials are being actively accumulated, and chief among the contributors is to be reckoned the medical profession, which may also be expected to derive a large share of the accruing advantages. Meanwhile the medical student of to-morrow will find in concentration his most hopeful tactics. Cautiously applied to school education, the same principle may some day make room there, without sacrificing either Greek or Latin, for such subjects as physics and chemistry. For the present, a year exclusively devoted by the intending medical student, either before or after joining a medical school, to chemistry, physics, and biology, would be an economical investment of time. I have previously referred to the achievements of the medical student of to-day as one instance, among many, of the capacity of this age for endurance. To the physician these performances are singularly suggestive. If training will enable human muscle and the human brain to accomplish so much work, may not constitutions be trained to live till extreme age shall decree the end? Many instances of remarkable longevity have come to light through the exertions of Professor Humphry. Whether such cases are more or less frequent than in previous generations, it is impossible to tell. Enough, however, that they still occur in this age of wear and tear. The life-history of those who have attained to a great age yields in one respect a uniform tale. They were active throughout life; and whether this activity was mental or physical, its supporting virtue was equally manifest. Above all, they trained those most conservative faculties which are the pillars of life—the power of resistance and the power of accommodation. Were we to compare their earliest physical training with that now prevalent in the nursery, we should probably find that the old rules, although less favourable perhaps to the survival of the weakly, were conducive to the vigour of the strong. To the present day the hardy Highlanders scorn the modern doctrine of flannel, and trust in great measure to their circulation to enable them to withstand the effects of the weather. Are they alone in these islands the inheritors of pristine robustness? I have been struck by the fact that, whilst the daily use of the cold sponge-bath and other tonic measures is slowly making its way on the Continent, old continental prejudice as to the risk of exposing the surfaces, especially in childhood, is gaining ground among us to an extent which may have its dangers. The heat generating and regulating apparatus, which is to be through life probably the greatest barrier to the inroads of disease, cannot with impunity be deprived in childhood of a proper and sufficient amount of stimulation. A similar reasoning applies to the education of other functions, especially to that of digestion. In the treatment of the dyspepsia not only of children but of adults, measures of protection might be overdone. The need for a selected and exclusive diet, imperative at first, is not necessarily permanent. Our aim should be to rouse to increased activity the sluggish function, until gradually it becomes capable of that variety of aliments without which the perfection of nutrition cannot be secured. I should crave your forgiveness for this long digression, but that it had a purpose. An analogy exists between the physical training of the infant and the mental training of the student. In both the aim to be attained is a certain independence of function. It is conceivable that the fostering heat of an *alma mater* might be applied too long and too liberally, and that the continuance of predigested food might impede the development of that omnivorous quality so vital to the medical mind. To those, no longer young students, who were spared no portion of the labour of learning, the luxuries enjoyed by the student of to-day are a vision full of envy. The improved facilities devised for him are a boon—nay, they have become a necessity, for more knowledge is expected of him, although not more time is allowed. They will be acknowledged as an unmixed boon if, through them, the capacity for independent mental effort suffers no detriment. But those qualities of which the profession of the future will most stand in need are not to be secured by a merely passive exercise of the brain; and it behoves teachers to endeavour to educate, from an early date, independent thought as well as memory in

students. Had time permitted, it would have been a refreshing task to dwell upon that most helpful reviver of the long-suffering brain, that delight which is also a duty—the training of muscle. But what need that I should instruct you in arts in which you are experts, or that I should preach athletics within the walls of St. George's? The quality commonly called 'nerve' exists ready-made in the majority of medical students; yet, in a sense, it is necessary that the medical man's nerves should be hardened. In self-control you possess a large field for training, where any conquests achieved will be valuable to you as men, but yet more valuable as professional men. The least to be expected from those who would be the advisers of others is that they should learn to be their own keepers. You will enjoy the same proud and wholesome freedom which has helped to train your predecessors. Displayed in them, its results have been so good that we should hesitate to exchange the old system for one of more restricted liberty for the student. Your entire training, comprising the science, the art, and the ethics of your profession may be obtained within this school. So long as sufficient bodily exercise is secured, every hour which you spend within its walls is well spent and never to be regretted. You are passing through an atmosphere of light; adjust that wonderful lens, attention, and that bright mirror, memory, till they burn a record as lasting as life itself. Rejoice also in the assurance that there is a maturing virtue even in those diffuse and glancing rays which you may fail to collect. Some day, perhaps, their unconscious workings may be projected into your thoughts with illuminating power. But more luminous than any others will be those impressions which you have laboriously gathered, and which you have closely interwoven with the thread of your own life at the cost of personal sacrifice. In extra-professional pursuits the doctor will find points of contact with his fellow-men. Association with the educated and with the learned has for him spontaneous attractions. But the singular privilege which he enjoys of being relatively matured in younger years and youthful in ripe age widens the sphere of his sociability. Furthermore, he is a humorist almost by profession. Contrasts, which are the foundation of humour, abound in his career; and he is daily confronted with that mixture of the sublime and of the ridiculous which makes up the tale of human life. Judged by his words, he might sometimes be thought to be a cynic, a socialist, an atheist, or something worse. Not his speech, however, but his deeds should be called to witness. His sensitiveness to etiquette is a sufficient proof of his rooted belief in the established order of things. And you require no assistance from me to draw logical inferences from his deep regard for principle; from his humble confession that the vital forces which he is called upon to watch and to regulate are, in their origin, hidden from his search; and from his liberal-mindedness in admitting that his speciality lies in the concrete world, and that the abstract is a field which others can cultivate with greater success. I have sketched out for you a heavy task. What, may you ask, is to be the upshot of so much toil? Great, indeed, if you reckon aright the regard of other men, and the testimony, yet more valuable, of your own conscience, for harm avoided and for good accomplished. Perhaps, without overstating them, I have dwelt too much upon the difficulties and the dangers which you will have to meet. For the youngest among you a bright and happy time is dawning. Of them will probably not be demanded that 'unfair toil which, with the help of hard times, conquers all things.' There will be leisure for wholesome recreation, and for the lighter moods of the mind. And as to worldly success, I would only quote to you an opinion held by Lord Bacon: "If a man look sharp and attentively he shall see fortune; for though she be blind, she is not invisible."

KING'S COLLEGE.

ADDRESS BY MR. J. ERIC ERICHSEN.

MR. ERICHSEN, F.R.S., LL.D., the President of University College, distributed the prizes in the Medical Faculty of King's College. After the distribution Mr. Erichsen addressed the students. In his introductory remarks he referred to his presence on that occasion as an evidence, if any were needed, that the lines which once deeply and somewhat widely separated King's College from University College, of which he was President, had now been obliterated.

The advance in public opinion that had marked the last half-century had enabled two institutions, which at their origin were founded on principles so differing as almost to be antagonistic, to be now in a position of complete harmony and of the most cordial and friendly understanding. That position had been brought about in great measure by their co-operation in the furthering of one of the noblest and greatest educational works that had ever been propounded in this metropolis—namely, the endeavour to establish, for the first time in the history of London, a university not only in London, but for London and for London alone. He would not enter at any length into this question, inasmuch as a Royal Commission was still considering it; but as there had been a great deal of misconception in the public mind upon this question of a new university for London, and as this might be the last opportunity for saying a word in public before the report of the Commission was issued, he might be allowed a few words in explanation of the position of the two Colleges in connexion with the proposed Albert University. It had long been felt by those interested in the cause of education that the sons and daughters of Londoners suffered much by the impossibility of receiving a thorough university education within the metropolis itself. It was also felt, and especially in connexion with the medical profession, that a great grievance existed in respect to the impossibility of the great mass of those students who were educated in London receiving the much-coveted M.D. degree in connexion with the schools in which they were educated, or without very considerable difficulty and loss of time in the metropolis itself, and that it was necessary for them to go to distant, to alien, or to foreign universities in order to receive that diploma. An Association outside the two Colleges, consisting of men much interested in educational matters, and presided over by the President of the Medical Council, placed itself in communication with University and King's Colleges, and, in consequence of the negotiations so opened up, these two Colleges, joining in the views of that Association, presented a petition to the Crown to enable them to take university rank, to give a university education, and to confer university degrees upon students in the metropolis. They did not wish to do so alone or unaided. Neither had the slightest feeling of selfish interest in the matter; they were willing to sacrifice their own individuality, and to associate themselves with the recognised medical schools on an equal and equitable footing, for the purpose of carrying out the object they had in view. The governing bodies of the Colleges felt that these two great institutions had attained a position that gave them a perfect right to solicit from the Government that university rank should be conferred upon them. They in every respect stood on an equal footing, except the granting of university rank, with the majority of the universities of the United Kingdom. Conjointly they were founded sixty years ago, at a cost of considerably more than half a million of money. Conjointly they possessed an income from fees of something like £70,000 a year. Conjointly they possessed trust funds to the extent of several hundreds of thousands of pounds for the endowment of lectureships, scholarships, and prizes of various kinds. Each possessed in itself every requisite for a complete system of university education—laboratories, workshops, museums, libraries, lecture theatres. Each possessed a complete organisation of faculties; each possessed a faculty of arts, of laws, of science, and of medicine, and King's College added a department of theology. Taking, then, the size of the two institutions, their wealth, their endowments, and general position as educational establishments, the governing bodies of the two Colleges felt that they were fully justified in petitioning that university rank might be conferred upon them. What the result of the deliberations of the Commission would be it was, of course, impossible to say; they could only hope it might be favourably inclined to the petition that had been presented to the Crown, and to the evidence that had been brought before them. If university rank were granted in connexion especially with the registered medical schools in London they would be able to start at once with a body of undergraduates larger than that possessed by any university in the United Kingdom, the two Colleges alone numbering something like 2000, and, if the various medical schools were added, the number of undergraduates would certainly amount to considerably over 3000. Proceeding to the more immediate business of the day, he wished first of all to say to those students who had not been successful that they

must not be discouraged by their failure; that, if they used it aright, they might turn failure into success, defeat into victory. He would not say that their failure might be a blessing in disguise; were he to do so, they would probably not believe him. But, if they used it aright, they would in all probability be able to avoid the recurrence of more disastrous failure in after-life. Let them inquire into the causes that had led to failure, and determine to correct them, lest they should be established into evil habits which would persist through the remainder of their days, and might lead to disaster in wider fields of action than competitive examinations within college walls. Putting aside chance or luck, and also varying ability amongst different men, in all probability failure had arisen from one of three causes; and by correcting those causes the student might succeed in future contests both there and elsewhere. The first was want of proper application; if so, let them determine to be more diligent. The second was want of method; and the third would probably be found in the attempt at grasping too many subjects. Any way, let the student determine to ascertain the cause of his failure, and, having done so, to correct it. To the successful students he would only say he hoped that their success might be the prelude of greater success in future life. The same qualities that had led to success in class examinations might, if continued, lead to success in the wider arena of professional competition, in which every man from the very first day on which he entered the profession to the very last day on which he left it would find himself engaged. Success was open to every man. There was no profession that was so open as that of medicine, or in which family influence, social circumstances, or accidents of position availed so little. The profession of literature had been called the "Republic of Letters"; that of medicine might be truly called the Republic of Medicine, in the sense that there was no hereditary rule, no privileged class. Every position was equally open to every man who entered the profession if he had the ability to aspire to it and the strength of character and of will to seize it. It would give to those who entered it everything that the profession could afford—social position, scientific eminence, professional distinction; such honours as medical men were thought worthy of, such wealth as might fall to the lot of a professional man. It would give all these, and something much greater and nobler than all these—the gift of daily usefulness in life, of daily usefulness to their fellow creatures, and the consciousness of not having spent their lives in vain. All these the medical profession would give, and freely give, to those who sought its gifts properly and in a true spirit. Success would come to those who deserved it; and when he spoke of success, he meant true and legitimate success, not that tinsel which was often taken for the real metal, not that notoriety which came from habitual self-assertion, from skilful self-advertisement, from the constant disparagement of competitors and rivals; and still less did he mean that ignoble prosperity that was brought about by the plausible tongue, the supple knee, and the grasping hand. That was not the kind of success that he meant; he meant the success that was accorded to men by the unanimous voice of their own profession and of an enlightened public. The eminence that was accorded in that way was the true measure of success in their profession. In order to obtain anything like true eminence there were three things necessary: to study hard, to observe closely and diligently, and to live soberly and righteously in the face of God and man. Let them do that, and success would attend their efforts. The knowledge obtained during their studentship was no doubt of considerable use hereafter, but the true system of education was to train their minds not to the mere acquisition of dry facts or the accumulation of masses of ill-digested knowledge, but to remain open for the reception of truth, and to meet the varying exigencies of the profession when they occurred. Medical knowledge is ever progressive, never stationary. Medicine is based on the natural sciences, which are never at rest, but always moving onwards. It is so with medicine. A man who remains stationary is retrograding when all around him is moving on in advance. In order to keep abreast with that movement, it is necessary not only to obtain equal knowledge with their brethren, but also to throw aside that which had become effete and useless. The soldier in a rapid advance threw away his impedimenta. A man of science in his advance must know how to throw aside the knowledge which he had formerly acquired, but which had now become useless. He must learn to forget. It is of great moment to learn to

forget in medicine. They would have to forget much in the later periods of their lives of what they had learnt in the earlier ones. They would have to forget and throw aside the debris of exploded theories, and the dry and useless husks of an obsolete practice. That was essential to success as they advanced in life. Every man in the medical profession should be a student through his life, and in the course of a long career it would be found absolutely necessary to re-learn many matters that had been thought to be thoroughly mastered at an earlier period. Looking back on his own professional life and in his own special branch, he found that, independently of many minor advances, surgery during the last forty years had advanced, as it were, in three distinct lines, which compelled every man engaged in surgical practice or teaching to become a student again, to throw aside a good deal of the knowledge he had previously acquired, and buckle to in order to acquire insight into the new order of things. The first of these was in connexion with the pathology of tumours. Forty years ago the microscope was scarcely used in pathological anatomy. As a student he lived six years with the greatest pathologist of the day, Sir Robert Carswell, the author of the greatest work on pathological anatomy in this country; but the whole of his pathology was naked-eye pathology. There was not a microscope in the house or in his class-room, and he never looked through a microscope during the whole of that period. The microscopical examination of tumours was then utterly unknown. For thirty years all those engaged in surgical practice had unceasingly to learn and to re-learn as new advances were made and old doctrines were found to be obsolete. A most distinguished pathologist and surgeon of his day said, with a certain amount of sarcasm, but with truth, that "a pathological fact only lived for four years." In all probability he gave rather too long an estimate of its life in those days; but now, at last, they had touched solid ground, and stood upon a firm and secure basis. The next event that occurred in the course of his own personal experience that compelled one to re-learn his profession was the introduction of anaesthetics into operative surgery. Previously, the scenes in the operating theatre were, he need scarcely say, very different from what was witnessed now. Every stroke of the knife was followed by a cry of anguish or a suppressed groan, perhaps of more intense suffering. Time was the great element in operations, and surgeons operated against time in order to save the patient prolonged and unnecessary suffering. The range of operative surgery was limited by the powers of endurance of the patient. Now it signified little whether a patient was fifty seconds or fifty minutes under the knife. But in former days, when operations were performed against time, and men stood with their watches in their hands counting the seconds that the operation took, the case was very different. They had to relearn a great part of operative surgery after the introduction of anaesthetics. Perhaps the greatest revolution in modern surgery was that which had been brought about by the introduction of that method of treatment which was due to the untiring energy and the translucent genius of one of the professors of that College, a man who, he (Mr. Erichsen) was proud to say, was a pupil and house surgeon of his own, with whom he had been connected by ties of friendship ever since that period—Joseph Lister. The working out of his system had cost many a heavy hour of labour to those who thought they knew something of surgery and something of the treatment of wounds. He knew of no illustration more to the point to show how thoroughly necessary it was for a man to unlearn as well as to learn than what had taken place in connexion with antiseptic surgery—how exceedingly difficult it had been to make men after a certain age understand the value of antiseptic surgery, and how readily it was accepted by those who saw its value and had not been compelled to unlearn previous and now obsolete methods of practice. In connexion with this he might say that the practice of asepticism was now thoroughly established in almost every medical school in every hospital throughout the kingdom, and it was only here and there that its full value was not recognised. Before concluding, there were one or two points to which he wished to direct attention. In the study of medicine there was a great charm, and the acquisition of medical knowledge was attended by an amount of satisfaction and pleasure which could scarcely be communicated by the acquisition of knowledge in any other profession. This arose from two causes. In the first place, medicine, as he had said, was never stationary, was always progressing. Hence there

was a constant variety in the study of medicine; there was never a finality; they were always on the threshold of some new discovery that might revolutionise the whole of the pathology and practice of their profession. There was consequently a degree of interest and variety that was peculiarly entrancing to many minds. Another charm was connected with its many-sidedness. The study of no other profession brought them in contact with so many other branches of human knowledge as that of medicine. Take, for instance, the natural sciences: medicine touched them on all sides; chemistry, physics, biology in its widest sense; comparative anatomy, botany, zoology, meteorology, and geology were all made subservient to it, and might all be studied with advantage by the medical man. So, again, the literature of the profession was not without its interest. In all probability the literature of the medical profession was more abundant than that of any other, unless it be that of theology. A man of literary tastes would find abundant scope within his own profession for the exercise of those tastes. Dr. Billings, the celebrated American physician, the head of the Army Medical Department at Washington, stated at the International Medical Congress in 1881 that during the preceding year he calculated that there had been 3200 distinct works on medicine published, together with 1500 theses and 40,000 articles in journals and magazines. That was an amount of literature that must surely be satisfying to the literary capacity of the most literary genius. Then, again, medicine came much in contact with art. The use of the pencil or of the brush was of the utmost possible service in connexion with their studies. Sketches, however rude, of anatomical regions or parts, sketches of microscopical structure, and so on, would occupy their time and would be sources of great interest. The mechanician might also find in practical surgery abundant scope for his skill. There was, however, a certain danger connected with the study of medicine against which he wished specially to caution them, and that was of becoming too technical, too much the doctor, and too little anything else. Their profession should be the first thing to them, but not the only thing. A physician should be a man of culture, as well as a man skilled in diagnosis and pathology and the treatment of disease. During the period of their medical studies they would have comparatively little time to attend to any matters outside the profession. The system of testing their advance by repeated examinations had to a certain extent an injurious tendency; it compelled the student to constantly direct his attention to the subject of the examination that was going on; he could not look around him, but must devote every moment to his particular work. In this way he neglected all reading that did not exactly tell upon the coming examination. But at a later period, when these ordeals were passed, he advised them to make it a point to devote a certain portion of each day to culture outside their profession. An hour a day devoted to the reading of some non-professional work—history, poetry, fiction—as dissimilar as they could possibly find to that which was occupying their attention in medical studies would give great comfort and great mental rest. There was more mental rest to be obtained by changing the subject of thought than by absolute idleness. An hour spent with Macaulay or with Froude, with Shakespeare, Byron, Tennyson, or Longfellow, with Dickens or Thackeray, would be the best antidote to the fatigue brought about by the many hours that must be spent with Quain and Gray, with Bristowe or Bryant or Holmes. In conclusion, he would remind them that from the first day on which they entered as registered students they were members in a sense of the medical profession, and the profession to which they belonged would be judged in great measure by their own conduct and that of each individual. Let, then, that conduct always be marked by circumspection, by a regard for honour and truth, by consideration for the feelings of others, by an attention to the amenities of polished life, and all that was necessary both for the bearing and the character of a gentleman, and, above all, by moral rectitude. And when at a later period they entered into public life and took part in public affairs, let them not be guided by any narrow or selfish considerations for the advantage of the special class or branch of the profession to which they chanced to belong, or the particular college or institution of which they were members, but let them seek to do that which was best for the profession as a whole, tending most to its honour and advancement. And in their practice let them bear this in mind, that they belonged to a

beneficent profession, the great object of which was the good of their fellow-creatures, an object as noble as, if not more noble than, that which characterised any other walk of life. In carrying out this object in alleviating human suffering, in protecting others from the invasion of disease, let it be their daily prayer to Him from whom all knowledge was derived that their perceptions might be cleared, their judgment strengthened; and in that supreme hour when the surgeon held the knife in his hand, when, it had been truly and eloquently said, death everywhere surrounds its edge, and all his knowledge is concentrated to its point, let his prayer be that he might have strength of nerve and skill of hand to carry his patient safely through. If they would do this they would exercise their profession in happiness and comfort; they would live to be respected and honoured by those who knew them, and most of all by those who knew them best.

ST. MARY'S HOSPITAL.

DR. WALLER, in his opening lecture, dealt with the increasing place which physiology is taking in the practical training of medical students, and dwelt upon the value of laboratory and ward work as the backbone of book and lecture knowledge. The body of the lecture consisted of an account of work carried on in the physiological laboratory relating to the electrical action of the human heart, and to information which the electrometer affords of the heart's normal mode of contraction on man and on quadrupeds, such as the dog or horse.

MIDDLESEX HOSPITAL.

INTRODUCTORY ADDRESS BY WM. FOSTER, M.A., F.R.C.S.

THE lecturer commenced by wishing his hearers a professional new year, and then alluded to the working of the new residential college and school buildings opened last year by the Lord Mayor. He congratulated the freshmen on entering a profession which was in universal request. Though one may elect to live without medical assistance, one's remains can only be disposed of by the aid of the medical man. He said that the medical student of to-day was better than the student of twenty years ago, and in this respect was merely reciprocating the improved temper and conduct of his elders. Mr. Foster particularly impressed on his hearers the importance of regular attendance at lectures as the shortest way of getting up a subject. He then alluded to his own department and the subordinate part which chemistry played in the practice of the ordinary medical man. The altered conditions of the colleges necessitated an acquaintance with the elementary principles and practice of chemistry. He contrasted examination and teaching, and then showed the absurdity of trying to teach efficiently the whole of the subjects in the synopsis in three months. He then referred to observations of effects and the reasoning as to probable causes, and said that the much-abused course of qualitative analysis was one of the best preparations a man could possibly have for the medical work he was subsequently called upon to study. It would assist him in prescribing and dispensing, the latter of which he said was often vilely done. A good pharmacist could often render him real service. About fifty years ago the hospital laboratories were comparatively the only places where chemistry could be studied properly, and as a consequence they attracted the very best chemists in the country. Of recent years the value of a lectureship in chemistry at the hospitals had considerably diminished, so much so that the lecturer in a small medical school was often required to furnish and maintain his department on a sum of £200 annually. Every such individual was compelled to devote his attention to some branch of technical chemistry as a source of livelihood. The lecturer then proceeded to say a few words on behalf of the scientific chemists. "The part they have played in the advancement of human knowledge, and indirectly in the alleviation of human suffering, has formed the subject of many eloquent discourses. Some of the discoveries which have proved such a boon to your profession, and which have so benefited mankind, have never had a price put on them by their authors. And still there are whole continents of subjects waiting for explorers. If we take any subject in chemistry connected with medicine and inquire into the evidence respecting it, we may be agreeably surprised to

find so much written about it, but most probably be disappointed at what has been done on it in the way of experiment. Take, for example, our knowledge respecting the carbohydrates and their disposition in the animal economy. Used as food, they give rise, among other things, to fat. How does the transformation take place? The problem is interesting to the chemist, but infinitely more so to the medical man anxious to advance his profession. The carbohydrates and animal fats are classed by the chemist in two separate groups, having no obvious relation. From the animal fats, by the application of heat, can be obtained two substances closely related—namely, acrolein and allyl alcohol. About two years ago it was announced that by taking acrolein, brominating it, and then decomposing the product with baryta water, sugar (one of the carbohydrates) had been obtained. Scientifically, this was an important advance in knowledge. Within the past two years the speaker had found, during his own experimental inquiries on the carbohydrates, that the vapours of acrolein and allyl alcohol were present in considerable quantities in the gaseous products of the decomposition of the carbohydrates by heat. Might we not reasonably hope to obtain much information from such laboratory experiments, and eventually arrive at some conclusion as to the stages the sugars pass through before they are eventually assimilated as fat? His own impression was that the subject could only be conducted in the laboratory by the trained chemist, and by him alone. The laboratories exist. Sir Edward Sieveking recently remarked that there were plenty of young men anxious to prosecute research if they were only guaranteed a living. Further, there were plenty of generously disposed people who freely subscribed to every benevolent scheme, be it real or imaginary. The problem was, How could these interests be connected? The speaker then referred to vulgar quackery, and considered that some of the vagaries of legitimate medical practice indirectly encouraged it, citing as his evidence the so-called "grape" cure, as recently described in the pages of *The Times*. He cautioned his hearers with regard to some of the combinations of meat, drink, and drugs compounded for the use of the profession, and questioned the value of many of them. In bringing his remarks to a close, he specially reminded them of the high character of their profession, and the enormous influence of their example on the poor, who should always be made to feel that the medical man is not only an adviser, but a friend.

ST. THOMAS'S HOSPITAL.

INTRODUCTORY ADDRESS BY DR. CULLINGWORTH.

AFTER a few words addressed especially to the students of St. Thomas's, the lecturer said he had chosen a special subject for the occasion—namely, the preventability of puerperal fever. He reminded his audience that the mortality of childbirth was much higher than it was popularly supposed to be, no fewer than 3877 deaths having been returned as due to this cause in England and Wales in the year 1886, including 479 in the single registration district of London. The most reliable statistics went to show that the greater part of these deaths, probably from 65 to 75 per cent., were due to puerperal fever. He hoped, before he concluded, to succeed in convincing them that almost the whole of this mortality might in future be avoided, and that puerperal fever might be practically stamped out. The subject of the nature, causes, and treatment of puerperal fever had long had a fascination for medical writers, but little or nothing had really been known of its etiology until quite recently. Certain tragic occurrences which took place from time to time brought home in a very painful manner the fact that the disease was communicable from patient to patient through the medium of doctor, midwife, or nurse, and the further fact that it might be carried to lying-in women from the post-mortem room. The discovery of the active part played by micro-organisms in the production of all forms of blood poisoning, puerperal fever amongst the rest, had furnished the explanation of these facts, and had suggested the means of prevention. He need not in that hospital remind them what a revolution antiseptic measures had produced in surgery. What he desired to impress upon them was that they were capable of effecting an equally stupendous revolution in obstetrics. He admitted with Fritsch that "to admit" nowadays "the existence of a spontaneous infection is to take a long step backward," and, as Dr. Cullingworth said, "it is to paralyse effort and

destroy hope. "The doctrine of autogenesis (self-infection)," exclaimed Parvin, "is a confession of ignorance, the creed of fatalism, the cry of despair, the very pessimism of obstetric medicine." He (Dr. Cullingworth) hoped that day to contribute in some small degree towards the overthrow of a doctrine that had done irreparable mischief. Already the practice of antiseptics (disinfection) in obstetrics had achieved wonderful results. In the lying-in hospital of Vienna, the largest institution of the kind in the world, the mortality, reduced by hygienic reforms from 28 per 1000 in the years 1857-62 to 16 per 1000 in 1863-80, had fallen since the introduction of antiseptics to 7 per 1000. At Dresden, Professor Leopold had succeeded in reducing the total mortality of the hospital from 50 per 1000 in 1872 to 10 per 1000 in 1886 and 1887, and had so nearly banished puerperal fever that only one fatal case had arisen in the hospital out of 1388 women attended last year (1887), and 95 per cent. of the patients had made an absolutely normal recovery. Turning to the United States, both New York and Boston were able to furnish similar testimony, the mortality from puerperal fever in the New York Lying-in Hospital having become reduced from 60 per 1000 in 1883 to 2 per 1000 in 1885-86; and that in the Boston hospital from 55.5 per 1000 in 1882 and 45.8 in 1883, to 16 in 1884, 6.4 in 1885, and 0 in 1886. Scarcely less striking was the record of the Maternity at Paris, the total death-rate in which had fallen from 93 per 1000 in 1858-69—first, owing to sanitary improvements, to 23 per 1000, and then, after the adoption of antiseptics, to 11 per 1000. Such instances could be multiplied almost indefinitely. He would only inflict one more upon them—that of their near neighbour, the General Lying-in Hospital in York-road. Until the year 1877 that hospital was scarcely ever free from puerperal fever, and the mortality occasionally was very great. On several occasions the hospital had to be closed for long periods, and thousands of pounds were spent on the sanitary improvement of the building. Since 1880, the hospital had been conducted on antiseptic principles. The result had been that the mortality, which from 1833 to 1860 averaged 30 per 1000, and from 1861 to 1877 was 17 per 1000, had fallen during the last eight years to 6 per 1000, and puerperal fever had been almost entirely banished. It was three years this month since the last death took place from this cause, and it had become quite unusual for there to be the slightest rise of a patient's temperature during convalescence. In the face of such results as these, it was surely time to give up talking of an autogenetic variety of puerperal fever. He desired that day to plead for the more general adoption of antiseptics in obstetric practice. The lying-in hospitals had very properly led the way, and the matter now rested with those engaged in private practice. It was obvious that the 2078 deaths certified as having occurred in England from puerperal fever in 1886 could not all have taken place in the hospitals. The only way to avoid this deplorable mortality, and also the enormous amount of puerperal disease, unrecorded because not fatal, was for every practitioner to recognise his individual responsibility in the matter. The use of antiseptic precautions in private practice in Germany was a matter of State regulation. The tendency of public opinion in this country was not in the direction of compulsory legislation in such matters. The use of antiseptics in Great Britain was, and was likely to remain, a question of individual responsibility, not of penal enactment. Surely it ought not, on that account, to be considered the less binding. "I have now," proceeded the lecturer, "stated my case. My plea has been on behalf, not of the sickly, aged, and useless members of the community, but of the mothers of this country whose lives and health are of an importance quite incalculable. Tragedies such as those I have felt it my duty to relate to you are still being enacted in our midst. I know of a country town, not very far from London, where within the present year puerperal fever has singled out the patients of one of the local practitioners exactly as it did at Plymouth and other places fifty and a hundred years ago. May I, in conclusion, borrow the words of one whom the whole English-speaking profession regards with affection and with pride, our venerable American *confrère*, Oliver Wendell Holmes, who, writing in 1843 of similar catastrophes, rose to an eloquence which even he has never surpassed? 'It is,' he says, 'as a lesson, rather than as a reproach, that I call up the memory of these irreparable errors and wrongs. No tongue can tell the heart-breaking calamity they have caused; they have

closed the eyes just opened upon a new world of love and happiness; they have bowed the strength of manhood into the dust; they have cast the helplessness of infancy into the stranger's arms, or bequeathed it, with less cruelty, the death of its dying parent. There is no tone deep enough for regret, and no voice loud enough for warning. The woman about to become a mother, or with her new-born infant upon her bosom, should be the object of trembling care and sympathy wherever she bears her tender burden or stretches her aching limbs. The very out-cast of the streets has pity upon her sister in degradation when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law, brought down upon its victim by a machinery as sure as destiny, is arrested in its fall by a word which reveals her transient claim for mercy. The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril. God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unwisely, or selfishly!"

UNIVERSITY COLLEGE.

INTRODUCTORY ADDRESS BY DR. RAMSAY.

DR. RAMSAY, in opening the session of the Medical Faculty, took for his subject the manner of thought of the middle ages, as regards science and medicine. He gave a *résumé* of an essay of the Benedictine friar, Basil Valentine (born 1394) on the "Microcosm." In this essay, the triad division of the Deity (Father, Son, and Spirit), of man (spirit, life, and body), and of matter (salt, sulphur, and mercury) are quaintly compared. The "matter and form" of the earth were quickened by "motion and mobility," and to these was added "imagination" to complete the marvellous structure. "The living spirit is the mercury of man; hence there are two principles, mercury and sulphur; and as to what man shares with other flesh—to wit, body and bone—here salt forms a third principle." The essayist next explains, according to his views, the transformation of matter from vegetable to animal, and, again, from animal to vegetable, exemplifying his remarks by considering the manner in which a cow is nourished by grass, and tracing the fate of the products of the cow, till, as manure, they refertilise the soil. The function of the air is next alluded to; how it causes laughter by invigorating the liver, how it prevents "pricking and pain" by its action on the pancreas, and how it prevents sickness and death by nourishing the lungs. The method of combating diseases is contained in the apothegm *similia similibus curantur*; and it is shown how principles possessing medical virtue can be extracted from the human organism, from minerals, and from plants.

The lecturer then alluded to the conceptions which underlie such thoughts as those of Basil Valentine; how he and others of his time believed certain numbers and geometrical figures to possess perfection; the false use made of analogy, which is, indeed, the basis of all science, since to know is only to refer the object said to be known to a certain class, with the numbers of which it exhibits analogy; the deference paid to authority by the ancient writer; and his use of words to which no definite meaning can be attached. Certain lessons were, however, to be learned from the ancients; among others, the necessity of taking a personal view of the problems of science, and of considering things in all their bearings. The lecturer next traced the connexion between chemistry and medicine, and pointed out that it is as essential to possess knowledge of the composition of the body as it is to know its structure and its functions. The anatomist studies the structure of the body; the chemist the composition of the various parts, their methods of interacting, and the changes which they undergo on treatment with other substances; while the physiologist busies himself with the functions of the different parts resulting from their structure, composition, and changes. The value of chemistry as a preliminary training for medical men was then insisted on, and it was remarked that those faculties of mind requisite for chemical investigation are the same as those exercised every day by the practitioner. The lecturer then stated as his opinion that, while the amount of chemistry required to pass the examinations of the conjoint boards is

of use only as a mental training, the requirements of the University of London are such that a diligent student is prepared for the intelligent study of physiology and pathology.

The lecturer concluded as follows: "There is no doubt that we English are in too great a hurry. We want to acquire our knowledge by a short cut. What in England is scamped over in nine months, the German lingers over for two years. And the result of the cause (I know not which) is that, while our students, as a rule, read to pass their examinations, the Germans read to acquire knowledge. One fundamental difference between their system and ours—which is thought by them and many of us to account for the difference in the aspect of mind between their students and ours—is, that their teachers examine their own students. The examinations thus lose that formidable aspect begotten of the dread of the uncertain which ours possess. The acquisition of knowledge is best attained by intimate contact between teacher and taught, and that knowledge is best tested by the teacher. It is true that the German system may lead to corruption, but they provide a remedy. By their system of co-examiners and extramural teachers, the possibility of the partiality or incompetency of a teacher is excluded. May we hope that an opportunity will soon be afforded us of trying their system?" The quaint words of the Benedictine friar were quoted in conclusion: "Only knowledge and experience, and thorough investigation of nature, make a trustworthy physician; yet only next the Creator, through whom all things happen, in the beginning, now, and for ever."

ROYAL VETERINARY COLLEGE.

ON Oct. 1st the sessional course of instruction was commenced at this College in the presence of a large number of students and many visitors from the medical and veterinary professions. Dr. George Fleming, C.B., chief of the Army Veterinary Department, occupied the chair. The inaugural address was delivered by Professor Brown, C.B., the Principal of the College. After a few words of welcome, the lecturer remarked that an opening address was an embarrassing task, mainly on account of the vast number of important subjects which presented themselves for consideration. The present age was distinguished as a time of scientific inquiry. Dogmatic assertion, so characteristic of the older schools, had given place to hesitant forms of expression and a tentative medical policy. The only advance which was claimed for the medical art was exhibited in the general disbelief in the specific efficacy of drugs, and the adoption of an expectant plan of treating acute disease. Meanwhile, as medicine was modestly retiring, seemingly bent on a policy of self-effacement, surgery, with steady and rapid strides, was forcing its way to the front. No abnormal growth could hide itself from the knife of the accomplished operator, cover a tumour with nerve substance, and bury it in the centre of the brain. Its discovery and removal were a simple and graceful exercise for the mind and hand of the skilful surgeon. One of our great art critics had said that the brush of the finished artist moved within the thousandth of an inch, and that no touch could be wrongly or wantonly made without marring the work. But the art of the perfect operator reached a higher point than this when his polished blade moved among vital structures, and his patient's life depended on the accuracy of his guiding hand. *Experimentum fiat in corpore vili*, and veterinary science might claim that the vast development of the art of surgery was the outcome of experiments on the animals which were the proper patients of the veterinary practitioner. It had not always happened that the medical man and veterinarian had been associated in the inquiries in which both professions were intimately concerned; with whom the fault lay was a question which could not be answered offhand. Possibly both professions might agree to accept the blame as the first step towards better things in the future. The lecturer then discussed the prominent medical question of the day—the communicability of certain maladies between man and the lower animals, and the importance of careful and critical observation of facts was urged. It was pointed out that the theory of the animal origin of diseases affecting the human being was a revival of an idea of the older pathologists, a theory to be

tested by extended and cautious inquiry by members of both professions specially qualified for the work; and one aim should, at all events, be kept in view by both—namely, to seek to discover in how many points they could agree, rather than to multiply the cases in which they felt bound to differ. Referring to the arrangement for the course of instruction, the lecturer sketched out an outline of the system in which the student should conduct his work, and concluded by remarking that he had been fortunate in securing the aid of some distinguished scientists, who would deliver special lectures during the session to the senior students on various branches of pathological investigation. He had only to mention the names of Professor Victor Horsley and Dr. Klein of the Brown Institution, Dr. Crookshank, Professor of Bacteriology of King's College, Mr. Watson Cheyne, and Dr. Fleming, the principal veterinary surgeon to the Forces, to convince them that an intellectual treat was in store.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

A CASE OF MOVABLE KIDNEY; NEPHRORRAPHY; CURE; REMARKS.

(Under the care of Mr. GOULD.)

THE operation of fixing a painful movable kidney in its proper position is one which has not occupied a place in surgical practice for many years. Yet the amount of pain and distress caused by the condition demanded from the surgeon something more than the application of a padded belt, and the operation of nephrorraphy or stitching the kidney was suggested, and has been performed with varying success by different surgeons. In Mr. Gould's remarks on this case he mentions one in which a different method was found unsuccessful; the operation as performed on this patient succeeded, as it did in another instance to which reference is made. We may take it for granted, therefore, that the operation performed as described below will give a satisfactory result, whilst practically unattended by danger to the patient. For the notes of the case we are indebted to Mr. F. C. Brodie, house surgeon.

S. S.—, aged twenty-eight, married, the mother of four children, was admitted into Queen ward on July 2nd, 1888. She had enjoyed good health all her life until three months before, when she was suddenly seized with intense pain in the right loin, shooting down into the right groin and across the abdomen. These attacks, varying in severity, had been repeated ever since, and she had not had more than one week of immunity from pain. The pain was always increased by exertion, and subsided when she rested. Micturition during the attacks of pain had been frequent and painful, but she had not noticed any change in the urine. The bowels had been very confined.

State on admission.—The patient is a fairly nourished woman, but the abdominal walls are notably lax. A freely movable "tumour" is easily felt in the right lumbar region, with a rounded outline, except at the upper and inner edge, where a notch can be felt in it; the surface is smooth. During a deep inspiration this "tumour" is felt to descend into the iliac fossa, but during expiration it is easily pressed back, and up into the loin and under the ribs. When she turns on her left side, the "tumour" falls forward and can be easily grasped between the two hands; and if it is compressed, pain of a sickening character, and like that experienced in the attacks of pain, is felt. The left kidney is felt in its normal position, and not unduly movable. Urine: sp. gr. 1015; acid; no albumen. A movable kidney was diagnosed, and the operation of nephrorraphy was recommended.

Operation.—On July 10th, the patient having been anaesthetised, was placed on her left side, and an incision

about four inches long was made in her right loin, parallel with and two inches below the last rib. The muscles and the lumbar aponeurosis were divided, and the fat around the kidney was pricked through with forceps, and the kidney exposed and pushed well up into the wound by an assistant. A large curved needle, armed with kangaroo tendon, was passed through the kidney so as to take up a broad portion of its capsule and cortex. Each end of this suture was then separately passed through the contiguous cut edge of the lumbar aponeurosis. A second suture was passed in the same way, and then both were tied, the assistant fixing the kidney in the wound all the time. The wound was then well irrigated with corrosive sublimate solution (1 in 2000), closed with deep and superficial sutures, a drainage tube inserted, and dressed with alembroth wool kept in place by strapping. The wound was dressed for the first time on July 13th; there was then a very slight serous discharge, but no redness and no pain. The tube was removed on July 16th and the sutures on the 20th. She got up on July 26th, and left the hospital on Aug. 1st, with the wound firmly healed and the kidney fixed in the loin. She bore the journey to Portland well, and when last heard of at the end of September had had no return of her old troubles.

Remarks by Mr. GOULD.—The doubts that were for a long time entertained as to the nature of the conditions called "floating kidney" and "movable kidney" seem to be paralleled by those held as to the best form of treatment. When Hahn's operation was first published, it was hoped that an easy and safe means of permanently curing the undue mobility of the kidney had been discovered. But it was not long before reports of the failure of the operation were heard, and it is not uncommon now to hear surgeons speak of nephrorraphy with very little confidence. It is easy to understand that the fixation of the kidney secured immediately after the operation may gradually be lost as the cicatricial tissue is absorbed and stretched, and it is therefore necessary not to trust to this means of fixing the kidney, but to fasten it in its place by sutures which will permanently hold it. This was forcibly impressed upon me by the first case in which I was called upon to do this operation. The patient was under Dr. Coupland's care in the Middlesex Hospital, with very painful symptoms, due, as we thought, to the mobility of the right kidney. At the operation I had the able assistance of Mr. Henry Morris. A silk suture was passed through the whole thickness of the lumbar incision, then through the kidney, and out again through the thick tissues of the loin. This suture had to be removed in a few days. The patient made an excellent recovery, and at first all was satisfactory, her symptoms being entirely removed. But in three months she returned as bad as ever, and I found the kidney had become as loose as before. I ought to add that she had worn a well-fitting abdominal belt ever since the operation. I then determined to operate again and fasten the kidney to the lumbar aponeurosis with kangaroo tendon, which should be allowed to remain permanently *in situ*. This succeeded well, and she has had no return of her old symptoms, nor can the kidney be felt to move. I have met with the same results in another case.

The mode of passing the suture is, I think, of importance. If a large curved needle, such as is often employed, is made to carry the suture at a single sweep, the surgeon is very liable to tear through the kidney, and even to some extent its capsule. I prefer first to pass the suture through the kidney, taking up as broad a piece of its capsule and cortex as I can, and then to pass each end of the suture through its corresponding portion of the lumbar aponeurosis. Two sutures passed in this manner are sufficient to hold the kidney firmly, and if they are tied carefully, the chance of their cutting out through the kidney, and so not holding it so securely as desired, is reduced to a minimum. A subsidiary advantage of this buried suture is, that the wound can be closed smoothly and accurately by the ordinary sutures. When the kidney is fixed by external sutures, they pucker the wound and interfere with the most rapid and perfect healing. As to the material of the deep sutures, there is room for divergence of opinion and practice. Silk, as being more durable than gut or tendon, would be preferable, were it not that it is more difficult to render absolutely aseptic than is kangaroo tendon. At any rate that has been my experience, and the tendon has answered so well in my hands as a ligature in ovariectomy and as a suture in the radical cure of hernia, and up to the present in nephrorraphy, that I use it with full confidence.

VICTORIA HOSPITAL FOR CHILDREN.

GONORRHOEAL RHEUMATISM OCCURRING AT THE AGE OF NINE YEARS.

(Under the care of Dr. J. H. PHILPOT.)

THE occurrence of acute inflammation in the metatarso-cuneiform joint of a girl so young as this patient was difficult of explanation in the absence of a history of injury; and it was the presence of such unusual tenderness and pain in the fascia mentioned in the report that induced the house surgeon to inquire as to the possibility of the presence of gonorrhoea, no mention of the vaginal complication having been made by the patient. For the notes of this case we are indebted to Mr. W. H. C. Staveley, house surgeon.

E. P—, a girl nine years old, was recently brought to the out-patient department of the hospital by her mother. The patient had complained of smarting pain on micturition, and a vaginal discharge of a thick purulent character had been noticed for a week. She then began to complain of aching pains down the back of the neck. This was followed by pain along the bicipital tendon of the right leg, then along the same tendon on the opposite side. These pains became less severe, but then began in the left foot, first on the inner side of the heel, then along the sole, and finally in the first metatarso-cuneiform joint. There was no history of injury and no family history of tubercle. On examination, the joint was intensely painful, red, hot, and swollen; there was extreme tenderness, both superficial and deep, extending along the plantar fascia to the inner side of the heel. No other joint was affected. There were no signs of outrage about the vulva, with the exception of the labia being swollen and the presence of a thick purulent discharge. The mother indignantly denied the possibility of the child having been tampered with. The case was treated as one of gonorrhoeal rheumatism, and the foot put up in plaster-of-Paris splints. With rest all pain in the foot disappeared, and the swelling gradually subsided without any complications. During the course of attendance at the hospital the mother acknowledged that the child had been indecently assaulted on three occasions by a youth, who, it appears, had been recently treated for gonorrhoea.

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

CONGENITAL CYST OF THE URACHUS; ABDOMINAL SECTION; RECOVERY.

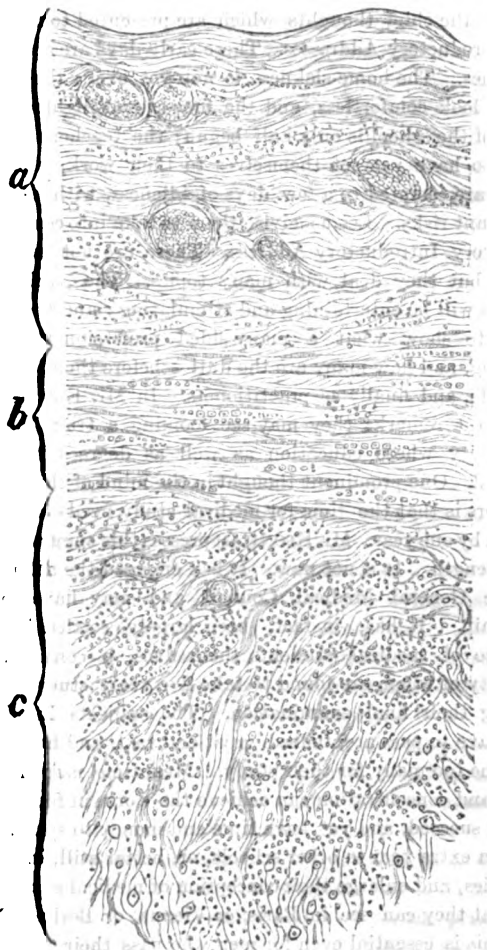
(Under the care of Mr. LAWSON TAIT.)

WE are indebted to Mr. E. Teichelmann for the following report.

Aug. 8th, 1888.—Mrs. T—, aged twenty-eight; married ten years; had two miscarriages in the second and third years respectively after marriage, occurring in each case at the end of the second month. Menstruation commenced at twelve, and has always been regular (except when pregnant) until thirteen weeks ago. The periods then became too frequent, occurring twice in the month, with only eight days' interval, until last month, when she became regular again. Her previous health has been good, with the exception of recurrent attacks of quinsy, from childhood up to two years ago. Three months ago she became suddenly ill, was very feverish, and fainted and vomited frequently. The patient states that a hard lump could be felt between the umbilicus and pubes, rather to the left side; this was accompanied by much pain in that region. The general malaise, vomiting, and fainting continued for a month; the pain, however, continued longer. Until three weeks ago she had great pain in passing urine, and had to pass it frequently; she states that the urine was dark and thick. Since coming to the hospital the urine has been normal. On examination per vaginam, the pelvis was found filled by a rather solid tumour, with indistinct fluctuation. On palpating the abdomen, the tumour was found to extend into the abdominal wall just above the pubis, in the middle line, and to the left side.

Particulars of operation, by Mr. LAWSON TAIT.—On opening the abdomen, the tissues in the middle line were thickened and cartilaginous in density; the tissues below were in a similar condition, causing the process of opening

to be somewhat protracted. As soon as the peritoneum was opened, the tumour was recognised as a large cyst occupying completely the cavity of the pelvis, but not in any way adherent to its contents. On tapping this, from eight to ten ounces of fetid, thick, flaky pus escaped, and then the true relations of the cyst became apparent. It was attached by a short sessile pedicle, of more than two fingers' diameter, to the abdominal wall, somewhat to the left of the mid-line and about two fingers' width above the pubes. It projected into the pelvic cavity, completely filling it. The true cyst wall, which was easily separable from its capsule, was removed, the cavity drained, and its margins stitched to the



Section through cyst wall (low power). *a*, Outer fibro-vascular layer. *b*, Layer containing involuntary muscular fibres cut longitudinally and transversely. *c*, Granular tissue.

abdominal wall. The peritoneal cavity was drained separately. She made an easy and rapid recovery, and left the hospital, with the wound completely healed, on August 27th.

Examination of cyst wall.—The cyst wall is of considerable and varying thickness, the outer part composed of fibrous tissue with numerous and tolerably large blood-vessels. Next to this is a layer composed largely of connective tissue, but containing numerous involuntary muscular fibres. The inner layer presents the structure of ordinary granulation tissue, with the following difference: scattered among the small round cells are numerous larger cells of an epithelial type; the innermost part of this layer is composed of fatty degenerated cells of both kinds. (See woodcut.)

THE SWEATING SYSTEM.—Lord Onslow, one of the members of the Select committee on the Sweating System, has, through his secretary, written to Mr. Louis Lyons, who was examined before the committee as to the effect of the system in the East-end of London, requesting that he may on an early occasion be taken over some of the sweating shops in the East-end in order to obtain some practical knowledge on the subject.

THE LANCET.

LONDON: SATURDAY, OCTOBER 6, 1888.

THE medical students of London will find it no unprofitable occupation of the first few days of the session to take note of the chief thoughts which are presented to them in the Introductory Addresses. These early days are apt to be dull ones. The home-sickness is not yet over; the apartments look comfortless, and the fires are not lighted; the work of the school is only half begun; the teachers do not seem to have yet set themselves to their work, and the pupils are tempted to a few days of idleness, with all their attendant risks. Let us advise them to take into consideration every Introductory Address. There are not many of them, but they deal with many topics. The variety of themes will be entertaining and stimulating; and they will serve to show what a many-sided profession they are entering, and how many are the duties before them, first as students, and finally as practitioners. In Mr. ERICHSEN'S important remarks they may see looming a true London University where education as well as degrees may be received. One prominent thought in the mind of this year's lecturers is that the time for medical study needs to be extended by one year. Mr. STONHAM presses this suggestion at some length. It is not new. It has engaged the attention of the General Medical Council, and may have to do so again. It has, in fact, been largely settled by the practice of medical students themselves, a considerable majority of whom are found to take five years' study before passing their final examination. The subjects in which they have to pass are, indeed, great and vast, and five years are none too many for their study. Meantime men of diligence and concentration can achieve the work in four, and, if they succeed, and yet have time and money to spare, can take an extra year in other schools, or, better still, in other countries, and enlarge their conception of medical education by what they can see in Paris, or Vienna, or Berlin. Not that this is essential even for men who pass their examination without a hitch, and at the end of four years. Such men are generally men of merit, to whom offices of credit and responsibility are given either in general hospitals or special hospitals. And apart from these rewards of industry, the hospitals of London supply abundant material for post-graduate study, which will be all the more enjoyable and profitable to those who are no longer trammelled by anxiety about examinations. Mr. STONHAM'S advice to advanced students to acquaint themselves carefully with the classes of disease which are not always met with in general hospitals—infectious diseases, diseases of the eye and of the ear, and diseases of women—should be laid deeply to heart. The true remedy for special hospitals is more special knowledge in general practitioners. And there is nothing that will more lighten the care of general practice, and tend more to its pleasantness and its profitableness, than familiarity even with rare forms of disease, and readiness with the use of the instruments for their detection and treatment. It is a peculiarity, almost a perversity, of our present state of education that

some men shall have highly specialised faculties without much knowledge of common diseases, and *vice versa*. They will recognise a tubercle bacillus or a spindle-shaped cell, but overlook scabies, or send a case of acne to the small-pox hospital. The model education is that which will send out a well-equipped practitioner, equal to great emergencies, but not made to look foolish by errors of judgment in every-day practice. Dr. EWART'S address at St. George's is highly worthy of attentive consideration. Though it comes late to students who have already entered the profession, it may well be laid to heart by those who are responsible for the regulation of medical study. He laments the low standard of preliminary examination for medical students. He sighs over the regulations which exempt men from a knowledge of Greek, and demands that the future medical student shall be free from the stigma of a second-rate education. He speaks of extensive and recent evidence to prove that, whereas the standard of general education has risen and is rising, the standard of preliminary education in medicine is not rising in any corresponding degree. The results are disastrous all round: to the student, who by insufficient mental training fails in his studies or in his profession; and to the public, who get an inferior type of medical adviser. We must be careful not to overrate the importance of Latin and Greek in an age when whole realms of knowledge are waiting to be explored not dreamt of by the men who found their vital breath in the study of the classics. Dr. EWART himself will not deny that the greatest mind of his own medical school was one which owed little to Latin and less to Greek. But with his general demand for more sound fundamental training, and especially for a year devoted to the study of chemistry, physics, and biology, we cordially concur. And the abundant supply of medical students, so far exceeding the waste of the profession or the demand of the public, fully entitles the Medical Council to straiten the gate of admission. It is lamentable to hear another orator on the opening day draw a comparison between the English and the German student, to the discredit of the former. Dr. RAMSAY declares that, whereas the Germans study to acquire knowledge, the English study to pass examinations. The best resolution that the students of this year can form is to refute Dr. RAMSAY'S charge by thinking more of the subjects and less of the examinations; though it is only fair to admit, in justice to the students, that our authorities have erected examinations into a sort of terror, and have not always given corresponding care to the efficiency of examiners or the processes and methods of education. Dr. RAMSAY magnified the German method (as it is the Scottish) of associating the teacher, whose estimate of a student's merit is not to be regarded as merely partial and interested, in the examination of the student. The subject of Dr. CULLINGWORTH'S address, "Puerperal Fever," was more appropriate to the close of medical study than to its introductory stage; but the address was a powerful demonstration of the responsibilities of medical men in regard to common branches of practice, and may well impress the minds of students. Mr. WALLER fired his audience to labour by bright demonstrations of the mysterious relations between muscular cardiac action and the development of electrical currents. Mr. FOSTER vindicated

the work of scientific chemists, and desiderated a higher standard of chemical knowledge for the medical student. We must not fail to notice the inaugural address of Professor BROWN at the Royal Veterinary College. The solidarity of the human and the lower creation is now admitted, and he well reminds us of our indebtedness as a profession to Comparative Pathology—a mine which is not yet exhausted. It is no slight proof of our mutual obligation that Professor BROWN has secured the aid, in his teaching arrangements for the session at the College, of Professors HORSLEY, KLEIN, and CROOKSHANK, and Mr. WATSON CHEYNE. The multifariousness of subject handled by our orators will be the best proof our students can have of the claims of the study on which they are entering. They will do well to dismiss all irrelevant subjects and pursuits, save as recreation and rest may require, and to devote themselves with heart and soul to the investigation of medical truth and duty.

THERE are few members of the profession—and happily so—who have had the cruel fate to be arrested on the charge of wilful murder, and to endure the obloquy, temporary though it be, of many who, for want of Christian charity, are ready to cast the stone of accusation and condemnation at one who, at the worst, could only be regarded as a suspect. The common law of England holds every man innocent until his guilt be proved; and therefore, upon strict technical grounds alone, Dr. GLOSTER, who lately had to undergo the shame and humiliation of occupying the felon's dock, must be held blameless and innocent of the deadly crime he was called upon to stand to his deliverance.

The recent trial affords ample material for anxious thought and study, whether regarded from a forensic, medical, or ethical standpoint. It has served one good purpose, in that it has been the means of reconsidering and ratifying the precedent judicial decisions upon the essential requisites of so-called death-bed statements and confessions. We are entirely at one with Mr. Justice CHARLES in his ruling that the allegations made by the late unfortunate woman SCHUMMACHER against Dr. GLOSTER were wanting in those absolutely precise and unmistakable conditions that should always form the essential basis of a dying statement. The person accused has no opportunity, by himself or agent, of challenging and testing the veracity of the accusations levelled against him such as obtains when a dying deposition is taken before a magistrate. But even were such charge made with all the solemnity that pertains to the last act of an earthly career, and under circumstances as exact and exclusive as it is possible to prescribe, we should still be inclined to hold the testimony as equivocal and requiring strong collateral support before it could be accepted as a means by which a fellow-creature's life could be justifiably sacrificed. There is a tendency, we doubt not, to regard death-bed statements as sacred truths on religious grounds in the abstract, and this because it is assumed that no one passing the frontier line of the vast beyond would dare to do so with a lie upon his lips. To the critical and scientific mind, however, certain qualifying conditions are deemed not only expedient but indispensable. There is no such thing as a universally accepted standard of religious obligation, quantitative or qualitative. A person who has

habitually led a life of immorality, and who has daily walked without the fear of GOD before his eyes, would probably form a very different conception of the awful responsibility devolving upon him when called upon to sign what might be the death warrant of his fellow, from that which would be formed by one who has habitually striven to do "the whole duty of man."

Beyond this, moreover, there is the purely medical aspect of the circumstances associated with the act of dying or its immediately antecedent state; circumstances which must be covered by the short but somewhat indeterminate period between the dying confession and the "surcease," a period which in legal phraseology is expressed as "the conviction of immediate or impending death." There are different modes of dying, and many are the ultimate causes of death. Let us by way of contrast take the case of a parturient woman dying from hæmorrhage, and consider it with that of a post-parturient succumbing to puerperal fever or blood-poisoning like the deceased Mrs. SCHUMMACHER. In the one faculty consciousness not unfrequently remains clear to the last; whilst in the other the function of the brain is disordered and perverted by long-continued pyrexia and septic intoxication. The dying words in the former case would be infinitely more reliable than in the latter. From whatever side we approach the question, therefore, we cannot avoid the conclusion that death-bed statements, especially when involving a criminal charge against another person, should be guarded with scrupulous exactitude.

The trial of Dr. GLOSTER, as we have seen, came to an abrupt termination; since, apart from the dying statement of Mrs. SCHUMMACHER, ruled as inadmissible by the judge, there was not sufficient direct testimony to support the indictment. By the common law of England, Dr. GLOSTER left the court not with a verdict of acquittal from a jury of his countrymen, but as a man against whom the prosecution had broken down on technical grounds. Herein lies the terrible injustice to the accused. All the damning evidence that could be procured—rightly we admit—was detailed before the coroner. In the police court, and in the public press, weeks of anxious suspense had to be endured, and in the end, when the time had come for the prisoner to unfold his defence, this simple act of justice was denied, because, forsooth, the existing state of the law did not permit a man accused of murder to be examined on oath; and, worse still, it was not competent for him to speak by the mouths of others who, we have the strongest reason to believe, would have positively proved him to be "not guilty." Dr. GLOSTER has satisfied his accusers; he has discharged his legal obligation. But, unfortunately for him, there are other ethical standards—religious, moral, and social—than the statutory law of one's country, and it is at least his undoubted right to claim the opportunity of publicly proving—since he was publicly accused—that in the matter under consideration he did not come short of them.

Some of the evidence adduced by the prosecution as indicating guilt seems to our mind to support the theory of innocence. In the first place, as regards the cheque, would it be likely that a guilty person would allow such abiding testimony to pass into the hands of a woman with whom he was an accomplice in crime? We cannot for one moment entertain

the question. Secondly, would the man who had performed an illegal operation upon a person, for his own sordid gain and to cover her shame, refuse to visit and attend her when he saw that the probable result of his criminal procedure would be a fatal one? We unhesitatingly say he would not. The history of numerous cases preserved in the records of the criminal courts is powerful testimony in support of our contention. Lastly, we maintain, that the wound inflicted upon the uterus of the deceased woman was more likely to have been done by a person of far less manipulative skill than Dr. GLOSTER can be proved to possess. That it may have been done by the deceased herself we doubtfully admit. It is no easy thing for a woman to direct an instrument through the os uteri without wounding the vaginal wall. It seems far more likely that, failing the assistance she sought from Dr. GLOSTER, she succeeded in securing the illicit services of someone, man or woman, belonging to a class which is known to be a comparatively large one—that of unqualified professional abortionists. Medical men would act wisely if, upon being asked to lend themselves to such nefarious practices, they at once communicated the fact to the police. In this way they would be less likely to meet with a similar misfortune to Dr. GLOSTER'S; many more cases of criminal abortion would be detected than at present, and many more prevented.

THE importance of the task undertaken by Dr. WILLIAM HUNTER, the results of which he has so fully contributed to our pages, can scarcely be overrated; for ever since ADDISON first drew attention to the occurrence of fatal cases of inexplicable idiopathic anæmia, and the subsequent publications by BIERMER and GUSSEROW, there has been great interest taken in this remarkable affection, and a wide literature based on clinical and pathological observations has grown up around it. For although the term "idiopathic" has been applied to it, the term has nevertheless been used in a lax sense. No one could believe that so profound and fatal a blood change could arise without some precedent disturbance in the economy, and accordingly the study of pernicious anæmia has led to a further research into the physiological processes of blood formation and blood destruction, in the hope that in one or other of these directions some clue might be gained to the primary functional disorder which eventuates in the disease. The bone marrow, lymphatic system, the spleen, and the liver have been scrutinised for the detection of any lesions common to all cases of pernicious anæmia, with hitherto but incomplete and unsatisfactory result. Moreover, the question became further complicated by the discovery that cases bearing clinically all the characters of the assumed idiopathic affection were associated with and apparently dependent upon organic disease of the stomach, on the *archylostomum duodenale* and other intestinal parasites, which at first sight would seem to have little to do with causing this blood deterioration.

Dr. HUNTER'S observations tend to dispel some illusions. In the first place, they go far to show that pernicious anæmia does not depend upon any impairment of the normal process of blood formation; so that the contradictory results of examination of the bone marrow, for instance, may be dismissed from consideration. They also demonstrate that,

strictly speaking, pernicious anæmia has a place apart from secondary anæmias due to wasting disease, repeated blood loss, or disease of the organs of nutrition. When in such cases the anæmia becomes, as we were wont to say, "pernicious," with the clinical symptoms of pyrexia, retinal hemorrhage, &c., and the characteristic fatty degeneration of the heart, it is not, according to his view, by any normal sequence of events, but by the intervention of a new factor. In such cases pernicious anæmia is a complication rather than a sequel; it is an indication of the supervention of a malignant process of blood destruction, which accelerates the fatal issue. The clue to this interpretation has been gained by the confirmation of the results obtained by QUINCKE and others as to the excessive quantity of iron found in the liver in subjects of pernicious anæmia. Dr. HUNTER'S tables are very instructive on this head; and equally so is his demonstration that the excess of iron cannot be explained by its having been largely administered during life, also that the iron occurs within the liver cells, and not in the ferrin of hæmoglobin within the bloodvessels or elsewhere. Yet the spleen does not show this excess of iron, which can only be attributed to an increase of the normal blood disintegration that occurs in these two organs. Indeed, the condition of the spleen in this disease is most variable—a variability ingeniously explained by Dr. HUNTER on the assumption that the process of hæmolysis, in which the spleen takes a large share, is intermittent; so that the appearance of the spleen depends upon the fact of its being actively engaged in hæmolysis or not just before death. The iron resulting from the hæmolytic process is separated out in the liver and not in the spleen, where it still remains in the form of hæmoglobin, and therefore does not give the reactions characteristic of free iron. In support of his contention that pernicious anæmia is an exaggerated degree of normal hæmolysis, Dr. HUNTER details the results of many experiments upon the effects of hæmolytic agents—one of which, toluylendiamin, was found to produce changes in the liver precisely similar to those met with in pernicious anæmia. The morbid agent is thus probably of the nature of a poison which causes excessive destruction of the blood. Pernicious anæmia, then, would depend upon the action of a poison which gains entrance into the portal circulation, and causes the blood to undergo disintegration therein, far in excess of that which doubtless takes place in the same vascular area in health. This poison, again, is probably generated in the gastro-intestinal tract, and is, Dr. HUNTER thinks, of cadaveric nature; and hence the frequency with which pernicious anæmia supervenes upon, or is associated with, morbid states of the stomach and intestines.

We may also direct attention to Dr. HUNTER'S comparison of this form of hæmolytic disease with that observed in malaria and paroxysmal hæmoglobinuria, and especially the distinction that he makes between them; the hæmolysis in the first case occurring in the portal circulation, and in the others in the general circulation. He shows, too, how the nature of the destruction differs in these three cases, and thereby meets one class of objections which are likely to be raised to his interpretation of the pathology of pernicious anæmia. Certainly he has succeeded in making out a very strong case for his view, which, more than any other

yet advanced, would seem to harmonise best with the clinical facts of this remarkable malady. We may now take into account the explanation he proffers in our treatment of this affection—for that the disease is necessarily “pernicious” and “progressive” is happily not universally proved. Still, as Dr. HUNTER observes, the disease, although chronic, has its exacerbations and remissions; and cases, as we know, have been considered to be cured which have ultimately relapsed and proved fatal. How far such a course is consistent with the theory that the disease is due to a poison absorbed from the intestinal tract may be fair matter for debate, as also would be the explanation of the good effect of arsenic in the treatment of some cases. For, if hæmolysis be deranged and excessive, of what avail would be the stimulation of hæmogenesis? It is of course conceivable that the “cadaveric poison” may become exhausted, and the process of blood disintegration be spontaneously arrested, in which case the use of arsenic would be valuable in hastening the renewal of the blood elements. Still, in most cases that is a forlorn hope; and, if Dr. HUNTER be correct, we must rather endeavour to find means to counteract or destroy the unknown poison which is at the root of this singular and mysterious malady.

THE recent tragedies in Whitechapel have served as reason for demanding a better government of those parts of the metropolis which are inhabited at the same time by the poor and by the criminal classes of the community. Poverty and wealth have alike their attendant vices, and the substitution of the one for the other does not necessarily imply the absence of immorality or crime; but without doubt the circumstances under which a vast multitude of persons are compelled to live in London are brutalising and tend to foster crime. Although we have no means of knowing how far these conditions may have been concerned in giving opportunity for the occurrences of the last few weeks, the fact remains that more serious effort should be made to elevate the many who, without aid, must go on from generation to generation in moral disease.

The letters in *The Times* from “S. G. O.” and from the Rev. SAMUEL BARNETT attribute to neglect the evils to which we refer. The very existence of criminal quarters in our midst is a disgrace; yet they have been permitted to remain and to serve as the nursery for the worst instincts which the human race possesses. Light, air, and cleanliness are pleaded for by Mr. BARNETT as if the most elementary requirements for a healthy moral and physical life were neither understood nor appreciated in these localities, and as if no adequate machinery existed by which they could be provided. The demand for better homes, for the cleansing and lighting of back streets, is one which there should be no difficulty in meeting, if the selfish policy which has kept rich London separate from poor London were ended. It is no blame to the local authority, Mr. BARNETT says, that the back streets are gloomy and ill-cleaned. A penny rate in Whitechapel produces but a small sum, and the ratepayers are poor; so the poverty of one district has not been relieved by the wealth of another, and London stands condemned because those who need the greatest aid have been allowed to aggregate in those areas least able to bear expense, an expense which

the helplessness of their inhabitants makes an absolute necessity if they are to live in a manner fitting for human beings.

The improvements that have in the past been effected in London are mainly due to those alterations of the law which have enabled their cost to be borne by the whole metropolis. The changes effected by the Metropolitan Board of Works, the provision of adequate sewers, the clearing of unhealthy areas under Lord CROSS's Acts, and the construction of hospitals for infectious disease have all been done at the cost of a common fund. If local expenses incurred by the poorest districts in amelioration of the home conditions of the poor could be still further lightened, there would be greater incentive to undertake the performance of this duty. Throughout other parts of England and Wales local sanitary authorities have been able to participate in imperial funds for the purpose of lightening the burden which the payment of salary for an efficient health officer's services would entail. The poorer districts of London may therefore not unreasonably claim that the cost of maintenance of a sufficient sanitary staff should be shared by those districts which are inhabited by the rich to the exclusion of the poor. Metropolitan districts, it is true, will be able to obtain such assistance in future, so far as the salary of their medical officer is concerned; but we would gladly see this principle extended further, and the local district authority encouraged to appoint an ample staff by the knowledge that the whole expense will not be thrown upon their often over-taxed and needy ratepayers. If assistance of this kind were given, there would be less willingness to allow the want of inspection to be responsible for the miserable condition in which tenemented house property is often allowed to remain.

But, beyond this, London has for years suffered from the want of inspection and inquiry which other parts of the kingdom have received from the central Government. Until the Home Secretary, acting on the recommendation of the Commission on the Housing of the Working Classes, ordered the inquiries in Clerkenwell, Mile-end, and Bethnal-green, local authorities have been unable to enforce, or have more often neglected to enforce, the provisions of Acts of Parliament without criticism, or without the experience of one or other district being made available for all. Hence in some parts of the metropolis no sanitary administration of a serious kind has been undertaken, and for years the poor have been living under conditions which would not have been tolerated had they been known. That this must now terminate is obvious, but the question must arise by whom it shall be performed. London has undoubtedly suffered by the anomalous position in which in this respect it has been placed. The statutory responsibilities of the Home Office to London health administration have been practically limited to duties relating to Lord CROSS's Acts, and the action of the Local Government Board has rarely extended beyond addressing letters pointing out the powers of Acts of Parliament which have been passed. But the Local Government Board may at any moment be required to undertake important responsibilities in regard to the prevention of epidemic disease, and it is evident that, if the duty of inspection should be

undertaken by the State, it falls more within the province of the Local Government Board than of any other department. The part the County Council are to play in such supervision does not appear to be great, but they inherit from the Metropolitan Board of Works an opportunity for influencing the future of London in a marked degree, and it may be hoped that some of the more important public health functions of the former Board which have been allowed to remain dormant will be exercised with vigour. But, whatever system of supervision is adopted, it is desirable that the responsibilities of the different authorities should be well defined, and that London, which has hitherto been allowed to be exempt from all sufficient criticism and control, will take her share of that which is given to other towns in the kingdom.

WE are hopeful that the breeze which has been blowing of late in the columns of one of our daily contemporaries on the subject of the Mechanical Restraint of the Insane has exhausted itself, so far at least as the general public are concerned. It was in its origin a breeze so purely local in its character that it ought never to have been permitted to gather force by the process of fanning in the daily press. We are quite satisfied that the governing body of the institution referred to are perfectly capable of dealing effectively with questions that arise within the scope of their duties and responsibilities. The gauntlet was in the first instance thrown down by a member of that body whose great weight and authority in lunacy matters are undoubted. The gravamen of his charge lies in the following statement having reference to the statutory record of Bethlem Hospital in June last: "I was astonished to find that the columns provided for the record of restraint, which for many years had been almost blank, had for some time past been largely used, and that from the 1st of the month of June to the 27th, there had been no less than thirty-eight instances of mechanical restraint recorded, and that eighteen different patients had been so restrained." It was, we think, but natural that an explanation should be sought for from the authorities under the circumstances; and some amount of irritation was excusable in one who, having "exhausted his official means of checking what he considered a great public abuse," found no explanation forthcoming. Even so, and if, in addition, he had assured himself that his urging the point into official notice would not be enough to bring about a remedy in time, we believe he would have been better advised if he had restrained his impatience, and not been in such a hurry to ventilate his grievance in the public press. The general public would themselves, if dealing with lunatics of the outrageous and violent type, have recourse to endless expedients in the way of mechanical restraint, and justifiably so in the absence of the ministrations of tutored assistance; but they do not expect professors of the art of "ministering to minds diseased" to apply mechanical force unless the circumstances are very exceptional. And the evil of an appeal to the general public on the merits of a particular form of technical treatment in a localised instance lies in the risk of doing an altogether unintended injury to the good name of the institution to which reference is made. Such an appeal is apt to do too much; it may, indeed,

be the means of putting an end to one "abuse," whose existence may or may not have been substantiated, but it may produce also an abundant crop of results which are none the less injurious because they do not at the time receive prominent expression. The correspondence upon the subject of mechanical restraint is practically left entirely to wordy professional warriors, who range themselves on one side or the other, mostly in a personal sense, and who indulge freely in historical personal recollections which are sometimes not devoid of interest. The superintendent, upon whose shoulders rest the responsibility in the charge brought against Bethlem, "declines altogether to discuss the subject in public papers." He is quite able to speak for himself, and until he has been heard in self-defence it is manifestly impossible to deal with the merits of the particular indictment. We may, however, be permitted to say that we shall closely watch the grounds upon which any appreciable increase in the number of asylum lunatics placed in mechanical restraint is defended. So long as a superintendent of acknowledged experience and capacity retains in his own hands the right of ordering mechanical restraint to be made use of after personal investigation in each individual case, such restraint, we take it, may not unfairly be classed as legitimate treatment. But in proportion as this rule as to the initiating authority—any after-sanction is not enough—is departed from, we shall be in the danger of finding that the repression of the insane, and not their curative treatment, is being attempted. The President of Bethlem Hospital, in his letter, gives the following extracts from the report of the Lunacy Commissioners upon their visit to the hospital on August 23rd, soon after the correspondence commenced: "We have seen all the patients in residence here, and have given particular attention to all recent cases. All whom we have seen have been placed properly under treatment. We have observed many patients who are improving mentally—some who will shortly be discharged. . . . We do not overlook the fact that the admissions here of acute cases are very numerous, many needing control, which may be more humanely applied by mechanical than by manual means." With this expression of opinion on the part of the Commissioners we feel that for the present we must leave the subject.

Annotations.

"Ne quid nimis."

INFANTILE INSURANCE.

THE ethics of infantile life insurance have recently been brought prominently under public notice by correspondence in *The Times*, and some just and, indeed, inevitable indignation at the slaughter of the innocents has found expression there. It is difficult to realise the state of mind of parents, however oppressed by poverty, who can be induced, by the prospect of a small money payment, to perpetrate the slow murder of their own offspring. And, indeed, it cannot be doubted that such depravity is at least highly exceptional. The real danger arises from a somewhat different state of things. The children of the poor are by force of circumstances deprived of much of that attention which surrounds the children of the rich. Not only are they forced to put up with harder fare and more meagre

accommodation, but they cannot be as constantly under the supervision of a watchful eye or the protection of a careful hand. Such inattention is in no sense culpable, but it easily passes into neglect, and a slight cause may in this way become sufficient to produce a most serious result, so that it must unfortunately be admitted that the prospect of even a petty pelf, tending as it does to counteract the natural sympathies, may prove a deteriorating influence, even in a case which is not one of marked depravity. Considerations of this kind greatly complicate the problem. They show, upon the one hand, that the danger is not so exceptional in kind as it might at first sight appear, but, on the other hand, that its cause is not so simple as to be easily eradicated. If the problem only were to repress a hideous traffic in infant life, it might be solved by an absolute prohibition of infantile insurance. But it is rather a question of surrounding the children with such moral influences as will lead their parents to bring their best abilities to the fulfilment of their parental duties. Only so can the neglect of which we have spoken be prevented. And under this point of view it may well appear doubtful if the infant community would be profited by restrictive legislation which took away from poor people the opportunity of providing by easy thrift against the comparatively heavy burden of burial expenses. No doubt much senseless extravagance is on such occasions indulged in by rich and poor alike; but that is beside the mark. An expensive fashion casts this burden upon the poor, and the question has to be faced—How are they to bear it? An insurance which provided exactly the necessary funds and no surplus would be an ideal expedient. The existing law makes £6 the limit of burial insurance in the case of children under five years of age, and it may well be doubted if this limit is not too high. When the Friendly Societies Act was under consideration in the House of Lords, an amendment was adopted making £3 the limit in the case of children under three years of age. The amendment was thrown out in the House of Commons, but it may well deserve renewed consideration. The heroic remedy of total abolition, which some correspondents of *The Times* have advocated, appears to ignore the important psychological fact that the maximum of parental attention can only be secured as the result of warm parental affection, and that measures which obviously increased the burden of bringing up a family of children would probably, by counteracting affection and thus relaxing diligence, do in the end more harm than good.

THE PUBLIC HEALTH IN THE SUMMER QUARTER OF 1888.

THE Registrar-General's returns for the thirteen weeks ending last Saturday show that the mean annual death-rate in the twenty-eight large towns dealt with in those returns did not exceed 16.9 per 1000 in the third or summer quarter of this year. We shall not know for another month, when the quarterly return will be due, what the death-rate in the whole country was during that period, but we may be assured that it was unprecedentedly low, and if it bore the same relation to the death-rate in the large towns that prevailed in the six preceding third or summer quarters of the year, the annual death-rate of England and Wales during July, August, and September last was below, rather than above, 15 per 1000. The lowest death-rate in the whole country that has previously been recorded in the third quarter of any year, since the commencement of civil registration in 1837, was 16.3 in 1879. But to return to the mortality in the large towns, we know that the mean death-rate in these towns was 16.9; in London the rate was but 16.2; and in the aggregate of the twenty-seven large provincial towns it was

17.5. The lowest rates in these twenty-seven towns were 12.7 in Bristol, 13.7 in Nottingham, 13.9 in Brighton, and 14.3 in Hull; the rates in the other towns ranged upwards to 20.2 in Bolton, 20.3 in Leeds, 22.3 in Preston, and 23.5 in Manchester. The unprecedentedly low death-rate during the summer quarter of this year may presumably be attributed to the exceptionally low temperature, and to the abundant rain that fell. It is worthy of note that during the three months under notice there were but six days of really summer temperature—that is, showing a mean daily temperature of 63° Fahr. or more; in 1887 the number of these warm days was thirty-nine. It appears, however, that the low death-rate cannot be entirely attributed to the comparative immunity from infantile diarrhoea. The annual death-rate from diarrhoea in the twenty-eight towns last quarter averaged 1.5 per 1000, and this exceeded the rate (1.2) that prevailed in these towns in 1879, when the death-rate from all causes was 20.4 instead of 16.9, as it was in the quarter just ended. In London the diarrhoea death-rate last quarter was 1.35 per 1000, and lower than in any summer quarter since 1882; in the twenty-seven provincial towns the mean rate was 1.62, and showed the usual wide and hitherto unexplained variations in the several towns. The lowest diarrhoea rates last quarter in these great towns were 0.26 in Oldham, 0.40 in Huddersfield, 0.45 in Halifax, 0.48 in Bristol, 0.63 in Newcastle-upon-Tyne, and 0.76 in Blackburn. The highest rates, on the other hand, were 2.19 in Norwich, 2.74 in Sheffield, 2.87 in Leeds, 3.31 in Leicester, and 3.89 in Preston. Although all the above-mentioned diarrhoea rates show a marked decline from the mean rates in recent corresponding summer quarters, the same towns are found with low and high rates respectively, as in past summers. It is somewhat humiliating to have to confess that we still know practically nothing of the causes of these wide differences between the rates of mortality from diarrhoea in the various towns. How can we explain the fact that during last quarter the diarrhoea rate was only 0.26 in Oldham, whereas it was 3.89, or nearly fifteen times as high, in the neighbouring town of Preston, both towns being mainly engaged in similar branches of manufacture? With regard to the mortality from diarrhoea in these large towns last quarter, it is worthy of note that it did not reach its maximum until the first week of September, and this increase was not apparently due to any rise in the temperature, as the mean temperature in the preceding two weeks had shown a marked deficiency. It would appear that we know definitely as little of the conditions which govern the general mortality from summer diarrhoea, as of the causes to which the marked variations in its incidence upon various towns are to be attributed.

CRIME-CULTURE THROUGH THE PRESS.

IT has been asserted, and perhaps truly, that the series of murders which have during the past few months aroused the indignation and horror of the whole metropolis, have been the work of one and the same person. There may or may not have been accomplices. For the sake of such credit as may be claimed even for criminal human nature, we would fain believe that there were not. In the total absence hitherto of any definite proof, it would, however, be more credulity to indulge this belief, and the more so that we have daily evidence of the existence in every city of a criminal class whose capacity for evil it is impossible to compute. We are therefore forced to inquire, Can nothing more be done than is being done to reduce the numbers of this class and its mischievous influence? What is the origin of this moral residuum, and how is its existence maintained in

spite of all the forces of our civilisation? The limited space at our disposal will not suffice for any adequate discussion of these questions, but there is one aspect of the subject which, in view of its important bearing on the development of a depraved type of manhood, cannot be overlooked. A few weeks ago we directed attention to the immunity with which grossly indecent publications continue to be circulated by the agents of an unscrupulous press among young persons of both sexes. It is notorious that matter of a scarcely less objectionable kind is offered to their readers in the pages of many of the lower class newspapers. Vice and crime rival one another as means of stimulating a depraved appetite for the horrible and the bestial. The educative aim of such writing is evidently to develop all that is lowest and most animal in our nature—the passions, the desires, and appetites—in place of that which is higher and more human. Tales of silly sentiment, of glaring immorality, of refinement in vice, of romantic passion working out its course in hatred and murder, fill up the pennyworths of garbage which are constantly foisted upon foolish and ignorant purchasers by these gutter purveyors of literature. Perhaps a transparent veil of pretended utility, philosophy, or virtuous reproof is cast by the cunning vendor over his disgusting stock-in-trade. Whatever the subterfuge adopted, however, there is at times but little if any real difference between his methods and those of the professed agent of a system of corruption. None can gauge better than he the fatal success at which he may hope to arrive, if only he will pander shrewdly to the diseased curiosity of his readers. Youth, untrained in right principle, perhaps overworked, physically and mentally morbid from the want of fresh air and sufficient house room, affords a ground already prepared to receive the tares of his injurious teaching. What, he asks, has he to do with the result? If it is bad in a moral sense, he need not pose as a censor. He comes to satisfy a want, and he sees no reason to impose a rein of scruple upon his transactions, while almost all possible excesses are securely sheltered behind the “liberty of the press.” It is very necessary that an effectual check should be placed upon the spread of this disastrous influence. Much has been and will still be accomplished by private efforts of a corrective kind. The Education Act, which has opened the door to this flood of filth and over-wrought sensation, has also provided an inlet for the remonstrances of reason and religion. These have already done good work, and still greater results may be expected in time to come. Meanwhile, we must not forget to notice the disadvantages which attend a purely expectant policy. While the flood-gate is open to evil the work of contamination is going on. For many the remedy, if it comes not soon, may come too late; and in face of this fact, and of the utter licence now enjoyed by the most debasing publications, we feel certain that a prohibitive measure, though it might seem to curtail the liberty of the subject, would not really do this, but would secure his best interests, and would also enjoy the general approval of public opinion.

PHARMACY IN RUSSIA.

THE Russian Minister of the Interior is preparing a plan for raising the status and qualifications of a Master in Pharmacy, with the intention of making the holder of that diploma the equal not merely of the ordinary medical practitioner, but of the Doctor of Medicine. According to the proposed scheme, the Master in Pharmacy will have to spend eight semesters at a university. It is intended that the two sexes shall have equal rights and privileges. Russia is not the only country where pharmacists are claiming a higher position in the social and intellectual scale; for a movement is on foot in Germany, promoted by the *Apothekerverein*, having the same end in view.

OPERATIONS AT HOSPITALS.

SOME of our contemporaries have recently taken notice of a letter sent to them by a correspondent who makes serious charges—not against any particular surgeon, but against hospital surgeons in general. It is stated that surgeons carry out painful operations on their patients which they know to be useless, and do not even trouble to render successful, the knife being used simply by way of experiment or demonstration. These charges, wild as they are, and utterly devoid of truth, are apt to produce an unpleasant impression on those of the public incapable of judging for themselves. They may also work in another direction, and cause some poor patient to lose his life through refusing to take a surgeon's advice and submit to an operation in time. We know the practice of all the hospitals intimately, and no operation is performed nowadays without a full understanding by the patient of the risks and probable benefit to be derived from it. If the relatives are known, they are communicated with, and the operation is explained to them should the patient be too ill to understand or appreciate his condition. We have known a surgeon to sit up all night simply waiting for the relatives to come and give permission for operation in a hopeless crush of the leg, the patient being drunk and quite unable to understand anything. The question of experiment does not enter into the mind of the surgeon, who simply considers what is best for those under his care, and has to explain before qualified medical men and students his reasons for doing this or that. All he does is done under the observation of those who would not fail to make known any risky thing unfairly attempted, the punishment for which would be most severe at the hands of his fellow-practitioners, even though it did not come under any penal clause. Operations involving risk to life are performed daily, and such are unfortunately a necessity. At rare intervals, in the hope of affording a chance of life in cases in which the known resources of surgery have been exhausted, operations are undertaken which had not been previously performed, but few know the care taken for their success, or the elaborate training undergone by the operator. Anything which tends to destroy the confidence of a patient in his surgeon does harm to the patient. Hence these anonymous attacks must be contradicted in the interest of the poor; as attacks on the honour of the profession they are beneath notice.

TRAINING FOR NURSES.

THE Court of Governors of the Devon and Exeter Hospital had under consideration, on the 20th ult., a report of the committee appointed in May last for the purpose of framing a scheme for carrying out the principles embodied in three reports on nursing, which were as follows:—(1) “That the employment of nurses who do not reside in the hospital shall be discontinued. (2) That some system for training nurses shall be established. (3) That in time trained nurses may be employed in private nursing from the hospital after the needs of the hospital are fully supplied.” The committee presented a somewhat elaborate report on the subject, and pointed out the advantages which, after careful consideration, they thought would accrue to the institution and the county by adopting the principle of the reports. They had gone carefully into the question from a pecuniary point of view, and found that a scheme which they recommended would cost about £1900, and the nursing at the hospital, while being greatly improved, would be done for about £760, instead of between £900 and £930 as heretofore. In conclusion, the committee recommended:—(1) “That a superintendent of nurses be appointed by the Weekly Board (at a salary not exceeding £60 per annum), and that her duties be defined by the Board. (2) That a new dining-room for the nurses be

provided in the basement under the board-room, at an estimated cost of £150. (3) That it is desirable that a house be erected for the accommodation of nurses, at an estimated cost of £1350, and the furnishing thereof £400 in addition." The report was carried.

THE DISTRICT SURGEONCY OF HANOVER, CAPE COLONY.

WE have received from the Cape copies of a correspondence relating to the dismissal of Dr. W. Bourke from the district surgeoncy of Hanover, and the report of a Select Committee of the House of Assembly appointed to investigate the circumstances connected with his dismissal. The case appears to us to show the necessity for a power of appeal where there is arbitrary magisterial power. On Oct. 13th, 1887, the Inspecting Civil Commissioner telegraphed to the Under Colonial Secretary a recommendation that Dr. Bourke should receive notice that Government had no further need of his services. "The evidence we [presumably the members of the Gaols Commission] have taken, which cannot be forwarded for some time to come on account of pressure of work, shows that this person is not fit for the office he holds, and I think he ought not to remain an hour longer in charge of the gaol. Messrs. Ayliff and Theron concur." The Under Secretary seems to have acted promptly on this telegram, without waiting for any particulars as to the charges, for on the following day the Resident Magistrate at Hanover intimated to Dr. Bourke that he was relieved of his duties as district surgeon, and called upon him to show cause why his services should not be dispensed with. Surprised at receiving such an intimation, Dr. Bourke requested that he might be informed of the charges which had been brought against him, and of which he had received no notice. On Oct. 31st, a fortnight after he had been suspended, and a week after he had addressed a letter to the Colonial Secretary complaining of his inability to obtain any information regarding the cause of his suspension, he received an official intimation from the Under Secretary that the charges preferred against him were generally, "Neglect of duty and untrue entries in your journal of medical occurrences." An application for copies of the records kept by him in the gaol was refused by the Resident Magistrate, who, however, was ordered by the Colonial Secretary to furnish them. It was not till Dec. 14th that Dr. Bourke received all the official documents he required, and on the 24th he forwarded an answer to the charges brought against him. On Jan. 30th, 1888, having received no communication on the subject of his defence, he addressed an appeal to the Premier of the colony, and at last, on March 23rd, was informed that the Colonial Secretary, having had the documents under his consideration, had decided to confirm the order dispensing with his services. Against this decision Dr. Bourke appealed to Sir Hercules Robinson, the Governor of the colony, principally on the grounds that he was perfectly innocent of any breach of duty: "that he got no notice that an investigation was to be held as to the manner in which he performed his duties as district surgeon; that he was not afforded the opportunity of cross-examining any witnesses; in fact, that every witness against him was examined privately, he (the petitioner) not being present, and that the Commission was influenced by hearsay evidence against him." Apparently in consequence of this appeal, a Select Committee of the House of Assembly, consisting of the Attorney-General and six members, was appointed to consider and report upon the petition to the Governor. The committee, after the examination of witnesses, and having before them all the papers relating to the case, came to the conclusion, "that there were not sufficient grounds to justify the dismissal of Dr. Bourke from the district surgeoncy of

Hanover." From a careful perusal of the evidence taken before the Select Committee, we fully agree with them in their conclusion. We do not know whether Dr. Bourke has been reinstated, or what compensation he will receive for the injustice done to him by his suspension from duty for nearly ten months, with all the anxiety he must have undergone and the injury he must have suffered in his private practice, for we cannot but feel that he has been treated most unjustly.

MEDICATED WINES AND TEMPERANCE BEVERAGES.

THE thirty-first Report of the Commissioners of Her Majesty's Inland Revenue contains a variety of interesting information, covering the net receipts from excise, stamps, land tax, inhabited house duty, and income tax. While the report is largely concerned with financial details, clearly arranged in tabular form, the report by the principal of the laboratory in the appendix exhibits in small space the results of considerable labour extended over a wide range of subjects. The increasing difficulty of keeping the sale of liquids containing alcohol in legitimate channels is illustrated by reference to the so-called medicated wines, which are said to be quite suitable for use as beverages. Two liquids of semi-medical names are mentioned as only possessing "their respective prefixes to distinguish them from champagnes of ordinary quality." It has long been well known that many temperance drinks contain varying proportions of alcohol. In this report it is stated that the sample of elderberry syrup examined contained 8.7 per cent. of proof spirit, that of "non-alcoholic ginger cordial" 10.8 per cent., that of "unfermented sherry" 17.6 per cent., and that of "cowslip wine" (which looks oddly in this class) no less than 28.9 per cent. "Temperance" beverages have always been regarded with suspicion; but the medicated wines have been attracting the attention of the revenue officers by their flavour, and by the size and frequency of the dose recommended. Whether habits of intemperance are likely to be fostered by them is a question beyond the scope of the report, which is confined simply to the statement that an alcoholic liquid employed as a beverage of necessity becomes subject to revenue dues.

THE WHITECHAPEL MURDERS AND SANITARY REFORM.

THOUGH no satisfactory explanation has yet been given as to the cause of the atrocious murders systematically committed in Whitechapel, this long series of tragedies has at least served the good purpose of awakening the public conscience. It is worthy of note that the crimes have been committed in precisely the same district where, as sanitary reformers, we have often demanded the intervention of the authorities and the more rigorous application of the Sanitary and other Acts by which the quarter could be improved. Undoubtedly great poverty, overcrowding, dirt, and bad sanitation have a lowering, brutalising tendency, which renders more probable the conception and the execution of such crimes as those that now absorb the public attention. Possibly the actual perpetrator of these sanguinary deeds has not himself endured; to the full extent, the misery and the squalor of the Whitechapel district; but his nature has probably been influenced by the degradation of the quarter he seems to frequent. In any case, we are glad to note that the public have associated the prevailing misery with the present appalling record of crime. There is already some talk of rebuilding a large portion of Whitechapel, and calculations have been made to show that this can be done in a remunerative manner. For years past we have sought to draw public attention to the miseries of the poor, and especially to the very streets

where the murders were committed. Our efforts were not altogether fruitless; assistance was given, through our Commissioners, to some extreme cases of distress, and one of our subscribers sent us £20 for this purpose. We had then published a special report on the exceptional distress prevailing in London. This report appeared on March 15th, 1879, and contained a heartrending description of the children and inhabitants of George-yard, where a woman was murdered on August 7th last. Some time previously the lodging houses in Flower-and-Dean-street, where another victim, who was murdered last Sunday morning, was believed to have been in the habit of lodging, were fully described by our Commissioners. One of the worse sweating dens described in our report published four years ago was in Hanbury-street, where Annie Chapman was murdered and mutilated on September 7th. This is the very heart of the sweating district, and Pelham-street, where some of the worst cases were found, runs parallel with Hanbury-street, and is only a few yards off. It cannot be said, therefore, that the public and the authorities have not had many opportunities of learning something of the dangerous condition of this district. Improvements have been effected, we acknowledge, and at the time the various reports we published were extensively quoted by the press at large. Nevertheless, what has been done is altogether insufficient, and it does not reflect creditably on our boasted civilisation to find that modern society is more promptly awakened to a sense of duty by the knife of a murderer than by the pens of many earnest and ready writers.

ENTERIC FEVER IN THE LINCOLN COUNTY ASYLUM.

WE are able to give some information of the recent prevalence of enteric fever in the Lincoln County Asylum. The institution has for many years been subject to the appearance of this disease among the inmates. As far back as 1872 several cases occurred, and it seems doubtful if any subsequent year has passed without some attendant or patient suffering from enteric fever. In 1882 and 1883 two nurses, and in 1886 as many as three servants and two nurses, were attacked. During the present year the disease first showed itself in January in the engineer's house, his son being the sufferer; a little later two patients in the female epileptic ward were attacked, death resulting on February 28th and 29th. From this time up to the latter part of September there were seventy-seven cases, occurring amongst male and female inmates, attendants, nurses, servants, and the engineer's family. The only other officer who appears to have suffered was the steward, who has unfortunately died, the other deaths amounting to thirteen. From the information at our disposal it is not possible to arrive at any absolute conclusion as to the detailed circumstances which have led to this disaster; but it is obvious that, in connexion with the asylum, there have been many local insanitary conditions which may not improbably have played an important part in the production of the disease. We learn of a large open cesspit of a cubic capacity of some 900 feet receiving excremental matter, and situated within forty yards of the female refractory court wall; the emanations from this tank would, we are told, readily reach the female wards when the wind is east or north-east. Again, the well from which the asylum was mainly supplied was liable to pollution, but it has not been thought that this was responsible for the outbreak. In other respects the institution evidently required improvement to raise it to the standard of sanitary excellence which is thought to be necessary at the present time; waste pipes of sinks and baths were connected directly with the drain, waterclosets

were conspicuously defective, and there were evidently many opportunities for the air contents of the drainage system to enter the interior of the building. So far as we know, no question has arisen as to the purity of food supplies. The work of improvement has been actively carried on under the supervision of the medical authorities.

OVERWORK ON RAILWAYS.

IT is stated that the Board of Trade have ordered the principal railway companies to supply them with returns showing every occasion during two typical months this year and last on which any man concerned with the working of the traffic was on duty for more than twelve hours continuously. It is believed that the Government contemplate the introduction of a measure dealing with the subject. Few things are of more importance, from the points of view of justice to the men employed on our railways and of the safety of the public who travel by them, than that the hours of labour of railway officials should have definite and reasonable limitation. If the directors of the companies themselves are unable to perceive that the interest of their shareholders is conspicuously involved in such limitation, then the Legislature must step in and enforce adherence to rigid rules in this respect—rules which prudence and humanity should have dictated without the interference of the authority of the State.

MICROCOCOCCUS TETRAGONUS IN A TUBERCULAR ULCER.

DR. B. VANGEL, of Buda-Pesth, on the microscopical examination of an ulcerated nose in a phthisical subject, found, besides tubercle bacilli, some cocci, which he cultivated, inoculating a white mouse, with the culture. The organs and blood, after being treated with Gram's stain, were found to contain cocci grouped in fours and enclosed in a capsule—*micrococcus tetragonus*, in fact—which Koch and Gaffky found in phthisical lung cavities, but which, as far as Dr. Vangel is aware, had not hitherto been found in other organs. What part this *micrococcus* plays in phthisis is unknown. It would appear, however, that tissue in the process of breaking down forms a soil suitable for its development. The ulcer in which the *micrococcus tetragonus* was found healed with suitable treatment, but the swelling and redness of the nose remained for a long time.

THE USE OF MINERAL WATERS.

BUT for an occasional reference to reassure the reader, it would be difficult not to imagine that the article upon the Home Uses of Mineral Waters by Dr. J. M. Coan had been the subject of a series of mishaps and oversights at the hands of the postman and the editor. It appears in the current number of *Harper's Magazine*, but its freedom of language and method seem to indicate that a medical publication had originally been its intended destination. The author does not hesitate to speak of "inflammation of the bladder and kidneys," "chronic uterine catarrh," and "derangement of the periodic uterine functions." Some space is devoted to the comparison of imported and manufactured mineral waters, with the conclusion that there is room for both, and that since both manufacturers and importers are supplying good and useful commodities it is scarcely worth while stopping to distinguish between them. The mineral water treatment of scrofula, chronic rheumatism, gout, anemia, chlorosis, diabetes, and numerous other diseases, is touched upon in very sketchy fashion, which is rather bewildering. The final remarks seem worth extracting. "When used for disease, mineral waters must be taken regularly and under competent medical advice. If

hygienic restrictions are necessary at the watering-places themselves, they are still more necessary when used at home." Holding these sensible views, it is a pity Dr. Coan has seen fit to publish this article in its present form in a general magazine.

COMMUNICATION BETWEEN THE LIQUOR AMNII AND THE MATERNAL CIRCULATION.

M. TÖRNQREN gives in the *Archives de Tocologie* an account of some researches he has been carrying out under Prof. Strauss, in Paris, on the communication existing between the liquor amnii and the maternal circulation. His observations were made on rabbits, and showed that substances introduced into the liquor amnii become absorbed by the maternal system, not, as far as could be made out, by being appropriated by the fœtus, and thus conveyed by the fetal circulation to the placenta, but directly through the decidua and the placenta. These observations would appear to confirm those of Winkler on the human placenta, as he described minute canals as existing in the placental portions of the chorion and amnion communicating with the cavity of the amniotic sac.

THE DICTIONARY OF MEDICAL SPECIALISTS.

WE continue to receive various and weighty proofs that the profession in its most representative men fully endorses our estimate of the proposed "Dictionary of Medical Specialists," in which we are sorry to see that Mr. Phillimore still persists. He has circulated the letter which he addressed to us. It would have been more magnanimous had he circulated with it our note of reply. It will be curious to see how he treats the various gentlemen who have not thought it consistent with their duty to answer his demand for returns. This is a case in which silence gives reproof. And a great liberty will be taken with members of the profession if their names are inserted without their express sanction. The following is a specimen of the reception given by a specialist to Mr. Phillimore's proposal:—

"DEAR SIR,—Your 'Dictionary' will no doubt be admirable in every particular, but I shall be glad to know that my name is conspicuous by reason of absence from its pages. Yours faithfully,

"W. P. W. Phillimore, Esq."

SILVER POISONING FROM THE PROLONGED APPLICATION OF CAUSTIC.

DR. SVORNIKOFF mentions in the *Medizinische Beobachtungen* a case of argyria, or silver poisoning, following constant applications of lunar caustic to the throat. The patient was a peasant woman fifty-three years old, who had had syphilis sixteen years previously. She was treated by frictions and applications with the brush of a 50 per cent. nitrate solution of silver to the throat for several weeks, she herself using the brush whenever the throat was painful. The pharynx, the hard palate, the gums, and the upper part of the chest and back became stained a deep grey colour, and the discolouration was even more marked on the face. A similar case has been reported by Dugiel.

THE AFTER-CARE ASSOCIATION.

FROM the last annual report of the Council of this useful Association, which is designed for poor and friendless female convalescents on leaving asylums for the insane, it appears that during the past year forty-eight cases have been before the committee, of which forty-one were accepted. Besides these, several cases not coming under the rules of the Association have been placed in the way of obtaining relief in other channels. The boarding-out of convalescents in cottage homes in the country has been

continued with very great success, and, as a rule, is much preferred by the women themselves to being placed in a home. It is satisfactory to note that in nearly every case the convalescents placed by the Society in service have given satisfaction to their employers, and remain in the places found for them. The work done by the Association in a quiet and unostentatious way is of a most valuable kind, and we heartily wish continued and increased prosperity to this important effort to assist those who have passed through the sad trial of insanity.

THE NEW SYDENHAM SOCIETY.

THE thirtieth annual meeting of the New Sydenham Society was held in Glasgow during the month of August, Sir Spencer Wells, President, being in the chair. The report and balance sheet were read and adopted by the meeting for publication, and the officers for the ensuing year were elected by ballot. The President for the current year is Dr. W. T. Gairdner. We are glad to notice that the Society's income for last year showed a slight but definite increase, a promise of success which we hope will not fail in the succeeding years. Including a balance of £129 left from 1886, the receipts during 1887 amounted to £2444, and at the end of that year a balance of £142 was left in the hands of the treasurer.

FOREIGN UNIVERSITY INTELLIGENCE.

Greifswald.—Dr. Sommer has been appointed to the chair of Anatomy, in succession to Professor Budge.

Madrid.—Dr. Jaimero Cabanas has been appointed Professor of Hygiene.

Rio de Janeiro.—Dr. Du Rocha Faria has been appointed Professor of Hygiene and of the History of Medicine. Dr. Du Fonseca has been appointed Extraordinary Professor of Pharmacology.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Fatnières, Professor of Ophthalmology in Bucharest.—Professor Ribeiro de Meredonca, of Rio de Janeiro.—Dr. C. H. Loharoff, ordinator of the City Alexander Hospital in St. Petersburg.

We recorded last week the death on the 3rd ult. at Bombay, of Deputy-Surgeon General Robert Augustus Chapple, at the age of fifty-six. Entering the medical staff of the army as assistant surgeon in 1854, Mr. Chapple received his full rank as surgeon eleven years afterwards. On his first joining the army he accompanied the troops proceeding to the Crimea, and was present at the capture and battle of Balaclava, and also at the memorable battle of Inkermann. He was also in the trenches during the bombardments of April and June, and was present at the final assault. For his valuable services during the war Mr. Chapple received a medal with three clasps, the fifth class of the Medjidieh, and the Turkish medal.

We regret to have to report that Dr. Waters of Chester has been ill. His illness seemed to be the result of a chill, and was of the nature of acute cardiac valvulitis. Sir Andrew Clark visited him in consultation with Dr. Taylor. We are glad to be able to report that his good constitution is asserting itself, and that he is decidedly convalescent.

MR. BOLTON GLANVILL CORNEY, M.B.C.S., has been appointed an official member of the Legislative Council of the colony of Fiji.

THE epidemic of yellow fever still continues to rage in Florida. During the twenty-four hours ending on the 1st inst., ninety-nine fresh cases and ten deaths occurred at Jacksonville, and during the next twenty-four hours ninety-eight fresh cases occurred, but no deaths were recorded. The total number of cases and deaths since the outbreak of the epidemic are—at Jacksonville, 1878 cases and 212 deaths; at Jackson, 14 cases and 4 deaths; and at Decatur, 17 cases and 4 deaths.

SIR WM. MAC CORMAC'S address to the Medical Society of London on Laparotomy in the Treatment of Intra-peritoneal Injuries has been translated into German by Professor Volkmann's assistant, Dr. Thamhain, and has been issued as one of the well-known series of *Klin. Vorträge*. This is a signal testimony to the value of the address.

THE Congress for the furtherance of Italian Medicine, announced to meet in Rome on Oct. 15th, has (in consequence of the visit of the Emperor of Germany) been postponed till the 20th. It will continue its sittings till the 23rd inclusive.

DR. DICKINSON will, on the 15th inst., deliver a lecture at the Hospital for Sick Children, Great Ormond-street, introductory to the course of clinical instruction at that institution. The address is announced to commence at five o'clock.

THE death is announced of Hofrath Dr. Karl von Buckhardt, whose genial presence at Wildbad, where he had practised for many years, will be remembered by not a few of our readers.

AT a meeting of the University Court of Aberdeen University on the 2nd inst., Dr. Carnelly, of University College, Dundee, was appointed Professor of Chemistry in the room of Dr. Brazier, who has resigned.

DR. E. MATTHEWS OWENS has been appointed to a seat on the Medical Board of Queensland by the Executive Council of that colony.

THE OPENING OF THE MEDICAL SESSION.

CHARING-CROSS HOSPITAL.

AT this hospital no introductory address is given. The annual dinner of the past and present students will be held at the Holborn Restaurant on Friday, Oct. 26th, Sir John Puleston, M.P., in the chair.

ST. GEORGE'S HOSPITAL.

THE introductory address was delivered at 4 o'clock by Dr. Ewart (an abstract of which is published at page 667), after which the prizes for the past year were distributed in the Board-room by Professor Humphry, F.R.S., of Cambridge, who, in addressing the students, strongly advised them to cultivate "attention." The dinner was held at 7 P.M. in the Whitehall Rooms of the Hôtel Métropole, Mr. T. Pickering Pick in the chair. About a hundred were present, and amongst these a large number of provincial medical men, and members of the Indian Medical Service. Professor Humphry proposed "Success to the Medical School," to which the Dean, Dr. Whipple, replied. "The Governors of the Hospital," proposed by the Chairman, was replied to by Colonel Haygarth, the treasurer of the hospital; and suitable replies were returned to the toast of "Past Students and Visitors," proposed by Sir Prescott Hewett. The dinner passed off most successfully.

KING'S COLLEGE HOSPITAL.

THE dinner of the old students of King's College Hospital was held at Linmer's Hotel on Monday, Oct. 1st, under the presidency of Dr. A. B. Duffin, Professor of Pathology. Among those who proposed or responded to the various toasts were Dr. George Johnson, Rev. Dr. Wace, chairman of the Committee of Management of the hospital, Mr. W. A. Bateman (Richmond), Mr. E. Pearl (Upper Norwood), Dr. Playfair, and Dr. Beale. Very many old friends from town and country joined with nearly all the members of the present teaching staff in supporting the chairman.

LONDON HOSPITAL.

THE initiation of work at this school began in the pleasant way of a dinner of old students, fitly presided over by Mr. Jonathan Hutchinson, F.R.S., who was supported by Sir Andrew Clark, Bart., F.R.S. There was a large company present, and the proceedings were of a very pleasing character. The toasts were few, and the speeches were limited in number as in length. Mr. Hutchinson was very happy in proposing "The Health of Her Majesty," and expressing his regard alike for monarchy and the Queen herself—a regard, he said, which deepened as the experience of life increased. His speech on the toast of the evening, "The London Hospital School," was at once modest and confident. He scanned the history of the past and its great success, urging the students to sustain a high reputation, transmitted from men like Sir William Blizard, Dr. Pereira, Dr. Billing, Mr. Luke, and Mr. Curling. He pointed out the present advantages; the noble building; the improved methods of research and of practice; the capable teachers of the younger age. But all these, he said, do not constitute the College of the London Hospital. This was in the living students, and in their thought and in their work, as stimulated and developed by their surroundings. He descanted on what he described as the two sides of medicine—the practical and the poetical. While abating nothing in the demand that they should be practical and ready for every duty, however prosaic or however difficult, in any part of the world to which they might be summoned, he called Wordsworth and Ruskin to his aid in defining the poetry of medicine and its great share in ameliorating the world—a process which he was sure, in spite of all appearances to the contrary, Mr. Ruskin himself believed in. So regarded, medicine was full of poetry, and had among its functions

"To sweep destruction from the busy day,
And make the chalice of the big round year
Run o'er with gladness."

Sir Andrew Clark proposed Mr. Hutchinson's health in eloquent and heartfelt terms, describing him as important, not only to the School of the London Hospital, but honoured wherever medicine was cultivated. Mr. Hutchinson departed from the rule of only three toasts—the Queen, the London Hospital Medical College, and the Chairman—by proposing "The Secretaries and the Promoters of the Dinner, including Dr. Stephen Mackenzie and Mr. Openshaw." Both of these gentlemen responded. Dr. Mackenzie protested against the additional toast, though it was clearly but the expression of the gratitude of the company for the good dinner and the good arrangements which they had enjoyed.

ST. MARY'S HOSPITAL.

ON the evening of October 1st, in connexion with the reopening of the Medical School of St. Mary's Hospital, a conversation was given by the members of the staff and lecturers in the hospital and school buildings. The gathering was very much enjoyed, and proved a great success, over 4000 persons being present. The decorations, which were most elaborate, were lent by Messrs. Maple and Co., Mortlock and Co., Hindley and Sons, Marshall and Snelgrove, W. Whiteley, Samuels, Van Hier, Morris, Comratt, and Dr. Salviati. Music was furnished by Mr. Dan Godfrey's orchestral band, and by the band of the St. George's Rifles, while in the museum large audiences were delighted by the selections of music rendered at intervals by Mr. Tilley's banjo band. The medical school was lighted throughout by electricity, and in the library Mr. Plater's glee union gave a selection

of igtees and madrigals. In the board-room of the hospital, Mr. Edison's lately perfected phonograph was exhibited by Colonel G. E. Gouraud, and was a source of much pleasure and astonishment to all who heard it speak in its loud and distinct tones.

The annual dinner of the past and present students was held in the Venetian Room of the Holborn Restaurant on the 2nd inst., Mr. Howard Hayward, dental surgeon to the hospital, presiding. About 150 sat down on the occasion. Several distinguished visitors were present, including Professor Michael Foster, F.R.S., and Mr. Bompas, Q.C. The usual toasts were drunk, and were interspersed with songs. The reunion was a great success, and passed off with the utmost enthusiasm.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.

THE session was opened on Monday last with an address by Mr. W. Foster, an abstract of which we publish elsewhere. The prizes gained during the past year were subsequently distributed by Sir Arthur T. Watson, Bart., Q.C., who addressed the students, and urged them to court success in life by hard and continuous work. Other things, such as a pleasant manner and tact in dealing with people of all kinds, were not to be disregarded or undervalued; but in the medical profession, as in other similar callings, the surest road to success was steady work, continued from year to year. The large theatre of the school was crowded with students and their friends, and both Mr. Foster's and Sir Arthur Watson's addresses were enthusiastically received. The Dean, Mr. Pearce Gould, read the usual report, which, in addition to enumerating the successes of the pupils from this school at the various examinations, pointed out that during the past year the new school buildings had been completed, the library had been newly furnished, a new *matéria medica* museum had been opened, a new class-room fitted up for the practical surgery and operative surgery classes, and a commodious luncheon-room had been started. These additions have greatly school premises very complete. After the opening meeting a added to the comfort of the students, and have made the reception was held in the school buildings and the residential college. Some of the rooms were decorated with flowers and with valuable pictures lent by Mr. W. A. Smith. A series of interesting microscopical specimens was exhibited in the physiological class-room, and an old student, Mr. Freeman, who has recently returned from the Gold Coast, showed a valuable collection of curios &c. he had made there. In the evening the staff and a large number of the past and present students of the hospital dined in the Venetian Salon of the Holborn Restaurant, Dr. Sidney Coupland occupying the chair. The usual toasts were honoured. Major Ross, M.P., spoke in the name of the hospital, in the most cordial terms of the school. Sir Arthur Watson, in replying for the visitors, referred to the happiness it had always been to him to remember that while his father, Sir Thomas Watson, had an unusually large number of close and valued friends in the profession, he appeared to have had no enemies, a fact which bore eloquent testimony to Sir Thomas Watson's charm of character. The music was of a very high order of merit, and the musicians (Mr. Ganz, Mr. Fulkerson, and Dr. Pringle) added not a little to the pleasure and success of the gathering.

ST. THOMAS'S HOSPITAL.

ON Monday afternoon, the 1st inst., the Medical Session at this school was inaugurated by the usual delivery of an introductory lecture. This year Dr. Cullingworth, who joined the hospital as Obstetric Physician on the retirement of Dr. Gervis in the spring, gave the address at 3 o'clock, in the Female Operating Theatre. The subject chosen was that of "Antisepsis in Midwifery Practice." (An abstract of this address is published on page 672.) There was a large attendance of visitors and students, and throughout the lecturer was listened to with the greatest attention, his earnestness and eloquence making a great impression on all. After this the various departments of the hospital and school were thrown open in working order, and were visited by those who had attended the lecture. At 6.30 p.m. the annual dinner was held in the Governors' Hall, when over a hundred members of the staff, and old and present students,

assembled. The chair was taken by Dr. T. B. Crosby, and a most successful evening was spent. After the usual loyal toasts, Dr. Crosby proposed "The Army, Navy, and Reserve Forces," to which Surgeon E. C. Freeman responded. M. Le Gros Clark, in the absence of Sir J. Simon, in an able speech proposed "The Medical School," to which Dr. Gervis, in a witty speech, in which he gave numerous interesting reminiscences of his old teachers and fellow-students, replied. Sir Henry Doulton, in the absence of the treasurer of the hospital, responded to the toast of "The Hospital." Dr. Stone, in his inimitable manner, proposed "The Health of the Chairman," who briefly replied. Dr. Bristowe, "The Old Students," to which Mr. Henry Lankester and Dr. W. Rhys Williams responded. "The Health of the Secretaries," Dr. Hawkins and Mr. Battle, was proposed by Mr. Clutton. A short reply was given by Mr. Battle, reference being made to the unavoidable and regretted absence of Dr. Hawkins, and to the assistance rendered in his absence by Dr. Mackenzie and Dr. Robinson. During the evening great pleasure was afforded to all by the most excellent singing and playing of members of the Guildhall School of Music, who were present at the request of the chairman.

SHEFFIELD SCHOOL OF MEDICINE.

THE new Medical School of Sheffield has had a brilliant opening. Sheffield has had a school for fifty or sixty years. But it became insufficient for the requirements of recent times, and, chiefly owing to the exertions of the president of the school, Dr. Bartolomé, a handsome new building has been provided and opened free of debt. The medical men of the town have heartily assisted in this project. Sir Andrew Clark, President of the College of Physicians, had previously shown his interest in the scheme by speaking at a public meeting, at which the Archbishop of York also spoke. On Saturday night last he attended a *soirée*, and delivered an address on the examining system now in fashion. We shall defer notice of Sir Andrew's views till we have them fully before us. Meantime, it is enough to say that he thinks our examining system cramming and worrying, and inconsistent with true study. The school of Sheffield seemed much delighted with Sir Andrew's visit and kindness, and gave a very unexpected and substantial proof of their feelings by making him a handsome present of a large silver salver. We congratulate the profession on the success of this effort to provide a suitable building for purposes of medical education, and have only to wish them equal success in the "living stones" which constitute the real college. It is gratifying to see a medical school the object of so much popular interest and support as in this case.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Windsor Urban District.—In dealing with the vital statistics of Windsor for 1887, Dr. Casey gives the actual death-rate from all causes as 16.9 per 1000, but he adds that the corrected rate would, for purposes of comparison, be more truly represented by the figure 18.2. The infant mortality is admitted to be unnecessarily high, amounting in children under one year of age to a rate of 13.4 per cent. of the registered births; whereas the zymotic rate for the year has been low—namely, 0.7 per 1000 living. Some few further steps have been taken to do away with the mischievous practice of taking drinking water from shallow wells sunk in a soil on the surface of which for so many years people have been located, and a few houses have been dealt with as unfit for habitation. Referring to the report of the inspectors of the Local Government Board, which was brought about as the result of an inquiry by THE LANCET Commissioners, it is explained that each of the recommendations made was taken into careful consideration. The first deals with the question of unhealthy dwellings. As to this, it is stated that some improvements as to ventilation and sufficiency of air space about houses were effected by the owners themselves, without resort to any measures of com-

pulsion. The remaining instances of courts and densely built quarters could, it is stated, only be dealt with by obtaining Parliamentary powers for the purchase of the properties comprised within the areas complained of. Such a proceeding would, of course, allow of the land being again sold for building purposes; but notwithstanding this, it is stated that it would involve great cost, and since the authority are, it is alleged, not required to proceed in this way unless satisfied of the sufficiency of its resources, the Windsor authority are content to leave the evils where they were; indeed "it has not been thought necessary to take further action for the present in this matter." Another recommendation related to the appointment of a sanitary inspector apart from the borough surveyor, and this very obvious requisite has been complied with. A third recommendation related to the provision of an isolation hospital and of adequate means for securing disinfection. The Windsor authorities have, like all other sanitary authorities, found that the provision of such important measures of sanitary defence as a hospital and a disinfection stove involve difficulties, and on this plea it is explained that matters still stand over. Lastly, the question of providing a refuse destructor was brought under the notice of the authority, and as to this also nothing has been done, although Dr. Casey admits that it will soon become a necessity. So that the total outcome of the report presented to the Local Government Board, and which proved, by means alone of the recommendations attached to it, how great was the need of radical measures for improving the sanitary state of the borough, amounts to the separation of the offices of borough surveyor and inspector of nuisances, and to the provision by a few owners of unhealthy property of somewhat better ventilation about their premises. As for the rest, all stands over; and, as regards one of the most urgent questions—namely, the "old courts," which the Government inspectors referred to as "pitifully bad,"—we are told, in excuse for the principle adopted, that "there is no evidence that the health of the residents within the districts in question has hitherto been affected by" what the medical officer of health is bound to admit are "the sanitary shortcomings of their dwellings." This, we should imagine, is hardly likely to satisfy the Central Board at Whitehall.

West Sussex Combined Districts.—Dr. Kelly's fourteenth annual report, covering as it does four urban and seven rural districts containing a population of nearly 100,000, is necessarily somewhat voluminous, each district being separately dealt with as regards its sanitary state and progress. Taking the whole district, the death-rate from all causes during 1887 was 14.5, or, excluding visitors in the case of seaside resorts, 14.2 per 1000; the rates varying from 9.2 in the case of West Worthing to 28.0 at Arundel. The latter rate is exceptional, and is not due to any excess of zymotic diseases. At the close of the report Dr. Kelly deals with the question of dampness of soil in relation to phthisis, lung diseases, and diphtheria. As regards the first two affections, he gives statistics to show how great has been the reduction in mortality since Dr. Buchanan's well-known inquiry and report some twenty years ago; and, dividing the district as regards its geology into places on pervious, moderately pervious, and retentive soils, he states that the mortality rates from diphtheria and lung diseases, whilst varying considerably, are much higher on retentive than on porous soils; whereas the mortality from phthisis and from all causes is very nearly the same on each variety of soil, this experience being based on statistics from seven specified rural sanitary districts within the West Sussex combination. Careful meteorological records of the district are also included in the report.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5286 births and 3295 deaths were registered during the week ending Sept. 29th. The annual rate of mortality, which had been 17.7 and 18.0 per 1000 in the preceding two weeks, further rose last week to 18.3. During the thirteen weeks ending last Saturday the death-rate in these towns averaged 16.9 per 1000, and was 4.0 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 13.7 in Huddersfield, 14.3 in Halifax, 15.1 in Birmingham, and 15.2 in Bristol.

The rates in the other towns ranged upwards to 27.1 in Bolton, 27.7 in Portsmouth, 28.4 in Manchester, and 32.3 in Preston. The deaths referred to the principal zymotic diseases, which had been 638, 622, and 544 in the preceding three weeks, rose again last week to 570; they included 351 from diarrhoea, 49 from scarlet fever, 47 from "fever" (principally enteric), 44 from measles, 42 from whooping-cough, 36 from diphtheria, and only 1 from small-pox. The lowest death-rates last week from the aggregate of these zymotic diseases were recorded in Huddersfield and Birkenhead, and the highest rates in Preston, Norwich, and Portsmouth. Diarrhoea showed the greatest mortality in Bolton, Sheffield, Norwich, Preston, and Portsmouth; scarlet fever and measles, in Blackburn; whooping-cough, in Cardiff, Norwich, and Halifax; and "fever" in Salford. The 36 deaths from diphtheria in the twenty-eight towns included 27 in London, 3 in Manchester, and 2 in Salford. Small-pox caused 1 death in Hull, but not one in London or in any of the twenty-six other large towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital did not contain a single small-pox patient at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 916 at the end of the week, against numbers increasing in the preceding five weeks from 774 to 850; 132 cases were admitted during the week, against 79, 93, and 115 in the previous three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 184 and 179 in the preceding two weeks, rose last week to 213, but were 11 below the corrected average. The causes of 63, or 1.9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bradford, Salford, Leicester, Nottingham, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Sheffield, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16.0 and 17.3 per 1000 in the preceding two weeks, further rose to 17.6 in the week ending Sept. 29th; this rate was, however, 0.7 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged last week from 12.8 and 14.2 in Perth and Dundee to 20.3 in Greenock and 26.1 in Paisley. The 444 deaths in the eight towns showed a further increase of 8 upon the numbers returned in the previous two weeks, and included 23 which were referred to diarrhoea, 9 to measles, 8 to "fever" (principally enteric), 6 to diphtheria, 4 to scarlet fever, 4 to whooping-cough, and not one to small-pox; in all, 54 deaths resulted from these principal zymotic diseases, against numbers increasing in the preceding five weeks from 42 to 57. These 54 deaths were equal to an annual rate of 2.1 per 1000, which was 1.1 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 29 in each of the preceding two weeks, declined last week to 23, but exceeded the number in the corresponding week of last year by 6; 4 occurred in Glasgow, in Edinburgh, in Dundee, and in Aberdeen, and 3 in Greenock and in Paisley. The fatal cases of measles, which had been 4 and 10 in the previous two weeks, declined last week to 9, of which 5 occurred in Paisley and 3 in Glasgow. Of the 8 deaths from "fever," an increase of 4 upon the number in the previous week, 5 were returned in Glasgow. The 6 deaths from diphtheria corresponded with the number in the previous week, and included 3 in Glasgow. The 4 fatal cases of scarlet fever and the 4 of whooping-cough were all returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 69 and 81 in the previous two weeks, declined again last week to 74, and were 9 below the number in the corresponding week of last year. The causes of 58, or 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 21.7 19.4, and 18.5 per 1000 in the preceding three weeks, rose to 24.4 in the week ending Sept. 29th. During the thirteen weeks ending on Saturday last the death-rate in the city averaged 20.1 per 1000, the mean rate during the same

period being 16.2 in London and 15.5 in Edinburgh. The 165 deaths in Dublin showed an increase of 40 upon the low number in the previous week; they included 18 which were referred to diarrhoea, 4 to whooping-cough, 2 to "fever" (typhus, enteric, or ill-defined), 1 to measles, 1 to scarlet fever, 1 to diphtheria, and not one to small-pox. Thus 27 deaths resulted from these principal zymotic diseases, against 18 and 23 in the preceding two weeks; these were equal to an annual rate of 4.0 per 1000, the rate from the same diseases being 2.2 in London and 1.0 in Edinburgh. The deaths attributed to diarrhoea, which had increased in the previous four weeks from 7 to 18, were again 18 last week. The 4 deaths from whooping-cough exceeded the numbers in recent weeks, while the fatal cases of "fever" showed a decline of 1. Four deaths from violence and 6 inquest cases were registered; and 48, or nearly a third, of the deaths occurred in public institutions. The causes of 25, or 15 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

ON THE INADEQUACY OF THE VISION TESTS SANCTIONED BY THE BRITISH ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—Science has been well defined as measurement, and in no branch is it so palpably true as in that of anthropometry. Anthropometry is solely and wholly measurement; but for measurement to be science it must be comprehensive, and it must be accurate. This is my excuse for questioning the adequacy of the tests of vision that are usually employed in anthropological investigations.

In the laboratory of the Bath meeting of the British Association for the Advancement of Science, held in September, the eyes were submitted, in the first place, to an examination for colour blindness, carried out by means of a modification of Holmgren's worsteds; secondly, the judgment of the eye, which is in great measure another name for the education, was tested by means of a line of ten inches, which had to be divided by the eye alone in half and also in thirds. A right angle had to be estimated and a square formed, suitable apparatus being supplied. At the Bath meeting, for some unexplained reason, no other test of vision was attempted, although it appears to be usual on such occasions to measure the visual acuity by noting at what distance from the eye "brilliant" type can be read. This ends the examination of the sight. Such a test gives no clue to the refractive condition of the eye; for anthropometrical purposes it tells us nothing; to the statistician it furnishes valueless statistics, and to the politician it teaches no lessons. One person may be myopic to several dioptries, yet be able to read the type at a normal distance; or, again, another may be hypermetropic, and still be able to focus the same type at 33 centimetres. Suppose observations to be made on such distinct people as, for example, (a) the inhabitants of the West-end of London, (b) those of the East-end, and (c) a rural population far removed from urban influences. Three more diversified classes of the community it would be difficult to imagine, racial descent, inherited habits, and local modes of life varying within the widest limits; and yet it is quite conceivable that in applying such a test of visual acuity as is sanctioned by the British Association, the results in the three instances might be much the same. It is quite possible that we might find the distance at which the average West-end inhabitants could read the test types reduced by myopia as a consequence of education; the distance at which the natives of the East-end could read the same reduced by corneal opacities, and other results of inherited syphilis; and the average acuteness of vision of the countrymen reduced to a like amount by hypermetropia, the refractive condition of undeveloped races; and so we should get a dead sea of sameness that would render our task hopeless and our efforts useless. The tests of the British Association do not differentiate these various causes in any measure. All we can know is that the acuity is reduced, but we are left in

entire ignorance whether the reason is racial, educational, or morbid.

Now, let us turn for a moment to the object of these anthropometric measurements. Are they a mere fad to amuse the pseudo-scientific whims of the public at these annual gatherings, or are they intended to serve any higher purpose? Doubtless they are meant to be of service to the anthropologist in the first place, but they are also of extreme importance to the hygienist, and through him they may serve high State purposes. To do this the details must be accurate. Suppose it were attempted to utilise the results of the vision tests that have been accumulated in the laboratory, we should find so many hundreds or thousands of individuals had been examined, and that the mean distance at which these people could read the smallest type was so many centimetres. We should also know that a small percentage of them were colour blind, and we should see that the figures were slightly different for the two sexes. The numbers tell us nothing, can help us in no way; no one is one whit the wiser for them, and, more serious still, they are absolutely uninteresting. The conditions that affect the acuteness of vision may be broadly divided into two classes: first, the refractive; secondly, the morbid. It should be with the first of these that the anthropologist should deal, and Cuignet's method offers at once a simple and accurate manner of so doing. All the apparatus required would be a Galezowsky mirror, an oil lamp, and a pair of reversible spectacles containing in the one eye-frame a + 5 D spherical glass and in the other a + 1 D. A portion of the room could be curtained off for examination, and with these instruments all ordinary errors of refraction could be qualitatively if not quantitatively noted in less than a minute for each person. Cases of mixed astigmatism might take rather longer, but they are fortunately rare; and simple and compound astigmatism could be included, as myopia or hypermetropia, according to the refraction. As the laws governing Cuignet's method are optical rather than ophthalmological, their application comes within the range of the man of science, even though he has had no special medical training, and there would be, therefore, no difficulty in finding those skilled to make the observations. From a vision test such as this results might be tabulated that would be of value to the anthropologist and to the State. For if the hypermetropic eye is, as Donders says, an imperfectly developed eye; if it is, as he says, hereditary; and if, as Landolt says, the hypermetropic type of face resembles the Mongolian, it needs no argument to prove the great importance of the subject to the anthropologist. Myopia is increasing *pari passu* with our civilisation; our mental vision expands as our physical vision contracts. Where will it end? How will it end? We know not. But to the State, in which the dictum holds good *Salus populi suprema lex*, it must be of imperial consequence to find out the laws which regulate the inheritance of good sight.—I am, Sirs, yours truly,

W. M. BEAUMONT,

Bath, Sept. 20th, 1888.

Surgeon to the Bath Eye Infirmary.

THE TEACHING OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—The excellent article upon chloroform in your issue of Sept. 15th will, I trust, do much good in the direction of impressing upon those concerned the importance of systematic teaching in both the theory and practice of that branch of our art which I venture to term the "science of anaesthetics." Those who still view with favour the indiscriminate employment of chloroform have found an able exponent of their opinions in the person of Mr. George Foy, whose letter appears in your issue of Sept. 22nd. I do not in any way wish to raise the oft-repeated question, "Which is the safest anaesthetic?" or to enter into the controversy to which such a question would undoubtedly give rise; but I would point out: 1. That many of the figures and opinions quoted by Mr. Foy are taken from American sources, and it is, to say the least, somewhat curious that it is precisely in that country that the administration of ether is most universal, and, in fact, I think I am right in saying that in some States the fatal result following the administration of chloroform renders the attendant physician or surgeon liable to censure by the coroner's court, or even to more unpleasant

legal proceedings; but I do not, of course, admit the advisability or even the practice of such a proceeding. 2. That even Mr. Foy himself admits the importance of "judicious administration," and holds that the high mortality "is due to faulty administration." In face of these important deductions, it is, I think, high time that some effort should be made to place the teaching of anaesthetics upon a more satisfactory basis than at present holds in many—I had almost said the majority—of our schools. The authorities, in whose hands rests the drawing up of the curriculum, are painfully solicitous that the candidates for the various degrees and diplomas should produce evidence that they have been duly instructed in the difficult and dangerous art of vaccination; but practice in methods of anaesthetisation still remains optional, and shares the fate of most permissive legislation.

I am, Sirs, yours truly,

J. FREDK. W. SILK,

Anæsthetist to the Great Northern Central Hospital.
Pemberton-road, Upper Holloway, N., Sept. 1888.

To the Editors of THE LANCET.

SIRS,—I fully agree with Mr. Foy in his objections to your leader on chloroform in THE LANCET of Sept. 15th, and I venture to think you can hardly have reflected on the awkward position in which many a country practitioner may be placed by your suggestion that at every coroner's inquest on a death from chloroform the question should be asked, "Was there any reason why ether could not have been administered instead of chloroform?" Thousands like myself, who have used chloroform for twenty years or more in all sorts of cases—hospital cases, dispensary cases, police cases, in private practice, for accidents, midwifery, &c.—are, it appears, to be debarred from using what we have hitherto found to be a safe anaesthetic (none of my cases having even given me any anxiety as to the result so far as the chloroform went), or are to use it with the unpleasant foreboding that should anything untoward happen, THE LANCET will be quoted against us for not having used ether. It is true that if we happened to have Holmes' "System of Surgery" at hand we might quote the reiterated opinion of Sir Joseph Lister expressed therein as to the safety and superiority of chloroform; but any hostile party who had read your leader would be quite prepared to set that down to "the strong predilection among Scotch surgeons for chloroform," and the *ex cathedra* utterance of THE LANCET would have a most damaging effect upon the reputation of the unfortunate practitioner. We are entitled, therefore, I think, to ask the grounds upon which THE LANCET has come to its decision. When I read the leading article of Sept. 15th first, I supposed it to be based upon six fatal cases which have apparently not been published; but in the editorial note appended to Mr. Foy's letter these seem to be quietly dropped, as are also "statistics" and "individual preferences" further on, and it is apparently solely on the strength of "the proofs given of its physiological action in mammals" that we are asked to admit the danger of chloroform as compared with ether, to put aside the experience of American surgeons on this point; and to accept the unsupported statement that far fewer deaths (in proportion) occur from ether than from chloroform. It may be so, but I do not think any jury of either English, Irish, or Scotch surgeons would agree to come, on such evidence, to such a conclusion.

I am, Sirs, yours obediently,

Sept. 25th, 1888.

H. NELSON HARDY.

ON THE RELATION BETWEEN RED AND GREY HEPATISATION OF THE LUNG.

To the Editors of THE LANCET.

SIRS,—I communicated to Dr. Sturges some years ago the results of observations made upon cases of pneumonia which were the subjects of inquests by Mr. Bedford, the coroner for Westminster, to whom I was under great obligations for giving me opportunities of illustrating my lectures to the students of the Westminster Hospital on forensic medicine. These cases are referred to by Dr. Sturges in his work on Pneumonia, and we discussed the truth of the doctrine that red pneumonia may become, and does become, grey by a

process of degeneration of the contents of the air vesicles. It was a singular fact that in all these cases death occurred without premonitory disturbance of health, and that the individuals were going about a few hours before. Finding now that students are being taught generally that there are three stages of pneumonia, and knowing that this doctrine is not supported by post-mortem observation, it seems to me that it would be well if the matter were made the subject of inquiry. When a student attempts to explain how the degenerated cells of red hepatisation, which are simple leucocytes, become the large nucleated pus cells of the grey form, he has to fall back upon his teachers for the responsibility of his opinion. So far as clinical experience goes, it must have been observed by many how a well-marked case of consolidation of the lung may recover without expectoration, and without any evidence of the formation of pus. It would seem that there are two distinct forms of pneumonia, the red and the grey, and that there is not necessarily any connexion between them. The cases above referred to are, it is true, very rarely met with in hospital practice, because they are so rapidly fatal; but they are the cases from which we best learn how to explain the differences between red and grey hepatisation of the lungs.

I am, Sirs, yours obediently,

Savile-row, W., Oct. 1888.

ROBERT J. LEE.

"WHOSE TURN NEXT?"

To the Editors of THE LANCET.

SIRS,—The question of "Whose turn next?" may properly be asked in connexion with criminal prosecutions of medical men. We read in the pages of THE LANCET almost every week of some unfortunate medical man being the subject of these nefarious practices of the public. It is nearly a weekly editorial "wail" that Mr. So-and-so has had to face the agonies of a law court in defence of his character and reputation as an upright and honest man. Or, it may be, your editorial sympathy is related in congratulating some fortunate individual whose position of integrity has been vindicated. It is worthy of THE LANCET to be, as it is, the stout and unflinching champion of the profession, which depends upon its uncompromising aid in advocating the claims of justice in these painful and disgraceful acts. Although it commonly turns out that many of these cases are trumped up either from a spirit of pure malice, or to extort money, or to ruin a man's life, still the costly proceedings fall upon the purse of many who, from various social circumstances, are utterly unable to meet the pecuniary outlay. Innocence is no protection, nine times out of ten, from the disastrous law costs. Surely something can be done in the way of a defence fund. Appeals are constantly being made, and subscription lists appear in the columns of THE LANCET to defray, either wholly or in part, the expenses of defending such actions. Is it not time for the profession as a whole to bestir itself, and form a substantial "defence fund" based on sound commercial lines and dispensed by a committee of well-known men? These prosecutions are becoming universal, so that no medical man is safe, except perhaps the chief consultants in our large towns, whose safety depends upon the fact that their patients are mostly accompanied by a parent or friend during their visits. With the ordinary general practitioner it is otherwise, and it is upon his devoted head this horrid catastrophe falls. Three or four years ago I brought this question forward, and a small committee of inquiry was formed to approach the General Medical Council, but it was found to be powerless in aiding the idea by any practical help, although much sympathy with it was felt. After the evidence of the Medical Sick and Annuity Society, as to what can be done by careful organisation and energetic action, it seems to me to be a small matter to promote a medical defence fund, maintained and administered by medical men alone, without the intervention of extraneous persons. Pray, Sirs, will you help this question, and give it a "lift" by one of your powerful leaders? I have a strong hope this question will be taken up *con amore* and brought to a successful issue within a reasonable period of time, and not left to be discussed *ad Græcas Kalendas*. We are in sore plight, as witness the case of Dr. Gloster in last week's issue.

I am, Sirs, yours obediently,

Southport, Oct., 1888.

G. B. BARRON.

REGISTRARS AND MEDICAL PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—On taking up THE LANCET this morning, I observed an annotation under the above heading; and, as it seems to me somewhat of an *ex-parte* nature, I beg to supplement it by a statement of facts and some remarks thereon. I attended the person referred to, who died on the 13rd inst., and the following day I gave the usual certificate of death to the deceased's sister, stating thereon as the cause of death, "Exhaustion—seven days." The same day the sister called on me and said that the registrar refused to register the death because the certificate was wrong. I then explained that it was quite correct, and referred her back to the registrar. He again refused to register it; and the following day I was again waited upon by the deceased's brothers. I repeated my explanation and again referred them to the registrar. The registrar then referred the certificate to the coroner, who declined to interfere by holding an inquest. I then reported the circumstances to the Registrar-General, with whom I have had a lengthy correspondence. As the body was buried, I assume my certificate was ultimately registered. These are the facts very briefly stated, and on them I have to remark:—

1. That at page 215 of the "Nomenclature of Diseases," approved by the Royal College of Physicians, "exhaustion" is given as a primary cause of death; and that accordingly, in stating that cause, I followed the course approved by the College. Either I am right or the College of Physicians is wrong.

2. I would draw attention to the fact that the registrar, in returning the certificate of a qualified medical man with the verbal intimation that it was wrong, was not only guilty of discourtesy, but his sending such a message through the mouths of people ignorant of such matters was calculated to impress them with the idea that I was not a qualified practitioner. Such conduct on the part of the registrar might, in the first case, have been due to want of thought or want of judgment, but as he had an opportunity afforded him of remedying it when the certificate was returned to him, which he did not avail himself of, I could not hold him free from blame, and as my certificate was legally right I refused to alter it.

3. Section 20 of the Registration Act says the medical attendant shall give a certificate stating "to the best of his knowledge and belief the cause of death, and the cause of death as stated in that certificate shall be entered in the Register." The Act distinctly says the cause, and not the causes. It says nothing about contributory—i.e., primary, secondary, and tertiary—causes. Therefore, having complied with the letter of the law in giving the proximate cause of death and the recognised nomenclature, the certificate should have been duly registered in accordance with the Act. It cannot be pretended that there was any shadow of "suspicious circumstances" or any other legitimate cause for referring the matter to the coroner.

In opposition to Sec. 20 the Registrar-General quotes Sec. 44 of the Act (37 and 38 Vic., cap. 88), which gives him power, with the sanction of the Local Government Board, to amend the forms of the schedules to the Act, but I fail to see that it gives him power to add to or subtract from the provisions of the Act, and the Act distinctly says "the cause," and not "the causes," and that I take to mean the proximate cause. Contributory causes might be multiplied to any extent, and I hold that the Legislature did not contemplate medical men being compelled to give to local registrars the medical history of their deceased patients to any extent; that the Registrar-General might think fit to direct—for that is practically his contention. It was not contemplated that medical men should give, for example, a certificate of death from "apoplexy," and be compelled to state thereon as a contributory or primary cause "syphilis," to the disgust of the relatives and the scandal of a respectable family. I therefore maintain that for a medical man to give "exhaustion" as a cause of death is a legally sufficient statement of the cause of death to the best of his knowledge and belief as required by the Act. That it may not be departmentally satisfactory to the Registrar-General is not a matter which concerns the profession; but if he require further information for the purpose of classification, I hold it is his duty to apply privately to the medical attendant, and then I have no doubt the profession will be willing to

help him in every way compatible with its duty to its patients and their friends.

It appears to me that in a town like Oldham, which has the largest number of uncertified deaths in the United Kingdom, as the returns in your pages periodically show, it would be good were the local registrar to exhibit the same amount of zeal in refusing the so-called death "certificates" of the numerous ignorant and illegal practitioners—medical botanists, self-styled homœopaths, *et hoc genus omne*—with which this town abounds, and who practise in the most open manner without let or hindrance, to the danger and destruction of the public health.

I remain, Sirs, yours faithfully,
Oldham, Sept. 29th, 1888. R. MAXWELL MOFFAT, M.D.

BIRMINGHAM.

(From our own Correspondent.)

THE MEDICAL INSTITUTE.

CONSIDERABLE feeling has been manifested among the members of the Medical Institute in consequence of the meeting of the Homœopathic Congress being lately held in the building. It seems that an application was made for the use of the library for a meeting at a given date. As a meeting of the Council would not be held until after the time mentioned, the secretary consulted the president of the institute, who granted the application under the impression that it was an ordinary meeting for scientific purposes of no special interest. Astonishment was felt when a public announcement appeared in the local press of the proceedings of the Homœopathic Congress held in the library of the institute, and still more so when it was seen that the president of the Congress devoted a large portion of his address to a revival of the old feud of 1875 concerning the admission of homœopaths as members of the institute. As a consequence there have been several resignations, and more are talked of, it being felt that the use of the library having been obtained by anything but a clear understanding as to the purpose required, there was the additional bad taste exhibited in the remarks of those who had become self-invited guests.

QUEEN'S COLLEGE.

The annual conversazione and prize distribution took place on the 1st inst. The Mayor occupied the chair, and there was a large attendance. The report showed that the number of medical students on the books stood at 193, with a prospect of increase this session. The facilities for instruction in general and special knowledge were pointed out as being exceptionally good, while a large field for clinical work is afforded by a number of hospitals of various kinds.

MASON COLLEGE.

The opening meeting of the ninth session of this College also took place on the 1st inst. The inaugural address was delivered by Professor Hillhouse, chairman of the Academic Board. It was pointed out that there had been a large increase in the number of students attending the day and evening classes. In the day classes there were 449, of whom 256 were men and 193 women; and in the evening classes there were 304, of whom 228 were men and 76 women. Various scholarships and prizes were awarded.

CRUELTY TO CHILDREN.

At a largely attended meeting held at the Council House on Sept. 27th a branch of the London Society for the prevention of Cruelty to Children was formed. The Mayor occupied the chair, and the Rev. B. Waugh attended to lay before the meeting the objects and the working of the Society. Much interest was manifested in the account given, and an influential executive committee was appointed to carry into operation the aims of the Society.

VACCINATION PROSECUTION.

At a case recently heard at the Aston Police Court, a point was raised that the onus of proving that the child had not been vaccinated rested with the prosecution and not with the defence. It was argued, on the contrary, with much ability, that it rested with the defendant, inasmuch

as the vaccination officer could not enter the house to see the child. If he had done so an action for trespass could be brought against him. Also, if the vaccination was performed by a public vaccination officer, that person was then bound to send in the certificate; if by a private practitioner, it was left to the parents to forward. No certificate had been received in this case, and the presumption was that the child had not been vaccinated. The Bench ruled that the onus rested with the parents of the child, and fined the defendant twenty shillings and costs.

Birmingham, Oct. 2nd.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE AND GATESHEAD: OPENING OF NEW HOSPITALS.

THE last few days have been remarkable in the north for the opening of new hospitals. We had first the opening of the Fleming Memorial Hospital for Sick Children, with its sixty-three beds, on Newcastle Town Moor, by Lord Armstrong; and, closely following, on Friday we had the magnificent Hospital for Fever and Infectious Diseases opened by the Mayor. Thus the borough hospital is situated about three miles from the centre of Newcastle, near the Walker railway station. It has been erected and fitted up at a cost of £18,000. It is supposed to be one of the finest and most complete fever hospitals in the kingdom. Our medical officer of health, Mr. H. E. Armstrong, stated, in the course of his reply to a compliment paid him on behalf of the meeting by Colonel Crawford, that, complete as the hospital was, it was only a part of a very large scheme of sanitation that the corporation had in hand. The corporation had done a great deal, but they had not provided for sanitary instruction, not only to the people and the tradesmen, such as plumbers, but also to the medical profession, and especially the younger members. He proposed, if all was well, to teach fever in that place, and that would be the first hospital in the kingdom where fever was taught as a matter of constant practice. In the sister borough, Gateshead, the new Children's Hospital will be opened under the most favourable auspices next week. Sir George Elliott, Bart., has contributed 100 guineas to the institution. Up to this time, Gateshead, with its population of nearly 70,000, has been without hospital accommodation of its own, so that the Children's Hospital may be only the first step in this direction. The administrative portion of the new building will be used at first as a complete hospital of twenty beds, but when the whole scheme is carried out there will be four wing wards, each of which will have accommodation for thirty beds. The medical officers will include Drs. Mearns, Purdie, and Blacklock. The style of architecture is early English; the walls will have red bricks with stone dressings. The roof has a span of fifty feet, finished with a flat lead. The outline of the roof is well broken up by the gables, and, in addition, eight heavy moulded dormer windows give the building a pleasant appearance.—A rare occurrence took place at Gateshead last week, by which five men nearly lost their lives. They were repairing a still used in the distillation of coal-tar products, when by some means an escape of ammonia took place, which rendered them insensible for a time; they were, however, subsequently restored, though with some difficulty.

DURHAM.

A very important, though informal, meeting of the representatives of the various friendly societies took place at the house of Dr. Barron, of Durham, last week. The meeting was called to promote the scheme of Dr. W. Robinson, of Stanhope, which he has originated in order to provide a convalescent home for the north of England, the leading features of which are that it is for the benefit of, and is to be supported and managed by, the societies.

Newcastle-on-Tyne, Oct. 2nd.

A WHOLESOME PROVISION.—The Portsmouth board of guardians have built a swimming-bath, holding 20,000 gallons of water, for the use of the pauper children, all of whom are to be taught to swim before they leave school.

EDINBURGH.

(From our own Correspondent.)

DINNER TO PROFESSOR HARE.

THE return of many of the teaching staff to Edinburgh for the post-graduate course, and the presence of many younger graduates, made possible the very large and enthusiastic gathering that met in the Waterloo Hotel on Friday, the 28th ult., to wish Professor Hare success in his new and extended sphere of action. There were present Professor Sir Douglas MacLagan (in the chair), Professor Chiene (croupier), Professor Crum-Brown, Dr. Priestley of Manchester, and a large number of colleagues, fellow-graduates, and old students. In proposing the toast of the evening, Sir Douglas MacLagan referred in warmest terms to Mr. Hare's abilities as a teacher and qualities as a friend and as a man. He said that, although his Edinburgh friends regretted his departure, Mr. Hare carried with him the good wishes of all, and their complete confidence that he would be able to fulfil his duty thoroughly as a teacher, and at the same time gain the trust and esteem of those who now, not knowing him, could not appreciate him at his proper value. He referred to the spirit of opposition manifested by some to Mr. Hare's appointment, and said that he was not only not astonished that such opposition had showed itself, but that he should have been surprised if it had not been there. It was but natural—nay, it was a very healthy manifestation in such a school as Owens College, and it spoke well for its *esprit de corps*, showing as it did that it had such confidence in its own *alumni*. The movement in favour of the home candidates certainly argued well for the present vitality and future permanence of the Manchester Medical School. He could not, therefore, find fault with this young and active school, but he thought that in time its members would come to see that they had done worse than commit a crime; as Napoleon said, they had committed an error, and having found that out they would soon profit by their newly acquired experience. He referred to the distinguished position that Mr. Hare held in their University, and also in the regard and esteem of teachers, colleagues, and students; and after again expressing regret at the loss of one who would be so greatly missed in debate, and on such occasions as that on which they were now present, Sir Douglas congratulated him on the prospect of such a brilliant future, and on behalf of all those present wished him godspeed.

HEALTH OF EDINBURGH.

It would greatly delight the heart of Dr. Littlejohn and of every other medical officer of health if, as each week came round, he were able to report that the deaths recorded were equivalent to an annual mortality of only 13 per 1000, as was the case last week. This, coming so shortly after other weeks, in which the mortality is much the same or even lower, is a matter for congratulation for the citizens of Edinburgh, as well as for those who have charge of the sanitary department of our city. In Leith, where the sanitary conditions are necessarily not so favourable, the deaths were equivalent to 18·27 per 1000.

THE MEDICAL SCHOOL.

The regular classes have not yet been opened, but the practical anatomy rooms in the University, the anatomical department and the chemical laboratories in the School of Medicine, are now all thrown open to those students who, tired of a long vacation, or anxious about coming examinations, have come back for the work of the winter session. Although there is a new lecturer on anatomy (Dr. T. W. Dewar, who will take charge of the anatomical department in which the lady medical students are to work), the inspector of anatomy will be better able than usual to meet all demands made upon him.

THE HERIOT WATT COLLEGE.

The opening of the new buildings of the Heriot Watt College, with the splendid class-rooms, workshops, and laboratories, will mark a new era in the technical and scientific education in Scotland. In the chemical department alone there are no fewer than three well-ventilated and completely equipped laboratories, in which Professor

Perkin can carry on the practical instruction of his students. One of these is set apart for elementary work, a second for advanced study, and a third is one in which purely technological chemistry is carried on. There is, in addition, a large lecture theatre well adapted for the purpose for which it has been constructed. Edinburgh, with all its new laboratories, bids fair to be as well equipped with facilities for carrying on both teaching and research work as any city in the kingdom, or even in Europe.

Edinburgh, Oct. 3rd.

GLASGOW.

(From our own Correspondent.)

POPULATION OF GLASGOW IN 1888.

THE medical officer of health for the city recently presented his annual estimate of the population of Glasgow, based on the number of inhabited houses within the municipality as at June 1st. The number was 114,863, which multiplied by 4.745 (the average number of persons per house in 1881) gives 545,025 persons; adding to this 6410, the number of inmates in institutions, the total population may be stated as 551,435, an increase of 7440 over last year. This refers of course only to the district included within the municipal boundary, and not to the clusters of parasitic burghs which hem in the city on all side; if these less densely built districts were included, their low death-rate would lessen the apparently high city rate. Dr. Russell's mode of calculating population differs from that of the Registrar-General, and it is claimed for it that it is more reliable; it makes the population 25,347 more than that quoted officially in London, and would make a difference of fully 1 per 1000 in the death-rate. In all published statistics, however, Dr. Russell adheres to the Registrar-General's calculation.

ANDERSON'S COLLEGE MEDICAL SCHOOL.

Of the changes impending in the arrangements of the medical schools in Glasgow, perhaps the most important is the contemplated migration of that connected with Anderson's College from the east to the west end of the city. This move has been rendered necessary by various circumstances. The constitution of Anderson's College has undergone revision, and since 1884 the institution has been merged in the Glasgow and West of Scotland Technical College. The medical school or faculty then became a separate and distinct institution, and it has been incorporated under memorandum and articles of association, its title now being Anderson's College Medical School. It is controlled by a body of thirty governors, about a third of whom are medical men. Being thus separated from Anderson's College as a whole, the school has to remove from the old buildings. In going west and planting itself at the gates of the overcrowded University School it acts wisely, and will be in a better position to engage in that honourable rivalry which is the first condition of health in small and large schools alike. An excellent site has been obtained for the new buildings which it is proposed to erect for the school, situated in Dumbarton-road, at the gates of the Western Infirmary and of the University. Plans and specifications for the buildings have been prepared, and tenders for the work have been obtained; from these it is clear that the new College is to be constructed on the best modern principles and provided with all the appliances requisite for the conduct and management of a fully equipped medical school. It is believed that, when it is finished, Glasgow will possess the largest and best-arranged extramural school in Scotland. The chief difficulty that stands in the way of the realisation of the scheme is want of money. The estimated cost is about £9000, and of that sum about £4000 is still required. The governors have issued a circular appealing to the more public-spirited citizens for subscriptions. Its numerous students, who are now to be found in positions of usefulness and honour in all parts of the globe, will be interested to know of this, and will doubtless feel disposed to give what aid they can in launching their *alma mater* on a new and honourable career. The secretary of the school, Mr. J. B. Kidston, 91, West Regent-street, Glasgow, will be glad to receive subscriptions towards the building and furnishing of the school.

DISPENSARY OF THE SICK CHILDREN'S HOSPITAL.

This most necessary adjunct to the hospital has just been opened. The building, which is artistic in design and most ingenious in plan (the site having presented unusual difficulties), is built of red stone, and situated at some little distance from the hospital in the midst of a crowded district. In the interior of the building mouldings and projections of all kinds have been avoided, to minimise the risk of dust, and possibly disease germs, collecting; and for the same reason the angles of all the rooms and the junction of the walls with the floor and ceiling have been rounded. Heating and ventilation have been carefully attended to. The opening meeting was presided over by the Duke of Montrose, who, with the Duchess of Montrose, has been much interested in the hospital from the first. In moving one of the resolutions, commending the hospital and dispensary to the support of the public, Professor Leishman emphasised the educational value of such a dispensary, and deplored the fact that the newly fledged practitioner should so usually be found ignorant, and necessarily so, of the diseases of young children.

CHARGE OF MALPRAXIS: IMPORTANT DECISION.

A ruling of some importance to colliery and club surgeons has been given in a case raised against Dr. Stiell of Lochgelly, Fifeshire, in which damages were claimed for alleged unskilful treatment by Mr. Edwards, Dr. Stiell's assistant, who is unqualified. The sheriff decided in favour of Dr. Stiell, as there was nothing to show that Mr. Edwards's treatment had been careless or unskilful. But in giving this judgment the sheriff held that, where the services of a colliery doctor are contracted for, a miner, in case of serious accident, is not bound to accept the services of a student assistant as implementing the contract, and this altogether irrespective of the question whether the assistant is or is not practically qualified. The action was not raised, however, on the ground of contract, but on that of unskilful treatment. As this was not proved, the case was dismissed, but no expenses were given to either party.

Glasgow, Oct. 2nd.

DUBLIN.

(From our own Correspondent.)

THE MEATH HOSPITAL.

THE medical board this year made a change in arranging for the delivery of the introductory lecture a month earlier than usual, and the real clinical work of the session was commenced yesterday, the 1st inst. Dr. J. W. Moore gave the inaugural address, and at its termination Dr. Ormsby, on the part of the medical board, said it was his pleasing duty to ask the chairman (the Solicitor-General for Ireland) to call upon Sir George Porter, the senior member of the board, to unveil a portrait of their old and highly esteemed colleague, Dr. Wharton. It would, he said, be the first piece of furniture which would be placed in their new consulting room, and its presence would constantly remind them of their much-valued colleague. Sir George Porter, amid applause, unveiled the portrait, and said that when Dr. Wharton determined to retire from the hospital they thought that he should not be permitted to leave them without having some lasting memorial of him placed in the hospital, and eventually they decided that it should take the form of a portrait. It would, as Dr. Ormsby had said, be a great pleasure to his colleagues to have the portrait of one who, in the board-room, gave them good advice, and it would remind them of one who had supported and stood by them at all times, and who had spent the best years of his life in helping to build up the reputation of the hospital. When the picture would be shown to visitors at the hospital it would be pointed out as that of a man who was a great surgeon and a most unswerving friend. Dr. Wharton, in returning thanks, said that the tribute of esteem he had just received he would regard as a higher honour than any he ever received before, and as an example of the cordiality and kindness which he had met with from his colleagues for many years. The feeling of gratitude would be in him as lasting as life. The portrait, which is an excellent likeness,

is by Mr. Werner of this city. The Meath Hospital annual dinner took place in the evening at the Shelbourne Hotel, the chair being occupied by Mr. Philip Crampton Smyly, ex-president of the Royal College of Surgeons in Ireland.

DUBLIN MEDICAL SCHOOLS AMALGAMATION SCHEME.

The proprietors of the Ledwich School of Medicine, at a meeting held last week, unanimously resolved to adopt the Scheme of Amalgamation as revised and passed by the Council in August last.

OUTBREAK OF FEVER IN COUNTY CORK.

At a meeting of the Schull guardians last week, a telegram was received from the chief officer of the coastguards at Crookhaven, stating that fever of a virulent character was raging there, and requesting instructions in reference to vessels arriving in the harbour. The Board decided that the coastguards be requested to warn all vessels of the existence of the epidemic.

Dublin, Oct. 2nd.

BELFAST.

(From our own Correspondent.)

THE CASE OF CARBOLIC ACID POISONING.

THE adjourned inquest on the death of the boy Jeffers, who, as we reported, was poisoned while an inmate of the Royal Hospital, Belfast, by a dose of carbolie acid administered to him by one of the nurses in mistake for black draught, was resumed on Tuesday, Sept. 25th, and after hearing some further evidence, as well as the speeches of the various solicitors employed, the following verdict was returned: "That the said James Jeffers, on the 6th day of Sept. 1888, in the Royal Hospital, in the borough of Belfast, came to his death from the effects of a quantity of crude carbolie acid, which was administered to him by misadventure by Nurse Torrens for a dose of black draught. And, further, the jurors do say that inasmuch as there was some carelessness in placing the carbolie acid bottle in a wrong position, they do hereby recommend that in future the Board of Management of the Royal Hospital do see that all poisonous drugs be kept locked up in a separate compartment. And, further, that the prescribing medical attendant do give his instructions to the nurse in writing." With reference to the suggestions of the jury, we think that anyone knowing the practical working of a hospital will see that they could not be carried out. In a hospital where many accident cases are admitted, and the Royal Hospital is largely surgical, lotions of a poisonous nature—such as carbolie acid, corrosive sublimate, &c.—are being used every day, and are needed in emergencies, so that to lock them up would in many cases lead to unnecessary trouble and delay. Further, if all poisonous drugs are to be kept in a separate compartment, lotions and medicines for internal use would be mixed together, so that the same unfortunate mistake might occur again. If by "the prescribing medical attendant" the jury meant a member of the extern staff, then we think the sooner the intern medical officers are done away with the better, as it is the usual practice in all hospitals for the attending physicians and surgeons to give their directions through the resident staff. Further, even the nurses, who are carefully trained, must be allowed some latitude in giving such a thing as an aperient draught. For one patient may need a larger dose than another, and to lay down hard-and-fast directions in writing, which the nurses must accurately obey, would soon end in confusion.

Belfast, Oct. 2nd.

PARIS.

(From our own Correspondent.)

MICROGRAPHY.

M. CHARLES GIRARD, *chef* of the Paris Municipal Laboratory, has forwarded a report to the Municipal Council, strongly recommending the establishment of a micrographic laboratory, the direction of which should be confided to doctors of medicine who have proved themselves

qualified to undertake such an office; that is, they must be chemists or bacteriologists specially educated for the purpose. The following are some of the most important passages on which the recommendation is founded. The necessity for the research of pathogenic bacteria is becoming more and more urgent, particularly as regards milk and water, which are now recognised as being in the first rank of the means of the propagation of infectious maladies. To say nothing of the germs of small-pox and scarlet fever, which are conveyed by milk, the transmission of tuberculosis by this liquid, which has been so energetically discussed for some years, now counts but few adversaries in the medical world, and already several Commissions of Hygiene of the Department of the Seine have expressed a wish that the search for the bacilli of phthisis in milk should be effected at the laboratory concurrently with the chemical analysis. Besides the study of milk, the same functionary may make at the Municipal Laboratory researches on the water employed for domestic purposes for the bacilli of typhoid fever and the bacillus of cholera, researches which are frequently demanded by the municipalities of the provinces. The same persons may be charged to examine ciders, beers, wines, and preserves in respect to alterations and maladies of which they are the object. The study of aliments in the same direction presents great difficulties, and exacts on the part of one who has charge of this department an assiduous attention and incontestable technical capacities.

INTRAVENOUS INJECTION.

Dr. Lejars has communicated to the Academy of Medicine a new procedure for the injection of veins. As the existence of valves in the veins prevents all centrifugal injection, the author had the idea, in following the method of Professor Farabeuf, to inject them by the arteries. He employed two masses for each preparation. The first mass injected was composed of a fatty substance coloured with orchanet, soluble in fatty substances. The second mass was formed by a fatty substance coloured by the suspension of a pulverulent matter. By means of this double arterial injection, the venous network is completely injected. Dr. Lejars was able to recognise the existence of deep-seated venous networks still scarcely known—he showed them around the fingers, toes, and in the palm of the hand. At the soles of the feet, the vascular network is such that, as expressed by Dr. Lejars, one can say we walk on a lamella of blood. One can understand the importance of these networks for calorification, the form, and the elasticity of the peripheric regions. The two specimens exhibited at the meeting met the approval of the members present, and proved that the author had entirely succeeded in his object.

THE URINE IN SMALL-POX.

At the meeting of the Academy of last week, Dr. A. Robin gave the result of his researches on the composition of the urine in small-pox. He insisted on the augmentation of the urea from the commencement of the stage of invasion, augmentation which permitted Gubler to set aside the idea of typhoid fever in difficult cases. This azoturia persists during the height of the disease, rises again at the moment of suppuration, and ceases when convalescence is established. As regards the albuminuria, Dr. Robin sometimes accords to it very little importance, sometimes a great prognostic value, according to the quantity of albumen rendered. He adds that one should fear a malignant form or a complication if the quantity of albumen excreted is considerable. In convalescence, the persistence of albuminuria is very rare, but it has the same signification as post-scarlatinous albuminuria. It may lead to fatal Bright's disease.

On his assuming office as Minister of War, the attention of M. de Freycinet was called to the question of the water used in the barracks for alimentation. At Paris, notably, the military establishments received only the water of the Seine, and the Council of Health justly attributed to the bad quality of this water the numerous cases of typhoid fever which each year attacked the garrison. This state of things is to be altered, and the military establishments all over France are soon to be provided with spring water. The Minister of War has ordered that in the field all officers and soldiers shall carry a pocket dressing-case made of impermeable material, containing a bandage of fine linen about three metres long, two small antiseptic compresses, and a safety pin.

M. L. Wickham, interne, is charged with a scientific

mission, with the view of studying the organisation of dermatological teaching in England; and Dr. Gibier is sent to the United States to study yellow fever there, and particularly in the territory of Florida.

Paris, Oct. 2nd.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major Mathew Lawrence White is granted retired pay (dated Oct. 3rd, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—The under-mentioned Surgeons to be Surgeons-Major, ranking as Major (dated Oct. 3rd, 1888):—Surgeon and Honorary Surgeon-Major Stanley Alexander Julius, 1st Cinque Ports Rifle Volunteer Corps; Surgeon Alexander Dall MacDonald, M.D.; and Acting Surgeon John George Saville, 5th Volunteer Battalion, the Manchester Regiment, to be Surgeon, ranking as Captain (dated Oct. 3rd, 1888).

ADMIRALTY.—Staff Surgeon George Bell Murray has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Sept. 16th, 1888).

ROYAL NAVAL ARTILLERY VOLUNTEERS (Clyde Brigade). Robert Stevenson Thomas, M.B., to be Surgeon (dated Sept. 26th, 1888).

The following appointments have been made:—Staff Surgeon Christopher Pearson, M.A., M.D., to the *Gannet*, when recommissioned, undated; Surgeon F. W. Stericker, to the *Cockatrice*, undated.

VOLUNTEER CORPS.—*Rifle*: 3rd Volunteer Battalion, the Duke of Wellington's (West Riding Regiment): Acting Surgeon J. F. Arlidge to be Surgeon (dated Oct. 3rd, 1888).

VOLUNTEER MEDICAL STAFF CORPS.—Surgeon William Albert Morris, Medical Staff, to be Adjutant, vice Surgeon J. L. Hall, whose term of office has expired (dated Oct. 3rd, 1888).

Obituary.

F. S. HAWKINS, B.A., M.B., B.S. OXON., F.R.C.S.

ON Friday, Sept. 28th, the subject of this notice, who was senior house surgeon to Guy's Hospital, died of diphtheria after several days' severe suffering. Nothing is definitely known as to how he contracted the disease, but during his tenure of office he had performed tracheotomy on several children suffering from diphtheria. Born in 1861, he was educated at Tonbridge and matriculated at Oriel College, Oxford, in 1879. He joined Guy's in 1882, and during his career he always occupied a prominent place in the honour examinations. He graduated in medicine at Oxford in June, 1887, and in the latter part of the same year gained his Fellowship of the College of Surgeons, passing with noticeable distinction. He held all the higher appointments at Guy's, and has now, just at the close of a brilliant career, fallen at his post as house surgeon. He will always be remembered by his contemporaries as one of the most able and energetic men of their time, being as practical in the art as he was sound in the science of his profession.

All must regret the premature close of so promising a life at a time when a larger sphere of usefulness was just opening before him. Quite a gloom has fallen on the hospital by this sad occurrence. The first part of the funeral service was held in the hospital chapel on Monday, and was largely attended by both the medical and nursing staff and students, after which he was removed to his home at Lamberhurst, Kent, where he was buried. Dr. Hawkins was the son of the Rev. R. Hawkins, of Lamberhurst, Kent, and his brother, Dr. H. P. Hawkins, is resident assistant physician at St. Thomas's Hospital.

HOSPITAL SATURDAY FUND.—At a meeting of the delegates of this fund, held at the board-room, 41, Fleet-street, on Saturday evening, under the presidency of Mr. W. E. Punn, the secretary (Mr. Robert Frewer) reported that the amount to hand was a little over £8000, being £800 in excess of the amount to hand on the same date last year. It was agreed that the books of the fund should remain open until the end of November.

Medical News.

UNIVERSITY OF DURHAM.—At the first examination, held in September last, for the degree of Bachelor in Medicine, the following candidates satisfied the Examiners:

All Subjects.

Allison, Thomas Moffatt, College of Medicine, Newcastle-on-Tyne.
Baines, Eustace Ward Powys, College of Medicine, Newcastle-on-Tyne.
Clay, John, College of Medicine, Newcastle-on-Tyne.
Collinson, Henry Augustus, College of Medicine, Newcastle-on-Tyne.
Cox, Alfred, College of Medicine, Newcastle-on-Tyne.
Daly, Ramsey Larny, Yorkshire College, Leeds.
Durant, Wm. James, College of Medicine, Newcastle-on-Tyne.
Huntton, Frederick, College of Medicine, Newcastle-on-Tyne.
Kendall, John Arthur, College of Medicine, Newcastle-on-Tyne.
Law, James, College of Medicine, Newcastle-on-Tyne.
Neale, Albert Ezra, College of Medicine, Newcastle-on-Tyne.
Oliver, Willie, College of Medicine, Newcastle-on-Tyne.
Watts, James Alexander Wood, Owens College, Manchester.
Wilson, Horace Bagster, Bristol Medical School.

Elementary Anatomy and Elementary Physiology.

Dixon, Taylor, College of Medicine, Newcastle-on-Tyne.
Fowler, George Harvey, College of Medicine, Newcastle-on-Tyne.
Lishman, Ralph Norman, College of Medicine, Newcastle-on-Tyne.
McComl, Robert, College of Medicine, Newcastle-on-Tyne.
Mitchell, Edgar, College of Medicine, Newcastle-on-Tyne.
Muschamp, Robert, Yorkshire College, Leeds.

Chemistry with Chemical Physics, and Botany with Medical Botany.

Atcherly, John, Yorkshire College, Leeds.
Bromley, Edward, Yorkshire College, Leeds.
Clayton, William Arthur, College of Medicine, Newcastle-on-Tyne.
Cole, Robert Hodgson, University College Hospital.
Cook, Henry William James, Charing-cross Hospital.
Dale, Arthur James, College of Medicine, Newcastle-on-Tyne.
Dale, Culbert Bracey, St. Bartholomew's Hospital.
Duncan, Robert Bruce, College of Medicine, Newcastle-on-Tyne.
Fowler, William, College of Medicine, Newcastle-on-Tyne.
Hewer, Arthur Augustus, St. Bartholomew's Hospital.
Hill, Kennedy Campbell, College of Medicine, Newcastle-on-Tyne.
Hughes, David Arthur, Middlesex Hospital.
Johns, Walter Denton, College of Medicine, Newcastle-on-Tyne.
Jones, Hugh Meyrick, College of Medicine, Newcastle-on-Tyne.
Macpherson, Ronald Seymour, College of Medicine, Newcastle-on-Tyne.
Perkins, Edward Swan, Yorkshire College, Leeds.
Robinson, George Barton, Sheffield School of Medicine.
Robson, Frederick, College of Medicine, Newcastle-on-Tyne.
Vincent, William James Nathaniel, London Hospital.
Wayman, George Turner, College of Medicine, Newcastle-on-Tyne.

Chemistry with Chemical Physics.

Blight, John Henry, L.R.C.P., M.R.C.S., Guy's Hospital.
Caddy, Arnold, L.R.C.P., M.R.C.S., St. George's Hospital.
Pearson, Richard, L.R.C.P., M.R.C.S., St. George's Hospital.

At the second examination for the same degree the following candidates satisfied the Examiners:—

Adkins, Percy Rutherford, College of Medicine, Newcastle-on-Tyne.
Alderson, Frederick Herbert, Middlesex Hospital.
Beattie, Thomas, College of Medicine, Newcastle-on-Tyne.
Crick, Alfred, St. Thomas's Hospital.
Diver, Ebenezer William, University College Hospital.
Hardy, Charles Maurice, College of Medicine, Newcastle-on-Tyne.
Hotchkiss, Robert Dunmore, St. Bartholomew's Hospital.
Hulbert, Ernest Beddoe, University College Hospital.
Martin, Albert Morton, College of Medicine, Newcastle-on-Tyne.
Peacock, Wm. Edwin (Materia Medica), Coll. of Med., Newc.-on-Tyne.
Plummer, Selby Wetherell, College of Medicine, Newcastle-on-Tyne.
Smith, Colvin B. (Materia Medica), Coll. of Med., Newcastle-on-Tyne.
Smith, Henry, College of Medicine, Newcastle-on-Tyne.
Stocketon, Hubert Samuel, M.R.C.S., L.S.A., Charing-cross Hospital.
Stokoe, Benj. Thomas, College of Medicine, Newcastle-on-Tyne.
Townsend, Arthur Allen Deykin, Queen's College, Birmingham.
Welsh, Robert Anthony, College of Medicine, Newcastle-on-Tyne.
Wood, Gay Edward Mills, University College Hospital.

At the examination for the Licence in Sanitary Science the following candidates satisfied the Examiners:—

Chand, Fateh, M.B., B.S., L.R.C.P., L.S.A., L.M.S. (India), Punjab University.
Goudie, Herbert, M.D., F.R.C.S. Edin., M.R.C.S., L.S.A.
Robinson, Alf., M.D., M.R.C.S., L.S.A., Coll. of Med., Newc.-on-Tyne.

The corner stone of the Hartlepool's Hospital extension was laid on the 29th ult.

THE Poplar District Board of Works, on the 25th ult., decided that a report on the disgraceful condition of the river Lea be sent to the Local Government Board.

THE VICTORIA HOSPITAL FOR CHILDREN.—The proceeds from the Silver Fête held at South Kensington in the summer in aid of the funds of this hospital amounted to £5000. During August the hospital was closed for some weeks to permit of repainting and cleaning. The Princess Louise ward has also been enlarged to the extent of eight beds, by taking in the old hall of the building. A small conservatory placed at the end of this ward enhances its cheerfulness.

MRS. WILSON FOX, widow of the late Dr. Wilson Fox, who died at the Park Hotel, Preston, has presented a beautiful altar cross to the parish church of that town.

NEW SEWERAGE SCHEME, PRESTON.—The Preston Town Council have resolved to memorialise the Local Government Board for powers to borrow £130,000 for the disposal of the sewage of the borough.

ST. THOMAS'S HOSPITAL.—The Open Scholarships in Natural Science have been awarded as follows: E. M. Hainworth, Scholarship, 125 guineas; Edwin Smith, Scholarship, £80.

PRESENTATIONS.—Mr. E. De Lacy Wickham, assistant surgeon, Female Convict Prison, Woking, on his removal to Winchester, has been presented by the officers of the prison with a handsome black marble clock, as a mark of their esteem.—Dr. Stiell has been presented by the members of the Lochgelly Ambulance Class with a gold scarf pin for gratuitously instructing them in rendering first aid to the injured.

ROYAL LUNATIC ASYLUM, ABERDEEN.—It is stated that the directors of the asylum have now completed the purchase of the large mansion house of Glack, with 283 acres of the surrounding land, as a branch to the Aberdeen Asylum. The requisite measures for adapting this property for the reception and employment of patients as soon as possible have also been taken, the asylum proper being still much overcrowded.

LOWESTOFT HOSPITAL.—At the annual meeting of the subscribers to this institution on the 28th ult. it was reported that the income for the past year exceeded that of the previous year by £337, the excess being mainly due to the proceeds of a bazaar in August. The total income amounted to £1517, and the expenditure to £1288. The sanitary condition of the hospital since the alteration and improvements of the drainage in 1887 has been satisfactory.

SEWAGE WORKS, FEATHERSTONE.—Lord St. Oswald, having given notice of complaint to the Local Board of Featherstone, near Leeds, as to the nuisance arising from their present sewage farm, Mr. W. Paterson, C.E., of Bradford, was instructed to advise the best means of remedying the evil. He reports, *inter alia*, that the twenty-five acres of land now leased to the Board for sewage irrigation by gravitation are useless, and that land filtration works, comprising five acres of ground at a cost of £1250, offer the best practical solution of the Board's difficulty in the matter.

SALFORD AND PENDLETON HOSPITAL.—Mr. Oliver Heywood presided at the sixty-first annual meeting, held at the Salford Town Hall on the 26th ult. The hospital has now 110 beds, complete and fully equipped. The report stated that the expenditure during the past year had exceeded the income by £1586. The institution was in a transition state. It was changing from a small to a large hospital, and a great addition to the subscriptions was absolutely indispensable. The financial position of the charity caused the committee grave anxiety, and required immediate attention.

DINNER TO PROFESSOR PATERSON.—A complimentary dinner was given by many of his friends, to Dr. A. M. Paterson, at the Queen's Hotel, Manchester, on Saturday last, on his election to the Cox Professorship of Anatomy in the University of Dundee. Professor Young, Dean of the Medical School, Owens College, presided. Dr. Paterson is a native of Manchester, and for the past five years has been a Demonstrator of Anatomy in the College. Following the usual loyal toasts, the toast of the evening was proposed and enthusiastically drunk, to which Dr. Paterson replied. The occasion was marked by much cordiality.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mrs. Janet Barr, of Oak Villa, Riddlesdown, Park-road, Kenley, has bequeathed £100 to the Caterham Cottage Hospital, Caterham Valley.—The will of the late Mrs. Margaret Platt, of The Woodlands, Stalybridge, it is announced, contains a bequest of £15,100 to her executors absolutely, but with the expression of a wish that they should pay thereout, *inter alia*, the following sums:—namely, £500 to the Deaf and Dumb Institution, Manchester; £1000 to Owens College, in connexion with the

Victoria University, Manchester; £2000 each to the Manchester Royal Infirmary and Dispensary, and the Salford and Pendleton Royal Hospital and Dispensary; £1000 to the Hospital for Incurables, Mauldeth Hall; £500 to the New Brighton Convalescent Hospital for Women; £500 to the Devonshire Hospital, Buxton; £300 to the Clinical Hospital and Dispensary for Children, Cheetham; £300 to the Manchester Royal Eye Hospital; £500 to the Manchester and Salford Lock and Skin Diseases Hospital; and £1000 to the Ashton and Stalybridge Infirmary. The Secretary of the Blackburn Infirmary has just received a legacy of £10,000 from Mrs. Daniel Thwaites towards the endowment fund.—The recent Barnet church parade, after payment of expenses, left £11 11s. to be handed over to the Herts Convalescent Home. The members of the friendly societies and Fire Brigade of Hershham and neighbourhood held a church parade on the 23rd ult. in aid of the Bexhill-on-Sea Convalescent Home. The collection amounted to £2 6s. 5d.—The Baroness Audley, late of 16, Gloucester-square, has bequeathed £300 to St. Mary's Hospital, Paddington.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BAILEY, W. H., M.B., M.R.C.S., has been appointed Assistant Electrician at St. Bartholomew's Hospital.

BARR, JOHN, M.B. Glasg., and C.M., has been reappointed Medical Officer of Health, Riston, Lancashire.

BARRON, ALEX., M.B. Lond., M.R.C.S., has been appointed Professor of Pathology in University College, Liverpool (Vict. Univ.), vice Alex. Davidson, M.A., M.D., F.R.C.P. Lond., resigned.

BARTON, J. A., M.B., C.M. Glasg., has been reappointed Medical Officer of Health, St. George's Bristol.

BROWNING, EDGAR, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Belgrave Hospital for Children, Gloucester-street, S.W., vice A. Blacker, M.B., &c., resigned.

DUTT, A. C., B.A., M.B. Camb., has been appointed District Surgeon to the Pendleton Branch Dispensary, vice E. O. Somers, M.R.C.S., L.R.C.P., resigned.

GEMMELL, JOHN E., M.B., C.M. Ed., has been appointed Registrar and Medical Tutor to the Liverpool Royal Infirmary, vice Alex. Barron, M.B. Lond., appointed Professor of Pathology.

GOULD, J. E., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer to the Whitechapel Infirmary.

GREEN, T. W., M.D. Glasg., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Rawtenstall Union District.

GRIFFITH, GEORGE, M.R.C.P., L.M. Edin., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Milford Rural District, Town, and Port.

GROOM, HARRY, M.D., M.R.C.S., L.S.A., B.A., has been appointed Medical Officer of Health for Wisbech and Walsoken, vice G. Mason, resigned.

HARRIS, A. E., L.R.C.P., L.R.C.S., and L.M. Edin., has been reappointed Medical Officer of Health, Sunderland Borough and Port, and Public Analyst for the Borough.

HYSLOP, THEO. B., M.B., C.M. Edin., has been appointed Assistant Medical Officer to Bethlem Royal Hospital, vice R. Percy Smith, M.D., M.R.C.P., appointed Senior Physician.

IRVINE, WILLIAM, A.B. Qu. Univ. Irel., M.D., M.Ch., has been appointed Visiting Physician to the City Hospitals in Grafton-street, and at Parkhill, Liverpool.

JOYNES, F. I., M.R.C.S., L.S.A., has been appointed Medical Officer of Health, Dursley Rural Sanitary District.

KIRLAND, ANDREW, M.D., C.M. Glasg., has been reappointed Medical Officer of Gerrard's Cross District, Eton Union.

LYS, HENRY GRAHAM, M.B. Lond., M.R.C.S., has been appointed Resident Accoucheur to the London Hospital.

MACALISTER, CHARLES J., M.B. and C.M. Edin., has been appointed Clinical Tutor to the Royal Southern Hospital, Liverpool.

MANNING, PHILIP PERCY, M.B. Durh., M.R.C.S., has been appointed House Surgeon to the Manchester Ship Canal Hospital, Ellesmere Port, vice R. E. Harcourt, M.B., resigned.

MILNER, EDMUND T., M.A., M.B. Oxon., M.R.C.S., has been reappointed Resident Surgical Officer to the Royal Infirmary, Manchester.

POGSON, W., F.R.C.S., has been reappointed Medical Officer of Health for the Leeds Rural Sanitary District.

STOCKS, W. PERCY, M.R.C.S., L.S.A., has been appointed Medical Officer to the Salford and Pendleton Royal Hospital and Dispensary, vice J. E. Pilkington, M.R.C.S., resigned.

STOKES, JOHN, M.B., B.S. Dur., M.R.C.S., has been appointed District Surgeon to the Salford Royal Hospital, vice T. M. Preston, M.B., C.M. Edin., resigned.

THOMAS, W. THRELWALL, M.R.C.S., L.R.C.P. Ed., has been appointed Registrar and Surgical Tutor to the Liverpool Royal Infirmary, vice H. Briggs, M.B. Lond., F.R.C.S. Lond., resigned.

THOMP, CHAS. W., L.R.C.P., F.R.C.S. Irel., has been reappointed Medical Officer of Health, Todmorden Union District.

WEEKES, C. J., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Resident Medical Officer at the Coast Hospital, Little Bay, Sydney New South Wales, vice Dr. H. W. Young, resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST**, Victoria-park, E.—Resident Clinical Assistant.
- COOKHAM UNION**.—Medical Officer for the Union Workhouse and the Cookham district. The salary for the Union Workhouse is £50 per annum, and for the Cookham district £65 per annum. These salaries to include all fees under articles of the General Consolidation Order.
- CROYDON UNION**.—Medical Officer for No. 9 District, and Public Vaccinator for "Norwood" District.
- INFIRMARY, SCHOOL, AND WORKHOUSE**, Bancroft-road, London, E.—Salary £100 per annum, with board, apartments, washing, and the option of money allowance in lieu of beer.
- LIVERPOOL INFIRMARY FOR CHILDREN**.—Assistant House Surgeon. No salary, but board and lodging provided.
- MEDICAL AND NATURAL HISTORY MUSEUM**, King's College, Strand, London.—Curator's Assistant.
- NORTH-WEST LONDON HOSPITAL**, Kentish-town-road.—Senior Resident Medical Officer. If the Assistant Medical Officer should be promoted to the Senior post, candidates to state if they will take the Junior appointment.
- PADDINGTON-GREEN CHILDREN'S HOSPITAL**.—House Surgeon. Salary £50 per annum, with board and lodging.
- ROYAL ALBERT ASYLUM FOR IDIOTS AND IMBECILES** of the Northern Counties, Lancaster.—Assistant Medical Officer. Salary £120 per annum, rising £10 annually to £150, with board, apartments, and washing.
- ROYAL SOUTHERN HOSPITAL**, Liverpool.—Junior House Surgeon. Salary 60 guineas per annum, with board, residence, and washing.
- RUBERY HILL ASYLUM**, Bromgrove, Worcestershire.—Assistant Medical Officer. Salary £100 per annum, with apartments, board, washing, &c.
- SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY**.—Junior Assistant House Surgeon. Salary £50 per annum, with board, lodging, and washing.
- ST. MARLEBONE GENERAL DISPENSARY**, 77, Welbeck-st., Cavendish-square.—Resident Medical Officer. Salary £105 per annum, with furnished apartments, coals, and gas.
- WESTERN DISPENSARY**, Rochester-row, Westminster.—Resident Medical Officer. Salary 100 guineas per annum, with furnished rooms, coals, gas, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

- ARNISON**.—On the 29th ult., at 11, Eldon-square, Newcastle-on-Tyne, the wife of W. C. Arnison, M.D., of a daughter.
- MORRIS**.—On the 23rd ult., at Ashlea, Feltham, Middlesex, the wife of C. Dwight Morris, L.R.C.P. Lond., M.R.C.S., L.S.A. Lond., of a son.
- SUTTON**.—On the 26th ult., at Whitehall, Pontesbury, Salop, the wife of Alfred M. Sutton, M.B. Lond., M.R.C.S., of a daughter.

MARRIAGES.

- HARPER-BRAND**.—On the 3rd inst., at the Parish Church, Great Driffield, Yorkshire, by the Rev. Canon Newton, M.A., Vicar, assisted by the Rev. James Davidson, M.A., Vicar of Nafferton, cousin of the bride, and the Rev. C. Sundius Smith, M.A., Curate, James Harper, M.D., South Kensington, eldest son of James Peddie Harper, M.D., Hertford-street, W., to Helen Watson, youngest daughter of the late Alexander Brand, Esq., Aberdeen.
- HASLAM-COOPER**.—On the 2nd inst., at St. Peter's Church, Caversham, by the Rev. A. E. Molineux, M.A., William Frederick Haslam, F.R.C.S., of 24, York-road, Edgbaston, Birmingham, son of the late James Haslam, of Reading, to Amy, daughter of the late Lewis Cooper, of Caversham. No cards.
- HOUSEMAN-HARGREAVES**.—On the 3rd inst., at the Parish Church of St. Luke's, Heywood, by the Rev. R. W. Perry Circutt, assisted by the Rev. J. Duerden, James Gilpin Houseman, M.D., younger son of the late John Houseman, M.D., of Newcastle-on-Tyne, to Mary Emily, elder daughter of James Hargreaves, Esq., Gorden House, Hopwood, Lancashire.
- WILSON-POWELL**.—On the 27th ult., at St. Mary's Church, Haverfordwest, James Wilson, M.D., F.R.C.S.E., son of William Wilson, Esq., Belfast, to Constance Ann, daughter of the late J. Rogers Powell, Esq., Buckingham House, Haverfordwest.

DEATHS.

- HAWKINS**.—On the 28th ult., at Guy's Hospital, of diphtheria, Francis Stanhope Hawkins, B.A., M.B. Oxon., F.R.C.S., House Surgeon, third son of the Rev. R. Hawkins, Vicar of Lamberhurst, in the 25th year of his age.
- LOCKING**.—On the 2nd inst., at his residence, Beverley-road, Hull, Joseph Agar Locking, M.R.C.S., L.S.A., eldest son of the late George Locking.
- TAYLOR**.—On the 24th ult., at Mucconer Falls, Kingussie, N.B., Alfred Claude Taylor, M.D., Colston House, North Circus-street, Nottingham, aged 43.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, October 4th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Sept. 28	30.07	E.	57	55	72	64	53	..	Foggy
" 29	29.79	S.W.	60	59	84	68	55	14	Foggy
" 30	29.72	N.W.	43	46	94	55	46	28	Fine
Oct. 1	29.73	W.	43	41	94	56	40	..	Fine
" 2	29.34	N.E.	43	41	..	46	39	..	Overcast
" 3	29.40	W.	43	41	84	54	34	14	Foggy
" 4	29.65	W.	45	42	77	54	40	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

THE ABOLITION OF THE "TOP HAT."

A CORRESPONDENT writes: "Would it not be a great boon to medical men to abolish the use of the tall silk hat, known as the 'top hat'? Has it not every disadvantage as a comfortable and hygienic headgear? And could not a substitute be found made of soft felt, the same material as clergymen's hats are made of, and somewhat the shape of the hat called the 'Beaufort,' one flat at the top and about two-thirds the height of the top hat, which would look equally professional and be infinitely more comfortable? The tall hat now worn constricts the head, makes many people's heads ache, impedes circulation in the scalp, and is always a nuisance in wet weather—a fact appreciated this summer. During, in his work on the Skin, goes so far as to say that such hats are a mechanical cause of baldness in men. To quote his words, 'The hard rim of the hat pressing on the temporal arteries narrows the blood-stream, and checks the advance of papulum to the hair. Those seated farthest from the periphery suffer most, as on the crown, though the temples, as their name indicates, are also easily affected, no doubt because the skin there is wholly dependent on the temporal arteries for its supply.' Evidence of its causing headache can be easily obtained; but, to quote a standard work, that of Bristowe's *Practice of Medicine*, 'Thus pain almost accurately resembling in all its characteristics that of *migrain* may be induced by the simple pressure of an unyielding hat upon the frontal branches of the fifth pair, which, though cured by removal of that pressure, often lasts long enough.' If only a sufficient number who wished a change—and I am sure they are numerous—would abolish its use, it would be a great benefit in allowing a young man (the older men can more easily please themselves) to wear a comfortable hat without being thought unprofessional in appearance. 'Your bonnet to his 'right use'; 'tis for the head.'"

S.—We must decline to hazard an opinion on a subject which has not come to be regarded as being within the domain of legitimate science.

Disputed.—We fear we cannot publish our correspondent's letter, which is of a libellous nature.

URTICARIA.

To the Editors of THE LANCET.

SIRS.—Let your correspondent try boracic acid lotion (ten grains to the ounce), to be applied with a sponge immediately after the appearance of the wheals; also small doses of Fowler's solution, with sodii bicarb. and mag. sulph. internally.—I am, Sirs, yours truly,

Manchester, Oct. 1st, 1888.

Jos. O'CONNOR, M.D., &c.

CRUCIAL EXPERIMENTS ON THE LIVING HUMAN SUBJECT.

G. L. B.—That Clement VII., whose pontificate lasted from 1523 to 1534, permitted the physiologists of his time to make trial of poisonous drugs on living criminals under sentence of death has often been stated. Dr. Edward Milligan's language is clear enough: "Pontificem Clementem VII. homines nocentes aponito, experimenti causa, interficiendos tradidisse." The "Dictionnaire des Sciences Médicales" (ix., p. 22) may be consulted on the same subject. Thirty-one years before Clement, another Pope, Innocent VIII., when the powers of life were exhausted, was induced by a Jewish physician to try the transfusion into his own veins of the living blood drawn from a young man. The anæmic pontiff had the experiment performed three times, at the expense of three young men in succession; but they all died (pontiff included). "Perhaps," says Pasquale Villari, who records the fact in his "Storia di Girolamo Savonarola" (1st edition), "on account of air introduced into their veins." The whole subject of transfusion, physiologically and historically considered, will be found amply treated in THE LANCET of April 17th, 24th, and May 8th, 1875.

H. S.—1. Our correspondent cannot claim any fee.—2. He need not attend, unless he is duly summoned.

"CHARGES AGAINST HOSPITALS."

To the Editors of THE LANCET.

SIRS,—Week after week paragraphs appear in THE LANCET under the above heading, refuting charges as damaging as those lately made against the West London Hospital, and as unfounded as they appear to have been. Surely, for any person or body of persons to make charges of this kind without taking any precautions to verify them is not only against the most elementary notions of fair play, but seems to me little short of criminal, especially when it is only too well known that these charges will be dishd up by that portion of the press which lives by creating an appetite for morbid sensationalism and ministering to it. Unfortunately, the poor themselves are often the most ready to believe these highly coloured or unfounded charges, if not to make them. Still more unfortunately, it is they who suffer most when baseless charges shake the confidence of the supporters of our great national charities.

The readiness with which coroners' juries accept and act upon uncorroborated charges is as unfortunate as it is proverbial. Some three years ago, by the unusual courtesy of a medical witness entirely unknown to me, I was informed that a complaint would be made against the hospital to which I am resident medical officer. I hastened off with a witness, and putting an entirely different complexion on the case, the censure prepared for the accused fell heavily on the accuser.

It seems to me high time the hospitals of London combined to protect themselves. The law gives redress almost too readily to the individual who considers himself libelled; but when slanderous charges are levelled against institutions which earnestly strive amidst enormous difficulties to carry on a noble work, the authorities fold their hands, or content themselves with feeble protests or explanations. There are occasions, even though they arise but seldom, when they are bound to vindicate in some more energetic manner the reputation of institutions committed to their charge as sacred trusts. Seeing how much more difficult it is to maintain a good reputation than to lose it, it behoves hospital authorities to fill their resident posts with those who have good personal, as well as professional, qualifications for such important positions. Great professional skill does not always imply the possession of judgment, kindness, and good temper. The best official is he who is ever alert to safeguard the good name of his hospital. And this is not always best done by blindly following the rules laid down for his guidance. And he may be sure that in all positions of difficulty the wisest course to pursue is that which savours least of parochialism and high-handed officialism.

Your remarks on the attitude which parish authorities assume towards hospitals in their districts are both timely and just. In the institution to which I am attached, at least 50 per cent. of the patients would fall under the care of the different parishes, from which we take them but for the existence of such an institution in their midst. And yet if a sick child should die in the hospital and the parents should be too poor to bury it, we are compelled to remove the dead child home at our own expense before the parish authorities will move in the matter. And yet by admitting such a child we constantly set free the breadwinner—often a widow,—and thus probably relieve the parish from the expense of a whole family. Frequently, as you may imagine, it is impossible to send the body of a child to some squalid and overcrowded home, and then the entire expense of burial falls on the hospital.

I am, Sirs, yours faithfully,

Oct. 1st, 1888.

R. M. O.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—In some remarks of mine on colotomy you were good enough to print in last week's "Mirror," an unfortunate printer's error occurs. I am reported as stating "there can be no possible question that lumbar colotomy is far better and safer than inguinal." This is exactly contrary to my views and practice, and I now always perform the inguinal operation, and am so confident of its superiority as to believe that in a few years the lumbar method will be as extinct as the dodo.

I am, Sirs, yours truly,

Stratford-place, W., Oct. 2nd, 1888.

HARRISON CHAPPEL.

THE NEW ORDER OF APOTHECARIES AND THE TITLE SURGEON.

The following correspondence has been forwarded to us. It is but reasonable that the new order of apothecaries should wish to use a title which would express that they are qualified in surgery as well as in medicine. It is to be regretted that Dr. Peregrine did not fortify his letter by a legal opinion on the point raised.

"Royal Infirmary, Manchester, Sept. 26th, 1888.

"DEAR SIR,—Will you kindly inform me whether practitioners who have obtained the L.S.A. under the new regulations have the right to use the title of 'Surgeon,' as the point appears to be disputed by members of the College of Surgeons?

"Yours faithfully,

"FREDERICK P. MOLES, L.S.A. Lond.

"T. Peregrine, Esq., M.D., M.R.C.P."

"Society of Apothecaries of London,

"Blackfriars, E.C., Sept. 27th, 1888."

"MY DEAR SIR,—The title of 'Surgeon' has been long in use implying medical practitioner. But the L.S.A. is a licentiate in surgery as well as in medicine. It cannot be said, then, that he is not a surgeon. It seems to me he may call himself what he likes—'Physician,' if he pleases. But he cannot call himself 'Doctor.'

"Yours faithfully,

"F. P. Moles, Esq."

"T. PEREGRINE, M.D., Sec.

"Most of the new L.S.A.'s now describe themselves 'L.M.S. Lond.'"

Dr. Lewins must excuse us for declining to be drawn into a discussion of Hylo-Idealism because we ventured on a few general remarks on the subject of the sermon preached by Principal Caird before the members of the British Medical Association. Those remarks were certainly not intended, and we think cannot fairly be taken, to afford any support to the conclusions which, as we understand, have been formulated by the school of thought to which our correspondent belongs.

D. L.—Where the parties are strangers, it is graceful to offer a fee. Otherwise, the consultant loses the grace of declining it.

M. A. Cantab.—We are not aware of any such list.

HYPERTROPHY OF THE STOMACH IN PYLORIC DISEASE

To the Editors of THE LANCET.

SIRS,—Owing to an unavoidable delay on my part in returning to the printer the "proof" of my case of excessive vomiting treated by intravenous injections of saline solution, the paper did not receive a few intended alterations. The (very justifiable) selection of the shorter of the alternative records of the symptoms and history submitted to your discretion caused some of the "Remarks" appended to the case to appear rather irrelevant. There is, however, only one point upon which I should be glad to be permitted to explain—the absence of peristaltic movement of the stomach. There is no apparent reason why cancer should not invade the pylorus of an atonic or a paralysed stomach, and in the case described it would seem that it did so. It is only when the nutrition of the gastric muscle is good and its nervous supply sound that it can hypertrophy. There is a woman, aged thirty-eight, now in the Leeds Infirmary in whom strong gastric contractions, easily aroused, can be seen as plainly as if the abdomen were open; the pyloric tumour in this case can almost be picked up in the fingers, its length, breadth, and thickness being readily determinable. Possibly compensatory hypertrophy of the stomach is dependent upon, *inter alia*, the age of the patient, and its absence may not always exclude the diagnosis of pyloric disease.

I am, Sirs, your obedient servant,

Leeds, Oct. 1st, 1888.

T. CHURTON, M.D.

WATER SUPPLY IN JAPAN.

In a recent report the Belgian Minister to Japan states that during the past year the Governor of Yokohama has had waterworks for that town constructed under the superintendence of General Palmer of the Royal engineers. In consequence of the success which has attended this undertaking, several other towns have applied for a similar water supply, and the subject is now being carefully studied. In Tokio also, arrangements are about to be made for improving the supply, but it is not yet known whether the State will defray the prime cost or leave it to a private company. The difficulty at present consists in providing the funds, amounting to about a million sterling. The city has 1,300,000 inhabitants, and enough water would have to be provided for 2,000,000. The question is a pressing one for Japanese towns, because the wells are for the most part fouled by reason of their proximity to the rice fields.

Mercury.—1. There is no reason why the exercise, unless carried to an inordinate extent or violently engaged in, should be injurious.—2. With the above limitation, we think it is not deleterious to the organ in question, if in a healthy condition.

Swindled.—The principal's conduct as described would be likely to incur the censure of the Medical Council. But our correspondent should not mix it up with personal and legal questions between himself and the principal.

THE ACTION OF ALKALINE PERMANGANATE OF POTASH.

Enquirer.—It is impossible to give in a few words the reaction which takes place when the nitrogen of organic nitrogenous matter is converted into ammonia by alkaline permanganate of potash, (1) because the reactions are very complicated, and (2) because they vary with the nature of the organic substance which is undergoing decomposition—e.g., some organic substances yield all their nitrogen as ammonia, some two-thirds, and some one-third, whilst yet another class of nitrogenous bodies yield no ammonia at all when boiled with alkaline permanganate of potash. However, in all cases the permanganate is necessary in order to "split up the molecule," mere boiling with caustic potash alone yielding no ammonia, though fusion with that reagent does so.

Dr. E. R. Connor.—It would be decidedly unprofessional to give the testimonial mentioned. Such testimonials grievously mislead the ignorant, who in such matters include a very large section of the public.

"PNEUMO-DYNAMOMETER AND SPIROMETER."

To the Editors of THE LANCET.

SIRS,—Will you allow me to state in connexion with the subject of spirometers, and more especially with a means of registering the force of expiration brought forward by Mr. E. Savary d'Odiardi in his description of his new instrument in your last issue, that the same subject has occupied my attention for years, and that I have in the past, for my own satisfaction, adopted a mechanism to fulfil the indications stated by this gentleman in your columns; and that I have been led to these considerations partly on account of the rarity in which the spirometer is at present used—an instrument which *a priori* would seem to fulfil a want.

Why is the present instrument so seldom used? (1) Because it is bulky, cumbersome, and expensive; (2) because it is adapted to the determination of one condition only—vital capacity, and does not itself indicate the correlating factors which modify it. I have often used for determining the vital capacity a simple means lately suggested by me to Messrs. Arnold, quite inexpensive, and probably capable of being made accurate—viz., a thin elastic bag, somewhat like those toys blown into by children, which could be carried about even in one's pocket. Again, for the determination of the expiratory force, nothing further is wanted than a thicker gutta-percha bag. The increase in bulk of each respectively when blown into will, of course, be the means of determining, in the one case the volume of air expired, and in the other the force of expiration. A very simple mechanism will determine the degree of expansion. The tube blown into may be fitted with a valve or stopcock, and each bag may then be actually measured, or each may be placed in a cylindrical vessel of water and then blown into, when the rise of the water will indicate the expansion, and hence the amount of air expired, or the expiratory force. Not only is it useful, however, to indicate the force of expiration, but a very simple means will approximately indicate that of inspiration, which I will not describe, fearing lest I have already too far trespassed on your space.

A propos to this subject I may mention that in certain cases of emphysema, where the elastic force of expiration is so much impaired and distress marked, I have with great advantage supplemented the feeble natural force by means of a Martin's elastic bandage bound round the chest, and in like conditions complicated with bronchiectasis and mucous accumulation which threatened asphyxia, I have on more than one occasion saved life by artificial respiration, and thus got up the plug which prevented the ingress of air.

I am, Sirs, your obedient servant,

Sept. 30th, 1888.

JAMES MACMUN.

FINSBURY PARK BRICKFIELDS.

The Horary and Finsbury Park Journal contains a letter by Mr. J. Wallis Mason, denouncing the nuisance of the above brickfields, which are certainly the subject of extensive complaint in the neighbourhood. The medical officer of health has reported strongly to his board on the injurious vapours emitted when the fine sifted dust, or so-called "breeze," is burnt in the kilns. But no good has resulted. Mr. Mason urges action under the 144th Clause of the Health Act, which enables ten householders to move the board to proceed to have the matter adjudicated before a justice. It is strange that with all our boasted sanitary legislation such nuisances should defy the complaints of a whole parish and of its medical officer of health.

ALGIERS.

To the Editors of THE LANCET.

SIRS,—I am going to winter this year in Algiers and am anxious to know if special clothing is required for that climate, also if the middle of November is a good time to arrive there. I should also be grateful for any other useful information on the subject.

I am, Sirs, yours obediently,

October, 1888.

ENQUIRER, M.R.C.P.

PUBLIC ABATTOIRS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me where a report relating to public abattoirs, issued, I believe, under the auspices of the London Model Abattoir Society, can be obtained?—Yours truly,

Leicester, Oct. 1st, 1888.

H. TOMKINS.

A TARIFF OF MEDICAL FEES FOR POLAND.

A TARIFF of medical fees for Poland is being prepared which will serve in cases of dispute in courts of law to show what the minimum fees are. Patients are divided into three classes, the first class comprising not only wealthy landowners and capitalists, but merchants and manufacturers, also Government servants of the sixth and higher classes (colonels in the army and post captains in the navy belong to the sixth class). The second class comprises commercial men and others whose incomes are more than £100 per annum, also officials of the seventh and eighth classes (a major in the army and a doctor in civil life belong to the seventh class). The third class comprises such persons as are not included in the first or second classes. Besides the division of patients into categories, other distinctions are drawn depending on the nature of the locality. Of these there are three classes: (1) Villages and towns under 10,000 inhabitants; (2) towns having a population between 10,000 and 100,000; and (3) towns of more than 100,000 inhabitants. In small towns the ordinary fees are: For the first class, 2s.; for the second class, 1s. 6d.; and for the third class, 1s. In medium-sized towns the fees for the three classes of patients are 3s., 2s., and 1s. 2d. respectively. Lastly, in very large towns the fees for the three classes are 4s., 3s., and 1s. 6d. At night—that is to say, between 8 P.M. and 8 A.M.—50 per cent. additional is allowed. It is noted that the fees marked do not include charges for operations or for visits at a distance.

A Regular Subscriber.—1. The first result of the administration suggested would be to spread the irritant action over a wider surface. This would probably be followed by an increased rapidity of absorption, with the usual results. The suggested treatment would hasten the fatal termination and increase the pain.—2. We are not aware of the conditions under which the degree mentioned is granted.—3. No qualification which did not afford evidence of attendance upon the medical curriculum of a recognised medical school would be accepted by the Conjoint Colleges as a ground for exemption from any portion of their curriculum.

Mr. J. H. Griffin.—The fee, strictly, is to be regarded as the principal's; but it might fairly be divided between the principal and the *forum tenens*.

Mr. A. E. Y. Laugel Smith.—We should not advise the course suggested.

"DISTRIBUTION OF HANDBILLS AND PRIVATE DISPENSARIES."

To the Editors of THE LANCET.

SIRS,—I thank you for sending me THE LANCET containing a reprint of a handbill of mine. The circular, however, was never intended to be largely distributed, but was meant to be handed to my poorer patients in the district of St. Mark's-road. It was owing to a mistake made by a person in whose charge they were left for a few days during the secretary's absence that they fell into the hands of other persons. I was very much annoyed at the time of the occurrence, but it was out of my power to undo it. The extent of the distribution even I am ignorant of. I am perfectly ready to answer any charges that may be preferred against me to either of the Colleges to which I have the honour to belong.

With all due deference to you as an organ of the profession, I fail to recognise in you any right to act as my censor, or to dictate to me the lines upon which my practice shall be carried on. I have not infringed, or have I the slightest intention of infringing, the bye-laws or regulations of either of the Colleges. Looking around me, I see that medical men of all grades benefit from various forms of publicity, and I object to your attempt to place me in a pillory because I desire to make myself known in my own way, so long as I do not infringe the regulations under which I hold my qualifications, or offend against public morals, I submit that you have no right, either legal or moral, to publish anything which might be construed either by lay or professional persons into a reflection on my character and consequent damage to my interests.

I trust you will insert this letter in your next issue in its entirety.

I am, Sirs, yours obediently,

HEATON C. HOWARD, L.R.C.P. Lond., M.R.C.S. Eng.

Clapham-road, S.W., Oct. 1st, 1888.

* * With all due deference to Mr. Howard, we cannot forego our right to an opinion on the methods of advertising which he uses, and which he now sees can be carried to an extent which he himself did not intend them to be carried.—ED. L.

MEDICAL SERVICE UNDER THE OTTOMAN GOVERNMENT.

To the Editors of THE LANCET.

SIRS,—I should feel greatly obliged if any of your readers could in THE LANCET answer the following queries:—1. What steps are necessary—i.e., to whom must one apply—in the endeavour to obtain the post of surgeon under the Imperial Ottoman or Egyptian Governments, the civil, military, or naval service? 2. What emoluments are attached to such posts? 3. Could one get along for the first few months with French alone, until one had learnt Turkish or Arabic?

I am, Sirs, yours obediently,

Sept. 25th, 1888.

D. S., M.C.

MEDICAL TOUTING BY THE TOWN CRIER.

It is stated in a German medical journal that in a certain village in Germany professional rivalry was so keen that the unseemly spectacle was observed of the town crier blowing a trumpet and publicly announcing that one of the doctors would pay visits at sixty pfennigs each. Two hours later the same crier informed the inhabitants that another doctor would see them for fifty pfennigs a visit.

Mr. Humphreys.—The paper is extant. The additional case would be acceptable.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Clifford Allbutt, Leeds; Mr. F. W. Cory, Bournemouth; Mr. Jefferson, New Hampton; Mr. F. C. Turner, London; Prof. Odiardi, Jersey; Mr. R. Walker, Aberdeen; Mr. Heath, St. Leonards; Mr. Weaver, Southport; Mr. Litchfield, Woodford; Mr. F. P. Moles, Manchester; Dr. Norman Kerr, London; Mr. P. E. Cane, Leeds; Dr. D. Finlay; Mr. Jonathan Hutchinson, London; Dr. Robertson, Newcastle-on-Tyne; Mr. Charles Higgins, London; Mr. MacMunn, London; Messrs. Williams and Co., London; Mr. Gostling, Diss; Mr. Wherry, Cambridge; Mr. C. Lucas, London; Mr. Poolman, London; Dr. Churton, Leeds; Mr. J. B. Kennedy, Stratford; Mr. H. C. Howard, London; Dr. Barron, Southport; Mr. W. R. H. Stewart, London; Mr. W. K. Hatch; Dr. L. R. Connor, Hastings; Dr. O'Connor, Manchester; Mr. P. S. Hutchinson, London; Dr. Moffat, Oldham; Dr. Waller, London; Mr. P. A. Kelly, London; Dr. Griffin; Mr. Grosso, Marseilles; Mr. Saunderson, Manchester; Mr. W. K. Hughes, London; Mr. Wood, Leeds; Mr. N. E. Davies, Sherborne; Mr. Erichsen, London; Dr. Furnivall, Barbadoes; Mr. Simmonds, London; Mr. Briscoe, Bolton; Dr. Williams, North Wales; Dr. Maynard, Brith; Mr. Diggins, Lancaster; Dr. Coleman, Glam.; Dr. Drysdale, London; Mr. Lee, London; Mr. Merryweather, Yorks; Mr. Smith, London; Mr. Smith, Worcestershire; A Regular Subscriber; D. S., M.C.; Swindled; R. M. O.; S.; Mercury; Equivocal.

LETTERS, each with enclosure, are also acknowledged from—Dr. Kelsa, Alton; Mr. Lee, Leeds; Mr. Brownfield, London; Messrs. Hooper and Co., London; Mr. Haslam, Reading; Mr. Morris, Feltham; Mr. Brett, Bridlington; Mr. Watson, Glasgow; Dr. Brailley, London; Dr. Holmes, Warwickshire; Mr. Arrowsmith, Bristol; Messrs. Mottershead and Co., Manchester; Mr. Hargreaves, Lancashire; Messrs. Child and Co., Leeds; Mr. Arnison, Newcastle; Miss Hunt, Dublin; Mr. Mason, London; Mr. Duncan, Newcastle; Mr. Jessett, London; Dr. Roberts, Sheffield; Mr. Heywood, Manchester; Mr. Wormald, Manchester; Mr. Partridge, London; Mr. Humphrey, Carnarvon; Mr. Birchall, Liverpool; Masonic, London; Omega, Mon.; Forceps, London; Rectus, London; B. W., Kent; M. P. J., Wilts; Victoria Hospital for Nurses, Bournemouth; E. London; Denmark, London; Deaconess Elsie, Tottenham; S. H., Hull; Surgeon, Mon.; M. R., London; J. S., Sydenham; Ebblan, London; G. D., London; Z., London; Medicus, Mon.; Medicus, Blackburn; Ajax, London; Medicus, Leeds; Dr. B., London; V. C., London; E. H., Brighton; K., Brentford; X. Y. Z., London; Mens, Leicester; Medicus, Hastings; S. M., Oxford; X. L., Penzance; Alpha, London; Medicus, Manchester; Beta, Newcastle-on-Tyne; Transfer, London; Cantab., London; C., Bristol; Surgeon, London; E. F. C., London; M. F., London; G., Suffolk; Genuine, London; Medicus, London; Matron, Barnsley; Surgeon, Leeds; E., Birmingham; J. H. B., Cornwall; Fidelis, Manchester; E. D., Darlington; Mona, London; Matron, London.

Chester Chronicle, Newcastle Daily Leader, Bristol Mercury, Warrington Guardian, West Middlesex Advertiser, Reading Mercury, Surrey Advertiser, Herald and Weekly Free Press, Irish Times, Hertfordshire Mercury, North Star, Windsor and Eton Express, City Press, School, &c., have been received.

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Agent for the Advertisement Department in France—J. ASTIER, 64, Rue Caumartin, Paris.

Medical Diary for the ensuing Week.

Monday, October 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, October 9.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.
Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.)—8 P.M.
Prof. W. H. Corfield: Sanitary Appliances.

Wednesday, October 10.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M.
Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M.
Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.
HUNTERIAN SOCIETY.—8 P.M. An Address from the President (Mr. R. Clement Lucas). Dr. Robert Barnes: The Recent Triumph of Surgery. Special General Meeting at 7.45 P.M.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. H. B. Brady: Reproductive Condition of Orbitolites complanata, var. lacinata.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens and Notes of Cases by Dr. Inglis Parsons, Mr. Reeves, Dr. Fancourt Barnes, Dr. Granville Bantock, Mr. Lawson Tait, Dr. Mansell-Moullin, and the President.

Thursday, October 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARGING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, October 12.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—Mr. Nunn: Injury to Elbow-joint, Unreduced Dislocation of Head of Radius, and Injury to the Ulnar Nerve.—Dr. Pasteur: Case of Pulmonary Gangrene treated by Incision and Drainage.—Dr. A. Morrison: Case of Extensive Ankylosis of Skeleton, with Diaphragmatic Breathing.—Dr. Stephen Mackenzie: Case of Peculiar Skin Disease, possibly a form of Lupus. Living Specimen by Dr. Stephen Mackenzie: Syphilitic Arthritis.

THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.)—8 P.M.
Mr. H. Percy Boulton: Soavenging, Disposal of Refuse and Sewage.

Saturday, October 13.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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Books and Publications (seven lines and under) ..	£0 5 0
Official and General Announcements ..	0 5 0
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NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

Clinical Lecture

ON

HERNIA INTO THE FORAMEN OF WINSLOW.

Delivered at the London Hospital,

By FREDERICK TREVES, F.R.C.S.,

SURGEON TO, AND LECTURER ON ANATOMY AT, THE LONDON HOSPITAL.

GENTLEMEN,—A patient has lately died in the hospital whose case enables me to demonstrate one of the rarest and most remarkable forms of intestinal obstruction—that known as hernia into the foramen of Winslow. Those of you who saw the patient during life will know that no sure diagnosis of his trouble was ever made, and that the interpretation of his symptoms remained until the last a matter of respectful speculation. It will be remembered also that in the operating theatre it was shown that there are still forms of hernia which are beyond the reach of the much-vaunted surgery of the time. Now that the body lies in the post-mortem room, the whole surgical history of the man is laid bare, and the many doubts and difficulties which surrounded the case are made plain.

The term "internal hernia," although somewhat recklessly used, is still conveniently applied to such hernia-like protrusions of the bowel as lie entirely within the abdominal or thoracic cavities, and yet fulfill the conditions required by the common definition of a hernia. Before enumerating the varieties of the internal hernia it may be well to note that some external ruptures may, under certain conditions, assume clinically the characters of the less obvious form. With such may be grouped the smaller varieties of obturator, sciatic, perineal, and lumbar hernie, minute femoral hernie and hernie in the linea alba in very fat subjects, and those ruptures about the inguinal region which are known as interstitial or inter-parietal. Under the term *internal hernia* the following varieties may be classified:—

1. *Diaphragmatic hernia*.—This form of rupture is not very uncommon. Leichtenstern in his monograph deals with about 250 examples, of which, however, only twenty-eight were true hernie—i.e., provided with a proper sac.

2. *Anterior retro-peritoneal hernia*.—Under this term are included the subperitoneal hernie, whose sacs, commencing at or about the internal inguinal ring, have made their way upwards along the ilio-psoas muscle (*hernia intra-iliaca*), or inwards towards the pelvis (*hernia ante-vesicalis*; "*hernie intra-pelviennes*" of the French).

3. *Hernia duodeno-jejunalis*.—This remarkable rupture, named by Sir Astley Cooper the mesenteric hernia, is due in the first instance to the passage of intestine into the fossa duodeno-jejunalis. A large number of examples of this condition have been placed on record. I have elsewhere (Hunterian Lectures, 1885) given a full account of the anatomy of the fossa in which the protrusion commences.

4. *Meso-colic hernia*.—This variety of retro-peritoneal hernia was first described by Sir Astley Cooper. It has no concern with the duodeno-jejunal fossa. I have endeavoured (in the Lectures already referred to) to show that it takes origin in an occasional pouch to be found in the descending meso-colon. It is clinically very nearly allied to the variety just described.

5. *Retro-cæcal hernia*.—This term has been applied to protrusions of bowel occupying a fossa said to be occasionally found behind the cæcum, and named by Treitz the subcæcal fossa. Three reputed examples of this hernia have been recorded, and in two of them strangulation had taken place. The accounts of these cases are a little indistinct.

6. *Inter-sigmoid hernia*.—In this variety the seat of the protrusion is at the inter-sigmoid fossa, a fossa of considerable interest to be found in a certain proportion of cases in the sigmoid meso-colon. Two cases of strangulated hernia in this situation have been recorded—one by Lawrence in his work on Ruptures, and one by Mr. Eve in the Erasmus Wilson Lectures delivered in 1884.

7. *Hernia into the foramen of Winslow*.—The case about which I now wish to speak is, I believe, the only example

of hernia into the foramen of Winslow for which laparotomy has been performed, and it is perhaps the only case of which complete clinical and pathological data have been forthcoming.

John S—, a laundry keeper, aged twenty-six, was admitted into the hospital on April 17th, 1888, under the care of my colleague, Dr. Stephen Mackenzie, to whom I am indebted for permission to bring the case before your notice. Previous to admission the man had been under the care of Dr. Robert Ambrose, whose very elaborate notes of the early symptoms are most valuable. The patient was a good type of a well-developed, muscular, and robust man. He had "never had a day's illness in his life," was of steady habits, knew nothing of dyspepsia, and never suffered from constipation. He had certainly been free from any intestinal trouble previous to the attack which caused his death. On April 9th he ate a very hearty dinner at 3 P.M., concluding the meal with a considerable number of periwinkles. At 5 P.M. he was suddenly seized with violent abdominal pain. The pain was like cramp, and was situate about and above the umbilicus. He was bent double, became faint, and broke out into a cold perspiration. He drank some brandy, which was retained. The pain was intermittent, the intervals of freedom from pain, however, being very short. The abdomen was not tender. The pain persisted all night, and was of such a character that he could not lie down, but spent the night in a chair. Before the morning the abdomen began to be a little distended, and to feel "tight" in the epigastrium. On the 10th he began to vomit, rejecting some milk he had swallowed. The pain was still severe and intermittent, and was still in the same situation. Nothing had passed the rectum since the morning of the previous day. Dr. Ambrose found the abdomen everywhere tympanitic, the meteorism being especially marked in the epigastric region, where, and where only, the abdomen appeared a little swollen. An examination of the rectum and of the cæcal region revealed nothing. The patient was sick about ten times during the day. Opium was now administered in doses that represented about three grains of opium powder in twenty-four hours. On the next day (the 11th) the pain was much less severe; but the vomiting continued, the patient being sick from ten to fifteen times in the twenty-four hours. On the 12th the bowels were well relieved, for the first time since the onset, by an enema. The patient was much easier, and vomited once only during the day. The tongue was now coated. The abdomen was more evenly distended, and was tympanitic everywhere, although the percussion note varied greatly in degree in different parts. The distension in the regions below the umbilicus was much reduced by the injection, and the swelling in the epigastrium was thereby rendered more distinct. This swelling occupied more or less precisely the epigastric area as anatomically defined, and appeared to be due to the distended stomach and colon. On the following day no change was to be noted. The bowels again acted after an enema, the patient felt better, and was only sick twice. Nothing passed the rectum after this date, in spite of copious and repeated enemata. During the three succeeding days (the 14th, 15th, and 16th), the patient's troubles increased. The pain again became severe, but was no longer intermittent, although it presented variations in its intensity. Vomiting occurred from twelve to fifteen times in the twenty-four hours. The epigastric swelling was more distinct, and on the 16th was noticed to be a little dull on percussion for the first time. There was no localised abdominal tenderness. As evidence of the man's general condition, it is noted that on the 15th he insisted on leaving his bedroom for some hours, and walked downstairs without assistance. On April 17th the patient was admitted into Dr. Mackenzie's wards. Before describing his condition when he entered the hospital, I might mention some general facts in the history of the week that had intervened since the attack came on. The treatment had consisted in rest, in the frequent use of enemata, in fomentations to the abdomen, in a most restricted diet, and in the daily administration of three grains of opium. The pain had always been complained of as about and above the umbilicus. It had at first been intermittent, but later had exhibited only variations in intensity. It had been of the character of cramp or colic. No specific tenderness had ever been complained of. During the whole of the week the patient had kept the sitting posture, declaring that he was unable to lie down. The

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vomiting had been throughout slight in amount; it was at first purely gastric and ultimately intestinal. It was never feculent. The sickness gave the patient no relief, and, except on two days (April 13th and 14th), whatever was taken by the mouth was rejected, although not directly. There had never been hicough. An almost constant tenesmus had marked the whole progress of the trouble. The urine was normal, was of high specific gravity, and moderate in amount. The tongue was at first clean, but soon became coated and flabby, and on April 15th dry and brown. The pulse throughout had been small and regular, and had varied from 85 to 100. The temperature had been normal or subnormal, and had averaged 98°. There had been almost complete loss of appetite, with great thirst. Dyspnoea had never been complained of. Intestinal movements were at no time visible, nor were borborygmi heard. The skin had been usually moist. The loss of strength had been gradual, and the patient's intelligence had remained clear. There had been no discharge from the rectum. When Dr. Mackenzie and I examined the patient, we found him in a condition of great prostration, with the pinched face and sunken eyes of acute abdominal trouble. The tongue was dry and brown; the temperature subnormal; the pulse 98, small and feeble. The patient was now lying upon the back, with the knees drawn up. Nothing had passed the rectum for three days. A little brownish fluid with a faint intestinal odour was being vomited about every half-hour. There was still much pain about the umbilicus. The abdomen was moderately distended, but there was a very conspicuous bulging of the anterior abdominal wall in the epigastric and hypochondriac regions. The summit of this swelling was in the median line. In the left hypochondriac district a high resonant note was elicited on percussion, and appeared to indicate a distended stomach. The whole of the area defined anatomically as the epigastric was dull, although a resonant note could be produced on deep percussion. Elsewhere the abdomen was evenly tympanitic. There was tenderness in the epigastrium, and it was evident that this region was the seat of some peritonitis. A rectal examination revealed nothing. The even swelling above the umbilicus rendered the aspect of the abdomen quite peculiar.

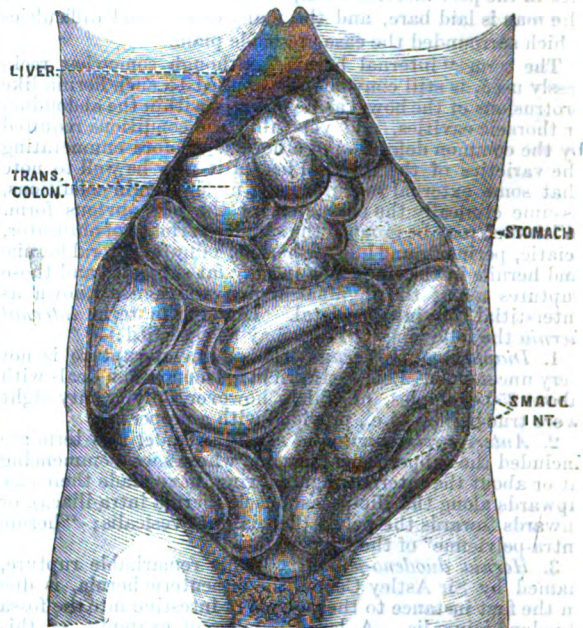
Such are the clinical facts of the case. So far as diagnosis went, it was only possible to say with certainty that there was an obstruction involving the colon, that this obstruction was complete, and probably concerned the bowel not far from its commencement, and, moreover, that there was some peritonitis in the epigastric region. There was no evidence to support the diagnosis of intussusception, the symptoms did not accord with the conception of a mesenteric or meso-colic (retro-peritoneal) hernia, there was evidence that the case was not one of volvulus of the sigmoid flexure, and the nearest approach to probability appeared to lie in the suggestion of a volvulus of an undescended cæcum. In the light, however, of the present case, and the few other examples of hernia into the foramen of Winslow which have been recorded, I believe it possible that in future the lesion may possibly be diagnosed during life.

As the patient's condition was very urgent, and as both he and his friends were most anxious that no possible effort to save his life should be spared, Dr. Mackenzie advised an exploratory incision, and in this advice I entirely concurred. The operation was performed on the afternoon of April 17th, precisely eight days after the commencement of the attack. I opened the abdomen in the median line below the umbilicus, and introduced my hand. I first sought the cæcum, but neither it nor the ascending colon were to be found. I then passed to the left colon, and found that the descending colon, sigmoid flexure, and rectum were empty and flaccid. I endeavoured to follow the upper end of the descending colon, but found it impossible to do so owing to the distension of the adjacent coils of small intestine and the presence of a dilated stomach. I now turned my attention to the small intestine, and soon discovered that there was no true mesentery. I, however, followed a coil of the bowel until I reached a constricting ring in the epigastric region through which this bowel passed. At first it appeared probable that the ring might be the opening of the fossa duodeno-jejunalis, and the case one of retro-peritoneal hernia. The ring was, however, above the situation of that fossa, and had no direct relation to the vertebral column. Moreover, the sac of a mesenteric hernia could not be made out, while by following the aorta the

true situation of the duodeno-jejunal fossa could be demonstrated. The orifice through which the coil of intestine passed was considerably to the right and above the usual situation of the mouth of the sac in meso-colic hernia. By a process of exclusion, rather than by direct evidence, it became clear that the constricting ring was the foramen of Winslow; but the presence of distended and unaccountable coils of intestine in the vicinity of the opening rendered the demonstration of the relations very difficult. The relation with the stomach could not be defined, and the presence of greatly dilated bowel served to confuse its position with reference to the liver. In the tissues in front of the ring an artery, clearly the hepatic, could be felt pulsating. I managed to reduce, with but little difficulty, some two or three feet of small intestine. The reduction, however, of another and quite distinct coil which also occupied the ring was utterly impossible. It was also impossible to enlarge the opening through which the bowel had passed, for even modern abdominal surgery has not proved that the hepatic artery, the portal vein, and the bile duct can be divided simultaneously with impunity. Further attempts to relieve the patient had therefore to be abandoned. The patient never rallied after the exploratory operation, and died some six hours after he had been carried back to bed.

The condition made evident at the necropsy is known to many of you. There was commencing general peritonitis.

FIG. 1.

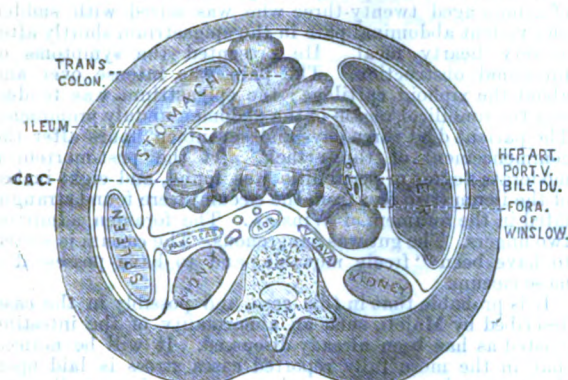


Aspect of parts on opening the abdominal cavity.

When the abdominal cavity was fully exposed, a coil of large intestine, so enormously distended as to be four inches in diameter, was found lying in the left hypochondriac region immediately under the costal cartilages of the left side. Below it the stomach, slightly distended and somewhat displaced forwards and to the left, presented itself. No other viscera were to be seen except the liver and coils of the small intestine. No other portion of the colon was in view. (Fig. 1.) Further examination showed that the cæcum, the whole of the ascending colon, and a part of the transverse colon had passed through the foramen of Winslow, and had become strangulated by the margin of that aperture. The colon, on entering the snare, had passed from right to left; the cæcum was to the extreme left of the abdominal cavity, and had forced its way through the anterior layer of the gastro-hepatic omentum, so that the vermiform appendix was actually lying on the anterior aspect of the lesser curvature of the stomach close to the oesophagus. (Fig. 2.) The diameter of the strangulated colon measured nearly five inches. This part of the bowel was gangrenous in two places. Both patches were limited to the ascending colon; one patch was equal in size to a half-crown piece, while the other was twice as large. The intestine had given way a little in the

latter situation, and fecal matter had found its way into the lesser cavity of the peritoneum. The colon outside or beyond the foramen of Winslow turned very sharply to the left, and was then represented by the dis-

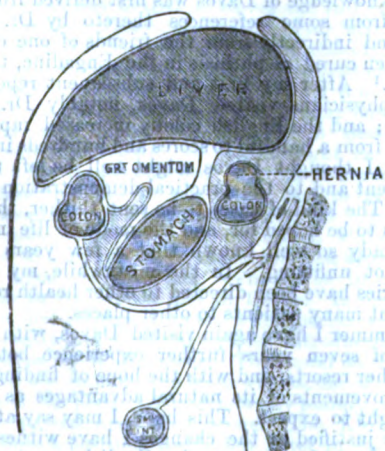
FIG. 2.



Section (diagrammatic) of the abdomen at the level of the foramen of Winslow, showing the hernia *in situ*.

tended segment of the large intestine already described as lying above the stomach. (Fig. 3.) On reaching the splenic flexure, the bowel was so sharply bent upon itself as to be again occluded. This kinking accounted for the great dilatation of that portion of the transverse colon which lay beyond the seat of strangulation. The descending colon, sigmoid flexure, and rectum were empty and collapsed. The great omentum was found rolled up along the greater curvature of the stomach. The whole of the small intestine was distended. Some four or five inches of the terminal parts of the ileum were still found within the hernial cavity. It had passed in with the cæcum, but was only partially strangulated. The two or three feet of ileum that had been reduced during the operation were indicated by a purplish discolouration as compared with the rest of the intestine.

FIG. 3.



Vertical section (diagrammatic) to show the position of the ascending and transverse portions of the colon.

At the seat of stricture the colon was in front of the small intestine. Of the strangulated colon the cæcum was the part that had suffered least. There was a descending meso-colon of moderate length. The colon may be described as being very sharply bent upon itself at the foramen of Winslow. The situation of this acute bending—the seat of the stricture—would correspond to about the centre of the transverse colon. The bowel from this point to the top of the cæcum was involved in the strangulation. The remaining (distal) half of the transverse colon was dilated by reason of the abrupt manner in which the bowel was again bent upon itself at the splenic flexure. This portion of the intestine (the distal half of the transverse colon) showed merely the effects of great distension. In other respects it was normal. There was, of course, no trace of a

hepatic flexure. There was a considerable degree of peritonitis in the epigastric area, and a few fresh adhesions united the ascending colon to the liver. The liver showed no morbid change of any kind. The stomach was merely distended. All the other viscera were perfectly normal. It was evident that the cæcum was "undescended," and had led the way through the foramen. The foramen of Winslow admitted four fingers. The tissues about it appeared normal, and no change could be detected in the structures occupying the gastro-hepatic omentum. The gall-bladder was but moderately full. It was found to be quite impossible to reduce the strangulated colon. Traction was maintained until the peritoneal coat of the bowel began to give way. Reduction could not be accomplished until the hepatic artery, the portal vein, and the bile duct had been divided.

It can readily be understood that this variety of hernia is exceedingly rare. Under normal conditions the foramen of Winslow will only admit one finger, or at most the thumb. It is true that its dimensions vary, but it is quite uncommon to find foramina so large as to admit two fingers. The opening is placed above the intestinal area, and would appear to be ill adapted for the development of a hernia. The ordinary factors in the causation of rupture, moreover, can hardly be considered to have effect in this district. The loop of intestine nearest to the foramen—the duodenum—is very fixed, and has, so far as I know, never been found involved in one of these herniae. The hepatic flexure of the large intestine and the transverse colon are the only other

FIG. 4.

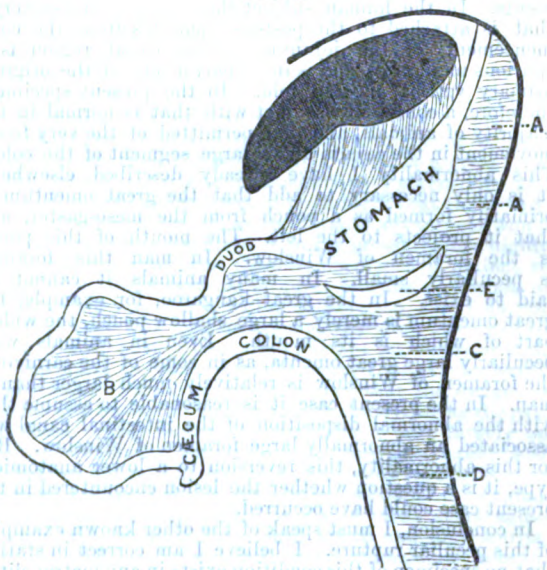


Diagram of embryonic intestine. A, Meso-gaster. B, Mesentery. C, Meso-colon. D, Meso-rectum. E, Slit left by cutting great omentum away.

segments of the bowel that may be considered as normally in near relation to the foramen, yet they are as a rule firmly secured and not adapted to form the contents of a rupture. It may be inferred that, with a normal arrangement of the intestines and peritoneum, a rupture of this character is scarcely possible, and I would venture to express the belief that the hernia into the foramen of Winslow is only possible when a certain abnormality of the intestine and its mesenteries does exist. The precise abnormality in question is one that consists in an arrest of development, and that represents a reversion to a condition of intestine that is met with in lower mammals. There is a time in the development of the human embryo when the alimentary canal consists of a simple straight tube suspended in the mesial line by a vertical fold of peritoneum attached along the posterior abdominal wall. The various portions of the canal become in due course differentiated into stomach, small intestine, cæcum, and colon, and then the upper part of the vertical fold of peritoneum is called the meso-gaster, the next the mesentery, that below the meso-colon, and the lowest part the meso-rectum. (Fig. 4.) The tube lengthens and forms a great

loop, which carries the mesentery with it. This loop has a narrow neck formed by the duodenum above and by what afterwards becomes the transverse colon below. The loop therefore includes the whole of the small intestine, together with the cæcum and the ascending colon. The duodenum and the right extremity of the transverse colon never lose their primitive relation. They limit the neck of the great mesenteric fold upon which the bulk of the intestinal canal is slung, and through the strait thus formed the superior mesenteric artery passes. The lower colon retains more or less its original mesial connexion. This elementary condition is persistent in many mammals—notably in the ant-eater, the sloth, and other edentates. The great intestinal loop becomes, as a result of its further development, twisted upon itself. The rotation is to the right; the right end of the transverse colon is carried in front of the duodenum, and the cæcum is brought into the right hypochondrium. At this stage there is still but one great common mesentery, which supports the whole of the lesser intestine, together with the cæcum and ascending colon. This great fold has its attachment at a point on the posterior parietes which corresponds to the original narrow interval between the duodenum and the transverse colon. At such a stage the cæcum is quite free, and has an extensive mesentery. This condition is the one that holds good in most of the mammalia below man. It was the condition met with in the present case. The cæcum and ascending colon, together with the jejunum and ileum, were slung by a common mesentery, the attachment of which to the posterior parietes was about the duodenal region. There was no mesentery with normal attachments. In the human subject the so-called "mesentery" that is attached to the posterior parietes from the commencement of the jejunum to the cæcal region is a spurious mesentery, and is in no part a relic of the original primary vertical median fold. In the present specimen, therefore, a condition was met with that is normal in the majority of animals, and that permitted of the very freest movement in the cæcum and a large segment of the colon. This abnormality I have already described elsewhere. It is only necessary to add that the great omentum is primarily formed as a pouch from the meso-gaster, and that it projects to the left. The mouth of this pouch is the foramen of Winslow. In man this foramen is peculiarly small. In many animals it cannot be said to exist. In the great kangaroo, for example, the great omentum is merely a large shallow pouch, the widest part of which is its mouth. Even in animals with peculiarly large great omenta, as in some of the carnivora, the foramen of Winslow is relatively much larger than in man. In the present case it is reasonable to assume that with the abnormal disposition of the intestinal canal was associated an abnormally large foramen of Winslow. But for this abnormality, this reversion to a lower anatomical type, it is a question whether the lesion encountered in the present case could have occurred.

In conclusion, I must speak of the other known examples of this peculiar rupture. I believe I am correct in stating that no specimen of this condition exists in any metropolitan museum. With regard to recorded examples, I can only find accounts of four cases.

1. Rokitsansky¹ states: "We once found a large portion of small intestine strangulated in the fissure of Winslow." No other details are given.

2. Blandin² gives a case, the circumstances of which are more fully described by Jobert.³ The patient was a man who was admitted into hospital with acute peritonitis, of which he soon died. Nearly the whole of the small intestine had passed through the foramen of Winslow. The gut was strangulated and a portion was gangrenous. Some part of the intestine had escaped from the lesser sac of the peritoneum through a rent in the transverse meso-colon.

3. Majoli⁴ cites the following. An emaciated man, the subject during the greater part of his life of chronic constipation, presented a persistent bulging of the anterior abdominal wall in the epigastric region somewhat more to the right than to the left. A painful, rounded tumour, dull on percussion, was readily defined in this situation. Symptoms of obstruction of the bowel were present. The diagnoses of faecal accumulation or of colic intussusception

were proposed. Enemata were employed, and doses of metallic mercury were given, but without effect. The man died fifteen days after the onset of the symptoms. The necropsy revealed a loop of the transverse colon strangulated in the foramen of Winslow. The bowel was gangrenous.

4. Mr. J. Elliot Square, of Plymouth,⁵ describes the case of a man aged twenty-three who was seized with sudden and violent abdominal pain in the epigastrium shortly after a very hearty meal. He presented the symptoms of intestinal obstruction. The pain was intense over and about the xiphoid cartilage; the epigastrium was tender, and the umbilical region of the abdomen unduly prominent. The patient died three days and seventeen hours after the commencement of the attack. At the post-mortem a moderate degree of peritonitis was found, and eight inches of the ileum (two feet from the cæcum) were found strangulated in the foramen of Winslow. The foramen admitted two fingers. The gut was gangrenous. The cæcum is stated to have been "freely movable, and to have possessed a meso-cæcum."

It is probable that in this case, and possibly in the case described by Majoli, such an abnormality of the intestine existed as has been already discussed. It will be noticed that in the more fully reported cases stress is laid upon the epigastric pain, upon the presence of a swelling in that region, and upon the existence of dulness over the swollen district. In no instance does there appear to have been any hepatic trouble or any jaundice.

DAVOS AS A HEALTH RESORT.

By T. CLIFFORD ALLBUTT, M.D., LL.D., F.R.S.,
CONSULTING PHYSICIAN, LEEDS GENERAL INFIRMARY, ETC.

TEN years have elapsed since I first wrote on the suitability of Davos as a health resort, and reports of my subsequent visits and of my experience of cases of phthisis treated at that place appeared in THE LANCET in the years 1879 and 1880. In 1878 few English invalids had found their way to the Grisons, and but two or three physicians in England had published any information on the subject. My own knowledge of Davos was first derived from German sources, from some references thereto by Dr. Hermann Weber, and indirectly from the friends of one of the first Englishmen cured of phthisis in the Engadine, though not at Davos.¹ After my first and subsequent reports, many English physicians visited Davos, notably Dr. Theodore Williams; and the English colony increased rapidly there, and grew from a handful to scores and hundreds in so short a time that I thought Davos might well be left to its own development and to the practical demonstration of its own virtues. The kind of cases to be sent thither, the kind of recoveries to be hoped for, and the mode of life in the place were already so well known that a few years of silence seemed not unfitting. In the meanwhile, my visits and my inquiries have been directed to other health resorts, and I have sent many patients to other places.

This summer I have again visited Davos, with the added interest of seven years' further experience both of that and of other resorts, and with the hope of finding in Davos such improvements of its natural advantages as the public have a right to expect. This hope, I may say at once, has been fully justified by the changes I have witnessed. The sudden influx of visitors to the English quarter of Davos has been so great and so constantly increasing that, if the hotel-keepers and the inhabitants in general had not been men of spirit and resource, the place would have been thrown back for a generation. English visitors come abroad calling for a high standard of accommodation, food and sanitation; and, had their habits been offended in these respects, their chances of recovery would have been less, and their reports to their friends would have been hostile to the place. At a heavy cost, however, improvements both of a smaller and larger kind have been carried out. I would especially refer to the canalisation of the river Landwasser, a large and costly work of

¹ Handbuch der path. Anat., 1842, Bd. iii., p. 136.

² Traité d'Anat. topograph., 1834, p. 467.

³ Traité des Malad. chirurg. du Canal intestinal, p. 522.

⁴ Rivista clin. di Bologna, July, 1884.

⁵ Brit. Med. Jour., vol. i. 1886, p. 1163.

¹ In a small volume entitled "A Season at St. Moritz" (Longmans, 1870), Dr. Burney Yeo published some observations and experiences of phthisis treated in the High Alps, which, however, then seemed to him rather discouraging.

first-rate importance. The cost of this canalisation has fallen heavily upon the inhabitants, but public money has rarely been better spent or a public burden more cheerfully borne. The village of Davos Platz, where English visitors mostly gather, might with advantage have occupied a higher place on the slopes of the hill. The so-called English quarter is somewhat higher than the lower village, but even these upper parts were not wholly above the influence of mists, which at times would gather above the river and its meadows. In this aspect of elevation St. Moritz Kulm has a considerable advantage. But the people of Davos have, by canalisation, reduced this disadvantage to small dimensions. The Landwasser formerly would not only overflow its banks and flood the flats about it, but from it there was constantly, no doubt, a circulation of ground water to considerable distances, which ground water was the cause of both cold and damp. The Landwasser, now confined to its own channel, sweeps all its waters rapidly down the valley without pool or slack, and I am informed that mist from the river is thus wholly prevented. Besides this great improvement, many others (such as the main drainage plan) have been carried out also, so that the community has kept well abreast of the needs of the day.

When we pass from public to private enterprise, there has been still no lack of well-directed energy. It has been feared that overcrowding would be a great danger to Davos, and it is well that such a fear should be expressed and overcrowding discouraged. Still, as yet, so far as the "English quarter" is concerned, I cannot see that much harm is done in this way. In the lower town there are evidences of overcrowding and of extensive industrial works, chiefly of building; but this is half a mile below the principal hotels. In the hotels themselves great improvements have been made. The Belvedere and Buol, so well known to the English, were early in the field with sanitary and other advantages, and both hotels have further enlarged their saloons and improved their heating and ventilation. Herr Buol has also given to his visitors the inestimable boon of the electric light. The most serious adverse criticism these Alpine winter resorts have against them is that patients who have lived all day in the light and air are crowded of evenings into saloons heated by stoves and full of the products of combustion of gas or mineral oil. This latter defect is now remedied in the Buol, and a brilliant, cleanly, and cool light obtained. Considering the heavy burdens entailed by recent expenditure, we cannot wonder that this light has not yet been adopted in all the other hotels; but I cannot too strongly urge upon the proprietors that English physicians will now regard the electric light as essential, and will look for its general use. The stove-heating of the rooms has been modified in the hotels, each in its own way seeking to secure a due admission of fresh air. The costly, admirable, and complete system in use at Maloja is well known, and if this system be impossible elsewhere, means sufficiently good, nevertheless, seem to be in course of development in St. Moritz and in Davos. It may not be improper in me, perhaps, to refer with special commendation to the costly and excellent system introduced into the Kurhaus Davos by M. Holzboer. This hotel on my former visits was, in my opinion, the least wholesome of the principal hotels of the place. This I now say plainly, as a great change has passed over that scene. The Kurhaus will henceforth hold a position beside any hotel in Switzerland for salubrity and cheerfulness. The ventilation and heating are obtained by means of an extensive system of steam pipes. These pipes are carried into the bedrooms and bath-rooms, and over coils of them fresh air is carried directly from the outside, so that by means of valves the occupants can admit warmed outside air at will.² In the large dining-room M. Holzboer is endeavouring to overcome one disadvantage found in all hot-air systems—viz., that it makes hot heads and cold feet. Under the flagged floor of the hall is a chamber in which the pipes so circulate that the flags will be uniformly warmed and communicate a comfortable temperature to the feet. I have some experience of a like system in a private house in England, where the effect is successful. The private villas attached to the Kurhaus seem admirable in every respect, and form charming temporary homes for families banished from their own hearths.

² The boxes which contain these coils harbour much dust &c., and are objectionable. Some light and removable screens, or curtains, would be much better—screens which could be removed for ordinary dusting of the apartments.

As I have thus been led, almost necessarily, to mention certain hotels by name, I feel it my duty to add that the Angleterre fully keeps up its reputation for comfort and good management, and that those who prefer a smaller and very home-like house, and who long for cookery more especially English in style, will find that lately opened by Mr. and Mrs. Pestalozzi to be very attractive.

What will be the results of the railway extension to Davos? This is a serious question much in the mouths of those who care for the best kind of prosperity in the little colony. That the railway will make a certain amount of smoke and dirt in the place is certain, and in the still air of winter this smoke may hang about the valley unpleasantly. This must be admitted, and, worse still, the railway will bring up coal at a much-cheapened rate, and coal smoke will increase in the houses and in the hotels. It is hard to foresee how serious an evil this may become; doubtless it is serious. On the other hand, the transport of invalids will be facilitated, fresher and more abundant provisions will be had, and other commodities cheapened. And a through route will tend to diminish the sense of distance and banishment which are felt by many patients, or by their friends. But it will also tend largely to increase the number of persons resident at Davos—a number, in the opinion of many, tending even now to be excessive for the capabilities of the place. The hotels, again, or some of them, will begin to lay themselves out for tourist traffic, and the patients may evade the counsels of their physicians and seek more dissipation in the place, and, what is far worse, may escape on the easy and rapid rail path to seek distractions, theatrical and other, in the cities.

These latter dangers are, I think, more in anticipation than in reality. Davos Platz is full enough, but there is ample room at Dürfti; and here, I think, as do also the local physicians, that a large sanatorium might be built in a sheltered elevated situation, which would be a great boon to the public. An establishment like Falkenstein, and managed on similar lines, would probably "beat the record" of that celebrated resort, as its climatic advantages would be tenfold greater. I shall have to say presently how highly I rate the importance of absolute obedience of patient to physician in these systems of cure; but the physicians of Davos are not wanting in will and discretion, and I do not fear that they will lose the ascendancy they have gained and will still hold. The railway is not an unmixed evil, and the harm to come from it may, I think, be easily exaggerated. To me it has appeared that the danger of patients getting out of hand has been chiefly during the past few years. The powers of government rest largely on tradition—habitual submission on the one hand, and habitual command on the other; and such traditions were seriously endangered by the large increase of English patients who flocked to Davos six or eight years ago—patients who brought with them youth and high spirits, ways of independence, and most inadequate conceptions of the task which they and their physicians had before them. To make such troops "toe the line" was no easy task, and it redounds much to the credit of the Davos physicians that good order was, on the whole, preserved. Still, I noticed, and others noticed, a new levity of tone, if not of deed. Young men and women threatened with death "did not mind going to Davos," as they heard there was much fun forward there. They would skate, toboggan, and dance, and have generally a "good time." On all such I threw my little cans of cold water as well as I could, and perhaps good sense prevailed on the whole, as, happily, it mostly does. When I first visited Davos, the great duty of invalid man was to "sit out all day under awnings," occupied in reading, working, and conversation. Now one hears, even yet, far too much of active amusements. The more active amusements are proper and even beneficial for cases on the high road of recovery; but I am satisfied that such pursuits are far more harmful to the ailing than physicians at home quite understand. The thermometer here is our best indicator, and it tells us, if we inquire, that, even after hectic fever has subsided, it is readily brought back even by moderate exercise; the fever, recalled by the indiscretion of an hour or two, may not be subdued for some days, and the patient's benefits are thus repeatedly undone. My friend, Dr. Fearn of Wiesen, showed me the charts of a patient who had very closely and intelligently watched himself, and this was the tale that it told. My own experience of cases treated at home strongly

supports this view, and condemns the new-born enthusiasm of physicians who, in and out of season, will be urging patients with raw phthisis to be constantly out of doors—too often, i.e., exerting themselves in work or play. We may depend upon it that the success of Falkenstein lies in the strictness of the method, and in little else. Fresh air cannot be too freely given and enjoined, but exercise must be kept for convalescents. The essential importance of fresh air and sunlight in the treatment of phthisis is well known, and provided for at Davos and other health resorts. The patients' bedrooms should therefore be well placed for sun and air. Nor should a liberal and delicate dietary be wanting. Competition is an excellent thing, but I shall be very sorry to see competition in *pension* prices in the Grisons. More than once I have seen *pension* in first-class hotels advertised at five francs a day. This is not progress. In a Swiss hotel, with fairly easy access of provisions, it costs four francs a day per head to feed the visitors, if it be done properly. Lodging, service, and wear-and-tear will leave but little profit out of the remaining franc. Five or six francs a day *pensions* mean, therefore, some economising upon the quality of the food. Stale or lower-class coffee, flat insipid tea, second-class bread and second-rate cooking—such small deteriorations, even if scarcely noticed by the inmates at the time, have much influence for harm. To stimulate the appetite of the invalid, food must not only be substantially clean and wholesome, but it must be interesting; it must have a dainty appearance, delicacy of flavour, and variety of dressing; its constituents must not only be sound, but of high quality; it must be skilfully cooked and never recooked. Speaking as an outsider, therefore, I do not think any visitor should seek a *pension* under ten francs a day, for I cannot see how any hotel-keeper can keep a first-rate *chef*, supply the first qualities of food, and give good bedrooms for less than this. Cheap prices mean flagging appetites and home sickness even among healthy persons who live long abroad; and far more is this the case with the ailing. Moreover, for some reason or other, dyspepsia seems to be one of the drawbacks to recovery in the Grisons. How far the prevalence of dyspepsia is an essential disadvantage of the district, or how far it may be an accidental result due to bad cookery or the like, I cannot say. But a common complaint I find among such patients is that they are kept back by recurrent stomach difficulties. We cannot forget, of course, that high prices mean in many instances the denial of climatic cure to persons of small means. But some other way of helping such persons must be found than that of lowering prices and advantages all round. The generosity of residents in the Grisons is most admirable. The hotel-keepers, the doctors, and the wealthy families who winter there all vie with each other in giving help to the needy. Were it not for the fear of paining the beneficent givers, I could name instance after instance of poor sufferers who have been thus comforted. I have heard of gifts of £50 to £70 at once being given to assist the less fortunate by individual members of the wealthier families who resort to Davos. Free meals for many months have been bestowed by residents or hotel-keepers, and a fund for helping the necessitous is always on foot and expends liberal sums. And if a sanatorium were built, all surplus accruing, after paying a proper return to the shareholders, might be used in favour of the poorer inmates. Those of us who know the Grisons well can always advise poorer patients how to reside there at the least expense, and I am violating no confidence when I say, for example, that the manager of the Maloja Hotel gave me two free tickets for next winter's residence there to be bestowed on poor gentlefolk needing the treatment, the directors having resolved to take in six cases of "clubbable" invalids free of charge. This is far better than damping down the diet and entertainment all round, so as to include a five or six francs grade.

The next point I would refer to is the duration of the treatment and its continuity. Phthisical patients seem to me to lie under two errors in regarding an Alpine cure: first, that the cure is to be rapid and decisive, like a surgical operation; secondly, that it is only a winter cure. Medical men, both at home and abroad, fail, I think, in impressing upon patients at the outset the gravity of the step they are

going to take; and in this judgment I do not spare even those who know well all the conditions of these problems. For ill-informed medical men there is more excuse; they err rather in giving advice for which they are imperfectly equipped. Still, in too many cases the patient leaves the doctor with an inadequate sense of that which is before him. He goes away with an impression that he "has a little weakness of one lung," and that he is to "run over" to the Engadine for a winter, or it may be for two winters, and thus readily put all to rights. To alarm or depress a patient is rarely wise; it is usually well for him to dwell upon the hopeful side of his malady, and to this he should be led and encouraged. Still, we may find some middle way between Micaiah the son of Imlah, and Zedekiah the son of Chenaanah. If we hold out to our people a strong hope of returning in safety from Ramoth Gilead, we must not fail, on the other hand, to explain to them that the undertaking is a very serious one. I am sure that in the end, and long before the end, it is far more disheartening to a patient to fall into error and to relapse than to go through a serious lecture at the outset. For my part, I am satisfied that in nearly all cases in which a patient consults a physician for even incipient phthisis, both he and his relatives should be given plainly to understand that phthisis is no mere disorder, but is an organic disease of much gravity; that from organic diseases man in general does not recover; that modern research and experience have, however, indicated means by which the prognosis of an organic disease even so grave as phthisis has been lightened, but that the consequent steps to be taken are steps on a dark and arduous course, which cannot be counted nor the end foreseen; that the treatment means a great outlay—to most persons a grievous sacrifice of time, money, and home; and, on the other hand, does not mean fifty pounds and a pleasant winter's holiday. To middle-class persons I begin by representing that, if seriously taken in hand, it will mean, whether by sea or land, probably from three to five hundred pounds of money, some three years of time and three years of broken-up home life; that the individual may recover with exceptional rapidity, but that of this we have no means of assuring them; that very promising cases often become very tedious in their after-course, and cases we thought at first less hopeful may deceive us pleasantly by rapid amendment; but in individual cases we have no measure of these prospects, and must promise no cheap and handy cures. If such an outlay of time and money cannot be made, neither by patient nor by any befriending him, is it not better never to name such a plan of treatment to the patient at all? It may be said, Why not give a man who can raise fifty pounds the chance of its being sufficient? Well, in my opinion it is unwise for this reason—viz., that a substantial proportion of cases of early phthisis do well on modern principles of treatment in England. By repeated visits to the Yorkshire moors, by easy massage to be learned by a wife or sister, by antiseptic atmospheres in the chamber in bad weather, and by general analeptic means in diet and medicine, I have seen so many recoveries or abiding amendments that I prefer to take my chance of such measures at home, rather than banish a patient from England with a slender purse. For phthisis is an expensive disease to catch; and the patient who has to "screw" in food, clothes, medicine, and fuel had better not think of foreign travel. Advice, like truth, must be "economised" at times. Let us, then, bring the friends always, and the patients generally, to realise that recovery from phthisis, however incipient, probably means a very costly and prolonged system of treatment, and, what is more, a steady, clear-eyed, persevering walk on the part of these patients and friends if success is to be attained. "But may not my son come home for the summer?" will many a parent say this autumn when an Engadine winter is prescribed. The answer is commonly "Yes," whether that answer be given in the Engadine or at home. It is usual to permit a return to England for the summer, partly because of the period of snow-melting, partly because the summer cure is somewhat villipended in comparison with the winter, partly because some doctors like occasionally to seem good natured. Yet how often this return to England means a relaxation of efforts and discipline, a return to damp or otherwise unhealthy districts, exposure to variable catarrhal weather or to relaxing heats and so on; and it always means a more or less sudden removal to an atmosphere of more density, more moisture, and more impurity. What a common experience it is to see patients, who have gained flesh and

(10) These tickets are not yet given away. As the offer covers one winter only, and the hotel may not open again in winter, they are fitted only for cases in preliminary or convalescent stages. I shall be glad to correspond with any medical man (only) who really needs such help for any case in his practice.

colour and lost all fever during an Engadine winter, relapse more or less after three or four months at home. Is it not unwise to talk of seeking change and amusement at home when this means at least a slackening of discipline, and probably some return of the disease? I must repeat—I cannot too often repeat—that such recrudescences do far more direct harm and interfere more with future melioration than is fully recognised, or at any rate acted on. Now when a man has had it put straight before him what “phthisis” means, even in its small beginnings, he will learn that a serious, an unflinching and a vigilant attitude is his one way of safety, and a little home sickness, some sense of tedium and some love of change must not be allowed to turn him from his long and arduous course. For my part, I think the value of the summer course in the Engadine and like high places is much underrated, and the dangers and discomforts of the snow-melting time exaggerated. Even this time may be “dodged” a little by moving to higher altitudes as the snow melts, and then as the change progresses to drop to a lower elevation for a few weeks, where the melting is well over—to such places as the hills above Montreux, for instance.

Once more I would urge upon all phthisical patients the importance of incessant medical supervision. Apart as I am from practice in Alpine health resorts, I may brush aside all scruples, all suspicions of self or class service, in saying this and in repeating it. For those medical men who do practise in these health resorts there must be a fear of a misconstruction of their motives when constant supervision seems to them more necessary than it may seem to the patient or his friends. But scruples of this kind, honourable as they are to the physician, must give way to a clear view of the need of such supervision. The patient must be kept at his best—at his best of digestion as well as at his least of pulmonary disorder. His temperature should again be scheduled whenever any sense of lassitude is felt, and the catarrhal and other varying conditions of lungs should be systematically recorded. Not only so, but the regular visits of his doctor keep up the patient's serious resolve, strengthen his will, inform his judgment and discipline his habits. And in all this lies most of the battle.

As regards the class of cases to be sent to the High Alps, I have little to add to the well-known opinions expressed by those who are best able to judge, and who have recently on more than one occasion formulated these opinions. Briefly, the persons likely to benefit are those of good physique, who bear cold well, who digest well, who are comparatively young—say not more than forty years of age at most,—and who have single cavities or limited consolidations. The matter of age is important; I have in some instances been disappointed with the results in persons over forty years of age, who otherwise—in physique, endurance, digestion, and so on—seemed promising cases. I differ from most of my brethren in my distrust of the Alpine winter in chronic pneumonic conditions, neglected pleurisies, and the like. So far as my own cases go, I have been much disappointed with the progress of these. Genuine primary phthisis, in my experience, comes round best. A greater difficulty arises when patients with more advanced phthisis desire to seek the Alpine health resorts. I have three cases now in my mind in which my opinion was given against the Alps, but which nevertheless did well there—cases of double cavities, of persistent fever and grave constitutional failure. At what point are we to step in and deny to such patients the one hope of their cure? We can have no rules for these, but must in the individual case apply our general principles as well as we can, looking especially to youth and vigour of the circulation. Nothing, however, can excuse the reckless way in which invalids are sent up to the Alps by medical men who know nothing of the country. I do not go so far as to say that a medical man should never on his own individual responsibility send a patient to any health resort which he has not himself visited, but I act as nearly as possible on this rule myself, and I think it should not have many exceptions. For my part, I only venture to break the rule in respect of health resorts to which I have sent many patients before-time with the co-operation of others who knew them personally, and from whom I had thus derived much intimate and detailed information. It is astounding to see the airy way in which a doctor who has never been out of England orders off his patients—this one to Aix, that to Carlsbad, a third to Davos, and so forth,—merely on the knowledge that the one is good for rheumatism, the second

for “liver,” the third for phthisis, and so on. In all these cases is needed not only an accurate knowledge of the precise kind of case to be sent to each place, but for nearly all is needed a somewhat minute local knowledge, which will help to indicate the most healthful and the most comfortable arrangements. Nearly all travellers have to pass through London; and when an expenditure of scores or hundreds of pounds is concerned, it is foolish to start for distant and strange places without securing the best instructions. Yet troops of patients every season are acting thus foolishly, so health resorts are discredited and the public are disappointed.

The effect of Alpine climates upon children seems to me to be as yet imperfectly understood. By children I would indicate persons, say, under the age of fifteen. For my own part, I am not sanguine in respect of these, and I have reason to suspect that in them Alpine health resorts are neither highly curative nor even highly prophylactic. It is much to be wished that physicians practising in these districts would instruct us in this matter. My own impressions are derived, I admit, from but few cases, few persons so young find their way to the Alpine places; but they come also from a general observation of young persons of all races in the Alps. Among many who are brilliantly healthy one notes not a few who seem ill-thriven or ill-complexioned. It may be that the climate is not the best for the growth and nutrition of children; certainly I think the air of the sea is far better for them. Their imperfectly developed lungs and respiratory machinery may need a denser air than that of greater elevations, and their greater relative radiation of heat may indicate a warmer one.

Finally, I would say a few words as to other health resorts of an Alpine or sub-Alpine character, both for cases of phthisis and other maladies; for I need not say these regions offer great curative advantages to many others. Pallid, ill-nourished young men and women, older men and women overworked or worn by care, cases of debility of indefinite kinds, convalescents, certain neurasthenics and sufferers from insomnia—all these and many other persons needing a stimulant to nutrition and a change of scene and thought may well find their way to these health resorts. But for most of these we may offer a large variety of choice; for them no very limited field of choice is needful. With the phthisical, however, this is otherwise. For these, after all trials, I do not hesitate to say that Davos is the best place. Many other valleys there may be which lie as well, and which are as wide for sun and yet as still from wind; but if such there are—and some I sincerely trust there are,—they are as yet undeveloped. St. Moritz Kulm runs Davos hard, and has, as I have said, the advantage of a greater elevation above the bottom of the valley, so that a small matter may lead a patient to decide in favour of St. Moritz. After these comes the Maloja, which has certain great advantages of which I will speak presently, but which for phthisis is somewhat inferior in climatic qualities. Together with Davos we must consider Wiesen. Wiesen has, I think, great advantages of position, and will become more and more sought after by the phthisical. It can never develop as Davos has done, and some invalids may find in this an additional advantage; the valley is altogether less spacious, and is lacking in extent and variety of level ground for walking. Still, in Wiesen there is ample room for many times its present number of visitors; M. Palmy's hotels are said to be comfortable, and my friend Dr. Fearn has decided to take up his residence there, so that patients who wish for a quiet place and simple inexpensive entertainment could not do better than go to Wiesen. Davos, Wiesen, and St. Moritz are, then, the trinity of resorts for the definitely phthisical at present, and there is no great choice to be made between them. For general invalids, not phthisical, or for convalescents from phthisis, there are many other good Alpine resorts—at any rate, in summer. In winter the Maloja Hotel offers great attractions. Its inferiority of position to the three former places for phthisis must be admitted, but this inferiority, I suspect, is not very serious during the months of winter, when winds rarely arise. A patient actively phthisical, and whose state makes it imperative to take every precaution, must go to Davos, St. Moritz, or Wiesen; but those whose recovery is well advanced, and the whole army of non-phthisical patients who simply need general restoration of health, may well go to Maloja. To such persons the Maloja Hotel offers peculiar advantages. The splendid reception rooms; the admirable system of heating and ventilation; the excellent management; the cuisine; the general comforts,

which, even when judged by us after more than a fortnight's enjoyment of the well-known hospitalities of M. Saratz at Pontresina, received our most favourable verdict; the amusements liberally provided for the guests; the advantages of medical attendance; the ready approach to it by way of Italy, and the ready descent to the Italian lakes or the Riviera for change or interlude—all these advantages make Maloja invaluable as a general winter sanatorium. To those who have to live for weeks in a foreign hotel, as a distinguished Englishman said to me who had spent ten weeks at the Maloja, a number of handsome and spacious rooms and large corridors are not only airy and wholesome, but also a source of pleasure to the eye and of variety to the mind, and they prevent the time from hanging so heavily as it may do in the one relatively small saloon of an ordinary hotel. I need scarcely say that I have no interest in the Maloja Hotel direct or indirect, save that general interest which we all must have in the prosperity of a great means of cure. So little advantage, however, has been taken hitherto of the winter season of the Maloja that the owners have decided to close it after this winter unless the numbers largely increase. This, I think, would be almost a calamity, for I am sure the place has but to be better known to secure a large winter population of travellers for health, recreation, and amusement. Equally or more accessible is the pleasant winter house at Grindelwald, lately built by the well-known Boss family. This house is spacious, and well warmed and ventilated, and a very agreeable company is to be found there in January, February, and March. Grindelwald, however, is not suitable for cases of phthisis as a rule, and the great mass of the Eiger intercepts much of the sun in the earlier winter; but in the second half of the winter visitors needing a rest in tonic air, or needing only a delightful holiday, will find themselves very happy and well cared for at the Bear. A large number of invalid, delicate or elderly persons find these Alpine resorts too cold, but, on the other hand, find the Riviera too warm and relaxing, its climate too exciting or its treacheries of wind and sun too trying. Many such patients I send up to Grasse, and with much advantage. But I think we ought to hear more and to learn more of the Italian lake country in winter, where, I believe, many patients of an intermediate class could derive more benefit than from either of the two former regions. To my regret, I find year after year that I cannot spare time in winter to visit these parts and test their qualities for myself. I have, however, during repeated autumn visits learned many particulars of the winter climate from disinterested persons and from private residents. Unfortunately the hotels there are built for summer visitors and for summer pleasures, and are therefore built near the water. There are, however, beautiful and sheltered sites on higher slopes where hotels could be built for winter and spring visitors did the demand arise. Como is a little too narrow and mountainous for safe spring weather, but in or near Varenna sites for charming winter quarters might perhaps be found. Pallanza, on Lago Maggiore, is well known, and both the Grand Hotel and the Garoni are more raised above the water than are Cadenabbia, Bellagio, or Ville d'Este on Como. The large hotel at Locarno is one of the most comfortable in Switzerland, and is well up on the slopes, but I can never get rid of a sense of distrust of the great delta of the Maggia, which lies not very far below it. Perhaps, as agreeable winter climates, the best resorts would be Pallanza, on Lake Maggiore; and Salò, Gardone, or Gargnano, on Lake Garda. The Bay of Salò is delightfully situated; the lake scenery is perhaps the finest in North Italy; and the hotels at Salò and Gargnano, though of the second class, are by no means bad. At Salò the lemon-tree grows freely, and this tree is perhaps the best test of climate in Europe. I cannot but believe that, were these places better known, they would attract many visitors in winter and spring. As the springtime opens, the excursions up the valleys, which are of grand and exquisite beauty and flowery as gardens, would be full of charm and enjoyment.

The reader will, I trust, accept these rough notes as they are—as disjointed reflections, dotted down at odd moments while travelling in Switzerland and North Italy. Some of the points here incidentally raised may receive a more careful handling on some future occasion, either by myself or by others more competent to treat them.

THE VALUE OF ANTISEPTIC PRECAUTIONS IN INTERNAL URETHROTOMY.¹

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WHEN a stricture which has been for some time subjected to dilatation becomes gradually more and more resilient, the catheter is at last so often required that both the patient and the surgeon are only too anxious to adopt some further and more efficacious treatment. There is no operation which is apparently so simple in performance, or so speedy in its results as internal urethrotomy; but, with all its advantages, this operation has never been universally accepted by surgeons, and it is not very difficult to discover the reason. It must depend either upon the immediate dangers of the operation itself, or upon the uncertainty which attends its ultimate results. To both of these considerations must be credited a share of its disfavour.

Let us briefly consider the second objection first. It is urged as an objection to internal urethrotomy that cases in which it has been performed afterwards come under treatment on account of the results of the operation being unfavourable. Is this a fair objection to the operation? I confess that I do not think so. As well might we object to dilatation because it requires to be repeated oftentimes for years. So good a surgeon as Mr. Reginald Harrison, who has had a large experience in urethral surgery, states his objections to the operation in the following words: "Some of the worst cases of stricture that I have had to treat have been those where internal urethrotomy has been performed."² If we consider for a moment the conditions of a urethra which is about to be submitted to internal urethrotomy, we shall at once see the fallacy of such a statement. Had anyone proposed to treat all strictures or even the great majority by such an operation, there would be good reason for such an outcry. But it is only the worst cases which are ever submitted to the operation, and unless it is followed by careful dilatation at the time, and by regular instrumentation afterwards, a rapid recontraction is sure to occur; and instead of an enlarged urethra with an easy and manageable stricture, contraction again ensues, and the "cicatrical splice," as it has been termed, instead of being gradually in great part absorbed and remaining easily dilatable, becomes the seat of fresh inflammation, and gives rise to those cartilaginous cicatrices which are too often looked upon as a necessary accompaniment of internal urethrotomy, instead of being an untoward result of its gross mismanagement by the patients. Hence it is that amongst private patients internal urethrotomy yields much better results than it does in hospital practice.

The other objection to the operation is based on the serious constitutional disturbances which are liable to follow it, and from the fact that in some cases death may result from it. I will again quote Mr. Reginald Harrison's remarks on the subject. Speaking of the operation, he says: "To divide a band of cicatrical tissue which narrows the urethra down perhaps to the size of a pin's head, so that in a moment it will permit the introduction into the bladder of a full-sized bougie, and at the same time be conscious that this can be accomplished with the same precision as if done on the external surface of the body, seems at first sight to offer the most rational method of treating this affection. And so undoubtedly it would prove to be were it not open to two objections, which to my mind weigh seriously against this proceeding. These are: first, that the operation is almost invariably followed by the development of rigors and fevers, which in some instances have proved fatal when least expected; and, secondly, because the operation has not been followed by permanent benefit." With this latter objection we have already dealt so far as it concerns us at present. Let us turn to the first objection, and consider if there is no means of obviating the rigors and rise of temperature.

Why is it that such an operation should be followed by such dangerous and even fatal symptoms? Though I am

¹ Read before the Harveian Society, May 17th, 1888.

² Surgical Disorders of the Urinary Organs, third edition, p. 3. Churchill, 1887.

not inclined to condemn the ordinary operation of internal urethrotomy as severely as does Mr. Harrison, yet I can confidently assert that I know of no operation in the whole range of surgery which, as ordinarily performed, is at the same time so slight in character and so severe in its results. By many surgeons the rigors and rise of temperature have been ascribed to a nervous fever or to other vague causes; in other words, they have been supposed to belong to the urethra, and to be a special property of it. But they do not occur after all operations on the urethra. It is rare to have a considerable rise of temperature or rigor when a stricture has been treated by external urethrotomy; indeed, although I have witnessed and performed a considerable number of such cases, I have never come across one in which a moment's anxiety for the patient's life ever crossed my thoughts. The dangers of internal urethrotomy are exactly the same as the dangers of catheterism, only they are increased ten-fold, nay fifty-fold. They depend solely on the liability to the introduction of poisonous matter into the patient's body at the time of the operation, and, as we shall see shortly, this condition can be readily counteracted, so there is no reason why operations on the urethra should not be as free from danger as are those on other parts of the body. The truth of this statement admits of proof both clinically and as the result of experiments. But, in the first place, it may readily be conceded that it is quite possible to find a source of infection in the patient's own body, as the following case will prove.

A few months back I was asked to see a case in which there had been stricture with retention. To relieve the immediate and urgent symptoms a catheter was passed and tied in, causing, as is often the case where the urine is prone to decomposition, a slight attack of urethritis. The catheter was withdrawn after forty-eight hours, and micturition was sufficiently free to dispel all anxiety on that score. Two days later, as a preliminary to further treatment, the patient being still confined to bed, the orifice of the urethra, which was much contracted, was divided with a bistoury. A few hours after this a rigor supervened, and complete suppression of urine, with vomiting, a temperature rising to 104°, a furred and dry tongue, and a pulse of over 120. When the suppression had already lasted for nearly thirty-six hours, I saw the patient for the first time; there was still some purulent discharge from the urethra, and it was tender to the touch in parts. A hot bath and a purge had already been administered; I therefore ordered half an ounce of the infusion of digitalis and wet cupping to the loins, to the extent of not more than two ounces. Twenty-four hours later the urine had again passed in full quantity, and the patient, though weakened by his attack, gave no further cause for anxiety. It is exceedingly rare to find any untoward symptom follow the division even of a penile stricture, but the incision of the urethral orifice is usually regarded, and with good reason, as absolutely free from danger. I have mentioned the case, however, not on account of its danger, but as an instance of the importance of not neglecting the condition of the patient's urethra at the time of operation. Had the urethra been thoroughly irrigated previously with a weak solution of sublimate (1 in 2000, or even weaker), the chances are that all would have passed off well, and the incision of the orifice have turned out to be absolutely innocuous.

The experimental side of the question has recently received great attention at the hands of Bouchard, by means of experiments on the lower animals, and his views on the toxic properties of certain constituents of the urine have been largely adopted by Mr. Reginald Harrison.

On the other hand, there is ample evidence of a clinical nature to show that healthy urine is not, even in the peritoneum, a noxious fluid until decomposition has had time to take place. If a kidney or bladder is ruptured and the urine finds its way into the peritoneum, some hours, at any rate, may elapse before acute symptoms set in; and if the urine is in the meantime removed, and its further escape from its normal channel is prevented, complete recovery may take place.

Now, whilst I will readily admit that there are instances in which self-infection takes place after internal urethrotomy, it is (as, I think, the following cases will show) at least far more likely than in a great many instances it is the instrument which is at fault. Whatever the form of the urethrotome, there are many corners and crevices in which putrid urine may lodge, and which, unless the greatest possible care be used, can never be thoroughly and effectually

cleaned. And there is a still further source of infection in the catheter which is passed after the urethra has been divided, more especially if it is allowed to remain for any great length of time in contact with the urethral walls.

For several years past I have been gradually coming to the conclusion that most, if not all, febrile attacks after internal urethrotomy are as readily preventable as after any other surgical procedure, provided cleanliness and good drainage are always ensured, and the wound is so handled as to prevent absorption of decomposing or decomposable urine from taking place. These precautions are carried out as follows. 1. The urethra is rendered as pure as possible by previous irrigation, and for several days beforehand, both with hot water and also with corrosive sublimate (1 in 2000). If there is any reason to suspect advanced kidney disease, or the urine that passes should be very foul, the stricture must be previously dilated a little temporarily so as to allow of a freer discharge of urine and to get it into a more healthy condition. I have come across more than one case in which, from the condition of the urine and the general aspect of the patient, I have selected external urethrotomy as the more preferable and safer operation. 2. The instrument which is to be employed should be taken to pieces and carefully scrubbed in soda-and-water, and soaked in carbolic acid (1 in 20) for at least ten minutes before the operation, and only put together at the last moment just before it is to be used. 3. When the urethra has been freely divided, a full-sized catheter should be passed into the bladder and retained there for twenty-four hours. The advantages of retaining a catheter are several: the wound is protected from contact with the urine, because the blood clots round the instrument at the site of the incision; and for the first twenty-four hours usually no urine trickles round the catheter, as it invariably does if it is retained much longer; any tendency to hemorrhage is checked, and the edges of the wound are prevented from uniting by first intention. The catheter which is used for this purpose should either be a new one or should be allowed to soak in carbolic acid (1 in 100) for at least twelve hours previous to the operation. If a much stronger solution of carbolic is used, even for a short time, the rubber will be rendered rough on its surface, and so prove a source of too great irritation in the urethra.

I have treated fifteen cases by this method, and I know of some four or five others in which the precautions that I am advocating have yielded excellent results, so that twenty cases at least have been successfully carried out on this plan. With these precautions, I have generally, I think I may say invariably, employed a Teevan's urethrotome, and the strictures which I am referring to have in all cases been situated in deep urethræ. In one or two instances, as will appear when these cases are considered individually, there have been anterior strictures in the penile urethra as well. In these cases the anterior strictures were divided on a separate occasion, either with a bistoury or with an Otis urethrotome if they were beyond the reach of the knife. I have not included the results of the division of these anterior strictures in my paper, for two reasons: firstly, because it is generally admitted that the division of these strictures is rarely if ever attended by any severe sequelæ; and, secondly, because I preferred to take the series of cases of stricture which were all located in about the same part of the urethra, hoping by such means to establish with greater ease the need for and the value of some such precautions as I have just alluded to. The following are the notes of some of the cases to which I am referring:—

CASE 1.—A. L.—, aged forty-four, came under my care at the West London Hospital in March, 1884, stating that he had suffered from stricture for some five or six years. His urethra was carefully examined with bougies à boule, and with an Otis urethrometer, with the following result:—The orifice admitted No. 11 English catheter; at 1½ in. the urethra was constricted to No. 8 English; at 4 in. the stricture admitted No. 9 English; the deep stricture would not admit No. 4 English. On March 20th the anterior strictures were divided with bistoury and urethrotome, but no catheter was retained; the bleeding was insignificant. For several days afterwards a full-sized bougie was passed daily down to the bulb, so as to prevent the edges of the strictures from again uniting at once. A week later, the deep stricture was still in the same condition, but the patient was desirous of leaving the hospital for a short time, and it was arranged that he should come at intervals for

dilatation. In May of the same year he was again admitted, as but little progress had been made with dilatation, though he had attended weekly. No. 5 English catheter was passed into the bladder, but the urine was thick, and often foul and ammoniacal. Under these circumstances I tried continuous dilatation, and tied in No. 5. His temperature rose the same night to 100·2°, and he had a rigor, so that the catheter was withdrawn a few days later; his bladder was washed out as well as it could be through so narrow a urethra, and this process was repeated for several days until the urine was sweet. The urine was then withdrawn, and some boracic acid (fifteen grains to the ounce) injected into the bladder and allowed to remain there for several hours. The contents of the bladder were again withdrawn, and two more ounces of boracic acid introduced immediately before the operation. The stricture was divided, though not without difficulty, as it was very tough and resistant. A No. 13 English catheter was then introduced with ease, and the bladder well washed out with hot water and then with boracic acid, after which No. 13 was tied in for twenty-four hours. The temperature rose the same evening to 99·4°, but fell the next day to 98·6°, and did not rise afterwards. At the end of a week he got up, a catheter having been passed on the sixth day, and a few days later he left the hospital. I saw him six months later in perfect health, and cautioned him to pass a No. 12 catheter, with which he was furnished, once a fortnight.

CASE 2.—E. T—, aged forty-seven, was sent to me by Dr. Jeken, of Eltham, to see if the stricture could be treated by electrolysis. He first came to me in August, 1886, stating that he had had a stricture for more than twenty years, and during the last three had rarely micturated excepting through a catheter, usually a No. 4 English. On Oct. 3rd, 1886, I commenced the treatment by electrolysis of his stricture, which was situated a little over three inches from the urethral orifice, and was nearly an inch and a half in length. I felt doubtful as to the result of electrolysis in so severe a stricture unless the patient would consent to lie up for some period. This he was unable to do, and so I advised him, after a few sittings with electrolysis, to submit to internal urethrotomy. On April 15th in the same year I divided the stricture freely, and, after washing out his bladder well, tied in a No. 12 English catheter for twenty-four hours. He had no rise of temperature at all, and the urethra, which had been tender to the touch and very much thickened previously, gradually became less so.

CASE 3.—E. C—, aged thirty-five. This man came under my care at St. Bartholomew's Hospital in April 1887. He had been suffering from a stricture for some years past, and I had divided his meatus a year or two before. He had only one stricture—viz., in the deep urethra; but whenever attempts had been made previously to dilate it, they were always attended by considerable rise of temperature—at least, so it appeared from his history, as he said he was always very ill, and had the shivers when a catheter was tied in. The deep stricture admitted No. 2 English catheter. As he was very anxious to get away again as quickly as possible, I divided the stricture forthwith, washed out the bladder thoroughly with sublimate solution (1 in 3000), and afterwards with hot water at a temperature of 105°. No. 12 black catheter of the English gauge was tied in for twenty-four hours. Three days later he left the hospital, coming back to have an instrument passed at intervals.

I have referred specially and fully to these three cases, because two of them were attended by rise of temperature after catheterism previous to the operation of internal urethrotomy; and yet no rise at all took place in one, and a very insignificant one in the other. In the third case the stricture was of unusual severity, and the same good result was produced by the operation. It would be tedious to go *seriatim* through all the symptoms, course, and treatment of the remaining twelve cases individually. It will, I think, suffice if I say that I have never but once had a rigor after these operations, and that was not attended by any severe constitutional disturbance, and even in this case the temperature only rose to 101·4° on the second evening after the operation, and had fallen by the following morning to normal, whilst the patient was up and about five days later.

From such results as these, I may reasonably claim that internal urethrotomy should no longer be regarded as a dangerous operation. With so many possibilities for danger around, when incisions are made into an unhealthy urethra, it is impossible to claim for such operations as these, or,

indeed, for any others, an absolute immunity from danger; but, at least, it appears to me to be clear that, when a rigor and rise of temperature supervenes some few hours after urethrotomy has been performed, perhaps just after the first attempt at micturition had taken place, the constitutional disturbance which follows must be ascribed to septic poisoning from the urethra, and not to obscure nervous influences over which at present we have no complete control.

Harley-street, W.

ON THE OCCURRENCE OF PYREXIA, SHIVERINGS, AND PYÆMIA IN CASES OF MALIGNANT DISEASE.

By JAMES FINLAYSON, M.D.,

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WE are in the habit, and no doubt rightly, of thinking of malignant disease as characterised by an absence of pyrexia. On the other hand, in inflammatory affections we look for a more or less persistent elevation of temperature, and when suppuration occurs rigors are of great diagnostic importance. In many cases of swelling or tumour in the abdomen, we are often at a loss to know whether the disease is malignant or inflammatory, and in doubtful cases we are naturally inclined to hope, from the presence of feverishness, and especially from the occurrence of rigors, that we have to do with an inflammatory affection going on to suppuration. No doubt the occurrence of feverishness may be explained away by the presence of some intercurrent inflammation appearing in the course of the malignant disease; and towards the end of the case, just before death, this is all the more likely to happen. Or it may be that some accident at the beginning of the case determines the occurrence of rigors, as these seem especially liable to occur in abdominal affections. Thus in the case of a gentleman affected with intestinal obstruction, due to an epithelioma in the descending colon, whose illness I watched with the greatest care and anxiety during a prolonged and fluctuating course, the very first symptoms were those of a feverish attack, with pretty high temperature, closely resembling the onset of enteric fever, without, at that time, either local pains or any intestinal symptoms. This feverish illness lasted from Nov. 6th to the 13th; after this he was supposed to have recovered pretty well. But on Dec. 9th he had a rigor and began to have sickness and vomiting, with abdominal pains; indeed, this was the first of his series of attacks of obstruction of the bowel, which culminated in his death on March 3rd. Yet in this case we found nothing, even at the post-mortem examination, to explain the feverish symptoms or the rigor; the preliminary feverish attack was doubtless in some way connected with the epithelioma, and the rigor was no doubt due to the sudden obstruction. With such a history of the onset of the illness, one was naturally led to think of inflammatory disease, although in the course of the case the cancerous theory was the one adopted.

I have seen, in the Western Infirmary, a case of hepatic disease with feverish symptoms, and with bulging or swelling of the liver to such a marked extent as to lead the surgeon in charge of the case to perform an exploratory operation in hope of finding an abscess; when, however, the liver was exposed malignant deposits were seen in the liver, and these were found at the post-mortem examination to be secondary to a large sloughing ulcer of the stomach, with an affection of the pre-vertebral glands.

A more striking case of persistent pyrexia associated with jaundice was lately seen by me, when it was operated on by my colleague, Dr. Hector C. Cameron, at the Western Infirmary. The man had been transferred to his care from one of the medical wards to have his gall-bladder opened, as it was hoped that the obstruction might be due to a remedial condition. The fever had been very persistent for about ten weeks, of a remittent type, often reaching 102° F. or more, but not associated with rigors. The operation was performed on Dec. 5th. The gall-bladder was found to be much distended, but no stones were present, and

it seemed, on exploration with the finger, as if some deep-seated obstruction to the duct existed. On examining the liver after its exposure, a nodule exactly resembling the one referred to in the last case seemed to me conclusive as to the cancerous nature of the affection. The immediate result of the operation was favourable; the patient felt relieved, and the temperature fell, at first at least, very distinctly. The subsequent course, however, showed a recurrence of the feverish temperatures, which repeatedly reached 102° or 103° . The patient died with extreme emaciation on March 14th, and Dr. Adam, who had charge of him as resident assistant in the Western Infirmary, made the post-mortem examination at the work-house, to which he had been removed. A cancerous ulcer was found in the duodenum at the orifice of the duct, the pre-vertebral glands were involved, and numerous nodules were found in the liver. The only other sign of disease likely to cause feverishness was the presence of vegetations on the mitral valve and two hæmorrhagic infarctions in the spleen. In this case, before the operation, the presence of notable fever, persisting for many weeks, was regarded by some as telling strongly against the theory of malignant disease, and the absence of shiverings seemed to suggest some other explanation for the febrile symptoms than mere distension of the ducts of the liver from pent-up bile. The event, however, proved that the illness was due to malignant disease, and, even allowing for the influence of the vegetations and of the infarctions on the temperature, the greater part of the fever course seemed clearly due to the cancerous affection or its immediate results.

In a case seen with Dr. Campbell, of Shawlands, I made the error of supposing that we had to do with an abscess in the kidney, while the event proved that the swelling was a malignant tumour of the bowel near the cæcum. The case was confessedly obscure: the gentleman was fifty-four years old, and there was an account of an injury to the abdomen in the month of December, a little below and to the right of the umbilicus; this was not associated with bruising, but there had been pain in the region after it. In February he was seen by one of the leading surgeons in town, and although nothing could be felt in the abdomen, the possibility of an abscess, perhaps in the region of the cæcum, was entertained. Before I saw him for the first time, on March 31st, he had been kept in bed, and blisters had been applied for the pain; for three weeks the patient had felt a lump, as he supposed, in the right iliac or lumbar region; but Dr. Campbell had only been satisfied of its presence for two or three days, although by the time I saw him it was perfectly plain. The tumour extended round to the back, and seemed to have a rounded anterior edge; it could be lifted up by the hand behind and felt by the other hand in front, very closely resembling what one feels in the case of an enlarged kidney with the pelvis distended with pus. There was no general hardness around this swelling, no great tenderness, and no implication of the psoas muscle; and if it were an abscess, it seemed to me to be one within the capsule of the kidney. The difficulty in accepting this diagnosis was that there was no pus in the urine, and, indeed, no history of urinary symptoms. But, equally, there were no symptoms of intestinal obstruction, no constipation, and no vomiting. In favour of the abscess theory was the presence of feverishness, the temperature ranging from 99° to 101° ; and there had been, apparently, a slight shivering at the very beginning of the illness in December, soon after the injury. It was agreed to watch the temperature and the urine with special care, and when I saw him again in a week it was reported that he had had a rigor on April 3rd; he was still feverish, and the tumour seemed larger and more painful, and even looked as if about to point above the crest of the ilium. I recommended a surgical exploration. Dr. Alex. Patterson saw him on April 11th, and, supposing it to be an abscess of or near the kidney, he arranged to open it next day; but, on arriving, the patient was found so sick and ill that operation was adjourned; vomiting and hiccough had come on, and for the first time the bowels were confined. These symptoms subsided somewhat on the 13th; a cannula and trocar were thrust into the swelling, but nothing was obtained, and so its malignant nature was suspected. The patient passed blood from the bowel nearly daily after this operation, but there were also some fæces, showing that the obstruction was not complete, and by and by the hiccough and vomiting stopped. Meanwhile the tumour remained as before, and in the course of a month

a portion in the middle of the tumour seemed as if it were pointing; and as another rigor occurred on May 14th, it was thought that there might, after all, be some abscess which the trocar had not reached, and so Dr. Patterson made an opening into the tumour and found a malignant growth of the ascending colon. The patient died a week later. There was no post-mortem examination. For ten days before death Dr. Campbell found the liver becoming much enlarged and painful, so as to suggest mischief there, but there was no great elevation of temperature. The nature of the hepatic mischief, whether abscess or malignant deposits, must remain uncertain.

In the next case, I again made the mistake of strongly suspecting an abscess in or near the kidney, the tumour proving on post-mortem examination to be a malignant growth in the descending colon. Here, also, the diagnosis of renal abscess was rendered doubtful by the absence of pus in the urine; and, indeed, there were few urinary symptoms in the case. Mindful of the last case, I was aware that a malignant tumour of the bowel might resemble closely the characters of an enlarged kidney; but, looking at the case from the practical point of view, it seemed wrong to let the lady die, as seemed almost inevitable from the time I saw her, without some attempt being made to reach the abscess to which the symptoms pointed so strongly.

Miss M—, a lady forty-seven years of age, had been in failing health all the autumn, and had suffered pains in her abdomen, of an obscure character, supposed at first to be uterine or ovarian, but on examination this was not confirmed. Subsequently a swelling in the left lumbar region was detected, and the ideas of a splenic tumour or of a malignant growth in the peritoneum were discussed; the notes of her case at this time (December, 1887) showed distinct and persistent feverishness (about 100° or 101°), with occasional exacerbations to 102° or $103^{\circ}5'$. One of these exacerbations at least seemed susceptible of explanation from a pleuritic attack. Subsequently she became very persistently feverish, the temperature ranging from $100^{\circ}5'$ to 104° , with profuse sweatings. In the course of April she became worse, and for three or four weeks rigors, with great elevation of temperature, occurred every two or three days, or every day, or occasionally twice a day. There was nothing found on the examination of the patient, when I saw her first on April 28th, to account for the symptoms, except a perfectly obvious tumour in the left loin, which seemed to have most of the characters of an enlarged kidney, as it extended to the back towards the spine, and it could be lifted up towards the front with a distinct impact; it was not clearly fluctuant, and it was not specially painful; the psoas muscle was not involved. During the few days she was under my observation she had repeated rigors of great intensity, followed by profuse sweats; the complexion was dingy, and the weakness very great; the appetite gone, and food taken with difficulty. The symptoms pointed to abscess, and I thought it must be a renal (or a perinephritic) abscess, for, although there was no pus in the urine, the ureter might be blocked, and so intensify the symptoms of abscess. There was but little in the previous history to point to the kidney, except occasional difficulty in passing urine, and on one occasion, as supposed, an attack of renal colic. But it was not clear what else it could be; for it was evidently not splenic, and there was only slight increase of the white corpuscles. There was also a complete absence of any signs of intestinal obstruction, and no constipation—rather, indeed, occasional diarrhoea. At my request, Dr. Hector Cameron explored the tumour with an aspirator on May 3rd, but no abscess could be found, and its malignant nature was at once realised. She died in the course of the next day, and the post-mortem examination was looked forward to with much curiosity. This was made by Mr. Mayland in our presence. The tumour felt proved to be an epithelioma at the splenic flexure of the colon, without any great interference with the calibre of the bowel; there was a mass of ragged ulceration. The spleen, kidneys, and lungs were practically normal. In the liver, however, there were very numerous minute deposits of pus, quite of the type of pyæmic multiple abscess, but unusually small. The head was not examined, but no special cerebral symptoms existed during life. In this case, therefore, we had in the presence of pyæmia an explanation of the violent rigors, with which the symptoms agreed well enough, if we had known the origin of the pyæmia. This seemed clearly to be the ragged, ulcerated surface in the intestine. But although the minute

abscesses in the liver might readily explain the rigors at the very end of the case, we could scarcely think of their being there to cause rigors recurring frequently for the last three or four weeks of her life, and the presence of the pyrexia, dating at least from December—that is, five months before her death,—was probably dependent on the growth of the tumour. The paroxysm of fever in December (103.5°) may have been due, as was supposed, to a pleuritic attack, and this may have been of septicæmic origin, although no notable trace of it was found at the post-mortem examination.

In view of these cases of pyrexia and rigors complicating malignant disease, I requested Dr. John Love, one of my clinical assistants, to search the records of my cases at the Western Infirmary, as I was aware that I had repeatedly seen pyrexia in the course of such illnesses, and occasionally some rigors also. He found about fourteen cases entered as malignant disease in the abdominal organs, characterised by more or less fever. Some of these were not verified by post-mortem examination; some of them were too complicated to throw light on this inquiry; some of them presented possible explanations of the terminal pyrexia, or even of the rigors, in various inflammatory complications, as evidenced by turbid fluid in the peritoneum or pleura. As a rule, the fever was moderate, only ranging from 100° to 101° F., although occasionally the temperature might be a degree higher, but seldom up to 103°. Such cases seem to confirm the view I had long ago arrived at, that rapidly growing or rapidly diffused cancers were often associated with a distinct but moderate pyrexia.

In one case we had, as in Miss M——'s case, distinct pyæmia. The patient, a man aged thirty-nine, had cancer of the head of the pancreas, with deep jaundice, obstruction of the common bile duct, and tumours in the liver, this organ weighing 117 oz. The temperature was at first normal, but for twelve days before death the morning temperature ranged from 100° to 102.4°, and the evening temperature from 101° to 104.5° or 105°. During life, some explanation of this was afforded by the very sudden appearance of an abscess near the ear, and of another in the buttock; there was also an enlargement of the thyroid. At the post-mortem examination, this enlargement of the thyroid was found to be due to an abscess; and, in addition to the abscesses in the neck, we had multiple abscesses in the kidney, an abscess in the prostate, and in the sterno-clavicular articulation. The right lung showed also evidences of grey hepatisation. The malignant tumour had infiltrated the wall of the intestine, but had not extended into it, and there was no ulceration in the bowels. There were two little nodules of the malignant growth in the portal vein. Special search was made at the examination for any ulcer or any other source of the pyæmic infection, but none could be found.¹

From a survey of the facts here adduced, we may consider: (1) That in the course of malignant disease, and even early in the case, we may have distinct but usually moderate pyrexia of the remittent type; (2) that occasional rigors may occur in such cases, without any evidence of inflammatory complications; (3) that the terminal phase of malignant disease may present higher degrees of pyrexia, or even rigors, due to inflammatory complications, which may be regarded as, in a sense, accidental; and (4) that in cases of malignant disease rigors and pyrexia of the pyæmic type may occur with the formation of multiple abscesses.

Glasgow.

GROUPED COMEDONES.

By GEORGE THIN, M.D.

THE first and, indeed, the only published notice of the occurrence of comedones in special groups of which I am aware is the observation recorded by Dr. Radcliffe Crocker in THE LANCET of April 19th, 1884. Dr. Crocker had observed that, whereas comedones have been considered to be an affection not usually seen before puberty, the condition occasionally occurred in children. He found that they were seated on the upper part of the forehead, the corresponding part of the occiput, and on the temples and cheeks in young children and infants. He states that they were found "grouped," giving the part a very dirty and sometimes black appearance. Dr. Crocker attributes the

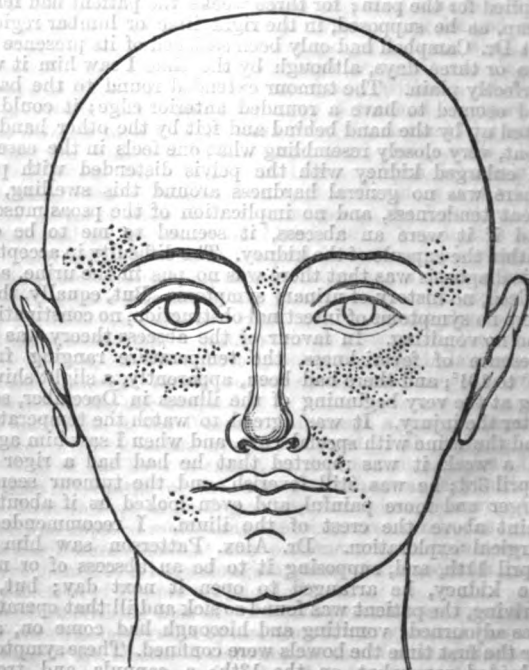
condition in these cases to warmth and moisture. This condition of grouped comedones is, however, not confined to children and infants. It is, indeed, recognised by authors¹ that comedones occur both regularly disseminated and in groups, yet I have found nowhere a description of a class of cases occurring in adults which I am disposed to think are by no means very rare. In these cases a well-defined tract or tracts of the skin of the scalp or face, or both, become the seat of a profuse development of comedones, so profuse that at a distance of a few yards a person so affected presents the appearance as if a piece of charcoal had been applied to the part. There are present to my mind three cases which I have had myself occasion to observe, and of two of which I have had sketches made.

The first case to which I shall refer, and of which I have had no sketch made, was that of a healthy, active, energetic man in the prime of life, who in every other respect presented the appearance of perfect health, and who considered himself as being perfectly well. In his case, on both temples, and advancing from the temples to the upper part of the cheek, a patch of skin was thickly sewn by comedones of rather small size. On casual observation, the impression was given that he had somehow dirtied this part of his face very much—as he himself said, as if he had rubbed his temples with a dirty glove. The appearance lasted over a period of many months, proved at first very rebellious to treatment, but afterwards yielded to appropriate measures, such as those which I shall describe further on.

In the second case, which I describe from a drawing made at the time, about two years ago, in an elderly man, a thickly set patch of comedones occupied the skin over the malar bone and outward towards the ear. A small group was situated on the temple, and a few still smaller groups on the sides of the forehead close to the ear. An isolated group occupied the centre of the fossa of the helix of the ears. A small group was found behind the ala of the nose, a situation in which comedones are common, and, in this case, would probably have passed comparatively unobserved had it not been for the condition of the other parts of the face.

The third case was observed by me on July 2nd of this year. A young man twenty-six years of age, in perfectly

FIG. 1. aged head of John Crocker.



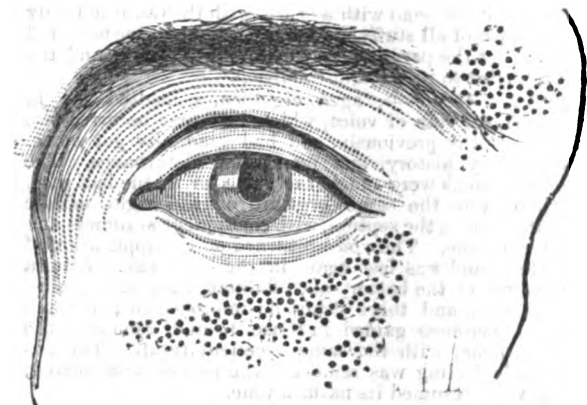
good health so far as his own sensations were concerned or could be detected by careful examination, was disfigured by what at a little distance seemed patches of dirt on the upper and inner parts of both cheeks, on the temples, and slightly on the lower part of the face. Close inspection showed that these dirty patches were caused by groups of come-

¹ MS. Pathol. Reports, Glasgow Western Infirmary, vol. v., p. 860.

¹ Kaposi, 2te Auflage, p. 176.

done. The most prominent groups were those on the upper and inner parts of the cheeks, but the others were all well marked. The position of these groups is shown in Fig. 1, which is of course no portrait, but a simple outline figure which I have used to show the position of these groups. Although the man was young, there were rather deeply cut lines in the usual situation between the fleshy parts of the cheek and the upper lip. In one of these lines—viz., that of the left side—a linearly arranged group of comedones extended from the ala nasi to beyond the level of the corner of the mouth, as is accurately depicted in the figure. In the corresponding line on the right cheek there were none present. The position of these groups is clearly shown in the figure, but the size of the comedones is not given in proportion. In order to show more accurately the size of the individual comedones and the closeness with which they are grouped, I have had a drawing engraved showing the groups on the left cheek and on the left temple. (Fig. 2.) Although in this figure the arrangement of the individual comedones does not pretend to absolute accuracy of detail,

FIG. 2.



it yet shows approximately the number and arrangement, while as regards the size of the individual comedones it may be taken as accurate.

The importance of this affection is entirely in its disfiguring effects. Ordinary comedones are, as many afflicted young persons are too ready to admit, by no means improving to the appearance, but grouped comedones developed to such an extent as those shown in these figures become a decided deformity, giving rise to no little worry and unhappiness to the person who is the subject of them. The extent to which this worry is developed depends of course a good deal upon the individual, but the most indifferent to personal appearance cannot help being rendered more or less unhappy by being compelled to constantly present the appearance of a daubed or unwashed face. Although a careful examination of all the latest works on dermatology has failed to discover a clear or well-marked description of this curious affection, I by no means consider that it can be very rare, and I shall be surprised if the publication of this short paper, and more particularly of the figures which illustrate it, does not lead to notices of similar cases. Probably it occurs amongst many persons who have not considered it necessary to consult a medical man regarding it. In two of the three cases which I have related I extracted a number of comedones and subjected the sebaceous plug to careful microscopical examination, but failed to find that it differed in any way from the similar plug which can be squeezed out in any ordinary case of comedo.

The treatment of this affection consists in stimulating applications to the skin. The circulation over the affected parts should be roused by friction with soft soap and the application of sulphur ointment. Friction with soft soap once in twenty-four or forty-eight hours, according to the susceptibility of the skin of the individual, and rubbing in at bedtime of the sulphur ointment, will, if persevered in sufficiently long, probably be found to effect a cure. When too much congestion or inflammation of the skin is produced, the treatment should be intermitted, and a soothing application of zinc ointment made for two or three days. Of course, other means might be taken which would in some cases be more convenient, so long as the end to be

attained is kept in view—namely, that of stimulating or rousing the skin to more tone and to more active circulation.

Persons of a speculative turn of mind will have no difficulty, on looking at Fig. 1, in developing plausible and more or less ingenious hypotheses as to the cause or causes of this peculiar grouping. For my own part, I do not hesitate to confess my ignorance on this point. The question is certainly an attractive one. Why a condition of the sebaceous glands that usually affects isolated points of the skin of the face, presumably due to some error of circulation in connexion with a particular gland, should develop to such an unusual extent over isolated groups of skin in which apparently every sebaceous gland becomes a comedo, is certainly a most curious question, and one in regard to which, although no satisfactory answer can, it seems to me, be given, the search for an answer should always be kept in view, and the peculiar circumstances of each individual case carefully considered, in order to obtain the clue to its solution. The development between the cheek and the lip may perhaps tend to cool the ardour of those who, in this as in every other case of skin disease, would seek to throw the blame on the nervous system. This fold does not, I presume, correspond to any vascular or nerve supply, but from the very fact of its being a fold it is liable to lower the vitality of the part. We know how, in certain individuals, folds of the skin are apt to become the seat of eczema or rhagades, which, of course, implies that those parts of the skin are less able to resist the ordinary causes of irritation which the healthy skin can bear with impunity.

Queen Anne Street, W.

A CASE OF PUERPERAL SEPTICÆMIA TREATED BY LOCAL, OR UTERINE, MEDICATION; RECOVERY.

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MRS. H— was confined on Dec. 11th of her third child, no one but her sister being present. She was fairly well on the 12th and 13th, but on the 14th the pulse rose to 108, the temperature to 100°, and the lochial discharge became scanty. The bowels had not acted for a couple of days. She was ordered a teaspoonful of compound liquorice powder. On the 15th, after slight purgation, the discharge somewhat increased, the pulse fell to 96, the temperature to 99°, and she felt better.

Dec. 16th.—Much the same as yesterday, but during the evening had a severe rigor.

17th.—The temperature again rose to 100°; pulse 108. The discharge has entirely ceased. She complained of sickness and faintness on trying to sit up in bed. Has some pain in the back. Bowels tympanitic, but no abdominal pain; loud tinnitus aurium.

18th.—Has spent a very restless night. Complaints of headache, and intense nausea, thirst, and anorexia. Temperature 100°; pulse 126. Secretion of milk stopped. Was occasionally delirious during the night. No lochial discharge.

19th.—Condition of patient much the same as on the 18th. There is much greater prostration and more continuous delirium.

20th.—On my visit this morning I found my patient, as I believed, to be rapidly sinking. She had been almost continuously delirious; could with difficulty keep her attention to questions asked. She complains, as formerly, of intense nausea, tinnitus, and a feeling of a most oppressive weight on the chest. Face pinched; cheeks, which in health were florid, divided into livid islets of skin, intersected with yellowish lines; upper lip quite pale and bloodless; eyes expressionless; breathing rapid. Temperature 100°; pulse 130. Breasts flaccid; no discharge since the 17th. At 4 P.M. the following treatment was adopted. (I ought to say that up to this time she had been treated with vaginal injections of Condy's fluid in water, and with quinine internally.) Placing the patient on her left side, I made a vaginal examination, and found the os quite wide enough to admit easily a couple of fingers. The sound was then introduced, and showed the

depth of the uterine cavity to be between eight and nine inches. On withdrawing the sound, I introduced a uterine hook, attached it to the inner surface of the anterior lip, and easily dragged down the organ almost to the outlet. Keeping the uterus in this position, and holding back the perineum with a Sims' speculum, a large piece of cotton wool saturated with iodised phenol was by means of a sponge-holder carried upwards to the fundus of the uterus, and the entire inner surface swabbed over twice. The cavity of the uterus was then washed out with a strong solution of permanganate of potash by means of a Higginson's syringe fitted with a uterine tube, as used by Barnes in post-partum hæmorrhage. During the application of the iodised phenol, probably from the uterine contraction, about five or six ounces of ashy-grey exceedingly fetid pus were discharged. Having completed the above procedure, a large cotton-wool tampon saturated with glycerinum boracis was placed in the vagina in contact with the cervix. The patient now said that she felt considerably relieved. At 10 P.M. I was told that she had rested well since 6 P.M., and she said that she felt better.

21st.—Feels somewhat better. No delirium during the night, except when waking out of sleep. She still complains of nausea, tinnitus, faintness, and weight upon the chest, but none of these symptoms are distressing. I removed the tampon and washed out the cavity of the uterus with the permanganate of potash solution. At 10 P.M. she still continued to improve; the uterus was again washed out with the solution. The os was somewhat narrower.

22nd.—Has spent a very uncomfortable night. Some aggravation of symptoms. I repeated to some extent the operation of the 20th, and washed out the uterus as before. At 10 P.M. she was much better. The os was so much narrower that the uterine tube could with great difficulty be introduced to wash out the uterine cavity.

23rd.—Considerable improvement. Nausea, tinnitus, and chest oppression almost gone. A No. 10 gum-elastic catheter was used for washing out the uterus. From this date the recovery was uninterrupted. The lochia, however, did not return, nor did the milk. She was able to sit up on Jan. 7th, and was off my visiting list on the 14th.

In carrying out this line of treatment again, I would not use a hook to draw down the cervix, but a vulsellum forceps. There was, I found, considerable risk of wounding the fingers, which, owing to the septic condition of the parts and their contents, would probably have been a very serious matter.

Remarks.—I would submit that to render, as in this case, the cavity of the uterus completely aseptic, it is necessary, first, to use a powerful germicide, such as iodised phenol, to destroy bacteria or other organisms. Then, in the second place, an oxidising agent, such as permanganate of potash, to oxidise the product of the development of these organisms.

Newcastle-on-Tyne.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TWO CASES OF UNILATERAL ADDUCTOR PARALYSIS OF THE LARYNX DUE TO NASAL REFLEX IRRITATION.

By W. R. H. STEWART,

ASIAL SURGEON TO THE GREAT NORTHERN CENTRAL HOSPITAL,
SURGEON TO THE LONDON THROAT HOSPITAL, ETC.

As at the present time great attention is being shown to nasal reflex symptoms, the following two cases are, I think, of interest as tending to confirm the view held by some that laryngeal paresis may be due to nasal irritation, and that, other causes being negatived, the nose should always be examined and symptoms treated. In both these cases the paresis was unilateral on the right side, and the adductors were at fault; in both the right middle turbinate bone was much enlarged and pressing on the septum; and in both the laryngeal symptoms disappeared on removal of the nasal trouble.

CASE 1.—A. G., aged thirty-eight, a single woman, came under my care at the London Throat Hospital in March, 1887, suffering from loss of voice. She spoke in a

whisper, and at times the voice was entirely lost. This had been gradually coming on for some time. She also complained of a stuffiness in the nose and slight frontal headache. No hereditary history of any sort. No uterine disturbance. On examination the fauces were found to be normal. No signs of cicatrisation on palate or pharynx. On phonation, the right vocal cord did not move towards the middle line, although there was some slight attempt at approximation and some movement in the arytenoid joint. The left cord acted normally. The mucous membrane covering the right middle turbinate bone was hypertrophied, and the bone itself enlarged and pressing on the septum. The cord answered to the stimulus of the faradaic current and the voice returned. A solution of chromic acid was applied to the hypertrophied turbinate mucous membrane and an alkaline nose-wash and tonics ordered. At the next visit the patient informed me that the voice had gone again by the time she arrived home. The treatment was continued for some time, the voice returning on each application of the battery only to disappear again in a short time. The pressure on the septum not being reduced, and the uncomfortable feeling still remaining, I removed the right middle turbinate bone with a snare, with the result not only of getting rid of all stuffy unpleasant feelings in the nose and forehead, but the paresis soon entirely disappeared, and the voice returned to its natural condition.

CASE 2.—Miss —, aged eighteen, consulted me in June, 1887, for loss of voice, which had first occurred two or three months previously, and had gradually got worse. No hereditary history, and no uterine disturbance. The throat symptoms were much the same as in the last case, and there was the same pressure of the right middle turbinate bone on the septum, with consequent stuffiness and frontal headache. The voice returned on the application of the battery, and was lost again in the same way. After a short course of the battery and chromic acid, with tonics, valerian, &c., and there being no improvement, I acted on the experience gained in Case 1, and removed the turbinate bone, with the same excellent result. The uncomfortable feeling was removed, the paresis disappeared, and the voice resumed its natural tone.

Devonshire-street, W.

CASE OF POISONING BY FUSTY BREAD.

By EDWD. C. BOUSFIELD, L.R.C.P. LOND.

THE following notes refer to a case which whilst not unknown in its character, is sufficiently rare to be of interest, the more so as every stage from the commencement of the attack passed under my immediate observation.

Mr. H., a total abstainer, and usually enjoying good health, save for a tendency to dyspepsia, travelled in company with me from London to the Isle of Man. He had not been feeling quite well for several days, and attributed the gastric discomfort from which he was suffering to a salad eaten five days previously. About an hour after leaving Euston he began to feel colicky pains, which shortly increased to such an extent, attended by a desire to defecate, that we arranged for him to do so in the carriage. After this he felt better, and, obtaining some brandy at the first halt, improved considerably. Later on the pain returned, and the bowels were again relieved, after which he slept, and awoke feeling better. When we reached Liverpool the bowels again acted, and, considering the attack to be a sharp bout of ordinary diarrhoea, I obtained for him a bismuth and morphia mixture, and out off all solid food. He walked about Liverpool comparatively well for an hour and a half, and then went on board the *Prince of Wales*, en route for Douglas. Shortly afterwards he was again seized with violent pain, this time without any desire for defecation; and this pain increased to such an excruciating extent, in spite of repeated doses of morphia, that I was compelled to appeal to the captain, who very kindly placed a private state room at my disposal, together with an abundant supply of hot water and turpentine. The persevering application of these afforded great relief from the pain; but vomiting, attended with purging, now set in, and whilst the latter soon ceased, the former continued from this point until the termination of the case. Being delayed at Douglas, and the stomach of the patient being apparently empty, I left him in a comfortable position to rest for a few minutes in order to obtain some refreshment for myself. On returning, I found him perfectly cadaverous in appear-

ance, the idea being only dispelled by the feebly-beating pulse, for the breathing was almost imperceptible. Arousing him at once, he appeared to recover to a considerable extent, and as the distance to Peel was short and there was no failing of muscular energy, I decided to take him on; but during the journey the action of the heart continued to fail and the tendency to stupor to increase, so that it could only be overcome by the most determined efforts. On reaching Peel I at once summoned further help, especially desiring to administer a hypodermic injection of ether, which, upon the arrival of Dr. Cole, I at once did, with good results; and at the suggestion of Dr. Cole, of whose kindness I cannot speak too highly, we conveyed the patient, who was still able to walk well, to that gentleman's house, where hot water, mustard, and friction produced a still further improvement. The first effect of reviving vital power was profuse vomiting, during which everything which had been given during the day was rejected, and as this passed off the case rapidly assumed a more hopeful aspect. I may add that it was only in my efforts to keep off stupor during the journey to Peel that the patient mentioned that the bread (whole-meal) which he had eaten at supper tasted a little fusty, and, as the symptoms throughout bore a close likeness to those produced by the action of muscarin, I have no doubt that the micrococcus (? *M. prodigiosus*) which gave rise to the fusty taste of the bread (which was not mouldy), was the toxic agent.

The symptoms worthy of note are the diarrhoea, intense pain, vomiting, and strong stimulation of the pneumogastric (producing inhibition of the heart's action), together with entire suspension of the absorptive power of the stomach after the assimilation of the poison, for everything administered after that time was sooner or later rejected unaltered. The administration of milk and soda-water for twenty-four hours, followed by light food, gradually increased, sufficed to complete the cure, and on the fourth day no trace remained of the almost fatal attack.

Old Kent-road, S.E.

NOTE ON PUERPERAL ALBUMINURIA.

By THOMAS F. RAVEN, L.R.C.P.L. &c.

THE object of this memorandum is to draw attention to certain symptoms associated with puerperal albuminuria—viz., Neuralgia and Precipitate Labour. Headache is very well known as a precursor of puerperal convulsions, or, if the term be really preferable, eclampsia. A rarer form of pain in the same relation is epigastric neuralgia. Denman, Chaussier, Churchill, and Leishman recognise the importance and gravity of this symptom, and a paper on the subject by Dr. John Phillips will be found in THE LANCET of April 2nd, 1887. The following is a case in point:—

Mrs. H—, aged forty-three, seven months advanced in pregnancy with her fourth child, was seized with violent epigastric pain and vomiting. The temperature was subnormal, the pulse slow and regular. The urine was of specific gravity 1004, and highly albuminous; and casts were found under the microscope. She stated that her first labour had been preceded by anasarca and followed by peritonitis, but that the two succeeding labours were natural. The pain left her, but soon returned with increased violence. Convulsions set in; the fetus and placenta were suddenly expelled, but the convulsions continued, and she died comatose, and paralytic on the right side.

Violent pain may be felt in other parts under the same circumstances. Mrs. M—, who had previously borne six children without a bad symptom, was seized at the eighth month of pregnancy with very acute pain under the right clavicle. There was a good deal of fever, and the urine was albuminous to about one-sixth of its bulk. After thirty-six hours of severe suffering labour set in, she was rapidly delivered, and the pain under the clavicle immediately left her.

Neuralgic pain of severity is apt to follow parturition among women the subjects of albuminuria. Mrs. F—, who had temporary albuminuria, was attacked, twenty-four hours after the birth of her third child, with violent pain in the left groin. The pulse rose to 160 and the temperature to 105°. There were no local symptoms to account for the pain, which was evidently neuralgic in character. I have witnessed acute sacral neuralgia following labour in a woman with renal disturbance of the same kind.

Women with albuminuria are liable, in my experience, to precipitate or, at least, abnormally rapid labour. In puerperal convulsions, it is well known that sudden and violent expulsion of the fetus is not uncommon. In such cases convulsion appears not to be limited to the voluntary muscles, but the uterus itself seems to partake of the convulsive action. I have witnessed the sudden birth of a child under these conditions, when examination a few minutes previously had revealed no appreciable dilatation of the os uteri. And in a lesser degree, and perhaps less frequently, I am satisfied that women with albuminuria are apt to expel the child with an abnormal rapidity, analogous to that which is seen in eclampsia. I have witnessed this on several occasions, and have profited by my experience in never neglecting to attend with promptitude a parturient woman with albuminuria.

Broadstairs, Oct. 1888.

TOXIC EFFECTS OF COCAINE.

By DANIEL MOWAT, M.D. EDIN.

THE following case may probably be of some interest to readers of THE LANCET.

G. M—, aged twenty-nine, a tall, strong-looking man, had a small rodent ulcer below and to the outer side of the left lower eyelid. I removed the ulcer by two elliptical incisions, using cocaine as the anæsthetic. Three and a half minims of a 20 per cent. solution were injected hypodermically in two different places. The operation, which was absolutely painless, only lasted about two minutes, but the patient during the stitching of the wound began to show signs of faintness, followed by some alarming symptoms: extreme pallor, yawning, gasping for breath, and frequent sighing, succeeded by rigidity and coldness of the extremities. The hands were firmly clasped above the head, and could be separated only with great difficulty. His face was blue and pinched, the pupils were semi-dilated and inactive to light, and the pulse was feeble and rapid. For a little while the patient was incapable of answering the simplest question put to him. The muscles became relaxed, and the patellar reflex was found to be increased; there was no ankle clonus. On regaining his power of speech he said he felt he was dying, and asked to see his wife. The aromatic spirit of ammonia was freely administered to him, and he began to recover. His pulse became full and rapid, 120 per minute. The clonic spasms seized him several times afterwards, each one being weaker than the preceding one. A few minutes after the cessation of these spasms he presented all the symptoms usually seen in a person suffering from the effects of alcohol. On his recovery he said he did not remember anything of the operation, but felt giddy.

I have used cocaine hypodermically pretty frequently, and in larger quantities than the above; but this is the only case where I have seen any evil effects from its administration.

Stamford-hill, N.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

AMPUTATION AT THE KNEE FOR EPITHELIOMA OF THE LEFT LEG, AND FOR RECURRENT MELANOTIC SARCOMA OF THE RIGHT LEG.

(Under the care of Mr. BRYANT.)

SOME of our readers will recollect that Mr. Bryant read a paper some years ago on Amputation at the Knee Joint by Disarticulation, in which he strongly advocated the employment of the method of operating by lateral flaps used in the two following cases. These are not good

1 Medical and Chirurgical Transactions. New Series, vol. II., 1855.

examples of the operation, the time which elapsed before the patients could be pronounced well being prolonged by suppuration. This might be accounted for by the poor condition of health of the patients at the time; but we must mention that a similar condition of after-suppuration has been met with in this operation when performed at other hospitals.

Epithelioma of the left leg following chronic ulcer; Stephen Smith's amputation at the knee joint: cure. (From notes by Mr. W. E. Treasider and Mr. F. W. Hall.)—M. A. G.—, aged fifty-two, living in Dorsetshire, was admitted on Nov. 7th, 1887, and was discharged on March 4th, 1888. The patient was married; had had two children; no miscarriages. She had always had good health. Her present trouble commenced five years ago, when she injured the inner side of her left leg by striking it against an iron bedstead. The wound was about an inch long and not very painful. As the wound did not show any signs of healing, she consulted a medical man. She had been under treatment for a long time, wearing a Martin's bandage most of the time; but the wound had continued to ulcerate, to slowly extend in area, and at the same time to cause her more or less intense suffering.

Condition on admission.—There is a large ulcer on the inner aspect of the left leg, situated at about the junction of its middle and lower thirds; its vertical measurement is five inches and a quarter, and its transverse diameter is about four inches and a half, reaching in front to within half an inch of the anterior border of the tibia, and nearly to the middle line at the back of the calf; the base is very rough and irregular, and formed of fungating, unhealthy-looking granulation tissue. The granulations rise up from the surface in irregular nodules from a quarter to a third of an inch in height; they vary in colour from a brownish-red to a yellow or ash colour, and the apices of the elevations have a tendency to bleed. The fungating surface is firm upon pressure, and there is a very foul-smelling discharge. The margins of the ulcer are irregularly cut, are firm and everted, but there is no well-marked induration, and there is no redness, swelling, or other induration around the margin of the sore; near the margin is the thinnest part of the ulcer, and it shows no tendency to burrow under the skin. According to the patient's account, the ulcer has been steadily growing from the first; it has shown no tendency to heal, but has gradually progressed in every direction; the surface is exceedingly tender, and any pressure or other irritation from the dressings, or exposure to cold air, gives the patient intense agony. Below the sore there is some swelling under the skin on the inner side of the ankle joint. No enlarged glands can be felt in the groin or in Scarpa's triangle. The edge is very sinuous in outline; it is not sufficiently raised or everted to mark it as epitheliomatous. Moreover, though the ulcer lies in part over the subcutaneous bone, it does not implicate it, but is freely movable over its surface; the edge of the ulcer is not rolled outwards to the extent characteristic of a rodent ulcer. The granulations on the base are extremely irregular and large in size, one or two of the fungating masses being nearly as large and prominent as walnuts.

On Nov. 7th the wound was dressed with terebene and oil lint, iodoform being freely sprinkled over its surface, and the knee was flexed at right angles and the limb put up in a splint running along its outer aspect. A section of the ulcer taken from a part near the margin showed clearly the characteristic structure of epithelioma. On the 8th she was ordered a tonic, and a one-grain pill of opium every night, but on the 11th the opium pill had to be given three times a day.

Nov. 14th.—An interrupted splint with a hinge to accommodate the bent knee was applied to the leg to-day. By this means the leg can be fixed and kept at rest, so that dressing the part interferes with it to a very slight extent. The splint was well padded, bent slightly for the knee, and the whole limb and splint put under an iron cradle.

22nd.—To-day Mr. Bryant amputated the leg, employing Stephen Smith's method of amputation at the knee joint. The patient was put under chloroform, the leg raised in order to deprive it of blood, and an Esmarch bandage placed round the thigh. Mr. Bryant then made an incision, beginning from a point about an inch below the tubercle of the tibia and carried backwards and slightly downwards over the outer side of the leg. As the incision reached the posterior surface it was curved upwards to the middle line. An exactly similar incision was then made on the inner side.

Both flaps thus formed were dissected away from the deep fascia, and therefore consisted only of skin and subcutaneous tissue. Mr. Bryant then cut through the fascia and capsule of the joint in front, keeping as closely as possible to the articular surface of the tibia and separating attachments of semilunar cartilage. Traction being put upon the leg, he then cut through the lateral ligaments of the joint and the tendons of the muscles on each side; he then divided the crucial ligaments within the joint and cut through the attachments of the semilunar fibro-cartilage to the margin of the tibia. This was done in order to secure the apposition of the semilunar cartilages to the articular cartilages of the femoral condyles. Lastly, the knee being in the semi-flexed position, he cut through the vessels, nerves, and muscles at the back of the joint, thus completely separating the leg at the knee joint. The vessels were then tied and Esmarch's bandage withdrawn. There was then some spouting from one of the articular arteries (or sural), which came off above the spot where the main artery was cut through, but this was soon stopped. The wound was then well washed with warm iodine lotion. The flaps having been brought together, their edges met along a vertical line situated entirely behind the stump, the lower part being covered by the skin over the patella and the portion which normally lies in front of the joint between the patella and the tubercle of the tibia. A drainage tube about three inches long was inserted upwards into the cavity, three silk sutures fixing the edges of the flaps above the tube and two below. The stump was then well covered with iodoform gauze strips, and these were overlaid with a triangular piece of Gangee tissue. A back splint was then placed in position, and the whole firmly bandaged. The patient was put back to bed, with the stump slightly elevated under a cradle. Two ounces of brandy were given at once, and a quarter of a grain of morphia subcutaneously.

27th.—Since the operation (five days) the patient has done remarkably well. There has been very little discharge, not enough to soak the dressings; and the temperature, after a primary depression for the first thirty-six hours, has remained about 99.4° ever since the operation. To-day, as there was a slight tendency to a rise of temperature, the stump was re-dressed; it looked well; only about a drachm or two of discharge had come away, and primary union was taking place at the extremities of the wound.

29th.—Patient doing very well. Temperature this morning 98.8°. Her general health is very good.

Dec. 1st.—The temperature has risen to 100.4°. On examining the wound this afternoon, a fluctuating swelling was found just above the knee. Mr. Bryant cut into it, and a quantity of clear pinkish bursal fluid was discharged; a drainage tube was put in, and the wound dressed with iodoform gauze &c.

2nd.—Wound dressed; a small quantity of fluid was found behind the joint; the wound was probed, and some adhesions broken down to let it out. Temperature 102.6° this afternoon. Ordered five grains of quinine.

5th.—The lower third of the thigh looks inflamed, so hot lead-and-opium lotion has been ordered. Temperature 100.6°.

6th.—The leg does not look so inflamed this morning. Temperature 99.6°. There is still considerable discharge; an extra drainage tube was put in yesterday.

7th.—The inflammation has quite subsided; the lead-and-opium lotion has therefore been discontinued. Temperature this morning 99.2°.

9th.—Leg dressed this morning; there was a good deal of discharge. The stump is very sensitive. There was some inflammation this morning, and the lead-and-opium lotion was again applied. Temperature this morning 100.2°.

10th.—The inflammation has quite gone, and the lotion was discontinued this morning. Discharge about the same. Temperature last night 101.8°; this morning 99.4°.

13th.—Discharge less for the last three days. Temperature 99.8°.

17th.—Scarcely any discharge this morning; the wound is now about an inch long. Temperature 99°.

Jan. 31st, 1888.—Wound quite healed.

March 2nd.—Patient had a wooden pin fitted.

4th.—Patient discharged from the hospital with an excellent stump. The soft parts move readily over the condyles of the femur.

Recurrent melanotic sarcoma of right leg after amputation of foot two years and a half previously; Stephen Smith's amputation at the knee joint: cure. (From notes by Mr. Brock and Mr. W. Stedd.)—S. A. W.—, aged fifty-

three, a laundress, was admitted on March 11th, 1887, and was discharged on Sept. 11th, 1887. The patient has been married twice, and has had eighteen children, ten being still alive. Eleven years ago the patient had rheumatic fever, and about the same time she lost the use of her right leg; a long time elapsed before she regained the use of it. In July, 1883, a nail which was in her boot ran into her heel; it bled a little and was painful. She poulticed her heel with bread for a month, but got no relief. The heel became worse. The patient came to Guy's in August, 1884. On her admission there was a large granulating surface on the right heel, and there were a number of black specks like gun-shot beneath the skin on the plantar surface of the foot. The inguinal and popliteal glands on the same side were also affected. Mr. Bryant diagnosed melanotic sarcoma, and performed a Teale's amputation of the foot. The patient left Guy's Hospital on Nov. 15th, 1884, with the stump healed up. Three days afterwards the cicatrix broke down again, and a piece of bone came away; another piece followed a month later, and the wound subsequently healed. The scar was, however, always painful.

Condition on admission.—The patient suffers a good deal. There is a granulating surface on the base of the stump about the size of a half-crown; there are several dark-coloured spots scattered on the stump, one about the size of a sixpence, situated at the posterior part, looks very like melanotic sarcoma.

Operation.—On March 18th, the patient being under the influence of chloroform, Mr. Bryant amputated at the knee joint. The amputation performed was that known as Stephen Smith's. Each flap was formed by an incision commencing one inch below the tuberosity of the tibia and running downwards and forwards over the side of the leg until it reached the posterior surface, when it was curved towards the median line; the soft tissues were then dissected away from the bones of the leg as high up as the upper margins of the tuberosities of the tibia. Mr. Bryant next separated the semilunar cartilages from the tibia and allowed them to slip up on to the condyles of the femur, so forming a cartilaginous buffer; the leg was then removed at the knee joint. All the injured vessels were twisted; the capillary oozing was stopped by means of sponges dipped in hot iodine water, and the flaps were stitched together with silk sutures. A drainage tube was inserted and the wound dressed with iodoform; an external splint was applied.

March 19th.—Patient had a morphia injection. She is in great pain this morning. The wound was dressed; there was a good deal of serous discharge. Temperature 100·4°.

20th.—Patient had sickness, so she was ordered one minim of tincture of iodine to a teaspoonful of water, to be taken every twenty minutes. The wound looks healthy; discharge about the same.

22nd.—The sickness has ceased. Ordered an ounce of brandy and eight ounces of port wine.

25th.—There is a little eczema of the thigh this morning. Boracic ointment was applied to it. Four sutures were removed this morning.

28th.—The eczema still continues. A little pus was found in the discharge this morning. Temperature 100°.

30th.—The patient is better this morning. The eczema is disappearing. There is still a little pus in the discharge. Temperature 99·6°.

April 1st.—She is going on well. No pus in the discharge. Temperature 98·2°. The last suture was taken out to-day.

6th.—The wound looks well. Temperature 98·2°. No pus.

May 16th.—Stump healed up and looks well.

June 2nd.—The wound has reopened. A good deal of serous discharge and about three drachms of pus came away. Temperature 100°.

3rd.—Wound dressed; discharge about the same. Temperature 100·6° last night; 99° this morning.

8th.—Discharge about the same. She complains of a good deal of pain, and there is a tendency to bagging on the lower aspect of the stump.

July 4th.—For the last three days there has been considerable redness and tenderness on the outer aspect of the stump. The temperature went up to 102°. This afternoon there was distinct fluctuation to be felt. Cocaine was applied. Mr. Bryant made an incision in the direction of the limb (half an inch in length); about five ounces of bloody pus were got out. The wound was syringed out with iodine water and dressed with boracic and iodoform gauze. It was suggested that the suppuration was due to breaking down of the cartilages &c.

12th.—A great quantity of discharge daily from the stump. Patient complains of great pain in the stump. Temperature 98·8°.

16th.—There was a large quantity of thick pus on the dressings this morning, which seems to have come from the old sinus at the bottom of the stump, and about another ounce escaped during the dressings. A probe can be passed inwards for some distance into the abscess cavity.

20th.—The patient is better. The discharge has nearly ceased. Temperature keeping down.

27th.—Stump quite healed; it is very well rounded, with the scar quite behind and running up the limb. The patella is drawn up in front of the condyles, but does not show prominently on the surface. The soft parts are rather tightly fixed to the end of the femur, but at the same time they seem ample enough.

Sept. 11th.—Patient's condition very good indeed since July. Wound quite healed.

Examination of the stump. (By Mr. Targett, surgical registrar.)—It was shapely, rather inclined to be square on the face; the skin was closely adherent to the corner of the tibia, at the amputation, but on the face and behind there was sufficient tissue to allow the skin to move freely over the bone. In its present condition the whole end of the stump is red and eczematous, and studded all over with flat tubercles of growth. Very few of these are dark enough to suggest melanosis, but on making a longitudinal section of the stump and bone it is seen that there are two or three deposits beneath the skin which are very dark—in places black,—and no doubt represent recurrent nodules of the original growth. The skin, where studded with tubercles, is infiltrated and much thickened, and the melanotic deposits are in direct connexion with the invaded skin. On section, this thickened skin looks reticulated, or rather honey-combed, by white bands of tissue, suggesting an alveolated condition of the growth. The deep deposits are firmly connected with the muscles and ligamentous structures, though these structures are only involved at the end of the stump. The muscles in the upper part of the limb are beautifully marbled from fatty changes. The bone is healthy on section, but very fatty.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

FATAL OPERATION FOR RADICAL CURE OF INGUINAL
HERNIA.—RADICAL CURE OF LARGE UMBILICAL HERNIA.

(Under the care of Mr. VINCENT JACKSON.)

Large right congenital inguinal hernia in an infant; radical cure; death from shock twenty-four hours after operation.—John H—, aged eighteen months, was admitted on Aug. 18th, 1888, on account of a large right inguinal hernia, which, although easily reducible, could not be maintained so by the application of a truss. The mother stated that the hernia was noticed soon after birth, and from that period it had increased in size in every direction until its present unusual size was reached. The hernia occupied the right side of the scrotum, and apparently consisted of intestine, and when returned by the taxis into the abdomen, the ring was perceived to be large, capacious, and easily admitted the end of the right middle finger.

Aug. 23rd.—Chloroform having been administered, an operation for the radical cure of hernia as follows was performed. An incision through the skin and other structures laid bare the sac from a little above its extreme upward limit to its lowest point. The neck of the sac, having been well freed and separated, was tied as high as possible by carbolised silk thread, a little below which point it was snipped across, then laid open and some of it cut away. The pillars of the external ring were closely sutured together by silk thread well carbolised. Every bleeding point having been arrested (and this was immediately done throughout the operation whenever required), the edges of the scrotal wound were brought together with gut suture, a glass drainage tube being first inserted at the lower angle. The dressings, which consisted of wet and dry gauze and mercurial wool, were carefully and evenly applied, and, having been fixed by bandages, the little patient was removed to his cot.

24th.—Mr. Gough, house surgeon, reported that since the operation the patient had suffered from shock, and that it continued in spite of the employment of counteracting

remedies and appliances. The bowels had been opened twice during the night, flatus and urine had freely been voided, and there had been no sickness. The dressings, being unstained, were not changed. Before the middle of the day the child expired.

Large irreducible umbilical hernia of many years' duration, causing distressing symptoms; radical cure; recovery.—Mary Ann R—, aged forty-six years, was admitted into the hospital on May 24th, 1888, on account of continuous dragging abdominal pain, due, as she stated, to a "belly rupture." The patient, although below the middle height of her sex, is yet circumferentially much beyond the average girth, for her central rotundity is so marked as to be a source of the greatest inconvenience to her, whether she is erect or supine; in a word, although perhaps not as broad as she is high, yet the approach to such an unfortunate physical condition is not so far off as is desirable or usual. The patient is married, and has five children, and for many years has been troubled with an umbilical hernia, which during the last two years has become larger as well as more painful and inconvenient from its size and weight, and, as no effort had succeeded in returning it into the abdominal cavity, relief was requested by an operation.

On June 12th, chloroform having been administered, the sac was opened by a central incision five inches in length; the omentum, which in many places was adherent to the sac wall, was ligatured through its pedicle by carbolised silk thread, and then cut away; it weighed three-quarters of a pound. The sac was separated by dissection from the skin, and, its neck having been tied by strong gut ligature, as much as possible was snipped off with scissors. A good deal of the skin, being redundant, was removed, and the edges of what was left were sewn together with catgut; a drainage tube was then inserted, and, the usual dressings having been applied, the patient was carried to her bed.

On July 24th the woman was discharged, the wound being healed and the hernia cured.

WOOLWICH INFIRMARY.

ANEURYSM OF BASILAR AND MIDDLE CEREBRAL ARTERIES;
HEMIPLEGIA; DOUBLE OPTIC ATROPHY; DEATH;
NECROPSY.

(Under the care of Mr. T. A. WATSON.)

A WOMAN, aged fifty-three, with a strong family history of insanity, two years ago had an attack of left-sided hemiplegia, which came on suddenly in the night. Her sight had been gradually failing for some years. There was no history of syphilis.

On examining the patient in May last, there was found to be motor paralysis of the left arm and leg, and atrophy of both optic discs, her vision being nil. Heart sounds normal. She was treated with iodide of potassium, but remained *in statu quo* until Sept. 21st, when she died, after a slight convulsive seizure.

Necropsy.—On removing the skull-cap some fluid blood escaped. The optic nerves and commissure were markedly atrophied. There was an aneurysmal dilatation involving the whole of the basilar artery and about an inch of the right vertebral artery. This dilatation was about half an inch in diameter. There was a similar dilatation at the origin of the middle cerebral artery from the internal carotid, so placed that it would press upon the optic commissure. In the medulla, towards its anterior surface, was a cavity containing softened brain substance extending about an inch downwards from the pons, and being chiefly in the right half. This softened area would lie over the most prominent part of, and was probably caused by pressure from, the basilar aneurysm. All the arteries at the base of the brain were somewhat dilated and sacular. The heart was normal; valves competent; aorta beginning to show signs of atheroma. No signs of syphilis were found in the skin or lymphatic glands.

CONGRESS OF RAILWAY SERVANTS.—At this Congress, which was held at Preston last week, resolutions were passed, *inter alia*, that the principle of appointing practical men as Inspectors of Factories and Mines should be extended to railways; that the long hours of work by railway men are detrimental to the men and a source of danger to the travelling public, and that the relatives of deceased railway servants should be admitted to coroners' inquests.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

New Operation for the Cure of Vesico-uterine Fistula.—The Value of Pilocarpine in Pregnancy, Labour, and the Lying-in State.

A MEETING of the Society was held on Oct. 3rd, John Williams, M.D., President, in the chair.

A report was read on Dr. Phillips' case of Congenital Sarcoma, exhibited before the Society on July 4th.

Dr. CHAMPNEYS, in a paper on a New Operation for the Cure of Vesico-uterine Fistula, described a case where he performed the new method of operating. The cervix being held down, the anterior vaginal wall was dissected away from the cervix to beyond the limits of the fistula. By this procedure a hole was left in the bladder and another in the cervix. These were closed and the vaginal wall repaired with complete success. The author compared this operation with those in use, and enumerated what he believed to be its advantages. In this case silver sutures were used; those closing the two holes were cut short; those uniting the vaginal wall to the cervix were afterwards removed. Dr. Champneys used silver sutures because he was anxious not to fail in a new operation on account of the sutures. In subsequent operations he would be inclined to try silk, so great was his belief that fistulae would be easily and successfully closed by this method.

Dr. P. BOULTON, with a large experience of injuries of the female bladder, had seen few cases of vesico-uterine fistula. In each, the anterior lip of the os uteri had been torn through at the time of the accident up to the seat of the fistula. Dr. Boulton thoroughly denuded the opening of the fistulous tract at its uterine end, closing this by means of a single "purse-string" suture, and at the same time repairing the torn cervix by means of an ordinary Emmet's operation. The top suture in the cervix made the fistula doubly secure. He had no dread of operating on uterine tissue. In Dr. Champneys' case the fistula was comparatively accessible, and might have been pined and stitched from the intra-uterine side, after widening of the os by Hegar's dilators, if necessary. Dr. Boulton saw certain objections to the new operation. 1. The pelvic cellular tissue was opened up, and freely bathed with urine during the whole of a long surgical proceeding. 2. The amount of necessary repair was more than trebled, since three large openings had to be closed. Dr. Champneys admitted that he used fifteen silver sutures. 3. All the sutures put into the bladder and uterus were shut up and left behind, seven in the bladder and four in the uterus. Though (as Dr. Champneys had noted) silver sutures were left in the uterus without evil results in Sanger's Caesarean operation, there was no alternative in that case; whilst leaving or removing sutures was a matter of choice in repair of vesico-uterine fistula. Even now the patient might not be free from future complications, such as escape of a suture into the bladder and formation of calculus, or trouble during a future delivery.—Dr. HERMAN thought that the operation was a great improvement in the treatment of these cases, as far as could be judged from the description; but very few persons had practical experience of vesico-uterine fistula. He would suggest that the objection raised by Dr. Boulton as to the undesirability of leaving so many silver sutures in the parts could be met by using catgut, which would certainly be absorbed. If this were done there would be no need for packing the vagina with gauze.—Mr. ALBAN DORAN referred to Dr. Bosman's recent bold innovations in the treatment of large urinary fistulae. That authority recognised two obstacles to success in extensive plastic operations. The vaginal and vulvar tissues were kept in an unhealthy state, being constantly soaked in urine. The urine itself was in a morbid condition through pyelitis—a complication constant, in his opinion, in old-standing fistulae. Dr. Bosman therefore fitted a drainage apparatus to the fistula, protecting the vagina, and after a time catheterised the corresponding ureter and washed out the kidney daily with sublimate lotion till the urine became healthy. Then he repaired the fistula. He had extended this operation to cases of primary pyelitis, making an artificial fistula, so as to reach the ureter.—Dr. CHAMPNEYS,

in reply, stated that in future he would use silk or perhaps chromic gut for sutures; why he used silver in this case was already explained in his paper. With antiseptic irrigation, there was no reason to dread opening up the cellular tissue or the passage of a few drops of urine. He preferred to close a fistula at its origin, and, practically, throughout its course, to attempting its closure at the distal end only. Uterine tissue would of course heal, but it was not nice to work in. If Dr. Boulton had not performed vaginal extirpation of the uterus or supra-vaginal amputation of the cervix, he would be astonished at the ease with which the bladder could be approached by the way indicated in the paper, and Dr. Champneys verily believed that whoever once operated by the method described in his memoir would use no other operation in the future.

Dr. JOHN PHILLIPS read a paper on the Value of Pilocarpine in Pregnancy, Labour, and the Lying-in-State, in which he treated the questions at issue under five heads: (1) the use of pilocarpine as an abortive; (2) for the induction of premature labour; (3) intra-partum; (4) post-partum and during the puerperium; and (5) in albuminuria, with or without eclampsia. Seven cases had been experimented on, and the results given in detail. Forty-eight cases under the second heading had been collected from all sources, of which twenty-seven had been arranged in two tables, while two original cases had been appended in full. The author concluded that five only of these could be considered as unqualified successes, and thought that pilocarpine was able in a certain number of cases to induce labour, but that it was not in any way reliable as an ecboic; those cases in which there was a tendency to premature termination of pregnancy were most suitable for its administration. Pilocarpine, intra-partum, was considered under three heads—(a) the “latent period” of labour; (b) the dilating stage of labour; (c) the expulsive stage of labour. Five instances occurred in the author's practice, and in one sphygmographic tracings were taken at various intervals. The result of thirty-nine cases was worked out, twenty-eight being successes and eleven failures. The author concluded that during the dilating and expulsive stages of labour pilocarpine was equally productive of increase and intensification of labour pains with ergot, but with more certainty of action and with none of its ill effects. Cases of simple uterine inertia were the most suitable for its administration. The drug was useless post partum and to stay hemorrhage. In a third table the results of thirty-nine published cases of puerperal eclampsia had been given, with recovery of thirty-one mothers and eight maternal deaths, or 20·5 per cent. Although good effects were produced in twenty-eight cases, yet in nine such dangerous symptoms manifested themselves that the author was bound to warn others against its use, especially when coma was pronounced. He recommended bleeding in conjunction with pilocarpine where it will not act alone, and adduced evidence to show that the mortality is not greater under this mode of treatment than in any other. Statistics of treatment by other methods were given, and the results compared. The question of the reason why pilocarpine is productive of uterine pains was discussed, and three theories given; the “latent period” of the drug was referred to, and illustrated by cases. Further remarks were made upon the action of pilocarpine on the fetus (with a fourth table), complications attendant on its use, the proper dose for administration, and contraindications. The paper terminated with conclusions as to its value and the precautions to be observed when used.—Dr. CHAMPNEYS eulogised this monograph as a most valuable summary of our knowledge on the subject, calculated to render reference easy in the future. He confessed that it had not made him feel anxious to use the drug.—Dr. HERMAN observed that Dr. Phillips had stated in his exhaustive treatise that during the dilating and expulsive stages of labour, pilocarpine was equally productive of increase and intensification of labour pains with ergot, but with much more certainty of action and with none of its ill effects. Dr. Herman thought that there were few drugs so certain and so definite in their action as ergot. That drug produced its effects whenever it was administered, throughout the stages of labour, or when the uterus was delivering a fibroid. Provided that ergot was not given when contra-indicated, no ill effects ensued. Whenever it was beneficial that uterine contraction and retraction should be produced, ergot would be given with confidence that this effect would follow, the causes of the few exceptions being pretty well known. The effects, on the other hand, of pilo-

carpine during the first and second stages of labour did not follow in every case, and, even when observed, was transitory. In the third stage, when certainty of action was especially wanted, its advocates admitted that it was valueless. The pains of the first and second stages of labour were influenced by so many causes that to determine the action of any agent upon the uterus it must be shown that its effect is both marked and constant. The entrance of the doctor into the lying-in chamber frequently stopped the pains for a time, but nobody contended that his movements had any special effect upon the uterus. Therefore the evidence failed to convince Dr. Herman that, in its effect on the uterus, pilocarpine was at all to be compared with ergot, either as to power or certainty. Assuming that the effect could be relied on, he thought that, remembering the sweating, giddiness, &c., which resulted from pilocarpine, there were fewer objections to the former. Dr. Herman concurred with Dr. Phillips in his warning against pilocarpine when eclampsia with coma had set in, on the ground of the dangerous liability to filling of the bronchial tubes with secretion. In eclamptic patients who recovered from convulsions and coma, the great danger was from pulmonary complications resulting from the great congestion of the lungs during the fits, and Dr. Herman thought that the liability to these lung troubles would be increased by pilocarpine. Dr. Phillips' warning was hard to reconcile with his subsequent statement that the mortality was not greater under this mode of treatment than under any other. If the dangers were real, they must raise the mortality. Dr. Herman thought that there was no satisfactory standard by which to estimate the mortality in puerperal eclampsia, since we did not know what was the average mortality when that complication was left untreated.—Dr. DYCE BROWN was struck with the uncertainty of the action of pilocarpine as an ecboic, according to Dr. Phillips' evidence. Not only was it useless for eclampsia, when not actually dangerous, but the dose which had produced dangerous symptoms in some cases was not higher than that which had been administered in other cases. Pilocarpine appeared to Dr. Brown to be a valueless addition to the obstetrician's armamentarium.—Dr. JOHN PHILLIPS remarked, in reply, that he had undertaken his researches with the greatest impartiality. Before commencing them, he had studied all the literature upon the subject and had condensed the results in his tables. He had laid especial stress upon the danger of its use in puerperal eclampsia, a matter which had not received sufficient attention. Singer's idea that its use might supersede the forceps was necessarily chimerical, and should not be entertained for a moment. He was sorry that all his evidence pointed to the fact that pilocarpine was not desirable as an ecboic remedy, and that no positive evidence of its value could be adduced.

Mr. J. BLAND SUTTON exhibited specimens of Ovarian Cysts with Mucous Membrane.

Dr. J. PHILLIPS showed microscopic sections from his case of Congenital Sarcoma in a New-born Infant.

Reviews and Notices of Books.

An Atlas of the Pathological Anatomy of the Lungs. By the late WILSON FOX, M.D., F.R.S. London: J. & A. Churchill. 1888.

WHEN the untimely death of Dr. Wilson Fox occurred, it was well known that this highly gifted physician had left behind him, in a forward state for publication, the material of an elaborate work upon diseases of the lungs, upon the preparation of which he had been long engaged. He had desired that, if he did not survive to witness the publication, the work should be entrusted to the hands of one of his colleagues. We are now enabled to notice the appearance of the first instalment of this posthumous work, the editor (who appears only at the foot of the preface under the well-known initials “W. R. G.”) wisely deciding to issue this Atlas without awaiting the completion of the companion work—an exhaustive treatise upon the Diseases of the Lungs, which was not left in so finished a state as the former. The Atlas forms a handsome quarto, and with its

venture to think, be treasured as a valuable memento by the large circle of the author's pupils and friends, whilst those who did not personally know him cannot fail to be impressed with the loss sustained by English medicine when he passed away. For the Atlas, in addition to its rich profusion of plates, comprises many pages of text, which strikingly recall the characteristics of ample learning and acute observation, with which the author's previous writings—e.g., his contributions to Reynolds' System of Medicine—have made us familiar. There is the same minute and careful description, the same thoroughness in detail, the same evidence of a profound and intimate acquaintance with the literature of his subject. It would seem that whatever subject Dr. Wilson Fox undertook he mastered on all points. There are few, if any, among our English medical writers who exhibit so wide a knowledge, or who are so scrupulously exact in stating the sources from which statements and facts are drawn. But then there are not many who in point of scholarship could equal him. The volume opens fitly with an introduction upon the Ultimate Structure of the Lungs, in which are collated and criticised all the more notable opinions and statements of those who have worked out this interesting anatomical question; and the liberal inclusion of engravings, culled for the most part from classical works—as those of Addison, Waters, Kölliker, Schulze, Harting, and Klein,—is of great assistance to the reader. Then in turn follow articles upon the pathological anatomy of the lungs—viz., Pneumonia, Acute Lobar, Catarrhal, Hypostatic, Interstitial, and Chronic; Brown Induration; Diseases caused by the Inhalation of Dust, Collapse, Embolism, Gangrene, Phthisis, Syphilitic Disease, and Cancer. To these articles is appended an essay upon the Artificial Production of Tubercle. The clinical and pathological details of fifty-three cases, each of which is illustrated in the plates, follow, and form a highly valuable part of the work, which teems with facts of observation accumulated by the author over a long period. Take, for instance, the article upon Phthisis, which may be selected as being the *pièce de résistance* of the volume. Could anything well be more elaborate or exact than the manner in which Dr. Wilson Fox deals first with the gross morbid anatomy and afterwards with the histology of this peculiarly protean disease—protean, that is, in the form and disposition of its lesions, although, it may be, singularly uniform in its primary cause? Thus, he first describes the Granulations, of which he distinguishes five varieties—(1) grey, (2) soft opaque white, (3) larger opaque white, (4) yellow, and (5) indurated; then the Infiltrations—as (1) red hepatisation, (2) grey infiltration, (3) gelatinous infiltration, and (4) caseous infiltration; then the Indurations; and finally the Cavities, separating thus, for the sake of clear and full description, each of the primal departures from the normal. Then he proceeds to describe with an almost painful minuteness the histological characters of each of these conditions; so that it may safely be said that no more detailed account of the anatomy of phthisis exists. For with all it must be borne in mind that the author keeps the purport of his work in view; it is descriptive, rather than argumentative; it deals with the effects of disease, and not its causes. Thus, although he discusses the significance of giant cells and the mechanism of caseation, the relation of the changes to the bacillus of tubercle is not touched on here. Indeed, even if Dr. Fox's histological work had been done since, instead of before, Koch's discovery, the latter could have made but little difference to the former. The distribution of bacilli in the tubercular granulation or caseous nodule is, so far as the histology of these products goes, only something superadded; and therefore his descriptions will remain as faithful and exact now as they were in the pre-bacillary period at which they were penned. But it must not be supposed that Dr. Fox either ignored or underestimated the value and import of the bacillus tuber-

culosis. We have only to turn to the appended essay on the Artificial Production of Tubercle to find that he was fully cognisant of all the bearings of this discovery, and that he had the candour to admit that his earlier experiments on inoculation with non-tubercular products were vitiated by the conditions under which they were performed. Indeed, apart from this question of artificial tubercle, it seems to us that in the almost universal reversion to the doctrine of the unity of phthisis which has followed the acceptance of the doctrine of the unity of the tubercular virus, the position long since taken up by Dr. Wilson Fox has been amply vindicated; for he maintained, at a time when such teaching was out of fashion, that all phthisis was tubercular—a thesis that is worked out to the full from the anatomical side in the pages of this Atlas.

So much, then, for the literary portion of this interesting volume; and now a few words upon its artistic merits. These are of a very high order. Of the forty-six plates, twenty-four are from coloured drawings of the naked-eye characters of lung lesions. Some are of especial excellence: e.g., Plate IV., representing chronic pneumonia and also grey hepatisation; Plate V., Fig. 3, lobular pneumonia; and very many of the abundant delineations of phthisical lungs—from which we may select for special commendation Plates VII., VII., and Fig. 2 on Plate VIII. (an admirable representation of miliary tubercle), Plates X. and XI. (showing tubercular pneumonia, caseation, and excavation), and Plate XVII. (indurating tuberculosis). With but few exceptions, all the drawings are original—the work of Mr. H. B. Tison,—from specimens derived from the cases described in the text. The artist has been very successful in his work, although here and there some slight exaggerations or defects may be observed, as in the deep-brown tint given to the greater part of the lung representing hypostatic pneumonia (Plate III.), and the representation of extensive induration changes in an otherwise excellent illustration of tubercular disease (Plate XV.); but when one considers the difficulties inherent in the subject, we can but admire the general accuracy and finish of the drawings. The plates that are not original include (on Plates II., VA., and XXI.) reproductions of Sir Robert Carswell's drawings, a few from Cruveilhier, one of miner's phthisis from a plate published by Dr. Greenhow in the Pathological Transactions, and one of a syphilitic gumma by Lebert. The remaining plates are occupied with histological drawings, of which there must be more than 150, executed by the author himself. Those who recall his admirable series of such drawings in the Pathological Transactions fifteen years ago will be prepared for the fineness and faithfulness of these, which speak volumes for the industry and skill of this accomplished observer.

The value of such an Atlas can hardly be overrated. The student will by its use be enabled to compare the objects of nature with their delineations, and the histological characters with the grosser morbid changes. He can go further, and, by a perusal of the illustrative cases, contrast the clinical with the pathological history, while he may also study systematically the features of each pathological process as described in the body of the work. In all parts there are copious cross-references. Hence the book is one which will bear frequent and renewed perusal. It will be invaluable to the practical pathologist, for it may be taken as the most exhaustive and elaborate analysis extant of the anatomy of pulmonary disease, and must form the basis of any further investigations into the subject. As a work of art it will take high rank, the reproductions of the drawings being excellent specimens of lithography, by the well-known firm of Messrs. Mintern; whilst the publishers have produced the volume in a style worthy of the contents. Surely such a volume—representative of English pathology, and recalling on every page the thoroughness of its lamented author—merits a place in every medical library.

Abstracts

OF

INTRODUCTORY LECTURES ETC.

DELIVERED AT

LONDON, PROVINCIAL, AND IRISH
MEDICAL SCHOOLS,

AT THE

Opening of the Session 1888-89.

ST. GEORGE'S HOSPITAL.

PROFESSOR HUMPHRY ON THE HABIT OF ATTENTION.

WHEN distributing the prizes at St. George's Hospital on Oct. 1st, Professor Humphry spoke as follows:—"After the excellent address we have just heard from my friend and former pupil, Dr. Ewart, it is needless for me to make many remarks; but I must congratulate you, gentlemen, on the results of your year's labours, and I do so the more heartily because those results offer a good omen for your future success in life. If you look over the lists of those who in former years have been prize-winners in the medical schools, you will find that there are few of them who have not subsequently done well; and if you cast your eyes over the names of the men who now occupy good positions in the profession, you will find that a large number of them were in their day prize-winners in the schools. A marked illustration of this is afforded by him who, by common consent, stands at the head of the surgical branch of the profession in this country, and who was the greatest prize-winner in his own and I believe in any time, in his own or any school in this metropolis. Indeed, it must be so, for the qualities which gain honours now are those which gain success afterwards. They are, I need scarcely say, energy, perseverance, and attention—qualities which are inborn, and which are also all capable of improvement, not talents to be laid up in a napkin, but to be strengthened twofold or even fivefold. With regard to the last of these—attention, which is only a manifestation of mental energy—I will venture to say a few words as supplementary to Dr. Ewart's address, for it is a most important quality, by the strength or weakness of which in ourselves we succeed or fail in the work of life. Of what avail, for instance, is the student's presence in the dissecting-room, or even much labour and care in dissection, unless he has given attention to the appearance and disposition of the parts? Commonly, I grant, the physical energy and perseverance required to dissect well is associated with the mental energy to observe and remember well. But the latter is the harder part of the process, and it is no uncommon thing to find that the student knows very little of the region which a few days ago he had carefully dissected. Of what avail is it to be regular in the lecture-room, and to take copious and careful notes, unless there have been also that alertness and closeness of attention which fixes the matter on the mind? Of what avail is it to go round the hospital wards, to see the cases, even to take systematic methodical notes of them, unless there has been that attention which impresses the facts upon the memory and will enable you to recognise the like facts and the like combinations in another case, which faculty it is that constitutes the practical man? We shelter ourselves under the excuse of "bad memory," but bad memory resolves itself into bad attention, for it is the mental effort of attention which makes the impress upon the mind, and it is the mental effort of attention which recalls that impress when it is needed. It is by the power of attention that we influence others, for it manifests itself in the movements of the body, especially of the face, and, above all, of those tale-telling organs, the eyes. All men are thought-readers, our patients no less than others. They can tell by the want of convergence of the optic axes that we are looking at nothing, and accordingly thinking of nothing; that we are absent, wool-gathering—wool-gathering, unfortunately, in the way that gathers no wool. By the fixity of the eyes they instinctively recognise fixity

of attention and acquire confidence in our judgment and faith in our advice. Dr. Ewart just now said "Manners make the man, and manners make the doctor." Of these manners none are more important than those which result from the habit of attention. The cultivation of this habit lies at the basis of sound education; and I wish it were more in the minds of teachers to effect it. A lad who has well acquired this has received valuable education, in whatever way it may have been given, and will obtain a good grasp of anything that he applies himself to; whereas, whatever may be the amount of Greek, Latin, mathematics, physics, natural history, or what not, that may have been crowded into him, if he have not acquired this habit he is nothing. I cannot but fear that the multiplicity of subjects now attempted in teaching, by scattering the thoughts over a wide field, tends to hinder the habit of concentrating them upon—that is, of attending well to anyone. As is well said by Locke, it is not *what* is taught, but *how* it is taught. Most important, too, is this concentration of thought-power at times of examination. The want of it constitutes nervousness. Often have I heard teachers in the London schools lament the manner in which, owing to the want of it, their otherwise good students have come to grief; their wits, as it were, refusing to be held together, and made to bear upon the needful point when the question-answering moment arrived. In other words, they could not command attention; scattered, brained at the very crisis when they should have been "all there"—that is, intent. Surely it is not amiss that there should be some test of this great faculty of attention in the examinations for entrance into a profession in which it is much needed, in which there are so many emergencies calling for it. Who is the nervous operator but the man who cannot bring his attention to bear upon a difficulty which suddenly arises, and by which he is therefore bewildered. I trust that all of you, who have done so well in the examinations here, will not fail to hold your own in the no less important ordeals which are yet to come. I have ventured to say this much because I do not think that thought-control or power of concentration—that is, attention—is sufficiently regarded in the mental training of our students. Some of you, I may presume, gentlemen, have failed in this contest for honours; and I must congratulate you on having tried; for it is far better to have tried and failed than never to have tried at all. Often has it proved better to be beaten than to beat; for they who are beaten take close searching stock of themselves, find out their weak points, and endeavour to strengthen themselves to do better in future, whereas the victors are liable to be tempted to be content and rest on their oars; and forasmuch as the tide of science is ever advancing, those who rest are soon left behind. All of you will probably look back upon the time you have spent at St. George's Hospital as the happiest in your lives, the acquisition of knowledge being one of the supreme pleasures of life. The love of knowledge is an inborn and deep feature in the human mind. There is not, there scarcely could be, a human being without it; and here you have enjoyed greater opportunities for gratifying it than you ever had before, or than you probably ever will have again. The pleasure of the retrospect will be proportionate to the use you have made of these opportunities, and, above all, to the high character of the motive which has actuated you in the use of them. Throughout life, happiness and success—that is success in its best sense—will be proportionate to the good use of opportunities and the good feeling that actuates you—to duty, in short, and motive; and nothing will throw a happier glow over the fading landscape of your setting professional life than the consciousness that the desire to promote the welfare of your fellow-men has found a large share of your motive in the study and practice of your profession. This, as we have just heard well said, gives the surest promise of bliss to come.

At the close of the address the following scholarships and prizes were distributed: £125 scholarship to Mr. R. G. Turner; £85 scholarship to Mr. J. S. Edkins; £50 scholarship to Mr. C. S. Berry; William Brown £100 exhibition to Mr. A. H. Ward; Brackenbury prize in Surgery and the Brodie prize in Clinical Surgery to Mr. H. Higgins; the Acland prize in Clinical Medicine to Mr. W. M. Davidson; Brackenbury prize in Medicine to Mr. B. V. Sortain; Sir Charles Clarke's prize to Mr. C. Truman; the Johnson prize in Anatomy to Mr. R. M. H. Walford; General Proficiency prizes to Mr. H. S. Barkworth and Mr. R. M. H. Walford.

OWENS COLLEGE.

THE address at the opening of the Owens College Medical School was delivered on the 1st inst. by Dr. JAMES ROSS, Mr. Edward Dooner presiding. After a few preliminary observations, Dr. Ross said that to those of his hearers who aspired to be thinkers he would say that, besides cultivating a particular department of science and adding to our knowledge by special researches, they ought to make a profound study of the problems of knowing and being, which was the subject matter of philosophy, and which since the dawn of speculation in Greece up to the present time had never ceased to exercise a marvellous fascination upon the greatest minds. It was not for him to determine the form in which these problems would present themselves to the coming generation, but they were pressed upon the notice of the generation now rapidly passing away in the form of an acute and violent collision between the expanding conceptions of science and, he would not say religion, but the traditional beliefs and dogmas in which our religious ideas were clothed. The first rude shock which the old theory of creation received came from a small and obscure laboratory in Manchester, where Dalton carried on his life work by means of old cups and ink-bottles for chemical apparatus. When this great man had once enunciated his atomic theory, chemistry henceforward became a strictly quantitative science, and the idea of the indestructibility of matter, long held by certain philosophers as a speculative doctrine, became one of the corner stones of science. But although the idea of the indestructibility of matter held within it the germ of a great movement of thought which was to end in the complete overthrow of the reigning cosmogony, yet the new and the old ideas did not at once come into direct collision. It was readily admitted by men of science, on the one hand, that the doctrine of the indestructibility and ingenerability of matter did not necessarily imply the eternity and uncreatedness of matter; and by theologians, on the other hand, that the history of creation referred less to the creation of matter than to the breathing of the energy of movement into dead matter, by means of which the chaos in which it previously existed was reduced to order. But this modification of the theory of creation was not long to remain unchallenged, and the first shock to it also came, in part at least, from Manchester, when Dr. Joule, almost contemporaneously with Mayer, determined the mechanical equivalence of heat. The idea that one form of energy could be transmuted to another had been familiar to scientific men for some time previously under the name of the "correlation of the physical forces," but with the determination of the mechanical equivalence of heat dynamics became a quantitative science, and the indestructibility and ingenerability of energy took, like the cognate doctrine with reference to matter, its rightful position at the foundation of science. Dr. Ross proceeded to show how gradually the modern views of evolution came to hold sway. By Darwin's life work, he continued, the theory of special creations was banished from animal and vegetable morphology, but the upholders of this theory endeavoured still to find a refuge for it in some of the obscure problems of life and organisation. For his own part, he had no wish to deny the wide chasm existing between the living and the non-living, but on the supposition that life was not suddenly created, but gradually evolved, what should one expect? Suppose that in the youthhood of the world, and under different telluric conditions from the present, the laboratory of nature had gradually evolved more and more complex substances, until at last protein had been produced, and that in the further course of time specks of this protein had become endowed with the functions of assimilation and reproduction, was it not evident that the struggle for existence would commence, and that the living protein would assimilate into its substance the partially living and the non-living protein as well as many of the higher hydrocarbon compounds? In other words, life being once developed, the intermediate forms between it and non-living matter would disappear, and produce this very chasm we find in nature. He did not say that life was developed in the manner just described; all he wished to assert was that this supposition made the origin of life congruous with the rest of our scientific knowledge, and that the possibility of making such a supposition showed that the existence of a wide chasm between the living and the non-living did not afford a sufficient justification for the counter supposition that life had its origin in a sudden creative act. He hoped his hearers would not

understand anything he had said as implying that an assent to the theory of evolution carried with it as its natural consequence religious doubt. The practical solution of their doubts consisted in following a precept which Carlyle said was of invaluable service to him—namely, "Do the duty which lies nearest thee, which thou knowest to be a duty; thy second duty will already have been clearer." The marvellous activity manifested in every direction in the search for truth, and the sacredness which came to attach to any work, whether material or mental, which tended to advance the social and moral welfare of mankind, brought the age into nearer contact with the life of the Founder of the Christian religion, who taught us the happiness and peace that was to be found in self-renouncement and doing good to others. The generation thus found a corrective against the everlasting Nay of critical and sceptical philosophy in the everlasting Yea of practical life. In conclusion, Dr. Ross dealt with the speculative solution of doubts.

YORKSHIRE COLLEGE.

MR. T. PRIDGIN TEALE, M.A., F.R.C.S., on the 1st inst., delivered the introductory address at this institution. Having reviewed the rise and progress of this flourishing school of medicine, Mr. Teale said that every change and every so-called advance in medical education, and, above all, every addition in the form of examination, tended to encroach upon and to dwarf that most valuable side of medical study which was represented by work in the hospital and which was formerly, for industrious students, the greatest and most effective part of their medical training. From this point of view the very improvements in medical education were in danger of becoming sources of deterioration, and they ran a risk of turning out medical men highly scientific it might be, yet inadequately trained in those points of character, habit, and readiness of resource which enabled a man to become, what all medical study should aim at making him, an efficient practitioner. This aspect of medical training was one which ought to be forcibly brought before their notice on that occasion. Many of those present were at the very commencement of their medical life; others had proceeded some way in their career as students; others were approaching the time when they hoped to receive the stamp of the licensing bodies as legally competent to commence practice. Most elaborate arrangements were made by the medical authorities that they should go through a carefully prescribed course of study and scientific training, and that their work should be constantly put to the test of examination. But it was well that they should be reminded that there was a part, and that no small one, in the training of a skilful practitioner which neither curriculum, nor lectures, nor examinations could secure. That part might be called their self-education—the earnest seeking after every opportunity of seeing, of observing, and of doing, the training of their eye not only to see disease, but to observe its effect upon the countenance, the manner, the character of their patient, and, beyond the patient himself, the effect upon others—parents, children, friends, dependents, so that their minds might grasp the whole situation, and enable them to discharge in the fullest sense their duties as a medical adviser; the determination to use every opportunity of watching illness, of discharging small duties about the sick, of training the hands and touch and mind to handle gently, and, when obliged to give pain, to give as little pain as possible. And not the least of the faculties of immense importance to a medical man was tact. That was partly the result of natural qualities, partly the result of training and of the observation. Tact implied the power of observing and estimating the effect of their own manner and words upon others, combined with judgment to perceive what was the best thing to do, with the right feeling to enable them to act unselfishly in the interest of another. Let them from the beginning be determined to take every opportunity consistent with their appointed studies of coming in contact with hospital work. These opportunities, where the number of students was large, would be probably restricted during the first two years to out-patient practice. But every hour spent in the out-patient room would bring before the student's mind innumerable points of anatomical or physiological interest, which would give life and reality to his other work, and teach him that he was dealing with living human beings. He could not think of a wholesome or sound practice for the study of anatomy, physiology, and

chemistry to be divorced from all observation of those departments from healthy anatomy and physiology, the study and correction of which was the very end of all medical work. After their second year, when most of them would that he could say all—would have successfully passed their examinations in anatomy and physiology, greater opportunities would be open for study in the hospital wards. A mighty privilege it was, and one which they could hardly prize too highly. There disease and injury in their more severe forms, often with life hanging in the balance, and apparently dependent upon the decision of the medical officer, were brought before them to study, with skilled persons ready to point out every important symptom, to interpret for them what they could not understand, and to explain all the most recent methods of investigation or treatment. Surely every minute thus spent in the wards should be counted most precious, and not a word spoken by the physician or surgeon to patient, nurse, or attendant should pass unheeded. Earnest, interested attention to all that was passing—sympathetic, at the same time, with the sufferings, the hopes and fears of the patient—were what the situation, their opportunities, and regard for human suffering demanded—suffering which had become subservient to their education and to the general benefit of mankind. Passing on to the main object of their meeting that day—the distribution of prizes—Mr. Teale said that working for prizes was a two-edged sword. It was a valuable aid to work if used rightly and with a proper motive. It encouraged and tested industry and the power of mental concentration, and was in some degree a measure, although not always a reliable one, of the relative merits of the competitors, and an aid to those who had to make a selection among competing candidates for a post of responsibility. On the other hand, like most good things, it was capable of misuse. If the mere getting of the prizes and the surpassing of a fellow-student became the mainspring of work and effort, industry was poisoned at its source, and success became a snare instead of a boon. It was a wise thing so to work for class examinations as to use them as an aid to study and as a “dress rehearsal” for the greater examinations of the licensing bodies at the end of their term. Then, if a prize fell to their lot, they would accept it with the feeling of double satisfaction of having won it by fair work, and of having worked worthily and well. If they wished for a rule to guide them, make this determination: never to work for any prizes unless they could make it worth their while to fail, so that to have worked and failed would prove of hardly less value to them than to have worked and won.

The following is the prize list for the year 1887-8.

Anatomy (Junior Division).—Prize, C. A. Dixon (Ganot's “Physiology”); certificate, H. Taylor.

Anatomy (Senior Division).—Prize, R. H. Shaw (Cheyne's “Antiseptic Surgery”); certificates, C. Benson and J. A. Codd.

Chemistry.—Prize, A. A. Smith (Brunton's “Pharmacology and Therapeutics”).

Physiology (Junior Division).—Prize, C. A. Dixon (McKendrick's “Physiology”); certificate, W. Woods.

Physiology (Senior Division).—Prize, A. L. Whitehead (Thorburn's “Diseases of Women”); certificate, S. L. B. Wilks.

Practical Physiology.—Prize, C. Benson (Roberts on “Diseases of Kidney,” and Hilton on “Rest and Pain”); certificate, A. L. Whitehead.

Surgery.—Prize, H. Walker (Johnson's “Medical Lectures and Essays”); certificate, J. J. Mitchell.

Gynaecology.—Prizes, J. E. Briscoe and J. J. Mitchell, equal (Walshe's “Diseases of Heart” and Gowers' “Diseases of Nervous System”).

Midwifery.—Prize, J. J. Mitchell (Gowers' “Diseases of Nervous System”); certificate, C. Benson; honourable mention, A. Wilkinson.

Materia Medica.—Prize, J. G. Rowell (Forster's “Physiology”); certificates, C. A. Dixon and A. Ellison, equal; very honourable mention, A. J. Managret.

Practical Chemistry.—Prize, J. G. Rowell (Hilton's “Rest and Pain”); certificate, H. Keighley.

Thorpe Prize in Hygiene.—J. Stalker, £5; honourable mention, E. Howgate.

Thorpe Prizes in Forensic Medicine.—T. P. Brain, £7; Charles Forsyth, and J. J. Mitchell, £4 each.

Hardwick Prize.—H. E. Hick, £10.

Silver Medal, for the student of the first year who has gained the greatest amount of class distinctions, C. A. Dixon.

MEATH HOSPITAL.

DR. JOHN WILLIAM MOORE delivered on the 1st inst. the introductory lecture at the Meath Hospital, which, it may be noted, is the first institution of a similar character in Dublin to commence clinical work on Oct. 1st, instead of Nov. 1st

as heretofore. Dr. Moore, after reviewing the various changes which had occurred at the hospital during the past year, said that he desired to consider what was the success at which his hearers aimed, and which, if attained, would be, like virtue, its own exceeding great reward. In the first place, he remarked, “success suggests the idea that a severe, or a long and arduous struggle, has gone before. And so it is—day after day, month after month, year after year, an increasing conflict with disease and death is waged in our wards. Victory inclines now to this side, now to that. Too often are the weapons drawn from the *armamentarium chirurgicum* all powerless against the deadly foe, which advances to the attack upon the stronghold of life under the guise of tetanus, or hydrophobia, or cancer, or malignant pustule. Too often does diphtheria, or petechial typhus, or purpuric small-pox, or malignant scarlet fever, or aneurysm, or apoplexy defeat the physician's untiring thought for, and devoted care of, the patients entrusted to his charge—nay, even he himself may fall a victim in the strife—as Cymbeline addresses Cornelius, who has announced the death of the Queen:—

“Whom worse than a physician

Would this report become? But I consider

By medicine life may be prolonged, yet death

Will seize the doctor too.”

But, granting all this, shall we, or can we, deny the triumphs of both medicine and surgery over disease and death? In the second place, and from another point of view, the word “success” implies that we intend—perhaps I should say hope—to do our duty by you, my young friends. Through your parents or guardians, or of your own free will, you have entrusted to our safe keeping, for the time being, your life interest in the profession of your choice. You have entered the walls of this hospital with all the enthusiasm of youth. Far be it from us to quench through any carelessness, or indifference, or coldness on our part, that vital spark—rather be it ours, by kindly encouragement, patience, and, if need be, self-denying and painstaking effort, to fan it into the flame of genius and research. Of these great prerogatives of the human mind, this hospital has been the home in the far-distant past. There is no reason why it should not be so equally, or in a still greater degree, in the present or in the immediate future. The spirit of scientific discovery is abroad, nor has it failed to soar on airy pinion above the wide-stretching domains of the healing art. In the realms of both curative and preventive medicine its presence has been felt, and the future progress of these great branches of human knowledge can scarcely fail to be as marvellous as it assuredly will be rapid. Medicine is a progressive science, and affords free scope for the exercise of the powers of those who are earnest, well trained, intelligent seekers after truth.” He would conclude his address with a warning and a promise. “There is a danger that in the daily practice of our profession—the noblest of all professions, the Church not even excepted—we may be carried away by our enthusiasm on the one hand, or we may be tempted by straitened circumstances on the other hand, to forget wherein its nobility consists. It is in its Christ-like nature. In Homer's great Epic, the word used to denote a physician—*Iatros*—derived from the verb *laounai*, ‘I heal,’ ‘or cure,’ is etymologically and almost in form the same as the name borne by the Divine Healer of the Nations; and, indeed, if asked where a faithful word-picture might be found which would convey to men's minds all that a physician ought to be, I would refer my hearers to the Sermon on the Mount. They should be ‘poor in spirit’—that is, humble-minded, sympathetic, meek, upright, merciful, pure in heart, peace-makers, tolerant of wrong, or ‘long-suffering.’ Should they in their course through life keep this pattern before them, and in their lives realise this ideal as it may be realised, then to each of them it might be said:—

“Servant of God, well done—well hast thou fought;

The better fight, who single has maintained

Against revolted multitudes the cause

Of Truth, in word mightier than thy arms; yd bearest

And for the testimony of Truth hast borne

Universal reproach, far worse to bear

Than violence: for this was all thy care,

To stand approved in sight of God, though worlds

Judged thee perverse. The easier conquest now

Remains thee.”

"PROTECTION OF THE MEDICAL PROFESSION."

To the Editors of THE LANCET.

SIRS,—There can be no doubt that it is high time for the great body of general practitioners to take some steps to protect themselves against the present rush of men into the profession, which is out of all proportion to the numbers leaving it, and as a result of which medical men are reduced to practise all manner of shifts to gain sufficient to merely exist. Medical ethics are becoming a dead letter, and a once noble and honourable profession is becoming little better than a trade. It behoves every medical gentleman to exert himself to the utmost to save his profession from dishonour.

I beg to offer the following suggestions for remedying the present condition of things: 1. That every member of the profession in Great Britain and Ireland be canvassed as to the advisability of forming an association for the protection of the profession. 2. That the number of candidates admitted into the profession by the various corporations be regulated according to the vacancies occurring in the profession, as is done in the army and navy. 3. That a fee be fixed below which a medical man may not charge, and if his client be unable to pay, let him rather give his services for nothing. 4. That the remuneration of all appointments be regulated by a council of the profession, and that no man shall take an appointment in opposition to this council.

I am, Sirs, yours truly,

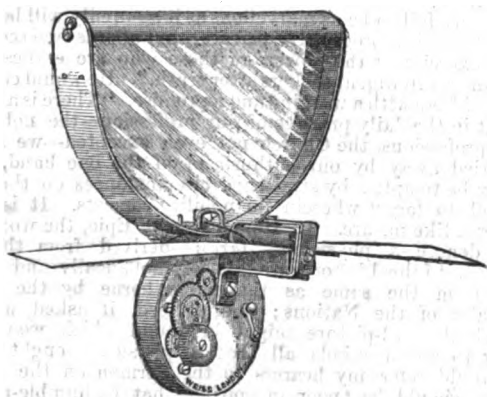
J. H. T.

Sept. 22nd, 1888.

New Inventions.

A POCKET CLINICAL PNEOGRAPH.

THIS instrument, devised by Dr. Mortimer-Granville and manufactured by Mr. Weiss, consists essentially of a delicately suspended and counterpoised semi-disc (at present made of talc), which rises and falls when the instrument is held over the mouth of a recumbent person, or swings vertically when held in front of the mouth of a person sitting or standing. The rest of the apparatus consists of an arrangement similar to that employed in the sphygmograph, by which the smoked paper is moved under

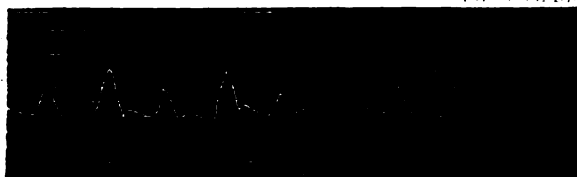


a needle attached to the semi-disc. The result is a tracing comparable, as regards length and character, with the tracing made by the needle of the sphygmograph. The tracing of the pneograph shows the expiration by a more or less vertical line, the duration of the expiratory effort being indicated by the length of the line traced by the needle before it descends, at the moment when inspiration commences. The character of the expiration as regards force and continuity is shown by the nature of this line, and very notable and apparently significant differences are observed between the results obtained in diverse conditions of the lung.

The following tracings are given as examples of the results of the use of the instrument in a case of pleuro-pneumonia and in one of mitral incompetency.

Case of Pleuro-pneumonia.

Respiration 32.



Pulse 102.

The vibrating lines at the head and base of the expiratory lines are produced by the force with which the semi-disc is moved by the breath.

The same case sixteen hours later, showing how improvement is indicated.

Respiration 30.



Pulse 96.

Case of (probably recent) Mitral Incompetency in an otherwise healthy subject.

Respiration 18, feeble.



No. 1.



Pulse 100, sitting.

No. 2.



Pulse 80, lying.

The intermediate beat in No. 2 (which appears as a pulsation equal in height with the alternate beats in No. 1) is scarcely recognisable with the finger when the patient is lying, but feels equal in force when the patient is sitting.

We shall look forward with interest to the results of further experience in the use of this ingenious little instrument.

THE LANCET.

LONDON: SATURDAY, OCTOBER 13, 1888.

THE Report of the Chairman of the Metropolitan Asylums Board for the twelve months ending March 25th, 1888, has been already noticed by us. It should be read in connexion with the Annual Reports of the Statistical Committee, and the Medical Superintendents of the Infectious Hospitals and Imbecile Asylums, for the year 1887. The reports and their accompanying tables teem with matter of not only public but professional and clinical interest. It is, indeed, desirable that they should be more extensively circulated, not alone among the public, but the profession. It is amazing to those who remember the origin of these Asylums in the defective beds and pauper nursing of London workhouses, twenty years since, to think that they now receive thousands of the public who would feel insulted to be considered paupers, and that they are accumulating an amount of experience and observation in regard to infectious fevers and small-pox which is worthy of deep study by medical practitioners. The profession has already been laid under obligation by contributions towards the prevention and treatment of such diseases by several of the medical officers of the board, notably by Dr. COLLIE and Dr. GAYTON. The lessons which these gentlemen and their colleagues have to teach us in their last report are proportioned to the magnitude of the duties which were thrown upon them last year in connexion with the unprecedented rush of scarlet fever cases towards the metropolitan asylums. Not the least interesting fact which comes out in these reports is that the epidemic of scarlet fever of last year was by no means so great, in comparison with those of former years, as it appeared to be. The Statistical Committee, evidently disposed to make the best use of the materials at their disposal, adopt this view, and quote the Registrar-General's report in support of it. Assuming the proportion of cases to deaths to be the same in London generally as it was in the infectious hospitals, the Registrar-General concludes that there were fewer cases of scarlet fever even in the last six months of 1887, when the pressure on the hospitals reached the extreme limit, than the average in the same period of ten years. According to this calculation, there were fewer cases in 1887 than in five out of the last eight years. It is estimated that in 1887 there were 13,841 cases; whereas in 1880 there were 28,039; in 1881, 21,376; in 1882, 23,194, &c. In the two immediately preceding years (1885-86) the cases were, it is estimated, 8886 and 8185 respectively. Yet the fear of scarlet fever last year filled the air and filled the newspapers, and on Nov. 23rd no less than 2789 cases occupied the beds of the metropolitan asylums—a number four times that of any previous year. It is possible that the rush into the hospitals saved the community very largely. This is the ordinary view of the facts, and we are bound to admit that there is much to be said for it.

The medical profession may have its misgivings as to the

justice of giving one-third of the cases of infectious diseases in the metropolis gratuitous accommodation and attendance in the asylums. If the public safety demands it, it is better that a few hundreds of cases should be admitted of those who might fairly be expected to be accommodated and attended at home, and at their own charges, than that a sharp economy should exclude doubtful cases. This is an aspect of the question which has not yet received sufficient elucidation. We think it full of interest, and it is one on which we should be glad to receive any information from our readers. But meantime we are informed that several boards of guardians in the metropolis have instituted inquiries into cases admitted without the order of the relieving officer, and found that, with few exceptions, the circumstances and social condition of such patients have been such that the relieving officer would not have hesitated to give an order. This is so far satisfactory.

We must notice a few points in the interesting reports of the Medical Officers, who, it is pleasant to notice, seem on most courteous and satisfactory terms with their respective committees. Dr. COLLIE is brief and to the point as usual. He dwells on the risk of nurses and other officers contracting disease, and the advantage of retaining "seasoned" and tried servants. In the last year sixty-four officials contracted fever, and were warded for 2798 days. Perhaps the most interesting point raised in the reports of the medical officers is in that of Mr. SWEETING, and entitled by him "Increase of Scarlatinal Albuminuria." Mr. SWEETING has used the picric acid test since 1884, and regards it as far superior to heat and nitric acid. By the way, we are surprised to find him say that a weekly examination of the urine in ordinary scarlet fever cases is regarded as sufficient. But to return. In November last he notified to the Statistical Committee "a large increase in the number of cases of scarlet fever complicated with albuminuria, especially in the third quarter. The rate of attack per cent. for the four quarters of the year was respectively 35.0, 29.3, 39.3, and 34.4. In the previous year he has found the increase of albuminuria more in the second quarter. He is disposed to associate this increase with two circumstances: first, the drafting of patients away to a convalescent hospital, which he finds, in point of time, will not explain the fact; secondly, with the crowding of cases in the wards, the admissions increasing from 12 to 30 per week. He quotes Dr. THORNE, late physician of the London Fever Hospital, as having made a similar observation. This is a point of great practical interest, and indicates the importance of fresh air in the scarlet-fever patients' room. In Mr. SWEETING's report, too, occur some interesting facts as to the age of patients with scarlet fever and its greatest mortality. More than two-thirds of those admitted into the Western Hospital were under ten; but the second quinquennial (five to ten) furnished more cases than any other—viz., 450 of the whole 1115. No deaths occurred over twenty-one years of age; 96 of the whole 103 deaths in this hospital were in those under ten, and of these 72 were children under five.

We have reached the end of our tether without noticing many important points—errors of diagnosis, the concurrence of multiple infections in the same case, &c. We may revert to these subjects. It would be ungenerous, while treating questions of public policy and professional in-

nerest, not to recognise the extreme value of the reports we have been noticing, and the able and prompt action of the Board in meeting the demands of a sickle public, which sends year by year, public asylums and another rush into them.

OUR correspondent, Mr. LITCHFIELD, has raised, once again, the old controversy about SHAKESPEARE and HARVEY, both immortals of this English soil, and both living here and radiating their fire of genius at the same period of time; so that, as some historians think, they actually may have met or at least have seen each other. Considering how small a place London was in the SHAKESPEARE-HARVEY era, it is probable that WILLIAM the doctor saw WILLIAM the playwright, for WILLIAM the playwright and player was a man of established note when WILLIAM the doctor was in the heyday of his life, and when to go to the play to see the King's crack company was the right thing to do by those about Court, and the natural thing also for one who, like our great anatomist, was fond of poetry, read VERGIL regularly, and, to use the high-flown term of the day, was Italianised in education. But that the two men ever met in the way of personal intercourse is not at all probable. They belonged to different spheres—spheres almost as widely apart as it was possible for them to be. The player and playwright lived a life of his own, and would be as little likely to commingle with a professor of physic as for the present stroller to visit with one of the heads of our Colleges. It is true that poor TOM LODGE, physician and playwright, and ye olde Catholic in disguise, did, in a furtive kind of way, make companions of the players, and even joined them in their labours of writing plays; but Dr. LODGE was not Dr. HARVEY, and, in fact, was looked on somewhat as a pariah of physic who had missed his natural vocation, and who himself cared nothing whatever for the good or bad graces of the members of the critical Faculty to which he nominally belonged. Above all things, then, it is unlikely that our national anatomist ever got a "wrinkle" from our national poet about the circulation of the blood, and equally unlikely is it that the poet got any "wrinkle" from the anatomist we most honour. And so it comes to pass that if SHAKESPEARE knew aught about the circulation, he got it from some Italian source. But did he know anything beyond the glimmering knowledge which preceded the clear discovery of HARVEY?—a discovery which was not announced, and, for the matter of that, not made until after the death of the poet. We believe not. There are, without doubt, in the plays of SHAKESPEARE, some very curious passages, of which the one sent us by Mr. LITCHFIELD is least remarkable. That passage from "Coriolanus" is, as our readers will see if they turn to Mr. LITCHFIELD's letter, a mere recast of an old fable—a fable old as Æsop himself. There is nothing about the circulation in any line or word. In it the poet simply quotes from a fable, just as in the same play he quotes from a fable of the "Oak and the Reed"—which WHITNEY, the emblemist, had illustrated—in the passage: "The worthy fellow is our general. He is the rock; the oak not to be wind shaken." The quotation about the "Belly and the Members" is not, indeed, in our opinion, so much as near the mark about the circulation; it is off the target altogether. The passages which are on the target, though far from the centre of it, are such as that in

"Twelfth Night," where the Clown shows his cognisance of the *pia mater*, a piece of anatomy which few could then have known: "Thou hast spoke for a madman, as if thy eldest son should be a fool: whose skull God cram with brains, for here he comes, one of thy kin, has a most weak *pia mater*." Or another passage well singled out by the late Dr. ROBERT WILLIS, in the play of "Cæsar," where Brutus speaks to Portia:—

"You are my true and honourable wife,
As dear to me as are the ruddy drops
That visit my sad heart."

Or, most remarkable of all, the passage in the Second Part of "Henry the Sixth," where Warwick describes the appearance of the dead Humphrey, Duke of Gloster:—

"See how the blood is settled in his face!
Oft have I seen a timely parted ghost, no son to radiant
Of ashy semblance, meagre, pale, and bloodless,
Being all descended to the labouring heart;
Who, in the conflict which he holds with death,
Attracts the same for aidance 'gainst the enemy;
Which with the heart there cools and ne'er returneth
To blush and beautify the cheek again.
But see, his face is black and full of blood."

In this last quotation there is something most curious for study. A description which in a medico-legal point of view is marvellously correct, as indicating the broad difference between the symptoms of death by syncope and death by asphyxia, but is no description of the circulation as HARVEY defined it; as far from that as SWIFT'S hazard of the two moons that sweep round the planet Mars is from the discovery of those satellites by the modern astronomer. It is a fine poetical generalisation; but without a single detail; the promise of one of those coming events which cast their shadows before, and which in this instance waited for WILLIAM HARVEY in order to make it stand out in the full light of day without a doubt and free of every shadow; nothing more. It may be that at the present moment some great truths are casting their shadows in the same manner. But who is enlightened by shadows which give no light, not even when a SHAKESPEARE casts them, until the light by its direct radiance dispels them, as HARVEY dispelled all shadow from the phenomenon "*de motu cordis et sanguinis in animalibus*"?

WE regret to learn that a strong impression prevails that the War Office and India Board, in a fit of saving, falsely called, economy, are seriously contemplating the abolition of this very useful and much-needed School. It was one of the great boons secured for the army by the soldiers' friend, SIDNEY HERBERT. In the evidence taken before the Royal Commission over which he so ably presided he was much struck with the general opinion that the want of special instruction in matters connected with the military duties and the sanitary requirements of the army was greatly felt by the young medical officers joining the service. On the report of that Commission the Military Medical School was founded at Chatham, and subsequently transferred, with the great invaliding hospital, to Netley. It has now been in operation for thirty years on the lines then laid down, and during that period has done good service. It cannot be doubted that, to some extent, the improved health and reduced death-rate of the troops have been due to the instruction in sanitary matters given there to the surgeons on probation, and which could not have been obtained

elsewhere. The instruction has not only been beneficial to the soldier, but it has also saved the young officer from much of the difficulty which his predecessors experienced on first joining, and which we have often heard some of the very best class of them lament as a necessary result of their being set to perform special duties without any preceding special instruction. The increased efficiency resulting from having gone through the Netley course has undoubtedly been the means of saving many lives, and thereby effecting a great economy, for it involves no small expenditure to replace a trained soldier. It is alleged that by abolishing the School a saving of £4000 a year may be effected; but we believe it will cost much more than that, as the result of placing in charge of troops medical officers who are unacquainted with the requirements necessary to keep them efficient, and the removal of the professors and surgeons on probation would necessarily involve an addition to the staff of the hospital, as much of the professional work is now done by them. We understand that one of the reasons assigned for the proposed step is that the instruction given at Netley may now be obtained at the civil medical schools. We greatly doubt it, for though students may there learn the general principles of hygiene, they cannot, at any school that we know of, be taught the application of these to the special circumstances of troops in the field and on the various foreign stations at which they are so largely employed. We are told that the India Board are of opinion that this special instruction may be as efficiently and more economically given at the medical colleges in India. We cannot believe that this could be done without a large addition to the teaching staff, which would more than swallow up all the saving. There would also be the serious drawback that the young officer, on his first arrival in India, would have to go through an arduous course of study under all the disadvantages of a residence in the large cities, under a tropical sky. As a result, some of them, at least, would probably break down in health, and a not improbable consequence would be the abolition of the course of instruction, leaving the young medical officer to acquire the necessary special knowledge at the expense of the health, possibly the life, of the soldier. We sincerely trust that, before any action is taken in this important matter, the War Minister and the India Board will institute an inquiry into the question as to the necessity for, and advantages to be derived from, such an establishment as the Military Medical School at Netley. They have the means of doing so by the appointment of a committee including the responsible heads of the two branches of the medical service, and some of the best of their officers, either retired or still serving. We believe there is room for improvement in the Netley course, and the means of effecting this might be included within the scope of the inquiry. It certainly seems to us very remarkable that at a time when exertions are being made to improve the professional education of military officers, especially in the scientific corps and at the Staff College, such a retrograde step should be contemplated as the abolition of a School where so much special instruction is given in the direction of saving life and promoting the efficiency of the soldier. If we would avoid a repetition of the Crimean horrors, this must not be treated as a mere

question of money, though even in that respect the special School may be an important agent in promoting economy by reducing the mortality and invaliding of the army. It must be looked upon as a duty we owe to our soldiers to take every means in our power to preserve them from sickness, and to provide thorough and efficient assistance for them when injured in the field, and in the much more frequent occurrence of being struck down by disease. We should look upon the suppression of the Medical School as a serious injury to the officers of the department, and *a fortiori* to the officers and soldiers of the army.

AN inquiry recently concluded by Mr. BRAXTON HICKS, coroner for Mid-Surrey, has exposed certain defects in the Infant Life Protection Act which call for speedy amendment. It has proved that under the Act as now constituted a system of baby-farming may be very extensively carried out in such a manner that infant life is endangered, while those who should be directly responsible for its safety are able to evade the clutches of the law. The business carried on by Mrs. JANE ARNOLD, or HALL, exhibits, as the coroner aptly remarked, the application of the "sweating" method to what was a regular trade in nurse children. In this case a number of infants—twenty-five at least—have during the last three or four years been distributed, by means of an intermediary, to various parts of the country out of sight and mind of their original owners. Mrs. ARNOLD's custom was to advertise herself as willing, for a consideration, to adopt a child or to take charge of one, and to provide a home with every comfort. She had replies, of course. Children were sent to her, and sometimes considerable premiums were paid with them. The amounts of these varied. In one case £30 was given, in another £40. This represented the cost at which the parent purchased immunity from all further concern in the child. It included all charges connected with the transfer. It was the wholesale price, and it also covered the retail cost, for Mrs. ARNOLD, the first receiver, was not, as we have indicated, the ultimate custodian of the infant. She kept no *crèche* for the accommodation of her numerous family. All that she did was to hand over her successive consignments to other women engaged in the same line of business, though on a smaller scale, allowing them a share of her original premium, or undertaking to allow a few shillings per week for maintenance. In some cases, however, her payments were so deficient that arrears of several pounds had accumulated up to the date of the inquiry. Her position, in fact, was identical with that of the middleman in the market. She received the commodity—a child,—made her own profit, and then passed it on. A system such as this evidently affords ample opportunity for convenient fraud, and it has the effect of casting the infant virtually on the world. In the great majority of cases these considerations would not be likely to disturb the minds of Mrs. ARNOLD's clients. Children thus disposed of are most usually inconvenient on account of their illegitimacy. But for the supervision of law, their existence and their ultimate destiny would, in very many instances, be ignored by their proper guardians; and it is clear, from the case before us, that the legal machinery now available for such oversight is in serious

need of amendment. Recognising the inefficiency of the Infants' Protection Act to deal with this system of child-hiring, the Metropolitan Board of Works have suggested the following useful amendments: (1) that the term infant should, for the purposes of the Act, include children up to five years of age; (2) that mere payment of money should not be allowed to release the parent of an adopted child from all responsibility for its welfare; (3) that persons who take for hire or reward any child under seven years of age must be registered under the Act, and any agreement entered into between the parties to any such transaction must also be registered by the local authority. We have little to add to these recommendations, though it is, in our opinion, open to question whether anything would be gained by impairing the parental rights conferred by adoption; and all the necessities of the case would probably be met by regarding the first recipient of a nurse-child as standing *in loco parentis*, and by forbidding the introduction of needless complications by a second transfer.

Annotations.

"No quid nimis."

MR. ERICHSEN AT KING'S COLLEGE.

ONE of the most interesting features in the introductory ceremonies at the commencement of this winter session was the presence at King's College, by special invitation, of Mr. Erichsen, President of University College, to distribute the prizes and to give an address to the medical students of King's College. Recalling to mind the acute rivalries and the religious jealousies which existed when these institutions were founded, it seems impossible that these difficulties should have been overcome merely by the fact that they were engaged in the same practical educational work, and friction brought to a minimum merely by a lapse of time. Professor Sir J. Lister, Bart., educated at University College, is now a clinical teacher of students at King's College; and Professor C. Heath, a pupil and house surgeon of the late Sir William Fergusson at King's College Hospital, is Professor of Clinical Surgery at University College. How little foreseen a few years ago were such appointments; and even now it is difficult to appreciate that the two foundations, instituted in direct opposition to one another, have been forced by the circumstances of London educational needs to place themselves side by side, and to exchange an active opposition for a friendly co-operation. Professor Erichsen showed that the two Colleges possessed every material necessary, in trust funds, teaching staff, and pupils, for a University, and that in some instances these essentials surpassed those held by existing Universities, and we can understand from his speech the probable character of the evidence submitted by the two Colleges to the Commission. Professor Erichsen pointed out that every care had been taken not to prejudice the position of the other medical schools in London, and we are glad of his authoritative declaration on this subject; for although a Teaching University in London may be the primary object sought by University and King's Colleges, such an institution cannot be established without affecting the question of degrees for London medical students; and in this matter every school must be duly represented, and every student be given an equal chance. No new university can be founded in London without the practical consent of the teachers in our metropolitan medical schools. We believe that the report of the Royal Commission will not be published until next month.

UNUSUAL BULLET WOUND OF HEAD.

ON Friday, Oct. 5th, a man, aged forty-five, was admitted into St. Thomas's Hospital, under the care of Mr. S. Jones, suffering from an unusual wound of the head, which had been self-inflicted a couple of hours previously. He had shot himself with a rifled revolver carrying a conical bullet. The bullet entered above the zygoma in the right side and passed obliquely across. He was found conscious, suffering much pain, and there was great chemosis of the eyelids. On raising the right eyelid there was no perception of light, but on raising the left lid he said that he could see the hand, but fingers could not be counted. The aperture of entry was examined, and a circular opening found through the temporal fascia and temporal muscle, and a similar opening in the bone beneath. A swelling, with crepitation, was found about the malar bone on the opposite side. The aperture of entrance was explored, but no fragments were removed. On exploration of the swelling in the opposite side, the bullet was found as diagnosed, and removed by Mr. S. Jones, with some loose fragments. A bullet probe was passed across in the track of the bullet, and a drainage tube inserted. There had been a good deal of bleeding from the nose, and after the anæsthetic he vomited, the vomited matter containing blood. No evidence of damage to the contents of the cranium was apparent at the time, and there has been none since. The drainage tube was removed in two days, divided, and the ends reinserted. There has been no rise of temperature, and the patient is now able to open his left eye, the orbital effusion having subsided, and with this improvement the pain has gone. Carbolic solutions were used for irrigation, and iodoform dressings applied. A fuller report will be interesting, and this we shall hope to give later.

CHILDREN IN COMMON LODGING-HOUSES.

RECENT events have thrust upon public attention the fact that there exists in the midst of our civilised refinement, and environed but untouched by the moral influences of our time, a class whose atmosphere is vice and whose criminal impulses are only restrained by the strong hand of law. It has occurred to some to question whether such restraint is to be viewed as the one reliable corrective for this unhealthy condition, and happily the doubt has not been wholly barren of remedial efforts of a different kind. Social and moral reform has entered the field as the ally of law. In various districts of the metropolis where wickedness once reigned supreme, order and right have found an entrance; and the same might be said of most of our large cities. That very much more remains to be done is, however, only too apparent, and every practical suggestion as to possible improvements must therefore be received with gratitude. Among others, we would especially refer to a proposal by Mr. T. J. Barnardo, whose efforts to reclaim the young of outcast London are familiar to most of our readers. In a letter to a daily contemporary, Mr. Barnardo draws a striking though by no means a highly-coloured picture of the misery and vice which constantly surround a certain class of poor London children. "Hundreds, if not thousands," he says, "breathe from their very birth an atmosphere fatal to all goodness, and are surrounded by influences so vile that decency is outraged and virtue becomes impossible." It will readily be believed that this is no exaggerated description, and the remedy suggested has at least an apparent suitability to the necessities of the case. It is proposed that an attempt be made to exclude the young—i.e., children under sixteen years of age—from the foul moral contagion of the common lodging-houses. This might be done by establishing a class of lodging intermediate between the houses above referred to and the

sual ward of the workhouse, and intended exclusively for the reception of children of the age in question. It is natural to inquire whether this plan would satisfy those whom it is intended to benefit. We know that family life among the poor of the slums has not that cohesion which it somewhere possesses. Possibly, therefore, the difficulty of separating parents and children, which the proposal seems to ignore, may not be a real one. Mr. Barnardo thinks it not, and his experience must entitle him to speak with some authority in the matter. The project, at all events, might be kept in view, and, if approved by other competent judges, might be tested by preliminary experiments, carried out on a small scale and extended if desirable.

THE ORIGIN OF THE WEATHER.

MR. B. G. JENKINS, F.R.A.S., has propounded an astronomical weather law, which, if it should be verified by observation, will certainly prove to be one of the most important additions to our knowledge that this century has witnessed. The strictly limited and hardly unequivocal success which the Meteorological Department has achieved in the matter of weather forecasting has nevertheless proved to be of immense importance to our shipping interests, and not without its value to the agriculturist. If it were possible to overpass the narrow limit of some four-and-twenty hours, which at present defines the meteorologist's horizon, and to foresee with some approach to accuracy the general character of a coming season, or of the weather for twelve months in advance, the gain would be enormous. Not only would the services which the weather student at present renders to the community be proportionately improved in value, but wholly new spheres of activity would be opened up to him. It would then be possible to advise a patient in quest of health to seek some region where the conditions most favourable to his case might be counted upon, and in a thousand ways which have never yet presented themselves to the imagination such knowledge would prove to be power. Such are the promises which an astronomical theory of the weather holds out, and it is impossible not to feel a keen interest in their realisation. Hope, however, will not affect the fact, and, as it may dull the edge of criticism, it is no doubt the wiser course in this as in all other scientific inquiries to curb sentiment and even repress expectation until the task of proving or disproving the theory has been accomplished. While the astronomers and meteorologists are busy with this part of the undertaking, it may be of interest to give our readers a brief sketch of the new theory, and this without attempting to decide upon its merits. Ingenious it certainly is, whether sound or not, and the praise of ingenuity may therefore be conceded frankly and at once. But, though ingenious, it is by no means difficult of apprehension, at least in its main outlines. Broadly, it proceeds upon the assumption that weather is for the most part dependent upon what may be termed atmospheric tides. That such tides exist is certain, for the same causes which produce tides in the ocean are acting upon the vast aerial sea which surrounds the earth, and must produce in it corresponding results. Looking down upon the upper surface of the aqueous ocean, we are naturally led to observe the tides, which are, indeed, its most obvious phenomena. But, being immersed in the aerial ocean, and dwellers upon its bottom, we have not the same facilities for observing its tides, and, indeed, can know nothing about them save by inference. When, however, we set ourselves to draw inferences, there is much that can be done in that direction. Long practice in computing ocean tides has made our physicists thoroughly familiar with their causes and the method of calculating them. Mr. Jenkins has done something of the same sort for the

atmospheric tides. He has computed the disturbing effect of the moon and planets upon that regular succession of tidal phases which would result from the earth's motion round the sun if the sun and the earth were the only members of the solar system, and he has thus obtained a curve representing deviations from mean weather, which, he says, compares astonishingly well with the records of some observatories to which he has had access. He cites the case of Jamaica, to which he sent out a lunar chart prepared according to his theory. "On it," he says, "occur the twenty-six crests of the lunar curve, and the twenty-six corresponding crests in the barometric curve of Jamaica." It may be that the moon is destined some day to take by scientific authority the rank as presiding deity of the weather which popular tradition has long assigned to her; though it seems strange that such complicated phenomena as are presented by the variations of weather in our own climate, for instance, should be capable of receiving so simple an explanation. Be that as it may, it is at least time that scientific meteorology made a distinct advance; and, until some comprehensive and far-reaching law is securely demonstrated, every attempt, even though perchance unsuccessful to reach it, will awaken interest and command attention.

TOBACCO AND BACTERIA.

THE popular belief in the germicidal virtues of tobacco smoke (which we note has been revived in connexion with the alleged immunity enjoyed by the cigar-makers of Florida during the recent yellow fever epidemic) has received some confirmation in the scientific researches of Dr. Vincenzo Tassinari, first assistant of the Hygienic Institute of Pisa University. In a preliminary note on his experiments (*Centralbl. f. Bakteriologie*, Bd. iv., No. 15) he describes the simple apparatus he designed to test the effect on pathogenic organisms of exposure to the fumes of tobacco. The apparatus consists in a chamber formed by two glass funnels placed horizontally, and connected together at their mouths by paraffin. In this chamber is suspended from a loop of platinum a small piece of linen, with the threads of its lower extremity immersed in a culture fluid containing the microbes. The chamber is connected at one end by a tube with a cigar or cigarette, and at the other, by a tube containing a plug of cotton wool (to serve as a filter) with the mouth of the experimenter. The smoke as it is exhaled, therefore, thoroughly surrounds the linen soaked in the culture fluid, and after the experiment, which lasts from thirty to thirty-five minutes, involving the consumption of from three and a half to four and a half grammes of tobacco, the chamber is opened and the linen allowed to fall into a test tube containing fluid gelatine. Control experiments were also, of course, made. The micro-organisms subjected to this treatment included—1. *Spirillum cholerae asiaticæ*. 2. *Spirillum Finkler-Prior*. 3. *Bacillus anthracis*. 4. *Bacillus typho-abdominalis*. 5. *Bacillus pneumoniae* (Friedländer). 6. *Staphylococcus pyogenes aureus*. 7. *Bacillus prodigiosus*. The result varied with the variety of tobacco and the kind of microbe, but in every instance there was marked (sometimes very great) delay in the development of colonies in the gelatine as compared with that of organisms dealt with similarly, but without exposure to tobacco smoke. Indeed, the development of some was entirely prevented. For example, in the third series of experiments cited, where large Virginia cigars were used, the development of *Bacillus prodigiosus* was delayed for seventy-two hours, that of *Staphylococcus pyogenes aureus* for seventy-three hours, of *Bacillus anthracis* for ninety-seven hours; whilst of the others, mentioned above, no development of colonies took place after from a hundred and twenty-eight to a hundred and sixty-eight hours. Dr. Tassinari attributes these results to the chemical action of the

ingredients of tobacco smoke. He proposes to extend his researches more fully, both as regards the effect of different kinds of tobacco upon these and other micro-organisms, especially the tubercle bacillus, and to determine the time of exposure as well as the amount of tobacco necessary to produce the full effect. He hopes also to ascertain what substance or substances are responsible for the germicidal action.

NEW ISOLATION HOSPITAL AT NEWCASTLE-ON-TYNE.

THE opening last month of the new infectious hospital at Newcastle-on-Tyne marks an important stage in the history of the isolation of infectious diseases in that city. Referring only to comparatively recent times, Newcastle has been ahead of many other large towns in this matter; and its House of Recovery, originally provided as a charitable institution, but in 1873 becoming the property of the sanitary authority, has in its time done excellent work. But the attempt to use it for the modern requirements of the city soon convinced Mr. Henry Armstrong, the medical officer of health, that it was no longer adapted to the purposes to which it was put; and since it soon became evident that disease was being spread from one part of the building to the other, and that the site was not fit for the simultaneous treatment of the different sorts of infectious fever, efforts were made to secure a new site and a new hospital outside the populous localities in and around Newcastle. Success in this direction has, fortunately, been amply achieved, and on an excellent site, thirteen acres in extent, one of the most perfect of modern isolation hospitals has now been erected. So far, there are four pavilions, each containing ten beds for males and ten for females; there is an excellent pavilion fitted with special isolation rooms, as also an administrative building and all the needed out-offices; there is also room for further extension of the hospital buildings, should such a need arise. There is but little to criticise in the buildings provided; but, in view of what we are learning as to the possible effects of aggregating large numbers of infectious cases in the same building, we should have been better pleased if the general pavilions had been arranged to contain a smaller number than twenty beds each. Speaking generally, however, we would urge all sanitary authorities of towns and cities who are contemplating model hospital provision for infectious diseases to visit the one at Newcastle, the excellence of which is largely due to the skill and energy of Mr. Henry Armstrong.

PYORRHOEA ALVEOLARIS IN AN ELEPHANT.

THE steadily progressive course, the intractability under treatment, and the frequency of the disease known in this country as pyorrhoea alveolaris have caused a great deal of attention to be devoted to it, especially by dentists, and the subject has been brought forward several times at the dental societies, but very little light has yet been thrown on the subject. The recent researches of Mr. Bland Sutton have established the fact that animals kept in captivity are liable to suffer from premature loss of the teeth, with wasting of the alveoli—in fact, from a disease closely resembling pyorrhoea alveolaris. He found also that the young of animals born in captivity were very liable to suffer in this way in conjunction with rickets. M. Gallipe showed at a recent meeting of the Société de Biologie, a report of which is given in the *British Journal of Dental Science*, the tooth of an Asiatic elephant which came away spontaneously. To all outward appearance the tooth was perfectly sound; the root, however, was covered with a crust varying in thickness in places from three to four

millimetres, and was of a calcareous appearance. The inferior extremity of the fang appeared to have been the seat of a rather severe pathological process, and presented sharp ridges quite incompatible with a normal state. "We found," said M. Gallipe, "that the calcareous crust covering the root consisted of salivary tartar—i.e., micro-organisms which had caused the deposition of the calcareous salt dissolved in the saliva. The cementum was the seat of every degree of change, from the most superficial erosion to its almost complete disappearance; micro-organisms were found not only on the surface but even in its very substance. In several spots where the dentine was exposed, it was found to be the seat of more or less deep excavations covered with masses of micro-organisms, disposed more or less in a regular order. These micro-organisms were found to have penetrated into the canaliculi, and we were able to follow them for a considerable distance into the dentine. These lesions do not present any essential difference from those M. Malassez and myself have found in man. We came to the conclusion that the Asiatic elephant when kept in captivity may be affected with the disease which we have described in man, under the name of infectious antro-dental gingivitis."

POST-GRADUATE LECTURES.

DR. JULIUS POELLÖCK delivered the introductory lecture at Charing-cross Hospital last Friday afternoon, on the subject of "Gout." Before commencing his lecture he pointed out how needful such lectures were to the busy practitioner, who found himself with little time for study amidst the cares and worries of a large and exhausting practice. The lecturer went fully into all parts of his subject, and devoted special attention to the diagnosis and therapeutics of gout. After the lecture clinical demonstrations took place in the wards, and the large attendance of the members showed how much they appreciated what was being done for their benefit. Many new entries were made, and further developments of post-graduate teaching in London were announced.

THE HEALTH OF SAINT LOUIS.

IN submitting his annual report for the last fiscal year on the health of Saint Louis, Dr. G. F. Dudley, the Health Commissioner, refers to the extent to which diphtheria prevails in that city, where 2964 cases were reported, 951 proving fatal; and there occurs in his report a sentence which Londoners may well take to heart at this moment, when they have learnt that, owing to the decision of the Local Government Board, and owing to the failure of that Board to make good an admitted flaw in the sanitary legislation for preventing infectious diseases in our metropolis, we are helpless as to the isolation of that disease. The sentence is as follows: "Isolation is the central idea in the management of this scourge but where it prevails to any considerable extent in a city like Saint Louis, without hospital facilities which can be brought into use for that special purpose, we are left to fight a battle with an enemy which neither forms lines nor selects an open field of contest, but insidiously enters the homes of many who least expect it." London and Saint Louis seem much on an equality in this respect, but when we come to read the account given by the chief sanitary officer of the Transatlantic city as to the reception given by the Municipal Assembly to the proposals made as to new legislation, we are inclined to think that Londoners, after all, have some advantage over the citizens of Saint Louis. Five separate ordinances were prepared and forwarded to the Municipal Assembly in relation to sanitary matters. The first related to the need for regulating the slaughtering of cattle and the management of slaughterhouses; but it was met with strong

opposition from the "dressed beef companies," and it was rejected. A second ordinance related to the cutting, storing, and bringing of ice from ponds which receive drainage, and are otherwise unfit for the purpose. It will be remembered that American experience has gone to prove the serious results following on this unregulated practice; but on the ground that the ordinance might be a hardship to small dealers, it, too, was rejected. A third ordinance related to the sale of milk, and this, it is stated, has rested for months in the hands of a committee, nothing having as yet been done in the matter. A fourth ordinance had to do with the regulation of dairies, and, like its fellow dealing with milk, it has been carefully deposited in the pigeon-hole of the committee's desk. The last one dealt with the filling up of such ponds as constituted a nuisance, and this, apparently by way of exception, was accepted and passed into law. The sanitary officer hopes for better things next year. We trust his hope may be realised.

CLINICAL UROLOGY OF VARIOLA.

GÜBLER some time ago observed that the amount of urea discharged per diem in variola was so much augmented that even in a sample of the twenty-four hours' urine Heller's test yielded a copious deposit of nitrate of urea, and he even went so far as to think that such azoturia could help in the differential diagnosis of small-pox from typhoid fever, measles, and scarlatina, since the latter, he alleged, never yield the spontaneous deposit of nitrate of urea on the simple addition of nitric acid. Robin estimates that the urea discharged in one day in small-pox is, on the average, from twenty-eight to thirty-eight grammes. When variola supervenes during convalescence from another acute disease the azoturia is equally marked. Robin's most recent investigations, whilst sustaining the position that azoturia is fairly constant in variola, demonstrate its fugitiveness and its presence only during the first days of the illness. There can be no doubt, however, that other acute febrile diseases do yield at times quite as much azoturia as small-pox. It appears further that grave forms of small-pox are those in which azoturia is most marked and most frequent, the ordinary forms being much less commonly associated with an increased output of nitrogen. The more inflammatory the nature of the lesion, the more azoturia will there be. The quantity of urine diminishes, but its density increases, in proportion to the azoturia. The chlorides, diminished at the period of invasion to one gramme, mount again to two grammes and a half during suppuration, until they suddenly rise to eight, ten, or fifteen grammes on the day when the hypo-azoturia sets in. The phosphoric acid augments during the period of invasion in children as in adults, and during the suppuration it likewise suddenly falls at the termination of the fever, and does not resume its normal until flesh begins to be put on. According to Maragliano, the chlorides and phosphate of magnesia disappear completely during grave cases; and this is of prognostic import. The sulphates are believed to be slightly augmented. *Variolous albuminuria* may precede the small-pox, and, if abundant, is of grave significance; *transitory slight albuminuria* may be noted at the beginning of the eruption and of suppuration; abundant albuminuria may supervene at any period, and a special kind is the albuminuria of convalescence. In some forms the nephritis causing albuminuria is very intense. Frerichs has discovered valerician acid in the urine of variolous cases, Bunnings fatty acids, and Hoppe leucine and tyrosine. Ponchet extracted a liquid ptomaine which he regards as a hydropyridic base of great toxicity. Robin has only been able to verify the presence of fatty and extractive matters. The indican, also, is augmented in all malignant cases. Strongly pigmented cells, white blood corpuscles, and

numerous filaments are found in the flocculent deposits, beneath which there exists also a layer of uric acid and urates, and sometimes purple urate of ammonia.

SMALL-POX MORTALITY IN ENGLAND.

A PARLIAMENTARY RETURN has recently been issued in continuation of returns called for some years ago, with a view to assist the anti-vaccinationists in their attack upon the value of vaccination as a protection against small-pox. The figures in one of the tables in this return can, however, scarcely be used to support the attack on vaccination. It is shown that prior to the enactment of compulsory vaccination the death-rate from small-pox in 1847-53 in England and Wales was equal to 304 per million; it declined to 186 in 1854-57; rose again in 1868-77, owing to the remarkable European epidemic of 1871-2, to 260; and fell to 58 per million in the most recent period, 1878-86, during which vaccination has been, in accordance with the Act of 1872, enforced by the appointment of vaccination officers by boards of guardians. In no previous period of nine years since the commencement of civil registration in 1837 has there been any approach to so low a death-rate from small-pox in England. The saving of life from small-pox has occurred mainly during childhood and the earlier period of manhood, when the full protective effect of vaccination is in operation. The table to which we have referred shows that in 1847-53 the proportion of deaths from small-pox among children under five years of age to a thousand deaths from this disease at all ages was 697; that it declined to 550 in 1854-57, to 323 in 1868-77, and further to 238 in 1878-86. Thus the proportion of deaths from small-pox among children under five years of age to deaths from the same cause at all ages was in 1878-86 little more than a third of the proportion thirty years before, in 1847-53. This remarkable change in the age-incidence of fatal small-pox cannot be attributed to any other cause than the more general adoption of infant vaccination, resulting from the operation of the various Acts passed by Parliament with a view to secure this end.

THE THERAPEUTICAL VALUE OF FICTION.

THE medical terms employed by recent speakers and essayists when speaking of works of fiction imply a belief that they are of distinct therapeutical service. Works of fiction have lately been called "mental sedatives," "literary anodynes," and "intellectual antidotes." All of these terms are open to criticism. The arguments urged in support of the first two by Mr. Andrew Lang and by a writer in the *Spectator* clearly suggest that, if an epithet was to be sought from the medical vocabulary at all, the word "alterative" would more clearly have met the requirements. "Intellectual antidotes" would lead by easy transition to "intellectual poisons" as a fit and proper designation for much of the stuff to be found on railway bookstalls and in circulating libraries. The range might be almost indefinitely extended. "Narcotics" would include many society novels marked by tedious conversations and wearying descriptions. "Stimulants" might be expected to group together many of the shilling dreadfuls, but some would undoubtedly be better placed among "narcotics" and "poisons." It would also be legitimate to speak of literary "irritants" and "depressants." The latter term especially calls to mind many sad and weary moments spent in morbidly regarding the efforts of some playful writers. Beyond all question, however, we have to be grateful to our novelists for much mental rest. Used rightly, in moderate doses and on appropriate occasions, novels certainly might almost be regarded as therapeutic agents. By diverting the thoughts into a new channel they serve to soothe a nervous system

which has been stirred into a condition of restless activity by lengthy contemplation of any absorbing or irritating topic. Regarded as "drugs," they possess the special disadvantage of not answering in all cases. Special idiosyncrasies render some individuals particularly intolerant of some varieties of literary treatment. The circumstances of the case, the point of view of the reader, and his previous history will be important factors. The experience of most medical men would show that, when on a railway journey seeking a holiday after a period of prolonged strain, it is possible to "tolerate" much that would be rejected at other times.

A SIR JOSEPH WHITWORTH MEMORIAL HOSPITAL

THE Manchester papers contain particulars of a munificent offer to the city by the trustees of the late Sir Joseph Whitworth, who have already endowed so many institutions of public utility and benevolence as the administrators of the enormous wealth dedicated by him to philanthropic purposes. They have now offered to the authorities of the Owens College a gift which, in its generosity and its special adaptation to the needs of the community, surpasses all that have preceded it. At an expense of wellnigh £90,000, they propose to erect and partially endow a hospital of 120 beds in the immediate vicinity of the College buildings, and to place its management in the hands of the College authorities. It has been repeatedly pointed out, and with truth, that the city of Manchester is insufficiently provided with hospital accommodation. If the number of hospital beds and their proportion to the gross population be collated, it is found to be in this respect far behind many other communities less outspoken in their claims to enlightenment and progress. It is not, however, solely on this consideration, weighty though it be, that we hail with satisfaction the prospect of hospital extension in Manchester. The interests of the Medical School are closely bound up with those of the city; and it is hardly too much to say that the erection of a new hospital near the College, where a certain proportion of the clinical teaching can be carried on, is an absolutely essential factor in the future development of its medical department, which we hope to see. The proposed deed of gift provides that the new institution shall work on terms of cordial co-operation with those already in existence—a wise provision no less for its own welfare than for that of the institutions specifically referred to. It is further to be noted that the donors speak of their gift as a first instalment, a phrase pregnant with possibilities of yet greater efficiency and completeness in store for the new institution at some future date. If the proposal be accepted and realised, as we cannot doubt it will be, medical education in Manchester will be placed once for all on an efficient basis; and the Manchester School will be put in a position to compete fairly even with the most favoured of the metropolitan and provincial schools.

TREATMENT OF EPILEPSY.

CONSIDERING the nervous disorders, partly of convulsive kind, which compose the cachexia strumipriva resulting from ablation of the thyroid gland, Sigacicelli suggests that a derangement of the functions of the thyroid body might play a part in the production of epilepsy. This idea led him to try the effect of galvanisation of the thyroid body in epileptics. Seven cases were tested: three showed no change in the progress of the disease; the other four presented first an augmentation and then a rapid and progressive diminution in the number of fits, which ceased entirely in one case for a month, and for two months in another instance; the mental state of the epileptics also improved.

THE BELGIAN MEDICAL FEDERATION.

THE Belgian Medical Federation celebrated recently the twenty-fifth anniversary of its foundation by means of an extraordinary meeting. Prof. Soupart of Ghent was elected president, and Prof. Charles of Liège vice-president. In an address given by Dr. Cloquet, the want of instruction in medical etiquette, or, as it is called on the Continent, "deontology," was insisted on. Dr. Cloquet thinks that it is quite time that this subject should have assigned to it a definite place in the system of university education. He considers that, as in the works of Hippocrates the proper way for a medical man to behave, both to his professional brethren and to his patients, is by no means ignored, so it should be regularly taught, together with the history of medicine, by professors at the universities. Dr. Cloquet spoke very strongly on the overcrowding of the profession which is now going on in Belgium, attributing to it the lamentable want of proper behaviour which is sometimes noticed amongst junior practitioners. The remedies which he proposes for the existing state of things are improvement in medical education, increased difficulty in examinations, and, last but not least, co-operation and combination of practitioners by means of medical clubs, which should be established without delay in all districts where none at present exist. From the medical journalist's point of view this meeting of the Belgian Federation had a peculiar interest, inasmuch as it celebrated not only the "silver jubilee" of the society, but the "golden jubilee" of the medical life of the veteran Belgian medical journalist, M. Festraerts of Liège, editor of *Le Scalpel*, and honorary president of the Federation. A valuable portrait of M. Festraerts was unveiled with an impressive ceremony, and several speakers recalled the numerous and important services which *Le Scalpel* has for many years rendered to the profession in Belgium.

THE WORK OF DOCTORS' FAMILIES.

PERHAPS in our eagerness to register the work of medical men, we are a little unmindful of the work that the world owes to the families of medical men—their wives and daughters,—who, in quiet ways and often in quiet places, do much to bless their neighbours. The Sheffield papers of the 6th inst. contain very pleasant reports of a concert to celebrate the creation of a free library at Baslow, Derbyshire. The library already contains about five hundred volumes. It owes its existence chiefly to Miss Letitia Wrench, the daughter of Mr. Wrench, F.R.C.S., well known throughout the district. The concert was a great success in every way, and was honoured by the presence of her Grace the Duchess of Rutland, who both sang and spoke on the occasion. She spoke with great earnestness on the advantages of such library accommodation in villages and small towns, and gave the Baslow people reason to be thankful that there is once more, after fifty or sixty years, a Duchess as well as a Duke of Rutland.

THE DISASTER IN THE CAUCASUS.

WE learn, with regret, from the highest authorities, that there can be no longer any doubt that Mr. F. Donkin and his companion, Mr. Fox, with their party, have been lost in the Caucasus. Nothing has been heard of them for some weeks, and although it may be doubtful as to the exact mountain on which they died, and it may not be possible to find them until the melting of the snow next summer, all hope has been abandoned. Mr. Donkin, who was well known in the scientific world, occupied the post of lecturer on chemistry to St. George's Hospital, where his earnest and careful lectures were much appreciated. A man of great attainments in subjects other than that which he

professed, he had made a name in connexion with electrical engineering, whilst his skill and dexterity in manipulation were surprising to those friends who knew him best. He is deeply regretted by his colleagues and numerous friends. No appointment to the post of lecturer on chemistry thus rendered vacant will be made until Christmas.

A LADIES' EARLY MORNING LEAGUE.

SOME ladies belonging to the highest circles of Parisian society have conceived the happy idea of founding "La Ligue du Matin." This association seeks to alter prevailing fashions so that the customs of society may better harmonise with the laws of health. These ladies consequently propose that all adherents should make it a rule to rise at seven in the morning, and, after taking a bath of cold—some recommend iced—water, proceed to enjoy an early canter on horseback. Friends are to be entertained at lunch rather than at dinner. The pleasures of the morning and the afternoon are to be preferred to those of the evening. Henceforth balls are to commence at 9 o'clock and finish at midnight. On those evenings when members do not go to any ball, they must retire to bed at 10 o'clock. All athletic exercises are encouraged, and notably fencing, which is becoming more and more fashionable among ladies. Unfortunately, these projected reforms do not take into consideration the hard necessities of life. They presuppose a society of pleasure-seekers and idlers. Putting aside the fact that the number of ladies who work is daily increasing, most men, even those who possess independent incomes, are engaged in some active profession or business. They could not attend at the early lunch, the early ride, and sometimes not even the early ball. If social entertainments have gradually been held at a later and still later hour, it is because the pressure of the day's business has so increased as to render these late hours more convenient. They are, however, none the less unhealthy, and Parisian ladies are to be congratulated on their effort to turn the tide of fashion and to bring people back to more primitive and more natural customs.

CHOLERA IN CHINA.

CHOLERA is reported from Macao, a Portuguese settlement and seaport in the Bay of Canton. Eight deaths occurred on board a transport whilst in harbour, and within forty-eight hours of the departure of the vessel for Timoor, no fewer than thirty deaths are stated to have occurred. News has at different intervals arrived as to the prevalence of cholera in different parts of the Chinese coast, and the intelligence now received points to some recrudescence of the disease.

MEETINGS OF MEDICAL SOCIETIES.

THE first meeting of the Clinical Society will take place to-day (Friday, October 12th); of the Pathological on Tuesday, October 16th; of the Ophthalmological on Thursday, October 18th; and of the Royal Medical and Chirurgical Society on Tuesday, October 23rd. The next meeting of the Obstetrical will be on Wednesday, November 7th.

STREPTOCOCCUS PYOGENES.

OF 127 healthy individuals examined by Netter seven times, a micro-organism having the characters and behaviour of the streptococcus pyogenes of Rosenbach was found in the saliva. In previous researches the author had found in healthy saliva Friedländer's microbe four times out of 100 examinations, and Fraenkel's micrococcus in 20 per cent. of the number of individuals examined, and this

without any of the examined having had pneumonia. The presence of this streptococcus pyogenes in the mouth gives some explanation of the frequency of suppurative inflammations in the course of scarlatina, diphtheria, and other pharyngeal diseases; so long as the epithelium is intact the microbe does not reveal its presence; it only becomes dangerous when an entrance for it into the tissues is effected.

FOREIGN UNIVERSITY INTELLIGENCE.

Amsterdam.—Professor G. Ruge, of Heidelberg, has been appointed Professor of Anatomy.

Berlin.—Dr. Wilhelm Zimmermann, of Greifswald, has been appointed Assistant in Anatomy, as successor to Dr. Klaatsch, who goes to Jena.

Gießen.—The names of Drs. Veit and Löhlein have been selected in connexion with the post of Professor of Gynaecology, vacant by the migration of Professor Hoffmeier to Würzburg.

Gratz.—Dr. Eberstaller has been appointed to fulfil the duties of the Anatomical chair, in consequence of the removal of Professor Zuckerkandl to Vienna.

Heidelberg.—Dr. Maurer has been appointed Prosector in the Anatomical Institute, in place of Professor Ruge, who is migrating to Amsterdam.

Jassy.—Dr. Bastaki has been appointed Professor of Pathology and Director of the Obstetric Clinic.

Prague (Bohemian University).—Dr. E. Maixner has been promoted to the Professorship of Special Pathology and Therapeutics. Dr. A. Belohoubek has been nominated Extraordinary Professor of General Chemistry.

FROM the report on the condition of the metropolitan water supply during the month of August by the water examiner appointed under the Metropolis Water Act, 1871, it appears that the average proportion of organic matter in the Thames water sent out by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies, which had in the previous month exhibited an increase, suffered in August an almost equally marked diminution, the latter being most conspicuous in the samples of the West Middlesex and Grand Junction Companies' supplies. The water principally derived from the Lea, and distributed by the New River and East London Companies, contained less organic matter than any of the Thames supplies. All the samples were clear and bright.

FOR the sanitary rehabilitation of Naples the financial preliminaries are now complete, and operations will at once be initiated, to extend over a period of (it is estimated) ten years. The rookeries standing in the four sections of Porto, Pendino, Mercato, and Vicaria will be demolished, and appropriate dwelling-houses erected in their room. Primary and secondary drainage (as it is called) will also receive careful attention, and the water supply be regulated on a sound and permanent system.

THE Congress of Climatology and Hydrology met on Wednesday, the 10th inst., at Bologna. An initiative has thus been taken by Italian medical men for securing Government aid in developing the resources of Italy in health resorts, abounding as she does in mineral waters and in meteorological advantages which have hitherto been comparatively neglected.

MR. FREDERICK TREVES will deliver an address on "Anatomical Conditions underlying Surgical Affections of the Intestines," at the opening meeting of the Nottingham Medico-Chirurgical Society on Friday, Oct. 19th, at 8 P.M.

WE regret to learn from Mr. Custance, the Secretary of the Metropolitan Hospital Sunday Fund, that the total amount received at the Mansion House is still £400 less than the sum collected last year. Surely this statement will act as an incentive to those interested in this great charity to remove all chance of the occurrence of such an opprobrium as a falling off in the Fund, upon which so many thousands of our helpless poor are to a large extent dependent in the hour of their sickness and adversity.

Pharmacology and Therapeutics.

MERCURY SUCCIMIDE FOR SUBCUTANEOUS INJECTION.

DR. VOLLERT, assistant in the Strasburg Syphilitic and Dermatological Clinic, writes in the *Therapeutische Monatsschrift* on the employment of mercury succinimide for hypodermic injection. This compound was discovered by Dessaignes in 1852, and has recently been brought into the market at a price equivalent to about two shillings an ounce. It occurs as a white shining powder, freely soluble in water, the solution being quite clear and without any tendency to become cloudy or to form a deposit, even on long standing. It does not precipitate albumen, or the fluids of pleuritic effusion or of hydrocele. Mercury succinimide appears to have several advantages over mercury glycooll, its solution being much more stable, and the injection being less painful and causing a smaller amount of infiltration at the seat of puncture, besides which its cost is decidedly less. When properly applied, the injection rarely, if ever, sets up suppuration. According to Professor Wolff, the best way of operating is to run the needle into the middle of the subcutaneous fat of the buttock, not perpendicularly to the surface, but parallel to it, then to inject the liquid very slowly, gently stroking the swelling formed so as to distribute and disperse the liquid over a somewhat extensive area. The daily injections are made alternately into the right and left buttocks. The strength of the solution recommended by the author is 2 per cent., corresponding to about 1 per cent. of mercury, so that each Pravaz syringe contains 0.01 gramme of mercury. The average number of injections given to each patient is about nineteen; in severe cases, however, thirty or thirty-five injections are required. Dr. Vollert has not as yet been able to make any observations on the excretion of mercury by the organism after the treatment; but, speaking from the point of view of clinical experience, after having given 523 injections to twenty-eight patients, he considers mercury succinimide bids fair to prove a very valuable drug for subcutaneous injection in cases of syphilitic disease.

THE CONSTANT CURRENT IN EPILEPSY.

Dr. Niermeyer has obtained some successful results in epilepsy by combining the employment of the constant current to the brain in combination with the internal use of small doses of bromide of potassium. The anode was moved about over the forehead, the cathode being held in the hand; or the anode was fixed on the nape of the neck, while the cathode was moved over the forehead or applied immovably over the gyri centrales of both sides. The treatment was carried out for ten months, the result being that one patient had no attack for two years and three months; another, who had previously had an attack about every month, had after the treatment only two fits in twenty-five months; and a third patient, who had been in the habit of having three or four fits a day, remained free for seven weeks.

CÆSIUM AND RUBIDIUM.

Dr. Sergei Sergéevich Botkin, a son of the illustrious Russian professor, has published in the form of a thesis for his doctor's degree some researches on the physiological action of the salts of cesium and rubidium, the results obtained being very similar to those previously reported by Ringer, with whose papers on the subject Dr. S. S. Botkin seems to be quite familiar. When introduced into the blood the chlorides of cesium and rubidium raise the arterial pressure and slow the beats of the heart. This slowing depends chiefly on stimulation of the pneumogastric

centre; at the same time the peripheral inhibitory apparatus of the heart is to some extent affected, especially by salts of cesium. The increase of the blood pressure is mainly attributable to the action of the salt on the heart and on the peripheral vascular system. The difference between the action of salts of cesium and rubidium and salts of potassium is mainly of a quantitative character. The last-mentioned salts being far the most active, and those of cesium the least so. Clinical observations were made in ten cases of compensatory trouble of the heart. The effect was slight, but salutary. Chloride of rubidium was the salt used in all these cases. A drachm was made into a six-ounce mixture with water, and a tablespoonful given five times per diem.

PICROADONIDIN, THE ACTIVE PRINCIPLE OF ADONIS VERNALIS.

Prof. Podvysotski of Kazan publishes in the *Meditsinskoe Obozrenie* some researches he has been making upon the active principle existing in *Adonis vernalis*. He finds by chemical analyses of the entire plant there is an amorphous substance of the nature of a glucoside (picroadonidin) which is the active principle, but that together with this there are present an orange-yellow substance (adonido-quercetin), a sugar (adonido-dulcitolum), which crystallises in beautiful prisms, a physiologically inactive glucoside, and an acid already pretty well known, and existing in *Aconitum napellus* and some species of *equisetum*, and therefore called aconitic or equisetic acid, $C_6H_5O_6$. Hitherto, according to Prof. Podvysotski, all attempts to isolate the active principle of *Adonis vernalis* have resulted in mixtures of the several substances named in various preparations, so it is not surprising that the so-called adonidins of different observers presented very dissimilar properties. Picroadonidin has an extremely bitter taste. It is easily soluble in water and alcohol, and slightly so in chloroform. It possesses all the physiological properties of the plant itself in a very high degree. The author proposes to publish further researches on the chemical properties of this substance in the course of the next two or three months.

URÆMIA IN PREGNANCY.

Drs. Charpentier and Butte have induced experimentally both acute and chronic uræmia in pregnant rabbits, with the object of determining the effect of this condition on the life of the fœtus. They found that the fœtus died before the mother, and that the fœtal blood and tissues always contained a larger percentage of urea than the blood and tissues of the mother, the explanation of this being apparently that the fœtus was unable to get rid of any part of urea by means of excretory processes, while the mother of course did so.

SIMULO IN HYSTERIA AND EPILEPSY.

Professor Eulenburg has for several months been making observations on simulo as a remedy in epileptic and hysterical cases. The results obtained by him appear to have been far less satisfactory than those reported by some other observers. He is disposed to think that it has some virtue as an anti-hysteric, but in only one case of epilepsy did it appear to do any good at all, and according to him it cannot be expected to take the place of bromides.

THE OPENING OF THE MEDICAL SESSION.

ST. BARTHOLOMEW'S HOSPITAL.

THE old students' dinner took place on Monday evening, October 1st. Present 111, comprising a large number of the members of the staff and several visitors, including Sir Thomas Crawford, K.C.B., Professor Flower, Professor Burdon-Sanderson, the treasurer of the hospital (Sir Sydney Waterlow, Bart.), and Mr. Trimmer, of the Royal College of Surgeons. Dr. Gee was in the chair. After the loyal toasts, "The Treasurer" was given by Sir James Paget; "The Visitors," by Mr. Langton, and responded to by Mr. Flower and Dr. Burdon-Sanderson; "The Chairman," by Dr. Matthews Duncan; and "The Secretary of the Dinner" (Mr. Butlin), by Dr. Lauder Brunton. In proposing "The School," the Chairman alluded to the great difference in past and present medical training, and to the advantage which the patients themselves derive from being

attended by men who are constantly obliged to practise before a public composed of students and medical men. After dinner the guests adjourned for coffee to the library.

GUY'S HOSPITAL.

THE winter session at Guy's was inaugurated by a meeting of the Physical Society, at which Mr. Thomas Bryant presided, and a paper on Peritonitis was read by Mr. Lawford Knaggs, of Huddersfield. Before the meeting the rooms of the Students' Club were thrown open for an exhibition of photographs, microscopic specimens, and surgical instruments, to which Messrs. Evershed, Lumley, Heatherley and Kelbe, Mr. Ellis Durham, and Messrs. Down Brothers were the principal contributors. We understand that the entry of students this year has been larger than in 1887, but upon this point further information will be given when the returns have been received.

UNIVERSITY COLLEGE.

THE old and present students of the Medical Faculty of University College met together for their annual dinner on Oct. 1st, at the Freemasons' Tavern. Dr. Russell Reynolds, F.R.S., took the chair, and was supported by a goodly number of old University men, including Mr. Erichsen, F.R.S., President of University College, the members of the hospital staff, and Professor Ramsay, who had earlier in the day delivered the inaugural address. After the customary loyal toasts, Dr. Reynolds proposed "Success to University College," and, in the course of an extremely eloquent and amusing address, delighted his audience with many personal reminiscences of University College more than forty years ago. It was natural that Dr. Reynolds should couple this toast with the name of Mr. Erichsen, the President of the College. Mr. Erichsen, in his reply, repeated the substance of some remarks which he had made at the opening of the session at King's College, and which we fully reported in our columns last week. Dr. Quain proposed "The Health of the Chairman." This was drunk with great enthusiasm, with musical honours. During the evening a selection of vocal and instrumental music was given by Mr. Cromwell Jones, Dr. Beevor, Dr. Turner, and Professor Ramsay.

GLASGOW VETERINARY COLLEGE.

THE winter session of this college was opened on the 2nd inst. by an introductory lecture, delivered by Professor Cooke, in the presence of a large assembly. In the course of his address, Professor Cooke called attention to the progress made by the college since its foundation just a quarter of a century ago, and to the changes in the teaching of students since he had become connected with the institution. He then went on to speak of the connexion between chemical science and the medical and veterinary professions, and concluded by giving some details of diseases connected with milk supply, especially with reference to the propagation of scarlet fever from the cow.

ST. BARTHOLOMEW'S HOSPITAL MUSEUM.

DURING the past year numerous additions have been made to the museum of this hospital, under the care of Mr. D'Arcy Power, which are of more than passing interest. A few of them have already been shown at the Pathological or other Societies, and there are several which we hope will be exhibited during the coming session, as in this manner many will be able to see them who are unable to visit the museum. We would draw attention to the following preparations which have been added this year amongst others of less note, mentioning those attracting the greatest interest:—The brain of a lunatic female criminal, weighing only 28 oz.; large tubercular abscess of the cerebellum; arterial angioma of the dura mater from a boy who died of cerebral hæmorrhage, the exact source of which could not be ascertained. Amongst "diseases of the eye" we may mention a preparation showing a piece of spectacle glass lodged in the anterior chamber for from five to seven years before sym-

ptoms of sympathetic ophthalmia in the sound eye made it necessary to operate; also one of hæmorrhagic glaucoma, and another of sarcoma of the conjunctiva. Disseminated tubercle of the spleen and of the supra-renal spleen. Tubercular abscess of the liver of large size. Several specimens of disease of the kidneys, chiefly showing the effects of the presence of calculi in that organ, their position, and the reason why there is frequently a difficulty in detecting them, even after nephrotomy. A renal specimen of note is one of large right kidney (or perhaps double kidney), from which two ureters extend into the bladder, where they open separately; the left kidney was normal. A bladder with mucous membrane separated as a slough. Polypi of the bladder. Epithelioma in three situations on the mucous membrane (? produced by contact). Also the effects of treatment of the enlarged prostate by electrolysis. In the gastro-intestinal group, a volvulus of the cæcum, and a preparation of "polypi of the large intestine," illustrative of the case brought forward by Mr. T. Smith; and some other growths of a similar character, removed by the same surgeon from the large intestine of relatives of this patient. Some good examples of the way in which tubercle attacks the testis are shown, and there are also two specimens illustrative of varicocele, obtained from the cadaver; such specimens are not often seen in museums. Diseases of the bones are represented, amongst others, by the stump of a femur forty years after the amputation, and periosteal sarcoma of the humerus, with the scapula removed later for secondary disease in two instances; the patients are still living. The chief preparations representing diseases of the joints form a series of several obtained from the body of one patient who died under observation, and show (? cause) ankylosis of knee and other joints, in some of which (knee and ankle) excision was performed for disease. These specimens are of the greatest interest. Aneurysms are shown specially dissected, and the lower extremity from a case of gangrene of both legs due to embolism, where the patient recovered after double amputation. Several casts have been added to those representing deformities &c. One important part of the museum must not be omitted from this short notice, and that is the part which is under the control of Mr. Leonard Mark, to whom the hospital is indebted for his skilful sketches of more transient conditions of clinical interest to be met with in the wards. We have not space to do more than mention them, but they will fully repay examination.

SANITARY SCIENCE CONFERENCE.

A MEETING of the Yorkshire Association of Sanitary Inspectors was held at Bradford on the 29th ult., the chair being occupied by Mr. W. T. McGowan, in the absence of the president of the Association, Mr. T. Pridgin Teale.

After the transaction of some formal business, Mr. William Warner (Nottingham) read a paper on Destructors and Refuse Furnaces, in which he said the development of this burning method had been no easy matter, and at the present time it had to fight many severe battles. After tracing the progress of the method in various Yorkshire towns, Mr. Warner asked why, considering the valued opinions of medical authorities, did they hear objections to the system on sanitary grounds? Why did they have agitation and threatened lawsuits? He attributed the objections to reasons which might be summed up as follows. 1. Supposed depreciation of property in the neighbourhood where destructors are erected. 2. The traffic in refuse to the destructor depôts. 3. Prejudice and individual causes. He then described destructors which had been patented and the cost of some of those which had been constructed. Taking the result generally, a chimney 160 ft. high was found to be very suitable, and one this size, with moderate foundations and good levels on site, could be built with a six-cell destructor for about £3000. If a town could utilise the whole of the clinkers, fine ashes, and fine dust, it would not only pay for the cost of burning and the repayment of capital expended on plant, but would also produce a revenue to aid the necessary cost of collection. He did not see why this point of perfection should not be reached. An animated discussion followed the reading of this paper, several members of the Association who had had practical experience with destructors warmly enlogising their action.

The agenda paper stated that the President would address

the meeting on the Scientific Construction of Domestic Fireplaces, and its bearing upon the Disposal of Ashpit Refuse. As Mr. Teale was unable to be present, the principle of the grate which he advocates was explained by means of diagrams by Mr. Newhouse.

A vote of thanks was accorded the Chairman, and the programme after the meeting included a visit to the sewage works and public slaughterhouses of the borough.

THE LAMBETH CONFERENCE ON PURITY.

THE following are some of the more important of the conclusions arrived at by the Committee on Purity of the Lambeth Conference, 1888:—

"Knowing, as we do know, how sins of impurity are not only a grave public scandal, but are also fostering beneath the surface, and eating into the life of multitudes in all classes and in all lands, we cannot keep silence, although we dare not utter all that we know. We are constrained, as Bishops of the Church of God, to lift up the standard of a high and pure morality, and we call upon all, whether of our own Communion or not, in the name of God our common Father, to rally round this standard. Especially do we press upon those on whom lies the responsibility of the cure of souls, to face the question, and to ask themselves what they are doing, or can do, to protect their flocks from the deadly ravages of sensual sin. We believe that, although the public conscience is in some degree awakened, and the self-sacrificing efforts of those who have laboured to this end have not been wholly in vain, yet the awful magnitude of the evil is but imperfectly realised. We are not blind to the danger of dealing publicly with the subject of impurity. We dread the effect, especially upon the young, of any increased familiarity with the details of sin. Notwithstanding we hold that the time has come when the Church must speak with no uncertain voice. We solemnly declare that a life of purity is alone worthy of a being created in the image of God. . . . We declare that a life of chastity for the unmarried is not only possible, but is commanded by God. We declare that there is no difference between man and woman in the sinfulness of sins of unchastity. We declare that on the man, in his God-given strength of manhood, rests the main responsibility. We declare that no one known to be leading an immoral life ought to be received in Christian society. . . . We, on our part, as Bishops of the Church of God, satisfied as to the gravity of this matter, and feeling that nothing short of general action on the part of all Christian people will avail to arrest the evil, determine to confer with the Clergy and faithful Laity of our several Dioceses as to the wisest steps to be taken for the accomplishment of the weighty enterprise to which God is calling us."

Then follow a list of questions upon which, in the opinion of the Committee, deliberation may be profitably conducted.

ITALIAN WINES.

THE most important feature of the Italian Exhibition is undoubtedly its vast assortment of wines. The jury appointed to test these Italian wines has just terminated its labours. They have accomplished no light task. The seven jurymen were called upon to carefully examine some 800 samples. The results attained are important as bearing both on public health and the temperance question. For health and sobriety cheap light wines are essential. One fact suffices to illustrate this principle. Drunkenness, dipsomania, and lunacy due to alcoholism are considerably on the increase in France wherever the supply of cheap pure wines has fallen off in consequence of the prevalence of the phylloxera. Throughout the world the populations of wine-growing countries are renowned for their sobriety. Who has ever heard of a drunken Spanish peasant? and, though Italians do at times drink to excess, inquiry will show that they are Italians coming from the Piedmontese mountains, where there is no wine. A population accustomed to drink only pure wine, with no addition of foreign spirit, is, speaking in a general sense, a sober population. Italy, it is now evident, is a wine-growing country that can supply not merely the needs of its own population, but may also export a vast quantity of wholesome, pure, and cheap wines. Unfortunately, as yet a great number, perhaps the majority, of Italian wine growers are altogether inexperienced. Their ignorance and carelessness are such that they annually spoil a large quantity of most excellent wine. Without entering into the technicalities of the errors thus committed, it may be said broadly that sufficient care is not taken to thoroughly ferment the wine, and that it is often put in casks which are either dirty or otherwise unfit to receive the wine. Thus, of the samples examined, a large proportion was undergoing a process of second fermentation, and was utterly unfit for consumption.

Such wines, however, as were properly made and properly treated are pronounced by the jury to be excellent. Their awards are all the more valuable as the bottles examined only bore numbers or other signs, and not the names of the growers and the shippers. The trial was strictly anonymous, so that it was not till after the awards were made that the jury knew whose wines they had pronounced to be the best. Also, in giving the awards the price of the wines was taken into consideration; thus a cask sold at £10 was not brought into competition with a cask worth only £5. The question of price is all important. If wine is not cheap we cannot expect the great majority of the population to drink wine. Therefore we were highly gratified to note that the ordinary dinner white wines that won the first diploma are to be sold at 18s. and 14s. a dozen. The first diploma red wines ranged from £4 12s. to £8 10s. the cask, and one was offered at 15s. the dozen. Again, and qualified as a superior dinner wine, we find Carlo Grassi's Capri Bianco, at only 14s. the dozen, which has the first diploma, while those that obtained the second diploma were 24s. and 18s. the dozen. Among the first diplomas for superior red wine there is Ferri y Pierotti's Maolina, at only 12s. the dozen. We mention these prices because of their social importance. The alcoholic strength of these wines ranges from 18 to 22 degrees. When used at table they will stand at least 50 per cent. of water, and will then be equivalent in strength to ordinary English beer, which contains, generally speaking, about 10 degrees of alcohol. At the strength and price mentioned above, wine would be scarcely dearer than beer. This is an important consideration medically and socially, and the Italian Exhibition in bringing the matter forward will have done a good service.

To render this lesson more emphatic, Mr. William Hudson, president of the jury, has delivered an excellent lecture on the subject at the Italian Exhibition. He happily remarked that the verdict of the jury was so favourable that, by the medium of the loving cup, they hoped to forge a new link of union between England and Italy. In the light sparkling wines, so often used in medical treatment, Italy, we were assured by this high authority, might well compete with France. At present good champagnes are exceedingly dear; but, if Italy would boldly enter the lists, the prices of the French sparkling wine would be affected, and this useful stimulant rendered available to many whose means are restricted. Mr. Hudson brought another important subject to the notice of his audience. He pointed out, in energetic language, that the masses in England depended on the public-house for their drink, but that the publican was the slave of the brewer and the gin distiller. From both these the publican obtains loans of money; in fact, practically, the brewers are the owners of the majority of the public-houses. Under such circumstances, it is almost impossible to introduce cheap wines for the use of the people. Those who believe that in cheap pure wines rests the solution of the temperance problem will have to fight the beer and gin monopolists. For the moment, not only is it impossible to introduce reform in our drinking customs through the public-houses, but such wines as the publicans sell are either so dear or so bad that a prejudice against wine is, it would seem, purposely engendered. Fortunately, good sense and good taste are gaining ground, and travelled Englishmen at least are creating a demand for wholesome and cheap wine, which, but for artificial obstacles, could be obtained as easily in London as in Paris and the north of France. Of late years, the destruction of so many French vines by disease has rendered this somewhat more difficult. But now we are assured that Italy can make up and, in fact, more than compensate the deficiency. This is undoubtedly good news, and merits the earnest attention of all true advocates of temperance. When the juice of the grape is allowed to ferment naturally and no artificial means are employed to hasten the fermentation, when no alcohol is added to the wine and it only contains that which the process of fermentation itself produces, and when the wine is not artificially sweetened, we have a beverage of great utility as a stimulant, and which, as a stimulant, does the very minimum of harm. A population that drinks only such wines rarely produces a dipsomaniac. To engender a taste for such wine, to supply it at a price and in a manner accessible to all, is to substitute a wholesome drink for what is now too often but rank poison. If this reform could be accomplished, we should have realised in a very

agreeable manner a practical solution to the great drink problem. The number of drinkers would so decrease that the advocates of total abstinence would be reduced to the position they actually occupy in the wine-producing countries, where teetotallers are at once unknown and unnecessary.

ISCHL.

(From a Holiday Correspondent.)

LEAVING Styria and the Austrian Tyrol, a visit to this fashionable watering-place seems too great an attraction to pass by, although the season is rapidly drawing to a close. Perhaps a short note about it may interest the readers of *THE LANCET*. The pretty town located near the confluence of the Ischl and the Traun is surrounded by lofty mountains, and forms the central point of the Salzkammergut, so that it offers great attractions for its own immediate environs, which are most picturesque, as well as for the facilities it affords for mountaineering, and these are greatly increased by the work of a branch of the Austrian Alpine Club. But it is as a health resort that your readers will find it a subject of interest, and in this respect I am disappointed. The climate has been vaunted as beneficial in bronchial and lung diseases, as well as in rheumatism, and yet it has just the qualities that are considered unfit for such cases. It is variable, damp, and often very cold. No doubt it is protected in some degree by the mountains from severe winds, but these find their way along the openings cut by the two streams, and sweep through the place with the impetuosity so familiar to all who have visited similar mountain valleys. Then the dampness of the air, except in very dry seasons, must be a serious drawback, and this season has been most unfavourable. Some years the records show two months of fine weather. In that period there have only been this year twenty days without rain. And when it does rain here there is no mistake about it. As one of the inhabitants told me lately, when it rains at Ischl it rains four times as much water as anywhere else. The other day I drove to St. Wolfgang, which took from an hour and a half to two hours. The afternoon was sunny, and the drive there warm and pleasant; but the clouds began to gather round the tops of the mountains during the return, gradually creeping downwards until, just as the town was reached, rain in almost tropical torrents began and kept up most of the night. This variableness, added to the other qualities, renders the climate, to say the least, risky. Yet Nottinghamsends his bronchitic and rheumatic patients here, so that he must think well of it. Bamberger, however, perhaps agrees with me, for none of his patients seem to find their way here. But if the climate lacks much, Ischl, like all continental resorts, offers a variety of baths and other therapeutic measures. As the centre of the Austrian salt manufactory districts, naturally enough salt baths are to the fore, and indeed a proportion of brine is commonly added to other baths. This brine is brought in wooden conduits, and is obtained by introducing fresh water into chambers excavated in the mines, and allowing it to remain until it takes up above 25 per cent. of sodium chloride. It is diluted to the prescribed degree when the bath is prepared. As these baths, therefore, are only salt and water, they have nothing to offer that cannot be obtained as well at Droitwich. But at Ischl there are some sulphur baths also. These are supplied from two springs, which both, curiously enough, rise in the salt mines. There are also mud baths, as well as iron, iodine, and other artificially prepared baths. Much more important than these, according to general testimony, are the pine extract baths. These and the inhalations of pine (and to some extent of saline spray) are the speciality of Ischl. I therefore examined them carefully, particularly as the pine cure has lately been exploited in England. In virtue of the number of baths devoted to this treatment, Ischl may claim to be regarded as the headquarters of the method, which has extended to many German spas. I have examined them also, as well as the rival Bavarian pine establishments, but must confess there is no necessity for English invalids to come so far in search of a treatment which they can obtain quite as well at home. In the Farnborough

establishments the baths, though few, are as well appointed as many in Germany, and I may say better than most. The inhalation room, too, is decidedly superior, and as much may be said for the Russian and Turkish baths. Of course the question of change of air, scene, diet, and other important adjuncts is outside these observations. At the Trinkhalle at Ischl it seems recognised that the local springs are scarcely adapted for drinking, and the waters of most other spas are sold. Milk cures, whey cures, and other methods are also carried out at Ischl. The town owes its success as a health resort to the late Dr. Wirer, to whom a colossal statue has been erected in the Park by his grateful fellow-townsmen; but probably it would not have attained its present importance, at any rate for some time to come, had it not been selected as a summer residence by the Imperial family. If I cannot endorse all that has been said in favour of Ischl as a health resort, I can confess to passing a pleasant time in this picturesque place, and leaving it with that degree of regret which is so often felt on turning from mountain valleys at the close of a holiday visit.

Ischl, Sept. 10th.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5478 births and 3286 deaths were registered during the week ending Oct. 6th. The annual rate of mortality, which had been 17.7, 18.0, and 18.3 per 1000 in the preceding three weeks, declined again last week to 18.2. During the thirteen weeks of last quarter the death-rate in these towns averaged 16.9 per 1000, and was 4.0 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12.8 in Oldham, 13.1 in Nottingham, 13.4 in Wolverhampton, and 14.1 in Bristol. The rates in the other towns ranged upwards to 24.0 in Birkenhead, 24.1 in Blackburn, 27.6 in Bolton, and 29.8 in Manchester. The deaths referred to the principal zymotic diseases, which had been 544 and 569 in the preceding two weeks, declined last week to 505; they included 286 from diarrhoea, 55 from measles, 49 from scarlet fever, 47 from diphtheria, 40 from "fever" (principally enteric), 28 from whooping-cough, and not one from small-pox. The lowest death-rates last week from the aggregate of these zymotic diseases were recorded in Bristol, Halifax, and Oldham, and the highest rates in Blackburn, Preston, and Bolton. Diarrhoea showed the greatest mortality in Bolton, Portsmouth, Wolverhampton, and Preston; scarlet fever in Bolton and Blackburn; whooping-cough in Norwich; and "fever" in Salford and Cardiff. The 47 deaths from diphtheria in the twenty-eight towns included 35 in London, 5 in Manchester, and 2 in Birmingham. Small-pox caused no death in London or in any of the twenty-seven other large towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital did not contain a single small-pox patient at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 921 at the end of the week, against numbers increasing in the preceding six weeks from 774 to 916; 92 cases were admitted during the week, against numbers increasing from 79 to 132 in the previous four weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding five weeks from 130 to 213, further rose last week to 239, but were 11 below the corrected average. The causes of 77, or 2.3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Preston, Brighton, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Hull, Sheffield, Leicester, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16.0, 17.3, and 17.6 per 1000 in the preceding three weeks, declined again to 17.0 in the week ending Oct. 6th; this rate was 1.2 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged last week from 11.3 and 12.8 in Aberdeen and Greenock to 19.4 in Dundee

and 28.7 in Paisley. The 429 deaths in the eight towns showed a decline of 15 from the numbers returned in the previous week, and included 18 which were referred to diarrhoea, 9 to measles, 9 to diphtheria, 4 to "fever" (principally enteric), 4 to whooping-cough, 1 to scarlet fever, and not one to small-pox; in all, 45 deaths resulted from these principal zymotic diseases, against 57 and 54 in the preceding two weeks. These 45 deaths were equal to an annual rate of 1.8 per 1000, which was 1.0 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 29 and 23 in the preceding two weeks, further declined last week to 18, and were 4 below the number in the corresponding week of last year; 7 occurred in Glasgow, 4 in Edinburgh, 4 in Dundee, and 2 in Paisley. The 9 fatal cases of measles, which included 7 in Paisley, corresponded with the number in the previous week. The 9 deaths from diphtheria, on the other hand, showed a further increase upon recent weekly numbers, and included 3 in Glasgow, 3 in Edinburgh, and 2 in Dundee. Three of the 4 fatal cases of whooping-cough and 2 of the 4 deaths from "fever" were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 81 and 74 in the previous two weeks, rose again last week to 76, but were 2 below the number in the corresponding week of last year. The causes of 44, or rather more than 10 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 18.5 and 24.4 per 1000 in the preceding two weeks, declined again to 23.3 in the week ending Oct. 6th. During the thirteen weeks of last quarter the death-rate in the city averaged 20.1 per 1000, the mean rate during the same period being 16.2 in London and 15.5 in Edinburgh. The 158 deaths in Dublin last week showed a decline of 7 from the number in the previous week; they included 19 which were referred to diarrhoea, 7 to "fever" (typhus, enteric, or ill-defined), 7 to whooping-cough, 2 to scarlet fever, 2 to measles, and not one either to small-pox or diphtheria. Thus 37 deaths resulted from these principal zymotic diseases, against 18, 23, and 27 in the preceding three weeks; these were equal to an annual rate of 5.5 per 1000, the rate from the same diseases being 2.2 in London and 1.6 in Edinburgh. The deaths attributed to diarrhoea, which had increased in the previous five weeks from 7 to 18, further rose last week to 19, and exceeded the number in any previous week of this year. The 7 deaths referred to "fever" and to whooping-cough also showed an increase upon the numbers in recent weeks. The fatal cases of measles and of scarlet fever also showed an increase. Three deaths from violence and 3 inquest cases were registered, and 45, or nearly a third, of the deaths occurred in public institutions. The causes of 20, or more than 12 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

THE MECHANICAL RESTRAINT OF THE INSANE.

To the Editors of THE LANCET.

SIRS,—I quite feel with you that the whole question of what has been called the mechanical restraint of the insane needs calm and careful consideration, and I therefore followed the course, of which I am glad you approve, of declining to take any part in its discussion in the daily press. Following the suggestion of your leading article, I hasten to supply some facts. I feel that it is unfortunate that this discussion has arisen after I had sent in my resignation of the post of superintendent to Bethlem Hospital. I purpose setting out my views and avoiding all personal matters, which can have nothing to do with the question. I shall divide the subject into three parts. First, I shall consider what I understand by mechanical means of treatment of the insane; secondly, whether any real increase has taken place in recent years in the use of such means at Bethlem; and, thirdly, if such

increase has taken place, whether there are any and sufficient reasons for such increase.

The mechanical means used were—(a) "Soft gloves," of which each hand is separate and padded to the thickness of about an inch, and which are fastened by a strap round the wrist with a screw button. (b) "Strong dresses," made of stout linen or woollen material, and lined throughout with flannel. The limbs are all free to move, but the hands are enclosed in the extremities of the dress, which are padded. (c) "Side-arm dresses" made of the same stuffs as the last, but in these there are two attached pockets to the side of the body of the dress, into which the hands of the patient are placed. By this means, though the patient can walk about his room, such dresses being used at night, he cannot make use of his hands to injure or destroy. (d) I employ the wet and also the dry pack. The former is so commonly used that I need not describe it; but as the dry pack is seldom used with the insane, I therefore wish to point out that in this mode of treatment I have the patient wrapped in a sheet or a blanket, and if very restless a second may be used. The patient is then placed on a mattress, and retained there either by means of an attendant or else by applying a sheet over the patient, which is fastened under the bed. In a few instances, in which there was exhaustion, with some bodily ailment as well, such as swelling of the feet, I have placed the patient in a side-arm dress, and then lightly packed him, so as to ensure the recumbent position, and in one similar case I had tapes applied to the side-arm dress and fixed to the bed. The result was the saving of the patient's life. I have used a belt once with attachment of the elbows to it, so that the patient, who was given to injuring himself by picking and rubbing, was thus prevented from so doing. I maintain that every physician with experience has a right to private judgment in the treatment of his cases, and that is practically what I claim and for which I suffer abuse. There are no straitwaistcoats, handcuffs, or what may be called true instruments of restraint in Bethlem; no patients are ever kept quiet by means of drugs; and it is very rare for patients to be held by attendants after the first day or two, when, this method failing, others are sought.

Next I shall give some of my reasons for the adoption of this increased amount of control. A patient who has "gloves" on can be allowed an amount of personal freedom which could not be granted otherwise. I allow patients who would undress themselves, who would attack others or injure themselves, all but uncontrolled liberty when they wear these soft gloves. I find the results highly satisfactory. Strong dresses, too, allow a large amount of liberty to more dangerous, and especially to destructive patients, without the irritation of the personal interference of attendants. The side-arm dresses have proved of the greatest benefit to patients who were constantly masturbating or who were given to determined attempts at self-mutilation, to fits of impulsive violence, chiefly at night, or to wanton destructiveness. The way in which such patients have quietly submitted, and for the first time for weeks have spent a quiet and restful night when they found they could not destroy, was very instructive to me, and I have acted upon it since, especially when I found other means for giving rest either useless or harmful. An inspection of the list of patients returned as being restrained in Bethlem would show that the greatest number were those who had soft gloves on, and were thus really granted liberty by means of the slight restraint put upon them. There are a large number of physicians to asylums and others who have seen the cases under treatment without any reserve, and could testify to the results of the so-called mechanical restraint. I am satisfied that many persons who were thus treated were saved from death, and some have even expressed a hope that similar treatment should be followed in case of a relapse. To sum up this part of my letter, I feel that if, on the one hand, I can grant more freedom by using one form of so-called restraint, while on the other I can induce rest and quiet, leading to recovery by another method of control, I should be wanting in courage if I refrained from the use of these means simply because similar means in other times have been abused. As our profession has not reached the point of having fixed principles, we must be chiefly directed by experience. In support of this, I quote Dr. Pye-Smith in the last edition of Fagge's "Medicine," where he says, "Hence all systems of medicine, like all universal remedies, are of necessity false."

I do not wish here and now to enter into all the cases of mechanical restraint which are recorded in the "visitation

book," though I am prepared to do this if need be. At present it must suffice for me to say that I felt for a time restrained from doing what seemed likely to be useful to my patients because of this so-called principle of "non-restraint," but during the past two years I have gained confidence from experience, and I have tried the experiment with results which have justified my action, and, with Dr. Yellowlees of Glasgow, I would say that I acknowledge no principle of "non-restraint," but only the higher one of humanity and humane treatment, which, if it mean anything, means the use of every method likely to restore health. The dread of the return to the use of fetters appears to me as groundless as though, because we use domestic servants, there should arise a scare lest slavery should re-develop. Service will last, and though the slavery of restraint is over, its service as a handmaid to the physician will continue to have its place and be better understood.—I am, Sirs, yours faithfully,

GEORGE H. SAVAGE, M.D., F.R.C.P.

Henrietta-street, Cavendish-square, W., Oct. 1888.

ON THE FOOTBALL ACCIDENT CALLED THE "POOP."

To the Editors of THE LANCET.

SIRS,—In your last issue, under the above heading, Mr. George Wherry, of Cambridge, wrote a short paper with the hope of gaining some information from the experience of others, and I am happy in being able to add my mite to his interesting article. During an experience of nearly eighteen years I have seen a great many "popes taken." The derivation of the expression I am unable to supply, but it is a well-marked accident well known throughout the football world. It is a term applied to a certain condition which arises during the game of football in the front muscle of the thigh—the rectus femoris, which, it must be remembered, is a bipenniform muscle. There are certain analogous conditions incidental to our various English sports, which almost invariably arise from a similar cause, and essentially consist in a too great strain applied to muscles which have not been recently accustomed to the exertion which has been suddenly required of them. At the commencement of the seasons of the various sports, or occurring in those who at any time play vigorously when they first begin to take such exercise, there are certain accidents which are constantly happening, and all bearing the same characteristics. As soon as the muscles have become accustomed to, and trained for, the exercise required, such accidents rarely happen. At the commencement of the hunting season there are always a large number of cases of the "rider's strain" arising. At the beginning of the lawn-tennis season the "lawn-tennis leg" frequently occurs. In the early days of football, or amongst those who only play occasionally, there are always a large number of "popes taken," which occur less frequently as soon as the muscles are better adapted to the strain put upon them in the exercise. The history of these cases is, that a boy, while playing vigorously, running, or placing a sudden strain upon his leg, as in standing against force, or wrestling, or in dodging and stopping suddenly to turn, in a moment feels something go wrong in his thigh, which he almost invariably attributes to a blow from an opponent's head, elbow, or knee. He is often obliged to stop at once, if he does not fall, on account of the pain and lameness, and he is conscious that his "pope is taken." When the thigh is examined, it is found that the rectus femoris is felt rigid, as hard as a piece of wood, and stands out in front of the thigh arched like a bow which has been tightly strung. This condition continues, according to the severity of the injury, for many hours or several days, and the whole thigh, including the knee joint, may become considerably swollen. The swelling and rigidity of the rectus are instant in their advent, and do not arise from effusion, as does the later and diffuse swelling which frequently takes place. I have never seen the vastus internus or the vastus externus involved in the primary swelling and rigidity.

In my opinion, there are three injuries which arise in this condition, varying according to their severity and their mode of occurrence—a bruising of the muscle, a tearing of some few muscular fibres, and a complete severance of it in bulk.

1. The thigh has actually had a blow on it from a head,

elbow, or knee. This blow has taken place when the muscle was in the act of firm contraction, such a contraction that it was totally unfitted for, owing to the newness of the exercise and its want of training for it. The blow, while in this state of high tension, has so bruised the muscle and nerves which supply the muscle that it induces a more or less persistent spasm of it, according to its severity. If the blow has been slight, or the muscle be fairly well conditioned, the boy will continue playing, and it will only cause him stiffness and consequent lameness. This is the way it is usually accounted for by boys themselves; but I do not myself think that this is the usual way in which it is occasioned, though doubtless it is sometimes thus produced. In "the lawn-tennis leg," the individual who is hurt usually states and believes that someone has hit him with a racquet, or that someone has thrown a stone which has hit him in the calf of his leg, while those with whom he is playing know that nothing of the kind has taken place. I believe this is the same that usually happens when "the pope is taken," and that the following is the true interpretation of the accident in the majority of the cases.

2. That the muscle, not being used of late to the technical exertion suddenly required of it in the game of football, in a moment pops, or gives way in some of its fibres, and thus the great pain and spasm of the muscle arise, causing it to stand out, as I have said, like a highly strung bow. It is usually tender at a certain spot, and the fibre-tearing causes the pain and spasm, and, when the tear is considerable, entails the general swelling, which extends even to the knee joint. Ecchymosis is not often seen, owing to the strong sheath of the muscle retaining the ecchymosed blood.

3. I have seen one case of this condition so severe that the rectus femoris was ruptured completely in two. It occurred in a master, who was not in condition, and was playing with his boys, and while running with the ball with all his might into goal he ruptured the muscle with the unaccustomed exertion, and fell. I could place my forefinger horizontally in the furrow, and in so doing it was below the level of the skin. The muscle was severed in bulk, and not torn in its fibres.

Except the latter, the cases all soon recover with rest and support. But the remedy against its occurrence seems to me to be that no one should play hard at this or any other game at the beginning of the season, but should gradually train his muscles to bear the exercise and the strain.

I am, Sirs, yours truly,

Rugby, Oct. 8th.

CLEMENT DUKES, M.D. Lond.

To the Editors of THE LANCET.

SIRS,—In reference to the football accident called "poop," I find the word occurs in Shakespeare's "Pericles," act iv., 2, 25, Globe edition, in a speech by Boult: "Ay, she quickly pooped him; she made him roast-meat for worms." Here it may mean to strike fatally, but the context suggests by a disease rather than by a blow. It is quite probable that the word, like the game of football itself, is an ancient one.

I am, Sirs, yours truly,

Cambridge, Oct. 10th, 1888.

GEORGE WHERRY.

THE LAW IN RELATION TO ABORTION.

To the Editors of THE LANCET.

SIRS,—With regard to your remark in THE LANCET of Oct. 6th, that it would be wise for a medical man to communicate with the police when applied to by a woman to produce abortion—would this really be justifiable? I have twice in thirty years been asked to produce abortion, and the women have appeared surprised at my informing them they were asking me to do a criminal act, and have expressed their belief it was frequently done. Is it criminal for the woman herself to induce herself to abort? It is illegal for her to solicit another to do the criminal act; would the police prosecute? And, then, how could the medical man avoid the trouble and scandal of being an informer and witness? Would a surgeon be justified in informing the police that a certain woman was pregnant and would suffer greatly to escape her shame, when the fact had come to his knowledge as a professional matter, the woman possibly not knowing that her desire was criminal as well as immoral? I can hardly think he would be justified—at any rate, I should like to know definitely if I

have done wrong in adhering to my rule, to "know nothing outside my consulting-room." I think it is a point worth ventilating.—I am, Sirs, yours faithfully,
Framlingham, Oct. 8th, 1888. GEO. E. JEAFFRESON.

THE CIRCULATION OF THE BLOOD.

To the Editors of THE LANCET.

SIRS,—Not belonging to the faculty, I should be very glad if you or one of them would instruct me whether the following passages from Shakspeare show a knowledge of the circulation of the blood. The extracts are from "Coriolanus," act 1, scene ii., a play said to have been written in 1608. Harvey, it is stated, discovered the circulation in 1615, and published his ideas in 1628.

The body's members accuse the belly:—
"That only like a gulf it did remain
I' th' midst o' th' body, idle and unactive,
Still cupboarding the viand, never bearing
Like labour with the rest; whereas th' other instruments
Did see and hear, devise, instruct, walk, feel,
And mutually participate, did minister
Unto the appetite and affection common
Of the whole body." The belly answered,
"True is it, my incorporate friends,
That I receive the general food at first,
Which you do live upon, and fit it is,
Because I am the storehouse and the shop
Of the whole body; but, if you do remember,
I send it through the rivers of your blood,
Even to the court, the heart, to th' seat o' th' brain,
And through the cranks and offices of man,
The strongest nerves and small inferior veins,
From me receive that natural competency
Whereby they live. And tho' that all at once cannot
See what I do deliver out to each,
Yet I can make my audit up, that all
From me do back receive the flour of all,
And leave me but the bran."

I shall be mistaken if this does not show a good knowledge of the circulation of the blood, yet am prepared to bow to superior opinion.

I am, Sirs, yours faithfully,
Woodford, Oct. 1st, 1888. EDWIN LITCHFIELD.

* * Our correspondent will see that we have noticed his letter in our editorial columns.—ED. L.

THE MEDICAL PROFESSION AND POPULAR "MEDICAL" JOURNALISM.

To the Editors of THE LANCET.

SIRS,—I hear my name has been mentioned in connexion with the *Hospital* journal as a shareholder. I am much surprised at this, as last December, when I resigned my seat in the Council of the Hospitals Association, I gave orders for the disposal of the share, and was under the impression that this had been done. I need hardly say I have taken steps to secure the legal withdrawal of my name if it has not already been accomplished.

I am, Sirs, yours obediently,
C. THEODORE WILLIAMS.
Upper Brook-street, W., Oct. 11th, 1888.

To the Editors of THE LANCET.

SIRS,—My attention has just been called to the presence of my name in the list of persons holding shares of the "*Hospital*, Limited." I beg to inform you that I resigned my connexion with the Hospitals Association in May last, and with that I fully understood that my connexion with the *Hospital* paper would also cease.

I am, Sirs, yours obediently,
50, Harley-street, W., Oct. 11th, 1888. WILLIAM ROSE.

* * We feel sure that the explanation given above will be satisfactory to the authorities of the respective Colleges to which our correspondents belong, as well as to the profession generally. Indeed, it is impossible to believe that gentlemen of the professional standing occupied by the writers should have knowingly allowed their names to remain on the list of shareholders of such an enterprise as the "*Hospital*—a journal which, starting avowedly as a lay publication, soon changed its front, and announced on its page "Medicine" as one of the subjects on which it proposed to instruct the public!—ED. L.

LIVERPOOL.

(From our own Correspondent.)

UNIVERSITY COLLEGE: OPENING OF THE WINTER SESSION MEDICAL FACULTY.

THERE was no introductory address this year at the opening of the winter session of the Liverpool University College, but the entry of students is already very good, and work has been going on for some days in the anatomical rooms. The classes promise to be fairly attended, and the students appear to appreciate fully the admirable facilities afforded them for the theoretical and practical study of all the various branches of medical study. On the part of the professors and lecturers no effort is spared to make the teaching as efficient as possible.

THE ROYAL INFIRMARY.

The new buildings of the Royal Infirmary are making rapid progress, which is sufficiently advanced to enable visitors to form some idea of the structure as it will be when completed. One great advantage over the old infirmary is already apparent. Owing to the peculiar character of the former buildings and their surroundings, the infirmary could not be seen until closely approached, and comparatively few citizens knew where this (the oldest medical charity of Liverpool) was. This defect has been remedied, the new buildings of the administrative block having a frontage in Pembroke-place, a leading thoroughfare, up which a considerable traffic passes. With this exception, which may necessitate some modification of the paving, the infirmary is situated in a remarkably quiet neighbourhood. When finished, it will, it is believed, be the most complete hospital in the kingdom.

BURIAL REFORM.

On the 1st inst. a meeting was held in the Medical Institution of the Church of England Funeral, Burial, and Mourning Reform Association, Dr. Carter presiding. Archdeacon Lefroy moved the first resolution, requesting the Home Secretary to appoint a Royal Commission to inquire into the condition of cemeteries and other burial places, and the mode of burial adopted, with a view to improved legislation and to the codification and simplification of the Burial Laws; and in the meantime that such steps should be taken as may be deemed advisable for the protection of the public health and the maintenance of public decency. The venerable Archdeacon condemned the practice of leaving bodies in churches all night, observing truly that this must defeat burial reform in its most important point by necessitating the use of strong coffins. The resolution was seconded by Mr. W. H. Manifold, consulting surgeon to the Northern Hospital, and carried. Dr. Hope, assistant medical officer of health, condemned the interments in strong coffins, vaults, and bricked graves, having witnessed their ill effects in the removal of parts of two city churchyards.

SERIOUS ASSAULT ON A PRISON SURGEON.

Dr. Barr, surgeon to H.M. Prison, Kirkdale, was last evening wounded on the left wrist by a negro sailor, whose manner has of late been peculiar, though not violent. He had managed to conceal a knife, and was in the act of stabbing a fellow convict when Dr. Barr interposed, and received the injury mentioned. Much sympathy was expressed for him when it was reported in this evening's papers. Several of the superficial and one of the deep extensor tendons were cut; the wound, however, did not gape much, and there is every hope of speedy union. Dr. Barr having attended to the prisoner, who was also stabbed, proceeded to the residence of Mr. C. Puzey, by whom, with the assistance of Mr. Reginald Harrison and Dr. Briggs, his wounds were dressed.

ANOTHER DEATH FROM CARBOLIC ACID.

The city coroner held an inquest to-day upon the body of a single lady, who resided with her brother, and, under a delusion that she had neglected her recently deceased mother, took carbolie acid, dying very soon after medical assistance arrived. The brother of the deceased and other witnesses were not aware that there was any carbolie acid in the house.

Oct. 9th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE-ON-TYNE.

THE late contest for the post of surgeon at the Royal Infirmary was a very spirited and close one, Mr. G. E. Williamson being successful by a majority of three votes. The committee of selection was a large one, and this was the first election conducted in this way and by voting cards. Mr. Williamson's election renders the assistant surgeoncy vacant, and already I hear of candidates being in the field, although personal canvassing will be prohibited.—There are various rumours in the air as to the establishment of a new hospital in this city. One would have thought that every possible ailment of humanity was already provided for by our medical charities; still I suppose this new venture will be shown to "supply a want." There is one thing certain—that, what with our numerous medical charities and friendly societies, the field of the general practitioner is becoming more and more circumscribed. The working classes, even, will run after specialists if they know that a specialist is to be found for their affection, so that it plainly behoves the medical student of the day to see that he is fully equipped for his start in the professional race.—Our medical officer of health, Mr. H. E. Armstrong, has in his "Report on the New City Hospital for Infectious Diseases," as well as presenting a comprehensive report on the new structure, given us some very interesting particulars relative to infectious diseases in Newcastle in olden times. In the plague records of 300 years ago we read of "seke folkes both afield and in town." Some were taken beyond the town walls to Warden's Close; some had their doors barred up, and their food handed through the windows; and some lay in camps or huts in the open spaces beyond the walls. In 1804 the present hospital was opened, and it is outside but contiguous to the remains of the old town walls. To-day I had an opportunity of seeing the old hospital, which has rendered immense service to the town. I suppose I saw the last patient likely to be admitted, and, curiously enough, he is a medical student suffering from enteric fever. One of the great features of the new hospital will be the systematic instruction of students in fever, and Mr. Armstrong has put the advantages of this very forcibly.—The workmen of the great shipbuilding and engineering firm of Messrs. Armstrong, Mitchell, and Co. have sent the handsome donation of £300 to the Infirmary and other medical charities of Newcastle. Considering that this is only a quarterly donation, it speaks well for the liberality and organisation of the men.—At the last meeting of the Tyne Port Sanitary Authority, it was reported that the total of British and foreign steamers and sailing vessels inspected was 2909. Of these, 1307 were coasting vessels, and 1200 were from foreign ports.

MIDDLESBROUGH.

The medical officer of health for Middlesbrough (Dr. Malcomson), in his report for the past month, states that the epidemic of pneumonia was diminishing, there being seven deaths, as against eighteen for August, while the death-rate for the whole borough was 19 per 1000. At the last meeting of the North Riding Infirmary it was stated that, although there had been an increase of patients, the expenditure had diminished, while the income had increased; thus the liabilities of the institution had been materially diminished.

MALTON.

At a late meeting of the Malton Naturalists' Society, the curator, Mr. B. Slater, reported a most interesting botanical discovery during a recent excursion in Houghton Woods. In a fir forest there, a Mr. Marshall had found eight specimens of *Goodyera repens*, which had never previously been found in Yorkshire, and only once in England. It is an arctic plant, and had evidently been left from the ice period.

Newcastle-on-Tyne, Oct. 9th.

PRESENTATION.—Mr. James Leslie Callaghan, L.R.C.P. Ed., L.R.C.S.I., on the occasion of his leaving Street, Somerset, was presented with an address, a bag of midwifery instruments, and a purse, by his club patients and other friends, as a token of their esteem and affection for him.

EDINBURGH.

(From our own Correspondent.)

THE MORISON LECTURES.

DR. KEILLER, in his first two lectures under the auspices of the Morison Trust, touched upon subjects which might be described as of prime importance in the treatment of the nervous diseases to which women are specially liable, but subjects which might also be classified by some as amongst the very trivial. In the first lecture he discussed at some length the essential points of difference between the nervous system in man and woman, especially those upon which the recent advances in embryological science have thrown some light. He raised the questions, how far and in what way the nervous diseases of women can be accounted for by the organic or functional peculiarities of the sex, and in what measure mere sex injuriously affects the nervous system of the female. In the second lecture he referred to the important part played by hereditary predisposition in determining the causes of nervous conditions in women, whose neurotic peculiarities so often resembled those of their immediate or even distant progenitors. In connexion with such predispositions, he pointed out how important it was for the practitioner to be on the look out for the slightest indications of hereditary peculiarities, and to treat them before they become rooted realities. He said, as reported the next day, that "women were specially liable to mental and emotional disturbances, and were often seriously disordered in their nervous systems by what were called love affairs. This was often endured, and was a tremendous power for evil to many a female whose bodily health and mental happiness had, because of broken vows and too well-remembered though long-severed attachment, given way to the never-to-be-forgotten story of their early, and it might be only, pledged affection. By some this might be thought a trifling subject to say much about in a College of Physicians, but it was not so. It was a touching and tender subject, and it required to be tenderly handled. Broken vows often led to broken hearts, and in many cases to worse results than even those of despair. Even long marriage engagements were to be deprecated, as the depths of melancholy to which a woman might be subjected too often left traces in after-years. In all matters which tended to depress the mind there were certain bad results left behind." The lectures were well attended and were listened to with great interest.

PROPOSED NEW PARK FOR EDINBURGH.

The Golfers of Edinburgh, a most important section of the community, have performed a very great service to their fellows by the decided action they have taken in the matter of acquiring a new recreation ground for the city. At a cost of £11,000, the city will have, in the first place, a splendid breathing place, and secondly, a magnificent golf course, where enthusiasts may enjoy the royal game without endangering the lives and limbs of the lieges, as at present they do in playing over the Bruntsfield Links, intersected by a very network of paths and crowded cross roads. It is to be hoped that the transaction will be completed and ratified by the Town Council as soon as possible, for the bargain is undoubtedly a good one.

OPENING OF THE EDINBURGH VETERINARY COLLEGES.

Both these schools, with their splendid equipments and teaching appliances on the most recent and approved plans, were formally opened on Wednesday, the 3rd inst. Principal Walley, in his introductory address at the Royal Dick Veterinary College, reviewing the medical and surgical advances recently made in their profession, referred to the *rapprochement* which had taken place between the members of the medical and veterinary professions. Those who heard or read Principal Walley's admirable opening speech in the discussion of Tuberculosis in Man and the Domestic Animals at the Medico-Chirurgical Society will appreciate what share he has taken in bringing about this desirable state of affairs. The Principal pointed out what important work had been done in regard to the question of the transmissibility of diseases from animals to man, and he hailed with pleasure all efforts to arrive at a right decision in this matter. But he at the same time expressed the hope that those who took part in these investigations would know something of the nature of diseases in animals as well as in man.

REPRESENTATION OF THE EDINBURGH AND ST. ANDREWS UNIVERSITIES.

By the election of the Lord Advocate, the Right Hon. J. H. A. Macdonald, to the Lord Chief Justice Clerkship, a vacancy will be caused in the representation in Parliament of the Edinburgh and St. Andrews Universities. In the movement upwards by rotation, Mr. J. P. B. Robertson, the Solicitor-General, who is already provided with a seat in Parliament, becomes Lord Advocate, and Mr. M. T. Stormonth Darling Solicitor-General. Mr. Darling is at present a member of the University Court as Lord Rector's Assessor, but, as he must have a seat in Parliament, it is probable that an effort will be made to secure his unopposed return as member for the two eastern Universities. It still remains to be seen whether the exigencies of academic politics will allow of this or not.

Edinburgh, Oct. 6th.

ABERDEEN.

(From our own Correspondent.)

ABERDEEN UNIVERSITY COUNCIL.

MR. WHITE's second term of office as the representative of the University Council in the University Court has expired, and although he is eligible for re-election, and is said to be willing to serve again, it is thought by many members of the Council that a change in the representation is desirable. The Rev. Mr. Smith (Newhills) has been chosen as Mr. White's opponent, and a meeting of graduates and members of the Council favourable to his nomination was held on Saturday the 6th inst. The meeting, while fully acknowledging the services which Mr. White had rendered to the University, considered that it was not desirable that he should enter upon a third term of office; and a motion, "That the meeting resolve itself into a committee to promote the return of the Rev. James Smith (Newhills) as the Council's representative in the University Court," was carried unanimously. The Council meets on Wednesday.

THE NEW PROFESSOR OF CHEMISTRY.

At a meeting of the Senatus of Aberdeen University, held on Saturday last, Professor Carnelly presented a minute of his appointment by the University Court to be Professor of Chemistry, and he was duly installed into office. Referring to this appointment, Professor Ewing, of Dundee University College, said, at the close of an address delivered on the occasion of the inauguration of the sixth session: "It is impossible to close without referring to an event that is much in the minds of all who take an interest in the affairs of our College, and who wish to see it prosper. If we may congratulate ourselves on the addition of two new members to the new professorial staff, we have poignant cause for regret in the thought that while they come another goes. In the loss of Professor Carnelly, who passes from the youngest, or nearly the youngest, chair of Chemistry in the kingdom to the oldest, we suffer a serious blow. His students lose a teacher they loved and honoured, an investigator who could fire them with something of his own ardour. The College loses one whose growing reputation bade fair to draw many pupils to its doors. We can but hope that the splendid laboratory which remains with us, the monument of his organisation, will attract a successor worthy to fill his place, and that in the old University city, whose historic lustre he is certain to enhance, he will make as many and as warm friends as he leaves behind him in Dundee."

OPENING OF THE WINTER SESSION.

The winter session opens at Marischal College on Tuesday, the 16th inst., and the preliminary examinations are to be held on Thursday and Friday of this week. The Strachan bursary, value about £20, is to be competed for early in the session for the first time. The subjects of examination are Clinical Medicine, Pathology, and Therapeutics; and the competition is open to all students who have completed their third year of study.

HEALTH OF THE CITY.

At a meeting of the Public Health Committee, held on the 5th inst., Dr. Hay, medical officer of health for the city, reported that the death-rate for September was equal to 14·92

per 1000, slightly over that of the previous month, but under that of the corresponding month of last year. There were thirty-three cases in the City Hospital at the end of the month—twenty-three of scarlet fever, one of diphtheria, and nine of typhus fever. The latter zymotic threatened to become epidemic, but by prompt isolation and other sanitary precautions it has been checked.

Aberdeen, Oct. 6th.

DUBLIN.

(From our own Correspondent.)

DUBLIN MEDICAL SCHOOLS' PROPOSED AMALGAMATION SCHEME.

A SPECIAL MEETING of the Fellows was convened by the President, Mr. Henry Fitzgibbon, to consider the scheme of amalgamation of the School of the College with the Carmichael and Ledwich Schools of Medicine; also the opinion of the law adviser and actuaries thereon, and the observations of the proprietors of the institutions.

The following is a summary of the scheme as revised and adopted by the Council of the Royal College of Surgeons in Ireland, Aug. 21st, 1888:—

The title of the Combined School shall be the *School of Surgery of the Royal College of Surgeons in Ireland*, including the *Carmichael College of Medicine* and *Ledwich School of Medicine*, and they shall be under the control of the President and Council of the Royal College of Surgeons. The professorial staff of the Combined School shall be appointed from among the professors, lecturers, and teachers in the existing schools. The resignation of Professor Thornley Stoker shall be accepted, and he shall be awarded a retiring allowance of £150 a year for fourteen years, or a capital sum of £1300; and Messrs. Frazer, Henston, and Nixon shall be nominated Professors of Anatomy; while Professor Mapother will be granted a retiring allowance of £700, or £70 a year for fourteen years.

Chemical Laboratory.—The present Professor of Chemistry in the College shall continue to be in sole charge of the laboratory, and enjoy the right of using it for analytical purposes as heretofore, the School Committee arranging the various matters in connexion with the department of chemistry, such as the appointment of demonstrators, cost of apparatus, and reagents &c.

Registrarship.—Mr. Brennen and Mr. C. H. Robinson shall be appointed Joint Registrars at an annual salary of 1 per cent. each of the gross fees received by the School. Paragraphs 5 to 10 refer to the emoluments of the professors, College anatomists, lecturers, and demonstrators.

Accumulation of General Fund.—In case any school entering into this combination shall not nominate a representative to any chair, excepting Anatomy and Medical Jurisprudence, a quarter of the fees earned by that chair shall be deducted from the sums received on account of each school which shall not have nominated a representative, and the sum so deducted shall be reserved for the General Fund. Eventually there shall be but one professor in each of the following chairs: Medicine, Botany, Chemistry, Materia Medica, Midwifery, Medical Jurisprudence, and Ophthalmology. Until that occurs, vacancies arising in any of these chairs shall not be filled, and one-fourth of the total fees received shall be reserved for each vacancy which shall arise for the General Fund. Any vacancies arising in the chair of Surgery shall not be filled so long as the professors thereof shall exceed two, and until there are but two no deduction on account of the General Fund shall be made, but after that period one-fourth shall be deducted.

Appropriation of General Fund.—The sums so reserved shall be applied to form a fund which shall bear the following charges: 1. To guarantee the income of Professors Fraser and Scott. 2. Purchase of Carmichael College. 3. Purchase of Ledwich School. 4. Retiring allowance of College of Surgeons professors. 5. Payment of registrar's fees. The balance shall be distributed rateably amongst the contributing chairs.

Carmichael College.—The Carmichael School shall be paid from the general fund £500 a year for fourteen years, for the goodwill of the school and for the Carmichael fund, if the gross income of the amalgamated schools amounts to or exceeds £6900 per annum; but if the gross income falls short of £6900 the school shall be paid 7½ per cent. on the

gross income for the said fourteen years, or such portion of the fourteen years as may not have expired. The payments, at the rate of $\frac{7}{8}$ per cent. in case the gross income falls short of £6900, shall be continued if necessary beyond fourteen years, until the capital sums of £5000 to the Carmichael and £4750 to the Ledwich School shall have been discharged in full, with interest at 5 per cent. on the balance due. The Council of the College is recommended to buy the buildings of the Carmichael School, and such apparatus and plant as may not be private property, for a payment of £200 per annum for fourteen years, in addition to the ground rent and taxes (£150).

The Ledwich School.—The proprietors shall be paid £475 for fourteen years for their goodwill, if the gross income of the amalgamated schools amounts to £6900; if below that, they are to be subject to the same deduction as applies to the Carmichael; also, £125 shall be paid from the general fund for rent and taxes of the school for three years, if not previously let or disposed of.

Liability of the College.—It is distinctly understood that the College does not undertake any liability in connexion with the scheme, save the purchase of the Carmichael College, including head rent and taxes, and that all other expenses shall be borne by the combined school.

Premium Fund.—The Carmichael Premium Fund (£2200) shall be made available for the reward of all deserving students of the combined schools.

Night Lectures.—It is recommended that arrangements be made for the completion of the medical education of the night pupils who have already entered in the Carmichael and Ledwich schools.

Undertaking by retiring Professors.—Any professor receiving a retiring allowance shall forfeit the same if he engages in school work in Ireland, and in cases where he is given a lump sum he shall give a written undertaking not to so engage.

The proprietors of the Carmichael and Ledwich Schools have assented to the scheme as revised and adopted by Council on Aug. 21st last; but, at a meeting of the professors of the College School, held on Sept. 24th, at which nine gentlemen were present, two only assented, while six dissented, and one did not vote. Since then seven of the College professors have issued a circular to the Fellows, stating the grounds of their opposition to the scheme as proposed. In it they remark that the College School is at present unencumbered with debt, but that the scheme proposes to make the professors responsible for a third portion of £11,750 (£500 to the Carmichael, £4750 to the Ledwich, and £2000 to retiring professors of the College School). They fail to see, they say, the equity of having to contribute to paying any portion of the £2000 to the outgoing professors, their retirement being solely for the advantage of debenture holders of the Carmichael and Ledwich Schools; and such payments, being without precedent, are completely contrary to the terms of the Charter and calculated to lower the prestige of the school. They are further of opinion that the scheme, if carried, will not only materially affect their prestige, but also seriously jeopardise their emoluments. The Council of the College of Surgeons, having instructed the Right Hon. S. Walker, Q.C., that gentleman has stated that the College can take over the Carmichael and Ledwich Schools, and that the Ledwich being a private proprietary school, its owners are competent to assign the goodwill to the College. A deed will have to be executed by the Ledwich proprietors assigning the goodwill to the College, and the said proprietors should covenant not to engage in school work or allow their premises to be used for a school of medicine or surgery. The goodwill and buildings of the Carmichael School must be assigned by a deed, all debentures on the premises released, and any bank charge. The Carmichael Prize Fund may be paid to students of the combined College.

DEATH OF A MEDICAL MAN FROM MORPHIA ACCIDENTALLY ADMINISTERED.

Mr. James Robert Panter, L.K.Q.C.P., L.R.C.S.I., died in the Hardwicke Fever Hospital last Sunday under very distressing circumstances. It appeared that the deceased gentleman was admitted on the previous day, and late at night one of the resident pupils had to give Mr. Panter a bromide of potassium draught and administer a hypodermic injection of morphia to another patient in a different ward. He had only the two bottles

with him, but unfortunately gave the solution of morphia to the deceased instead of the bromide draught. The mistake was discovered almost immediately, but, although every means was used, death took place on Sunday morning. The solution, it may be added, contained about six grains of morphia. Deceased was thirty-nine years of age, and in feeble health. So many accidents have happened recently—notably one in Belfast—from poisons being administered by mistake, that in the interests of the community the time surely has arrived when poisons—especially in public institutions—shall be kept in specially constructed bottles, which may prevent accidents so lamentable in their nature again taking place. Various kinds of poison bottles have been patented, all more or less useful, one of the simplest being where the neck of the bottle is so contracted that its contents can only pass out in drops, thereby at once arresting the attention of the dispenser.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

The sixth annual general meeting of the Academy will be held in the Royal College of Surgeons on Friday, Oct. 26th, when the report of the Council and the treasurer's statement of accounts will be submitted, and an election of officers take place. In addition to the ordinary vacancies, the presidential chair becomes vacant, and for this latter it is believed a contest will take place, a circumstance deeply to be regretted, and which it is to be hoped, in the interests of the Academy, may be obviated.

Mr. J. M. Kennedy, house surgeon to the Richmond Hospital, has been elected surgeon to Tullamore Gaol. Dublin, Oct. 8th.

PARIS.

(From our own Correspondent.)

THE URINE AFTER INTERMITTENT FEVER.

PROFESSOR BOUCHARD presented to the Academy of Medicine a note for Dr. Mossé of Montpellier on the Composition of the Urine after Intermittent Fever. It is known that Professor Verneuil had drawn attention to the existence of glycosuria consecutively to paludism. Dr. Mossé, from observations made in a hospital where cases of intermittent fever are frequent, was able to prove that glycosuria occurred only exceptionally in patients having or having had intermittent fever. It did not appear to the author even that paludal intoxication had any kind of influence on the development of diabetes, the coexistence of the two maladies being a pure coincidence. Dr. Mossé has established, on the other hand, consecutively to marsh fever, an acute form of polyuria, the excretion amounting to ten litres of urine in the twenty-four hours. This polyuria, free from azoturia, would approach the polyuria of convalescence, and should not be considered critical.

TOXICITY OF ALCOHOL.

Dr. Laborde made a communication on Alcohol and its Toxicity. He referred particularly to the toxic substances contained in wine, brandy, and liqueurs. He remarked that the question of alcoholism is becoming every day more and more important. At the present time it may be estimated that the maladies due to alcoholic drinks constitute one-fourth at least of the diseases observed in France. The author studied the subject from a scientific point of view only, and carried out researches with the specimens obtained from the Municipal Laboratory, assisted by Dr. Magnan, well known for his researches with the essence of absinthe. It is in the manufacture of "bouquets," which give the wines their flavour; that the adulterations are practised. They are known in commerce under the terms of "huiles de vin Françaises," and "huiles de vin Allemandes;" the latter are mostly employed because they are more active. MM. Laborde and Magnan studied the toxicity of these substances by injecting them into the veins of dogs. They caused the death of these animals after having produced symptoms of excitement followed by nervous prostration and great difficulty of respiration. These substances are toxic in an extreme degree. Even alcohols are adulterated with odoriferous substances which mask the alcohols of bad flavour. Dr. Laborde had particularly studied fufural, the odour of which is very agreeable,

being similar to that of cinnamon or bitter almonds. The intravenous injection of furofural produces in a dog an attack of epilepsy and then kills it. Liqueurs are also adulterated with analogous substances. The salicylate of aldehyde is substituted for the essence of the "queen of the meadows." It is found in vermouth, in bitters, and in whisky. It is a colourless liquid, reddening when exposed to the air, and is of a very agreeable aromatic odour. Like furofural, it kills dogs after having produced epileptiform attacks. As regards the salicylate of methyl, which is substituted for the essence of winter green, it does not cause epileptic fits, but it produces rigidity and trembling, which also lead to death. Hence Dr. Magnan now recognises that divers adulterated alcoholic drinks can produce epilepsy as well as absinthe, and it must be admitted that a still greater number have a baneful action on the nervous system.

SOPHISTICATION OF BEER.

After the conclusions of a report by Dr. Pouchot, the Consultative Committee of Public Hygiene has recommended that the employment of benzoic acid should not be tolerated for the preservation of beer or other alimentary substances. The addition of antifermentative substances might be injurious to the normal evolution of the digestive functions. The committee has also adopted the conclusions of a report of M. Dubrisoy on the "capsulage" or stoppering of milk bottles, with a view to the suppression of the use of metallic stoppers containing lead.

DISINFECTION OF SPUTA.

The Assistance Publique has caused to be placed at the Lariboisière Hospital, under the direction of Dr. Laillier, an apparatus destined, by a new procedure of antiseptis, for the disinfection of spitoons used by tuberculous patients. This innovation is to be applied to all the hospitals of the Seine.

RABIES.

The *Semaine Médicale* reports that a man named Sinardet, of Polliot, aged twenty-six years, bitten by a rabid dog on April 26th, 1886, and treated at the Pasteur Institute from May 3rd to the 12th, 1886, died of convulsive rabies at the hospital of Bourg on July 28th, 1888, twenty-seven months after the antirabic treatment.

There have been received at the Faculty of Medicine of Paris this year 373 Doctors of Medicine, of whom 321 were French, 50 foreigners, 1 French lady, and 1 foreign lady. There are now inscribed 3688 male students and 114 female. Paris, October 9th.

INDIA.

(From a Correspondent.)

THE MANGO.

DR. BONAVIA contributes to the *Journal of the Society of Arts* a long disquisition on this delicious fruit. In India mangoes are always plucked from the trees when still unripe, and then they are ripened completely under straw. In the unripe state he thinks they might be exported in cool chambers to Europe, and then the ripening, if required, could be effected in straw. The day will come when, by the cheapening of coals, the time occupied in voyages between Bombay and London will be much shortened, and then this prince of Indian fruits will find a place in the London market. The Bombay mango, like the Bombay plantain, is well known, and there are several varieties of it, of which the "Alphonso" is the best and richest in flavour. The best way of eating the mango is first of all to put it in ice for some hours, next to make two horizontal slices, with the stone or seed in the centre, and then to scoop it out with a spoon. It is, I may tell you, like highly-flavoured ice-cream. In the "Flora of British India" about twenty distinct species of *Mangifera* are described, and it is stated that there are in all about thirty species. Dr. Bonavia states that there is a fine field for horticultural societies in India, and Government gardens to help further in the development of the mango. Opportunities exist for the introduction of new species; experiments of crossing them with a view of raising new varieties;

the discovery of the best mode of cultivating them, with the object of obtaining the maximum amount of good fruit; and of new modes of propagating the plant.

SNAKE-BITE.

The mortality from snake-bite in Bombay has been reduced to a mere fraction of what prevails in other parts of this Presidency. In the Sanitary Report for last year just issued, 1164 deaths are said to have been caused by it, and of this number Bombay town is credited with only 3, while the average of the preceding five years is put down at 4. The figures with which other large towns are credited are:—Hyderabad in Sind, 150; Tannah and Kaira, each with 86; Ahmedabad, 85; Shikurpore, 83; Kurrachi, 81. According to the Sanitary Commissioner, Mr. Hewlett, the danger from snake-bite increases greatly during the rainy season, while it is diminished in the cold weather. He gives figures to prove this. In this connexion it may be noted that Masso, an Italian *savant*, has conducted certain experiments which seem to have established the fact that the blood of salt-water eels is possessed of the poisonous properties of the venom of snakes, and they only need the addition of fangs to render them equally dangerous to life. The blood of these sea-eels experimented with killed animals in the same way as the venom of snakes—viz., by paralysing the respiratory organs. Masso holds that medicaments are of no avail, the only chance being tracheotomy and the artificial pumping of air into the lungs. Might not this knowledge be turned to some account in this country in the treatment of cases of snake-bite?

Bombay, Sept. 4th.

THE SERVICES.

ARMY MEDICAL STAFF.—The undermentioned Surgeons-Major to be Brigade Surgeons, ranking as Lieutenant-Colonels:—James Forbes Beattie, M.D., vice J. Paxton, M.D., retired (dated June 27th, 1888), and Chas. McDonogh Cuffe, C.B., vice J. T. M. Symons, M.D., retired (dated Sept. 1st, 1888).—The undermentioned Surgeons-Major are granted retired pay (dated Oct. 10th, 1888):—Forbes Dick, M.D., James Barker, William Fuller Bennett, M.D., and Francis Arthur Davy, M.D.; Surgeon-Major Richard Wm. O'Donnell to retire upon temporary half-pay (dated Oct. 13th, 1888).

BENGAL MEDICAL ESTABLISHMENT.—The Queen has approved of the transfer to the Half-pay List of Surgeon John Gatchell Hancock (dated Sept. 27th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Acting Surgeon Henry George Thompson, M.D., F.R.C.S.I., 1st Volunteer Battalion, the Royal Fusiliers (City of London Regiment), to be Surgeon, ranking as Captain (dated Oct. 10th, 1888).

ADMIRALTY.—The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet:—John Davey Henwood, Henry William Duffield Walsh, Myles O'Connell McSwiny, Thomas Edward Henry Williams, William Masters Rae, Leonard Henry Kellett, M.A., M.D., James Crawford Dow, M.B., Charles Francis Newland, Penrose John Barcroft, George Despard Twigg, and George Joseph Fogerty (dated Sept. 30th, 1888).

THE HONOURABLE ARTILLERY COMPANY OF LONDON.—Surgeon-Major Peter Yeame Gowlland retires out of the Veteran Company, with the honorary rank of Brigade Surgeon, and has permission to wear his uniform on his retirement (dated Oct. 6th, 1888); Surgeon Walter Culver James, M.D., to be Surgeon-Major, vice Gowlland, retired (dated Oct. 6th, 1888).

VOLUNTEER CORPS.—*Royal Engineers:* 1st Flintshire: John Williams, Gent., to be Acting Surgeon (dated Oct. 6th, 1888). *Rifle:* 5th Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Duncan McMillan, M.B., to be Acting Surgeon (dated Oct. 6th, 1888).—1st Volunteer Battalion, the Royal Welsh Fusiliers: The undermentioned Acting Surgeons resign their appointments:—D. Hughes (dated Oct. 6th, 1888); R. C. Roberts (dated Oct. 6th, 1888).—1st Volunteer Battalion, the King's (Liverpool Regiment): Robert Griffith Roberts, M.B., to be Acting Surgeon (dated Oct. 6th, 1888).

OPEN SPACES.—The Stockport Town Council has resolved to purchase thirteen acres of land for a new recreation ground, at a cost of £8000.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At a quarterly meeting of the Council of the above College, held on Thursday, the 10th inst., the minutes of the ordinary Council meeting of August 2nd were read and confirmed.

On the recommendation of the Museum Committee, and in accordance with the estimate given, it was agreed to provide the requisite photographic apparatus, at a cost of £33 6s. 8d., for use in the special room attached to the museum. The twelfth report of the committee on the extension of the College premises was read, adopted, and entered on the minutes. By this the contractors were instructed to proceed with the building of the Conservator's house for the sum of £3410, and an additional expenditure of £230 was authorised for the erection of a new party-wall in the place of the one on the east side, which is in a very unsatisfactory condition.

Mr. S. J. Hutchinson was elected an Examiner in Dental Surgery to the vacancy caused by the retirement of Mr. J. Smith Turner.

On the nomination of the Committee of Management of the two Colleges, the following were elected Examiners in Public Health for the ensuing year:—Dr. Thomas Stevenson, Dr. Edward Ballard, Dr. Thorne Thorne, Dr. W. H. Corfield.

The Council then proceeded to the election of a member of the Committee of Management, vacant by the retirement of the President, who, being eligible, was re-elected.

The draft of the report to be presented to the Fellows and Members of the College at the meeting to be held on Thursday, November 1st, was read and considered, and with a few slight alterations was approved. It will be ready for issue to any Fellow or Member of the College by the middle of next week.

A letter was read, dated the 29th ult., from the Under Secretary of State for Foreign Affairs, forwarding a despatch respecting an alleged remedy for snake-bite, to be laid before the College for any observations that it might wish to offer. The secretary was authorised to reply to the effect that the College was unable to undertake the investigation of secret remedies, neither was it licensed to conduct the necessary experiments by vivisection.

After the consideration of the motion by Mr. Heath—viz., "That an honorarium of £300 be presented annually to the president on completing his year of office"—eleven voted for the motion and four against. It was accordingly lost.

The following motion by Mr. Willett was carried, subject to confirmation at the next Council meeting: "That Sec. 12 of the bye-laws be so amended as to provide that in future no member of the Council shall be declared to be elected to the office of president or vice-president unless he shall have obtained a majority of the votes of the members of the Council present at the meeting for such election."

Obituary.

DAVID DAVIES, M.D.

ANOTHER link connecting us with the past school of medicine was severed on Sept. 14th by the death of Dr. David Davies, which took place at his residence, 40, Warrior-square, St. Leonards-on-Sea. The deceased was born at Moyton in Cardiganshire, and was a student at St. George's Hospital in Sir Benjamin Brodie's time, with whom he was a great favourite. He soon afterwards started in Belgrave-street, Belgrave-square, where he early secured a good practice, and was noted for his successful treatment of the diseases of women and children. His work ultimately telling on his health, he retired in the year 1869, after having practised about forty years.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following candidates passed the Second Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 8th inst.:—

Neville C. Gwyn and Graham T. Kevern, Students of Bristol Medical School.

Anatomy only.—Robert Edwards, of Bristol; George Allcock, James Neal, Edward F. Page, and Thomas H. Wilkins, of Queen's College, Birmingham; George H. Crofts, Henry W. Fisher, and David F. Williams, of University College, Liverpool; Edward B. Collings, George W. Lilley, and Alfred G. Hebblethwaite, of Yorkshire College, Leeds; Richard Gillbard and Ashley T. Jago, of Guy's Hospital; Herbert A. Julius, of St. Thomas's Hospital; Edward B. Wrench, of St. Thomas's and Cambridge University; Montague H. Knapp, of Cork and Mr. Cooke's School of Anatomy.

Physiology only.—Bernard C. Kendall, Benjamin G. Neale, and James Smith, of Bristol; Edwin T. Hollings and Thomas W. Swales, of Yorkshire College, Leeds; Fredk. W. Pogson, of Leeds and Mr. Cooke's School of Anatomy; William Hall and David Headridge, of Owens College, Manchester; John A. Hogg and Murtaugh J. Houghton, of Queen's College, Birmingham; Arthur W. German and Stanley Melville, of University College, Liverpool; Henry H. Weekes, of University College, London; Sydney J. Roberts, of Guy's; and George T. Eccles, of Cambridge University.

The following passed on the 9th inst.:—

Anatomy and Physiology.—Hugh A. Bryant; Edward G. March, of Guy's; Reginald C. Worsley and Gervas P. Glyn, of University College; Percy C. Powrie and Alfred E. E. Tynnam, of University College and Mr. Cooke's School of Anatomy; Charles A. Owen, of Calcutta; Gregory A. Féré, of Toronto and Mr. Cooke's School of Anatomy; Ernest W. G. Masterman, of Edinburgh and St. Bartholomew's Hospital; Charles Palne, of St. Mary's Hospital; George R. F. Sillwell and Ernest W. Senior, of St. Thomas's Hospital; William R. Boyd, James S. Thomson, and Charles D. Russell, of Melbourne University; and Samuel A. Rowley, of Bristol and Mr. Cooke's School of Anatomy.

Anatomy only.—Hugh M. Alexander, Henry H. I. Patch, and Charles R. M. Woodward, of St. Thomas's Hospital; William J. Covey, of University College and Mr. Cooke's School of Anatomy; George H. Brand, of King's College; Chas. W. H. Newington, of St. Bartholomew's Hospital; and Henry Collier, of University College, Liverpool.

Physiology only.—Augustus White, of Guy's Hospital, and Richard H. Griffith, of University College.

The following passed on the 10th inst.:—

Anatomy only.—Lawrence A. Johnson, of Yorkshire College, Leeds; Mark R. Rich, of London and Mr. Cooke's School of Anatomy; Edward C. Hope, of Melbourne University; Bawa J. Singh, of Lahore Medical College; Arthur H. Turner, of London Hospital; George A. Simpson, of London and Mr. Cooke's School of Anatomy; C. E. Oakeley, of St. George's and Mr. Cooke's School of Anatomy; Stanlake James, of St. Thomas's Hospital; C. W. Allen, A. W. C. Herbert, of St. Mary's and Mr. Cooke's School of Anatomy; A. D. Humphry, of St. Bartholomew's Hospital; Thomas S. Byass, Charles D. Cooper, of University College and Mr. Cooke's School of Anatomy; H. H. Pearce, Fredk. B. Lumley, and Arthur H. Meadows, of Guy's Hospital.

Physiology only.—William Handcock and Lionel F. West, of Yorkshire College, Leeds; Frederick J. A. Dalton, Arthur O. Hubbard, St. John B. Killery, William E. Sargant, and Maurice Swabey, of St. Bartholomew's Hospital; William H. Dixon and Walter A. Higge, of Guy's Hospital; Francis A. Osborn, of Guy's and Mr. Cooke's School of Anatomy; George Garrard, of St. Mary's Hospital; Basil S. Foulds, of Westminster Hospital; Isaac Newton, of Charing-cross; John C. Ellis, of St. George's Hospital; Douglas L. Freeland, Alexander R. M'Farlane, of Middlesex Hospital; William C. H. Wroughton, of St. Thomas's Hospital; Edward B. Allan, Raymond T. Cassal, of University College; Charles E. Dawes, Joseph S. Matthews, and John S. E. Passmore, of London Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

Those gentlemen having passed the necessary examinations in Surgery, and having since obtained Medical qualifications, were, at a meeting of the Council on the 11th inst., admitted Members of the College:—

Slyman, Wm. Betenson, L.S.A., Cavendish-road.
Whitaker, George Herbert, L.S.A., White Lodge, Enfield.

The following gentlemen having passed all the necessary examinations, and having attained the legal age of twenty-five years, were at the same meeting admitted Fellows of the College:—

De Santi, P. R. W., L.R.C.P. Lond., Great Ormond-street. Membership dated Nov. 24th, 1884.
Metzgar, C., L.R.C.P. Lond., Guy's Hospital; May 5th, 1887.

UNIVERSITY OF CAMBRIDGE.—The examiners in State Medicine issued on the 8th inst. the following list of those examined and approved for both parts of the examination in Sanitary Science, and who are entitled to diplomas testifying to their competent knowledge of what is required for the duties of a medical officer of health. All those approved are on the Medical Register:—G. Adkins, A. J. Anderson, S. Barwise, F. F. Caiger, S. Davies, E. Drummond, R. S. O. Dudfield, E. Evans, G. F. W. Ewens, W. B. Feather-

stone, J. Glaister, J. Hickman, W. Little, W. T. G. Robinson, A. Sheen, P. C. Smith, T. Thomson, F. C. A. Treadgold, W. Venis, G. Vincent, H. E. Waddy, S. White, A. D. Williams, F. M. Williams, C. R. Woods.

UNIVERSITY OF ABERDEEN.—The following appointments of Examiners in Medicine for the next year have been made: W. D. Halliburton, M.D.; D. Lowson, M.D.; Robert W. Philip, A.M., M.D.; W. Robert Smith, M.D.; Seymour Taylor, M.D.; and F. Buchanan White, M.D. The University Court approved of the following appointments of Assistants for the ensuing session made by the respective Professors: In Natural Philosophy, William Ingram, A.M.; in Anatomy, Charles Angus, M.B.; in Medical Jurisprudence, Alexander Macgregor, M.D.; in Materia Medica, John Gordon, M.B.

THE Jubilee of the City and County of Perth Infirmary was celebrated on the 1st inst.

FEES TO POLICE SURGEONS.—The Holborn Board of Guardians, at their last meeting, resolved to resist the payment of fees to police surgeons who happen to tend pauper cases, the opinion being that such fees should be, as hitherto, borne by the Police Commissioners.

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the directors of the fund, held on the 9th inst., T. Russel Pickthorn, Esq., Inspector-General, in the chair, the sum of £53 was distributed among the several applicants.

A DOLL SHOW, which will include a stall in which dolls will be dressed in different hospital costumes, will be held at the Hospital for Sick Children, Great Ormond-street, on the 5th prox. Full particulars may be obtained from the lady superintendent of that institution.

THE BUDLEIGH SALTERTON COTTAGE HOSPITAL.—At a meeting of the subscribers last week to draft the rules of the institution and elect a committee of management, it was announced that the Rev. James Bouchier had contributed a donation of £1000 and Dr. Walker £100.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of this Society will be held at the Holborn Restaurant on Friday, October 19th, at 4 P.M., when, amongst other business, Dr. Dudfield will move resolutions as to hospital provision for diphtheria in the metropolis.

HOSPITAL SHIP FOR THE NORTH SEA.—In connexion with the Mission to Deep-sea Fishermen, a hospital ship, named *Queen Victoria*, was launched at Great Yarmouth on the 29th ult. She will be fitted up as a hospital for the treatment of accident and illness among fishermen of the North Sea. Her Majesty subscribed £50 towards the cost, and takes great interest in the mission.

DEATH UNDER THE INFLUENCE OF CHLOROFORM.—Another death during the administration of chloroform preparatory to the performance of a surgical operation is reported in the Liverpool papers. At the inquest on the body, that of a young man, the verdict returned was "Death while under chloroform skilfully and judiciously administered."

SOCIETY OF APOTHECARIES OF LONDON.—The results of the examination in Arts qualifying for registration as Medical Student, held in the Hall of the Society on Sept. 7th and 8th, have just been published. There were 155 candidates, and from the Pass List it appears that 2 were placed in the first class and 28 in the second class, and 91 were certified as having passed in some subjects, but not in all. The next examination will be held on Dec. 7th and 8th.

SCHOLARSHIPS.—*Guy's Hospital*: The Open Scholarship in Arts of 125 guineas has been awarded to Mr. J. B. Leathes, of Rochester. The Open Scholarship in Science of 125 guineas has been awarded to Mr. W. J. Johnson, of Sheffield, Bedfordshire. — *Charing-cross Hospital*: The Scholarship of fifty guineas, open to students of the Universities of Oxford and Cambridge, has been awarded to Mr. Albert Carling, of St. John's College, Cambridge. The Entrance Scholarship of 100 guineas has been awarded to Mr. William Escombe, and that of fifty guineas to Mr. Percy J. Probyn. — *Westminster Hospital*: An Entrance Arts Scholarship, value £80, has been awarded to Mr. Henry Witham.

NEW CHILDREN'S HOSPITAL, LEICESTER.—The Mayor of Leicester, Mr. Alderman Thomas Wright, laid, on Tuesday, the foundation stone of a new Children's Hospital at Leicester, which is to be a wing to the present Infirmary. It will accommodate fifty children, and cost about £8000, which has already been subscribed, together with the cost of all the requisite appliances, leaving a nucleus for the endowment fund.

THE SHEFFIELD WATCH COMMITTEE AND THE SWEATING SYSTEM.—The Watch Committee, acting on the feeling of the Council as expressed at the last monthly meeting, have decided to add the following clause to the advertisements for police clothing: "No tender will be accepted unless the person making it can satisfy the committee that the clothing will not be made on what is called the sweating system."

MANCHESTER SEWAGE DISPOSAL.—The Local Government Board inquiry into the application of the Manchester Corporation to borrow £490,000 for purposes of sewage disposal terminated on the 4th instant. The inspector appointed by the central authority stated that he would give the most careful consideration to the arguments submitted to him, and then place his report before the Local Government Board.

NEW MAIN DRAINAGE, NORTH WOOLWICH.—The Woolwich Board of Health having complained to the Board of Works of the injurious effect on the health of the district, in consequence of the sewage being allowed to drain into the river, the Board of Works, on the recommendation of the Works Committee, have agreed to construct a sewer which will carry the sewage into the Board's works at Crossness.

RUGBY FOOTBALL UNION.—A special meeting of the Union was held in London on the 4th inst., to consider the proposals of the committee for the amendment of the laws relating to rough and unfair play. It was stated that the committee were unanimous as to the proposed amendments, which, on being put *seriatim* (with the exception of a few verbal alterations), were carried; they impose severe penalties for any infringement of them, and will come into force on the 1st proximo.

A FEVER HOSPITAL FOR SALFORD.—After experiencing considerable difficulty in finding an eligible site for a fever hospital, the General Health Committee recommended to the Salford Town Council, at the monthly meeting held last week, the purchase of a plot of land containing about thirteen acres, in the Eccles New-road, whereon to erect the hospital. They had inspected the site and had made an offer for it, subject to the approval of the Council. The recommendation of the committee was adopted.

THE NEW HOSPITAL, MERTHYR.—The Marquis of Bute formally opened this hospital, on the 1st inst., in the presence of a large and influential assembly. The treasurer read an abstract of accounts, from which it appeared the donations received and promised were £4575 0s. 10d., and the expenditure £4786 12s., leaving a deficiency of £211 11s. 2d. The vice-chairman hereupon announced that he had the previous day received an intimation that Lord Windsor would subscribe £200, which, with another donation just to hand of ten guineas, would balance the accounts. At the conclusion of the meeting Lord Bute stated he desired to mark that occasion by the endowment of another bed.

THE SANITARY INSTITUTE.—The first meeting of the Council of this Society, which has recently been incorporated, was held at the Parkes Museum on Friday, Oct. 5th. The Institute is founded to carry on the objects of the Amalgamated Sanitary Institute of Great Britain and the Parkes Museum. Sir Douglas Galton, K.C.B., F.R.S., was unanimously appointed chairman of the Council, and Mr. G. J. Symonds, F.R.S., registrar. Nearly 400 members and associates were enrolled. An important letter was read from the Charity Commissioners, saying they considered that the new Institute was likely to prove a powerful means for the diffusion of sanitary knowledge, and promising to grant facilities to it to deliver lectures in the various buildings which the Commissioners proposed to establish in different parts of London. It was decided to hold the Institute's first examination for local surveyors and inspectors of nuisances on Nov. 8th and 9th.]

THE COTTAGE AND CONVALESCENT HOMES, REGATE.—The reports of these interesting institutions are before us. Both are evidently doing good and much-needed work under the fostering care of Mrs. Kitto, of St. Martin's Vicarage, Charing-cross. During the sixteen years that the Convalescent Home has been in existence 3616 persons have participated in the benefits of the charity, 318 of this number having been admitted in the past year. The Cottage Home for Little Girls has been established four years, and receives eight female children between the ages of eight and fifteen. Such institutions as these are eminently worthy of support.

BOOKS ETC. RECEIVED.

CHURCHILL, J. & A., New Burlington-street, London.

The Prevention of Disease in Tropical and Sub-tropical Campaigns. By A. Duncan, M.D., B.S. Lond., F.R.C.S. 1888. pp. 396. Massages and Allied Methods of Treatment. By Herbert Tibbits, M.D. Second Edition. 1888. pp. 142.

The Diseases of the Chest, including the Principal Affections of the Pleura, Lungs, Pericardium, Heart, and Aorta. By Vincent D. Harris, M.D., F.R.C.P. (Student Guide Series.) With 55 Illustrations. 1888. pp. 419.

The Royal London Ophthalmic Hospital Reports. Edited by R. Marcus Gunn, M.A., F.R.C.S. Vol. XII. Part II. July, 1888. pp. 200.

CLARENDON PRESS WARHOUSE, Amen-corner, London, E.C.

Clarendon Press Series. A Class-book of Elementary Chemistry. By W. W. Fisher, M.A., F.C.S. With 60 Engravings on wood. 1888. pp. 272.

GILL, L. UPCOTT, 170, Strand, London, W.C.

Mediterranean Winter Resorts: a Practical Handbook to the Principal Health and Pleasure Resorts on the shores of the Mediterranean. By E. A. Reynolds Ball. With 27 Illustrations. 1888. pp. 237.

GINN & COMPANY, Boston, U.S.

Laboratory Manual of General Chemistry. By R. P. Williams, A.M. 1888. pp. 100.

GREFFIN, CHARLES & Co., Exeter-street, Strand, London.

Outlines of Qualitative Analysis. By A. Humboldt Serton, F.I.C., F.C.S., F.R.S.E. With Illustrations. 1888. pp. 176.

A Text-book of Human Physiology, including Histology and Microscopical Anatomy. By Dr. L. Landis. Translated from the Sixth German Edition, with Additions, by W. Stirling, M.D., Sc. D. With numerous Illustrations. Third Edition. 1888. pp. 920.

HIRSCHWALD, AUGUST, Berlin.

Die Bekämpfung der Infektionskrankheiten insbesondere der Kriessenechen. Von Dr. E. Koch. 1888. pp. 40.

KENT, W., & Co., Paternoster-row, London, E.C.

Illustrations: a Pictorial Review of Knowledge, conducted by Francis G. Heath. 1888. pp. 880.

LEWIS, H. K., Gower-street, London.

A Manual of Ophthalmic Practice. By Chas. Higgins, F.R.C.S.E. With Illustrations. 1888. pp. 314.

An Atlas of Illustrations of Pathology. Fasciculus VI. Hydatid Disease of Liver, plates 27; Urinary Calculi, plates 28 to 31. With descriptive letterpress, compiled by Jonathan Hutchinson, F.R.S. 1888. pp. 29.

Elements of Practical Medicine. By Alfred H. Carter, M.D. Lond. Fifth Edition. 1888. pp. 472.

LONGMANS, GREEN, & Co., London.

Dressed Game and Poultry à la Mode. By Mrs. De Salis. 1888. pp. 79, price 1s. 6d.

MACMILLAN & Co., London and New York.

A Text-book of Physiology. By M. Foster, M.A., M.D., LL.D., F.R.S. With Illustrations. Fifth Edition, largely revised. Part I., comprising Book I. 1888. pp. 352.

MACDOUGALL, ALEX., Buchanan-street, Glasgow.

University of Glasgow. Thesis for the degree of M.D. Clinical Observations on Epileptic Insanity. By D. Finlay, M.B. and C.M. 1888. pp. 106.

NIXON-JONES PRINTING OFFICE, St. Louis, Mo.

Eleventh Annual Report of the Health Commissioner, City of St. Louis, Mo., 1887-1888. By G. F. Dudley, M.D., Health Commissioner. pp. 115.

SINGLE, A., 80, Lime-street, London, E.C.

Die Zackerharnruhr: Ihre Ursache und dauernde Heilung. Von Dr. Emil Schnée. 1888. pp. 183.

SMITH, ELDON, & Co., Waterloo-place, London.

The Frog: an Introduction to Anatomy, Histology, and Embryology. By A. Milnes Marshall, M.D., D.Sc., M.A., F.R.S. Third Edition, revised and illustrated. 1888. pp. 146.

Dictionary of National Biography. Edited by Leslie Stephen. Vol. XVI. Drant-Edridge. 1888. pp. 423.

A Directory for the Dissection of the Human Body. By J. Cleland, M.D., LL.D., F.R.S. Third Edition, revised by J. Yule Mackay, M.D. 1888. pp. 191.

Therapeutics: its Principles and Practice. By H. C. Wood, M.D., LL.D. The Seventh Edition of a Treatise on Therapeutics, rearranged, rewritten, and enlarged. 1888. pp. 996.

THE CHEMIST AND DRUGGIST OFFICES, 42, Cannon-street, London.

The Art of Dispensing. A Treatise on the Methods and Processes involved in compounding Medical Prescriptions. 1888. pp. 286.

THE JOURNAL COMPANY, Lincoln, Nebraska, U.S.A.

Second Report from the Patho-Biological Laboratory: Swine Fever. By Frank S. Billings, Director of the University of Nebraska. With Illustrations. 1888. pp. 414.

WILLIAMS & NORGATE, Henrietta-street, Covent-garden, London.

Hunterian Lectures on the Development and Transition of the Testis, Normal and Abnormal. By C. B. Lockwood, F.R.C.S. With Illustrations. 1888. pp. 122. Price 5s.

A Popular Summary of the Law relating to Local Government, forming a complete Guide to the New Act of 1888; by G. F. Chambers, F.R.A.S., Barrister-at-Law (Stevens and Sons, 119, Chancery-lane, London), price 2s. 6d.—*A Eulogy upon Cornelius Rea Agnew: Read before the New York Academy of Medicine;* by T. G. Thomas, M.D., June, 1888.—*The Mineral Water and Baths of Ashby-de-la-Zouch;* by C. R. Williams, M.B., M.C. Edin. (J. Barker, Market-street, Ashby-de-la-Zouch, 1888), price 6d.—*British Pharmaceutical Conference, Unofficial Formulary, 1888* (J. and A. Churchill, New Burlington-street, London, 1888).—*Index Medicus: Authors and Subjects*, vol. x., No. 8, August, 1888 (Trübner and Co., and Lewis).—*Jaeger's Test Types for use of Teachers:* published by Pickard and Curry, opticians, 195, Great Portland-street, London.—*The Family: its Scriptural Ideal and its Modern Assailants;* by Professor W. G. Bialkie, D.D., LL.D. (The Religious Tract Society, 56, Paternoster-row, London).—*State Organisation of Hospital Management;* by J. Brindley James, M.B.C.S. Eng. (John Bale and Sons, 87, Great Titchfield-street, London, 1888).—*Infection and Disinfection;* by Robson Roose, M.D., F.C.S. (Chapman and Hall, London, 1888).—*Procentische, Chemische Zusammensetzung, der Nahrungsmittel des Menschen;* von Dr. Chr. Jürgensen (August Hirschwald, Berlin, 1888).—*On Evolution;* by Jas. Ross, M.D., LL.D., F.R.C.P. (J. E. Cornish, Piccadilly, Manchester, 1888), price 6d.—*Magazines for October:* Scribner's Magazine, Girls' Own Paper (Religious Tract Society), Leisure Hour, Sunday at Home, Good Words, Boys' Own Paper, The American Magazine, Sunday Magazine (Isbister).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BERESFORD, R. DE LA POER, M.D. Glas., L.R.C.P., L.R.C.S. Edin., L.R.C.P. Lond., has been reappointed Medical Officer of Health for the Oswestry Rural and Union Districts.

BOND, F. F., M.D., M.B., C.M. Edin., has been reappointed Medical Officer of Rastrick.

BOWIE, ALEX., M.D., C.M. St. And., L.R.C.P. Ed., has been appointed a Physician to St. John's Hospital for Diseases of the Skin.

BOYD, JOHN ST. CLAIR, M.S., has been appointed Assistant Surgeon to the Belfast Hospital for Sick Children.

BUCHANAN, JOHN, M.D., C.M. Univ. Glas., M.R.C.S., has been appointed Medical Officer to the No. 2 District of the Ladies' Charity and Lying-in Hospital, Liverpool, vice Dr. Fisher, resigned.

CAMPBELL, S. J., L.R.C.P. Edin., L.F.P. Glas., has been appointed Medical Officer of Winchcombe Union, vice Penruddocke, resigned.

COLLINS, H. W., M.B.C.S., L.S.A., has been appointed Medical Officer for the Wington District, Axbridge Union.

DAWSON, W. E., L.K.Q.C.P., L.S.A., I.M. &c., has been appointed Assistant Physician to the City Provident Dispensary, Little Britain, E.C.

DOCKRELL, MORRIS, M.A., M.D., B.Ch. Dub., has been appointed a Physician to St. John's Hospital for Diseases of the Skin.

GUTTERIDGE, EDWIN P., M.R.C.S., L.M., L.S.A., has been appointed Medical Officer of Health, Union and Port Districts, Maldon.

HARGREAVES, MARK K., M.D., C.M. Glas., has been appointed an Assistant Physician to St. John's Hospital for Diseases of the Skin, vice Alex. Bowie, M.D., C.M., elected a Physician.

HINDHAUGH, JAMES, M.B., B.S. Dunelm., has been appointed Resident Medical Assistant to the City of Newcastle Hospital for Infectious Diseases, Walker-on-Tyne.

HOPKINS, EDWARD W., M.D. Edin., M.B., C.M., D.Sc., L.R.C.P. Lond., has been appointed Inspector of Nuisances for the City of Liverpool.

JELLET, J. C., L.R.C.S., L.K.Q.C.P. Irel., has been appointed Medical Officer of the Swinhope District, Grimsby.

JONES, E. LLOYD, B.A., M.B., B.C. Cantab., has been appointed a Junior House Physician at St. Bartholomew's Hospital.

MASTERMAN, G. F., L.K.Q.C.P. Irel., M.R.C.S., L.S.A., has been reappointed Medical Officer of the Astley District, Martley Union, Worcestershire.

O'BRIEN, P. C., M.D. Qu. Univ. Irel., and M.Ch., has been appointed Medical Officer of Health Middleton No. 1 Dispensary District, Cork.

PENRUDDOCKE, CHAS., L.R.C.P., I.M. Edin., M.R.C.S., has been appointed Medical Officer of the Stapleford District, Wilton Union.

PROG, THOMAS, M.D. St. And., M.B.C.P. Lond., M.R.C.S., has been appointed Medical Officer, 7th District, Tending Union.

SINCLAIR, F. HOWARD, M.D., L.K.Q.C.P., has been appointed Assistant Physician to the Belfast Hospital for Sick Children.

SOMERSET, EDWARD, M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Assistant House Surgeon to the Salop Infirmary.

TAYLOR, MOSES, M.R.C.S., L.S.A., has been appointed Medical Officer of the Borough District, Walsall Union.

WALSH, W. A. S., M.R.C.S., L.S.A., has been reappointed Medical Officer of the Holt District, Martley Union.
 WESTLAKE, A., M.B., C.M. Edin., has been appointed Medical Officer of the Grimsby No. 1 District, vice Leppington, resigned.
 WILKIN, G. C., M.R.C.S., L.S.A., has been appointed Medical Officer of the Burwash District, Ticehurst Union.
 WILLIAMSON, G. E., F.R.C.S., L.S.A., has been appointed Senior Surgeon to the Newcastle Royal Infirmary, vice Armstrong, deceased.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

GENERAL INFIRMARY AT LEEDS.—Resident Obstetric Officer. A House Physician and two House Surgeons. No salary will be given, but board, washing, and lodging provided in the Infirmary.
 GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Physician to Out-patients. Surgeon to Out-patients.
 KILBURN, MAIDA-VALE, AND ST. JOHN'S-WOOD GENERAL DISPENSARY.—Vacancy on the Honorary Medical Staff.
 NATIONAL DENTAL HOSPITAL, 149, Great Portland-street, W.—House Surgeon.
 NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Senior Resident Medical Officer. If the Assistant Medical Officer should be promoted to the Senior post, candidates to state if they will take the Junior appointment.
 ROYAL ALBERT ASYLUM FOR IDIOTS AND IMBECILES of the Northern Counties, Lancaster.—Assistant Medical Officer. Salary £120 per annum, rising £10 annually to £150, with board, apartments, and washing.
 SEAMEN'S HOSPITAL SOCIETY (LATE DREADNOUGHT), Greenwich, S.E.—Resident House Physician. Salary £75 per annum, with board, furnished rooms, and attendance. Surgeon for the Dispensary, Well-street, London Docks. A dispenser provided. Salary £63 per annum. Dispenser for Branch at Well-street, London Docks. Salary £40 per annum.
 ST. PANCRAZ AND NORTHERN DISPENSARY, 126, Euston-road.—Physician or Surgeon Accoucheur.
 WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—House Surgeon. Salary £60 per annum, with board and residence in the hospital.
 WEST RIDING LUNATIC ASYLUM, Wakefield.—Resident Clinical Assistant. No salary, but board, apartments, &c., provided.

Births, Marriages, and Deaths.

BIRTHS.

BARRY.—On the 5th inst., at Bokingbroke-grove, Wandsworth Common, the wife of E. J. Barry, M.D., of a son.
 BATTERBURY.—On the 4th inst., at Wimborne Minster, the wife of George H. Batterbury, M.D. Lond., of a daughter.
 BERRY.—On the 6th inst., at Queen's-road, Watford, the wife of F. Haycraft Berry, M.D., of a son.

MARRIAGES.

ERRINGTON—BOUSTEAD.—On the 4th ult., at Christ's Church, Ahmednagar, India, by the Rev. E. Jenkins Bowen, Chaplain to the Forces, assisted by the Rev. J. Taylor, M.A., Lieutenant R. Errington, 1st Grenadier Regiment, N.I., and Bombay Staff Corps, third son of G. H. Errington, Esq., of Merryoak, near Southampton, to Essie, eldest daughter of Surgeon-Major R. Boustead, M.D., F.R.C.S., H.M.'s Indian Army.
 HEWITT—BEARE.—On the 4th inst., at Christ Church Cathedral, Dublin, by special licence, David Basil Hewitt, M.D., of Warrington House, Northwich, to Mary Alice, younger daughter of George H. Beare, Phoenix Glen Lodge, Conyngham-road, Dublin.
 MIDDLETON—TOONE.—On the 2nd inst., at Rathmichael Church, Shankill, Alfred Hancock Middleton, M.D., F.R.C.S., Upper Brook-street, W., second son of Alfred Hancock Middleton, Esq., of Athgoe Park, Shankill, to Amy Beatrice, only daughter of the late Major James Hasting Toone, 11th Bengal Cavalry.
 OLIVER—YOUNGER.—On the 4th inst., by the Rev. Canon Dixon, assisted by the Rev. W. D. La Touche, at the Parish Church, Warkworth, James Oliver, M.D., F.R.S. (Edin.), of Gordon-square, London, to Mary, only daughter of the late Geo. Younger, of Church Hill House, Warkworth, Northumberland.

DEATHS.

EARLE.—On the 4th inst., at the Priory, Brentwood, Essex, Joseph Earle, M.R.C.S., L.S.A., third son of the late Rev. John Earle, of Watton Abbey, Yorkshire.
 EDWARDS.—On the 5th inst., at Stafford House, Hedsnesford, Stafford, Thomas Richard Charles Edwards, L.R.C.P., M.R.C.S., only son of Dr. Edwards, of Gloucester-crescent, Hyde-park, London, after a few hours' illness, aged 52.
 FENTERN.—On the 2nd inst., at Eyam, Sheffield, Thomas Fentern, F.R.C.S. Eng., aged 76.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, October 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
 MEDICAL SOCIETY OF LONDON.—8.30 P.M. Sir William Mac Cormac (the President) will deliver an Opening Address. Mr. Edmund Owen: A case of Acute Intestinal Obstruction successfully treated by Abdominal Section.—Mr. Charles Ballance: A case in which the Sternum was Trephined for Mediastinal Abscess.

Tuesday, October 16.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
 THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M. Mr. Charles E. Cassal: Food (including Milk), Sale of Food and Drugs Act.
 PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Hutchinson, jun.: Syphilitic Disease of Knee Joint.—Dr. H. W. G. Mackenzie: Blood Calculi in Ovaries.—Mr. A. Doran: Large Ovarian Tumours in a Seven-months' Child.—Mr. Bruce Clarke: Encysted Prostatic Calculi.—Mr. Spencer: Varicocele, a Spontaneous Variation in the Spermatic Veins.—Mr. Sheld: Complete Rupture of Left Bronchus from Fractured Rib.—Dr. Cayley: Congenital Stricture of Ileum (Card Specimen).

Wednesday, October 17.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, October 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
 HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. Jonathan Hutchinson: Some Operations for Abdominal Tumours.—Mr. Pepper: A case of Ligation of the Femoral Artery and Vein. Cases will also be shown by Mr. Malcolm Morris.
 OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M.—Mr. Hartridge: Case of Double Optic Neuritis following Injury to the Head.—Mr. Gunn: Case of Acute Double Proptosis.—Mr. Silcock: (1) Case of Connective Tissue Tumour in each Orbit; (2) Sarcoma of both Orbits. Papers.—Mr. Grossman: Stereoscopes by Difference of Colour for the Normal and for the Colour-blind Eye.—Mr. Lang: On a case of Absence of Iris following Injury.—Mr. Silcock: Further Report on a case of Sarcoma of Frontal Bone.

Friday, October 19.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
 THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M. Infectious Diseases and Methods of Disinfection.

Saturday, October 20.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, October 11th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Oct. 5	29.73	W.	41	37	90	53	32	.07	Hazy
" 6	29.84	N.W.	40	34	72	51	34	..	Hazy
" 7	30.11	N.W.	47	45	87	51	28	..	Hazy
" 8	30.23	N.W.	38	36	82	52	33	..	Foggy
" 9	30.12	E.	44	41	86	56	37	..	Hazy
" 10	30.08	N.W.	46	44	74	59	43	..	Foggy
" 11	30.13	W.	49	47	64	56	45	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

INVALID COOKERY IN THE FIRST CENTURY.

IN pleurisy the practice of the Roman physicians in the reign of Tiberius (A.D. 14-37) was to keep the patient on food as light and demulcent as possible (*obis quam maxime tenuis et lenis*), principally on nutrient drinks (*sorbitiones*), of which barley gruel was a favourite, or, equally so, "broth in which leeks and a young poultry-cock had been boiled together" (*Jus in quo porrus cum pullo gallinaceo coctus sit*). Readers of Lockhart's "Life of Scott" must remember the famous forty-first chapter, in which the author refers to Sir Walter's favourite dishes, "such as Scotland borrowed from France before Catherine de Medici brought in her Italian *virtuosi* to revolutionise the kitchen like the court. Of most of these he has in the course of his novels found some opportunity to record his esteem. But, above all, who can forget that his King Jamie, amidst the splendours of Whitehall, thinks himself an ill-used monarch unless his first course includes 'cocky-leekie.'" Mr. Lockhart, who was a well-read scholar, should have known that the savoury broth referred to was as little French as it was Scottish, but was an important article in the invalid *menu* of the first century, if not indeed much earlier.

Mr. R. Robinson, M.R.C.S.—The Registrar no doubt satisfy our correspondent.

THE HERITAGE FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly permit us to acknowledge the following donations towards the relief of the case of distress which have been received since July 1st? Per Dr. G. C. Jonson: An Anonymous Donor, £100; J. T., £2 2s.; Dr. Cumberbatch, £1 1s.; A Friend, £1; A Thank Offering, £1; a parcel of clothes from One Far Away. It will be remembered that the case for which we asked help was that of a poor medical man with a wife and seven children, who was struck down with paralysis, and thus rendered destitute. By the great generosity of the profession and the kindness of friends, the home has been maintained, the family fed and clothed, and three of the children—girls—admitted into good schools, where they will be educated, clothed, and boarded free of all cost. Two of these girls, twins aged eight, by the extreme kindness of anonymous donors in the profession—one of £100 and another of £20—have been enabled to obtain presentations by purchase of £180 each to St. Anne's Schools. The two eldest boys, aged fourteen, are both earning small wages, and only two children remain to be educated.

We have to express our most grateful and sincere thanks to the profession and the anonymous donors for all the kindness and sympathy shown in the case, and to yourselves for so kindly allowing the appeal and the lists of donations to appear in your columns.

We are, Sirs, yours faithfully,

GEORGE C. JONSON,
JOHN M. BRIGHT.

Oct. 8th, 1888.

HOSPITAL ABUSE IN LYONS.

DR. VICTOR AUGAGNEUR, editor of *La Province Médicale*, a medical journal published in Lyons, writes very strongly on the abuses of the hospitals of that town by well-to-do, or comparatively well-to-do, persons. The rule is at these hospitals that all patients except paying ones shall furnish a certificate of poverty. These certificates are generally given either by the *Bureau de Bienfaisance* or by the Commissaries of Police, or, in the case of strangers from another locality, by the Mairie. The principle appears to be excellent, but in practice it does not work as well as might be expected, certificates of poverty being far too easily obtainable. M. Augagneur mentions that he saw one the other day which had been given by the Commissary of the Police, which, though on the ordinary printed form, instead of certifying the poverty of the holder, contained the following note. "The parents have a house worth 1000 francs per annum, and keep a small restaurant." With regard to paying patients, there are in each hospital a certain number of beds set apart for patients who do not bring any certificate of poverty. These pay two francs a day, and are allowed to have curtains and some other small privileges denied to non-paying patients. As, however, the cost of their maintenance may be reckoned at at least three francs a day, even these patients are recipients of charity to the extent of one franc or more. Consequently only such persons ought to be admitted as paying patients who are really in need of this amount of assistance. Unfortunately, however, a large number of well-to-do people, especially those who require operations, and who ought to retain the services of a private practitioner at their own homes or in a private institution, take advantage of the pay beds. Thus, M. Augagneur mentions a case in which he found that one of these pay patients, who he had been led to suppose would find some difficulty in paying the two francs a day, was possessed of property worth 200,000 francs. The remedy suggested for this state of things is that far more care should be exercised in granting certificates of poverty, and that the pay beds should be either abolished altogether, or made available only for those who produce proof of straitened circumstances.

J. B. W.—The law peremptorily requires the fee to medical witnesses to be paid at the time the inquest is held. A representation to the coroner to this effect would probably save any further trouble.

CURE OF RUPTURE.

To the Editors of THE LANCET.

SIRS,—Will you kindly inform me what steps should be taken to expose the following case of imposition?

A young lady (a child's maid and companion) sent for me professionally, and informed me that she had been under treatment for three months for rupture, the "doctor" promising her a complete cure in twelve months. She wished my advice about the truss, which did not fit quite so comfortably as at first. I could find no trace of rupture on either side, though she was quite positive she had swellings in the groin some months ago. She also informed me that this rupture curer had charged her twenty guineas at first, which she had paid, and two guineas for a bottle of lotion he supplied "to be rubbed in every night." He also gave her a bottle of oil which, she was told, was to reduce "the fatty substance in connexion with the rupture." As this young lady's salary is only £24 a year, and she has already been induced to part with £22 to this "London doctor," as she calls him (I cannot find his name on the Register), I think you will agree with me that something ought to be done to expose and prevent in future what seems to be nothing more or less than a cruel swindle. My patient wishes to know if she can by law recover some of the £22 she has paid. I suppose she could prosecute the man for obtaining money by false pretences if he has no qualification. I enclose the pamphlet by which she was tempted to consult this "doctor." Perhaps you will think it right to publish this letter.

I am, Sirs, yours faithfully,

October, 1888.

SUBSCRIBER.

OBSCENE POSTERS.

To the Editors of THE LANCET.

SIRS,—Can you or any of your readers inform me whether any means can be adopted to prevent the vendors of medicines for venereal diseases plastering the town and neighbourhood with their indecent bills? There are, unfortunately, in this town quite a host of these quacks, and for miles round the town every gatepost and many of the trees by the roadside are disfigured by their suggestive posters. One cannot help feeling that such men ought not to be allowed for a single day to practise their nefarious vocation. If the Medical Council have not the power to prosecute these unqualified charlatans, then the sooner they obtain the necessary powers the better the members of the profession will be pleased. Does anyone suppose for one moment that the legal profession would allow unqualified men to practise in their midst? I trow not. If they are able to defend their just rights, then why in the name of all that is fair should not the medical profession be protected in a similar way? Surely, the profession is strong enough to get a short Act of Parliament passed to enable them to put down such a crying abuse. I appeal to you, Sirs, to help us in this great cause.

I am, Sirs, yours faithfully,

Cardiff, Oct. 9th, 1888.

MEDICUS.

SUDDEN VARIATIONS OF TEMPERATURE.

To the Editors of THE LANCET.

SIRS,—May I be allowed to record in THE LANCET particulars of a case which may be of interest to some of your readers.

On Aug. 1st I delivered Mrs. H— of her second child. It was necessary to use the long forceps. The child was remarkably large, but delivery was not difficult. The mother progressed very favourably until the morning of the 4th, when she complained of excruciating pain in the head. The thermometer registered 102°; pulse 120. There were no discoverable signs of metritis, &c. There was no marked alteration until the evening of the 7th, when the temperature stood at 105°; pulse 120. Pain was now felt on deep pressure above the pubes. The lochia were scanty, and somewhat unusually offensive. Aconite in drop doses was ordered every hour, and the usual treatment of the inflammatory form of puerperal fever adopted. The temperature fluctuated greatly until the 10th, when it again stood at 105°, the pulse being 130. Typhoid symptoms now showed themselves; diarrhoea was troublesome, and sleep profound. On the 12th the temperature had fallen to 102°; pulse 104. On the 13th it fell to 98°; pulse 84, morning and evening. By the morning of the 14th the temperature was again 102°; pulse 120. By the evening it had reached 105°; pulse 124. On the morning of the 15th (in twelve hours) the temperature had fallen to 99°—a fall of 6° 2'. In the evening, temperature and pulse were normal. The following morning the thermometer stood at 98° 5'; pulse 78. In the evening both were normal, and remained so. The tongue was moist and clean throughout. The thermometer has been tested. How to explain the sudden rise, without any corresponding febrile symptoms, on the evening of the 14th, and the equally sudden fall on the 15th, is a point I leave for others to settle. I suppose, as is often done with things we cannot explain, we must ascribe it to some peculiarity of constitution. Mrs. H— is the second wife of her husband, who tells me that his first wife was delivered with instruments, and died of puerperal fever. Can there possibly be any connexion between the two cases? See letter on "The Contagion of Puerperal Fever," by "Obstetricus," in THE LANCET of Aug. 11th. I am, Sirs, your obedient servant,
Aston, Sept. 25th, 1888. RANDOLPH CLARKSON, L.R.C.P., &c.

Mr. J. B. Pike.—We do not think the question so simple either morally or legally as our correspondent seems to do. But the discussion of the subject is pretty well exhausted.

APPOINTMENT OF ASSISTANT MEDICAL OFFICER TO THE BETHLEHEM HOSPITAL.

To the Editors of THE LANCET.

SIRS,—On Aug. 18th the above vacancy was advertised as follows:—"Assistant Medical Officer. Candidates for this office must be Fellows or Members of one of the Royal Colleges of Surgeons, and also Members or Licentiates of one of the Colleges of Physicians, or Licentiates of the Company of Apothecaries," &c. On Oct. 6th, notice of the appointment of Mr. Hyslop, M.B., C.M., is made. I wish to draw attention to the fact that, after advertising so as to exclude a large number of possible candidates, an assistant is appointed who does not possess a single qualification mentioned in the advertisement as essential for the post.

I am, Sirs, yours truly,

October, 1888

M.B., C.M., M.R.C.P. Ed.

Mr. R. A. Monson.—The subject has been repeatedly referred to—e.g., in THE LANCET of Nov. 28th and Dec. 12th, 1885.

Mr. John Horsfall.—The matter shall have attention next week.

TRAINING OF THE DEAF AND DUMB.

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly inform me of any home for the training of a deaf and dumb child with very limited means?

Oct. 10th, 1888.

I am, Sirs, yours truly,
Lit.

MEDICAL APPOINTMENTS IN TURKEY.

To the Editors of THE LANCET.

SIRS,—I know nothing about medical appointments in Egypt; but in Turkey proper I should say that, except in cases of war, there would be enormous difficulty in getting into the Turkish service. French is of no use whatever with the great mass of the Turks, and Turkish is not picked up in a few months—at least, by the ordinary individual. If "D. S., M.C." is in London, and cares to call on me, I will give him all the information I can, having just returned from a long sojourn in Turkey.
I am, Sirs, yours truly,
Oct. 10th, 1888. GALEN.

G. F.—The Antonius Musa to whom Virgil addresses the glowing eulogy given in his "Catalecta" was the celebrated physician of Augustus to whom hydro-therapeutics owe so much. The hypothesis that it was Musa the rhetorician whom the poet praised is regarded as no longer tenable.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Julius Pollock, London; Prof. Humphry, Cambridge; Dr. P. W. Latham, Cambridge; Dr. Finlayson, Glasgow; Mr. Butlin, London; Mr. C. Williams, Norwich; Mr. Patrick, Bolton; Dr. Batten, Dalwich; Mr. Raven, Broadstairs; Mr. T. Lyons; Mr. Carnel, London; Mr. Smith, London; Mr. Madden, Dublin; Mr. J. B. Pike; Mr. C. H. Wells, London; Mr. Jessop, London; Mr. Foy, Dublin; Messrs. Lee and Nightingale, Liverpool; Mr. Hovell, London; Mr. C. Hancock, Dublin; Mr. Seon, Reading; Dr. G. Duke, Rugby; Mr. J. F. Little, London; Dr. G. H. Savage; Mr. Leechman, Willesden; Dr. W. H. Wathem, Louisville; Mr. G. G. Hamilton, Liverpool; Mr. Foulerton, Chatham; Dr. Cremen, Cork; Mr. Humphreys, London; Mrs. Pole, Torquay; Dr. Bright; Dr. Annington, Cambridge; Mr. Diggins, Lancaster; Mr. Harrison, Liverpool; Dr. Harris, London; Mr. Buckley, Notts; Messrs. Farwig and Co., London; Messrs. Burroughs and Wellcome; Mr. L. Kidd; Mr. Collins, Somersetshire; An Invalid; A. K. C.; Justice; Galen; Student; Radius; E. R., London; Public Vaccinator, Cardiff; M.B., M.R.C.P. Ed.; L.B. Lond. Univ.; Subscriber.

LETTERS, each with enclosure, are also acknowledged from—Dr. Knott, Middlesbrough; Messrs. Evans, Liverpool; Mr. McMath, New South Wales; Mr. Butcher, London; Mr. Williams, Cornwall; Dr. Drysdale, London; Mr. Smith, Bromsgrove; Mr. Gorham, Galway; Mr. Turner, London; Mr. Tunmer, Harrogate; Dr. Smyth, Yorks; Messrs. Miers and Levi, London; Dr. Harcourt, Beds; Mr. Lee, Leeds; Mr. Oliver, London; Mr. Ocombe, Bridgwater; Mr. Garrod, Dies; Mr. Barrett, Folkestone; Mr. Royle, Channel Islands; Messrs. Bagshawe and Co., Sheffield; Dr. Harrison, Northumberland; Messrs. Watkins and Osmund, London; Mr. Hornibrook, London; Mr. Noble, Northumberland; Mr. Heywood, Manchester; Mr. Kerr, London; Dr. Waddell, London; Mr. Hale, Chesterfield; Mr. Edwards, Yorks; Dr. Nesbitt, Notts; Messrs. Quibell, Newark; S. W., London; Comfort, London; Volta, London; Tutor, Newcastle; M.R.C.S., Manchester; Children's Hospital, Birmingham; O. P., London; Matron, Bedford; Medicus, Newport; F. V., London; A. B., Leeds; H. E. W., London; T. B., Hants; Medicus, York; H., London; Stetho, London; Medicus, Wakefield; Insula, London; Matron, Middlesbrough; Medicus, Blackburn; H. D. H., London; H., Lancaster; M., Manchester; Masonic, London; A. B., Yorks; Medicus, Sheffield; Fides, London; Alpha, London; G., Putney; M., Croydon; B. A. C., London; Birmingham and Midland Hospital; M.D., Crewe; Juno, Lancs; A. K., London; L. B. B., London.

Pick-me-up, The Satellite, Cambrian News, Herald and Weekly Free Press, Herefordshire Herald, Herefordshire Mercury, Ashton-under-Lyne Reporter, Nottingham Evening News, St. Helen's Chronicle, Reading Mercury, Montreal Herald, &c., have been received.

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The Harveian Oration,

*Delivered before the Royal College of Physicians,
October 18th, 1888.*

By P. W. LATHAM, M.A., M.D.,

FELLOW AND CENSOR OF THE COLLEGE, DOWNING PROFESSOR OF
MEDICINE IN THE UNIVERSITY OF CAMBRIDGE, AND SENIOR
PHYSICIAN TO ADDENBROOKE'S HOSPITAL.

MR. PRESIDENT AND GENTLEMEN.—To-day we meet together in fulfilment of the express wish of Harvey, our illustrious benefactor and most distinguished ornament, and it is my duty "to commemorate the benefactors of the College and to encourage its members to search out the secrets of nature by way of experiment." I will not apologise for endeavouring to perform this duty, imposed upon me by our past President, heartily though I wish it had fallen into worthier hands. As a duty I accepted the task; and it is made a pleasant one by the feeling that in commemorating the achievements of the past I shall have the sympathy of my audience; and if, whilst looking to the future, and pointing to the direction in which further advances are possible, and suggesting routes by which these advances may be made, some here present are encouraged and stimulated by what I say to search out these secrets of nature, I shall feel that the very deep anxiety with which I venture to address you has not been altogether fruitless.

And what are the achievements of the past? and of the present? Is disease being prevented? Is life being prolonged? Is pain lessened? When disease arises, can it be more skilfully treated or more rapidly controlled? It is almost superfluous for me in this assembly to answer these questions, or to point out how intimately our progress has been associated with and dependent upon Harvey's great discovery. As illustrations, need I speak here of the diminished mortality from consumption, which, by the recognition of and attention to ordinary sanitary laws, has during the last quarter of a century been reduced in England and Wales 28 per cent.; or of the diminished mortality from ague or from typhoid fever? Is pain lessened? Need I refer to ether and chloroform; or to nitrite of amyl, which is now finding a more extended use than in simply relieving angina pectoris; or to the hypodermic injections of remedies such as morphia and ether? When disease arises, can it be more skilfully treated or more rapidly controlled? Need I speak of the effects of the bromides in epilepsy and allied disorders; of the specific effect of quinine in ague, or of the equally specific effect, in proper doses and with suitable diet, of the salicyl compounds in acute rheumatism; of the diminished mortality from pneumonia; of the use of the aspirator in pleuritic and pericardial effusion; of our increased skill in the localisation of cerebral disease, and the brilliant results which are now achieved by surgery in connexion therewith? All these are modern advances of which we may well be proud. The names of those, many still happily living among us, to whom we owe this increased knowledge, are known to you all. It is unnecessary therefore to commemorate singly those distinguished Fellows of this College whose names connected with the advance of medicine will be cherished by posterity not only as benefactors of this College, but of mankind at large.

And what shall I say of our greatest benefactor whose memory we specially commemorate to-day? When I turn to the orations delivered by my predecessors, I find that the history of Harvey's life, his surroundings, his mode of investigating nature, his early studies, classical, dialectical, and physical, his habit of inductive reasoning, the steps leading to his great discovery, the grounds for asserting his rightful claim to be the discoverer, have all been so eloquently discussed and so exhaustively displayed before you that it would be out of place for me to dilate on any of these themes. Permit me rather to picture before you to-day some of the discoveries which have been made in modern times, in matters connected with the circulation, and more particularly in reference to some of the changes in the blood which may be associated with or productive of disease; and thus to indicate some of the additions to that

fabric of scientific medicine of which Harvey's great discovery is the corner stone.

Following upon the labours of Harvey, we note the discovery of the capillaries by Malpighi, about 1687, our knowledge thereof improved by Leeuwenhoek in 1729, and then by Hales, Cowper, Haller, and Lieberkühn, and perfected by Prochaska in his publication in 1812. Subsequently we learned how the rhythm of the heart may be interfered with by causes acting through the nervous system, and how the calibre of the minute arteries may be modified through the same agency. Then we have the changes connected with inflammation; and can we not picture to ourselves with what special interest such an observer as Harvey would have watched the changes which take place in the vessels and the surrounding tissues following upon irritation or inflammation, and which, by the aid of those appliances with which modern science has furnished us, have been discovered in recent times? I refer to the dilatation and relaxed condition of the vessels, the slowing of the blood stream, the falling out of the colourless corpuscles, like tired soldiers on the march, as Professor Burdon Sanderson has expressed it, leaving the mid-stream and loitering against the vein wall, afterwards sticking to it, and then in some wonderful way wandering out, emigrating through the unbroken vascular wall into the surrounding space, some of them becoming disintegrated and dissolved in the liquid which is also effused, and so leading to an accumulation of coagulable lymph or inflammatory exudation external to the vessels. How much is there in these phenomena which still requires investigation and explanation. Why do the blood vessels dilate? How is the emigration of the colourless corpuscles to be explained? By what means also do these corpuscles "penetrate into dead tissue, and indeed into any material capable of imbibition with which they are brought into contact in an active state?" And then the further questions may be suggested: Does there exist an antagonism or attraction between these white corpuscles and those recently discovered organisms, the bacilli? Is there a struggle for existence between them? How are the powers, and action, and growth of the colourless corpuscles modified by the presence of these micro-organisms? What part do the latter play in the production of disease? Is it true that a large part of all health and disease in the world is dependent upon them? Such questions as these indicate the degree of importance which must be assigned to the discovery of these bodies, and account for the interest in them which prevails at the present time. Probably no other discovery since that of the circulation of the blood appears to be so full of promise in elucidating the causes and courses of some diseases as this one. These micro-organisms in various forms seem to take part in the destructive changes with which we are familiar in the animal and vegetable world; they are found in connexion with certain diseases, and some of them have their home in the circulatory apparatus. Is it not, then, peculiarly fitting that on an occasion like this some reference should be made to these micro-organisms? We can rightly commemorate and rejoice over the work which has been done in this direction, whilst we feel at the same time how much there is still unsettled and obscure. The knowledge gained from the experimental observations on animals is as yet applicable only within very narrow limits to the human subjects. Nay, more. The results of clinical observation are altogether inconsistent in many cases with what these experiments would suggest; and yet how fruitful and full of promise does the territory seem from our present standpoint! Is it not one to which I may point encouragingly and ask you to explore it, and bid you, in Harvey's words, "search out its secrets by way of experiment"?

Let me briefly remind you of some of the facts which have been made out regarding these bodies. There can be little doubt that in some disorders these organisms, in their various forms, round, corkscrew, or straight-rod-shaped, are the causal connexion, the virus, of the disease. The bacilli are constantly present in the affected parts; the organisms have been cultivated outside the body and separated from all the morbid materials, and the disease has been produced by the introduction of these cultivated organisms into healthy animals. As examples of such disorders, we have, as described by Koch, anthrax or splenic fever, a septicæmia in mice due to bacteria, and a septicæmia in rabbits due to micrococci. After inoculating an animal with

the smallest drop of anthracic blood, provided it contains bacilli or their spores, it dies within twenty-four or thirty-six hours, and then in the capillaries of the liver, spleen, lungs, kidneys, and stomach incredible numbers of these bacilli can be seen permeating this portion of the vascular system; whilst in the larger vessels, even in the arteries and veins of an intestinal villus, they may be entirely absent or only seen at long intervals; and it is remarkable that in the capillaries of the brain, skin, muscle, and tongue there are fewer than elsewhere. The development of such numbers in so short a time appears almost incredible. The bacillus subtilis, however, which is not parasitic, but otherwise very much like bacillus anthracis in all respects, with a good supply of food and oxygen, and a temperature of 30° C. (86° F.), doubles its length, and divides once every thirty minutes, forming two separate organisms. By an easy calculation, therefore, we find that at the end of twenty-four hours the progeny of such a bacillus, increasing at such a rate, would amount to upwards of eight hundred millions of millions. In anthrax it would seem to be quite clear, then, that the bacillus will give rise to the disorder. There can be little doubt also that woolsorters' disease, malignant pustule, and intestinal anthrax in the human subject are developed from the same source.

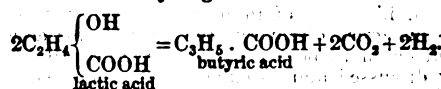
As an example of a disease connected with a spirillum or spirochæta we have that of relapsing fever—a disorder in the spread of which it is certain that contagion from the sick or through the intervention of articles of daily use plays a very important part. During the febrile condition of the patient, a slender thread-like and twisted organism, which is never still, but always moving about in various directions, is found in great numbers in the blood—the Spirochæta Obermeieri—closely resembling Spirochæta Cohnii or plicatilis found in the mucus of the teeth, but innocuous. During the intervals between the febrile attacks none of these organisms can be detected in the blood. Outside the body they show active movements at a temperature of 60° or 70°, become languid at blood heat, and die at fever heat. The pyrexia, therefore, of the patient is supposed to destroy the organism, which then breaks up into a number of minute granules, some of which may constitute the spores from which fresh crops of the organism may develop. If blood is taken during the stage of pyrexia and containing spirochæta from a patient, and human beings or monkeys inoculated with it, the disease can be reproduced, but not by blood taken during the intervals between the febrile attacks. Injections of the blood into other animals, such as dogs, rabbits, and guinea-pigs, were always without result. All attempts to cultivate the organism outside the body have not as yet been successful, so that we really know very little of its history. Here, again, we have a disorder associated with a bacillus, the organism disappearing and reappearing from the system, and the blood of the infected animal being intermittent in its power of communicating the disease to other animals.

Perhaps few disorders of the human frame have greater interest attached to them than those associated with tuberculosis, and when we remember that one-seventh on an average of the deaths of human beings result from pulmonary tuberculosis the importance of any fresh light shed on this disorder, or the discovery of any new fact, cannot easily be overestimated. The discovery, then, by Koch in 1882 of a bacillus in the tubercular diseases of man and animals has necessarily attracted a good deal of attention and led to a good deal of discussion. These rod-shaped bacilli have been shown to exist, in all cases of human tuberculosis, in the sputum, in caseating scrofulous glands, and in the tubercular masses in the lungs. Pure cultivations of these bacilli, when introduced beneath the skin of susceptible animals, such as rabbits, guinea-pigs, cats, and field mice, always produce, after three, four, or more weeks, the typical tubercular lesions: swollen lymphatic glands, deposits in the spleen, liver, and lungs, and enlargement and caseation of the bronchial glands. Different species of animals present very different degrees of susceptibility: the domestic mouse is not easily affected, whereas the field mouse is highly susceptible; and, as every practical physician knows, in certain families of the human species there is an unmistakable liability, an in-born tendency, to suffer from tuberculosis, whereas other families entirely escape. Wherein lies this great difference of susceptibility? In what way do the micro-organisms, either in tuberculosis or anthrax or relapsing fever, influence the economy?—how do they produce the disease? Why should some animals resist their power

and others be overwhelmed by them? Recent investigations seem to me to throw some light on these points, and in some degree to answer these questions.

When certain forms of bacilli, of the so-called non-pathogenic character, are introduced into the blood of the lower animals, even in large numbers, their existence is of comparatively short duration, and they speedily disappear. The living blood has the power of destroying them. In three hours, according to Wyssokowitch, none are present, even though enormous numbers are injected. They are deposited in the liver, spleen, and medulla of bone, and soon die if they do not contain spores. If spores are injected, these live much longer than those of bacillus subtilis, being still alive after three months. But there is another way in which they are destroyed. "When bacteria are injected into the tissues, there follows a struggle for existence between them and the cellular elements. Leucocytes quickly accumulate in the neighbourhood of the mass of bacteria, and then there follows a fight for the mastery between these cells and the bacteria. The cells take up the bacteria into their interior, and where the bacteria are non-pathogenic for the animal employed they are destroyed" (Cheyne). The discovery of this is due to Metschnikoff. It is well known that the colourless blood cells possess the power of constantly changing their shape, exhibiting undulatory movements and alternate protrusion and retraction of processes; they are also able to take up and absorb solid bodies into their soft substance. "If the foreign body comes into contact with the surface of the cell, the latter puts out processes which embrace it and gradually close over it as the waves close over a drowning animal, so that it lies at last inside the soft cell substance. It may be cast out again at some future time, but it may also suffer decomposition inside the cell, be killed, and disappear." These well-known facts led Metschnikoff to investigate the behaviour of the colourless blood cells of the vertebrate animals towards the bacillus of anthrax. He found "that the virulent rods, when introduced by inoculation into an animal liable to take the fever, such as a rodent, were not absorbed by the blood cells, or only in exceptional instances. They were readily absorbed by the blood cells of animals not liable to the disease, as frogs and lizards, provided the temperature was not artificially raised, and then disappeared inside the cells. The same thing happened when susceptible animals were inoculated with bacillus anthracis which had been attenuated to the harmless state." Metschnikoff therefore assumed "that the bacillus is harmless because it is absorbed and destroyed by the blood cells, and injurious because this does not happen; or at least that it becomes harmless if the destruction by the blood cells takes place more rapidly and to a greater extent than the growth and multiplication of the bacillus; the converse being also true." If in the case of frogs the temperature be raised, "thus favouring the growth of the bacilli and at the same time lowering the vitality of the cells, the bacilli grow and penetrate into the circulating blood."

If, however, the bacilli, when introduced into the blood or into the tissues, are not destroyed by the colourless blood cells, or otherwise, but are such as are able to live in the blood or tissues of living animals, what is the nature of the change which they produce? It appears that among the products which result from the decomposition of organised matter and associated with the growth of bacteria certain chemical poisons appear which are capable of destroying animal life. We have long been familiar with the fact that the micrococcus or bacillus lacticus is the agent by which the lactic acid fermentation of the sugar contained in milk takes place, and this lactic acid, being then neutralised with lime or other substance, will after a time, through the agency of another micro-organism, probably the bacillus amylobacter, undergo a further change or fermentation, and be converted into butyric acid, with the simultaneous evolution of carbonic acid and hydrogen:—



And there are other fermentations of a similar character. But it is only in recent times that it has been discovered that, as the result of albuminous or proteid decomposition or putrefaction, certain animal alkaloids are produced similar in their nature and in their chemical composition to the vegetable alkaloids. Some of these products, or

ptomaines as they are called, are innocuous, others possess poisonous properties varying in degree from the slightest forms to the most intense activity. Nearly seventy years ago Kerner pointed out the similarity of the effects produced by sausage poison to those produced by atropine, but the symptoms are slow in appearing; sometimes two, three, or four days may elapse before they manifest themselves. Dr. Alfred Swaine Taylor mentions the fact that in 1859 sixty-four persons suffered from the poisonous effects of a certain batch of sausages, only one case, however, proving fatal. Chemical analysis of the sausages yielded nothing of a poisonous nature, though there could be no doubt that they had caused the symptoms and death. The symptoms were—burning in the throat and stomach, followed by vomiting and purging, giddiness and confusion in the head, and in some cases delirium. It might now possibly be urged, with our present knowledge, that the symptoms arose from the formation of an animal alkaloid in the meat, developed through the agency of such an organism as Cohn's bacterium termo or Bienstock's drumstick bacillus. From partial decay, through the agency of Tyrothrix tenuis or some other bacteria, cheese sometimes acquires irritant properties, and will give rise to vomiting and purging more or less violent in those who have eaten it. Pickled or tinned salmon, salted herrings, and even fresh mussels, are examples of articles of diet which have caused poisonous symptoms in those who have partaken of them. In 1856 Panum showed that these effects were the result of some chemical poison developed in putrefying material. He subjected the fluids to prolonged boiling so as to destroy any living organisms, and on injecting it into animals the poisonous effects were still produced, though in a slighter form than from the unboiled fluid. Further, after filtering the fluid and boiling it for an hour, he evaporated it to dryness, then digested it with absolute alcohol, and treated the residue with boiling water. This watery extract also was poisonous. Some of these chemical substances or animal alkaloids were separated by Armand Gautier in 1872, and by Professor Selmi of Bologna, and named by him ptomaines. Professor Brieger has since succeeded in producing these bodies, and some not poisonous, in a crystalline form, and in determining their chemical composition. The following are some of them:—

Neuridin $C_5H_{14}N_2$, a non-poisonous alkaloid, is the one which is most constantly present at the commencement of putrefaction, and which appears in largest quantity. This substance can be split up into dimethylamine and trimethylamine.



After the removal of this from putrefying flesh two poisons can be extracted, neurin $C_5H_{13}NO$ and cholin $C_5H_{15}NO_2$, differing only in composition by a molecule of H_2O , but the neurin being ten times more poisonous than cholin, which latter exists normally in the bile, and as a constituent of lecithin in the brain, and in yolk of egg. From putrefying fish and gelatine muscarine $C_5H_{16}NO_3$ is obtained—an alkaloid previously discovered by Schmiedeberg and Koppe as the poisonous agent in a disease of flies caused by a fungus, the *Agaricus muscarinus*. Brieger also obtained other products from decomposing albuminous substances and human corpses—viz., ethylene diamine $C_2H_4(NH_2)_2$, gadinin $C_7H_{17}N_2O_2$, trimethylamine $N(CH_3)_3$, dimethylamine $NH(CH_3)_2$, and trimethylamine $N(CH_3)_3$, cadaverin $C_5H_{16}N_2$, putrescin $C_4H_{12}N_2$, saprin $C_5H_{16}N_2$, and mydalein; the amount of these substances obtained depending upon the stage of decomposition and the temperature at which it took place. I will not stop to describe the poisonous effects of these products on the system. For that I must refer you to Professor Brieger's publications or to Dr. A. M. Brown's treatise on the Animal Alkaloids. The point of interest is that they are developed during the process of putrefaction, in which bacilli take an active part; and probably it is from the development of these poisons that the effects on the animal system are produced when certain of the micro-organisms gain an entrance into it. It is to be observed that these poisons are developed by the action of bacilli on dead or effete animal matter, not necessarily on living tissue; and it might be suggested, therefore, that if they are produced from living tissues by the micro-organisms, this can only take place when the tissue has lost its so-called vitality, or when there is a departure in the tissue from the normal condition which constitutes health. But this will hardly apply to such a disorder as splenic fever, or even to tuberculosis in guinea-pigs &c., in which cases we have very clear

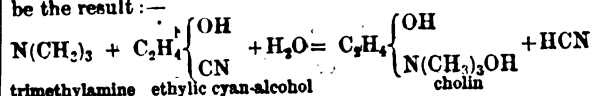
evidence that the introduction of the pure cultivated micro-organism into healthy animals will produce the disease. This at once suggests the question, Can the apparently innocuous or non-pathogenic bacteria be so cultivated outside the body as to develop an intense virulence and become pathogenic—endowed, that is, with the power of growing and multiplying within a living animal? To this I will briefly refer later on.

Now, not only has it been demonstrated that certain poisons or ptomaines can be derived from dead putrefying animal substances, but, moreover, it has been shown by Gautier that certain alkaloids which he terms leucomaines, having poisonous properties, are formed within the living organism and independently of the action of bacteria—waste or effete debris—by the accumulation of which in the system the vital processes are arrested. As examples of these he gives betain, gnanin, xanthin, kreatinin, &c. The accumulation of these substances in the system is prevented either by their destruction by oxygenation, or by their elimination through the agency of the kidneys and liver. That products are formed in the living body which, if not eliminated, produce poisonous effects is well shown in cases, for example, of uræmia, gout, or diabetes. The majority of observers are of opinion that uræmia is not solely due to the effect of an excess of urea or of carbonate of ammonia in the blood, but to the poisonous action, in addition, of such substances as kreatin, kreatinin, and other extractives or waste materials which have accumulated in the system from defective excretion by the kidneys. In gout we have uric acid exerting its poisonous effects on the nervous centres, and modifying the nutrition of parts of the body. In diabetes we have not only in some cases the formation of glucose taking place in the system, even when saccharine and starchy foods are withheld, but we have also evidence of some abnormal molecular change in the constitution of the tissues, as shown by the marked tendency to carbuncle and to tuberculosis of the lungs. As the disease advances we have symptoms of drowsiness showing themselves, the result of some abnormal product in the blood acting on the nervous system; later on acetone appears in the urine, and, in general, not long after this stage has been reached death takes place. In the Croonian Lectures for 1886 I endeavoured to show that there were grounds for regarding living albuminous compounds as made up of certain cyan-alcohols united to a benzene nucleus; or, in other words, by combining hydrocyanic acid with a compound belonging to the benzene group, and with the five aldehydes—methyllic, ethylic, propionic, butyric, and valeric,—a compound would be formed having the same ultimate composition as albumen: and also that a considerable number of the substances, such as glycocoll, lactic acid, leucine, &c., which are obtained from albuminous substances, could be prepared in the laboratory artificially from these cyan-alcohols. Assuming such a constitution for albumen, I indicated how, if the force, vital or otherwise, which held these molecules, forming living tissue, together were modified or lessened, so that the molecules, instead of undergoing the normal changes, fell asunder and were partially oxidised, such substances would be produced as glucose from methyllic cyan-alcohol, lactic acid and para-aldehyde from the next in the series, and oxybutyric acid and acetone from a third. I refer to this here, because the same assumption as to the constitution of albuminous material helps to explain the origin and formation of Brieger's ptomaines. From the lowest cyan-alcohol in the series, $CH_2 \begin{Bmatrix} OH \\ CN \end{Bmatrix}$, glycocoll

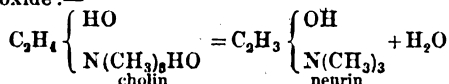
$CH_2 \begin{Bmatrix} NH_2 \\ COOH \end{Bmatrix}$ should be obtained, which under certain conditions splits up into carbonic acid and methylamine $NH_2(CH_3)$. This methylamine may under certain circumstances form dimethylamine $NH(CH_3)_2$, and trimethylamine $N(CH_3)_3$, the two substances into which neuridin (the alkaloid which is the first to be separated from putrefying meat) can be decomposed. The following equation then would represent the origin of neuridin:—



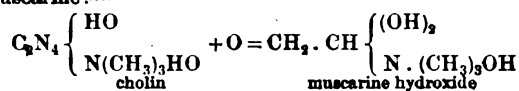
If we take now trimethylamine and combine it with the next cyan-alcohol in the series, the ethylic, cholin should be the result:—



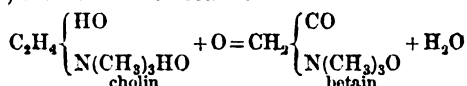
for cholin has been formed synthetically in the laboratory by heating ethylene chlorhydrin $C_2H_4 \begin{Bmatrix} OH \\ Cl \end{Bmatrix}$ with trimethylamine, and the same reaction should hold good for the cyan-hydrin or cyan-alcohol. Neurin differs from cholin by H_2O , and the former can be obtained by heating cholin with hydriodic acid and then acting upon it with moist silver oxide:—



By oxidising cholin (by gently heating its hydrochloride or platino-chloride with strong nitric acid) we obtain muscarine:—



Oxidised in a different fashion cholin is converted into betain, the alkaloid of beetroot:—



a substance which has also been found by Liebreich in the human urine. Such facts as these lend some support to the view which I have advanced as to the constitution of albumen, and I mention them here in order again to call the attention of those interested in chemical physiology to the close relationship which exists between these compounds of prussic acid with the various aldehydes, or the cyan-alcohols, and the different substances which can be extracted from albuminous tissues.

Let me now return from this digression. From the data which I have placed before you, I wish to draw the inference that in the living animal organisms, owing to slight departures from the normal nutrition of parts, arising probably through nervous agency—the trophic nerves,—various substances, such as extractives or alkaloids, will be produced, which, if not eliminated or neutralised, will lead to pathological changes in the system, absolutely and entirely independently of any bacterial action. As an illustration, I would refer to the pyrexia or fever which, even in healthy individuals, may follow over-exertion or excessive fatigue, and which is still more readily developed in convalescents or in persons who are not very strong. Sir William Aitken has directed special attention to this condition, “which is constantly seen in all forms of physical over-taxation or over-exertion, as in a prolonged march or by excessive drill, especially in young and adolescent soldiers”; and he refers to the investigations made by Prof. Angelo Mosso of Turin on the physiology of fatigue as developed in the soldiers of the Italian army, and the pathological manifestations which accompany it. “Fatigue carried beyond the moderate stage, at which it is decidedly beneficial, subjects the blood to a decomposing process through the infiltration into it of substances which act as poisons—substances which, when injected into the circulation of healthy animals, induce malaise and all the signs of excessive exhaustion.”

In convalescence from disease, too, how readily does the evening temperature rise after any slight physical exertion; and at the commencement of typhoid fever perhaps nothing tends to intensify the severity of the attack so much as physical fatigue. It would seem in this case as if the soil for the cultivation of the fever germ was materially enriched by the products of disintegration. In “fatigue fever” these products are formed more rapidly than they can be eliminated or neutralised. With rest the febrile condition soon passes off, if the individual is otherwise healthy. Now it appears to be the function of certain glands besides the liver and kidneys to get rid of the poisonous products resulting from the disintegration of the tissues, either by neutralising or decomposing them, or otherwise. If the action of the glands is checked or modified either by disease or by their removal, then the poisonous material soon begins to exert its specific effect on the system. We have recently been taught that following upon disease or removal of the thyroid gland the condition known as myxœdema, with all its attendant phenomena, arises. Again, in disease of the suprarenal capsules “effete pigments and effete proteids circulate in the blood, the former or their incomplete metabolites

producing pigmentation of skin and mucous membrane, and appearing often in the urine as urobilinogen, uroporphyrin, and the latter producing toxic effects, and leading to further deterioration of the blood with its consequences” (McMunn). If, then, from any cause due to glandular, nervous, or other derangement in the system, these poisonous substances are developed or not eliminated, they will alter the composition and constitution of the blood; the white corpuscles may be destroyed, or their movements enfeebled, and, by any such changes, the blood, which previously could resist the attacks of the various parasitic micro-organisms, is so modified as to render it a suitable soil in which these organisms may develop and thrive. This view is confirmed by the experiments of Roszbach and Rosenberger, who found that when papain or sterilised septic blood was injected into the vessels micrococci developed in the blood with extraordinary rapidity; the blood, that is to say, was so modified in character that the micrococci which could gain no entrance previous to the injection of papain, afterwards found a congenial soil for their development.

We may take another illustration from the process of fermentation. By fermentation sugar can be converted into carbonic acid and alcohol; but a pure saccharine solution does not ferment on the addition of a small quantity of fungi or bacteria in a pure state. Some nitrogenous material must be added as well, to act as food to the organisms, and then the transformation into carbonic acid and alcohol commences. That it is only in particular conditions of a tissue, or at special times in its growth, that it furnishes suitable soil for the growth of the bacilli is shown by the following illustration from the vegetable world furnished by De Bary:—“The common garden cress *Lepidium sativum* is often attacked by a parasitic fungus of comparatively large size, *Cystopus candidus*. In consequence of this it shows considerable degeneration, swellings, curvatures of the stem, and often also of the fruits, and on these parts and on the leaves white spots and pustules, subsequently turning to dust, which are formed by the sporogenous organs of the *Cystopus*, and give the entire phenomenon the name of the white rust in cress. This is a case of disease, and so striking that everyone notices it at once with the naked eye. Now we find in a bed of cress at about flowering time a certain number of rusty plants—two, for example, or twenty. They are in the middle of the other hundred or thousand plants, and these are healthy and free from the fungus, and continue so till the period of vegetation is at an end. This is the case, though the *cystopus* forms countless spores in the white rust pustules, and the spores are dispersed as dust and are at once capable of germination, finding the necessary conditions for their further development in the bed of cress, and are the instruments by which the white rust disease is eminently infectious. Nevertheless, those hundred or thousand plants are not infected. All that has been hitherto said is strictly correct, and, if we limit our view to this, we shall see in the phenomena which have been described a conspicuous case of individual difference in predisposition; a case, too, perhaps, if we judge hastily, of sickly predisposition in the plants attacked, for they do become sick and the others do not. And yet this is not the true account of the matter. Every healthy cress plant is equally liable to the attacks of the *cystopus* and to the rust disease which it causes, only the liability is confined to a certain stage of the development, and ceases once for all when that stage is past. The germinating cress plant, in effect, first unfolds two small three-lobed leaves, the seed leaves or cotyledons; when it has grown a little further and formed more foliage leaves, the cotyledons wither and drop off. It appears, then, that the germ tubes of the fungus of white rust find their way into all the cotyledons, and are able to develop there; and if this development has once begun, the fungus establishes itself at once in the tissue into which it has penetrated, and grows on, in, and with the growing plant, and produces the disease. The germ tubes of *cystopus* may, indeed, make their way for a short distance into all the other parts of the plant, but are unable to establish themselves inside it and continue their development. The plant is for the future safe from the attacks of the parasite as soon as the cotyledons have fallen off. The two or the twenty rusted plants in the bed are the ones in which the fungus attacked the cotyledons in good time; if it had attacked the thousand others in equally good time, all would have been rusted. They continued healthy,

because they were not infected in the stage in which they were open to infection—that is, predisposed.”

We may take another example from the human subject. Ringworm of the scalp due to the fungus *Trichophyton tonsurans* is not infrequently seen in children under sixteen years of age; but after that age, though the fungus may affect other parts of the body, the scalp is generally free from it. Some change has taken place in the tissue there, which makes it less suitable for the growth of the parasite.

Now, may not the function of the glands to which I have just now alluded—viz., that of destroying or neutralising effete or toxic products formed in the system—have some bearing upon the development of tuberculosis? Thirty years ago it was suggested by Buhl that in the human subject acute miliary tuberculosis was due to the absorption into the blood of caseous matters from various sources. “It afterwards became the fashion to regard tubercle as always a secondary product, the origin of which was sought for in ‘caseous foci’ of which the formation was supposed to precede, in all cases, the development of tuberculous lesions. . . . The acute tuberculosis of children was traced back in a large number of instances to a simple intestinal or bronchial catarrh; this was supposed to lead first to swelling of the corresponding abdominal or thoracic lymph glands, and then to their caseation; and when once caseation had commenced, the conditions for the development of tubercle were assumed to be present.” But, says Dr. Hilton Fagge, whom I have just quoted, “nothing is more certain than that in man the inspissated pus of a common abscess, or the caseous matter of an atheromatous artery, or of a degenerating new growth or gumma, does not produce tuberculosis.” We may neglect, then, the consideration of these caseous glands as “caseous foci,” and yet their existence antecedent to or associated with tuberculosis is so general that to the mind of the practical physician it would seem as if there must be some distinct relationship as to cause and effect between them.

May I venture to offer an interpretation of the fact? Suppose that in an individual we have such a condition of the glands either inherited or acquired, such a “vulnerability,” so to speak, that from more or less slight irritation of the mucous membrane of the throat, of the lungs, or of the intestines, the glands in connexion with those parts become enlarged and inflamed, and, instead of recovering, become caseous. These organs then would no longer be able to perform their function, whatever that function may be; and if it be that of modifying or destroying the effete material coming to them as the result of normal changes in the mucous membrane, this effete material must pass on into the circulation generally, and produce its noxious effects—lessen, it may be, the vitality of the white blood corpuscles, or the epithelial or endothelial cells, or so modify the condition of the blood that the tubercular bacillus finds a suitable soil in which to develop and flourish. Or it may be that these poisonous substances act specially as irritants of epithelial structure, causing an overgrowth of epithelial cells, just as we know will be the result when any other irritant is applied to these tissues; and so the soil is prepared for the lodgment of the bacillus. The human body in the normal state of things may be able to destroy the bacillus tuberculosis, just as the white corpuscles of the frog in Metschnikoff's experiment could destroy the bacillus anthracis, but not when placed in abnormal conditions. In connexion with this view of the matter, it is significant to find in the case of animals inoculated with tubercle that the lymph glands in the neighbourhood of the inoculation become enlarged and caseous, and this precedes general tuberculosis by a longer or a shorter time. Nor would I maintain that the loss of function caused by the swelling and caseation of the various glands was the only way in which the tissue soil could be prepared for the reception of the bacilli. If, as I urge, tissue in a state of decay is suitable, I would suggest that imperfectly formed tissue would furnish equally suitable food for these parasites—such tissue as would result from living in a close atmosphere, with poor and insufficient food and insufficient exercise. We could not imagine any conditions better calculated than these I have just mentioned to lower the activity or vitality of the epithelial cells of the pulmonary alveoli, or to interfere with the perfect organisation of the tissues generally, or to conduce more effectively to the accumulation of waste or effete material in the circulation, or to impede generally the action of the glandular structures, whereby these waste products should be rendered innocuous; and no wonder that

under these conditions the tubercle bacillus finds a congenial home, in which it spreads and thrives and multiplies.

Again, the condition often seen in some parts antecedent to the formation of tubercles in the human system indicates that there is often some structural change before the bacilli take possession of the part, and that “their appearance on the scene is subsequent to the damage of which they are, in fact, the pathological consequences.” Not infrequently in cases of acute tuberculosis of other organs we find an affection of the membranes of the brain presenting all the characters of simple inflammation, no tubercles being discoverable. And in the lungs the first stage of the morbid process is of a similar character—namely, the filling of the alveoli with epithelial cells, or, in other words, a “catarrhal pneumonia.” And according to the vitality of these epithelial cells will be the changes produced in them by the bacilli. Some of the cells possessing greater vitality will, when attacked by the bacilli, go on increasing or coalescing, and so in some way or other the formation of the so-called “giant cells” takes place, which at one time were regarded as the typical elements of tubercle, and the remarkable phagocyte property of which has been recently shown by Metschnikoff to be something more than a theory. If the cells are of a weaker nature they quickly die and undergo degeneration, and become caseous.

And, once again, it may be suggested that when the bacilli have gained a footing in this effete or enfeebled tissue, whilst absorbing from it the constituents of their own protoplasm they may give rise to or secrete poisonous products or ferments capable of still further destroying or weakening the surrounding tissue or cellular elements, and so obtain fresh food on which they can thrive. In this way, to use Dr. Sanderson's words, “germs are not so much ‘mischief makers’ as mischief spreaders; that is to say, that although an inflammation may come into existence without their aid, their presence communicates to it after it has come into existence the power of reproducing itself in previously healthy tissues, whether by extension or dissemination.” Sometimes, however, even though the tubercle bacilli establish themselves in the tissue, the epithelial cells may become strong enough to resist their further invasion and destroy them. The bacilli disappear, and a “fibrous tubercle” containing giant cells but no bacilli is left behind as evidence of the fight which has taken place. And does not this fact furnish us with our most important lesson?—viz., that in the prevention and treatment of consumptive mischief our aim must be not so much to fight against the bacillus as to strengthen the parts attacked; to improve, that is, the condition of the blood and of the cellular elements by suitable dietetic, hygienic, and medicinal means. And is not this in accordance with sound practical experience? That the tubercle bacillus will communicate the disease under ordinary circumstances to healthy individuals cannot for one moment be admitted. The statistics compiled by Drs. Cotton and Theodore Williams and Mr. Edwards from the records of the Brompton Hospital, relating to several hundreds of individuals subjected more or less to contact and association with consumptive patients for three months and upwards, directly negative any idea of consumption being, in the ordinary sense of the word, an infectious disease. And, therefore, if a healthy human system can resist the invasion of the bacillus, surely the common-sense view of preventing its invasion or arresting its progress must be to adopt such measures as will tend to the development of healthy tissue. That the internal administration of cod-liver oil is of great service generally in the treatment of phthisis few, I think, will deny, and the same may be said of the free use of butter as an article of diet, the latter sometimes even appearing to answer better than the cod-liver oil, and is certainly more willingly taken. But what possible effect can these have on the bacilli? Indeed, I fear the discovery of the tubercle bacillus has not proved in some respects to be an unmixed benefit, and that, by treating patients in various ways by antiseptic remedies, the result has been that the patient, and not the bacillus, has succumbed.

Lastly, there is one important point to refer to in connexion with these micro-organisms. We are surrounded on all sides with certain forms of them which under ordinary circumstances produce no injurious effects on the human frame, living only as saprophytes on dead animal or vegetable matter. Can these harmless organisms under any mode of cultivation acquire virulent or poisonous properties enabling them to attack living animal matter? Can the common

bacillus of hay infusion, the bacillus subtilis, be transformed into the bacillus anthracis? Or, putting the question more generally, can a specific disease arise *de novo*? Pathologists and bacteriologists differ strongly on this point. Buchner says that the transmutation of the hay bacillus into the bacillus anthracis does take place. Koch and Klein say it is impossible. All admit that the bacillus anthracis, if cultivated outside the human body artificially, at a certain temperature, can have its properties so modified that it ceases to be poisonous, and after six weeks' attenuation can then be injected into the blood of a living animal without producing any injurious effects: rabbits resisting the injurious effects at an early stage of attenuation; later, guinea-pigs; while it is only after the parasite has been cultivated for a period somewhat less than six weeks that mice seem to be impervious to its attacks. But how it is that this attenuation takes place—whether it is due to the effect of heat alone or to the effect of oxygen—bacteriologists are by no means agreed. Further, it has been shown that when the attenuation of the bacillus has been brought about in a certain way (by the addition, for instance, of carbolic acid or potassium bichromate to the cultivation) its virulence is not regained when cultivated in fresh material at the ordinary temperature. But, attenuated in a different fashion, it does regain its virulence under those conditions. Again, the virulence of a parasitic organism is materially altered according to the animal through which it has been transmitted. "In the course of Pasteur's interesting researches on swine plague he found that pigeons inoculated with the virus of swine plague died in six or eight days, after suffering in the first instance from symptoms like those of fowl cholera. If the disease is transmitted from pigeon to pigeon, the organism after a time acts more violently, and the animal dies sooner. If, now, pigs are inoculated from these pigeons death occurs more quickly than when inoculated from a pig, the organism having become more virulent. With the rabbit the converse is the case. The virus kills rabbits, but if it is passed through a series of rabbits it is no longer able to kill pigs." (Watson Cheyne.)

Now, if this is the case—if the virulence of parasitic or pathogenic organisms can be thus modified,—it seems incredible that organisms of similar structure, though apparently harmless saprophytes, cannot be cultivated in some way or other so as to become pathogenic. And when the bacteriologists tell us that it is impossible, that only means, I suppose, that they have not yet discovered the way. Specific diseases and pathogenic bacteria can hardly have existed from the foundation of the world; they must each have had their power of development, and what has developed through one period of time may be developed again under similar circumstances. This may require a combination of circumstances acting simultaneously. Each circumstance separately may be in frequent action, but the necessary combination may present itself very rarely. A certain temperature and a special pabulum—a product, perhaps, of a certain stage of putrefaction—may be the first requisites to develop the pathogenic power of the bacterium; it may then require a special condition of the living animal organism, a lowered vitality, or an enfeebled state of health—the result, perhaps, of the same conditions of air, soil, temperature, &c., which have called forth the power of the parasite—before it can find an entrance; and possibly after that its transmission through different species of animals may be necessary before it acquires destructive virulence, and is able, like the bacillus anthracis, to attack sound and healthy tissue. Instances are not rare of vegetable cells possessing poisonous properties at one time and not at another. Nägeli has called attention to one of the most striking, which is thus described by De Bary: "The bitter almond tree is poisonous from the amount of amygdalin it contains, though it is not very dangerous to human beings; the sweet almond contains no amygdalin, and is not poisonous. The sweet almond tree does not differ specifically from the bitter; a tree with bitter seeds may be produced from a sweet seed; bitter and sweet seeds may even be borne on the same tree in flowers and fruits not morphologically distinguishable from each other." What the origin or cause of this difference is has not yet been discovered, and no explanation can as yet be offered; but the fact will help us to understand that cells may be developed by these micro-organisms capable of producing very different effects upon the system; and I incline therefore to the view that, probably from the simple neglect of ordinary sanitary

measures, innocuous micro-organisms may become virulent, and that diseases may arise *de novo*.

I have, however, detained you already too long with these speculations, and will not proceed further with them, tempting and important though the subject may be. One thing is clear and certain: there is very distinct evidence showing a relation between bacteria and certain diseases both in man and animals; but what the exact *modus operandi* is in the production of the disease can only be learned from further investigation; and additional study may throw a very different light on the relationship of these organisms to the respective maladies from that in which it may now be regarded. Whether this will be so or not, it seems to me that with increasing knowledge of the chemical changes in the blood and in the tissues, we are on the threshold of most important discoveries, and of a very marked advance in the science of medicine. That physiologists are recognising in a greater degree than formerly the importance—nay, the absolute necessity—of further acquaintance with chemical physiology is shown in a marked way by the appearance of such works as those of Gamgee and Charles, and especially that most recent and most valuable one of McKendrick. Perhaps by further investigations into the chemical changes produced by bacilli, the constitution of the proteid molecule, complex as its nature is now regarded, may be unravelled and its properties better understood; we may be able to discover, possibly, what poison it is which the bacillus secretes, or how it is formed, or from what constituent of the proteid molecule it is derived. The other constituents of the molecule may perhaps furnish the antidote, or a poison antagonistic to that produced by the bacillus; for we know that poisons are antagonistic to each other—atropine and muscarine for example. We may even hope to find that the action and growth of the bacilli may be inhibited by certain substances, and then by injecting these substances into the blood disease may be prevented, or if disease exists it may be arrested or cured. Is there not, then, in this direction much that should attract you, and, in Harvey's words, "encourage you to search out the secrets of nature"? The changes seem so minute and inscrutable, sometimes so transitory, that amidst difficulties and disappointments we may often be discouraged and inclined to abandon the investigations. So it was with Harvey: "I found the task so truly arduous, so full of difficulties, that I was almost tempted to think, with Fracastorius, that the motion of the heart was only to be comprehended by God.....At length by using greater and daily diligence.....I thought that I had attained the truth.....and that I had discovered what I so much desired, both the motion and the use of the heart and arteries." Reverently, earnestly, and hopefully he continued his work, and succeeded. Let us follow in his footsteps, gathering up the facts, and, with minds educated and trained to reason upon the facts, try to penetrate further into nature's mysteries; and thus may we be enabled to do God's work in the world by preventing and healing all manner of diseases, and so promoting the happiness and welfare of mankind. One, whose memory is revered by all here, Dr. Parkes, wrote: "In the scheme of Providence it may not be meant that man shall be healthy. Diseases of mind and body may be the cross he has to bear, or it may be the evil against which he has to struggle, and whose shackles he has finally to unloose. The last disease will disappear, we may believe, only when man is perfect; and as in the presence of the Saviour all disease was healed, so, before perfect virtue, sorrow and suffering shall fade away. Whether the world is ever to see such a consummation no man can say; but as ages roll on, hope does in some measure grow. In the midst of all our weaknesses and all our many errors, we are certainly gaining knowledge, and that knowledge tells us, in no doubtful terms, that the fate of man is in his own hands." Let us hopefully strive to increase that knowledge, and so help, each one, to hasten on the time, far distant though it yet appears, when the last disease will disappear and man be perfect; when "there shall be no more death, neither sorrow nor crying, neither shall there be any more pain: for the former things are passed away."

HOSPITAL SUNDAY AND SATURDAY PROVINCIAL COLLECTIONS.—The Basingstoke Hospital Sunday collection on the 8th inst., in aid of the Basingstoke Cottage Hospital, amounted to £35 7s. 2d. The Hospital Sunday collection at Ware on the 8th inst., on behalf of the Hertford Infirmary and Herts Convalescent Homes, produced £20.

ABSTRACT OF A
Lecture
 INTRODUCTORY TO THE
COURSE OF SURGERY,

Delivered on October 2nd, 1888,

By WILLIAM ROSE, M.B., B.S., F.R.C.S.,
 PROFESSOR OF SURGERY AT KING'S COLLEGE.

MR. ROSE commenced by expressing his keen appreciation of the honour conferred upon him by the Council in electing him to such an important post as Professor of Surgery, and assured his hearers that he felt deeply the grave responsibilities which he had undertaken, whilst he expressed his earnest wish that he might be enabled to acquit himself creditably, maintain the honour of the chair, and prove worthy of the trust reposed in him. He said that it was only natural that, in thinking over a few topics as appropriate subjects for his introductory remarks, his thoughts should be directed to those who had preceded him in the chair of Surgery at King's College, particularly those with whom he had been associated during his student career. He referred, in the first place, to the late Sir William Fergusson, the first occupant of the chair within his recollection, and for whose memory he, in common with many others, entertained the deepest respect and affection; from whose clinical experience they had learned so much, and under whom he had had the privilege and happiness of working for many years, and of witnessing his extraordinary skill and coolness as an operator.

After reminding his hearers of the brilliant operations that were performed in those days in the theatre at King's College Hospital, the birthplace and nursery of many of the now recognised major operations, referring more particularly to excisions of joints, removal of formidable growths involving the maxilla, the scapula, &c., Mr. Rose alluded to the fact that a successful result was frequently marred in consequence of the prevalence of those terrible diseases, pyæmia and septicæmia, which at that time haunted the surgical wards, to which subject he would allude presently.

He then spoke of his immediate predecessor, Mr. Henry Smith, now Emeritus Professor of Surgery, whose friendship he had enjoyed for a period of twenty-one years, and for whose kindness, example, and assistance he expressed himself in terms of warm gratitude. He took this opportunity of expressing on his own behalf and that of his old pupils, their obligation to him for the work of his life, and their sincere wishes for his prolonged health and happiness in his retirement from active hospital work.

The lecturer next referred to the time when Mr. John Wood held the chair of Surgery, and spoke warmly of the advantages he had personally derived from attending his demonstrations of anatomy as well as his surgical lectures. He reminded his hearers that it was in 1870 that Mr. John Wood, on his assumption of the charge of surgical beds at the hospital, began to devote his attention to the antiseptic treatment of wounds, and thus brought about a great revolution in the surgical statistics of the institution, so that when the great master of asepticism joined the staff in 1877 he found his new colleagues to some extent versed in the principles, and ready to follow out under his guidance all the details, of his system of antiseptics.

In enumerating the advances which had been made in the art of surgery during the last twenty-one years, the lecturer drew attention to the improvement which had taken place in the knowledge and administration of anaesthetics, the use of which had produced a marked effect upon the method of operating. While formerly there was an ever-present apprehension in the mind of surgeons which frequently caused operations to be somewhat hurriedly performed, and many without any anaesthetic at all, in the present day operations are conducted with greater deliberation, and careful precision has taken the place of the rapid dexterity so necessary in pre-chloroform days. On the other hand, he pointed out the great importance of guarding against a possible tendency to unnecessarily protract the

period during which the patient is kept under the influence of an anaesthetic. But the most conspicuous element of all in the history of modern surgical progress was the general acceptance and diffusion of the principles of antiseptics promulgated by Professor Lister—principles which had given the surgeon a new and solid foundation on which to work with safety, as well as confidence to perform operations in regions of the body formerly considered beyond the reach of surgical skill. He instanced more particularly the surgery of the brain, spinal cord, kidney, and stomach, and the modern treatment of diseases and injuries of joints; adding that in these departments alone a great field was open for further investigation and practical research.

Mr. Rose concluded his remarks by a few words to those who would form his class in the ensuing session, upon whom he impressed the importance of punctuality and regular attendance. He explained to them that the great object in lectures and demonstrations was not to supersede reading and practical work, but to assist the student in these exercises, by explaining principles and illustrating facts, and in this way fixing them upon the mind more indelibly. He advised them to read up, in a recognised text-book, the subject of the lecture, if possible, both before and after, comparing the brief notes made during the lecture with the descriptions in the manual; in this way they would be enabled to retain facts which might otherwise slip from their grasp.

SHAKSPERE AND THE PIA MATER, WITH
 A NOTE ON THE ORIGINALITY OF
 HARVEY.

By BENJAMIN WARD RICHARDSON, M.D., F.R.S.

THE mode in which William Shakspeare obtained his knowledge about the pia mater is, I think, fairly explainable from a curious literary discovery which I was so fortunate as to drop upon, in my readings, a few months ago. I came across a large volume of anatomy published in the year 1615 by Helkiah Croke. It may be said, without hesitation, that this compendious volume was the first great work in anatomy ever published in the English tongue. It fills 1111 pages of imperial quarto size, closely printed, and it is illustrated throughout by drawings on wood of anatomical subjects. Such a book would cost the most industrious writer even in these days several years to compile and bring out, and, I should think, did cost at least fifteen to twenty years of labour. It contains not only anatomy pure and simple, but various passages of a physiological and psychological nature which had descended from Aristotle and Galen, with references also to the Pythagorean controversies and other subjects of metaphysical cast. The book is one we may speak well of, although it is really nothing more than an industrious compilation from Gaspar Bauhinus and Andreas Laurentius; and, in so far as the plates are concerned, from Vesalius out and out, being, in point of fact, a kind of new edition of the anatomical compendium of Geminus which that systematic plagiarist from Vesalius printed, published, and dedicated to Queen Elizabeth in the year 1559.

In the volume of Croke the membranes of the brain are well defined and described, the pia mater takes a very distinct place, and the brain and cerebro-spinal system are figured with a clearness which would excite no small degree of wonder in one who for the first time studied them even in this day.

What connexion has the book of anatomy by Helkiah Croke with the plays of Shakspeare?

This remarkable connexion: that the man who printed the works of Croke was W. Jaggard, of the Barbican in London, the same man who was the printer for Shakspeare. Within easiest walking distance from the Globe Theatre, the scene of the great William's managerial glory, was the printing office of Jaggard, where the plates and letterpress of Croke would for long seasons be the most remarkable press works of the time. To that office the indefatigable playwright would often be drawn by his own business, and there he would hardly fail to see unfolded before him the anatomy of man from a sure source, and just in the form that would most readily appeal to his ever-absorbing mind.

In this school of anatomy ready prepared for his hand, our immortal dramatist learned, as I believe, the fact of the existence of the pia mater, saw the drawing of it, and learned the function of it as the feeding mother of the brain. I might go a long way further in exposition of the source of Shakspeare's anatomical knowledge generally, for the closer this book of anatomy and the book of plays are read together the more clearly is it detected where and how the dramatist became the student of anatomy. But at this moment I am content to stop with the proposition placed before the reader, that the pia mater argument of Shakspeare was simply derived from the work and plates of his industrious contemporary, Helkiah Crooke, "doctor of physic, physician to his Majesty and his Highness, and professor in anatomy and chirurgery."

NOTE ON THE ORIGINALITY OF HARVEY.

Before I conclude I am forced, however, *à propos* of this work of Crooke, to say a word about Harvey in stronger vindication of his claim to originality than has perhaps ever before been found. This book on anatomy by the most competent authority of his day barely predates the Harveian discovery of the circulation. It brings up the known anatomy of the arterial and venous systems to the latest point before the discovery. It describes the valves in the veins, after Aquapendente, with exactitude. It contains a drawing which one is bound to confess Harvey must have seen, and which it would have been well for him to have acknowledged as from a previous master. But with all this there is not a word in Crooke about the circulation of the blood as Harvey afterwards explained it. Crooke believes that the heart and the arteries do not keep the same time in their pulsations; and he says of the arteries that—

"When they are dilated they snatch from the heart spirits as a new matter which in their contraction they communicate to the particular parts to be a vehicle of the heat, and do assume out of the neighbouring veins natural blood for their proper nourishment by the inoculations which are betwixt them and the veins, and that is the reason why the veins and the arteries do walk together throughout the whole body unless some great obstacle be in the way."

The above passage was published in the year 1615. How far it lies from the true reading of the circulation of the blood let anyone say: In that self-same year Harvey began to demonstrate his view of the subject in his lectures before the Royal College of Physicians. How new that exposition must have been to those who had the latest and most comprehensive work on anatomy in their hands let anyone also say.

Manchester-square, W., Oct. 15th, 1888.

THE CONSTITUTIONAL CHARACTERISTICS OF DWELLERS IN LARGE TOWNS AS RELATING TO DEGENERACY.*

By G. B. BARRON, M.D.

A PAPER was read last year at Manchester on "The Effects of Town Life upon the Human Body," by the late Dr. Milner Fothergill. The subject created an interesting discussion, exception being taken to some of his propositions. Degeneracy of race in town dwellers is still an unsolved problem, and anything that can be said in elucidation of the question is serviceable in an anthropological sense.

It may be readily supposed that the conditions of life and their general surroundings must largely influence and materially affect the physical or constitutional characteristics of town dwellers. At the onset, then, I venture to advance the proposition that the "vital force" of the town dweller is inferior to the "vital force" of the countryman. The evidence of this is to be found in a variety of ways. The general unfitness and incapability of the dwellers in our large lives of industry to undergo continued violent exertion or to sustain long endurance of fatigue is a fact requiring little evidence to establish; nor can they tolerate the withdrawal of food under sustained physical effort for any prolonged period as compared with the dwellers in rural districts. It may be affirmed also that, through the various factors at work night and day upon the constitution of

the poorer class of town dwellers, various forms of disease are developed, of which pulmonary consumption is the most familiar, and which is doing its fatal work in a lavish and unerring fashion. Thus it may be conceded as an established fact that the townsman is, on the whole, constitutionally dwarfed in tone, and his life, man for man, shorter, weaker, and more uncertain than the countryman's. I hold the opinion that the deterioration is more in physique, as implied in the loss of physical or muscular power of the body, the attenuation of muscular fibre, the loss of integrity of cell structure, and consequent liability to the invasion of disease, rather than in actual stature of inch measurement. The true causes of this deterioration are neither very obscure nor far to seek. They are *bad air* and *bad habits*. To these may be added a prolific factor operating largely to produce degeneration of race, and that is, *frequent intermarriage*, often necessitated by religious affinities.

Taking these causes in the order in which I have placed them, but without reference to their relative intensity, I think *bad air* is a potent factor of enfeeblement. Included in the phrase "bad air" are bad sanitation and overcrowding. I have no doubt on my mind it has a powerful and never-ceasing action, paramount and decisive, on the physical frames of young and old town dwellers, producing deterioration of physique, lowered vitality, and constitutional decay. For over thirty years I have been hammering away at this question of "bad air" and "bad sanitation" as the prime causes of impairment of health and race, and the more I consider it the more I am convinced of the soundness of my conclusions. A great deal has been said on this subject, and it is not difficult to adduce conclusive evidence from a large variety of reliable sources in proof of the deleterious effects of impure air on the animal economy. Consumption is the best type of degenerative action and loss of vital energy. It stands out in bold relief as the disease most rife wherever foul air exists. The significance and value of fresh air was recognised by the old fathers of medicine. Hippocrates was accustomed to advise a walk in fresh air of ten or fifteen miles daily. Aretæus, Celsus, and Pliny speak of the good effect of fresh air; and our great English physician, Sydenham, did the same thing. Dr. Guy found that of 104 compositors who worked in rooms of less than 500 cubic feet of air for each person, 12.5 per cent. had had spitting of blood; of 115 in rooms of from 500 to 600 cubic feet, 4.35 per cent. showed signs of consumption; and in 100 who worked in rooms of more than 600 cubic feet capacity, less than 2 per cent. had spat blood. Consumption is only one of the long list of evils to which the town dweller is exposed. But it is not desirable to particularise all the medical features of this question; their name is legion. It may be well to mention that the Labrador fishermen and the fishermen of the Hebrides, with plenty of fresh air, are practically exempt from this disease. The absence of pure air acts upon the animal economy in much the same way as the withdrawal of light on plants, the result being pallor and feebleness of constitutional vigour. This effect ramifies in every direction; the tissues of which the human body is composed lose their tonicity and contractile power, and even mental integrity may be more or less affected. The pent-up denizens of the courts and alleys of our large towns, surrounded on every side by imperfect light, bad air, and the general aspects of low life, necessarily degenerate in physical competency, and their offspring is of a feeble type. Fortunately, one antidote is to be found in the nomadic instincts of such offspring. Better the gutter life and street Arab gymnastics than the sickly incapability of a pent-up cellar child. When people are huddled together in badly ventilated hovels and narrow courts, compelled to live almost without light and air, the effects are soon made clear. The unsavoury courts and slums of our large towns cannot but be productive of a lowered vital force and impoverished physique. The fact must not be overlooked that there are two classes of town dwellers: one being those who dwell for a limited number of hours in the day—that is, whose occupation keeps them in close offices and places of business during the day, but who sleep in the suburbs in purer atmospheric conditions; and those who pass the whole of their lives in bad contaminated air without the advantage of a few hours' respite out of the twenty-four. It is with the latter class my observations deal.

The second chief factor of deterioration—viz., *bad habits of life*—tells a sad story on the physical power of the town dweller, probably through ignorance, but certainly indiffer-

* Abstract of a paper read at the British Association Meeting, Bath.

ence to the ordinary precepts of health is the rule of life. It is no doubt a fact that intemperance largely exists amongst this class, and the incidence of debauch upon them is heavier than upon those who live under more favourable conditions. Then the various forms of impurity smite with devitalising severity the offspring to the third and fourth generations. Moreover, the general tendency of their ailments is of the asthenic type. When we add to these conditions of human existence the influence of imperfect feeding and malnutrition, we get the state of physical degeneracy largely increased and emphasised. In the paper alluded to great stress was laid upon the diet of the town dweller, as compared with that of the countryman, as tending to degeneracy and impaired health. The digestive capability of the former is of a lower standard, and less capable of dealing with the ordinary articles of diet than the latter. Consequently, they live on such food as they can digest without suffering—bread, fish, and meat; above all, the last. The sapid, tasty flesh of animals, which sits lightly upon the stomach, gives an acceptable feeling of satiety, so pleasant to experience. Such selection is natural and intelligible, but it is fraught with danger. I quote from the paper: "The chief diet selected by the town dweller begets a condition known to doctors as the uric acid diathesis, with its many morbid consequences. Pulmonary phthisis and Bright's disease seem Dame Nature's means of weeding out degenerating town dwellers." Such are some of the medical aspects of the case. But it must not be lost sight of that there is a large class who are not able to procure much nourishing food of any kind, but, on the contrary, are forced by poverty to be content with less sustaining dietary, and they adopt another kind of food, not less injurious, but in another way—a diet mainly consisting of bread, tea, and such-like aliments. The time-honoured fashion so prevalent amongst well-to-do people, of five o'clock tea, may be attended with many advantages socially, but woe to those who take tea four or five times a day, and rely upon it alimentarily.

But it is not the male sex alone we have to consider. The factors I have briefly enumerated tell a terrible story on the lives of mothers of this part of future England, and their offspring pay the penalty nature imposes upon those who fail to fulfil her laws. Their children evidence constitutional disabilities of frame, which is badly and slowly developed, while their mental precocity shows itself in a peculiar adroitness in all the arts of cunning acquisitiveness. It is supposed by some that the effects of mental activity thus early developed interferes with the development of the physique. No doubt the scanty necessities of life induce a standard of craftiness and cunning which passes muster for intellect at an age which would imply precociousness and superiority, while the country child remains in its first simplicity.

But to the important question, "Is the town dweller degenerating in stature, or is he not?" there is yet no satisfactory answer supplied. It has been said that such a thing as a pure cockney of the fourth generation is a rarity, and so it may be said of all other large towns. The immigration of country folk of both sexes into our large towns is a well-known fact, and it is impossible to trace how far marriage supplies an admixture of new blood into the worn-out stock, and thus renovates it and becomes an antidote to decay. Taking the best evidence we possess, we can only approximately arrive at a solution of the problem. I have said that the degeneracy probably is more found in the loss of enduring tone and physical vigour than in inch measurement. The constant and ever-recurring immigration of the strong and robust countryman into the cities constitutes a steady counterpoise to the downward tendency, and the balance is fairly well sustained. Hence the difficulty of solving the problem. Seven years ago, at the request of the Anthropometric Society, I obtained the measurement of 300 men of various nationalities, some born in towns, some in the country, of various occupations, of different complexions and temperaments, and of various habits. I failed to discover any satisfactory evidence to lead to the conclusion that in actual inch measurement the town-bred man was appreciably inferior to the country-bred man. But, so far as my observation enabled me to judge, the countryman came out incontestably superior in tone of muscular activity. These figures are recorded in the Anthropometric Society's Transactions. Standing alone, they are of no value; they prove nothing, because I had no evidence at what age town dwelling commenced. It is in the mass of statistics we can find proof. Mr. Francis Galton, to whom science is so much

indebted, has recently recorded some measurements made by himself in his laboratory at South Kensington on men during the Health Exhibition, and has made a comparison with those of Cambridge University men. Mr. Galton's inquiry extended to as many as 9000 persons. The relation of the two points to a considerable advantage of the Cambridge men:—

	Height.	Weight.	Breathing.	Pull.	Squeeze.
Cambridge....	68.9 in.	153.6 lb.	254	83	87.5
Kensington ..	67.9 in.	143.0 lb.	219	74	85.0

These figures appear to substantiate the statistics of the Anthropometric Society: that the average well-to-do man has a higher general physical condition than the average of a lower grade of society; a similar, though not so well-defined, brain-development exists. These measurements, so far as proof of stature is concerned, must be accepted with some degree of reservation. Presuming that the Cambridge students were drafted from the upper stratum of society, and from the country mainly, there is no evidence that the other class were all from towns.

The tables of the Anthropometric Society, as issued by Mr. Roberts and published in the York Meeting Transactions, state that the result of a comparison as to the average height and weight of the several classes of the population distinguished as (1) the professional classes, including town and country; (2) the commercial classes in towns; (3) the labouring classes in the country; and (4) the artisans in towns. The relative position of the four classes stands in the order stated, Classes 1 and 2 being taller and Classes 3 and 4 slightly shorter than the general population. This relation is maintained throughout, and the tables afford material for study as to the comparative effects of occupation and town and country life on growth. Another table (No. 6) relates to weight. Here, again, the relative position of the four classes stands in nearly the same order, Class 1 being heavier, and Class 4 (i.e., artisans in towns) lighter than the general population; but Class 3 (country labourers) very nearly coincides with the general average, and is, in general, superior in weight to Class 2 (commercial classes in towns). In other words, the occupation of the country labourer places him in weight over the town tradesman, though the latter has the advantage in height.

As regards the physical improvement or degeneracy of the population, the report of the Anthropometric Committee at the Southport meeting says: "Few statistics are in existence which help to throw light on this subject. It is generally believed that the population in the manufacturing towns of the north of England is rapidly degenerating, but a comparison of the measurements of stature and weight given in the Report of the Factory Commission, and the Report to the Local Government Board of the employment of children and young persons in factories, 1873, shows that this is not the case."

What we want is more extensive inquiries as to measurements of persons who have lived in large towns for two or three generations, and compare them with those who have lived in the surrounding country for some generations without admixture. Such an inquiry is surrounded by difficulties, but it alone would be conclusive. My contention is that it is in the loss of physique, of muscular tonicity, vital capacity, and vital force that the degeneracy is to be found. Let the town dweller of the same height and weight go to the Grasmere sports or the Braemar gathering, and try conclusions in wrestling or games of prowess and endurance with the hillside man, and the issue will not long hang in doubt; the town man has no "staying power," no "muscular contractile power," and he soon comes to grief. Probably no arrest in the downward tendency of constitutional power can take place until there is some amelioration in the conditions of life to which town dwellers are subjected. Development and integrity of cell structure and the processes of vital organisation are next to impossible under such circumstances of life to which they are exposed. This question is a broad one, and involves many ramifications. If all the circumstances connected with the so-called "sweating system" brought out by THE LANCET Commission can be substantiated as facts, a terribly hideous and degrading state of things exists among those unfortunate creatures compelled by the irony of fate to dwell and work in the slums of our great towns. Their life is little removed from the process of wallowing in dirt, and abiding in squalor and poverty of the most appalling description. They are surrounded by every circumstance of human existence calculated to debase the mind and destroy the body. Is it

possible to conceive any state of life more conducive to loss of health and dwarfing of physical development? These poor creatures appear to have no qualifying or redeeming feature in their every-day routine of life. Breathing in their insanitary homes the wreaking fumes of unhealthy surroundings, an atmosphere vitiated to the last degree of respiratory fitness, to which is added unwholesome food and consequent faulty assimilation, the aggregation must inevitably result in depraved constitutional integrity. Nor is there the faintest silver lining to this dark social cloud. These people have not the relieving benefit of sleeping in pure air after a day of hard work of twelve or fourteen hours' duration in the disease-laden atmosphere of insanitary workshops, but are subjected by day and by night to conditions as far removed from the sources of health as the poles are asunder. Their daily occupations and mode of life in the workshop are bad, and their homes also are bad. It is to be hoped the utter desolation of their lives thus brought to light by THE LANCET will stir up the public mind to such a degree as to insist upon an immediate amelioration of their unhappy condition, and that both homes and workshops will be made more fit for human existence than exists at present. A grave responsibility rests upon the Government of this country in both these respects, and imperial legislation must no longer be delayed to render it impossible for local sanitary authorities to neglect a duty so manifestly necessary to put an end to this pernicious system, which is sapping the life blood and destroying the vital powers of so many town dwellers. The gratitude of every thinking man is due to THE LANCET for exposing the destructive agencies at work amongst the toiling classes, who are incapable themselves of doing anything to lessen the disabilities of life.

It may pertinently be asked, What is the remedy to hinder further degradation of racial power, and rescue the town dwellers from the agencies so powerfully operating upon their physical competency? I fully recognise the cogency of such a question, but I must at once admit my inability to suggest a satisfactory answer. It may to some extent be found in adopting legislative measures. No doubt sanitary reform is doing an excellent work. Insanitary surroundings, overcrowding, uncleanness, impurity, and intemperance must all be done away with or lessened. Educate the children in the pure air of the country, make the parents aware of the great constitutional value of sobriety and morality, give them all pure air and plenty of it, and away fly the pale faces, cachexia, lowered vitality, stunted development, muscular attenuation, and the imperfect elimination of functional products.

I observe the Anthropometric Committee has instituted an inquiry as to the influence of occupation on the physical development and conformation of the body, and Manchester has been selected as the best place to carry out the research, chiefly because its racial elements are pretty uniform, and it possesses a great diversity of industries. Such an inquiry will necessarily embrace a variety of facts as to health, fitness of occupation, relative injury sustained as to arrest of physical development and other constitutional characteristics of town dwellers. If well organised and well carried out, such an inquiry will define and determine many points hitherto shrouded in obscurity, and it is obvious that an extensive investigation of this kind will lead to satisfactory results. The purely physical side of human nature demands our attention. The instinctive rush of the poorer people into the towns in quest of means to live has greatly helped to complicate the problem of relief. Hardships of various kinds tend to accentuate their wretchedness, and they seek solace too often in the unhealthy pursuit of unrighteous habits. The problem of physical degeneracy has to be reckoned with if the English race in our large towns is to retain a fair standard of physical integrity.

Southport.

ON SUTURE OF THE URETHRA IN CASES OF PERINEAL SECTION.

By A. MARMADUKE SHEILD, M.B. CANTAB., F.R.C.S.,
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I VENTURE to call the attention of surgeons who may perform the operation of external urethrotomy to the practice of uniting the urethral wound by means of catgut sutures. In cases of perineal section as commonly practised, no attempt at closing the perineal or urethral incision is

made. An indolent, deep, and suppurating wound results. At the bottom of this the introduced catheter is exposed, often for several weeks. Healing is protracted and unsound. It may truly be said that by the aid of the fine catheters and bougies of the present day "impassable" strictures should hardly be found in the practice of a skilled surgeon. During the past two years I have met with three cases of stricture which resisted the passage of instruments, though of varied size and form, and used with all observation of patience, gentleness, and perseverance. In these patients, men of over forty years of age, who had long suffered from stricture, the common conditions of perineal fibroid induration and great sensibility of the parts were observed. One of them had suffered for three months from sinus in the perineum. The operation was in all cases conducted after the fashion so well described and practised by Mr. Wheelhouse, the urethra being opened in front of the stricture. In the performance of urethral suture the following points were observed:—

1. The coverings of the urethra were divided by an incision of limited length, and the urethra was clearly defined and felt with the staff pressed against the face of the stricture.
2. The urethra was opened with a fine and very sharp knife, which did not push the fibrous tissue in front of it.
3. The stricture having been passed, incised, and a large gum instrument passed into the bladder, a series of catgut sutures were introduced through the margins of the cut urethra by means of a curved needle. They were placed close together, and, when tied, the catheter was quite concealed. The wound was now dusted with iodoform and the soft parts covering the urethra were united. This was effected by fine wire sutures deeply introduced. About one-third of the length of the incision was left open posteriorly to ensure drainage, and great care was taken that no pouch or pocket could be left in which discharge could accumulate.

The after-treatment to be carried out may be briefly indicated. The perineal wound must be kept clean, and supported with a pad of iodoform wool. The catheter should be retained *in situ* for a week, and the bladder washed out daily with warm boracic fluid. The silver sutures can be retained for fourteen days; they cause little irritation. The catheter should be worn for about a month, and frequently passed afterwards. In the three cases alluded to, union was speedy and complete. In only one of them did any urine leak through the wound. Twelve and eighteen months have elapsed in two of the cases since the performance of the operation, and the patients are able to micturate and pass large instruments with ease and comfort. I would venture to insist upon the importance of making the incisions with a very fine and sharp knife, and of checking all bleeding by sponge pressure, and clearly defining the urethra in a good light before opening it. I have been unable to discover any published account of urethral or perineal suture in the works or writings of English surgeons.

I am quite aware that the experience of these three cases is insufficient to establish the value of this proceeding. But I think I am justified in calling the attention of surgeons to it, and trust that it may receive a trial in appropriate cases. Strictures which call for external division are comparatively rare. It is only by combined experience that the value of any operative modification can be determined.

Stratford-place, W.

ON VENTRAL FIXATION OF THE UTERUS FOR INTRACTABLE PROLAPSE.

By JOHN PHILLIPS, B.A., M.B. CANTAB., M.R.C.P.,
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THE disease of which I propose to treat here is only too familiar to every practitioner, and its resistance to all varieties of treatment is equally well known. I wish to bring into more prominent notice an operation for its relief, which has been performed in Germany during the past two years more than once, and also in America, but of which, so far as I know, there is no published record in this country. Hitherto nearly all attempts to alleviate this most distressing condition have been directed towards the vagina by the performance of such operations as perineorrhaphy and elytrorrhaphy, the hope being that by constriction or complete closure of this passage the enlarged uterus might be kept in position. The futility of these

procedures is, I think, universally admitted; and when the Alexander-Adams operation was introduced, it was believed that at last a method had been conceived which, from its simplicity of technique and mathematical rectitude, would overcome this *bête noire* of gynaecology. Sufficient evidence has not been adduced at present for or against its value in this condition, and the case I propose to relate shows that at least in some instances the operation would be impossible, and probably in others quite futile as a remedy.

By ventral fixation of the uterus is meant the performance of abdominal section and the fixation of the uterus, either by sutures through its substance or through its appendages, to the anterior abdominal wall. Evidently this may be done in many ways: 1. By removal of the uterus and bringing the stump into the abdominal wound (hysterectomy). 2. Removal of both ovaries and appendages, and suturing one or both stumps into the abdominal wound. 3. Suturing the round ligaments as they pass obliquely from the uterus, and bringing the stitches out external to the median incision. 4. Passing stitches through the muscular tissue of the fundus (true hysterorrhaphy). 5. Removal of the appendages on one side only, and suturing the stump, not into the wound, but external to it, by making the stitches pierce the abdominal wall; adhesion between the stump and parietal peritoneum being the object to be attained. I shall criticise these various methods later on in the paper.

Case.—On March 12th, 1886, I was asked to see, in consultation with Mr. Reginald Clarke, a patient aged forty years, a nullipara, who had been married nineteen years. I found complete procidentia present, rectocele and cystocele. The mass protruded six inches and a half from the osium vaginæ, while the surface was extensively and deeply ulcerated, bleeding freely on manipulation, and was very tender. Her general condition was unfavourable. The skin was harsh and dry. Urine scanty; sp. gr. 1008; non-albuminous. The catamenia were irregular as regards time, and always scanty, the discharge lasting thirty-six hours, and being of light colour. There has never been any dysmenorrhœa. Palliative treatment had been tried for several months, in the shape of rest, tampons, and all varieties of pessaries. The tumour was easily reducible. The ulcerated surfaces were freely cauterised, and at the end of a month I was enabled to introduce a Cutter's pessary. This produced the desired effect for six weeks, when the patient's condition became as bad as formerly. After further rest and expectant treatment, without any beneficial result, I determined to try operative interference. On March 1st, 1887, I performed a modification of Braun's operation—namely, excision of an elliptical piece of mucous membrane from the front and back of the procident tumour. After bringing the edges together and reducing the curtailed mass, the best result was obtained, as the parts healed by primary union. A month later I operated upon the stretched perineum, baring the surface high up on the posterior wall and well forward on either labium majus. Good union resulted, and the vagina was now so contracted as barely to admit the examining finger. In six weeks' time the cervix was quite healthy, and the length of the uterine cavity two inches and a half. A ring pessary was inserted, and she remained quite comfortable until November, when, from straining at stool, she thinks, acute prolapse took place, and reduction could not be effected without anaesthesia. From this time the old condition of things recurred, the prolapse becoming as bad as ever and her suffering very great. To add to her troubles, copious and repeated hæmorrhages took place, which reduced her to such an extent that she spent more than six weeks in bed before complete hæmostasis could be obtained. On resuming the upright posture the hæmorrhage began again, and, as her mental condition was causing some apprehension, it was deemed advisable to resort to some more radical treatment. I negatived the Alexander-Adams operation because the patient was very stout, and, after trying the operation on the dead subject, I failed in two instances out of six attempts to find the ligaments; in addition, the prospect of permanent relief afforded by this mode of procedure did not seem good enough. On March 7th, 1888, after the usual preparatory treatment, I opened the abdomen by an incision of two inches and a half, intending to suture the round ligaments to the anterior abdominal wall. The uterus was forcibly pushed up into a position of extreme anteversion by an assistant per vaginam. Several coils of small intestine were found in front of the

fundus (a similar condition is reported by Sänger). Owing to the thickness of the abdominal walls it was difficult to get the uterus well into view; it was then found that the round ligaments were almost entirely atrophied, and that any attempt to utilise them as a means of suturing the uterus would be followed by failure. On examining the ovaries, I found the left quite healthy, but the right composed of several cysts, the mass being of the size of a Tangerine orange. This I regarded as fortunate. I removed the ovary and tube, leaving a thick pedicle, and then, by means of two silk-worm threads, sutured the stump to the anterior wall, being careful to pass them on the inner side of the epigastric artery. I closed the incision, and then drew the two stump ligatures tight, passing them over a piece of solid indiarubber cord, and fastening them by means of split shot and coils. The patient was kept on an inclined bed, the foot being six inches higher than the head, and the vagina plugged with cotton-wool pledgets, thus preserving the position of anteversion. The progress of the case was sufficiently simple. I drew the ligatures out on the twelfth day, and had the satisfaction of feeling the uterus slightly but firmly fixed, the fundus rotated towards the right and anteverted. No descent of the organ followed straining. I put in a ring pessary and allowed her to walk. Since that time she has been quite well, and a few days ago I examined her and found the condition of things unaltered. She suffers no pain, and has had no dysuria or hæmorrhage; she is, moreover, able to walk four miles a day without fatigue. Menstruation has been in abeyance since the operation.

Remarks.—(a) As to choice of operation. On referring to the five methods enumerated above, the first (hysterectomy) was quite unjustifiable, the patient being in the prime of life, and, although nulliparous, there was the possibility of maternity to be borne in mind. Moreover, the disease was not sufficiently serious to allow me to entertain the idea of such an operation for a moment. Neither could I bring myself to remove the healthy ovary, as it would have done away with all chance of child-bearing. The third was impossible for the reason already given above, and I am not aware that this clinical fact has been noted—viz., the concurrence of prolapse and atrophy of the round ligaments; was it cause and effect or merely a coincidence in this case? Hysterorrhaphy is said to be attended by some danger, but whether real or not I am unable to state. Howard Kelly certainly deprecates the proceeding, although Tait and others appear to have performed it with impunity. By a process of exclusion, then, I have shown my reasons for choosing the method I did, and so far the result has justified the means. Should pregnancy follow, the behaviour of the adherent stump under the new condition will be watched with much interest. (b) Technique of the operation. There appear to be no more dangers than ordinarily occur in abdominal sections. The uterus must be well pushed up and anteverted by an assistant per vaginam, and the intestines kept out of the way by another. The points for passage of the transfixing sutures must be placed about an inch outside the central incision and nearer the pubes than the umbilicus; the epigastric artery must be made out before the suture is passed.

The after-treatment of these cases is most important. The inclined bed should be always used, and a pessary inserted before the patient is allowed to get up, as the newly formed adhesion is sure otherwise to stretch and the prolapse recur. Suturing without removal of the ovaries is the most justifiable of all these operations, and more than one case of success is on record; it was only, in my case, because of the ovarian disease that I was enabled to make use of the stump as already described. Olshausen's case was much like mine as regards the antecedent history. He had tried everything fruitlessly, and then he stitched the base of the broad ligaments and the round ligaments to the anterior wall; the operation, however, failed. He is very decided in his opinion as to the limitation of this method. He thinks that only in very isolated and otherwise hopeless cases (*trostlos*) of adherent retroflexio and prolapsus uteri should the operation be performed. With this opinion I think all who look upon the matter from an unbiased point of view will cordially agree.

The bibliography relating to this subject is of recent date and very scanty; I have, however, appended those of value:—1. Olshausen: "Ueber ventrale Operation bei prolapsus und retroversio Uteri" (*Centralbl. für Gynäk.*, 1886, Bd. x., s. 698). 2. Sänger: "Ueber operative Behandlung

der. retroversio-flexio Uteri, &c." (*Centralbl. für Gynäk.*, 1888, Bd. xii., s. 17, 34, and 102, with figures; and 1885, Bd. ix., s. 664). 3. Howard Kelly: "Hysterorrhaphy," with figures (*Amer. Journ. Obstet.*, 1887, vol. xx., p. 33). 4. Klotz: *Centralbl. für Gynäk.*, 1888, Bd. xii., s. 11, 69. 5. Leopold: "Ueber die Annäherung der retroflectiren Gebärmutter an der vorderen Bauchwand" (*Centralbl. für Gynäk.*, 1888, Bd. xii., s. 161).

A CASE OF

ACUTE DELIRIOUS MANIA COMPLICATED
WITH STRANGULATED HERNIA AND
WITH ABNORMAL TEMPERATURES.

By FREDERICK BRYAN, M.B.,

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G. L—, aged sixty-five, labourer, was admitted to Colney Hatch Asylum on Nov. 10th, 1887, when the following notes were made. The patient is a tall, well-developed man, somewhat feeble and shaky, but able to stand. Heart and lungs healthy. He has very rigid and tortuous arteries. He has a right inguinal hernia, which is somewhat hard. There is no impulse on coughing. Owing to his mental state, no history of any kind can be obtained from him. Mentally, he is in a state of acute delirious mania. He is incoherent, and shouts out loudly; he pays no attention to questions whatever. Tongue clean. Pulse full and strong. Pupils equal, and react normally. Knee reflexes are normal and equal. He was sent to bed.

Nov. 11th.—Reported very restless and noisy during the night. Has been wet, but had no action of the bowels. An attempt to reduce the hernia failed. Evening temperature 97°. Ordered twenty grains of chloral hydrate.

12th.—This morning at 11 o'clock, fifty-seven hours after admission, after some slight hiccoughing, he vomited once; the vomit was distinctly fecal. Pulse good; tongue clean. One hour afterwards he underwent the usual operation for strangulated hernia, the taxis having failed. No difficulty was experienced during the operation. The sac was not opened. Immediately on his return to bed, he passed a very copious loose motion. A morphia suppository (one-third of a grain) was administered. Evening temperature 99°.

13th.—Morning temperature 99°; evening 100°. Very restless and maniacal during the night. He had removed part of the dressings. Wound dressed. Pulse good. Tongue clean. Has had some milk and beef-tea.

14th.—Still very maniacal and restless. Wet and dirty during the night. Some urine was caught and examined: sp. gr. 1025; acid; no albumen; high-coloured. Evening temperature 99°. Ordered twenty grains of chloral hydrate.

15th.—Temperature normal to-day. Wound dressed. Owing to his restlessness the stitches had given way, and the edges were brought together with strapping. It looks healthy.

16th.—Wet and dirty during the night. Wound dressed; healing from the bottom. Takes his food well. Very restless and maniacal. Is tied in bed. Temperature normal. (No further interest was attached to his hernia; it gave rise to no adverse symptoms, and was practically well at the date of his death.)

17th.—There is no change in his maniacal symptoms. There is little loss of strength. He takes his food well, but it is noticed that there is a little difficulty in swallowing. From to-day his temperature runs rather a remarkable course, as seen by the following table:—

	A.M.	P.M.
Nov. 17th	—	97.6°
" 18th	96.0°	97.6°
" 19th	97.0°	97.1°
" 20th	97.0°	96.1°
" 21st	95.6°	97.3°
" 22nd	98.0°	98.2°

On the morning of the 23rd he was reported to have been seized with a fit of trembling, and apparently to have lost power in his left leg. One hour later, when examined, he had distinct loss of expression on the right side of his face.

There was then no other paralysis. His pupils were equal and reacted to light. His knee reflexes were exaggerated, and the stimulus used to demonstrate this produced spasm in the thigh muscles. Well-marked ankle clonus. There was some hyperæsthesia in both legs below the knee. The difficulty in swallowing had increased. Temperature: morning, 102°; evening, 98.2°. The subsequent temperatures were as follows:—

	A.M.	P.M.
Nov. 24th	100.2°	100.6°
" 25th	102.0°	101.6°
" 26th	101.0°	101.6°
" 27th	101.0°	101.4°
" 28th	101.7°	102.0°
" 29th	101.6°	102.0° at 7 P.M.

After this his temperature was taken every quarter of an hour. It rose gradually from 106° to its maximum of 108°, when death ensued. Half an hour after death the temperature was 104°, and then slowly fell. During the last twelve hours the patient had been in a state of stupor. His pulse was full and strong. He breathed rather laboriously. His eyes were closed, but when opened the conjunctivæ were sensitive to touch, and the pupils reacted to light.

Shortly before his death some friends visited him and gave the following history. From boyhood the patient was noticed to have been somewhat stupid and eccentric, but he had always been well employed. At times he had drunk hard. About five months ago they had noticed him become very strange, and he did odd things and was restless. Particularly they noticed that he became wet and dirty. A month before admission he was suddenly dismissed from his situation, and after a short period of depression became maniacal and was removed to the parish infirmary. As far as his friends knew, there was no family history of insanity.

Necropsy.—In the right inguinal region there was a superficial granulating wound, the remains of the wound made in relieving his strangulated hernia. There was no other sign of external injury or disease. Lungs hypostatically congested, otherwise normal. Heart somewhat enlarged, due to some general dilatation; valves healthy; aorta very atheromatous. Abdominal organs healthy. There was no sign of peritonitis. Although carefully looked for, the seat of the strangulation of the gut could not be found. On examination of the head the calvaria was found to be normal; the dura mater was also normal. On removal of the brain a small quantity of fluid escaped. The arteries at the base of the brain were rigid and atheromatous. The pia mater at the base of the brain was little changed. That on its upper surface was gelatinous in appearance and much thickened. There were no adhesions between it and the cortex, but it peeled off as if gummed to the cortex. It was removed nearly as a whole, and when held up to the light was opaque and crowded with large vessels. The gelatinous appearance of the pia mater was apparently partly caused by the presence of serous fluid in its meshes. It was tough, and its thickness many times that of normal. The cortex was somewhat greasy to the finger. No other sign of disease was discovered in the brain. The ventricles were of normal capacity, and contained no fluid. There was no sign of any hemorrhages or softening. The cord was removed and examined. Its membranes were healthy, and there was no sign of disease to the naked eye on section.

Remarks.—Surgically, this case is interesting from the scarcity of symptoms pointing to strangulation. Although it appeared that there was no impulse in the hernia on coughing, still this was somewhat uncertain owing to the difficulty of making the patient cough well. Practically, the only symptom was the vomiting; and this occurred only once, and was fecal, fifty-six hours after admission. This abeyance of symptoms is met with in lunacy practice, often to a very great degree; and the writer knows of at least one other case in which there were no symptoms produced by a strangulated hernia. Medically, the case was looked upon as an acute attack, superimposed upon a chronic disease of the membranes of the brain. In nearly all cases of acute delirious mania a sudden shock is the assigned cause; in this case the patient's sudden dismissal from his situation appears to have been the exciting cause of his acute delirium. The abnormal temperature was very interesting. Abnormally high temperatures, and, (?) less frequently, abnormally low temperatures, are fairly common in the insane, but as far as I know the combination is unusual. Whilst watching the progress of this case it

occurred to me that it would be very instructive to endeavour to explain the possible cause of the abnormal temperature. The usual explanation of elevation of temperature is, to put it shortly, increased tissue metabolism, and the cause of low temperature exactly the reverse. In this case, however, it appears to me that this explanation does not hold good, as the condition of the patient—viz., that of exaggerated restlessness and delirium—was the same during the period of low as during the period of high temperature, at any rate as far as the elevation to 104°. The possible explanation appeared to be that the so-called "heat-regulating" centre in the cortex had been directly interfered with by the disease of its membranes, and this case seems at least to suggest some corroboration of the presence of this cortical centre. That the thickened, gelatinous membranes must have affected the functions of the subjacent cortex cannot, I think, be doubted; and the fact of the facial paralysis and the evanescent limb paralysis—a common feature in general paralysis of the insane, in which the naked-eye appearances of the membranes are exactly as in this case—I think corroborates this.

For permission to publish this case I am indebted to Dr. Seward, medical superintendent of the male department. Colney Hatch.

PERFORATION DURING ENTERIC FEVER; RELAPSE; RECOVERY.

By RICHARD LAKE, L.R.C.P. LOND., &c.

ON March 28th last I was called in to see a young lady, aged nineteen, suffering from sickness and diarrhoea. She gave the following account of herself. Twenty-five days previously she was seized with vomiting and diarrhoea during the night; the latter continued until four days before the above date, when she complained of more malaise than hitherto, and was given a saline purge. All her previous troubles now became exaggerated, and troublesome vomiting set in.

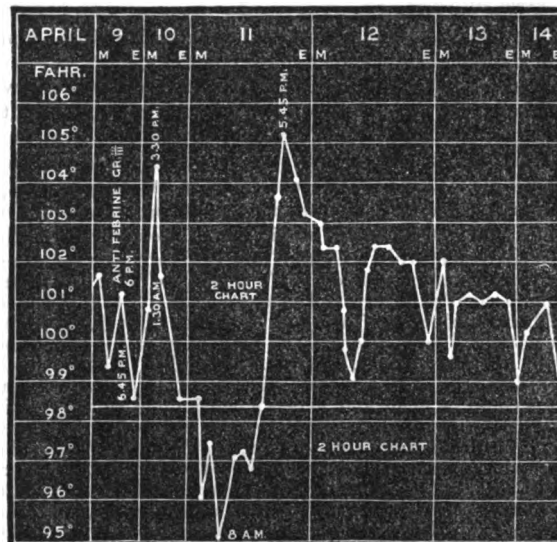
On examination her abdomen was slightly distended and tumid. Pain was present in the right iliac fossa, also gurgling. No spots were found. The vomit was clear and of a bright-green colour. The stools were of a yellow pea-soupy consistence, with some floating flakes of mucus; fifteen stools during the last twenty-four hours. Temperature 103°; pulse 100. Tongue red in centre; edges covered with a thick white fur; dry, but not cracked.

March 29th.—Bowels acted thirteen times during the day. Less vomiting. Liver dulness increased, with marked tenderness over the whole organ. Ice given to suck.

30th.—No vomiting until 5 P.M. One-third of a grain of morphia was given thrice in six hours to check the diarrhoea.

The temperature from the 28th for five days fluctuated between 103° and 101° F., being only slightly influenced by antifebrin. The symptoms scarcely varied at all, excepting that the diarrhoea was checked by the three doses of morphia. During the next five days defervescence took place, the morning fall approaching or reaching normal, and the evening rise only once reaching 101°. During the four following days the chart was about this level, the temperature rising once to 102.5°; this was due to constipation, as the temperature fell immediately the bowels acted. (See chart.) On the night of April 9th pain was complained of in the abdomen, but was not severe, and was treated as colic by hot fomentations. As the pain continued and became more severe, the temperature rising, the patient at the same time getting an anxious expression, the abdomen was subjected to another examination, with the result of the discovery of a tender spot midway between the eighth right costal cartilage and the umbilicus. The hot fomentations were reapplied and nourishment given, chiefly brandy and raw beef juice. At mid-day on the 10th, the fall of temperature was so sudden, and symptoms of collapse so rapidly followed, the face becoming blanched, the tongue dry, and the pulse frequent and small, that perforation of the intestine was diagnosed, which belief was strengthened by the persistence of tenderness in the right hypochondrium, together with some ill-defined dulness there, with sharp shooting pain in the abdomen. Hot bottles were used to pack the patient in, and the following measures taken to endeavour to prolong life. The

patient was kept in the dorsal decubitus, with flexed legs and thighs, together with the application of hot fomentations to the abdomen. Of this period a chart is given, continued until all signs of inflammatory action had ceased—i.e., on April 14th. An ounce of brandy, with an ounce of raw beef juice, were given in the form of an enema every hour; also five minims of tincture of opium every hour by the mouth for the time the patient remained awake, and then every two hours until the 12th; subsequently every four hours until the 14th, when it was discontinued entirely, and food again administered by the mouth. With regard to the general and local symptoms after the morning of the 11th, green vomiting was again present, but was checked by sucking ice. The dulness in the right hypochondrium extended until it occupied an area of about four inches in diameter, forming a fairly well-defined



tumour, very painful on palpation; this began to contract on the 14th, was almost imperceptible on the 28th, and was entirely absent by the 10th of May. The pain was at all times the same, sharp and lancinating, and often accompanied by vomiting. The bowels were only moved by glycerine enemata, and there was much chalky matter in the motions. The breath was exceedingly offensive, and had a strong faecal odour. From the 14th to the 18th the temperature remained subnormal, with evening rises above the normal. On the latter day a relapse commenced, the temperature reaching 102.6° on the evening of the 22nd, falling to the normal by the 27th. There was one rise on the 26th up to 104.2°, with vomiting; this was explained by the bowels not having acted, as on the 7th. The patient has lately returned to Scotland, and is quite well to all appearances.

Remarks.—Any doubt remaining as to this case being enteric fever is removed by the following facts. 1. The patient contracted the illness in a district where enteric was prevalent. 2. The main and house drains were very defective, the former blocked, as I learn from the medical officer of health for the town. 3. Several other pupils from the same house had the disease; the date of invasion being in all cases the same, and three deaths occurring, one of those first mentioned being under my care suffering from enteric. 4. Nurse Scarmen, to whose skilful care the successful issue of the case was largely due, contracted enteric, and was treated at the Victoria Nursing Home, from which institution she came. The chief interest of the case lies in the period expressed on the chart—i.e., from April 9th to the 14th. It is obvious that some severe lesion had occurred on the evening of the 9th, as is shown by the sudden collapse and rapid rise of temperature which followed. Dr. Donald Hood has recorded several cases of venous thrombosis in the course of enteric fever, which have suggested perforation by their course and symptoms; but though collapse may be present in these cases, neither is the fall so low as 95°, nor is the rise afterwards so high. It is known that perforation may occur in a portion of the intestine bound down by

lymph, the result of a localised peritonitis from the spread of inflammatory action from the ulcerated Peyer's patch, thus localising the mischief; and these are apparently the changes which took place here.

Barnes.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF DEFICIENT OESOPHAGUS.

By CHARLES STEELE, M.D., F.R.C.S.

THE following case appears to me to be of interest from both a surgical and an anatomical point of view.

I was lately asked to see in consultation an infant twenty-four hours old, who, shortly after being given nourishment, a little of which was taken readily, became very livid, had difficulty in breathing, and then returned the food and appeared no worse. The gentleman in attendance wisely introduced a sound, and found that it passed about five inches and encountered an impassable obstruction. He then asked me to see the child, and I repeated the sounding with the same conclusion. We diagnosed that there was either a membrane across the oesophagus, or that it ended in blind terminations; and I advised that through the night enemata of dessertspoonfuls of peptonised milk should be given every two hours, and that by daylight the stomach should be opened and the oesophagus explored; if a membrane could be made out across a continuous canal, that it should be perforated in order to give a hope of life; and that, if we found any distance existed between the extremities, we could do no more; the parents, however, might feel that every possible endeavour had been made to save their child's life. This was agreed upon, and the father willingly acceded. On the following afternoon I was asked to perform the operation. The infant took chloroform well. I opened the abdomen above the umbilicus in the middle line, exposed the stomach, and stitched it at four points to the skin, having some difficulty to keep the liver from protruding. The stomach was then opened, which was perfectly healthy, and of course empty. A bougie was passed down the oesophagus as before, and another upwards from the stomach for a short distance; but they did not approach each other by what we judged to be an inch and a half. I then cut a gum-elastic catheter in half, and passed it from below, introduced up it a long slender steel probe, and pressed it upwards as much as was justifiable, in case the lower part of the tube might be twisted or narrowed, and capable of being rendered pervious. All was of no avail, however; so the stomach wound was closed with sutures, also the abdominal wound, and we felt sure that the oesophagus was deficient for about an inch and a half. The infant slept for some time, and died twenty-four hours afterwards. The next afternoon we made an examination, and found that the oesophagus terminated above and below in blind rounded ends an inch and a half apart, and there was no cord or connexion between the parts. All the wounded portions were quite healthy, and the appearances led to the conclusion that had there been only a membranous occlusion a happy result might well have been hoped for.

SUPPURATING HYDATID CYST OF THE LIVER PERFORATING THE LUNG; RECOVERY.

By FRANCIS W. JOSHUA,
SURGEON TO THE GREAT MALVERN DISPENSARY.

MISS A. S—, aged fifty, of full habit, had in 1886 and 1887 several attacks of congestion of the liver and jaundice, but throughout December of the latter year felt perfectly well. On Jan. 6th, 1888, I was sent for, and found her in bed complaining of pain in the right shoulder and just below the right breast. Her countenance was anxious; temperature 101°; pulse 100; respiration hurried; no

jaundice; dorsal decubitus. The liver was two inches below the ribs (the percussion note dull as high as the fifth interspace); its contour was smooth and regular; no fluctuation could be detected. Gall-bladder distended; no tenderness on palpation. Three weeks later the liver was three inches below the ribs, somewhat tender to the touch, and quite firm. The temperature during this period was generally normal during the day, rising to 100° and 101° in the evening. The bowels were constipated, and the evacuations untinted by bile. On Jan. 30th an incessant dry hacking cough set in, lasting ten days, which was relieved occasionally by morphia. The patient was now very ill and weak; there had been no rigors. (On Feb. 9th she coughed up a pint and a half of pure pus. The following day a few hydatid cysts of small size appeared in the sputa. She complained of great sense of oppression and severe pain in the upper part of the chest, more especially on the left side. The lung and heart sounds were normal, and the chest was resonant throughout, save in the hepatic area, where there was absolute dullness and considerable bulging of the parietes. During the next few days hydatids in varying number were spat up daily, most of them larger in circumference than a crown piece; their emission was always accompanied by most distressing paroxysms of coughing and extreme dyspnoea. On Feb. 17th the patient was very hoarse. At 1.30 P.M. she took a little solid food. At 2.30 P.M. a sudden rush occurred from the mouth and nares of a thin fluid, hydatids, and blood-stained pus. I saw her a few minutes later, when she was apparently moribund, no pulse at wrists, gasping inspirations (four or five in the minute), extremities cold, face cyanosed, and completely unconscious. Two chamber utensils were shown me nearly full of blood-stained hydatids. I injected thirty minims of ether hypodermically, repeating the injections in a few minutes, with but slight result. Then, on the supposition that hæmorrhage had taken place into the cavity, I injected four grains of ergotine. The pulse returned gradually, but the cheeks and lips remained perfectly blanched. I therefore injected into the rectum an ounce of brandy and half an ounce of turpentine with yolk of egg. Consciousness returned, and she was shortly able to swallow a small quantity of brandy and milk. On each succeeding day a few hydatids and some sanious matter were coughed up, until March 2nd, when the cough became more violent, and she expectorated a pint of pus during the day. On the 7th she was jaundiced, and the temperature rose to 101°. On the 13th bile-stained hydatids were coughed up, and on the 14th a pint and a half of pure bile, which came up in varying quantities for a week, with one interval of two days. Then began an uninterrupted recovery, and on April 3rd she was able to bear removal to another room. At this time the patient was greatly emaciated. The hypodermic punctures had sloughed, and a bulla four inches in diameter over the left tibia left a corresponding ulcer. The liver gradually receded to the lower margin of the ribs.

Remarks.—The exceeding rarity of complete recovery in such cases renders the present one worthy, I think, of record. There was considerable difficulty in arriving at a correct early diagnosis, the (comparatively speaking) apparent smallness of the visceral enlargement, its firm and even outline, and absence of fluctuation leading one rather to the supposition that the case was one of malignant or amyloid disease.

Great Malvern.

ON THE SMOKING OF STRAMONIUM LEAVES, SIMULATING INSANITY.

By M. J. T. J. BLANCARD, SURG. M.A.

ON Aug. 30th, 1887, while on duty with a flying column at Leygi, Upper Burmah, I was called to see a man found unconscious near a well close to the outpost. The man was taken to hospital, and on examination the following symptoms were observed. Insensibility, with complete relaxation of voluntary and involuntary muscles. Pulse small and compressible. Surface of body cold and clammy. Pupils not reacting to light, but fixed in a dilated position. Deglutition normal. Sphincters relaxed; motions and urine passed. Reflexes absent. Breathing at first stertorous, but gradually becoming quicker, with intervals of sighing. When spoken to in a loud voice the man answered with a moan. Eyelids closed—not naturally, but as if done purposely. Head cool.

Liquid food introduced into the mouth was readily swallowed. This state of things was kept up for thirty-six hours, when the patient suddenly started up, and tried to escape. The two orderlies watching over him had to use considerable force in restraining him, the finger of one of them being severely bitten. Forty grains of bromide of potassium were with difficulty given, after which the man became quieter and fell asleep. When he awoke he was quite conscious, and was bewildered to find himself in a strange place. As I had observed a similar case some years ago, I, without preamble, asked him what he had been smoking. Taken aback, he blurted out the whole truth: that about a week ago he had smoked and chewed the leaves of the *Datura stramonium*, which grew profusely in the neighbourhood; that he had felt very sick; and that afterwards it was all a blank. To fill up the gap in his case, I waited for further information, and was told that the patient had been observed to be somewhat strange in his usual behaviour, laughing and crying without the least cause. He, however, suddenly disappeared, and was not heard of till his discovery as above narrated.

Ramsgate.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proemium.

ST. MARY'S HOSPITAL.

ACUTE INTESTINAL OBSTRUCTION; ABDOMINAL SECTION;
RECOVERY; REMARKS.¹

(Under the care of Mr. EDMUND OWEN.)

In addition to Mr. Owen's remarks, we may refer our readers to the discussion at the Medical Society on Monday last, which excited much interest. For the following report we are indebted to Mr. A. H. Bindloss, B.A.

On the evening of Monday, July 30th, Mr. Owen was called in consultation to the wife of a small shopkeeper, in her fiftieth year, who since the previous morning had been vomiting incessantly. On the evening of Saturday (28th) she had, according to her usual custom, taken some purgative medicine, and early in the morning of the Sunday had been seized with such severe abdominal pains that, on getting out of bed to pass a motion, she had fainted and fallen upon the floor. After this, vomiting set in, and continued throughout the whole of Sunday and Monday. When Mr. Owen saw her (on the Monday night) she was sick every ten minutes, and was complaining of great pain across the umbilical region, but she did not show much sign of collapse. On making a careful examination of the surface of the abdomen, a small irreducible femoral hernia was found upon the left side. It had existed for many years, and on this occasion was so quiet and free from tenderness that it appeared unlikely that it could be the cause of her present distress. It was agreed, however, to cut down upon it there and then, and that, if it were found of no material import, and if the symptoms persisted after the herniotomy, the patient should be sent into St. Mary's Hospital next morning for abdominal section, so serious an operation being quite impracticable in her own house. The hernia proved to be a mass of omentum, which, being somewhat adherent to the sac, was carefully separated and returned into the peritoneal cavity. Next morning the patient was no better; so Mr. Bligh Wall, under whose care she was, persuaded her to come into the hospital.

On Tuesday (31st), at 2 P.M., she was taken into the theatre, and, after a brief consultation, it was unanimously agreed to open the abdomen. Even at this time she did not show much collapse, but her abdomen was enlarged, tympanitic, and tender, and she was vomiting constantly.

Operation.—A five-inch incision was made in the linea alba, and on opening the peritoneum about half a pint of dark cherry-coloured serum escaped. The small intestine

was purple, and on lifting up some greatly distended coils a pale and collapsed piece was discovered, and a firm band of omentum was found compressing, and obliterating the lumen of, the bowel. A few inches distant up the dilated piece of intestine was a ring-like constriction, which had evidently been caused by a previous and long-continued pressure by the same band. There were no signs of recent strangulation at that constriction, however, and the conclusion drawn was that that piece of the bowel had become accustomed to the pressure of the omental band, but that a sudden slipping of the intestine—perhaps the result of the purgation—had brought a fresh piece within its grasp, which had promptly become strangulated. It may not improbably have been this old-standing compression that caused the woman to resort to the weekly purgation. The omental band was about one-eighth of an inch wide, and the piece of bowel across which it lay gave ample evidence of the urgency of the need for its division. The band being torn across by the fingers, the intestine was at once free. The piece of omentum which had been returned from the femoral sac was seen in the left inguinal region, and, as it looked swollen and ragged, it was ligatured and removed. The peritoneal cavity was not washed out; the abdominal wound was closed by silk sutures, which passed deeply through the serous lining and kept the sides of the peritoneal incision in accurate apposition. The dressings consisted of boracic acid powder and pads of wood-wool, under a binder.

After being put back to bed the patient had no more sickness, and on the following day a little milk was allowed with iced water, which she kept down; and on the second day after the operation she took small quantities of pap-tonised beef and milk. The temperature remained under 100° F. She was passing a good deal of flatus per anum. At the end of a week the bowels were relieved by an enema, and the wound was dressed for the first time. The femoral wound healed by first intention, as did also the abdominal wound, with the exception of the lower end, from which there was a good deal of discharge for some days during the second week. Towards the end of September the woman left the hospital, well, and rapidly regaining her strength.

Remarks by Mr. OWEN.—The coexistence of the irreducible femoral hernia with the internal strangulation is an interesting rather than an important feature of the case. The absence of local tenderness about the hernia could not be taken as evidence that the acute symptoms were not dependent upon it; the only thing to be done was to cut down and explore. Had the patient's surroundings been more favourable, the abdomen would probably have been opened as soon as the hernial wound had been explored. As it was, there was a delay of sixteen hours before the laparotomy could be undertaken. This loss of time was much regretted, but it could not be avoided; on her coming into the hospital the operation was undertaken without a moment's delay. Certainly if it had not been done the woman must have died, for the rigid band was deeply embedded in the dark and swollen bowel, and ulceration must have occurred very shortly. This report affords further evidence of the value of early exploratory incision in the case of acute intestinal obstruction. Clinical experience gives almost daily testimony to the fact that a clean incision into the abdominal cavity is not in itself accompanied with much danger, though, of course, when a prolonged search has to be made behind dilated coils of intestine the outlook becomes more grave. One of the most distressing revelations of the post-mortem room is the demonstration of an acute internal strangulation, which, though suspecting it during life, the surgeon has not the opportunity of relieving; but more poignant still is the regret felt by the surgeon who, obtaining the tardy sanction to explore the abdomen, finds the strangled bowel damaged almost beyond the prospect of recovery.

GUYS HOSPITAL.

PROGRESSIVE CARIES OF THE TARSUS.—MULTIPLE
EXOSTOSES.

(Under the care of Mr. BRYANT.)

Caries of tarsus (left) and first metatarsal; incision and scraping; spread of disease; Pirogoff's amputation; recovery. (From notes by Mr. Carter and Mr. Perkins.)—E. R.—, aged three, was admitted on Dec. 12th, 1887, and discharged cured on April 29th, 1888. The family history

¹ Abstract of a case read before the Medical Society on Oct. 15th.

was good. The boy had whooping-cough twelve months previous to admission. At that time he had a fall. He complained of pain in the left foot next day. Three months after the accident a swelling was noticed on the dorsal surface of the left foot, which gradually increased in size, and at the end of the next three months it was as large as an egg. Poultices were used, without any good effect. Iodine was applied, and the swelling got a trifle smaller. The iodine treatment was continued, but the swelling had not decreased in size while under observation.

On admission, there was a swelling on the dorsal surface of the left foot, about the size of a pigeon's egg, situated over the three internal metatarsal and the three cuneiform bones, and reaching from about half an inch in front of the junction of the leg with the dorsum to within half an inch of the toes. The ankle joint was free. There was distinct fluctuation in the swelling. The part was not inflamed. Urine acid; no albumen or sugar.

Dec. 22nd.—Under chloroform an incision one inch long was made over the swelling, which was composed of pulpy granulation tissue; a little carious bone was scooped off the dorsal surface of the first metatarsal bone, close to the apex. Iodoform gauze dressings were put on, and a back splint with foot-piece applied.

31st.—Wound dressed; a good deal of discharge.

Jan. 7th, 1888.—Wound covered with granulations; still a good deal of discharge.

24th.—Wound not healing well; discharge less.

26th.—Under chloroform an incision about an inch long was made over the middle of the fifth metatarsal bone. About half an ounce of dark blood came out. Iodoform gauze dressings were applied, and a back splint with foot-piece again applied. Temperature this morning 100°.

27th.—Foot seems more comfortable. Temperature 98.4°.

31st.—Foot very tender; painful on pressure over the dorsal surface. Not much discharge. Leg is now swung in a cradle.

Feb. 6th.—Wounds have an unhealthy appearance; not much discharge. Foot tender on dorsal surface; not red.

15th.—Foot uniformly enlarged; prominent granulations project from the wound on the outer side of the foot, and the outer half of the dorsal surface looks red. The wound on the inner border is nearly healed.

21st.—Under chloroform the wound over the fifth metatarsal bone was enlarged backwards over the cuboid. Mr. Bryant put his finger in the wound and found the cuboid bone very much diseased, and the cartilage on the anterior facets shed. The greater part of the bone, which was very soft and carious, was scooped out; the cavity was washed out with iodine water, and the wound dressed with iodoform strips. An incision was also made into a small, soft fluctuating swelling on the inner border of the foot, just in front of the prominence of the heel, and about two drachms of pus and a little blood came out. No bone could be felt. Cavity washed out with iodine water; wound dressed with iodoform strips. Back splint with foot-piece applied. The following note was made by Mr. Burghard, surgical registrar: "Only a mere shell of the cuboid was left. The bone removed was soft and spongy in the extreme, and its meshes were filled with fatty granulation tissue. Cartilage was fairly healthy. Os calcis not affected."

27th.—Wound looks much better; very little discharge. Temperature about normal.

March 10th.—Very little discharge; foot very swollen and tender on pressure.

20th.—Under chloroform Pirogoff's amputation was performed. An incision was made from the lower extremity of the external malleolus to that of the internal; from the lower extremity of the internal malleolus an incision was carried across the dorsum of the foot to the lower extremity of the external; the ligaments of the ankle joint were then cut through, and the flap of integument taken off the posterior part of the os calcis; the extremity of the calcis or epiphysis was retained in the flap; the lower extremities of the tibia and fibula were then exposed and cut off with a saw, the vessels were twisted &c., silk sutures inserted, a drainage tube put in on the outer side, and the wound dressed. Ten minims of tincture of opium were administered at 6 P.M.

22nd.—The parts are in good apposition. Union making good progress; drainage tube removed.

26th.—Sutures removed; strapping applied.

April 23rd.—All the parts are completely united. The boy gets up; he can stand on the stump without pain.

29th.—Went out; to come up in a month's time.

Multiple exostoses, one on neck of fibula stretching the external popliteal nerve; removal of growth; recovery. (From notes by Mr. Tressider and Mr. Clowes.)—J. F.—, aged twelve, living at Plumstead, was admitted on Dec. 21st, 1887, and was discharged on March 15th, 1888. The family history was good. His present trouble commenced nine months before admission, when he fell and hurt his right knee (outer side). A week afterwards he noticed a hard and painful swelling there, which increased in size, and recently he noticed three smaller swellings in the region of the knee joint. These had been getting larger, and were painful. He could move his knee joint, but it was painful if moved much.

On admission, there was a hard swelling firmly attached to the bone over the outer side of the head of the right fibula; it was about an inch and a quarter in length, and painful on pressure. There was another round immovable swelling just below the inner tuberosity of the right tibia; two others, hard, immovable, and smaller, above the internal condyle of each femur; and one over and in front of the external malleolus on the left side. The following note is by Mr. Burghard: "The tumour over the head of the fibula is the largest, and at first gives quite the sensation of being a much expanded head of the fibula. Closer investigation proves it to have a lowly tuberculated surface, and the finger can be inserted beneath a small prominence on the anterior aspect of the head of the bone. All the other tumours are situated on or near the epiphysal lines. Those on the femur are rather spur-shaped, and project upwards in the direction of the adductor magnus tendon."

30th.—Patient has been kept in bed for the last day or two, the swelling on the outer side of the right leg has got smaller, harder, and less painful.

Jan. 3rd, 1888.—Under chloroform, Mr. Bryant made an incision two inches long over the upper end of the right fibula, the highest point corresponding to the insertion of the biceps. The skin and fascia were divided and the peroneal nerve exposed. This was carefully raised from the tumour, and an incision made down upon the bone. With a chisel and hammer the exostosis was removed in two pieces. A couple of gut sutures were put in, strapping applied, the wound dressed with iodoform gauze, and a long rectangular splint applied to leg and foot. The exostosis was found to consist of cancellous bone covered with cartilage. No bursa was found on its surface. The surface of the tumour exposed displayed a surface covered with several small tubercles, each of which was covered with hyaline cartilage. The tumour consisted of cancellous bone covered with a layer of hyaline cartilage one-eighth of an inch thick.

4th.—Patient sick; complains of pain in the knee; temperature 98°.

5th.—Wound looking well.

15th.—Wound looks well; no pain.

Feb. 5th.—He got up yesterday for the first time since the operation; leg looks well.

12th.—Wound washed with chloride of zinc lotion.

March 7th.—Wound granulating up; almost healed; no discharge.

15th.—Patient went out to-day. The wound seems larger, and there is a little extravasation of blood in a part of it. He does not seem very strong in himself. A good recovery, however, eventually took place.

BOLTON INFIRMARY.

CHRONIC GENERAL ARTERITIS; DEATH; NECROPSY;
REMARKS.

(Under the care of Mr. E. C. KINGSFORD.)

ANN M—, aged forty-five, was admitted on Feb. 16th, 1888, suffering from gangrene of the left foot. No history of anything wrong could be obtained anterior to nine weeks before admission, when the patient was said to have suffered from inflammation of the lungs and bronchitis; nor was there any history of syphilis or rheumatism. Four weeks later, on getting up one morning, she found the right foot extremely painful and colourless, and was unable to stand on it; the left foot was soon similarly affected, and in a few days both got well again. Three days before admission the left foot again became very painful, and was discoloured on the outer side. When first seen both feet were cold, and the left, together with the leg and thigh up to the groin, was extremely painful; the fourth and fifth toes and an inch or so of the foot posterior to them, were of a purplish-red

colour. No artery in either foot could be felt, and the pulse was scarcely perceptible at the wrist, and could only just be felt in the temporals. The heart's rate, as counted by sound, was something over 180 per minute, and there was no bruit. No pain existed anywhere except in the left leg and foot. The urine contained urates and a slight amount of albumen, and, on adding a strong solution of ammonia to it, phosphates were thrown down, and the fluid assumed a bright cherry-red colour (euro-erythrin?).

In order to relieve the heart, nitro-glycerine and strophanthus were administered every four hours, and after six doses the pulse was irregular and about 150 per minute. Next day it was reduced to 140 and was less irregular, and easily felt at the wrist, though not countable; and the following day its rate was 106. The foot became more dusky, and the fourth and fifth toes and a patch of skin over the tibia quite black and dry. During the following week the pulse varied from 100 to 120, and was more or less irregular, as, felt at the wrist, its rate did not agree with that of the heart sounds, some of the beats seeming to be dropped. The gangrene in the meantime slowly extended, pain being now confined to the foot, and there was no tactile sensation below the ankle.

Feb. 28th.—There is sudden pain all down the right leg, the patient being greatly frightened. Cough becoming troublesome; wheezy rhonchi heard at upper part of right chest; left upper part dull; vocal and tactile fremitus absent.

March 9th.—Urine contains one-fifth albumen; no reaction with ammonia. Some oedema of right leg; considerable congestion about perineum; diarrhoea and vomiting.

11th.—Complains of "curious numb feelings all over her." Pulse 88, regular.

13th.—Loss of appetite; sleeps very badly; seems very anxious about herself.

14th.—Becoming noisy and extremely irritable; wants very much to be helped to die easily.

15th.—Hands cold; breathing of a gasping character. Pulse very irregular; cannot now be felt even in the femorals. Complains of abdominal pain since she made an attempt to get out of bed early in the morning. She became gradually worse, and died at 4 A.M. on the 16th.

At the necropsy double pleurisy, with effusion, was found. The right lung was in places adherent to the parietes; the left was much compressed, and there was a large infarct in the anterior part of its upper lobe, and another in the lower. The heart weighed 14½ oz., the left ventricle being hypertrophied and the auricle dilated, with an ante-mortem clot filling its appendix. The right ventricle appeared normal, while its auricle was dilated and hypertrophied. The mitral valve was thickened, and the orifice would only admit one finger; the other valves appeared normal. No pericarditis, but a well-marked milk patch. A few atheromatous patches were scattered over the commencement of the aorta, but the arch was free. There was peritonitis, with sanious fluid and recent lymph; a good deal of the latter in Douglas's pouch. The intestines were congested and inflated, and the stomach appeared healthy. The liver weighed 50 oz., and was extremely fatty and fibrous; under its capsule posteriorly was a cavity of about four ounces in capacity, stuffed full of empty, breaking-down hydatid cysts, varying in size from a pin's head to a billiard ball. The spleen was hard, and weighed 9 oz.; and the kidneys were small and pale, one of them containing a large infarct, which was caseating in places. Both the common iliac arteries contained adherent blood clots, that in the right being more organised of the two; the right femoral was much attenuated with thickened walls and small lumen, and the left appeared thicker, but its lumen was only slightly greater than that of the right, and was blocked with an adherent clot. The brachial, radial, and tibial arteries were similarly thickened. Unfortunately the head was not examined.

Remarks by Mr. KINGSFORD.—This case, beyond the fact that it proved a veritable museum of pathology, is of special interest, in that chronic general arteritis is a rare disease, and, according to Wilks and Moxon, generally occurs in young and vigorous persons. These authorities, too, point out its coexistence with fibrous myocarditis in the left ventricle, and in the case before us there was extreme stenosis of the mitral orifice. It is worth noting that this lesion did not produce any murmur, for the heart was auscultated with care daily in order to count the pulse, and no bruit was at any time heard.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Injury to Elbow Joint.—Pulmonary Surgery.—Extensive Ankylosis of the Skeleton, with Diaphragmatic Breathing.—Peculiar Cutaneous Disease.

THE first ordinary meeting of the session of this Society was held on the 12th inst., Dr. W. H. Broadbent, F.R.C.P., President, in the chair.

Mr. T. W. NUNN read a case of Injury to the Elbow Joint involving the ulnar nerve. The patient, aged sixteen, while at school in France, fell in taking a leap, making it probable that the hand first came in contact with the ground. He was first seen two months after the accident, when it appeared that the radius was dislocated forwards. Attempt at reduction under an anæsthetic was unsuccessful, and at that time the arm could not be fully extended, and extension as far as it went was not in the normal line, but in a line bending inwards. The hand was *en griffe*, indicating paralysis of the ulnar nerve, of which some thickening could be felt above the elbow. There was loss of sensation in the little and ring fingers. After an interval of five years from the date of the accident (Nov. 1881), if the arm were kept flexed for any length of time, "pins-and-needles" would be felt in the two ulnar fingers, and on examination the head of the radius could be seen without question to rest on the front of the capitellum of the humerus, proving that dislocation had occurred simultaneously with the other injuries.—Mr. CHRISTOPHER HEATH observed that these cases were not only difficult to diagnose, but difficult to treat, because in young people the accidents were generally complicated, and the epiphysis of the lower end of the humerus snapped off. The proper treatment of doubtful cases was to flex the elbow, and lay the forearm obliquely across the chest so that the hand of the injured side touched the opposite shoulder.—Mr. BRYANT agreed that in doubtful cases, and in those which could not be reduced, the position advocated by Mr. Heath was the best one.—Mr. NUNN said in a recent case he should be inclined, in the case of a young child, to put the arm up perfectly straight, and trust to obtaining movement afterwards.

Dr. PASTEUR read a case of Pulmonary Gangrene treated by incision and drainage. The patient was a delicate-looking boy aged seven. His illness was insidious in the onset, but had developed rapidly. On the morning before admission to the North-Eastern Hospital for Children he coughed up a quantity of bright blood, and his mother noticed that his breath had become very offensive. On admission ten days after the onset, he was febrile, with thickly-coated tongue, quickened breathing, and gangrenous fetor of breath. Over the right upper lobe were impaired resonance, weak tubular breath sounds, and diminished voice conduction. During the next three weeks cavity signs developed at the right apex, and the remainder of the right lung became pneumonic. The temperature ranged between 100° and 103.6°. He spat up daily from two to four ounces of offensive watery fluid, mostly saliva. The boy was subsequently operated on by Mr. Pollard. The cavity was incised at the anterior extremity of the right second space, one inch from the sternum. Large quantities of gangrenous lung and putrid fluid were expelled through the wound. The cavity reached down to the sixth rib. A counter-opening was made in the sixth space, flanged tubes inserted, and a blue wool dressing applied. Next morning the child was much relieved, nearly free from cough, expectorating small quantities of frothy sputum almost free from odour, and practically free from pain, which had hitherto been a most distressing symptom. The cavity was washed out daily one or twice as occasion required. At the end of a week the washings deposited a copious sediment of pus. The improvement, however, was not maintained. The temperature, pulse, and respirations remained high, fetor of breath reappeared on the tenth day, and the patient sank rapidly three days later. A huge cavity occupied the anterior third of the right lung. It was lined for the most part with a thin layer of granulation tissue. At the inner margin the necrotic process had invaded the pericardium and set up acute pericarditis. The œsophagus was firmly adherent to the right bronchus, and a narrow sinus about three-quarters of an inch long

led from a minute valve-like opening in the œsophagus to a small ragged opening in one of the main divisions of the right bronchus. There were no signs of tubercle or of caseating or suppurating bronchial glands. The gangrene was undoubtedly due to the passage from the œsophagus into the lung of some irritative material (probably decomposing food stuffs) along the sinus above mentioned. Whether this sinus was the remains of a glandular abscess or was caused by the passage of some pointed foreign body from the œsophagus was doubtful. The limitation of the gangrene of the anterior region of the lung, and the implication of all three lobes in a single cavity, were worthy of notice. Pericarditis appeared to be a rare complication of pulmonary gangrene. The indications for surgical interference were sufficiently clear—viz., imperfect communication of the gangrenous area with the bronchi, failure of expectant treatment, and signs of a cavity in an accessible situation. The amount of repair which took place under unfavourable circumstances was very encouraging. An earlier operation might have saved the life of the patient.—Mr. GODLEE mentioned a case of gangrenous cavity at the apex of one lung, which was opened and drained; the pleura was not adherent, necessitating the sewing of the pulmonary to the costal pleura before the abscess was opened. The child died in two days, and then it was found that another gangrenous cavity existed in the opposite lung.—Dr. BROADBENT said he only saw in one case an attempt made to reach a gangrenous cavity in the base of the lung; but no relief followed.—Dr. BARLOW related a case of gangrenous mediastinal abscess involving the lung by extension, and into which a sinus lead from the gullet; probably the gangrene was secondary to perforation of the gullet by a foreign body. In cases of gangrene due to discharge of a bronchial abscess into a bronchus, the œsophagus has not been in communication with the abscess cavity.

Dr. ALEXANDER MORISON related a case of Extensive Ankylosis of the Skeleton, with Diaphragmatic Breathing. The patient was a male, aged forty-four, of neurotic and rheumatic family history, and himself rheumatic. His present condition seemed likewise to be related to an attack of gonorrhœa. The joints chiefly involved were both shoulders, both hips, all the ribs, and the vertebral column. The knees were almost but not quite stiff, the head was twisted to the left shoulder, he had talipes equinus of the right ankle, and some softening of the inferior maxilla and the auditory ossicles. Thoracic respiration was abolished, and its place taken by exaggerated abdominal breathing. The expiratory capacity of the chest was reduced to 96 cubic inches from a probable average of 156 cubic inches. The pectoral muscles were atrophic. The daily excretion of urea ranged from 210 to 276 grains per diem, and the patient had recently begun to deposit fat in excess. Dr. Morison remarked on the influence of prolonged rest in favouring ankylosis, on the relation of gonorrhœa to articular disorganisation, on the gradual substitution of abdominal for thoracic respiration, and on the defective metabolism as evidenced by the fat formation consequent thereon.—Dr. BROADBENT said he had seen two cases in which the fixation of the bony framework was as complete. Such cases seemed to show that diaphragmatic respiration was the more important of the two; when diaphragmatic respiration was lost the distress was much greater than when the respiration was carried on by the diaphragm alone. This was especially well marked when the diaphragm was flabby, and yielded to the atmospheric pressure.—Mr. GODLEE mentioned the case of a man who had a fracture of the spine, causing paralysis of the abdominal and inspiratory muscles. As the injury was below the origin of the phrenic nerve, diaphragmatic respiration still went on for some time. He was, however, unable to cough, except by compressing the sides of the chest with his hands, and ultimately the lungs became choked with mucus, and the man died. Mr. Godlee said it would be very interesting to know whether these cases of general ankylosis were always associated with gonorrhœal rheumatism. He had seen one case in an obviously rheumatic subject, who came to him in the first instance with chronic synovitis of the knee joint. Some years later the patient contracted gonorrhœa, and then one joint after another became fixed, until ultimately his hips, knees, and spine were quite ankylosed. He was still alive, and fairly comfortable.—Mr. JONATHAN HUTCHINSON said, with reference to the question as to the causation, that although the great

majority of cases of ankylosing rheumatism were consequent on gonorrhœa, yet there was a certain proportion of cases in which gonorrhœa had nothing to do with it. He expressed the opinion that gonorrhœal rheumatism occurred almost exclusively in those who had a strong inherited tendency to rheumatic gout. He had never seen a severe case in which there was not a clear and definite history of gout or rheumatism.—Dr. BARLOW mentioned the case of a man who had an attack of gonorrhœa followed by extensive ankylosis of a great many joints. Since that time he had seen four cases not quite as bad as the case brought before them by Dr. Morison, and of the four only one could be definitely connected with gonorrhœa. He had also seen the disease in two children, in one case following measles. He asked whether the man had been getting progressively shorter: also whether Dr. Morison had referred to a case in the Transactions about eight years ago by Dr. Allen Sturge, under the head of spondylitis.—Dr. PASTEUR observed that the case threw light on a case of his own of ankylosis in a child.—Dr. ANGEL MONEY had seen a case in a young girl, though not as bad as the case in question. In some of these cases it was very probable that the disease was the outcome of a peripheral neuritis. There was very rapid wasting of the muscles, with progressive muscular atrophy, glossy skin, and herpetic eruptions. He suggested that lead poisoning, as productive of gout and peripheral neuritis, might possess some influence in this direction.—Dr. MORISON, in reply, said that in the case quoted by Mr. Godlee there was no thoracic paralysis. He added that in a second case there was a distinct gouty history.

Dr. STEPHEN MACKENZIE read a case of Peculiar Skin Disease—possibly a form of Lupus. The patient, a woman, aged thirty-five, was under treatment for auditory vertigo when the disease first appeared, about six years ago. Since then she had had recurrences and subsidences, the former generally occurring in the autumn or winter. She had never had syphilis. The eruption had always been practically confined to the backs of the (upper) arms and the calves of the legs, but extended on the left arm below the elbow. In one attack spots occurred on the ears. The eruption consisted of nodules or tubercles and erythema, the former slowly disintegrating and leaving scars, so that the general appearance of the affected parts was an erythema interspersed with circular scars. There had been no pain, and only slight itching at the commencement of the attacks. Attention was directed to—1. The symmetry of the eruption. 2. Its anatomical characters. 3. That it destroys the skin, leaving scars. No precisely similar case was known to have been observed, and discussion was invited on its nature. The following diagnoses were discussed:—1. Dermatitis medicamentosa. 2. Syphilis. 3. Lupus, or an ally. Against a drug eruption, the identity of the eruption whilst the patient was taking a variety of medicines, and the fact that the disease had appeared when the patient had not taken any drugs for weeks or months, were held to be conclusive. Against syphilis, besides the negative history, the symmetry and recurrence taken together were held to be strongly antagonistic, and that the eruption had subsided without anti-syphilitic treatment being employed. With regard to lupus, it was pointed out that the age of the patient, the symmetry of the disease, the absence of ulceration, and the subsidences were against lupus vulgaris; whilst the age, symmetry, and erythema were in favour of lupus erythematosus. On the other hand, the nodules or tubercles, the absence of scales, and the occurrence of the eruption on covered parts of the skin were different to what was usually observed in lupus erythematosus. It was thus clear that the disease conformed to the type of neither lupus vulgaris nor erythematosus, though it resembled the latter in several respects. The author concluded that, though not definitely lupus, he regarded the disease as belonging to the lupus family.—Mr. JONATHAN HUTCHINSON observed that it was a very interesting and a very peculiar case. He had had several cases very, if not quite, like the case related by Dr. Mackenzie, and had mentioned two such in his book on syphilis in neither of which could he ever establish his diagnosis of syphilis. It occurred in two married ladies of respectable position in society. The symptoms did not yield to mercurial treatment as rapidly as syphilitic manifestations generally did. He had seen some other cases less well marked. He added that the eruption lacked the *verrucciform* character which was held to be characteristic of lupus; moreover, lupus was very rarely symmetrical.

PATHOLOGICAL SOCIETY OF LONDON.

Syphilitic Disease of the Knee Joint.—Blood Calculi in Ovaries.—Fetal Ovarian Tumours.—Encysted Vesical Calculus.—Varicocele, a Spontaneous Variation in the Spermatic Veins.

The first ordinary meeting of this Society for the present session was held on Oct. 16th, Sir James Paget, F.R.S., President, in the chair.

Mr. JONATHAN HUTCHINSON, jun., showed a specimen of Syphilitic Disease of the Knee Joint as illustrating a form of specific joint disease not, perhaps, previously recognised in this country. The right knee was the only joint affected, and it was obtained from the body of a sailor, aged twenty-three, who died of syphilitic stricture of the rectum and chronic nephritis. The patella was much thickened and had left its normal groove on the femur to articulate with a ridge on the outer side of the external condyle, in which the cartilage was greatly hypertrophied. The internal condyle of the femur had lost its cartilage and was adherent to the internal tuberosity of the tibia by firm fibrous bands, in which was merged the internal semilunar cartilage. The external tuberosity of the tibia was roughened on its cartilaginous surface. In the centre of the ligamentum mucosum was a leathery gummatous mass, which the microscope showed to consist of ill-defined cells and fibrous tissue. There were no nodes about the bones and the synovial membrane and ligaments were practically healthy, the chief seat of the disease being in the cartilaginous surfaces of the joints. Unlike chronic rheumatic arthritis, there was no eburnation, although at parts there were grooves in the cartilage, especially one deep one between the facettes for the patella and external tuberosity of the tibia. The changes appeared to be similar to those described by Professor Virchow as due to syphilis, in so far as their chief seat lay in the cartilage (see *Berlin. klinische Wochenschrift*, August 18th, 1884), and to differ from the more common cases of tertiary syphilitic joint disease, in which periosteal nodes or peri-articular gummata were the chief features. Both kidneys were greatly enlarged, weighing together no less than thirty-five ounces, were firm in consistence, pink in colour, mottled with whiter patches, but no isolated gummata were found. Sections showed interstitial cellular exudation, obliteration of many of the Malpighian bodies, and comparatively slight involvement of the tubes. Most probably it was a form of diffuse syphilitic disease. The rectum revealed a fibrous stricture, with extensive ulceration round it. The patient was a Swede, and no clear history of primary disease could be obtained from him; he exhibited no signs of inherited syphilis.—Mr. ROGER WILLIAMS saw some time ago a knee joint which was suspected to contain a foreign body; this proved on opening to be a thickened synovial fringe, and the thickening under the microscope was seen to be gummatous infiltration.—Mr. W. ADAMS had not seen gummata within a joint, though he had frequently observed joint disease following primary periosteal inflammation; this caused great enlargement of the bone, and rendered the case difficult to diagnose from sarcoma.—Dr. QUAIN inquired if the urine had been examined.—Mr. HUTCHINSON could not state positively as to the urine. He pointed out the difference between periosteal nodes and gummata and those occurring within the joint.

Dr. H. W. G. MACKENZIE exhibited a specimen of Concretions in the Ovaries from a woman aged forty-one, who had suffered from menorrhagia for two years, and had a large fibro-myoma of the uterus. She had disease of the mitral valve and fatty degeneration of the liver. The uterus was uniformly distended by the tumour, which was a globular mass about four inches in diameter growing inwards from the uterine wall on the left. The uterine walls were themselves hypertrophied. The ovaries, which were enlarged, contained a large number of black, hard, flat concretions of sizes varying from a coriander seed to a bean, of irregular shape, smooth, firm, and hard, although they could be cut with a knife. The concretions were in cavities, two or three together. Microscopic examination of a thin section showed absence of structure. The concretions were exceedingly insoluble in acid and alkaline solutions, and were only slowly dissolved by digestion in the gastric juice. They probably consisted of coagulated proteids, and were akin to the colloid concretions found in the prostate and in

old hæmorrhages. The specimen was a very uncommon one, perhaps unique. The enlargement of the organs was probably due to chronic congestion, the consequence of the large uterine growth. The concretions, it was suggested, were derived from hæmorrhages into Graafian follicles, the effused blood having undergone a rare colloid change.—Mr. ALBAN DORAN referred to a paper by Patenko in Virchow's *Archiv on Corpora Fibrosa of the Ovaries*, in which he discussed the pathology of ovarian clots. He himself had often seen hæmorrhage into ovarian fibromata, but he had never before noticed calculi.

Mr. ALBAN DORAN then exhibited a pair of Ovarian Tumours, removed after death from an infant (a seven months' child) which survived its birth but a few minutes. Mr. C. Hooper of Aylesbury, who attended the case, reported that the infant's abdomen was distended with ascitic fluid and the superficial veins were engorged, as in malignant tumours of the ovary in the adult. Each tumour looked like a cystic kidney when fresh, and consisted of a single cystic cavity surrounded by a thin wall composed of a highly reticulated tissue. The trabeculae which traversed this tissue in all directions were composed of collections of round cells in a transparent matrix, an arrangement recalling the structure of the inter-follicular tissue of the ovary in an earlier stage of fetal life than that which this patient had attained. The growth appeared to represent persistence and hyperplasia of the entire embryonic tissue of the parenchyma of the ovary rather than round-celled sarcoma, which, even when congenital, was in every respect of a different character, as proved by a recent case described by Dr. John Phillips. Graafian follicles were found in the substance of the tumour, which therefore originated in the ovarian parenchyma, and not in the hilum, but the tumour was clearly of extra-follicular origin. The cavities and the large central cyst appeared to be the result of breaking-down of the tumour substance; they bore no epithelial lining. The tumours thus bore no resemblance to the common multilocular ovarian cyst. The larger of the pair had been presented by Mr. Thornton to the Museum of the College of Surgeons.—Mr. J. B. SUTTON referred to the fact that in many amphibians the ovaries contained a central cavity surrounded by ova, but he knew of no instance of this kind in mammals.

Mr. BRUCE CLARKE brought forward a case of Encysted Vesical Calculus. The man, fifty-five years of age, from whom the bladder was removed, had been twice operated on for stone, once for one in the urethra and once for a vesical calculus. On a third and last occasion the bladder was explored, but no calculus could be detected, only some phosphatic material in the urethra being found. At the post-mortem examination a sacculus was discovered containing a calculus, and communicating with the bladder by a very minute aperture, which barely admitted a probe. The stone had almost ulcerated through into the peritoneum. He considered its position too far from the prostate to have originated there, and regarded it rather as a small vesical calculus which had slipped into a sacculus, and then had afterwards, by gradual additions, grown to its present size.—Mr. ROGER WILLIAMS held that if the stone had been chiefly formed in the sacculus, it would have an irregularly laminated structure, owing to the additions to it taking place on one side only.

Mr. W. G. SPENCER read a paper entitled "Varicocele, a Spontaneous Variation in the Spermatic Veins." The author showed a number of transverse sections at various levels which had been made of the spermatic cord at all ages. Three chief points were illustrated: (a) the large number of veins of all sizes present in the spermatic cord at all ages, (b) the number and size of the veins were greater on the left side than on the right, and (c) the presence on the right side especially of very minute veins, and of other veins in which the lumen was imperceptible, and amongst these were groups of cells arranged in a concentric manner as if representing obliterated veins. With regard to a, the spermatic veins were at first the veins of the Wolffian body, a very vascular organ. Statistics and clinical experience showed that every variety existed between veins that could be just felt and the largest varicocele. Examination of the whole French male population was made for the army, and of those about 32 per 1000 required treatment for varicocele before entrance, while a very large number were admitted without treatment, because the presence of varicocele was not inconsistent in them with active service; some statistics gave varicoceles in

60 per cent. of all those examined. Varicoceles had been described in childhood, and many before puberty; these variations in the size and number of the spermatic veins were developmental in origin, and were hereditary in some cases, and thus comparable to other instances of "spontaneous variation." All the conditions called at present "causes of varicocele" were thus not really such; they merely kept filled with blood veins already present. A large number were anatomical in character, yet conditions which existed in all could not be the causes of disease only in some. Increased vascularity at puberty was natural, it could in no way cause disease, but it might tend to fill veins which were already present, and hence cause a varicocele to appear at puberty; anything increasing the blood supply to the testis, or obstructing its return, filled those veins. The position of the sigmoid flexure and the passage of feces were also natural conditions, and there were no recorded cases of varicocele due to the supposed collection of feces in the sigmoid flexure. Mr. Gould's theory of a true venous hypertrophy at puberty was not supported by any experimental evidence. Referring to *b*, it was interesting, with respect to the greater number of varicoceles on the left side, to note that the left kidney and testis were larger, and the latter was more advanced in its development than the right. This might have to do with the persistence of the left arch of the aorta in the embryo, whilst the right arch became obliterated; no vena cava was formed on the left side, but the left vein had to join the left renal and cross the vertebral column. The embryo was said to be constantly on its left side. With regard to *c* on the right side, the very minute veins and the groups of concentrically arranged cells appeared to take the place of many of the larger veins on the left side. In some sections from the left side the veins were not very much larger than on the corresponding right, and there were also seen the above conditions; but, where on the left side the veins were numerous and large, the appearance of very minute veins or of concentrically arranged cells was scarcely seen. This apparent obliteration of veins was seen in young specimens following the disappearance of the Wolffian body; an arrest in the retrograde process left many veins persistent, or, in other words, the spontaneous variation in the size of the spermatic veins was in inverse ratio to the amount of obliteration.—Mr. J. B. SUTTON referred to a paper he had published five years ago, advocating a similar theory. In monkeys varicocele was common, and was more frequent on the left side, whereas in them the rectum went down the centre of the pelvis. The development of varicocele about puberty was the result of an inherited tendency to a physiological congestion at that time which corresponded somewhat to the rutting season in animals.—Mr. RAYMOND JOHNSON referred to a case, recently in University College Hospital, of a man who exhibited signs of complete transposition of viscera, and who had a right varicocele.—Mr. J. HUTCHINSON, jun., did not think there was much difference in weight between the left testis and the right. Subperitoneal lipomata travelling down the inguinal canal were thrice as common on the left side as on the right, though no difference in size of the inguinal canal existed to explain it.—Mr. PEARCE GOULD said that the main point established was that varicocele was a dilatation of pre-existing veins, but it had not been shown why they became enlarged. Varicocele, together with varix of veins of the lower extremities, could often not be regarded as a pathological condition, nor even as a serious clinical matter.—Mr. BRUCE CLARKE gave the history of a varicocele which formed within five days after the patient had been thrown from a horse.—Mr. WILBERFORCE SMITH had seen varicocele often as part of a general venous enlargement.—Mr. SPENCER, in reply, held that spontaneous variations only, and not acquired ones, could be inherited.

The following card specimens were shown:—

Mr. RAYMOND JOHNSON (for Mr. Heath): Large Retroperitoneal Tumour.

Dr. H. W. G. MACKENZIE: Ulceration of Oesophagus in diphtheria.

Sir JAMES PAGET gave notice that the Council had decided to set aside Dec. 4th and 18th for the discussion of the Morbid Anatomy and Pathology of Chronic Alcoholism. The names of those desiring to exhibit specimens and take part in the debate would be received by Dr. Sidney Coupland, the medical secretary.

MEDICAL SOCIETY OF LONDON.

President's Address.—Laparotomy for Acute Intestinal Obstruction.—Mediastinal Abscess treated by Trephining.

THE first meeting of the Medical Society for the present session took place on Oct. 15th, the President, Sir William MacCormac, occupying the chair.

THE PRESIDENT congratulated the Society on its prosperity in the past and its promises for the future. The clinical evenings had become an increasingly important feature, a most valuable series of illustrative cases having been presented and discussed. The financial condition of the Society was excellent, the unexpected legacy of Dr. Alvarenga, a Spanish surgeon, amounting to £420, being a welcome addition to the funds. Sir William MacCormac then referred to the death of four Fellows during the past year—Mr. Teevan, Dr. Greenhalgh, Dr. Camps, and Mr. Hood; and proceeded to deliver an address on "The Old Surgery and the New." He often thought we were too apt in the preoccupation of the present to forget what a great amount of work was accomplished by our predecessors, and how completely in many instances they fashioned the pathway which had led to many of our modern achievements. Only to mention the honoured name of Celsus, we found several of the operations described by him were still performed, and he had recorded his experience, or rather, the experiences of his time, with a force and precision that never, probably, had been surpassed. The traditions of the past were, the President supposed, a part of the discipline of the surgical mind; at the same time, one could not look back to some of the procedures of our ancestors without horror. Never were the arms of surgery, literally as well as metaphorically, so well appointed as they were now. People spoke of conservative surgery; but all surgery, in strictness, was conservative; in fact, to speak of surgery as otherwise was a *non est*. The exigencies of practical work perhaps required divisions; but, whilst it did not follow that the physician must be a surgeon, it was quite needful that the surgeon be a physician also. The future of surgery, he was of opinion, would be found in a greater breadth of culture on the part of those who practised it, and in dealing with the body as a whole, as well as looking to the various requirements of its parts. Our most cultured intelligence was none too much to devote to the noble object of appeasing anguish, and directing to safe issues the casualties that beset the most wondrous structure this world contained. If one of the old surgeons should return to earth, how greatly, for instance, would he be astonished at the simplicity of the procedure now adopted for the reduction of dislocation. The pulleys, the racks, appliances more befitting a room of torture than the operating theatre of a hospital, were replaced by an assistant or two, a sheet or napkin, or often the unaided *tour de maître* of the surgeon himself. On the manner of dealing with wounds it was unnecessary to speak: everyone must admit the vast progress which had been made. Within the last few years it had amounted to revolution; as contrasted with the methods of ancient days, it was safe and painless; it was no longer needful to insist upon the necessity of aseptic and antiseptic procedures, of strictest cleanliness in air, person, and environment; and the relative rarity of so-called hospital diseases, blood poisoning, traumatic fever, erysipelas, and gangrene bespoke the improved hygiene of modern times. Secondary hæmorrhage was much less frequent; wounds, as a rule, healed by first intention; the tendency to pain and inflammation was abated. In every branch of surgery progress had been made. Our fathers would look on with amazement could they but witness the ablation of a diseased ovary, spleen, or kidney; the modern methods of dealing with stone in the bladder; the treatment of aneurysm by ligature or by compression, instead of the former evacuation of the sac with its attendant risks; the radical cure of hernia, and much besides. Tubercular disease under a multitude of circumstances had to be dealt with by the surgeon, and its etiology was surely better determined now than it was before. Among animal poisons, syphilis, glanders, and the poison of hydrophobia or of tetanus we had as yet been unable to remove from our midst, yet they were managed, on the whole, more successfully than in days gone by, and their causes and manner of treatment were becoming better known. Cancer we had hitherto striven against in vain; its etiology was among the problems which

awaited solution, he would fain hope, in a near future. Yet we could accurately localise a tumour or abscess in the brain, and in many cases relieve the patient from an otherwise certain death. We dealt with the formerly sealed cavity of the skull and its precious contents almost as freely as with other parts of the body. To discover the precise position, and afterwards to successfully remove a tumour of the spinal cord, was an achievement of which any body of surgeons might be proud. Diseases of the lungs and chest cavity were directly dealt with in a manner heretofore unthought of. And as for the abdomen, an "Open, Sesame" had been found for every organ within its cavity. Cases both of disease and injury had alike been submitted to active intervention at the hands of the modern surgeon, whose courage had been amply justified by his success. The field of practice was vast, the subjects of inquiry were multitudinous, and surgery was always progressive; but the mind of man itself was progressive. New triumphs of skill, a deeper insight into the causes of premature human destruction, and more effective means of dealing with them, awaited, without question, the surgeon of the future, as they had more or less attended the surgeon of the present, and his brother of the days that were gone by. Yet medicine and surgery were not two sciences, but one science, aiding and aided, having the same end in view, and any disparaging comparison of one in regard of the other was no less futile than it was absurd. The Medical Society in its purpose and its work exemplified the union of the two great branches of our profession in their common task of alleviating all kinds of suffering, and prolonging, as far as might be, the span of a healthy life.

A vote of thanks to the President for his able address was proposed by Dr. Theodore Williams and seconded by Mr. W. Adams.

Mr. EDMUND OWEN then read notes of a case of Acute Intestinal Obstruction, successfully treated by abdominal section, the details of which will be found on page 765. The case illustrated the comparative safety of opening the abdomen with clean hands and the advantage of operating without delay.—Sir WILLIAM MACCORMAC was reminded of a case to which he was called a little while ago, the patient, a strong farmer, having severe abdominal pain, vomiting, and rise of temperature. Operation was recommended, but the patient refused, and died twelve hours later, perforation of a gangrenous vermiform appendix being revealed post mortem.—Mr. KNOWSLEY THORNTON recently saw a little boy with well-marked symptoms of acute intestinal obstruction. The parents refused operation till late, when peritonitis had set in, and on releasing the band the gut was found perforated.—Dr. DE HAVILLAND HALL related a case he had seen at Westminster Hospital. A cabman was admitted almost collapsed and vomiting, with a history of acute obstruction. Laparotomy was performed, and no band was found, but it was presumed that a kink in the gut was undone. The sutures closing the abdominal wound, and applied after a new method, gave way thirty-six hours afterwards, and many coils of intestines escaped; they were, however, returned, and the man made a good recovery.—Mr. BALLANCE described two cases of obstruction; one in which, treated by daily enemata, on the ninth day, after a copious clyster, the patient felt something give way, and then got well. In the second case, he performed laparotomy, and found a large number of bands in the right iliac fossa. These were so complicated that he was unable to release them all, and the patient succumbed unrelieved.—Mr. OWEN, in reply, thought it a good rule to explore any hernia that might be found co-existing with acute obstruction, even though no symptoms pointed to the hernia itself. It was to him a matter of great wonder that the case related by Dr. Hall had not yet been recorded.

Mr. CHARLES A. BALLANCE read an interesting paper on a case in which the gladiolus sterni was trephined for pus pent up in the anterior mediastinum. The patient, aged thirty-five, was admitted into St. Thomas's Home on August 31st, 1887, complaining of a discharging abscess over the front of the upper part of the chest, accompanied by constant and severe pain and great tenderness along the breast bone; also of fever, anorexia, loss of strength, and want of sleep. There was a history of inflammation of the lungs two years before; for three months there had been mid-sternal pain, and a lump had formed, into which an incision had been made and much pus evacuated. This was followed by a discharging sinus, which, on admission, was

found to lead down to bare bone at the left second costal articulation, and the probe could be passed still further into a space behind the gladiolus. The sternum itself was acutely tender on palpation, and was the seat of constant dull, aching pain. Another swelling had formed over the left fourth, fifth, and sixth costal cartilages, and the discharge from the old sinus was less copious than usual. Two days after admission the lower swelling was incised, and the old sinus laid freely open. During the next five days rigors occurred, and it was decided to explore behind the sternum for pent-up pus. Two trephine holes were made, and the intervening portion of bone cut away with forceps. The bone removed was found permeated by pus, and on looking into the anterior mediastinum a layer of thick creamy pus was seen on the front of the pericardium; this was carefully syringed away, and much carious bone was then scraped by means of a Volkmann's spoon from behind the sternum. Finally the wound was irrigated with sublimate lotion, packed with wet sublimate dressing, and covered with a dry dressing of the same character externally. The patient made a rapid and complete recovery, the sternal opening becoming filled in by fibrous tissue. Mr. Ballance was not aware of any case in which treatment had been applied to the posterior surface of the gladiolus. He took it from the first that the illness of the patient two years before had been puerperal or septic in origin, and had left some focus of disease in the interpleural space. By scraping the posterior surface of the gladiolus he could not hope to eradicate all the germs of the disease, and the completely successful issue of the case was, he thought, in no small degree due to the constant association of the diseased surfaces during convalescence with corrosive sublimate. The sternum had been trephined for abscess or foreign body in the mediastinum, for paracentesis pericardii, and the operation had been suggested in order to facilitate the ligation of the innominate artery. The two most prominent symptoms of mediastinal suppuration appeared to be dyspnoea and constant severe pain. A carefully compiled list of published cases of mediastinal suppuration accompanied the paper.—Mr. M. SHEILD had twice seen pyæmic abscesses perforating the sternum and giving rise to pulsating swelling. They followed acute necrosis; both were opened, and both terminated favourably.—Mr. DAVIES-COLLEY inquired what were the exact symptoms that pointed to abscess behind the sternum.—Mr. BALLANCE replied that the sudden cessation of discharge from two sinuses leading to the anterior mediastinum, accompanied by rigors, pointed to retained pus.

Reviews and Notices of Books.

Die Krankheit Kaiser Friedrich des Dritten, dargestellt nach amtlichen Quellen und den im Königlichen Hausministerium niedergelegten Berichten der Aerzte Prof. BARDELEBEN, Generalarzt I. Kl. und Kgl. Geh. Ober-Med. Rath in Berlin; Prof. von BERGMANN, Generalarzt I. Kl. und Geh. Med. Rath in Berlin; Dr. BRAMANN, erster Assistent der Kgl. chirurg. Klinik in Berlin; Prof. GERHARDT, Geh. Med. Rath in Berlin; Prof. KUSSMAUL, Geheimer Rath in Strassburg i. E.; Dr. LANDGRAF, Stabsarzt in Berlin; Dr. MORITZ SCHMIDT, Sanitätsrath in Frankfurt-a.-M.; Prof. SCHRÖTTER, Vorstand der Laryngol. Klinik in Wien; Prof. TOBOLD, Geh. Sanitätsrath in Berlin; Prof. WALDEYER, Geh. Med. Rath in Berlin. 8vo, pp. 103. Kaiserl. Reichs-druckerei, Berlin. 1888.

The Fatal Illness of Frederick the Noble. By Sir MORELL MACKENZIE. London: Sampson Low and Co. 1888.

[FIRST NOTICE.]

It is neither our desire nor intention to discuss here the volumes before us on political, social, or ethical grounds. Our remarks will be confined solely to a scientific criticism of the main points in the history of the fatal illness of the late Emperor. That the august Sovereign succumbed to malignant disease of the larynx is now beyond doubt, since the fact was verified by post-mortem examination and recorded in the Protocol signed by both English and German doctors. In this, at least, they were agreed.

It will be remembered that the first symptom—hoarse-

ness—was experienced by the then Crown Prince in January, 1887. On March 6th Professor Gerhardt asserts that he detected, by laryngoscopic examination, a small growth at the posterior part of the left vocal cord. This he endeavoured to destroy by the electric cautery, which was employed on fifteen occasions, the last of these being on April 7th. As no cicatrization followed, and as the growth recurred, it was suspected that the disease was of a cancerous nature. This suspicion in Professor Gerhardt's mind was strengthened on May 15th, when the patient returned from a month's sojourn at Ems. It was ascertained that whereas the affected cord had hitherto been freely movable during phonation, it had now become sluggish, a sign upon which considerable stress was laid. Three days later, after a consultation between von Lauer, Tobold, Wegner, Schrader, von Bergmann, and Gerhardt, the diagnosis of cancer was unanimously arrived at. The grounds for this diagnosis were as follows: (1) The rapid regrowth of the tumour; (2) the hardness and unevenness of the growth; (3) the continued non-healing of the wound on the inner part of the tumour; (4) the defective mobility of the cord; (5) the age of the patient; (6) the situation of the growth; (7) the exclusion of tuberculosis and other specific disease. On May 20th preparations were completed for the performance of *thyrotomy* by Professor von Bergmann. On the evening of the same day Sir Morell (then Dr.) Mackenzie first saw the case, and pronounced the diagnosis of cancer as being unwarranted by the facts as yet observed. He advised that portions of the growth should be removed by the *endo-laryngeal method* and submitted to microscopical examination. This mode of investigation, however, did not yield satisfactory results, since, although it was repeatedly resorted to, it failed to give the required corroborative evidence, until the disease had made such ravages that total extirpation of the larynx and tracheotomy were the only feasible alternative operations. For this failure we do not cast the least reflection on Sir M. Mackenzie's manipulative skill or on Professor Virchow's pathological research; it was incidental to the conditions under which the experiments were made. Now, although Professor Virchow's reports seemed to favour the opinion of Sir M. Mackenzie, they were only of negative value. He did not find *infiltration* of the tissues with epithelial elements, but it did not necessarily follow that none existed, for only portions of the growth were removed. Professor Virchow was inclined to consider the disease as *pachydermia verrucosa laryngis*—a warty elevation of a thickened mucous membrane; but his statements were made with reservation, and, taking an unbiased view of them, one has now no difficulty in reconciling them with the assumption that the malady was malignant from the first. Was it malignant from the first? We feel constrained to subscribe to this contention. "Traumatic malignancy" is now an established theory in pathological science, and, acting on this, Sir M. Mackenzie suggests that the original growth may have been benign, and that the conversion process into cancer may have been effected by the rapidly repeated cauterisations of Professor Gerhardt. Medicine is an inexact science, and we cannot foretell with certainty results of imperfectly determined factors; but the balance of evidence in this case seems to us to speak forcibly in favour of Professor Gerhardt's deliverance. Nor do we think Sir M. Mackenzie makes out a better case against the Professor when he alleges that the aforesaid cauterisations were possibly the cause of the destructive perichondritis which was so pronounced a feature in the late Emperor's illness. *A priori* the probabilities are against it, besides which there was sufficient irritation by the infiltrating growth, which Sir Morell admits not unlikely began in the deeper tissues. To say the least, Professor Gerhardt, although we do not exculpate him from all professional

blame, cannot be said to have altogether the worst of the contention.

Admitting that Sir M. Mackenzie had conscientious doubts of the clinical nature of the malady, whilst in his belief the proposed thyrotomy was an operation at once destructive to the voice and highly dangerous to life, no one can say that he was not justified in advising a postponement of the operation for a reasonable period—that is, until the development of the case had declared for or against his views. Nevertheless, it was unfortunate that circumstances conspired against an earlier understanding and declaration which should have indicated the time for more decisive action. According to Professors Gerhardt and von Bergmann, it was understood that Sir M. Mackenzie was to take over the conduct of the treatment of the Crown Prince by the *endo-laryngeal method* on two conditions—(1) that every particle removed should be submitted to Professor Virchow for microscopical examination, and (2) that Sir M. Mackenzie should report to his German *confrères* as soon as he found his procedure had failed, if such should happen. The first of these conditions was fully carried out. It is on the second that the German doctors base their charge against Sir M. Mackenzie. Sir Morell replies that the disease ran a very abnormal course; at one time giving rise to the worst apprehensions, and anon subsiding with unwonted rapidity. Now, although in addition to his English colleagues Sir M. Mackenzie was associated with Surgeon-General Wegner, the body physician of the Prince, and Dr. Landgraf, the main responsibility rested upon himself. Finding that in spite of changes of climate and the most assiduous attention, his patient on the whole grew worse rather than better, it is matter of regret that he did not sooner than November advise a consultation. For some reason or other Professor Gerhardt seems to have dropped out of the scene; and thus it happened that when the Prince became worse at San Remo, help was sought from other sources. Schrötter of Vienna, Krause of Berlin, and Moritz Schmidt of Frankfort were ordered to attend a consultation. The result of the examination was that the original diagnosis of Professor Gerhardt was confirmed, and the Prince was informed that he must choose between complete extirpation of the larynx and tracheotomy, when the latter should become necessary. He declared for the latter alternative. It was intended that Professor von Bergmann should perform the operation, but the condition of the Crown Prince became so serious that, ere that surgeon could arrive from Berlin, Dr. Bramann, his assistant, who had had great experience of tracheotomy, was requested to undertake it. This seems to have been carried out without any great difficulty; and yet here, again, there arose a source of complaint and accusation. Sir M. Mackenzie and Mr. Hovell assert that the windpipe was opened to the right of the middle line, a circumstance which was alleged to account in some measure for the subsequent difficulty in adjusting the tracheotomy tube. Great pains have been taken by Sir M. Mackenzie in his work before us to explain this both by letterpress and diagrams. Whilst thus portraying Dr. Bramann's alleged maladroitness, Sir M. Mackenzie magnanimously admits that under all the circumstances Dr. Bramann acquitted himself fairly well.

There seems to have been a disagreement between Sir M. Mackenzie and Dr. Bramann as to the advisability of administering chloroform; but as the latter was to be the operator, and he requested anaesthesia, the former yielded, though with misgiving. We are not aware—except through Sir M. Mackenzie's assertion of the practice generally adopted at the Throat Hospital—that surgeons, as a rule, prefer to perform tracheotomy merely by the aid of local anaesthesia. Speaking from our own experience and knowledge, we

should say that performing it whilst the patient retains sensibility is rather the exception. However, this is a mere detail, and one which we deem unworthy of further comment.

Now arose the difficulty with the cannula, which Professor von Bergmann and Sir M. Mackenzie in turn attributed to the faulty instruments of the other. It is almost incredible that on such a matter they could not have agreed upon a mutually satisfactory understanding, and yet upon this very point hinges some of the most serious charges hurled against one another by the contending parties. Professor von Bergmann is accused of using cannulae utterly unsuited to the case, cannulae which were too long or too curved, and which, by "cutting into the windpipe," caused the blood-tinged, offensive discharge that was so copious, and protracted in its duration. Professor von Bergmann, in defence of himself and Dr. Brannmann, replies that the tubes were specially selected for the case, and that, instead of their doing damage, they were calculated to give the most efficient relief to the sufferer. He, moreover, asserts that the purulent and sanious discharge was derived from the ulcerous and necrotic malignant laryngeal growth, and that it trickled down the windpipe and was coughed up through the tracheotomy tube. Support is certainly lent to this hypothesis by the local extension of the disease observed during life, and by the condition found after death. On one occasion the tube could not be kept *in situ*, and Sir M. Mackenzie sent an urgent message for Professor von Bergmann to attend. It was on this occasion that the incident arose which gave foundation for Sir M. Mackenzie's most serious indictment against Professor von Bergmann. By the latter's own admission, he failed in more than one attempt to get a tube into the windpipe, after which his assistant, Dr. Brannmann, succeeded; but then one has to keep in mind the context. Professor von Bergmann says that the cancerous growth of the larynx had extended to the tracheotomy wound, and had infiltrated the walls of the latter—this, be it remembered, was observed at the necropsy,—so that the original track of the cannula was deepened and made irregular. Sir M. Mackenzie accuses Professor von Bergmann of pushing his finger deeply into the wound, as though this was prompted by nervousness; whereas Professor von Bergmann justifies the act on the grounds that it was necessary to clear away some cancerous granulations in order to make a path for the tube. Nor does the indictment stop here, for it is written and figured in Sir M. Mackenzie's book that Professor von Bergmann actually thrust the tube amongst the tissues in front of the trachea, causing a false passage, which accounted for the hæmorrhage at the time and the protracted suppuration afterwards. One can hardly bring oneself to believe that a surgeon of Professor von Bergmann's acknowledged learning and skill could so allow his head to misguide his hand. But we cannot in this matter stand as the arbiter of the opponents' fates. They must leave their grievances and differences to the opinion of the profession to which they belong. It is a question of the credibility of witnesses.

We may be wrong in our estimate, but, guided by the light of the published accounts before us, we do not glean from the narrative that Sir M. Mackenzie met seriously and *seriatim* the grounds advanced by Professor Gerhardt as the basis of his early diagnosis. We do not mean for one moment to assert that he is chargeable with carelessness on this head; we only say that we had hoped to find a fuller logical discussion of Professor Gerhardt's propositions. Referring again to the microscopical examination, we would add that, in our opinion, too much seems to have been expected of it. Too much stress was laid upon the negative evidence when considered collaterally with the clinical symptoms. We have even known the positive signs adduced lead to serious fallacy. In one case a tongue

was removed because epithelial collections were obtained in scrapings from an ulcer which after the operation was proved to be purely gummatous.

After carefully weighing all the facts and arguments with a full sense of the gravity of the issue, we must express our opinion that Professor Gerhardt's original diagnosis was correct; and that it is to be regretted that it was not found practicable by the associated professional advisers of the Prince to arrive at a unanimous verdict as to the nature of the disease before it had advanced to such a stage as to render extirpation by thyrotomy a course not to be recommended.

In our next issue we propose to deal with the post-mortem evidence, and to discuss its bearing upon certain clinical features of the late Emperor's malady.

Intracranial Tumours. By BYROM BRAMWELL, M.D., F.R.C.P.E., F.R.S.E. Edinburgh: Young J. Pentland. 1888.

DR. BYROM BRAMWELL is well and widely known as a physician who brings the power of careful observation, acute and impartial investigation, and lucid explanation to bear upon many departments of medical science. In this, his latest contribution, he has taken up the subject of Intracranial Tumours, a subject which possesses a peculiar fascination on account of the remarkable way in which it has been elucidated by the combined progress of several branches of medical science. Ophthalmoscopy, physiology, and clinical observation have rendered the diagnosis of these affections exact beyond that of any other kind of brain disease, and among the subsidiary problems of the subject are some of the most interesting in the whole range of neurology. Moreover, at last surgery has come to take away some of the reproach that the progress of diagnosis is fruitless of practical benefit to the sufferer.

In the volume before us Dr. Byrom Bramwell has not attempted to compete with those writers who have attempted an exhaustive analysis of the symptoms of recorded cases. He has contented himself with the more modest task of collecting the opinions of the chief writers on the subject, and on many topics adding the results of his own observation and research. The reader who expects to find in the book any considerable general addition to our knowledge will be disappointed; but, on the other hand, a perusal of the work cannot fail to give clearer views of many of the important problems connected with these diseases. Many of these problems are discussed at considerable length, and the volume is enriched with the careful records of many instructive cases. It is also profusely illustrated by figures produced by the now fashionable photographic processes, and these, although not always very slightly, answer their purpose effectively enough.

A brief account of our ignorance of the subject of causation is followed by a description of the individual symptoms and the probable mechanism by which they are produced. Among these, the changes in the eye are considered at length, and the mechanism by which optic neuritis is produced is discussed very fully. The author believes that no theory fully explains it, but that pressure, and the propagation of irritants by the fluid that distends the sheath of the optic nerve, probably constitute the most frequent cause. The motor and sensory derangements are then passed in review, as well as the mental alterations, aphasia, apoplectic attacks, and visceral disturbance. Diagnosis is dealt with in three chapters: first, the differential diagnosis; secondly, the indications that enable the seat of the tumour to be ascertained; and, thirdly, the pathological diagnosis, which is considered in connexion with the pathological anatomy. Prognosis, duration, course, termination, and treatment, are rather briefly described in one chapter of ten pages; while

a concluding chapter by Mr. A. W. Hare deals with the question of surgical treatment.

The work merits commendation in all parts, but some chapters are more rich than others in the results of personal observation. The numerous illustrations of hemianopsia and of the microscopical structure of the various growths deserve special mention, and so also does the brief, but practical, *résumé* of the chief points in the differential diagnosis of these tumours from other diseases with which they may be confounded. Dr. Bramwell's earlier tendency to excessive tabulation has been chastened in his later writings into a moderation which very much increases the practical utility of his diagnostic analyses. Here and there in the work before us a carping critic may perhaps be inclined to complain that generalisations are made on too scanty a basis, but, on the other hand, they are never unduly pushed or put forward otherwise than with modesty. The book does not attempt too much, and what it does is thoroughly and well done.

BRITISH NURSES' ASSOCIATION.

A MEETING of the General Council of the British Nurses Association was held in the rooms of the Medical Society of London on the 12th inst., Mr. W. S. Savory, President of the Royal College of Surgeons, in the chair. There was a large attendance, and the agenda was as follows: To receive reports from the executive committee; to consider various schemes for the benefit of members; and to consider the draft outline of the petition for the Charter.

Miss Wood, secretary, having read the notice convening the meeting and letters of regret at being unable to attend from several members of the Council, the Minutes of the previous meeting, held on June 28th, were read and confirmed.

Dr. Bedford Fenwick then read the report of the Executive Committee, which was to the following effect:—Since the last meeting of the Council, 489 new members (consisting of 14 medical men, 26 matrons, and 449 nurses) had joined the Association, making a total of 1146 members. Petitions had been received from New Zealand, New South Wales, and other colonies asking that branches of the Association should be established in those countries. The motion of Sir Dyce Duckworth, relative to the composition of the Executive Committee, which was passed at the last meeting of the Council, should, in the opinion of the committee, be annulled. The seal of the Association was being engraved, and the words "Steady and True" had been chosen as the motto. Miss Wood had been appointed to visit provincial towns to explain the objects of the Association. It was considered advisable that in the petition for the Charter it should be provided that the members of the Registration Board should be appointed by the Association, and that Crown nominees should be dispensed with. Powers were also asked for the registration not only of trained nurses, but also of midwives and monthly nurses. A full draft of the Charter would be brought forward at the next meeting of Council.

At this stage a desultory conversation as to the claim to registration, training, &c., took place, and the appointment of members to the Registration Board by authorities other than the Association, as tending to inspire public confidence, was warmly advocated. It was also stated that opposition to the objects and progress of the Association was gradually being overcome.

Mr. Brudenell Carter supported the recommendation that the Association should appoint all the members of the Registration Board. He had always advocated the keeping of everything in their own hands.

Dr. Fenwick then resumed the reading of the report. The Executive Committee advised that a conversation should be held each year, and that during the winter months meetings of the members should be held for the reading and discussion of papers on subjects connected with nursing; that the Association should bestow a gold medal on nurses who had rendered conspicuous or unusual

service to their profession; that the Association should establish a benevolent fund for illness or affording temporary help to needy members; that as soon as possible a convalescent home and holiday house should be organised; that the Association may, if invited, hold its annual meetings in provincial towns, each meeting to be held in the first week in August. Dr. Fenwick then read a programme of practical nursing, suggested by the Association as essential to be known by every trained nurse. It was as follows:—

"Candidates for registration must possess some knowledge of elementary anatomy and physiology. They must understand the best methods of keeping a ward or sick room clean and healthy, by sweeping, dusting, polishing, ventilating, warming, &c. They must understand the various methods of making a bed for medical and surgical cases, and of changing sheets &c. They must know the best and least exhausting way of keeping a patient in a cleanly condition, and know how to prevent or dress a bed sore. They must be skilful in undressing sick and injured persons, and must be able to bandage, pad splints &c., and prepare and apply all dressings. They must know how to prepare or apply poultices, fomentations, hot bags and bottles, blisters, lotions, leeches, ice bags, evaporating lotions, and wet packs, and prepare for cupping. Also how to give baths, hot, cold, hot air, and vapour, as regulated by the thermometer. They must understand the use of the clinical thermometer, and how to keep a chart and record the rate of the pulse and respirations correctly. They must know the various ways of administering food, medicine, and stimulants, and know by heart the tables of weights and measures. They must be able to use quickly and correctly the various syringes and female catheter, and must know the quantities generally given in enemata and injections of all kinds. They must have practical knowledge of the various systems of disinfecting patients' clothes and rooms, and of keeping utensils and instruments thoroughly clean. They should possess some knowledge of cooking for the sick, and how to prepare beef-tea and jelly, chicken and mutton broth, arrowroot, cocoa, whey, egg-flip and milk puddings, and also how to peptonise food.

The balance sheet for the past quarter was most satisfactory. In June there was a balance of £167, and up to the 12th inst. a further sum of £189 had been received. The total expenditure amounted to £59, and a balance of £297 was left in the hands of the treasurer.

The report of the committee was carried unanimously, subject to an understanding that friends of members should be admitted at a nominal charge to the proposed conversation.

Dr. Fenwick proposed that members of the Association, not members of the Executive Council, should be allowed to attend its meetings as visitors, not joining in the discussion or voting, and that reporters from the lay press be allowed to attend. Miss Stewart having seconded the motion, it was carried *nem. con.*

Mr. Sibley moved a vote of thanks to Mr. Savory for his cordial assistance to the Association and for presiding on this occasion. Miss Stewart seconded the motion, and it having been carried, Mr. Savory returned thanks, and the proceedings terminated.

JUBILEE MEMORIAL HOSPITALS.—The foundation stone of the Victoria Hospital, Swindon, which was laid on Jubilee Day, 1887, was formally opened on the 29th ult. The site (an acre of land) was sold by the lord of the manor at a nominal price. The cost of the building has been £1626, the whole of which (with the exception of £50) has been raised. All the beds in the wards—three for males and three for females—have been presented by various donors. A new hospital, as a Jubilee Memorial, erected at St. Albans, Herts, by public subscription, was opened by the Earl of Verulam on the 10th inst. It has cost upwards of £4000, and will provide accommodation for twelve patients, but additions, when necessary, can be made at a comparatively small outlay. Six beds are appropriated to men, four to women, and two for accidents.

SUNDAY LECTURE SOCIETY.—The Committee of this Society have determined to give during the winter a course of twenty-one lectures, in St. George's Hall, London, on Sunday afternoons, at 4 P.M., as in former years, beginning on Oct. 21st.

THE LANCET.

LONDON: SATURDAY, OCTOBER 20, 1888.

THE out-patient department of the various metropolitan and provincial hospitals affords an almost unlimited field for observation and for clinical instruction—a field that is already diligently cultivated, but of which the resources and possibilities are wellnigh inexhaustible. We propose to consider what are the advantages offered to the student by this department, what are its defects and dangers to the medical tyro, wherein it offers opportunities peculiar to itself, and wherein it is inferior to bedside teaching.

Speaking broadly, out-patient practice is wide in its range rather than conducive to depth and thoroughness. The pressure of patients is so immense that the ablest and most painstaking practitioner is compelled, often reluctantly, to hurry through his work and to omit many of the methods of precise observation which he employs regularly in his ward work. The student, on his part, is apt to be bewildered by the endless succession of types and stages of disease, and unless his observation be concentrated and judiciously directed he is liable to carry away general impressions rather than precise knowledge. This danger is more evident and more pressing in the medical than in the surgical out-patient room. In medicine diagnosis is in a large proportion of cases complex and difficult, requiring a very thorough physical examination and a careful induction from the history of the case and the symptomatology, which may present many points of conflict or contrast; in surgery, on the other hand, the physical signs are often palpable and the diagnosis evident. The young beginner finds a difficulty in following the physician who in a few rapid words indicates the diagnostic features of a case of pulmonary or cardiac disease, but will much more readily follow the surgeon in noting the characters of a fracture, an ulcer, or a diseased joint. Hence we think it is imperative, if the professional training of the unfledged student is to continue to begin in the out-patient department, that, at least in medical practice, his attention should be concentrated on a few typical and selected cases, rather than allowed to stray at will over the wide field of observation there open to him. Some physicians adopt with great success the method of selecting a few well-marked and instructive types out of the crowd of patients, and either detain them until the routine work of the department is over, or send them apart into an ante-room, where the diagnosis can be fully elucidated to the clinical class. Others contrive so to arrange the attendance of patients that a few cases suitable for teaching purposes shall have precedence of the general work, and half an hour or more is devoted to instruction before the general flood of cases begins to render adequate explanation and diagnosis impracticable. We commend either of these methods as tending to obviate the evil which we deprecate—viz., of encouraging or permitting the young student to spread fruitlessly over a large area that energy and attention which, more prudently husbanded, might be productive of good

results. The evil strikes deeper than even the dissipation of energy and waste of time. The student who has been allowed to roam at will through out-patient departments without check or restraint is apt to think that he knows many things of which he possesses only an inconsiderable smattering, and may thus unfit himself for the laborious and exhaustive analysis of disease which awaits him in the wards. These evils, however, may be, and are, successfully obviated in many cases by those methods to which we have already made allusion.

What out-patient practice is apt to lose in depth it may gain in breadth. Exhaustive analysis is difficult, but amplitude and comprehensiveness of view is practicable, and, indeed, easy. Few cases comparatively can be probed to the bottom and thoroughly exhausted, but of the great majority it is possible to form a shrewd general impression, incomplete, no doubt, as a rule, but not necessarily inaccurate to any serious extent. Hence the senior student should not ignore the out-patient room as unworthy of his most serious attention. There he can test his readiness in the application of the knowledge gained at the bedside, and do much work which is an excellent preparation for the consulting room. The out-patient department and the consulting room have more in common than may be at once apparent. In both, the power of seizing the salient outlines of a case in a limited time is indispensable for success. In both, the practitioner has to learn to exclude everything that is non-essential, and to concentrate his attention and treatment upon the chief morbid condition present. In both there must be a wise neglect of the verbiage of the egotistical patient, of the unconscious exaggerations of the neurotic or hysterical, and occasionally of the deliberate deceit of the malingerer.

The out-patient room may also afford the senior student wholesome and fruitful instruction in rough-and-ready therapeutics. He cannot, indeed, there learn thoroughly scientific and exhaustive treatment, but he may acquire the power of handling effectively the more potent remedies for the relief of the commoner ailments. The cases under notice being usually of a less serious character than those which gain admittance to the wards, the treatment is often, legitimately enough, of a symptomatic character. The relief of dyspepsia, constipation, neuralgia, headache, myalgia, and a host of similar minor ailments, largely engages the attention of the physician in the out-patient room, and the student cannot too soon be convinced that such knowledge will be of the utmost advantage to him in his after-life. In spite of the medical scepticism of the day, the public, with a true enough instinct, still look to us mainly for treatment, and will not rest satisfied with mere diagnosis or prognosis, however exhaustive and accurate. The power of handling with effect the remedies at our disposal is one which we cannot afford to depreciate or despise. It is a power possessed in very different degrees even by men of distinguished talent, and we think the out-patient room affords a valuable field for its cultivation.

BEFORE any new legislative measure can be deemed generally satisfactory, two requirements must be proved so far as they are capable of proof. It must be shown that existing arrangements are undesirable and calculated to

act to the public detriment, and the measures suggested for their amelioration must be found to be an improvement which is free from the charge of introducing any fresh awkward complications. Consideration of the present strained relations in Ireland between "chemists and druggists" and "pharmaceutical chemists" sufficiently demonstrates the need for legislative interference, and, although the matter received much attention some thirteen years back, it is already found necessary to introduce an Amendment Bill to improve matters. This Bill was brought forward in the Lords last session, but the amount of opposition it met in many quarters was shown by the appointment of a Select Committee after the second reading. The Committee received evidence and duly reported thereupon, but, in spite of this, when the Bill was brought down from the Lords to the Commons, it was allowed to stand over for second reading in November. The report of this Select Committee has now been published, together with the Minutes of the evidence received, and it serves to explain the present position of the chemists and druggists, while its voluminous character and its intricacy perhaps account for the reluctance of the House of Commons to deal hastily with the question. It is freely admitted that the Pharmacy Act (Ireland) passed in 1875 has been found difficult to enforce; that it has been repeatedly evaded and disregarded with impunity; that those charged with its administration have found themselves powerless to act from lack of financial resources. The difficulty and confusion appear to result mainly from the ambiguity of the trade names employed in Ireland. From the evidence given before the Committee, it was speedily apparent that, although the Act of 1875 was intended to reproduce in Ireland the conditions of Great Britain, the term "chemist and druggist" had no true equivalent here. Before the passing of this Act "chemists and druggists" in Ireland were unregistered, they had passed no examination in proof of their qualification to retail drugs and poisons, and they were not entitled to make up medical prescriptions. In numerous districts the demand for drugs would not support a pharmaceutical chemist, who alone had the right to dispense. Those carrying on the business of chemists and druggists in many cases were also employed in retailing drapery, ironmongery, grocery, or even whisky, and merely set apart a little corner of their shop for the sale of drugs. The possible danger of poisoning from confusion of bottles sent to these stores for drugs and for drinks was sufficiently obvious, although this appeared to be regarded as rather a secondary consideration. The chief question inquired into by the Committee was the propriety of retaining the linked title of "chemist and druggist." This designation was rightly held to be confusing, although those objecting to the Pharmacy Act Amendment Bill fought strenuously for its retention. The information elicited by the Committee clearly showed that abuses were likely to arise from druggists who have no right to dispense retaining the title of chemists. When requested to state their objections to the Bill, this proposed suppression of one of the terms which had been linked by usage was placed in the front rank, as it was imagined that it would lower them in the public estimation. The "chemists and druggists" also objected to the regulations which surrounded the examinations of

the Pharmaceutical Council, the serving four years with a pharmaceutical chemist or with a "registered chemist and druggist of Great Britain" being very irksome; they objected to the payment of fees unless the Pharmaceutical Society allowed them a representation on the Council, and one witness urged the frivolous objection of the financial loss which he would suffer in having to destroy all his bills and labels which bore the words "chemist and druggist." These terms threatened so much confusion that in the end the secretary of the Pharmaceutical Society of Great Britain was asked to indicate the differences existing here between "pharmaceutical chemists" and "chemists and druggists." He explained that so far as regards their business and their relations to the public they are on exactly the same footing. In the ordinary routine of business the pharmaceutical chemist possesses no advantage over the ordinary chemist and druggist. His superior knowledge, which has been shown by a higher examination, is but rarely appealed to in questions of analysis, and his designation is, in a sense, an honorary degree. As the matter at present stands, "the chemists and druggists" in Ireland are clearly trading under a misleading designation, which affords no protection for the public. That the Committee of the House of Lords realised this danger is evidenced by the new clause they have introduced into the Bill. Not only is the title of "chemist and druggist" to be abolished, but "every person practising as a registered druggist under this Act shall display conspicuously outside his place of business a notice in legible characters as follows, 'Not licensed to dispense or compound medical prescriptions,' and in default" to be subject to sundry penalties. It is clearly an anachronism to leave an uneducated public to struggle with the niceties of the distinctions between druggists and pharmaceutical chemists, or to trust those to observe the law who admit that they have freely evaded it. When the President of the Pharmaceutical Society of Ireland plainly states that it has been found impossible to administer the Act of 1875 and to prevent the sale of poisons in public-houses, it is high time more precise and stringent legislation were effected. Careful consideration of the evidence taken by the Select Committee of the Lords should convince everyone of the need of this measure, which appears so essential to the public safety.

IN the few abstracts of Introductory Lectures delivered in the Provinces and reported by us last week, the same great morals are pointed and the same great problems are broached as in the Metropolitan Addresses already noticed. At Owens College Dr. JAMES ROSS discoursed, as he was highly fitted for doing, on the great problems of Knowing and Being; of the living and the non-living, and the gulf between them. These are rather severe questions to propound to the young mind of students on the threshold of a profession so pressed with urgent duties, for the discharge of which, happily, knowledge of a more concrete and elementary kind is enough. "The doctrine of the indestructibility and ingenerability of energy" and the like doctrine of matter are, no doubt, conceptions of the highest interest in philosophy, and of the most far-reaching consequences; but whether they are just the thing to drop into the mind

of a youth as he is confronted with four years of hard practical work, may possibly be doubted. They give the sense of diffusion and doubt, at a moment of life when concentration and faith are the great desiderata. By way of correcting this tendency of his able and lofty address, Dr. ROSS ended with more practical reflections, enjoining attention to duty as the great solvent of doubt, quoting CARLYLE to this effect: "Do the duty which lies nearest thee, which thou knowest to be a duty; thy second duty will already have been clearer." Mr. TEALE, at Leeds, touched inevitably on the bearing of our present system of education and examinations on the development of character and efficiency. Mr. TEALE is one of those earnest educationists who think that examinations are overdone, and that the very improvements in education may become sources of deterioration. Cramming and routine of mechanical work are large elements in the educational processes of the day, necessitated by the very nature of the examinations which admit to the profession, and they are apt to crush out individuality. "Self-education" is apt to be neglected, but it constitutes a large part of true education. We commend Mr. TEALE'S address to students, and especially his advice to seek after every opportunity of personally seeing, observing, and doing. The more we can learn everything for ourselves, and verify it for ourselves, and incorporate it with ourselves, the more lasting and fruitful will the lessons of our life be, whether at the student period, or the later one to which that is but the introduction. His high praise of hospital work will be endorsed by every successful physician and surgeon; so too will be his estimate of prizes and the working for them. The man who will score the real prizes of life will be he who works not for the sake of the school prize, but for the sake of the work which gets the prize. Dr. JOHN WILLIAM MOORE in the Meath Hospital vindicated, in spite of humbling failures, the triumphs of both medicine and surgery. He characterised medicine as the noblest of the professions, though those who follow it might be led to forget wherein its nobleness consisted from two very opposite reasons—either their enthusiasm on the one hand, or their straitened circumstances on the other. The nobility of medicine consisted in its Christ-like nature, and it must be admitted that medicine in its best examples most resembles the Great Physician, both in its actual achievements, and in the spirit in which they are worked. There are those who vulgarise even medicine, but they are incongruous and unworthy. We say they act unprofessionally, which is only another way of saying that in the very "manner of their spirit" they are unfitted for the calling into which they have drifted.

AMONG the rarer phenomena observed in patients thoroughly saturated with the poison of malaria is a special and interesting form of inflammation of the testicle. The disease is quite a rare one, even in countries where malaria is rife, and no mention is made of it in our English text-books and systems of surgery, or in CURLING'S well-known work on Diseases of the Testis. In a recent number of the *Revue de Chirurgie* Dr. CHARVOT has described some cases which have come under his notice among the French soldiers in Tunis, and from them and from other

published cases he draws a fairly complete picture of the disease.

The first feature of malarial orchitis, and one that seems to be well marked, is its occurrence only in those who have suffered severely from ague. The onset of the inflammation may be noticed during an attack of fever, often in the night, and quite apart from any injury, urethral discharge, or other exciting cause of an epididymitis spreading from the urethra. The inflammation is of an acute and severe type. In a few hours the part becomes greatly swollen, and the disease reaches its height in two or three days, and then somewhat slowly and gradually subsides and passes away. In some recorded cases the local inflammatory phenomena have undergone daily exacerbations and remissions in unison with the body temperature, but Dr. CHARVOT has not observed this in his cases. Both the body of the testicle and the epididymis are involved in the inflammation, and there is effusion into the tunica vaginalis. The skin of the scrotum is not implicated, and is only rarely adherent to the subjacent tissues, although there is inflammatory oedema of the cellular tissue of the scrotum. The pain is usually very severe, and radiates from the testicle up to the groin and round the loins. Under treatment the pain and inflammatory oedema quickly subside, but the absorption of the inflammatory exudation in the testicle takes place much more slowly, and is followed by more or less atrophy of the secreting substance of the gland. The disease is accompanied by malaise, headache, neuralgia, pinched face, and anæmia, all marks of severe malarial poisoning.

One very important point is that it is usually followed by more or less complete atrophy of the testicle. This is exactly similar to the atrophy attending all acute inflammations of the body of the testicle, and depends upon the destructive influence of the inflammatory exudation upon the delicate seminal tubules packed inside the unyielding tunica albuginea. The same tendency to atrophy is seen in traumatic orchitis, and in that which is a part of parotitis; and, indeed, an acute and severe inflammation of the body of the testicle unaccompanied by subsequent atrophy is unknown.

The treatment of this form of orchitis, happily, is not very difficult. A full dose of quinine should be given a few hours before the rise of temperature, and this should be repeated daily until the patient is continuously apyrexial. The beneficent effect of quinine is quickly seen in the fall of the temperature, the abatement of the pain, the lessening of the headache and malaise, and often in the quick subsidence of the scrotal oedema. If its influence is maintained, the swelling of the testicle shrinks, and the gland becomes smaller and softer, with loss of testicular sensibility. No special local treatment is required. The fever which is always associated with malarial orchitis is not symptomatic: it most often precedes, but is by no means in proportion to, the inflammation of the gland, and it yields to treatment by quinine much more quickly than does the orchitis itself. The liability to wasting of the gland renders it important to recognise the nature of this disease as soon as the patient is attacked by it. As a rule, the diagnosis presents no grave difficulties. From gonorrhœal orchitis it is distinguished by the affection of the body of the gland as

well as of its epididymis, by the character of the fever, by the history of the patient, and by the very marked influence of quinine given in full doses. It is more closely like the orchitis of mumps; but where there has been no parotid inflammation to assist in the diagnosis, the intermittent or remittent character of the fever, and the failure of the swelling to undergo rapid absorption after the fall of temperature, are sufficient to distinguish it. The effects of a single large dose of quinine are also so well marked in malarial orchitis that in any doubtful case the therapeutic test is of great value. Dr. CHARVOT has found more difficulty in distinguishing this form of acute orchitis from an acute tubercular affection; but in the latter the epididymis is markedly nodular, and there is a notable tendency towards suppuration. Although the disease is very little known in England, it is yet one worthy of careful study. Patients saturated with malaria often return home to this country with various manifestations of the disease; and our military surgeons, as well as many private practitioners, may well find themselves called upon to treat this affection when residing or travelling in foreign climes.

THE remarks which appeared in THE LANCET of the 15th ult. with regard to the suggestion made by Mr. ALBERT BENTHALL of Southsea, has called forth letters from that gentleman and two anonymous correspondents, to which it is necessary to reply. Mr. BENTHALL'S letter commenced with the remark that no one who is not practising in a garrison town could have any conception of the disastrous results of the repeal of the Contagious Diseases Acts. Having made this statement, one would have expected from him the obvious and logical conclusion that the remedy for such a state of things was the restitution of these Acts. Unfortunately he made a suggestion for the examination of men, which we felt obliged to reject as wholly impracticable, for reasons which were given at length. It is much to be regretted that Mr. BENTHALL, "A Medical Muser," and "M.D. Durh.," with many other medical brethren, cannot read a defence of the Acts without retorting with an amount of feeling which unfits them for a dispassionate discussion of the subject. Those who defend these Acts are looked upon as apologists for vice committed by vicious men upon helpless women. When discussing recently the repeal of these Acts in the colonies, we were careful to disclaim the idea that fornication was a necessary evil, and we quoted Sir JAMES PAGET'S words: "Chastity does no harm to mind or body; discipline is excellent; marriage can be safely waited for." Sir WILLIAM JENNER has also spoken strongly on the importance of young men curbing their passions. On this point medicine and divinity are united. GEORGE HERBERT'S words, "Continence hath his joy" is no mere poetical sentiment, but a sober truth, which none can appreciate better than medical practitioners. It is they who know the terrible consequences of incontinence on the one hand, and, on the other (though the cases are rare), the solid advantages mentally and bodily enjoyed by men who have kept themselves pure. But we have to take the world, not as it ought to be, but as we find it; and, to return to the present subject, we would ask, Why is it that garrison towns are such centres of vice, and,

consequently such hotbeds of disease? The answer is that wherever soldiers are stationed in any considerable number, thither will flock a number of prostitutes of the lowest kind. So well established is this fact that the proposal to erect barracks in any locality previously free from them encounters strong opposition from the residents, who know well from the experience of other localities similarly situated what will be the inevitable result. Mr. BENTHALL has made it perfectly clear that the Acts did remove evils in Portsmouth and Southsea, which their repeal has intensified; proving, what we have always contended, that the large proportion of venereal diseases is caused by prostitutes. The remark of "M.D. Durh.," that, from the physical condition of the two sexes, it is much more likely for a woman to contract disease from a man than *vice versa*, proves conclusively that his knowledge of these diseases must be very limited. The experience of lock hospital and visiting surgeons is that these women may infect an almost unlimited number of men before they are themselves aware that they have anything the matter with them! Ulcers on the os uteri cause little or no inconvenience, and give hardly any indications of their presence until revealed by careful examination with the speculum. Gonorrhoea, which with its various complications of chordee, orchitis, epididymitis, bubo, perineal abscess, &c., causes such frightful suffering to men, is painless in women, and is much more liable to be contracted by men than by women. So far from acting harshly towards these miserable women, the Acts were their best friends—much better, indeed, than the neglect and filth to which the repealers of these Acts have abandoned them. The Whitechapel horrors have again compelled attention to this worst form of the "social evil," and the fact that the Contagious Diseases Acts grappled successfully with an evil with which philanthropists, both before their passing and since their repeal, have wholly failed to deal, remains with all the proverbial stubbornness of facts in general. "A Medical Muser" is keen to see the mistakes which everybody else has made in dealing with the social evil; but his suggestion to make the communication of syphilis a penal offence is as impracticable as Mr. BENTHALL'S for the examination of men. History repeats itself; and before long it will be found and admitted by our correspondents that those who framed these Acts were perfectly well acquainted with the subject in all its bearings, and that the only real objection to them was the limited sphere of their operation.

A MATTER which, though essentially medical in its nature, has become so public as to have had all its scientific details laid bare to a gaping world, no longer lends itself readily to the dispassionate criticism of a purely professional journal. It is true that, under ordinary circumstances, it would be comparatively easy to eliminate the extraneous elements of the case, and deal solely with those points in it which could be adequately appreciated by instructed readers. But in respect of the fatal illness of the late Emperor FREDERICK of Germany even this course has been rendered extremely difficult by the complications, political, social, and ethical, in which the circumstances attending that deplorable event have become involved, to say nothing of the contradictory evidence forthcoming in relation to its

more prominent facts. It cannot but be deeply regretted that it should have been deemed necessary or wise to make public, from the time that active treatment was commenced until the melancholy close, all the minutiae of the symptoms arising in the course of the malady of the august sufferer, and the means adopted to mitigate them. But it is still more to be regretted that political rivalries and professional jealousies should have been allowed to intrude into the very chamber of the death-stricken Emperor, so as to imperil, if not to destroy, the peace of mind which is so essential an auxiliary to the beneficent action of well-devised remedies, either medical or surgical. It would have been to a certain extent satisfactory if these unpleasant, not to say discreditable, features in connexion with the history of this case had been suffered to pass into oblivion with the decease of the illustrious patient whose closing days they had embittered. But this, unhappily, was not to be. The unseemly strife must be perpetuated over the imperial tomb, and angry criminations and recriminations flung across it, to the infinite pain, we may well suppose, of the survivors in the bereaved family, the indignation of the profession to which the chief combatants belong, and the edification, or perhaps amusement, of the world, to whom, indeed, the appeal is now made by the volumes just issued from the press. But another circumstance much to be regretted in this miserable business is the publication—in a quarter, too, where it might be expected more prudent counsels would have prevailed—of a statement alleged to have been written by the dying Emperor, in which he expressed an unfavourable opinion of the merits of the treatment carried out by one of his medical attendants. Of course, the opinion of a patient, however noble and dignified, yet unfitted by education and training to decide on medical questions, is valueless as evidence of the propriety or otherwise of the means adopted for his relief. The publication of the “facsimiles of some of the late Emperor’s scripts” can therefore only have the effect of intensifying yet more the feeling of personal rancour imported into a controversy already sufficiently pronounced, and of rendering more dense the cloud of prejudice by which its true issues, which should be viewed in the calm, clear light of science alone, are kept out of sight.

The whole matter being thus thrown into the arena of public gossip and debate, we, as medical journalists, can have but little to do with it in its present phase, save from a purely scientific point of view. As we have intimated above, some of the main facts in connexion with it are involved in doubt, statements in regard to them, confidently affirmed on the one side, being vehemently denied on the other. We must leave the disputants to settle these broad discrepancies. Our duty will be discharged by offering an exposition of the significance of the more important facts as brought out in the clinical reports of the illness and in the protocol of the post-mortem examination. The first part of this exposition will be found in an article in another column of our present issue, in which the two books containing the charges and countercharges, the affirmations and denials, in this gruesome controversy, are submitted to review.

Annotations.

“Ne quid nimis.”

REFORM AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE report of the minutes of the quarterly meeting of the Council, held on October 10th, appears in our last issue. From it we glean that the Committee on the Extension of the College Premises have recommended a yet further expenditure of £3640 for a new house (conservator’s) and a new party-wall. In our opinion this expenditure on bricks and mortar is unsatisfactory and extravagant, and should not have been incurred without the consent of the Fellows of the College. The President of the Council of the College was re-elected on the Committee of Management. Mr. Heath’s motion, “That an honorarium of £300 be presented annually to the President on completing his year of office,” was lost. Eleven councillors voted against the proposal, and four for it. By accident, in our last issue, the words *for* and *against* were transposed. One word about the annual meeting to be held on Nov. 1st, at 3 P.M. The Supplementary Charter granted to the Royal College of Surgeons by the Lord President can stand only as a provisional measure, the Charter having had expunged from it all controversial matter. These controversial points will and must be raised again and again. We trust that there will be a large attendance of Fellows and Members to protest that their present position is intolerable, and unworthy of the time and place. They will again approach the authorities at the College respectfully soliciting reform; they will endeavour to obtain the same legitimately through their own representatives before taking independent action to force into further prominence the present constitution of the Royal College of Surgeons of England, and the administration of corrective remedies to a most faulty system.

SCARLET FEVER IN LONDON.

RECENT returns issued by the Metropolitan Asylum Hospitals and by the London Fever Hospitals have shown that during the past eight weeks the number of cases of scarlet fever isolated for treatment in these institutions has steadily increased from 774 to 983. As this fact taken alone might give the false impression that London is suffering from a severe epidemic of this disease, it may be useful to call attention to a few statistics bearing upon the recent prevalence of this disease in London. It appears from a summary table published in the Registrar-General’s last Weekly Return that during the quarter ending with September last 238 deaths from scarlet fever occurred among the residents of Registration London, the average number in the corresponding period of the last ten years, corrected for increase of population, being 490. The mortality from scarlet fever last quarter was therefore less than half the corrected average, and was equal to an annual rate of 0·22 per 1000, corresponding with the mean rate during the same period in the twenty-seven provincial towns. The Registrar-General’s table shows that the mortality from scarlet fever varied very considerably in the five principal groups of registration districts. The annual rate from scarlet fever last quarter did not exceed 0·10 in the west group of districts, whereas it was 0·23 in the central and 0·50 in the east districts. Thus scarlet fever was just five times as fatal in East as it was in West London; and it may be said that the only one of the Metropolitan sanitary areas in which the disease showed epidemic prevalence during last quarter was Bethnal-green, where it caused an annual rate of 1·10, or five times the mean rate in the whole

of London. To revert to the hospital returns, it may be noted that the Metropolitan Asylum Hospitals contained 915 scarlet fever patients on Saturday last, against 2012 in the corresponding week of last year. It should also be borne in mind that in London, at any rate, the proportion of isolated cases is constantly increasing, so that the above numbers do not fully show the extent of the decline in the present prevalence of scarlet fever in London compared with its prevalence at this time last year, when, moreover, it scarcely exceeded the average. The proportion of deaths from scarlet fever in London occurring in hospital rose steadily from 7 per cent. in 1878 to 36·6 per cent. in 1887; and it is noteworthy that during last quarter 45 per cent. of the fatal cases of this disease were recorded in hospital. It should be stated, moreover, that the proportion of isolated cases in Bethnal-green was considerably lower than the mean proportion in the whole of London. It is, at any rate, satisfactory to know that, notwithstanding the large number of cases of scarlet fever now under treatment in the Metropolitan Asylum Hospitals, the prevalence of the disease, judged by the death-rate, is scarcely more than half the average prevalence at this time of the year, when the mortality curve for the year usually reaches its maximum.

THE PREVENTION OF YELLOW FEVER.

THE continuance of the serious epidemic of yellow fever at Jacksonville has necessarily led to a consideration of the question whether the sanitary measures adopted in the United States for the prevention of that disease need to be modified or extended; and it seems to be generally admitted that the present system of sanitary defence against it is imperfect, and that it needs amendment, especially in the direction of definitely placing the responsibility attaching to the importation of foreign diseases in the hands of a central sanitary bureau rather than in those of individual States, the boundaries of which are ignored by the prevailing infection. More than once endeavours have been made to decide on some definite line of action as to yellow fever in the United States—conferences, inquiries, and conventions having been organised for that purpose. The more advanced sanitarians have long since come to the conclusion that the cause of yellow fever is specific, particulate, and endowed with the vital properties of growth and reproduction. There is not complete unanimity as to its conveyance from person to person, but it is very generally understood to be spread by means of fomites, and in this, and perhaps other senses, it is generally held that, whilst it is not contagious in the common sense of that term, it is portable and communicable. It is essentially to foul ships and filthy cities that yellow fever attaches itself, and though there is doubt as to the respective influence of vessel, freight, soil, sewerage, and sanitary circumstances generally, there is but little difference of opinion as to the value of cleanliness in all its varied aspects for preventing epidemics of the disease in countries like the United States, where the disease has as yet never acquired a permanent domicile. Isolation, disinfection, and depopulation, where these can be efficiently carried out, are perhaps the most potent measures for preventing the spread of the disease when once it appears. Thus far, isolation has been attempted under some form of quarantine. The system adopted has, as time has progressed, rather come to resemble the system of medical inspection advocated by the Vienna Conference than the Eastern quarantine; but it has failed over and over again. Some hold the view that, having regard to the imperative commercial necessities of the United States, such quarantine must always be doomed to failure, and that it is only whilst the panic of an epidemic, or the immediate recollection of it lasts that the public will tolerate any sufficiently

stringent regulations in this direction. Others contend that if a certain number of properly constituted quarantine stations were organised along the Atlantic and Gulf coasts of the States, instead of expecting each port to take care of itself in this respect, much greater efficiency and security would be the result. Hitherto it has been somewhat difficult to decide how far measures of restriction upon communication have succeeded, for when cessation has followed, apparently as the result of their adoption, it has more than once been a question whether the improvement has not been due to the advent of cold autumnal weather. But, on the other hand, the mere fact that yellow fever in the States ceases to extend with November cold, is regarded by some as strongly justifying the control which would be exercised by a system of medical inspection and detention, for the reason that though it might not be complete enough always to exclude infection, it would tend to delay its entrance, and the gain of a few weeks, or even less, would at times make all the difference between an epidemic and no extension of the disease. As to disinfection, few things are more difficult than the efficient and complete disinfection of a typical yellow-fever vessel, with rotten wood, warm, damp, confined air, and holds full of trunks, bales, &c.; but much by way of prevention can still be done in this direction. Depopulation is admitted to be an important remedy when the disease has extended on shore, and especially where the soil is favourable, from filth and otherwise, for the retention of the poison. But large towns and cities cannot be depopulated even at the public cost; and for this and other reasons set out, the real remedy against the spread of yellow fever must be mainly sought in the application of such sanitary measures to ships, docks, ports, and cities as will get rid of the soil in which the poison lives and propagates itself, afloat or on shore.

"ARE FRIENDLY SOCIETIES AND OTHER SICK CLUBS A DELUSION?"

THIS is the title of paper by Dr. Belcher, of Gloucester. The paper is unnecessarily long, consisting of sixteen closely printed columns. But it gives full expression to the feelings of a great many medical men on the abuses of club practice, or rather of that modern form of club practice known as the "Friendly Societies' Medical Association." Shortly put, the argument of Dr. Belcher takes this form: that people of means and property take shabby advantage of the sick club, which is essentially meant as a benevolent accommodation to those earning moderate weekly wages. He asserts—what, indeed, is notorious—that well-to-do people, tradesmen, owners of property, &c., who can well afford to pay the ordinary charges of a medical attendant, go into a club and claim the doctor's services for a few shillings a year. He argues that doctors see this, and that they would be something more than human if they did not resent it. To the answer that doctors are not compelled to take these appointments, and that after taking them optionally they are precluded from the right of complaint, he replies that they are virtually compelled to take them by the pressure of circumstances and competition. He is very forcible when he expresses his surprise at respectable mechanics countenancing such mean treatment of medical men. They know the value of good workmanship, and, excepting in this club question, are generous in their feelings, and thoroughly averse to bringing the remuneration of good work down to the figure dictated by the neediest members of their class. Dr. Belcher refers to the recent recommendations of the committee in the metropolis for investigating and reporting on the question of medical attendance on the working classes. There is little praise in his reference to the Metropolitan

Provident Dispensaries. But he approves the recommendations of the committee—first, in respect of the terms of attendance; secondly, in the recommendation of a strict wage limit; thirdly, in the charging of a penny for each prescription compounded. His great complaint is of the low terms offered by the Friendly Societies' Medical Association, and of the absence of a wage limit admitting members who own property or have means that would enable them to pay ordinary charges. Without assenting to all Dr. Belcher's statements, we think he has not unduly condemned the tendency painfully exhibited in late years to get medical service for nothing or on the meanest terms. We cannot acquit medical men who accept these terms so readily as Dr. Belcher does. If the medical profession does not protect itself in this matter, there is no external authority that can protect it. It can only protect itself by each individual practitioner remembering that he represents a learned and a liberal profession, and men who fail in this duty and accept large professional responsibilities on terms on which neither good medicines nor adequate attention can be given must not complain if they lose the respect of their professional brethren. The way in which this loss of respect should be expressed is a serious question which we shall not now stay to discuss. But we may another time have something to say about it, and also of the way in which it should not be intimated.

ARSENIC IN LEUCOCYTHÆMIA.

THE results of a careful investigation of the effect of arsenic on a case of leucocythæmia appear in the *Therapeutic Gazette*, No. 9, from the pen of Mr. G. A. Barton, late house physician to University College Hospital. In the case in question the blood contained 38 per cent. of red corpuscles, with one white to about every three red. On leaving the hospital, the red blood corpuscles were 46 per cent., and there was but one white to 400 red. Gamgee states that the number of white corpuscles after a meal is double that of fasting, and that this is not a progressive rise, but is at its maximum half an hour after meals. Mr. Barton confirmed this fact in the case of leucocythæmia also. The white corpuscles examined on the warm stage at a temperature of 91° F. showed movements as active as those of the white cells of normal blood. The arsenic was employed in large doses, nearly as much as a grain of arsenious acid a day being administered; pigmentation of the skin appeared, and a crop of carbuncles about the perineum; but to what precise cause the latter were due does not appear.

ART AND INVALIDS.

A CORRESPONDENT writes to direct our attention to an old and real grievance which continues to distress that large class of invalids who cannot walk. A Bath-chair or a tricycle may not, as a rule, enter the rooms of an art gallery or a museum, and a prohibitory custom also prevents their being utilised on railway platforms. The self-denial thus inconveniently imposed on their occupants is evident. We must admit, however, that we cannot as yet see in what way the difficulties of their condition can be effectually met. Take for example the case of museums. The turnstile system of checking the entrance and exit of visitors opposes an impassable barrier to the invalid. The stairs also present a serious obstacle. The space occupied by a wheeled vehicle driven along a corridor among show-cases, which are at the same time a source of interest to walking sight-seers, is another noteworthy consideration. Similar objections, modified by special circumstances, apply in the case of the railway station. We are well aware that these difficulties are not wholly irremediable, though their removal would imply in many cases a certain outlay. The con-

struction of an additional entrance would obviate the need of a turnstile. The walking public, we are sure, would readily share its present locomotive convenience with the crippled minority. We confess that we cannot quite see how the stair impediment, with its risks of serious accident, is to be overcome. This and the other matters natural to the subject may, however, be submitted to the judgment of the responsible officials whose part it is to consider any possible reforms. We feel for invalids in their present position, and are not hopeless that some at least of the inconveniences which now limit their means of recreation may by judicious management be removed.

THE BURG THEATRE AT VIENNA.

AUSTRIA is not generally considered to be a very forward country, and it is perhaps true that in many things it is a little behind the age. We must acknowledge, however, that Vienna has long been in the forefront of medical progress, and in the all-important department of preventive medicine it is taking a prominent place. The application of scientific principles to the construction of theatres is of the greatest importance to the health of those who frequent them either for amusement or in the course of professional duty, and the Viennese have lately given to the world an example of what a theatre should be, whether regard be had to its safety or wholesomeness. The new theatre, of which a detailed description was given lately in the *Daily News*, appears to have been planned more than twenty years ago by Baron Hasenauer. When the magnificent Opera House in the Ringstrasse was built, the first person to be consulted was the director of the Allgemeines Krankenhaus, from whom an opinion was sought as to the possibility of giving an audience fresh air, or at least pure air, to breathe. The ventilation of the new Opera House has been most successful, and hitherto it has been *facile princeps* in this respect among the theatres of the world. The new Burg Theatre, however, is said to surpass it. The air is sucked, by means of a fan from the Volks Garten, into a high subterranean corridor. Here it is both screened of dust particles and moistened by an elaborate apparatus. From the corridor this clean moist air is propelled into a circular room, in which, by an ingenious contrivance, the current is divided, half for the stage and half for the auditorium. Part of the air is warmed by passing through steam-heated cylinders, and in a room above the receiving room the hot and cold currents are mixed, and when the proper temperature is reached it passes through a great number of tubes to its destination. By means of over a hundred thermometers and anemometers the temperature and the amount of air entering every section of the house is at once ascertained, and the director of the ventilation, by means of a series of handles and cocks, can drive the air to any part of the house which is most in need of it. The air escapes from the roof and rises to a gallery at the very top of the house. The theatre is lighted entirely by electricity, there being some 5000 incandescent lamps; and, in case of a temporary failure of the electrical apparatus, there are lanterns provided with wax candles throughout the building. A theatre without gas is certainly a curiosity. We have often envied the last generation, who enjoyed seeing Garrick, the Kembles, and Kean in the comparatively cool atmosphere of a candle-lit theatre; but here we have the brilliant illumination of electricity, without even that small amount of fouling of the air which even a candle will produce. A good feature of the new theatre seems to be the separation of the staircases from the house. These are placed in distinct wings, and appear to be of most ample dimensions. The terrible catastrophe at the Ring Theatre some few years ago has been productive of good, as is seen by the various precautions taken against accident. The house is

constructed of incombustible materials, and even for the shifting of the scenes iron is exclusively employed. With the exception of the wooden floor to the stage, there is nothing combustible; and the scenery, except that in actual use, is kept at a depôt at some distance from the house. There is, it is needless to say, an iron curtain between the stage and auditorium; it is double, and if it be lowered with a jerk water flows between the double skins. It is difficult to see what more could be done than has been done in this really imperial theatre to secure the comfort and safety of the audience. The decorations are in every way worthy of the house, but a description of these is unnecessary in this place, although we may mention that the great Englishmen, Shakespeare, Garrick, and Edmund Kean, have (among others) inspired the decorative artists. It is doubtless owing to the fact that the Burg Theatre enjoys a State subvention, and is in fact a Government institution, that such lavish expenditure has been made in this magnificent attempt to obtain perfection. Our theatres, unfortunately, have not the public purse to dip into, but nevertheless we believe that private enterprise might safely provide many of the luxuries we have described. More fresh air and less gaudy decorations is what is wanted in our theatres. It should be added that the prices at the Burg Theatre in Vienna are, or used to be, very much below those of even our second-rate houses in London.

THE NEW ENTRIES.

THE following is a list of the fresh entries for the current winter session at the various medical schools from which returns have been received:—

	Entire course.	Special classes.	Prelim. Scientific.
St. Bartholomew's	108	20	*
Guy's	74	13	16
St. Thomas's	94	27	5
St. Mary's	71	40	—
London	78	42	—
University College	70	18	65
Charing-cross	50	17	1
Middlesex	59	37†	6
King's College	35	57‡	19
Westminster	16	7	—
St George's	31	2	—
Newcastle-on-Tyne	34	34§	—
London School of Dental Surgery	26	—	—

* Students for the Preliminary Scientific Examination are not counted as students of the hospital.

† Including 7 dental.

‡ Including 37 for the bacteriological course and 10 dental.

§ Including 1 dental.

ENTERIC FEVER AT KILHAM.

THE recurrence of enteric fever at Kilham in the Driffield rural sanitary district of the East Riding of Yorkshire claims the immediate attention of the sanitary authority. It would appear that no final remedy is practicable until a scheme of sewerage has been carried out, and owing to a difficulty in securing land for the outfall works, it is possible that compulsory powers of purchase may have to be exercised, which will involve a delay of about another year. But in the meantime the existence of the disease in connexion with the old-fashioned abominable midden-privy system should lead to a reform in the direction of the method of excrement disposal. Unless the sanitary authority are convinced that on the provision of a sewerage system waterclosets will become universal in Kilham—a most unlikely result in a Yorkshire village,—they should at once proceed to deal with all middens and privies causing nuisance, and secure their reconstruction on the principles explained and illustrated in the annotated edition of the

Model Bye-laws. And the principles embodied in these bye-laws, if not already in force, should at once be applied to all the more populous parts of the district. Such action on the part of the authority, together with the immediate organisation of a system for the scavenging of refuse under their own control, would certainly remove an obvious cause of enteric fever from their midst.

NON-LIABILITY OF PARENTS FOR CHILDREN OVER AGE.

MEDICAL men are constantly asked to see sons and daughters who are over age in the houses of their parents, and naturally look to the parents for the payment of their accounts. Now and again this expectation is disappointed. A case in point is reported in the *Leeds Mercury*. Mr. Horsfall sued in the County Court Mrs. Baines, of Church Cottage, Headingley, for attendance on her son over age, now dead. Mr. Horsfall had attended another son previously, and was paid by his executors. Mrs. Baines never said anything to lead Mr. Horsfall to doubt she would pay the bill. Indeed, she asked for some abatement, and he appears to have been willing to consider this. But on her suggesting to give £10 in full settlement of £18 18s., the plaintiff naturally declined. Thereupon she denied her liability, and Judge Greenhow has given a verdict in her favour, with costs, remarking that she had never made any promise to pay the plaintiff, and was therefore not liable. This may be law, but it is not justice, and cannot be very satisfactory even to the defendant. Let medical men take note of the judgment. Mr. Horsfall has acted more in the interest of the profession than his own in the suit, and he has been badly treated. He will, at any rate, have the thanks of the profession for making clear a point of law.

THE "B.P.C." UNOFFICIAL FORMULARY.

THE new edition of the Unofficial Formulary has evidently been the subject of much careful work. The very brief preface scarcely indicates this, since, although it makes mention of the addition of sixteen new formulæ, and draws attention to a suggested change in the mode of preparing an emulsion of cod-liver oil, to realise the labour expended, careful comparison with the issue of last year is needed. Among the additions we note the following: acetum ipecacuanhæ, elixir phosphori, elixir saccharini, extractum tritici liquidum, liquor ferri hypophosphitis fortis, syrupus codeinæ, syrupus ferri bromidi, syrupus ferri, quiniæ et strychninæ hydrobromatum, syrupus ipecacuanhæ aceticus, syrupus pruni Virginianæ, tinctura calendule florum, tinctura capsici fortior, tinctura euonymi, tinctura phosphori composita, and unguentum oleo-resinæ capsici. The elixir of phosphorus appears to be a convenient suggestion for the introduction of a solution of phosphorus. The elixir of saccharin is prepared by dissolving saccharin in presence of bicarbonate of sodium, and can be given in comparatively small doses; it takes the place of glycerine in the new emulsion of cod-liver oil, which also differs from the former emulsion in the employment of yolk of egg, and of essential oil of bitter almonds in place of oil of cassia. The formula for the liquid extract of triticum, from *triticum repens*, the couch-grass or dog-grass of the United States Pharmacopœia, will probably find favour as a diuretic and emollient preparation. The strong solution of hypophosphite of iron can be employed by itself, but it is also introduced in the preparation of the compound solution of hypophosphites, and in the compound syrup of hypophosphites. The liquor hypophosphitum compositus was formerly designated liquor ferri hypophosphitis compositus, but the method of preparation has been somewhat modified. Another change

is to be noted in the solution of coal tar, where the alcoholic solution of quillaia bark is prepared as required, instead of appearing under a separate heading. It is a satisfactory comment upon the work of the committee that this tincture of quillaia and the syrup of the hypophosphites of calcium, manganese, and potassium are the only formulae that have been omitted in this new issue. The utility of the Unofficial Formulary has this year been enhanced by the publication of an interleaved copy in a limp linen cover. As a relief from the "incubus caused by the use of remedies of secret composition," this little book merits the attention of prescribers and dispensers, and reflects great credit upon the members of the Formulary Committee.

POST-EPILEPTIC STATE.

DR. HUGHLINGS JACKSON returns to his favourite study of evolution in the nervous system in the current number of the *Journal of Mental Science*. "There are three levels of evolution; the highest centres, popularly called mental centres of the cerebral system, make up the highest level, and this level is only a most complex evolution out of the middle level, as the middle is a less complex one out of the lowest, and as the lowest is a least complex one out of parts of the body, which parts that lowest level represents most nearly directly." By the expression "parts of the body" is here meant all parts other than the nervous system, and they make up the lowest level of the whole organism. In the amoeba, which possesses no structure worthy of the name of a nervous tissue, there is no complexity, no three levels; we have here only a dead level throughout, each molecule being its own nervous representative, and therefore representation is of the most perfect and accurate description. As differentiation proceeds, representation becomes less perfect as regards the individual units, but more useful to the entire organism; the nervous system is a representation on the utilitarian principle of the greatest good for the greatest number. The epileptic process begins in some part of the highest cerebral centres, and when the fit is a severe one all the levels are greatly involved; the peripheral effects, which are the convulsion and its equivalent, are directly dependent on discharges of the lowest level. The post-epileptic condition, supposing the fit to have been a severe one, is the sum of the after-effects of discharges of all the levels, and must be regarded as some universal paralysis or loss of power of the nervous centres. It follows that the paralysis, though universal, is not complete, and is not equal in the different levels or at different parts of the same level. In post-epileptic mania, the lower levels are engaged in producing movements, and these are engaged subordinately to all that is left intact of the highest level.

THE POST-OFFICE AND IMMORAL LITERATURE.

THE postal authorities of Sydney have taken energetic action with regard to the distribution of indecent publications, by interrupting the transit of letters and obscene broadsheets relating to a questionable specific. The method of the chief offenders in this matter was a singular one, and practically entailed for its success a species of involuntary collusion on the part of the postal department. After desiring their correspondents to address communications to the private post-office box of a firm with which they had no connexion whatever, they had the impudence to request the postal officials to forward letters &c. found in the said box, and directed in their names, to themselves. The Postmaster-General naturally objects to become responsible for the conveyance of these filthy communications. He has therefore had a number of the letters in question opened and returned to their writers as "dead," and refuses to forward any more such without prior examination. The mind of

the public in this country—and likewise, it would appear, in Australia—is awaking to a just sense of the difference between liberty and licence in matters of this kind. Legislation of a restrictive character could only be regarded in the light of a deliverance, and we cannot wish for it a truer keynote than that supplied by the resolution of the Sydney postal department.

Next of kin to the disgusting trash, by means of which an education in vice is carried out, are the penny histories of murder and felony which abound on many bookstalls. The ruinous effects of this kind of reading cannot be denied. If proof of its actual influence be required, we need only point to the recent confessions at Tunbridge Wells. Such dangerous productions are simply so many manuals of instruction in crime, and their efficiency as such has been proved to demonstration in the case referred to. Surely after this no lover of liberty will question the need of an authoritative censorship which will purge the land of these disastrous publications.

THE BENTLEY TESTIMONIAL.

AT the opening meeting of the session of the Pharmaceutical Society the President gave a report of certain proceedings which had resulted in the Bentley Testimonial. Professor Bentley, like Professor Redwood, had, after nearly forty years' teaching, found it necessary to retire, and some of his old pupils and friends had desired to present him with a token of their esteem. This had assumed the form of a portrait and a purse, and Mr. Plowman, the secretary and treasurer, was asked to state more fully the result. The latter said that the movement was a complete success, and the President was asked to accept, on behalf of the Society, a portrait in oils, by Mr. Arthur J. Foster, of their old friend and teacher. The portrait was now in the Examination Hall for the inspection of the members and subscribers, and the President was also asked to present Professor Bentley with a purse of 300 guineas as a mark of personal esteem. The President accepted the portrait, which will be placed on the walls of the institution, side by side with those of other distinguished men, where it will perpetuate the memory of Robert Bentley, when, in the inevitable course of things, the Society and his friends can no longer enjoy his personal presence.

PULMONARY SURGERY.

THE case read at the Clinical Society by Dr. Pasteur at its first meeting presents features of pathological and operative interest. A male child aged seven developed gangrene of the right lung, chiefly involving the upper and front parts. The physical examination detected signs of a large cavity, and from this the boy expectorated gangrenous material. As improvement in the child's condition was not manifested under stimulant and antiseptic treatment, Dr. Pasteur asked his colleague, Mr. Bilton Pollard, to open and drain the cavity. The incision was made at the seat of the most marked signs of a cavity in the second right interspace, and the knife almost at once entered the abnormal space, for the pleura were firmly adherent and almost no thickness of lung existed between the pleura and the cavity. The finger introduced into the opening detected a large space reaching downwards to the sixth right rib, where it was judged advisable to make a counter-opening, so as to secure free drainage. The cavity was cautiously syringed and washed out with a solution of boracic acid. The child began to mend at once, and for ten days afterwards, when signs of failure set in, and proved to be chiefly due to pericarditis, which the necropsy showed had extended from the gangrenous lung. The pathological interest of the case consisted principally in the mode of origin of the gangrene. Careful dissection and inspection proved that a fistulous tract placed the

œsophagus in communication with the right bronchus close to the tracheal bifurcation. Many suggestions of the mode of origin of this fistula presented themselves for consideration, but the view that a fish-bone or such-like body had perforated the œsophagus and led to the bronchial fistula seemed most probable. The presence of a congenital diverticulum of the gullet is also worth mention.

HEALTH OFFICERS AND THE LOCAL GOVERNMENT ACT.

IN another column we publish the letter of a correspondent ("W. W. H."), who is unduly apprehensive of the effects of the Local Government Act upon existing medical officers of health. This letter is based upon a wrong impression of the scope of the section to which he refers; we would therefore, for the convenience of those who have not a copy of the Act, point out, firstly, that the requirement of possession of a certificate in sanitary science or public health is limited to those officers who have not during three consecutive years before Jan. 1st, 1892, held office in relation to a population of 20,000 as enumerated at the last census. Secondly, this requirement is still further limited to those seeking appointments after that date. The total number of men thus affected will not, therefore, probably be great; but, under any circumstance, we cannot sympathise with the proposal of our correspondent that universities and colleges should make presents of certificates, which, it must be recollected, certify to the possession of knowledge, without proper steps being taken to ascertain that this knowledge really exists.

VOLUNTEER MEDICAL SERVICE.

THE committee appointed by the Secretary of State for War to consider what steps should be taken to render effective the Volunteer Medical Service (including, we presume, the questions raised by the recent Warrant establishing an Army Medical Reserve of Officers and the objections raised to it) is now, we understand, sitting and taking evidence. The following are the members of the Committee:—Colonel Henry Eyre, C.B., M.P., 4th Volunteer Battalion, the Sherwood Foresters, (Chairman); Major-General A. I. Lyon Freemantle, C.B., Deputy Adjutant-General for Auxiliary Forces; Sir Thomas Crawford, M.D., K.C.B., Director-General, Army Medical Department; Colonel Howard Vincent, C.B., M.P., the Queen's Westminster Rifles; H. T. De La Bere, Esq., Deputy Accountant-General; Surgeon-Commandant A. T. Norton, 1st Division, Volunteer Medical Staff Corps; Surgeon-Major William Robert Smith, M.D., 3rd Volunteer Battalion, the Queen's Own (Royal West Kent Regiment); and Charles Morton, Esq., (Secretary).

A REFUGE FOR AGED OUTCASTS.

LAST week we noted with satisfaction a scheme brought forward by Mr. Barnardo for the better accommodation of the street Arabs in the east-end of London. Almost simultaneously comes a proposal of a somewhat similar kind, which aims at establishing a night refuge for aged outcasts. In founding such institutions, one is perhaps too apt to ignore the needs of age and to think only of those who are beginning life, and whose power for evil, whether taken in or given forth, is greater in proportion to their younger energies. There is, however, no reason why both young and old should not be included in this beneficent work, and, as a matter of fact, substantial aid has already been rendered to the former. The claim of the aged is for several reasons a valid one. By affording them the needed shelter we abate somewhat the sum of homeless misery which abounds

in every city; we make some provision for their moral welfare, and lessen in proportion the influence of their vicious example on their juniors; and, lastly, we offer, in a very limited measure it is true, that physical comfort the want of which in a cold season is for them very commonly a fatal privation. The sum which the Bishop of Bedford asks for in support of his scheme is £2000, no great matter for the most prosperous community in the world. It is worth giving on the score of charity, and the hardest economist will be gratified to find it repay him somewhat by a saving in the rates.

A NEEDFUL LESSON.

THE magistrates of Bootle had a painful duty to perform last week. Two persons were brought before them for reckless conduct in removing from infected houses clothing and bedding which had been used by fever patients. The first offender was a coal-porter, who took the infected articles from a room where his child had died from scarlet fever to another house. The second was a poor woman who had pawned a quilt to buy food for her fever-stricken son. In both cases nominal fines were inflicted. The magistrates undoubtedly took the proper view of these cases, for the Public Health Act is before all things educational, and in these pitiable cases where ignorance was pleaded, it was sufficient to teach the lesson that such conduct must, in the public interest, receive punishment. But we would desire to submit to the inhabitants of Bootle, and indeed of all other towns, the consideration whether this ignorance is not a reproach to themselves. So much good has been done by local sanitary associations, by recognising that the education of the people is the basis of public health administration, that we would desire to see such societies constituted in every part of the kingdom. In Bootle the local authority will, we trust, be at pains to make these convictions known to every inhabitant of the town, otherwise the effect of the punishment which has been inflicted will be lost; but this could best be done if working with them were a body of lay helpers such as we have mentioned.

ROYAL COLLEGE OF PHYSICIANS.

THE lecturers at present appointed for 1889 are as follows:—Gulstonian, Dr. Tooth; Croonian, Dr. Brunton; Lumleian, Dr. John Harley; Milroy, Dr. Arlidge.

PENALTY ON A CHLOROFORMIST.

ACCORDING to recent intelligence from Sydney, a death from chloroform has been followed by somewhat serious consequences for the medical man in charge. A lawsuit undertaken by the husband of the deceased has resulted in a verdict of guilty and an award of £200 damages, on the ground that the anæsthetic was improperly administered and that the patient was subsequently neglected. We have not at our disposal the data necessary to enable us either to affirm or to question the justice of this decision. We merely mention the incident as one which is fitted to remind our readers of the need of care, and the responsibility which in every case attends the use of anæsthetics. It teaches the importance of remembering that accusations of malpraxis may at any time be preferred by bereaved relatives in the event of accident. Such a proceeding would usually be a purely vexatious one, and would serve no useful purpose. As such it would find but little favour in a court of law. Still we must always bear in mind that the unexpected may happen, and the case we have quoted shows that adverse decisions in such cases are by no means impossible. It particularly impresses the necessity of obtaining the intelligent consent of any respec-

sible relatives before employing an anæsthetic, and also of adhering strictly to rule in its administration, so as to leave no possible avenue for injurious reflections.

THE HARVEIAN ORATION.

THE meeting at the Royal College of Physicians on the occasion of the Harveian Oration was curiously different from those of former years. The resolution with regard to academical dress was by no means universally observed, and perhaps influenced the attendance, which appeared scarcely equal numerically to the audience ordinarily present. The Oration, in spite of its length, was highly interesting and suggestive, although the validity of some of the steps by which Dr. Latham reached his conclusions might not be quite evident to the whole of his audience. The arrangement of the Library was new, the speaker addressing the audience from the end instead of the centre; but Dr. Latham's strong voice and clear delivery proved equal to the occasion.

MEETING OF THE GENERAL MEDICAL COUNCIL.

THE Council will meet on November 27th, not on the 21st, as has been erroneously stated. In addition to the business affecting the Register, the reports of the inspectors appointed under the Act of 1886 will engage the attention of the Council.

FOREIGN UNIVERSITY INTELLIGENCE.

Giessen.—Dr. Löhlein has been invited to succeed Professor Hofmeier in the chair of Gynecology.

Kharkoff.—Professor T. Obolenski has been transferred from the chair of Special Pathology to that of Therapeutics, vacated by the death of Professor Lashkevich. Dr. Shiltoff, *privat docent*, has been promoted to be Professor Extraordinary of Special Pathology.

Vienna.—Professor Bamberger, having obtained leave of absence for the present winter session on account of his health, the duties of his chair will be undertaken by Dr. Ed. Neusser.

At the recent Bologna Congress of Hygiene the discussion of Dr. Sorra's report on the prevention of syphilis was very animated. Signor Crispi's Contagious Diseases Act was assailed on two grounds—first, that it did not attain its prophylactic object; and, secondly, that, even if it did, it was an intolerable violation of the liberty of the subject. Ultimately it was agreed that, prostitution being the principal medium of the spread of syphilis, Government should exercise surveillance over "unfortunates"; that these should be compelled to inscribe their names in the register kept *ad hoc*; that sanitary inspection of them should be practised periodically or at brief intervals; and that dispensaries sufficient in number should be established for their benefit. The syphilicemia now in working should, it was further resolved, be maintained.

On Saturday last, Dr. William Thelwall of Farndon, near Chester, was presented with the bronze medal of the Royal Humane Society, for his gallant conduct in jumping into the river Dee and rescuing a man who attempted to commit suicide in the river, and found to be in an unconscious state.

We are glad to learn that the injury inflicted by a prisoner in Kirkdale Gaol on Dr. Barr is yielding favourably to treatment at the hands of Mr. Chauncy Pusey and Mr. Damer Harrison. There appears to be no danger of deprivation of the use of the hand through severance of the tendons.

THE prevalence of measles at Bootle, near Liverpool, has assumed serious proportions. The school authorities are endeavouring to prevent any further spread by excluding scholars from infected houses, and, if this partial measure does not succeed, it is expected that the sanitary authority, acting under the powers given to them by the Education Code, will require the complete closing of the schools for a definite period.

DR. GRAILY HEWITT has been elected Honorary Fellow of the American Gynecological Society.

REPORT OF THE LANCET Analytical Sanitary Commission ON EGYPTIAN CIGARETTES.

FOR some time past stories have been in circulation in regard to the noxious effects produced by the smoking of Egyptian cigarettes. These have been intensified by a letter which lately appeared in a morning contemporary under the signature "Medicus," and by the correspondence which followed upon it. The authority of "Medicus" was promptly impeached by the officers of the hospital from which his letter was dated. The interesting letter from our Cairo correspondent, which we printed on Sept. 29th, showed the utter improbability of some of the statements made, not only by "Medicus," but by several writers who followed him. Nevertheless, the practice of cigarette smoking has increased so much of late, and cigarettes imported from Egypt have become so popular, that we thought it right to undertake an experimental inquiry into the matter. We therefore purchased from London tradesmen cigarettes of five well-known brands, and submitted them all to most careful analysis. We think that the samples selected may be regarded as fairly representative.

The charges brought against imported Egyptian as distinguished from other foreign cigarettes, and from cigarettes made in England, are mainly these: 1. That they contain opium, or some other foreign and deleterious substance. (In the epistle of "Medicus," he asserted that he had found in foreign cigarettes "a large proportion of opium and an unclassified alkaloid.") 2. That the paper used in the manufacture contains arsenic, or copper, or chlorine. 3. That the tobacco consists in part of the Smyrna variety known as "Solouk," or "Aya Solouk," which is coarser, stronger, and more irritating to the throat than genuine Turkish. 4. That in consequence of one or more of the above defects Egyptian cigarettes are apt to produce malignant throat diseases.

Our experiments were directed to the solution of the first two of these questions, and as far as they went they were conclusive. They were conducted as follows, and the results were in every case identical. 1. The tobacco was examined under the microscope with the greatest care. In no case was any trace of foreign leaf or foreign substance discovered. 2. The tobacco was exhausted with dilute acetic acid, and the filtered extract treated with lead acetate. The precipitate was decomposed by hydrogen sulphide and again filtered. The concentrated filtrate gave no colour with ferric chloride, showing the absence of meconic acid; it contained, of course, much malic acid. The liquid filtered from the lead precipitate was freed from lead by hydrogen sulphide, and from nicotine by the ether method, and was then tested for morphine in the ordinary manner. Not a trace was detected. In other experiments the nicotine was removed by distillation in a current of steam. No alkaloid remained behind. 3. The paper of the cigarettes was next examined. No arsenic could be found, even by tests of the utmost delicacy. We do not say that arsenic was absent, but we are able to assert with confidence that a dozen of the cigarettes did not contain as much as 1/100th of a grain of the poison.

With regard to copper the case was different. We found

a minute trace of the metal in all the papers. There is nothing remarkable in this. Copper is often found in the ash of paper, and in this case its presence is easily accounted for. Each cigarette had a metallic label upon it, and the metal which had been used was the ordinary copper alloy. The fine powder of imitation gold is easily disseminated, and probably the trace of copper found in the paper, even when the label had been cut off, was due to this source. The presence of copper is of no real significance, for its quantity is very small and the metal is not volatile; but the force of prejudice is strong, and we should advise manufacturers to avoid in future the use of this material.

As to the absurd suggestion of chlorine being present in the paper, it is only necessary to say that not a trace was contained in any of the samples we examined.

It only remains to be said that the cement used in closing the cigarettes was in every case starch, as was shown by the iodine test. To this no possible objection can be made.

Having disposed by the unerring method of analysis of all other charges against Egyptian cigarettes, we must consider the very important allegation that the throat irritation so often complained of is due to the admixture of the Salouk tobacco of Smyrna. Analysis does not help us here, but we have made careful inquiries from persons of experience, and have convinced ourselves that our Cairo correspondent has given a correct account of the Egyptian cigarette industry. It is admitted on all hands that the Smyrna leaf, or, at any rate, the tobacco known as Salouk, is not only cheaper, but is more pungent and irritating to the throat than genuine Turkish tobacco. The flavour of Salouk is peculiar, and to some is agreeable; critical cigarette smokers detect it at once. But it seems evident that continued use of it is attended with risk, and that the slightest sign of throat irritation should warn the smoker to change his cigarette, if not to abandon it. There appears to be nothing akin to adulteration in the Egyptian cigarettes of the best makers. All is a question of the selection, or, as wine merchants would call it, the blending of the tobaccos. The alleged addition of opium is not only most improbable, in view of the very high price of the drug, but is disproved by chemical analysis.

Summing up the results of our investigation, we report as follows. The Egyptian cigarettes which we have examined are made from genuine tobacco. No foreign substance, and particularly no opium or "unclassified alkaloid" (whatever that may mean), is added. The paper and the cement are pure, the only possible objection being the trace of copper we found in the ash, which is probably due to the metallic lettering. Some proportion of Smyrna tobacco is commonly incorporated with the Turkish, which is always used. If this Smyrna or Salouk tobacco is present in excessive quantities, the throats of some persons, if not of all, will be affected injuriously. It is probably safer to avoid it. Doubtless there are smokers who enjoy the Salouk flavour, as there are coffee drinkers who like an admixture of chicory. The smoker must select his cigarette for himself; and we trust that in this case, as in so many others, the forewarned will be forearmed. Let it be remembered that tobacco, to say nothing of opium, is not grown in Egypt. The Egyptian manufacturers select and blend their leaves, and, to judge from the popularity of the cigarettes, they do so with great skill. In future they will probably be more careful in the use of Salouk, as every motive urges them to retain and extend their trade. Physicians will do good service by watching the effects upon their patients of cigarette smoking. If they find that the change from Egyptian to Turkish or English cigarettes removes unpleasant throat symptoms, there will soon be a definite condemnation of Salouk tobacco.

BRITISH INDIA.

THE statistical abstract and the annual report on the Moral and Material Progress of India do not convey to their readers the impression that the administration of India has been particularly successful in the year 1886-7. The period has indeed been marked by disturbances in Burmah and its neighbourhood, for which the Government cannot be held primarily responsible, but in parts remote from this centre of disturbance come reports of what cannot be regarded as satisfactory results of our administration,

and perhaps the worst feature of the official review is the easy optimism with which it records facts of serious and unpleasant import. Thus we find a marked increase of crime explained with apparent satisfaction on the ground that "the courts have not the same prestige as formerly among the common people; and an exaggerated belief in the power of pleaders to secure acquittal of offenders appears to prevail. The bulk of the criminal work is now done by native magistrates, who, though fully capable, seem, in many cases, to err in too great readiness to acquit or to pass inadequate sentences." If these criticisms are well founded, they ought to serve as the ground of a serious effort to remedy what is assuredly a grievous defect and serious weakness of the administration, instead of being put forward as affording a satisfactory alternative to the explanation that there is an increase of criminality on the part of the people.

Equally unsatisfactory, as it seems to us, is the official optimism in view of the very high rate of mortality which prevails in Indian gaols. In Madras and in the North-west Provinces and Oudh the statistics of criminal mortality show, what we are accustomed to in England, a lower death-rate prevailing in prisons than among the general population. Not only does the careful regimen of prison life conduce to this result, but the absence of infants and the paucity of the numbers of persons extremely old exercise a powerful influence in the same direction; while more influential still in sophisticating the numerical record is the humane practice of releasing from custody prisoners whose health has given way in confinement. All these influences act, as we presume, upon the Indian convict community; but, with the exception of the two Provinces which we have just named, all exhibit the strange phenomenon of a death-rate among the occupants of the prisons exceeding, and in most instances largely exceeding, that of the general population. Thus in Lower Burmah the prison death-rate is as high as 61 per 1000, while that of the general population does not exceed 15. In Assam the one is 64, the other 28; and in the Central Provinces a prison death-rate of 65 is recorded, with a general death-rate of 33. It is of course easy to suggest speculative explanations, as that the registration of death among the general population is very inefficient and incomplete. That may be so, but it is at least plain that in the cases which we have named the prison death-rate is abnormally high. It would be much more satisfactory to learn that the authorities in India, sensible of the importance of improving upon these very unsatisfactory figures, were resolutely taking in hand the improvement of the sanitation of their prisons, rather than that they are resourceful in the simple art of throwing discredit on the figures which they have produced.

In the practice of vaccination some progress, if slow, appears to be annually made. The Indian populations have a sufficiently constant and near acquaintance with small-pox to value prophylactic measures, which some more enlightened, or at least more privileged, communities do not. Little by little the use of this preventive is spreading over the vast continent, and although we may feel impatience that its progress is but slow, we may hope that eventually it will make the fell disease against which it is employed as scarce and as harmless in India as in England.

OUR ARMY.

THE general annual return of the army for 1887 shows the average strength of all ranks, including colonial corps, to have been 209,574: of these, 106,767 were employed at home and 102,807 abroad. The average strength of non-commissioned officers and men was, exclusive of colonial corps, 199,420; of these 1909 died and 2566 were discharged as invalids, being respectively in the ratio of 9.57 and 12.87 per 1000. There were during the year 10,668 men, or 53 per 1000, transferred to the First Class of the Army Reserve. The number of recruits enlisted during the year was 58,645, of whom 18,001 were "rejected prior to attestation," presumably on medical inspection, being 307 per 1000; and 2003, or 34 per 1000, after attestation, probably for military reasons. Of the whole number, only 31,234 joined the army, or 533 per 1000 enlisted. Of those who joined, 12,575, or two-fifths of the whole, were between eighteen and nineteen years of age, and 20,048, or nearly two-thirds, were under twenty, being

very slightly in excess of the proportion in the preceding year. Of the recruits who joined, 19 died and 16 were invalided within three months of the dates of enlistment; these numbers give an annual ratio of 2.48 and 2.12 per 1000. The total loss from these two causes in three months amounted to 1.15 per 1000. If we may judge of the physique of the recruits by their weight, there has been an improvement compared with the preceding year, the proportion under 120 lb. having been 182 as against 187, and above 130 lb. 467, as against 439 per 1000. The composition of the army as regards age on January 1st, 1888, was as follows:—Under twenty, 156 per 1000; from twenty to twenty-five, 497 per 1000; from twenty-five to thirty, 223 per 1000; thirty and upwards, 124 per 1000. So that nearly two-thirds of the men actually serving were under twenty-five years of age. As regards nationality, there were 745 English, 85 Scotch, 157 Irish, and 13 colonials and foreigners per 1000 of force. As regards educational acquirements, 22 per 1000 could neither read nor write, 13 per 1000 could read but not write, 13 could write but not read, 99 could read and write only, and 853 per 1000 were reported as "better educated."

In addition to the Regular Army, there was an average force of 48,950 men of the Army Reserve. Of these 351 died, or 7.17 per 1000; but it is quite possible that the mortality may be understated, as 1801 were struck off the strength for absence, some of whom in all probability had died, but their deaths had not been reported. The ages of the men composing the Army Reserve were: under thirty years, 596; from thirty to thirty-five, 304; from thirty-five to forty, 25; and over forty years, 75 per 1000; so that nine-tenths of the Reserve are under thirty-five. The men under forty almost all are in the First Class, and, with a few exceptions, those over forty are enrolled pensioners. The average strength of the Militia, exclusive of the permanent staff, appears to have been 109,603, of whom 431, or 3.84 per 1000, are reported dead; but, as during the year 10,288 deserted or were struck off as absentees, it is very probable that this is considerably under the actual death-rate. The number of enrolled Volunteers is stated at 226,752, and among them 776 deaths were reported, or 3.42 per 1000, but we fear little reliance can be placed upon all the deaths having been reported.

HEALTH OF THE METROPOLITAN POLICE.

THE report of the Chief Surgeon, Mr. A. O. MacKellar, M.D., F.R.C.S., shows the average strength of the force in 1887 to have been 13,488, exclusive of the men employed in the outlying dockyard divisions. The number of cases of sickness among them during the year was 7339, and of deaths 69, being in the ratio of 544 and 5.16 per 1000 respectively. The average daily number on the sick list was 336.8, and on sick leave 26.1, giving together the proportion of 26.83 per 1000 constantly non-effective from sickness. These ratios compare favourably with previous periods. In 1880 the cases were 622, the deaths 6.41, and the constantly sick 31.69 per 1000. The cases and mean sick are much lower than in the Household Cavalry and Foot Guards, but the death-rate is higher than in the former and nearly identical with that of the latter. The proportion of men at the higher ages, however, is so much greater in the Police Force as to vitiate any comparison of the mortality. The report does not give any information respecting the ages of the men, but a comparison of their length of service with that of the Foot Guards, as stated in the Adjutant-General's annual return, shows that the age-distribution of the two bodies must differ very materially. Thus, in the Police Force the proportion per 1000 of strength under five years' service is 342, five and under ten years 222, ten and under fifteen 163, fifteen years and upwards 274; while in the Foot Guards the proportion is 768, 140, 47, and 45 at these periods respectively.

As formerly, pulmonary diseases have been the most fatal, the deaths from them having amounted to 2.74 per 1000, or upwards of half the total mortality. It is worthy of remark that only 6 deaths are recorded under the head of injuries, 3 accidental, and 1 suicidal drowning, 1 suicidal cut throat, and 1 "fractured skull, laceration of brain, kicked by his horse."

During the year 391 men were removed from the force in

consequence of being incapacitated by sickness or long service. Of these, 73 were discharged to pension for age, long service, and debility, leaving 318, or 23.68 per 1000, invalided for medical causes, of whom 26 were not entitled to pension or gratuity. Of the others 88 were unfit from rheumatism and gout, 72 from pulmonary disease, and 39 from the direct results of injuries.

There is considerable difference in the amount of sickness which occurs in the various divisions. In Whitechapel it reached 80 per cent., in Paddington 77, in Holborn and Finsbury 74, in Southwark 68, in Marylebone 66, and in the Thames division 61. The lowest ratio, with the exception of the Commissioner's Office, was 33 in the Woolwich division, and next to it 35 in the Greenwich. The causes of the marked difference in the divisions seem to deserve investigation by the Surgeon-in-chief.

Mr. MacKellar reports the introduction of a course of lectures to the police on ambulance subjects. These were in the first instance delivered by himself, but afterwards undertaken by Dr. Waters of the C Division. The results are stated to have been very satisfactory, and instances are given in which valuable assistance was rendered by constables who had gone through the course. Considering the exposure which the men undergo in all sorts of weather, and the risks they run from accidents in the discharge of their duty in the crowded streets and from the violence of drunkards and of the criminal classes, this report shows a very satisfactory condition of the force as regards health; and the low rates of sickness and mortality afford good evidence of the care taken by the medical staff in the discharge of their professional duties.

SIX AT A BIRTH.

WE have received from Dr. Francesco Vassalli of Lugano a detailed account of the remarkable case of delivery of six fetuses at a birth, concerning which we recently published a brief note. The mother was a countrywoman, aged thirty-six, living at Castagnola, near Lugano. With the exception of a sister who had been delivered of twins, there was no family history of any abnormality. She had been married two years to a healthy countryman, aged forty-one, a widower with ten children. He reported that five of his cousins had each had twins. Towards the end of the first year of matrimony the mother was delivered of a healthy child at term, whom she nursed until the eleventh month, when she again became pregnant. Menstruation had recommenced at the seventh month, but appeared in December for the last time, and its arrest was followed by the ordinary sympathetic disturbance and morning vomiting. The great dimensions speedily assumed by the abdomen led to some uneasiness, and were accompanied by frequent desire to micturate and obstinate constipation. Still there was no oedema of the lower extremities or external genitals, but from the severity of the vomiting the patient wasted considerably and became anemic. Towards the fourth month the gravid uterus appeared the normal size at full term, and some slight oedema of the ankles appeared. On the morning of the hundred and fifteenth day she was suddenly surprised by a sudden discharge of fluid from the vagina. A midwife called in hastily found the foot of a fetus projecting from the vulva, and had very little trouble in completing its birth by slight traction. Dr. Vassalli was then summoned, and noted an absence of fever and a generally satisfactory condition. The os appeared somewhat softened and dilated. On abdominal palpation, numerous small fetal projections were observed, although no active movement or fetal pulsation could be detected. The patient passed a good night, and, feeling perfectly well the next morning, got up to perform her ordinary household work. Towards the middle of the day she suddenly had a severe shivering fit, with lancinating pelvic pain. Rigors being frequently repeated, Dr. Vassalli thought it advisable to induce labour, especially in view of the violent pain and hæmorrhage and the weakness resulting from frequent vomiting. Puncturing the membranes with an ordinary darning-needle, he had little difficulty in extracting a second fetus, and then became aware of a third, fourth, and fifth fetus, which were successively extracted. Uterine contraction did not follow, and much anxiety was caused by the adherence of the

placenta and by some hæmorrhage. Three other doctors from Lugano arrived, and one of them, not without difficulty, removed the placenta, when a sixth fetus was found, still surrounded by membranes. During the tedious delivery, which lasted seven hours, the patient was much excited and in great pain, but she subsequently made a complete recovery. Collectively the fetuses weighed 1730 grammes, ranging from 305 grammes to 240 grammes. Their length varied from 22 centimetres to 26 centimetres.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kingston-upon-Hull Urban District.—The annual death-rate from all causes in Hull was 18·9 per 1000 during 1887. Amongst the zymotic group of diseases, 2 from small-pox, 67 from scarlatina, 123 from measles, 11 from diphtheria, 29 from continued fever, and 217 from diarrhoea are recorded. As regards diarrhoea, it is stated that the investigations carried out tend to prove that the mortality is greater in thickly populated districts, where ventilation is impeded, and where the subsidiary drains are choked with sewage. During the year, 377 patients were admitted into the isolation hospital, and Dr. Mason notes that the continued increase in the number of admissions and the willingness of parents and guardians to notify cases of disease are a guarantee of the popularity of the hospital and of the beneficial effects it has exercised upon the community. The average stay of each patient in hospital was forty-six days, the average cost per day being 1s. 11d., amounting to an average of £4 8s. for each patient during the whole period of isolation. A detailed account is given in the report of the various matters in which sanitary progress is extending, and reference is made to the fact that the river Humber is now for sanitary purposes and for the prevention of imported diseases under the control of the joint port authority of Hull and Goole. There is also reference to the somewhat extensive work which is necessary in the borough and port in connexion with emigration; no less than 62,802 emigrants being inspected upon their arrival and departure.

Kensington.—Dr. Dudfield's report on the health and sanitary condition of the parish of St. Mary Abbott's, Kensington, during 1887, extends far beyond the limits of that parish; indeed, about a hundred pages are taken up with questions which, affecting the metropolis as a whole, have some bearing on the requirements of each division of London. These questions are very largely concerned with the measures for preventing the spread of infectious diseases, and they include matters relating to the general policy and practice of the Metropolitan Asylums Board, to the danger which may be anticipated of the spread of scarlatina by the milk of diseased cows, to the need for ambulance services for land and river, to the desirability of a system of notification of infectious diseases, &c. Nothing new is stated on these points, the references to them being rather in the nature of an extended summary of the current information available concerning them. Coming to Kensington proper, it appears that the general death-rate for 1887 was 16·4 per 1000, and that there was some excess of zymotic diseases. As to small-pox, it appears that a new departure has been taken by the Kensington guardians, who have made arrangements for a supply of fresh calf lymph for vaccination purposes, to be ready at the public station on the appointed vaccination days. What these arrangements are is not stated, and hence it remains to be seen how they will compare with the corresponding ones at the public station in Lamb's Conduit-street, which is open to the general public twice a week. Sanitary legislation, prospective and past, the attitude of the Metropolitan Board of Works as to the disposal of sewage, the state of the metropolis as regards water supply, and other allied matters are also dealt with, and a certain portion of the volume contains an account of the current sanitary work in the parish. Its special interest lies mainly in its forming a report in which the requirements of the metropolis as a whole are indicated, and in which is contained an annual account of the progress made in regard of some of the more important public health matters which affect Londoners generally.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5816 births and 3777 deaths were registered during the week ending Oct. 13th. The annual rate of mortality, which had been 18·3 and 18·2 per 1000 in the preceding two weeks, rose last week to 21·0, a higher rate than has prevailed since April last. During the thirteen weeks of last quarter the death-rate in these towns averaged 16·9 per 1000, and was 4·0 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 11·9 in Derby, 16·8 in Bristol, 17·2 in Birmingham, and 17·8 in Brighton. The rates in the other towns ranged upwards to 27·3 in Preston, 28·0 in Bolton, 28·5 in Huddersfield, and 35·7 in Manchester. The deaths referred to the principal zymotic diseases, which had been 569 and 505 in the preceding two weeks, further declined last week to 461; they included 184 from diarrhoea, 76 from measles, 62 from whooping-cough, 55 from scarlet fever, 45 from diphtheria, 38 from "fever" (principally enteric), and only one from small-pox. No death from any of these zymotic diseases was registered during the week in Plymouth; while they caused the highest death-rates in Wolverhampton, Salford, Huddersfield, and Portsmouth. Diarrhoea showed the greatest mortality in Norwich, Wolverhampton, Portsmouth, and Preston; measles in Huddersfield; whooping-cough in Manchester, Derby, Cardiff, and Huddersfield; scarlet fever in Blackburn; and "fever" in Salford. The 45 deaths from diphtheria in the twenty-eight towns included 28 in London, 5 in Manchester, 3 in Newcastle-upon-Tyne, 2 in Bristol, and 2 in Nottingham. Small-pox caused one death in Hull, but not one in London or in any of the twenty-six other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital did not contain a single small pox patient at the end of the week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 983 at the end of the week, against numbers increasing in the preceding seven weeks from 774 to 921; 119 cases were admitted during the week, against 132 and 92 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding six weeks from 130 to 239, further rose last week to 311, and exceeded the corrected average by 20. The causes of 71, or 1·9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bradford, Blackburn, Wolverhampton, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Oldham, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·6 and 17·0 per 1000 in the preceding two weeks, rose to 20·4 in the week ending Oct. 13th; this rate was, however, 0·7 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 10·1 and 14·4 in Greenock and Perth to 21·7 in Glasgow and 37·1 in Paisley. The 516 deaths in the eight towns showed an increase of 87 upon the number in the previous week, and included 18 which were referred to diarrhoea, 14 to measles, 11 to whooping-cough, 8 to diphtheria, 5 to "fever" (principally enteric), 4 to scarlet fever, and not one to small-pox; in all, 60 deaths resulted from these principal zymotic diseases, against 57, 54, and 45 in the preceding three weeks. These 60 deaths were equal to an annual rate of 2·4 per 1000, which was 0·2 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhoea, which had been 29, 23, and 18 in the preceding three weeks, were again 18 last week, of which 5 occurred in Glasgow, 4 in Edinburgh, 4 in Dundee, and 3 in Paisley. The 14 fatal cases of measles, of which 12 occurred in Paisley, showed a further increase upon recent weekly numbers. The 11 deaths from whooping-cough included 9 in Glasgow, and also showed a marked increase upon the numbers returned in recent weeks. The 8 deaths referred to diphtheria were, within one of the number in the previous week; 6 occurred in Glasgow. The

deaths from "fever," which had been 8 and 4 in the previous two weeks, were last week 5, and included 2 in Glasgow and 2 in Paisley. Three of the 4 fatal cases of scarlet fever were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 74 and 76 in the previous two weeks, rose last week to 100, and exceeded the number in the corresponding week of last year by 17. The causes of 67, or 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 18.5, 24.4, and 23.3 per 1000 in the preceding three weeks, was 23.6 in the week ending Oct. 13th. During the thirteen weeks of last quarter the death-rate in the city averaged 20.1 per 1000, the mean rate during the same period being 16.2 in London and 15.5 in Edinburgh. The 160 deaths in Dublin last week showed an increase of 2 upon the number in the previous week; they included 13 which were referred to diarrhoea, 7 to whooping-cough, 3 to "fever," 2 to scarlet fever, and not one either to small-pox, measles, or diphtheria. Thus 25 deaths resulted from these principal zymotic diseases, against numbers increasing from 18 to 37 in the preceding four weeks; these were equal to an annual rate of 3.7 per 1000, the rate from the same diseases being 2.2 in London and 1.4 in Edinburgh. The deaths attributed to diarrhoea, which had increased in the previous six weeks from 7 to 19, declined last week to 13. The deaths from "fever," which had been 2 and 7 in the preceding two weeks, declined again last week to 3; while the 7 fatal cases of whooping-cough and the 2 of scarlet fever corresponded with the numbers in the previous week. Four deaths from violence and 8 inquest cases were registered; and 48, or nearly a third, of the deaths occurred in public institutions. The causes of 15, or more than 9 per cent., of the deaths in the city were not certified.

THE SERVICES.

Surgeon-General D. A. C. Fraser, M.D., has succeeded Surgeon-General J. Sinclair, M.D., as Principal Medical Officer at Malta, and Surgeon-Major J. L. Notter, M.D., has been appointed Professor of Military Hygiene at the Army Medical School, Netley, in succession to the late Professor De Chaumont, F.R.S.

ARMY MEDICAL STAFF.—Brigade Surgeon Jas. Inkson, M.D., to be Deputy Surgeon-General, ranking as Colonel, vice R. A. Chapple, deceased (dated Sept. 4th, 1888); Brigade Surgeon James Jameson, M.D., to be Deputy Surgeon-General, ranking as Colonel, vice E. H. Roberts, placed on temporary half pay (dated Sept. 14th, 1888); Surgeon-Major Joseph Ridge Greenhill, F.R.C.S. Eng., to be Brigade Surgeon, ranking as Lieutenant-Colonel, vice J. Inkson, M.D. (dated Sept. 4th, 1888); Surgeon-Major Charles Alfred Atkins, to be Brigade Surgeon, ranking as Lieutenant-Colonel, vice L. Corban, M.D., retired pay (dated Sept. 12th, 1888); Surgeon-Major Francis Howard, M.D., to be Brigade Surgeon, ranking as Lieutenant-Colonel, vice J. Jameson, M.D. (dated Sept. 14th, 1888); Surgeon-Major William Patrick Smith is granted retired pay (dated Oct. 17th, 1888); and Surgeon-Major James Scanlan, M.B., is granted retired pay (dated Oct. 17th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Acting Surgeon Edwin John Hunter, 3rd Volunteer Battalion, the Hampshire Regiment, to be Surgeon, ranking as Captain (dated Oct. 17th, 1888).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon St. Lawrence French-Mullen, M.D., has been placed on the Retired List of his rank at his own request (dated Sept. 23rd, 1888); Mr. Herbert N. Sweetnam, to be Surgeon and Agent at Skull.

VOLUNTEER CORPS.—*Artillery*: 1st Northumberland: Acting Surgeon H. S. Baumgartner, M.B., is appointed Surgeon (dated Oct. 17th, 1888). *Rifle*: 5th (The Hay Tor) Volunteer Battalion, the Devonshire Regiment: Charles Henry Wade, Gent., to be Acting Surgeon (dated Oct. 17th, 1888).—3rd Volunteer Battalion, the Queen's Own (Royal West Kent Regiment): Allan Macfadyen, M.D., to be Acting Surgeon (dated Oct. 17th, 1888).

THE HONOURABLE ARTILLERY COMPANY OF LONDON.—The following announcement is substituted for that which appeared in the *London Gazette* of the 5th inst., regarding the undermentioned Officer:—Surgeon-Major Peter Yeame Gowlland retires into the Veteran Company, with the honorary rank of Brigade Surgeon, and has permission to wear his uniform on his retirement.

Correspondence.

"Audi alteram partem."

SHAKSPEARE AND HARVEY.

To the Editors of THE LANCET.

SIRS,—The letter of Mr. Litchfield and your interesting article thereon in THE LANCET of Oct. 13th are a very welcome change from the series of complaints with editorial comments on ridiculous questions of professional etiquette which so frequently disfigure the pages of the medical journals nowadays, questions which might easily be avoided by the exercise of a little of that brotherly spirit which is said to irradiate our profession, but which seemingly exists only in introductory lectures. Verily many such appellants virtually cry out with honest Dogberry, "But, masters, remember that I am an ass; though it be not written down, yet forget not that I am an ass." The question of the source and origin of our great poet's medical knowledge is a very interesting one; to us especially so, for, could we elucidate it, it would throw much valuable light on the question of medical education at that period, and the means and facilities (if any) which laymen possessed of gaining a peep behind the scenes in the medical schools. It is true that we are checked on the threshold by our ignorance of the details of our poet's every-day life, but, noting the care which lay writers of the present day take to master the medical details (with such success as is proportionate to their intelligence) which are necessary for their purpose, may we not infer by analogy that Shakspeare sought and took every means to give truth to his sketches? That he was possessed of such knowledge as could be gained by reading the available anatomical &c. treatises of the period is proved by the extracts already quoted, and that he must also have had opportunities of learning the practice of medicine is shown, I think, by the following extract from "Measure for Measure," act ii., scene 4:—

ANGELO: "O heavens!
Why does my blood thus muster to my heart,
Making both it unable for itself,
And dispossessing all my other parts
Of necessary fitness?
So play the foolish throngs with one that swoons;
Come all to help him, and so stop the air
By which he should revive."

What modern lecturer could give better instruction? Other and similar passages will doubtless be remembered by readers of our poet; but that he knew nothing of the circulation of the blood "beyond the glimmering knowledge which preceded the clear discovery of Harvey" I agree with you, SIRS, for is it not conclusively shown by the following extract from "Love's Labour's Lost," act iv., scene 3:—

BIRON: "Why, universal plodding prisons up
The nimble spirits in the arteries."

Herein is seriously enunciated a theory, peculiar, though universally accepted at the time he wrote (*circa* 1594), but justly ridiculed by Harvey in the Proem to his "Anatomical Exercises." Be it noted that the *veins* only are spoken of in connexion with the *blood* and *heart* in the aforesaid extracts, whereas to the *arteries* are allotted the *spirits* in the last-mentioned one.

The statement, however, that the discovery was "not announced, and, for the matter of that, not made until after the poet's death," demands special notice, for of the possibility of Shakspeare in his latter years hearing rumours, if not gaining more direct information, of the researches of Harvey, I have little doubt; though, by-the-by, I cannot remember any passage in our poet that indicates any knowledge of the valves in the veins which his contemporary, Fabricius, had demonstrated to our anatomist; but, perhaps you, SIRS, or some of your readers, can enlighten me thereon.

What are the facts? Harvey returned to England in 1602, fresh from the demonstrations of Fabricius, and full

of enthusiasm for further research caused by the tantalising half-light thrown on the circulation of the blood by the discovery of the immortal Paduan; and I think there can be no doubt that from that time till his appointment to office in the Royal College of Physicians of London in 1615 he was diligently pursuing his anatomical investigations. Though he does not specify any date for the commencement of his studies of the motion of the heart, yet in chap. i. of his "Anatomical Exercises" he clearly indicates that he was so occupied for some considerable period, for he writes: "*At last, using daily more search and diligence, by often looking into many and several sorts of Creatures, I did believe I had gain'd the motion and use of the heart, together with that of the arteries, which I did so much desire: Since which time I have not been afraid, but privately to my friends, and publicly in my Anatomie Lectures, to deliver my opinion.*" Moreover, the reasons which he gives later on for publishing his work indicates that some considerable time again elapsed between his final determination that he was right in his discovery and the actual date of publication (1628). So that I think it is not at all impossible (of the probability I leave others to judge) for our "Sweet Swan of Avon" to have heard in his retreat at Stratford some preliminary rumbles of the advancing storm which shook Warwick-lane to its foundations. I remain, Sirs, yours faithfully,

LEONARD K. H. HACKMAN, L.R.C.P. Edin.

Portsmouth, Oct. 15th, 1888.

FOOTBALL ACCIDENT CALLED "THE POPE TAKEN."

To the Editors of THE LANCET.

SIRS,—I have had such frequent experience of the condition of "pope," which Mr. Wherry described in his interesting communication in your issue of Oct. 6th, that I hope I may be allowed to endorse his explanation of its causation. It is, as he says, "produced by a sharp blow," generally from the knee of an antagonist, "upon the front and outer side of the thigh," and near to the middle of its length. I believe that, for the usual effect to be produced, the muscle (quadriceps) must be in a state of extreme contraction at the moment of impact, and that, as a result, a sort of temporary paralysis of the muscle fibres is caused. That there is no direct injury to a nerve is probable from the very short duration of the effect, and that little actual lesion occurs is shown by the rarity of the occurrence of any considerable bruising. So far as my personal and professional experience allows me to judge, the after effects are little more than a slight subcutaneous bruise and some stiffness in the muscle at the site of injury which rarely lasts more than three or four days. I am, therefore, surprised to see Mr. Wherry's statement, that it is followed by effusion into the joint, and can hardly imagine that this results from the same injury as that whose effects he has so accurately described.

The accident occurs more frequently in the Association game than that of the Rugby Union, but I have made inquiries of the leading players in both games at Oxford, and find that their accounts of the accident and its effects entirely coincide with the above description.

Mr. Clement Dukes in his letter of last week has, I think, confused several accidental lesions with the one described by Mr. Wherry, and principally that rupture of some portion of the fascia lata which occurs just as does the "lawn tennis leg" in persons who are, from age or want of training, not in the best physical condition. I have had several cases of this casually sent to me, not only from among lawn tennis and football players, but from among athletes to whom the accident has happened while practising on the cinder path, where no blow could possibly have occurred.

I am, Sirs, yours faithfully,

JOHN H. MORGAN,

Grosvenor-street, W., Oct. 1888.

Late President, O.U.A.C.

To the Editors of THE LANCET.

SIRS,—Having several times "had my pope taken" during the twelve years or so I played football, I was glad to see Mr. George Wherry directing attention to it in your columns, especially as I have never previously seen any mention of this well-known accident in medical literature. In my experience, in Rugby Union football a man "gets his pope taken" not so often by a "hack" or kick, as by

the knee, or sometimes heel, elbow, or other projecting part of friend or foe, getting heavily pressed into the mass of muscles in front of the thigh. This may occur during a "scrimmage," as when several "men are down" together. This injury is also more likely to occur when the player's own leg is fully flexed, causing tension of the fibres of the quadriceps. A player is also apt to get his "pope taken" when collaring a man "running" straight at him. No doubt the accident may be caused by a kick, but this is more likely to occur in Association football, in which game the ball is often kicked at when higher in the air than in Rugby. However caused, it is, I think, simply a more or less severe and deep contusion of the muscles in the front of the thigh. If severe, there may be, of course, some effusion into the knee joint or bursal cavities. The symptoms are: rather severe, cramp-like pain at the moment of causation; temporary inability to move the leg; then inability to walk or run, except with the leg stiff. If not severe, a player generally finishes out the game fairly well; but next morning he is very stiff, and has to walk with a limp for a few days. There is also considerable tenderness on even slight pressure over "the pope." Discolouration of the skin usually shows itself a few days after the accident. If severe enough to require treatment, the best is rest and support followed by passive movements and massage. I doubt whether pads would be of any use in preventing this injury. I am an advocate, however, for light thin "shin" guards (as sold made up with split cane, whalebone, &c.) being worn, under the stockings if preferred, especially if the skin of the shin is already abraded. I have once seen a case of troublesome periostitis set up by repeated hacks on the same place. As to the true orthography of the word I know nothing. I have heard it generally described as "being popped," or more usually "had my pope taken." As to derivation, in my own mind I always thought that from its situation in the leg it had some relation to the pope's eye in a leg of mutton. The term is not a local one, as it is, I know, used in Hertfordshire, Surrey, Cornwall, Devon, and in Scotland, though less in Scotland.

I am, Sirs, yours obediently,

Dulwich, Oct. 9th, 1888. GEORGE B. BATTEN, M.D. Edin.

THE TREATMENT OF PUERPERAL SEPTICÆMIA.

To the Editors of THE LANCET.

SIRS,—Dr. McBean's case of Puerperal Septicæmia is a most interesting one. May I be permitted to supplement it with another somewhat similar?

Some time ago I attended a lady, aged twenty-nine, in her third confinement. Although her general health was very good, her puerperal history was decidedly bad. After the birth of her first child she had a rather profuse hæmorrhage. Her second labour was precipitate and attended with a most terrible and dangerous flooding; she was pulseless and unconscious for several hours. Her third confinement took place on May 7th. I remained with her throughout the labour, which was completed without any serious loss of blood. All went well for two days, when on the 9th she had a slight rigor. Quinine was at once ordered and the vagina was systematically washed out with permanganate solution. After this no particular anxiety was felt until the afternoon of the 11th, when I was hastily summoned, to hear that she had just come out of a very severe rigor. The temperature was 103.2° and the pulse 115. Finding the os uteri patulous, I immediately passed a soft elastic tube up to the fundus, and gently but thoroughly washed out the cavity with warm permanganate solution. The returning fluid was carefully examined, but nothing special was discovered. At 8.30 P.M. the temperature had fallen to 100°, and the next morning it was normal. Then for a week the temperature ranged between 99° and 100°, except on the evening of the 16th, when it suddenly rose to 105°, to as soon fall again to the previous level. After this it remained normal. The convalescence was uninterrupted; but for some months there were pain and tenderness in the region of the left broad ligament, and some swelling of the left foot and ankle after standing or walking. The history of the case shows, I think, that septic infection had already commenced.

If while congratulating Dr. McBean on the successful issue of his case I may be allowed a few words of criticism, I would suggest that it would have been better had he performed the *toilette* of the uterus on Dec. 16th instead of

delaying it until the 20th. Perhaps, also, that, short of absolute necessity, it would be better not to inflict fresh wounds in the presence of so much septic material; and, lastly, that in such cases the mere washing out of the vagina is little better than waste of time.

I am, Sirs, your obedient servant,

FRANCIS T. TAYLER, M.B.

Lewisham High-road, S.E., Oct. 16th, 1888.

MEDICAL OFFICERS OF HEALTH AND THE LOCAL GOVERNMENT ACT.

To the Editors of THE LANCET.

SIRS,—Next April the new County Government Act comes into force. Under the provisions of that Act many medical officers of health who do not possess certificates in sanitary science or public health will lose their appointments. It is generally considered a simple act of justice that Acts of Parliament in Great Britain should not have retrospective action. It is evident, however, that this particular Act is to be an exception to this just and fair rule, and that in consequence many medical men who have made themselves fully competent to act under the Public Health Act, and have probably given up general practice, are to be driven out of their appointments, and treated by an act of their country's Legislature in a very unjust and arbitrary manner. As no redress is to be got from Parliament, and in order to counteract this act of injustice, would it not be becoming and gracious on the part of the Colleges from which each medical officer of health obtained his diploma to present all holding office at the date of the passing of the obnoxious Act with the necessary "certificate"? Many of these men have probably arrived at ages when to pass an examination is an ordeal both undignified and derogatory.

I am, Sirs, yours truly,

Oct. 17th, 1888.

W. W. H.

THE TEACHING OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—I regret that Mr. Silk, in replying to my letter of the 22nd ult., should state that I advocate "the indiscriminate use of chloroform." It is a groundless assertion. Mr. Silk further asserts that in America "the administration of ether is almost universal." Mr. McGuire, addressing the Virginia Medical Society in October, 1887, says, "In the Southern States chloroform is principally used." I quoted the statistics of Messrs. McGuire and Chisolm on account of their large experience of chloroform as an anæsthetic, and also because their names are known and respected wherever surgery is practised.

Mr. Silk recounts some instances of local prejudice and hysterical legislation against the use of chloroform, such as took place in the New England States. Dreading that similar results might, from your condemnation of the medicine, follow in these countries, I wrote my protest of the 22nd, and I am glad to see I do not stand alone on the question. I object to the creation of a prejudice that would restrict me in the choice of a therapeutic agent. Let the blame be fairly bestowed and not always cast on the drug, when it frequently should be thrown on the incompetent administrator. We do not condemn opium when an overdose has been prescribed, nor assert that had chloral been used the patient would now be living; neither do we cry out against the general use of the drug.

I am certain THE LANCET would not approve of a law coercing a surgeon to use an anæsthetic other than that which commended itself to him as the most suitable; neither would it acquiesce in the condemnation of a surgeon by a coroner's jury who might arrogate to itself the right of deciding on the relative merits of ether and chloroform. I believe THE LANCET would in no uncertain tone advocate the surgeon's right to select his anæsthetic untrammelled by legislative interference, and undeterred by coroner's juries; but once let the prejudice get hold of the public, and your demand for justice for the profession will fall on the ears of those deafened by prejudice both to reason and argument.

I have had personal experience of ether, chloroform, and the A.C.E. mixture, and I prefer chloroform, and I appeal

to your sense of justice not to raise a prejudice against an anæsthetic which I consider best for my patients, and the one with the use of which I operate with the least anxiety. Teach the public that chloroform is a dangerous anæsthetic, and you make it so, by producing a dread of it in the patient's mind. Suppose chloroform driven from the field by prejudice, what anæsthetic will replace it for operations on children, in midwifery, patients suffering from renal and pulmonary and asthmatic troubles, and in those suffering from arterial degeneration?—in all of which cases Dr. Dudley Wilmot Buxton, anæsthetist in the University College Hospital, author of "Anæsthetics, their Uses and Administration," published this autumn, considers ether unsuitable.

I fully agree that it is a necessity to teach students to administer anæsthetics, and I believe, if they are properly taught, the mortality from chloroform anæsthesia will become almost nil. I do not advocate the indiscriminate use of chloroform or any other therapeutic agent, but I protest against the unqualified condemnation of so valuable and, I believe, so safe an anæsthetic.

I am, Sirs, yours truly,

Lower Gardiner-street, Dublin, Oct. 6th, 1888. GEORGE FOY.

Our correspondent is perfectly right when he says we should deprecate any legislation which dictated to a surgeon what anæsthetic he should employ. Every surgeon ought to be a fit judge of the matter, and should, we unhesitatingly assert, select ether for his routine anæsthetic, falling back upon the A.C.E., or some mixture containing chloroform when ether is contra-indicated. We cannot create a prejudice against chloroform, for that agent has already abundantly prejudiced most persons by its dangers. Education in anæsthetics will do much to lessen the death-rate, but, as we pointed out, chloroform deaths have occurred in the hands of the most expert—e.g., Snow, Clover, &c.,—and in cases where no question of overdosing could have arisen. Mr. Foy says: "We do not condemn opium when an overdose is prescribed"; but, we may indicate, we do condemn opium in forms of renal disease, and avoid its use. The moral points itself: let chloroform be condemned in all cases where the consensus of experience has shown that a safer anæsthetic can be given.—ED. L.

DEATH UNDER CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Anent the recently and oft-repeated statement of the "safety of chloroform as an anæsthetic," I have the misfortune to place on record an additional fatal case, and this after an experience of nearly twenty years of hospital and general practice and an attendance at several thousand administrations.

The particulars of the case are as follows. The patient, a youth of fifteen years, the subject of phimosis, and on whom circumcision was about to be performed, was, to all appearances, in good health. The stethoscope revealing no contra-indication to the administration of chloroform, the patient having been carefully prepared for the operation, and there being at hand a hypodermic syringe charged with ether and also a bottle containing nitrite of amyl, the anæsthetic was commenced on a Skinner's inhaler. The administration proceeded satisfactorily for fully fourteen minutes, two drachms of chloroform having been used, when, the patient slowly showing signs of anæsthesia, I substituted the A.C.E. mixture; my reason for so doing was that I did not perceive any increase in the pulse. The administration of this mixture for five minutes (nineteen minutes in all) sufficed to ensure sufficient anæsthesia for the commencement of the operation, and, to my surprise, on the first touch of the knife the patient exhibited what I thought were signs of pain—viz, raising both his hands as if about to interfere with the operator. Having taken the conjunctiva as my test, and not wishing to push the anæsthetic before assuring myself of its absolute necessity, I again resorted to that test, to find that it was still anæsthetic, and that the pupil was dilating to an extraordinary extent. The face during this short space of time became congested, and the upper extremities were in a state of clonic spasm, of little amplitude (more after

the character of a severe tremor), and highly suggestive of an epileptic seizure. This state of affairs continued probably not more than fifteen seconds, to be succeeded by complete loss of pulse and respiration, with pallor of face. Now up to this very time the pulse and respiration gave not the slightest indication for anxiety, and as corroborative evidence of the condition of the circulation the operator had to deal with a spouting artery. I must mention that the cutting part of the operation was completed coetaneously with the occurrence of the urgent symptoms—fifteen seconds' duration. The subcutaneous injection of ether (already at hand), the exhibition of nitrite of amyl, cold affusion, artificial respiration, and the galvanic battery availed nothing. It was noticed during the time artificial respiration was employed that the pupils would slowly contract, and this appeared more perceptible when the nitrite of amyl was used. There were in all some five or six of these pupillary contractions, but at no period was there any return of the apex beat. In conclusion, I may say that had I not been carefully noticing the condition of the pupil I should have had no warning from either pulse or respiration. I am, Sirs, yours faithfully,

Bolton, Oct. 9th, 1888.

ROBERT PATRICK, M.D.

WORK IN ASYLUM BOARD HOSPITALS.

To the Editors of THE LANCET.

SIRS,—In your leading article of last week on the work of the Asylums Board, in referring to my report, you make the criticism that "we are surprised to find him say that a weekly examination of the urine in ordinary scarlet fever cases is regarded as sufficient." Permit me to point out that this conclusion, and the criticism based upon it, are not warranted by the words of my report; for I expressly state in the context of Table A that "it has been the invariable custom to examine every patient's urine at least once a week, and in special cases more often than this."

I am, Sirs, yours faithfully,

Western Hospital, Fulham, Oct. 17th, 1888. R. D. R. SWEETING.

THE ALPINE CLIMATE IN PHTHISIS.

To the Editors of THE LANCET.

SIRS,—Will you allow me space for a few remarks on Mr. Lowe's article in a recent number of THE LANCET on the Climate of Davos in Phthisis?

Mr. Lowe may consider himself a fortunate man, and it is not surprising that he rejoices in, and wishes to impress others with, the means by which he regained his health. He, however, seems to imagine that, because Davos snited him, therefore it must suit everyone else in a similar condition, which is very far from being the case even after eliminating those cases which are manifestly unfitted for the climate. Now I also can speak from experience, having spent nearly a year in Davos and in the Engadine, and I should, indeed, have stayed longer if the climate had not been *killing* instead of curing me. I do not, therefore, speak without adequate experience of the climate, as he charges Drs. Quain and Pollock of doing, and I unhesitatingly affirm that there are numerous cases even in an early stage to whom it proves harmful instead of beneficial, and that, if this is even suspected, such patients should not endeavour to stay there with the hope of its ultimately suiting them, as they are only too frequently encouraged to do, with most unfortunate results. If it is the intense cold which the constitution of the patient is unable to withstand rather than the altitude (and as it is the latter which is the important factor in curing the disease, as is proved by equally good cures being obtained in high altitudes in warm climates, and by the absence of phthisis even in large towns if situated at a high altitude—e.g., the town of Mexico), it would be far more judicious for the patient to descend at once to a warmer climate—e.g., the Riviera; and then to again try Davos or the Engadine in summer. I myself went there during the summer in an early stage of the disease, and also felt some of the benefit Mr. Lowe mentions he obtained, my temperature lessening, my appetite returning, and so on; in fact, I progressed very satisfactorily until the cold weather came, which was to effect the complete cure, instead of which it immediately brought on complications which did me more harm than any benefit I otherwise

obtained. Though I was as careful as I possibly could be, I got four attacks of pleurisy and one attack of congestion of the lung, and finally profuse and persistent albuminuria. I know several cases in which this latter effect has been produced, and an eminent London physician has informed me he has seen several cases in which albuminuria has apparently been produced by a winter's residence at Davos.

I am, Sirs, yours truly,

Madeira, Oct. 10th, 1888.

H. COUPLAND TAYLOR, M.D.

"GROUPED COMEDONES."

To the Editors of THE LANCET.

SIRS,—On reading Dr. Thin's description of the above subject, it occurs to me that a short note of two cases I have lately seen would be interesting. On Saturday last two boys, brothers, aged about ten and eight, came to my out-patient room at the Sussex County Hospital, saying that they had ringworm. Each proved to have a group of comedones on the forehead: on the right side in the elder boy, on the left in the younger. Both were circular patches, and one was a perfect ring with clear centre. The coincidence struck me as curious.

I am, Sirs, yours faithfully,

Brighton, Oct. 16th, 1888.

T. JENNER VERRALL.

MANCHESTER.

(From our own Correspondent.)

OWENS COLLEGE.

THE College has now got to work again in all its branches. The medical department was, as already noted in your columns, opened by an inaugural address by Dr. Ross on the 2nd inst., which was marked by a depth of thought and philosophical speculation which would not have been out of place either in subject or treatment at the Church Congress which commenced its sittings the same week in this city. In passing, it may be noted that the said Congress was one of the largest and most successful hitherto held, and some of the subjects under discussion, notably that on cremation, had a special interest for members of the medical profession. Principal Greenwood, speaking at the introductory lecture to the department for women in the College, stated that eight ladies had passed the preliminary or matriculation, two the intermediate B.A., and four the final B.A. examinations during the past year. The winter session of the evening classes was opened last night by a lecture from Mr. Tait, assistant professor in history. An important announcement was made that in the forthcoming session not only would the chemical laboratory be open for the use of evening students, but also the new engineering, biological, and physical laboratories, as well as the library—a boon which will undoubtedly be appreciated by those whose studies are perforce carried on when their ordinary day's work is over. Professor Hare, the newly-elected professor to the chair of surgery, was accorded a very favourable reception, considering what strong feeling was exhibited by the students at the time of his appointment. He is an able lecturer, and bids fair to become a popular one here. Dr. Paterson, before leaving Manchester to take up his duties as professor of anatomy at Dundee, was publicly entertained by numerous friends as a mark of their esteem during the five years he has been demonstrator at the College. At the same time that Dr. Paterson goes to Dundee another old Manchester student leaves that University to go to Aberdeen; Dr. Carnelly, who received his training under Sir Henry Roscoe, having been recently appointed Professor of Chemistry to the latter University. It almost seems that the Whitworth munificence is without end. It is but a week or two since that details were given in this column of charitable bequests to the amount of nearly £40,000; and at the late meeting of the court of governors it was announced that £25,000, in addition to that already given to the College, had been received from the Whitworth legatees towards the building fund; and, still further, an offer was made to the College of a valuable site for a new hospital, with £35,000 for building the same and an endow-

ment towards the necessary funds for maintaining it of £1000 per annum. As you have already commented on this gift, I need only remark here that to the College medical school it is a matter of the first importance; the proximity of the new hospital to the College will be appreciated by every medical student; by means of it the College will be able to confer upon its professors and teachers of medicine and surgery important hospital appointments, so that the theory and practice of teaching shall go hand in hand, and we shall not again be troubled with the undesirable spectacle of ill feeling and friction between the College authorities and those having the control of the hospital wards, where these students must obtain their practical bedside instruction. In every way the importance to the future of the Manchester School of Medicine of this proposal can scarcely be over-estimated.

MANCHESTER AND SALFORD ONE CITY.

The agitation which for some months has been in progress, and which has the support of a large number of influential gentlemen, for the amalgamation of the neighbouring borough of Salford with Manchester proper, has advanced a stage. The committee appointed in May last presented their report yesterday at a public meeting, and it was decided that, in all respects, it was desirable that the union of the two municipalities should be brought about, and steps are to be taken to induce the respective corporations to obtain powers to amalgamate. Possibly an important medical question will now stand in abeyance for a time—namely, the provision of a new fever hospital for Salford. At the last meeting of the Salford Town Council another site was proposed for this, and a resolution was passed authorising the purchase of a site of thirteen acres at £1000 per acre; but as there is considerable opposition to the scheme we shall probably hear more of it before being carried into effect. If the two corporations become one, there is but little doubt that all fever patients will be sent to Monsall Hospital, and, still further, that the question of the transfer of this hospital from the infirmary to the proper health authorities of the district would then doubtless soon come to the front.

ROYAL INFIRMARY.

The election for the post of assistant physician to the infirmary, to fill the vacancy caused by the promotion of Dr. Ross, resulted in the appointment of Dr. Harris, the youngest of the six candidates. Dr. Harris is an old Manchester student, who, after a very successful career as a student here, continued his studies for some time afterwards in Germany. For upwards of three years he has held the post of pathologist to the infirmary, and is also assistant physician to the Consumption Hospital.

Oct. 16th, 1888.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE AND GATESHEAD.

THE winter classes are now in full operation in the new building of the University of Durham College of Medicine. I believe Dr. Oliver had the pleasure of giving the first lecture in it. The number of new entries for the present session is as follows: thirty-four for the full course, thirty-three for the year of residence required for the degrees in medicine, and one for the dental course, making in all sixty-eight.—I hear that the amount subscribed for the Luke Armstrong Memorial approaches £600.—The report of the medical officer of health for the last fortnight shows that there is still a prevalence of scarlet fever in Newcastle, thirty-seven cases having been notified to him by practitioners. In reference to the last outbreak of scarlet fever in the Jesmond district, several of the dairymen suffered much loss through having their milk destroyed, and they have made an application to the Town Council for compensation. It is to be hoped that this will be favourably considered, for it would much help the suppression of an epidemic diffused by milk if the dairymen knew they would suffer no pecuniary loss by reporting and stopping the supply. I believe that there is a good deal of scarlet fever now existing on the Gateshead side of the Tyne, but as there is no notification in any form existing there it is difficult to

get at the figures. The Gateshead practitioners are believed to be unfavourable to a notification Act, at least to one that would leave the onus of reporting to them.—I regret to notice the death of an old and respected practitioner, Mr. Robert Davis, of Wrekington House, Gateshead, on the 8th of this month, in his sixty-fourth year. Mr. Davis was an M.R.C.S. and L.S.A. He was at one time deputy coroner, surgeon to the Gateshead Dispensary, and medical officer for the south district of the Gateshead Union. Mr. Davis had rendered signal service during the cholera epidemic at Gateshead, and was himself prostrated by the disease twice. He had a very extensive field for practice, but he once told me that his father had the practice before him at a time when he was the only surgeon between Gateshead and Durham city. Mr. Davis had suffered for some time from bulbar paralysis, for which he was attended by Dr. Philipson and his own sons, two of whom are in the profession. He has also left a widow and a large family of sons and daughters. His funeral took place on the 11th, and was the occasion of the expression of much esteem for his memory by friends far and near.

STOCKTON.

At a meeting of the Stockton Hospital Committee, held last week, the question of the extension of the hospital was considered. It is thought that, with the great increase of men at work now in the town, the present accommodation will very soon fall short of its requirements.

AMBULANCE WORK IN THE NORTH.

Surgeon-Major Hutton has been at work in the north for some time. Last week he addressed a meeting at the extensive colliery works of Ashington, near Morpeth, and explained the history and objects of the St. John Ambulance Association, and the benefits to everyone from understanding a few simple rules. The lecture was very interesting, and resulted in the formation of a class of sixty men.

Newcastle-on-Tyne, Oct. 17th.

EDINBURGH.

(From our own Correspondent.)

OPENING OF THE WINTER SESSION.

THIS year the medical classes in the University have met nearly a fortnight earlier than usual. As the classes in the Faculty of Arts will not be opened until the 24th inst., Sir William Muir does not until then give his Principal's address, so that the work in the various classes has got into full swing on the first day of the session. In only a few of the classes was there any regular introductory address given, and where the general rule was departed from the lecturers so arranged their matter that it should have some special bearing on the subject of the course. There are no changes in the professorial staff this year, as, fortunately, there is no obituary record.

THE EXTRA-MURAL MEDICAL SCHOOL.

In the Extra-mural School there are several young recruits to the body of lecturers. Dr. Alexander James, who last year retired from the lectureship on Physiology on his appointment to the infirmary, now lectures on Practice of Physic, Dr. C. Watson MacGillivray lectures on Surgery at Surgeons' Hall, and Dr. Hodsdon has commenced a course of lectures on Surgery at Minto House. Both these last-named gentlemen made use of the occasion to give special addresses to their students and the friends and colleagues collected to hear them. Dr. MacGillivray spoke of the development of the teaching in the Surgeons' Hall, referring especially to the new dissecting rooms and laboratories connected with the departments of Anatomy, Physiology, Pathology, &c. Many celebrated men, he said, had carried on the teaching within the College walls, and some, though few, still continued with them. Medical science, like their colleagues, did not stand still; consequently the conditions of student life were now very different from what they were when he was a student. With all the alterations and additions to the subjects which they had to study, there was no corresponding rearrangement of the curriculum. The only way in which the problem of how to get through their work could

be even partially solved was to give as much time as possible to practical work, the knowledge resulting from which, unlike that derived from books, was always available. Dr. Holsdon devoted his first lecture to the causes, results, and surgical treatment of empyema, basing much of his argument on the results of experiments and observations made by himself.

REPRESENTATION OF THE EDINBURGH AND ST. ANDREWS UNIVERSITIES.

It is said that at the meeting of the Liberal Association of the Edinburgh and St. Andrews Universities, held this afternoon, a committee was appointed to approach Mr. Erichsen to see whether he would again contest the seat, should he be desired to do so by the Liberal Association. In the case of his being unwilling to place himself at the disposal of the Association, the committee are empowered to look out for a Liberal candidate whose high academic distinction and knowledge of university work would render him acceptable to the majority of the Liberal electors of the constituency. It appears that imperial politics were freely discussed, and that a good deal of party feeling was introduced into the speeches that preceded the final settlement. It is to be feared that the fight will, in this instance, resolve itself into one on almost strictly party lines, and that university interests will be lost sight of entirely unless each candidate tries to outbid the other in making his appeal for support. It is quite possible, however, that there will be no fight at all, and that the new Solicitor-General will be allowed to walk over the course. It is said that Mr. Darling has given promises of most cordial support to the Universities of Scotland Bill, and to all measures which may conduce to effective university reform.

Edinburgh, Oct. 16th.

DUBLIN.

(From our own Correspondent.)

COLLEGE OF PHYSICIANS IN IRELAND.

As previously intimated by me a considerable time since, the Fellows will, at their annual meeting on Thursday, the 18th inst., elect as their President Dr. Lombe Atthill, ex-Master of the Rotunde Lying-in Hospital, and formerly Obstetric Physician to the Adelaide Hospital. Dr. Atthill succeeds Dr. Little, who has served as President for the past two years. On the 18th inst. (St. Luke's Day) there will also take place the election of the various examiners, office-bearers, and the representative of the College on the General Medical Council.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

I am informed that Mr. Robert H. Moore, a well-known dentist in Dublin, is a candidate for the vice-presidency of the College next year. Mr. H. Gray Croly's name has been before the electors for several months, and it is rather a surprise to learn, when all opposition had ceased to be expected, that he will be opposed. I believe Mr. Croly, if a contest takes place, will be successful by a very large majority; but, all the same, it must be disagreeable to him to be subjected to a contest when it was generally believed that he would be returned unopposed. These contests for the vice-presidency of the College have of late years become altogether too frequent; they cause a good deal of unpleasantness, and for many reasons ought to be discouraged. I may state, and I do it with the fullest knowledge, that Mr. Croly is a good surgeon, a brilliant operator, and a gentleman who, with his extensive practice, is admirably fitted for the post he seeks. Also, I may add that it is rather unusual for anyone not a member of the Council of the College to become a candidate for the vice-presidency, which naturally leads to the presidency, the highest honour the Fellows can confer on one of their number.

CLOSING OF ST. AUDOEN'S GRAVEYARD.

Mr. Robinson, Local Government Board inspector, held an inquiry recently with reference to the closing of this graveyard, as it is considered that any further interments would be productive of danger to the public health. The graveyard, besides being situated in the midst of a

populous neighbourhood in Dublin, is filled with human remains, for it appears from the records that it is of great antiquity, and that 30,000 persons have been interred in it. There has been no burial for the past five years, and, as there is no one to claim the right of interring in the graveyard, most likely it will be closed.

POISONING BY CYANIDE OF POTASSIUM.

Quartermaster Sergeant Huggins committed suicide on Saturday last at Linenhall Barracks, in this city, by swallowing a quantity of cyanide of potassium. The amount administered was about half an ounce, and, as might have been expected, death took place very shortly after the poison had been taken.

DANGEROUS DUBLIN.

The insecure condition of a large number of houses in this city has attracted attention of late, which has been increased by the recent fall of a house in Cumberland street, attended with loss of life. The Lord Mayor has very properly requested the borough surveyor to prepare a report on the condition of dwelling-houses in Dublin, and on any measures required, either by amendment of the law or otherwise, to provide for the safety of life.

Dublin, Oct. 16th.

PARIS.

(From our own Correspondent.)

THE URINE AFTER INTERMITTENT FEVER.

To the communication of Dr. Mossé on the above subject, reported in THE LANCET of last week, may be added a note from Dr. Sorel, an army surgeon at Algiers, in which he stated that Professor Verneuil was evidently deceived by a simple coincidence. Dr. Sorel's conclusions were, therefore, in accord with those of Dr. Mossé. As a rejoinder, Professor Verneuil remarked that the results obtained by these two physicians in their practice should not be generalised. Professor Verneuil had on several occasions an opportunity of observing employees of the Panama Canal, who were sent back to France on account of intermittent fever, and who were at the same time glycosuric. On the other hand, he was informed by Dr. Charles Blanc, a practitioner of Bombay, that pallidism was very frequently followed by diabetes. He could not account for this difference of results in different countries, but observed that in hot countries, where pallidism is endemic, and where hepatism is also endemic, pallid glycosuria or oxaluria would also be met with. It is possibly a question of medical geography, the complications varying a good deal according to the climate, and cannot be resolved till further researches from different parts of the globe are carried out.

NEPHRECTOMY.

Dr. Terrillon reported a case of abdominal nephrectomy that he had performed on a woman aged thirty for a displaced kidney, which was discovered in the right flank, and was diagnosed as being suppurating and tuberculous. The operation, a very delicate and difficult one, was performed in the month of January last. An incision was made extending from the borders of the ribs to the crest of the ilium. The peritoneum once opened, the displaced kidney was easily found. The separation of the tissue of the kidney from its capsule was found difficult; the parenchyma had to be removed piecemeal, and it was necessary to leave a small stump at the bottom of the shell of the kidney. In the month of February the patient had already left her bed. She is now considered completely cured, and has increased in weight by thirty pounds. No trace of tuberculosis could be discovered on her, and yet Koch's bacilli were found in the fragments of the extirpated kidney. It was therefore concluded that it was a case of localised tuberculosis.

CRANIAL SURGERY.

Some years ago surgeons were in accord not to intervene in cases of intracranial abscess. At the present day, thanks to surgical antiseptics, the intervention of the operator is accepted, as the operation is no longer considered dangerous, and it may be the means of saving the life of the patient. M. Chauvel, Professor of Surgery at

Val-de-Grâce, in an interesting communication to the Academy, established that symptoms often permit the surgeon to suspect the existence of an abscess, ordinarily situated in the neighbourhood of the petrous portion of the temporal bone, in the temporo-sphenoidal lobe. In this case, if the excision of the tympanum and the antiseptic cleansing of the middle ear, combined with the trephining of the mastoid apophysis, do not effect amelioration, the opening of the skull is advised. The skull should be freely opened, the dura mater incised, and a trocar plunged into the cerebral substance, indicating the presence of pus, the seat of the abscess, and serving as a guide to the bistoury.

As an example of the utility of the operation of trephining, the *Montpellier Medical* relates the case of a young man, aged twenty-eight years, who was found in a railway van with a large wound in the left parietal region. There was fracture with depression of the skull, hemiplegia, no aphasia, and the intelligence sufficiently clear. Raising and ablation of the fragments were practised by Dr. Boye. This was followed by a cure, and the patient, who was employed on the railway, was soon able to return to his work.

ACTION OF ANTIPYRIN ON THE TEETH.

Among the inconveniences ascribed to the use of antipyrin, Dr. Galippe has brought to notice that in several cases in which the drug was administered internally the teeth were blackened by it. Dr. Galippe, who devotes himself to dentistry, could offer no scientific explanation of the manner in which antipyrin acts on the teeth; he, however, found that the teeth blacken the more readily when they have lost their enamel. But this inconvenience is only transitory, and may be removed by simply rubbing the teeth with oxygenated water.

In THE LANCET of Aug. 18th, the death of Dr. E. Decaisne was announced. I have now to report the death of his son, Dr. Gaston Decaisne, aged thirty-six years, which took place on the 4th inst. Deceased was formerly chef de clinique, and promised to become a distinguished physician.

Paris, October 16th.

Obituary.

G. H. BARFOOT, M.D.

WE regret to record the death, on the 9th inst., of Dr. G. H. Barfoot of Birkenhead. The deceased, who was born at Leicester in 1851, received his professional education at University College, and in 1872 took the M.B. degree with honours at the University of London. After this, being in delicate health, he went for a year's voyage to China. In 1873 he was appointed house physician at the Leeds General Infirmary; and in 1874, when only twenty-three years of age, he obtained the degree of M.D. Lond., in the examination for which he was again placed in the honours division. After residing for a year or two at Shrewsbury, Dr. Barfoot removed to Birkenhead about ten years ago, and entered into partnership with Dr. Walker, a connexion which continued to the time of his death. He soon made himself appreciated by a large circle of friends and patients, and was appointed one of the acting medical officers of the Wirral Children's Hospital. Always of a somewhat delicate constitution, he suffered latterly from anæmia, and was compelled this summer to be away for three months at Llandudno and Douglas. On his return to work, however, his illness gradually assumed a serious aspect, and he died somewhat suddenly.

LEICESTER INFIRMARY.—Sir A. G. Hazlerigg, Bart., presided at the quarterly meeting of the governors, held on the 9th inst. The report of the Finance Committee at the close of the past quarter showed respectively on the medical library account, the fever house account, and the chaplain's fund account a total balance in hand of £215 8s. 1d., but on the infirmary proper account there was a serious deficiency at the end of the quarter. The balance due to the treasurer was £3392 18s. 1d. An unusually large number of patients at the fever house had involved at least £1000 more than the average expenditure.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following candidates passed the Second Examination at a meeting of the Board of Examiners on the 11th inst. :—

Anatomy and Physiology.—George L. Bell, of Melbourne University, and Framroz S. Dávar, of Grant Medical College and Mr. Cooke's School of Anatomy and Physiology.

Anatomy only.—Charles K. Crowther, of St. Bartholomew's Hospital; Henry P. Job, of University College; Rupert James, Stuart A. Ord-Mackenzie, of University College and Mr. Cooke's School; John Wells, Edgar S. Sanderson, Henry Corby, and Henry W. West, of London Hospital; Thomas H. English, Patrick Quaid Ambrose, and Lennox Wainwright, of London Hospital and Mr. Cooke's School; Henry G. Biddle, Gerald Sichel, and George W. B. Featherstone, of Guy's Hospital; L. Daniel Heather, of King's College; Robert R. Hatherell, Sydney F. Wright, and Percy W. Campbell, of St. Thomas's Hospital.

Physiology only.—Harry H. Brind and Arthur A. Fennings, of St. Mary's Hospital; Edward Knox Goodwin, Leonard J. Minter, and George F. Read, of King's College; Robert Henry and Edwin C. Walter, of St. Thomas's Hospital; Edward Cornish, Edward H. Greaves, Edward W. Sharman, and Wilfrid E. Sturges-Jones, of Guy's Hospital; Albert H. Beardmore, of Sheffield Medical School; Frederick Temple Morris, of University College; Herbert Sisson, of London Hospital; Edward D. Madge, of Middlesex Hospital; Julius Abrines, John B. Anderson, James Cooper, Willoughby F. Cotton, Edward A. R. Covey, and Fredk. E. Withers, of St. Bartholomew's Hospital; Walter Wright, of St. Bartholomew's and Mr. Cooke's School.

The following passed on the 12th inst. :—

Physiology only.—George Kendrick, of Queen's College, Birmingham; William R. Ashworth, Thos. C. Hughes, of Westminster Hospital; Charles B. Braithwaite, of Guy's Hospital; Thomas H. Adams and Robert C. Middlemist, of London Hospital; Felix Turner, of University College; Harry B. Williams, of St. Thomas's Hospital; Wm. K. Brewer and Percy A. Longhurst, of Charing-cross Hospital.

ROYAL COLLEGE OF PHYSICIANS IN IRELAND.—

The following has been admitted to the Licences in Medicine and Midwifery of the College :—

John Francis Greene.

The undermentioned have been admitted Members :—

Thomas Canton, Kells.
William George Hill, Fleet Surg. R.N. (retired), Fermoy.
Daniel O'Sullivan, Station Hospital, Fulford, York.
Walter Henry Ryan, Bucks.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates having passed the qualifying examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society :—

Alcock, Richard, Owens College, Manchester.
Beale, Peyton Todd Bowman, King's College Hospital.
Foster, John Edward, Queen's College, Birmingham.
Moles, Frederick Parker, Owens College, Manchester.
Slyman, William Betenson, St. Bartholomew's Hospital.
Westwood, John, Queen's College, Birmingham.
Winn, Thomas Cromwell, London Hospital.

The following passed in Surgery :—

Morton, James Douglas, St. Mary's Hospital.
Neville, Evan James, King's College Hospital.

Passed in Medicine, Forensic Medicine, and Midwifery :—

Ellis, Henry Havelock, St. Thomas's Hospital.
Fielder, Sidney, Glas. Univ. and St. Thomas's Hospital.

Passed in Medicine and Forensic Medicine :—

Hurst, Walter, Owens College, Manchester.

Passed in Medicine and Midwifery :—

Hues, Frank, Queen's College, Birmingham.

An inquest was held on the 12th inst. on the body of Dr. William Logan of Willington, who expired from strychnine poisoning, taken in mistake for morphia.

An inquest was recently held at Paddington on the body of a man whose death had been caused by swallowing false teeth.

The annual meeting of the subscribers to the Birmingham Dental Hospital was held on the 5th inst., when satisfactory financial and general reports were presented and adopted.

UNIVERSITY COLLEGE, LONDON.—The under-mentioned Prizes and Scholarships have been awarded :—
Medical Entrance Exhibitions: F. W. Wesley, £100; C. G. Spencer, £60; B. L. Abrahams, £40. Andrews Entrance Scholarships of £30 each: Languages, C. Conroy; Science, S. F. Kirby. Gilchrist Engineering Entrance Scholarship of £35 per annum for two years: P. T. J. Estler. Engineering Matriculation Certificate: S. A. Lang.

GREAT NORTHERN CENTRAL HOSPITAL, HOLLOWAY-ROAD.—This institution has benefited to the amount of £114 by the late athletic sports fête held at Tufnell Park grounds, promoted on its behalf by the tradesmen and police (Y division) of Holloway.

CRICKLESWELL DISPENSARY.—The subscribers, at their annual meeting, held on the 13th inst., increased the salary of the medical officer, Mr. Philip E. Hill, quite spontaneously and unanimously, from £35 to £40 per annum.

NEW HOSPITAL, DOVER.—A new hospital is to be erected in this town, adjacent to the old institution, which was opened as a memorial of the general thanksgiving in 1854. The estimated cost is upwards of £5000.

OPEN SPACES.—The Hackney District Board of Works have resolved, by a large majority, to contribute £15,000 towards the purchase of Chissold Park, and to borrow that sum from the central authority—£10,000 to be charged upon the parish of Stoke Newington, and £5000 on the parish of Hackney.

REFERRING to the notice in our last week's issue of a Doll Show to be held in aid of the Hospital for Sick Children, Great Ormond-street, we understand the Princess Frederica has altered the date for the distribution of prizes, and the Exhibition has consequently been postponed to the 9th and 10th prox.

THE NATIONAL APPLE AND PEAR CONFERENCE, arranged for the display of collections and specimens and the discussion of various questions pertaining to the production, distribution, and improvement of hardy fruits, which opened on the 16th inst. in the gardens of the Royal Horticultural Society, Chiswick, will close on the 20th inst.

NORTH-WESTERN POOR-LAW CONFERENCE.—The proceedings of the fourteenth annual conference in connexion with the north-western districts (Lancashire and Cheshire) were concluded at Chester on the 13th inst. A paper was read by Dr. Rhodes on the Laws relating to Pauper Lunatics, which provoked a long and interesting discussion. It was decided to hold next year's conference at Preston.

MADAME PATTI AND THE HOSPITALS.—Madame Patti gave her fourth concert at Swansea on the 11th inst., in aid of the Swansea Hospital and other charities. The proceeds amounted to about £1000. Several presentations were made to her, and the French Consul presented her with the decoration of an Officer of the Académie des Beaux-Arts, in recognition of her assistance to the French Hospital in London.

SWEATING IN HOLLAND.—From the evidence as to the condition of the workers in Holland, which has recently been taken by a committee of the Dutch Chamber, it appears that in that country the average factory day is from thirteen to fourteen hours, while the operatives often work eighteen, twenty-four, and thirty-six hours at a stretch. The Commission reports that infant mortality is increasing, technical improvements are neglected, and the inventiveness of workmen is destroyed.

NEW HOSPITAL AT SUNNYSIDE ASYLUM, MONTROSE.—The foundation stone of this new hospital was laid on the 10th inst., by Provost Scott of Montrose, chairman of the Board of Managers. In consequence of the continually increasing demands upon the Montrose Asylum, one of the oldest in the country, the managers last year decided to build a new hospital beside the main building, involving an outlay of £15,000 exclusive of furniture &c. The new building will accommodate 100 patients.

BEQUESTS AND DONATIONS TO HOSPITALS.—The honorary treasurer of the Bootle Borough Hospital has recently received £163 17s. 6d. from the *employees* of the White Star Steamship Company. The honorary secretary of the Newbury District Hospital has received £100 as a donation from a "Lady" to the funds of the hospital, "in memory of Thomas and Mary Palmer." The treasurer of the Guest Hospital, Dudley, has received £1000 from Mrs. Caroline E. Hudson, of Oxford, as a gift to the hospital in memory of her father. Mr. Wm. McNamara, late of Cork, has bequeathed £50 to Mercy Hospital, and a similar amount to St. Patrick's Hospital, Cork. Mr. Gervais Taylor has given £50 to the Adelaide Hospital, Dublin.

SUPERANNUATION.—An annuity, by way of superannuation of £500, has been granted to Dr. Samuel Mitchell, lately medical superintendent at Wadley Lunatic Asylum, Sheffield, who retires from ill-health. He had been an officer of the asylum for sixteen years.

THE PUBLIC SANITARY INSPECTORS' ASSOCIATION. On the 12th inst., the members of the North-Western District of the Association visited Warrington, and made inquiries into the sanitary arrangements of the borough. The visitors were received at the Town Hall by Alderman Burgess (the chairman of the Sanitary Committee of the Warrington Town Council) and Mr. T. Longdin, the borough surveyor. Mr. Longdin briefly explained the system adopted in Warrington for dealing with the refuse of the town. Subsequently inspections were made of various places of sanitary interest, and the opinion was expressed that the example set in Warrington was one which might be extended to almost every town in the country, and that they, the visitors, had that day witnessed the best means of dealing with excreta.

THE VOLUNTEER MEDICAL STAFF CORPS.—When the Volunteer Medical Staff Corps was founded in April, 1885, it was placed under the charge of Mr. Cantlie as commandant, and Surgeon J. Lees Hall, A.M.D., was appointed adjutant. The strength of the corps was limited at that time to 400 men, of which number three companies were composed of students of the different London hospitals and one of men who were not intending to enter the medical profession. Subsequently the movement was extended, and companies were successively formed in Edinburgh, Woolwich, Maidstone, Manchester, Leeds, &c. This year the Government has authorised the formation of another company in London, the strength being thus raised to 500. It is further proposed to extend the movement gradually in other cities and towns where large bodies of Volunteers are. It is not essential that the privates should be possessed of any medical qualification, but the officers must all be duly qualified medical men. The formation of this corps was a new departure in the Volunteer movement, and, like other new organisations, had numerous difficulties to contend with. The resignation of Mr. James Cantlie was a loss severely felt, and we hear that the Adjutant, Surgeon J. Lees Hall, whose tenure of office has expired, leaves for Ceylon in a few days. There can be little doubt that the success which has been obtained has been largely due to the untiring energy, tact, and skilful services of this deservedly popular officer, whose departure will be much regretted.

PRESENTATIONS.—On the 8th inst. the Bond of Brotherhood Club, Street, Somerset, met for the purpose of bidding farewell and making a presentation to their medical officer, Mr. J. J. Kerr. There was a large number of members and friends present. Mr. Pursey, the president, presided, and expressed the regret of the members that Mr. Kerr had decided on leaving the town, where, during his residence, he had won the esteem and good feeling of all with whom he had come in contact. Several of those present also spoke to this feeling of regret. An address was then presented to Mr. Kerr, which spoke not only of his pleasant and kind manner, but also of his attention to his duties and the confidence the members had felt in his skill. With the address was also handed to the doctor a purse containing a sum of money, subscribed for by over 100 members and friends.—The medical friends of Mr. Henry Burford Norman, F.R.C.S., the president of the South-east Hants District Medical Society, have, on the occasion of his retiring from practice and leaving the neighbourhood, after an honourable and successful career in Southsea covering over a period of thirty years, presented him with a tea and coffee service, in memory of his long residence with them. At the same time a handsome carriage clock was presented for Mrs. Norman.—The ladies of the Ainsdale Class of the St. John Ambulance Association (Birkdale Centre) have presented Dr. Moore with a pair of gold sleeve-links, in recognition of his services.—Dr. Robertson, F.R.C.P., the chairman of the Board of Trustees and Committee of Management of the Devonshire Hospital and Buxton Bath Charity, was presented on the 6th inst., after the usual business of the quarterly meeting, with a portrait of himself (a striking likeness, and which will adorn the walls of the institution), in recognition of his lengthened and very valuable services to the Devonshire Hospital.

PLUMBING.—The corporations of the Hartlepoons have been co-operating to promote the system of national registration of plumbers established by the Plumbers' Company. The mayors of both places have just congratulated each other at a public meeting upon the fact that their first co-operation since the incorporation of Hartlepool as a municipal borough should be in a matter of such vital moment to the public health. Dr. Gourley, medical officer of health, who took part in the meeting, said he was sure no one present could fail to recognise the importance of the movement, and he was sure he would have the support of the Health Committee. It could not be denied that in the past no one had given so much work to the doctors as plumbers. Therefore he hoped the present movement would go on and prosper, and that before long every plumber, not only in the Hartlepoons but throughout the country, would be registered.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALFORD, H. J., M.D. Lond., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health of Taunton Rural and Union Districts.
ALLEN, WM. E. L., M.B., C.M. Glas., has been appointed House Surgeon to the North Lonsdale Hospital, Barrow-in-Furness.
BARBER, PERCIVAL E., B.A. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Public Hospital and Dispensary, Sheffield.
BOYD, A. J., B.A., M.D., T.C.D., has been appointed Medical Officer to the No. 3 District of the Ware Union, vice H. May, M.D., resigned.
BOYD, J. ST. CLAIR, M.D. B. Univ., M.Ch. Irel., has been appointed Assistant Surgeon to the Belfast Hospital for Sick Children.
BROOKS, J. HABLEY, M.B., C.M. Aberd., has been appointed Assistant Medical Officer to the Mile-end Infirmary, School, and Workhouse, Bancroft-road, E.
CLARK, W. W., M.D. Edin., M.R.C.S., L.S.A., has been reappointed Officer of Health, Wellingborough District Union.
DAVIES, H. A. B., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Newton Abbot District, Newton Abbot Union.
DAWDALL, S., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant at the Marylebone Infirmary, Notting-hill.
DONALD, JAMES, M.R.C.S., L.S.A., has been appointed Medical Officer of the Ham Common District, Kingston Union.
GREEN, G. SYDNEY, M.R.C.S., L.R.C.P. Lond., and L.S.A., has been appointed House Surgeon to the Loughborough Infirmary and Dispensary.
HANNAH, N., L.R.C.P. Edin., L.R.C.P., L.R.C.S. Glas., has been reappointed Medical Officer of Health, Ashton and Abram Union Districts.
HARDWICKE, E. H., L.R.C.P. &c., has been appointed Medical Officer and Public Vaccinator of No. 4 District of the Risbridge Union, Great Bradley, Newmarket, vice R. Cooper, resigned.
HARRIS, THOMAS, M.D. Lond., M.B., M.R.C.P., M.R.C.S., has been appointed Honorary Assistant Physician to the Royal Infirmary, Manchester, vice Ross.
HEATHAW, HUGH P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the West District, Bingham Union.
HOEGOOD, S. P., M.R.C.S., L.R.C.P. Lond., late Clinical Assistant to the Marylebone Infirmary, Notting-hill, has been appointed Junior House Surgeon to the Royal Infirmary, Hull.
HOWE, JOE D., M.R.C.S., L.S.A., has been appointed Assistant Medical Officer of the Workhouse, Township of Manchester.
HOYLE, J., M.B., C.M. Edin., has been appointed Medical Officer of Barkinsland, Yorkshire.
KAY, WALTER SMITH, M.D. Edin., M.R.C.S., has been appointed Medical Superintendent to the South Yorkshire Asylum, Wadale, near Sheffield, vice Samuel Mitchell, M.D., resigned.
KEITH, ARTHUR, M.B. Aber., has been appointed Assistant Medical Officer to Murray's Royal Asylum, Perth, vice Geo. Findlay, M.B., resigned.
LUCAS, H., M.R.C.S., L.S.A., has been appointed Medical Officer of Health, Huntingdon Union District, vice Redding, resigned.
PARRY, J. W., L.R.C.P., L.M., L.R.C.S. Edin., has been appointed Medical Officer of the Workhouse, Holywell Union.
ROSS, JAMES, LL.D. Aberd., M.D., M.B., C.M., F.R.C.P. Lond., has been appointed Honorary Physician to the Royal Infirmary, Manchester, vice Morgan, retired.
SINCLAIR, F. H., M.D., B. Univ., M.Ch., L.K.Q.C.P., L.M., L.R.C.S. Irel., has been appointed Assistant Physician to the Belfast Hospital for Sick Children.
STANFORD, J. W., M.R.C.S., has been appointed Junior House Surgeon to the Public Hospital and Dispensary, Sheffield.
STEIN, C. G., M.B., C.M. Edin., M.R.C.S., has been reappointed Medical Officer of Health, Warrup and Mansfield Woodhouse, Notts.
TENCH, MONTAGUE, M.R.C.S., L.R.C.P., L.S.A., has been appointed House Surgeon to the Middlesex Hospital, Berners-street, W.
TREVELYAN, E. F., M.D. Lond., B.Sc., M.R.C.S., has been appointed Resident Medical Officer and Pathologist to the Leeds General Infirmary, vice C. W. Turner, resigned.
WICKHAM, ONSLOW A., M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed a Surgeon to the Holloway and North Islington Dispensary, Highbury-vale Branch, vice Dr. Merce, resigned.
WYNN, J. D., B.A. Dub., M.B. and B.Ch., has been appointed Assistant House Surgeon to the Public Hospital and Dispensary, Sheffield.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOOTLE BOROUGH HOSPITAL.—A House Surgeon. Salary £30 per annum, with board and residence in the Hospital.
CHELSEA HOSPITAL FOR WOMEN.—A Pathologist. The appointment, which is honorary, is made for one year.
CHILTERNHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £40 per annum, with board and apartments.
DENTAL HOSPITAL OF LONDON AND SCHOOL OF DENTAL SURGERY, Leicester-square.—A Lecturer of Mechanical Dentistry.
GENERAL INFIRMARY AT LEEDS.—Resident Obstetric Officer. A House Physician and two House Surgeons. No salary will be given, but board, washing, and lodging provided in the Infirmary.
GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Physician to Out-patients. Surgeon to Out-patients.
OWENS COLLEGE, MANCHESTER.—Junior Demonstrator in Anatomy. Stipend £100 per annum.
SEAMEN'S HOSPITAL SOCIETY (LATE DREADNOUGHT), Greenwich, S.E.—Resident House Physician. Salary £75 per annum, with board, furnished rooms, and attendance. Surgeon for the Dispensary, Well-street, London Docks. A dispenser provided. Salary £33 per annum. Dispenser for Branch at Well-street, London Docks. Salary £40 per annum.
WILTS COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £100 per annum, with board, residence, attendance, and washing.
WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £100 per annum, with furnished rooms, gas, coal, and attendance (without board).

Births, Marriages, and Deaths.

BIRTH.

JARDINE.—On the 15th inst., at Lichfield-gardens, Richmond, Surrey, the wife of James Jardine, M.B., of a son.

MARRIAGES.

KIRKPATRICK—CHANDLER.—On the 16th inst., at Great Bealings Parish Church, H. Ivers Ingram Kirkpatrick, L.K.Q.C.P.L., son of Wm. Kirkpatrick, J.P., The Hermitage, Mohill, county Leitrim, Ireland, to Alice May (Blossom), second daughter of the late Colonel G. Lea Chandler, Royal Artillery.
LAKE—PELLEY.—On the 3rd inst., at Yoxford, Suffolk, by the Bishop of New Westminster, assisted by the Rev. A. Pemberton, Vicar of West Stow, Richard Lake, Barnes, to Mildred, third daughter of Justinian Pelley, of Elmley, Yoxford.
MILNER—MCARTHUR.—On the 27th ult., at Burlingham, St. Andrews, by the Rev. C. C. McArthur, assisted by the Rev. F. Fitch, M.A., Vicar of Cromer, James Milner, M.R.C.S., of Shipham, Norfolk, to Frances Elizabeth, eldest daughter of the Rev. C. C. McArthur, Rector of Burlingham, Norfolk.
RITCHIE—SOUTHFIELD.—On the 11th inst., at the Roxburgh Hotel, Edinburgh, by the Rev. Wm. Turnbull, Gladsmuir, Daniel Ritchie, M.D., Tranent, to Jane Cunningham Gibson, third daughter of George Gankroger Southfield, Longniddry.
SYKES—WARE.—On the 10th inst., at the Doncaster Parish Church, William Sykes, F.S.A., M.R.C.S., L.R.C.P., of Mexborough, to Gertrude Wilmot, eldest daughter of the late Canon Ware, Rector of Barnburgh.
SYMPSON—KNIGHT.—On the 10th inst., at St. Paul's Church, Camden-square, by the Rev. F. Wallis, M.A., Fellow and Dean of Caius College, Cambridge, assisted by the Rev. E. H. Leamon, Edward Mannel Sympton, M.A., M.B. Cantab., M.R.C.S., of James-street, Lincoln, son of Thomas Sympton, F.R.C.S., to Florence Mabel, younger daughter of Joseph Knight, Barrister-at-Law, of 27, Camden-square, N.W.

DEATHS.

BACOT.—On the 10th inst., at Seaton, Devon, J. T. W., Bacot, Deputy Inspector-General of Hospitals, A.M.D. (retired), and 30th and 89th Regiments, eldest son of the late John Bacot, Esq., of Portugal-street, Grosvenor-square.
BARFOOT.—On the 9th inst., at his residence, Devonshire-road, Birkenhead, George Harry Barfoot, M.D. London, eldest son of William Barfoot, Esq., J.P., aged 87. Interred in Leicester Cemetery, at 12 o'clock, Saturday, the 13th inst.
ELLIOTT.—On the 25th ult., at North-street, Chichester, George Hurlstone Elliott, M.R.C.S., L.S.A., son of the late Robert Elliott, F.R.C.S.E., F.S.A., in his 50th year.
HOSKINS.—On the 12th inst., at York-place, Candie-road, Guernsey, Samuel Elliott Hoskins, M.D., F.R.S., aged 89 years and 8 months. It is requested that no flowers be sent.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, October 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10.30 A.M., and each day at the same hour.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30 P.M.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour
 MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Fletcher Beach: On a case of Recovery after Laceration of Brain.—Mr. Marmaduke Sheild: On the Removal of an Auricular Exostosis by the Chisel after Incision of the Cartilaginous Meatus.—Dr. Howard: On a New and Only Method of Raising the Epiglottis.

Tuesday, October 23.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.
 Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 2.30 A.M.
 THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M. Mr. J. F. J. Sykes: General Powers and Duties of Inspectors of Nuisances; Method of Inspection.
 ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. W. A. Meredith: Remarks on some Points affecting the Mortality of Abdominal Section, with tables of cases.—Mr. Edmund Owen: Arthrectomy, Erasion of Joints.

Wednesday, October 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 3 P.M.; Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M. Saturday, same hour.
 HUNTERIAN SOCIETY.—8 P.M. Dr. Stowers: Notes on the Treatment of Diseases of the Skin.
 BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens and Notes of Cases by Dr. F. A. Purcell, Dr. Fancourt Barnes, Mr. Reeves, Mr. Lawson Tait, Dr. Richard Smith, and Dr. Granville Bantock. Council, 8 P.M.

Thursday, October 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHARGING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, October 26.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
 CLINICAL SOCIETY OF LONDON.—Dr. H. Handford: Case of Empyema, Loss of Vision, Cerebral Softening.—Dr. Beaufoy Green: Case of Dermoid Cyst of Tongue.—Mr. Hutchinson: Second Report on Persistent "Aptyalism," or Dry-mouth, with an additional case.—Mr. E. M. Fenwick: Case of Encysted Stone.
 THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M. Mr. J. F. J. Sykes: Nature of Nuisances, including Nuisances the Abatement of which is Difficult.

Saturday, October 27.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, October 18th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Oct. 12	30.07	S.W.	49	47	96	62	45	..	Cloudy
" 13	29.83	W.	51	47	92	56	47	.02	Cloudy
" 14	30.10	N.	47	47	82	51	30	..	Hazy
" 15	30.35	W.	40	37	61	54	34	..	Foggy
" 16	30.40	W.	43	41	90	56	39	..	Foggy
" 17	30.31	W.	44	43	67	57	41	..	Foggy
" 18	30.28	E.	42	41	57	47	40	..	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

THE QUESTION OF TITLE.

WE think there is no more to be said on the subject. As a mere trademark, we cannot admire the title of "doctor" any more than "apothecary." "Medicine man" is not a badge that anybody would like to bear, however proud of his profession. The real thing that one ought to have reason to be proud of is organic relation to universities and a title implying honour derived from them and from their estimate of merit. The universities have themselves to blame that this ground of pride is not always so well based as it should be. They have been so keen to compete with the ordinary licensing boards that they have lowered the value of their own degrees as distinctions. Perhaps they are seeing now somewhat the danger of this course. Meantime, there is one title that is highly honourable, and is almost now a distinction among medical men who feel their own strength and rest on their consciousness of being masters of their art—the good old title of "Master," which some of the best men in the profession find ample for all social and professional purposes. It is certainly infinitely more honourable than any unacademic or unwarranted use of the title of "doctor." And we see many indications that this view is shared by the profession, and by many who think they have a right by courtesy to something more.

Mr. Blancard (Ramsgate).—The paper has not yet appeared in our columns.

RE CORRECTIONS.

To the Editors of THE LANCET.

SIRS:—Will you admit in your valued columns a suggestion re corrections?

Take a recent instance. Mr. Harrison Gripps at page 698 refers to an error in a former paper which appeared in "last week's Mirror." Others, like myself, may have desired to make the correction in their copies, and after turning over many leaves have done so at page 620. It is, I too well know, quite customary to allude to former papers in this manner, instead of stating the exact page, which if stated would save many explanatory words, and so save space, and also avoid the loss of time, and not unfrequently of temper, too. If you would advocate the cultivation of the habit of referring to the exact page, you would confer an obligation upon many besides. Yours truly, Oct. 10th, 1888.

SUGGESTER.

Overall, the findings of this study suggest that the use of a structured, evidence-based approach to patient assessment and management can lead to improved patient outcomes and reduced costs. The implementation of such a program requires a commitment to ongoing education and training for healthcare providers, as well as a focus on patient engagement and communication. The results of this study provide a strong foundation for the development of similar programs in other healthcare settings, and highlight the importance of a patient-centered approach to care.

POISON BOTTLES.

MR. NUTTER, of Minneapolis, has patented a device for poison bottles. With the stopper is a plate having sharp points on its outer side, and a fastener on its under surface to attach it to the stopper. When bottles of this kind are used the sharp points will grasp one's hands thoughtlessly applied.

Mr. L. Kidd.—"The Filaria Sanguinis Hominis," by P. Manson, M.D. (Lewis, 1883).

Dr. Le Grand.—We regret the inadvertence, which is not likely to recur.

F. G. S.—The question must be answered in the negative.

Student.—Roscoe's Chemistry.

A COMPLAINT OF DISCOURTESY.

To the Editors of THE LANCET.

SIRS,—I beg to call the attention of your readers, particularly young qualified gentlemen, to the great lack of even ordinary gentlemanly conduct as shown by many medical men who advertise for qualified assistants. These advertisers invite qualified gentlemen to apply for their posts and ask for full particulars of four curricula, references, testimonials, photos, &c., and many of them do not even show common courtesy by sending one word in answer on a thin post-card. I object to this most strongly, but I begin to feel legally inclined when cabinet photos are retained. My opinion is that young medical gentlemen have to learn to put their university ideas of medical etiquette on one side, and by no means take that of a great many of the older practitioners as their guide. I am, Sirs, yours truly,

Oct. 17th, 1888.

A PHOTO VICTIM.

SYPHILIS IN THE ARMY.

To the Editors of THE LANCET.

SIRS,—It is stated that one in every five of the Foot Guards in London suffered from syphilis in the year 1874. Is this statement correct? Does it mean that one-fifth of the men actually had the disease? Or that the number of admissions to hospital was in the ratio of one to five of strength, several admissions being due to one man?

I am, Sirs, yours truly,

October, 1888.

A MEDICAL MUSER.

. The Army Medical Reports show the number of cases admitted into hospital for primary venereal sores among the troops in London in 1874 to have been in the proportion of 179 per 1000 of the strength. It is probable that the cases of secondary syphilis would bring the ratio up to 200, or one to five of strength.—ED. L.

TREATMENT OF CHRONIC DYSENTERY.

To the Editors of THE LANCET.

SIRS,—I have under my care at present a poor woman suffering from chronic dysentery. The usual remedies have been tried without avail. I see in Quain's Dictionary of Medicine that a water-belt is recommended; could any of your readers inform me where one is to be obtained and if of practical utility, as well as suggest what further can be done? I am, Sirs, your obedient servant.

Oct. 17th, 1888.

ENQUIRER.

ERRATA.—In the letter of our Liverpool correspondent published last week the name of Mr. Reginald Harrison was given in mistake for Mr. Damer Harrison, as that of one of the surgeons who assisted in dressing the wounds of Dr. Barr.—In the last line of the annotation headed "Pyorrhea Alveolaris in an Elephant," page 730, for "antrodental gingivitis" read arthro-dental gingivitis.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. W. P. Latham, Cambridge; Mr. J. B. Sutton, London; Dr. Spottiswoode Cameron, Huddersfield; Dr. Cheadle, London; Dr. B. W. Richardson; Dr. S. Fenwick, London; Dr. Whiphram, London; Mr. Kershaw, London; Mr. Hummel, Philadelphia; Dr. Barnard, Guernsey; Dr. Coupland Taylor, Madeira; Dr. Robertson, Newcastle-on-Tyne; Dr. Radcliffe Crocker, London; Mr. B. Hewatson, Leeds; Mr. F. C. Fisher, King's Langley; Dr. G. Thompson, Fishponds; Dr. Underwood, Pagoda Anchorage, China; Mr. J. M. Pardey, Launceston, Tas.; Dr. Julius Pollock, London; Dr. A. Cox, London; Dr. A. J. Richardson, West Brighton; Mr. Drummond, Manchester; Dr. T. Oliver, Newcastle-on-Tyne; Mr. J. B. Pike; Dr. Le Grand, Southampton; Mr. P. M. Yearley, London; Dr. Milligan, Liverpool; Mr. Hackman, Portsmouth; Mr. Harvey, Fulham; Mr. Ballance, London; Dr. Rentoul, Liverpool; Dr. Cremen; Mr. M. Sheld, London; Dr. Barron, Southport; Dr. Dickinson, London; Mr. J. H. Morgan, London; Mr. J. F. Harries, Shrewsbury; Dr. F. T. Tayler, Lewisham; Mr. R. F. Gill, London; Mr. Burnie, Brighton; Mr. Cook, London; Mr. T. J. Verrall, Brighton; Mr. Webster, Bootle; Mr. Leach, Bath; Mr. Johnston, Glasgow; Mr. Russell, London; Mr. Gosse, Sittingbourne; Mr. C. Hancock, London; Lieut.-Col. Everitt, London; Mr. McClune, Pontypridd; Mr. Foulerton, Chatham; Dr. A. G. Barra, Leeds; Mr. F. C. Turner, London; Mr. Sweeting, Fulham; Miss G. Wright; Mr. O. H. Brown, London; Dr. Aikman, Guernsey; Mr. Laban, West Bromwich; Mr. Boehm, London; Mr. D. Walsh; Mr. Siggs; Mr. Blancard, Ramsgate; Alpha; W. W. H.; H., London; H. & R., London; Not a Ship-Surgeon; M.D., Derby; Staffs Infirmary; Radipole; Medical Superintendent, Devizes; C. M. M.; M.R.C.S. & L.S.A.; A Photo Victim; C. H. S.; Nemo, London; Inquirer; Delta, Folkestone; Rex, London; Enquirer.

LETTERS, each with enclosure, are also acknowledged from—Dr. Taylor, Manchester; Mr. Rigby, Lancashire; Dr. Pavy, London; Mrs. Blair, Staplehurst; Mr. Jackson, Yorks; Mr. Hawkes, London; Mr. Lee, Leeds; Mr. McMunn, London; Mr. Leggett, Kent; Mr. Newsholme, Sheffield; Mr. Milner, Norfolk; Miss Hunt, Dublin; Dr. Bentham, Brighton; Mr. Wraith, Darwen; Mr. Costa, London; Messrs. Lewis and Sons, Bath; Mr. McJerrrow, Edinburgh; Messrs. Maw, Son, and Thompson, London; Mr. Maclean, Ashbourne; Messrs. Maclehoose and Sons, Glasgow; Mr. Heywood, Manchester; Messrs. Pratt and Co., London; Mr. Elliott, Carlisle; Mr. Logan, Glasgow; Mr. Bland, Stourbridge; Mr. Simpson, Lincoln; Mr. Ritchie, N. B.; Mr. Lake, Barnes; Mr. Hewett, Bridgnorth; Mr. Davis, London; Dr. Harding, Whittlesea; Dr. Adam, West Malling; Mr. Adams, Birmingham; B. D., London; N. W., London; Leamington, London; Cheltenham General Hospital; M.D., Malvern; A. B. C., London; Springfield House; G. D., London; C. R. K., Dover; Aries, London; Queen's College, Birmingham; S. W., London; Candidate, London; South Hants, London; Zoster, London; Medicus, Mon.; M.D., Crewe; The Hospital, Rotherham; M.D., London; F.R.G.S., London; Halifax Infirmary; V. G., London; Boaz, London; Medicus, Yorks; W. X., London; G. E., London; J., Sevenoaks; G. F. S., Lancashire; Sligo, London; E., Birmingham; Chez nous, London; Medicus, Margate; Charles, London; Poop, London; Delta, London; Canula, Leeds.

Portsmouth Times and Naval Gazette, St. Helen's Chronicle, Hertfordshire Mercury, Surrey Advertiser, Star (Guernsey), Reading Mercury, Le Journal Medical, Windsor and Eton Express, Herald and Weekly Free Press, Birkenhead and Cheshire Advertiser, &c., have been received.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an additional advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

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Agent for the Advertisement Department in France—J. ASTIER, 64, Rue Canmartin, Paris.

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NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

Clinical Lecture

ON

TUMOURS OF THE SCROTUM,

Delivered at University College Hospital,

By CHRISTOPHER HEATH, F.R.C.S. ENG.,

HOLME PROFESSOR OF CLINICAL SURGERY IN UNIVERSITY COLLEGE, LONDON.

GENTLEMEN,—I propose to-day to speak of tumours of the scrotum. It is a very important subject, one which is constantly coming before us here at the hospital, and I need hardly add that tumours of the scrotum pretty frequently come before candidates for examination.

Let me say at once that, having seen a good deal of the examination by candidates of tumours of the scrotum, it seems to me that a great many of them do not know how to go to work. There is a right and a wrong way of examining a case, and the wrong way is to seize hold of the tumour and put the patient to pain. Naturally the patient does not like it and resents it, and I presume that if he were a private patient he would transfer his attentions elsewhere; he would not put up with it for a moment. The first thing you have to ascertain is whether the tumour is really scrotal, or whether it is abdominal and has come down into the scrotum; of course, that is a matter of vital importance. If it is a scrotal tumour, it is a comparatively simple matter; if it is a tumour which has come down from the abdomen into the scrotum, it may be a very urgent matter, especially if a hernia. This is most conveniently ascertained by sitting down in front of your patient and employing your right hand if the scrotal swelling is on the left side, and *vice versa*. What you want to do is to feel with the fingers and thumb whether you can make out the spermatic cord above the swelling, or whether there is something obscuring it. If you can feel the spermatic cord, and nothing else with it, it is clear that the tumour must be entirely scrotal, and cannot have come down from above. If, on the other hand, you feel the swelling going right up into the groin, the probability is that it has come down from above. I say the probability, because it is not quite certain even then, for every now and then hydroceles do protrude up from the scrotum, and sometimes even invade the inguinal region; but that is the exception rather than the rule.

These abdomino-scrotal cases may be at once conveniently divided into reducible and irreducible by laying the patient down and applying gentle pressure. A reducible tumour is, of course, *primâ facie* a hernia. When reducible with a little manipulation, it will go up, if it is intestine, with that characteristic "slip and gurgle" which we all recognise as leading symptoms of hernia. But you must bear in mind that you will have the sac left alongside the cord, and that commonly you have the sac considerably thickened in old-standing cases. Again, a hernia may be composed entirely of omentum, and the omentum, although it may be pushed back, will go up in a very different way from the slip of the intestine. It requires manipulation really to push it back, and the knotty feel of the omentum is so entirely different from the feel of intestine that you ought, with a little experience, such as you may get in ordinary student life, to be able to distinguish the two. Then, let me say, an omental hernia is very commonly irreducible. It often happens that a piece of omentum has come down and has been so for months or even years, and has got certain attachments to the sac, and the result is that you cannot put it back; it is practically an irreducible hernia. Of course occasionally intestine is irreducible—not so commonly, I think, in the inguinal as in the femoral region. Still it may be irreducible, and then you would recognise it, of course, not by the slip and gurgle that I have mentioned, but by the general sensation conveyed to your hand, by the feel that it is intestine containing more or less gas, and by the very important symptom that when you percuss over it carefully with your fingers in the ordinary way you elicit a clear note.

No. 3400.

Now let us take the other so-called reducible tumours. I should put second *congenital hydrocele*—a form of hydrocele, as you all ought to know, in which the tunica vaginalis still communicates with the abdominal cavity. It is seldom seen except in children, but every now and then seen later on in life. In a child you get a tumour which you recognise at once as a hydrocele, but it has the peculiarity that, when you lay the child down and hold the scrotum up, the fluid disappears, or, if you have the patient standing, with a little manipulation you can still squeeze the fluid into the abdomen. The way in which that congenital hydrocele returns into the abdomen is quite different from the return of a hernia: there is nothing of the characteristic slip and gurgle, but it is simply a flow of the fluid by gravity into the peritoneal cavity when you hold the scrotum up. It is very important, of course, to recognise this in a child, because if you make the serious mistake of tapping it without recognising it, it is conceivable that you might be led to inject iodine, and find that you had injected the peritoneal cavity and set up peritonitis.

Then the third form of reducible tumour is *hydrocele of the cord*, which is not strictly reducible, although it appears to be so in some cases. I refer to a little sac shut off from the funicular process of the peritoneum and not absorbed completely, but still containing some fluid. It forms a little tumour, which slips up and down alongside the cord with a little gentle manipulation. If you take hold of the cord and pull it down, you generally pull the tumour down with it, and when you let go perhaps the tumour disappears; still with a little manipulation you can get it down, and then it eludes your finger and slips up again. But there it is always of the same size; it does not vary in the least. The only interest in connexion with it is that it is often mistaken for hernia. I have had children brought to me over and over again, even the children of medical men more than once, who were supposed to have hernia. A little care in examination shows that it is not a hernia—that it is simply a tumour containing fluid, and very elastic. You can frequently cure those cases at once by a simple puncture, drawing off a small quantity of straw-coloured albuminous serum.

Lastly, I may mention *varicocele*, because it is reducible to a certain extent, and no doubt is often misunderstood, because a large varicocele has a very distinct impulse on coughing. It is a curious thing, but it is only of late years that we have been able to get an impulse on coughing put down and recognised in the books as one of the symptoms of varicocele, although I presume it has existed from time immemorial. Thus, having an impulse on coughing when you make the patient stand up, the varicocele becomes, of course, distended with blood (varicocele, I need hardly say, is a bundle of distended spermatic veins); you can reduce the distension by a little pressure, and in that sense it is reducible; not reducible like hernia, nor exactly like hydrocele of the cord, because you can squeeze the fluid out of the veins, and when you take off the pressure the fluid comes down again without any straining if the patient is erect. One of the best tests for varicocele is this. You lay the patient down, and squeeze the fluid blood out of the veins; you put the finger firmly on the abdominal ring, and then you let the patient stand up, still keeping the finger on the ring. Of course, if it were anything from above, either a hernia or a hydrocele of the cord, the effect of your putting your finger there would be to prevent its filling, but you will find as the patient stands up that in two or three minutes the veins fill, of course from below, and there is the varicocele below the finger as full of blood as ever.

We have discussed, then, the four reducible tumours of the scrotum—hernia, congenital hydrocele, hydrocele of the cord, and varicocele; and we now come to the true scrotal tumours. When you have a tumour which is distinctly scrotal, the first thing you have to ascertain is whether it is or is not a *hydrocele*, a hydrocele being of course a common affection. We have here a patient who tells me that he was last tapped five months ago, and I see by his paper that he has been tapped five times, and I presume that the sac is now pretty well filled again. It is, as you see, a fairly well marked ordinary hydrocele. I will proceed to examine it according to my own teaching. First, we have to ascertain whether the cord is quite clear. Here it is perfectly clear, and below it there is a very elastic tumour, large enough in this case to give signs of fluctuation. Let me warn you, however, against always

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expecting to get fluctuation in a case of hydrocele. It must be large in the first place, and it must not be too tense in the second, or you will not get fluctuation. But when you have a hydrocele, however small it may be, you will always get the feeling of elasticity which is so characteristic. This is a large hydrocele, and, as you see, I can manipulate it, and almost show you at a distance that there is fluctuation. Then let me call your attention to the fact that it conceals the testicle. You can see nothing of the testicle at all. There is the healthy testicle on the opposite side, but here the testicle is entirely concealed; if you remember the anatomy of the parts, you will know that the testicle is entirely at the back. I have before now heard men say, "It cannot be a hydrocele, because I can't feel the testicle." Now I should have said that that was the very reason why it was a hydrocele, because the testicle could not be felt. I quite allow that if you know where to look for the testicle, if you feel at the back of the tumour, you can generally get some indication of its presence. I can feel this man's testicle now, and I have no doubt that if I pinched it he would not like it; but if you had a hydrocele a good deal larger than this, the testicle might be so completely overlapped by it that you would not feel it at all.

We have here, then, a very elastic pyriform swelling, which is characteristic of a hydrocele. In order to be sure about it, let me apply the last test—that of translucency. It is here that a great mistake is often made, and I want to show you the proper way of examining a scrotum for translucency. You let the patient stand, and you sit down in front of him. You then have a light held on the side where the hydrocele is. If you put the light on the opposite side, of course there are the other testicle and the penis both in your way; but if you have the light held on this side, you will have it at once close to the hydrocele, and you will have very little difficulty in getting translucency, provided you make the scrotum tense. That is the mistake that is made by a great many persons—the parts are held so unskillfully that the scrotum is not tense, and if you have it loose it stands to reason that you do not get the light transmitted readily through it. If you have any difficulty in the matter, you can easily get over it by using a roll of paper or a stethoscope to look through, and you at once recognise the pink glare caused by the transmitted light.

I will now tap the swelling in order to demonstrate that it is a case of hydrocele, though I have no doubt about it myself. I begin by making it tense; then I plunge in the trocar and cannula, and at once get the straw-coloured fluid, which I will demonstrate to you contains albumen in large quantity by the addition of a little nitric acid.

Now, supposing that we had a tumour of the scrotum resembling to all intents and purposes that swelling which I have demonstrated to be a common hydrocele, it might yet not be a common hydrocele after all. If you get an encysted hydrocele growing to a large size, I do not think anybody can be quite sure before tapping whether it is an ordinary hydrocele or not. If it is a *small* encysted hydrocele, you may be quite sure, for you find a small elastic swelling connected with the epididymis, which is the usual position of it, and you tap it with a trocar and cannula and draw off the fluid. I have not the opportunity of showing you a case of that kind, but the fluid is quite different from ordinary hydrocele fluid. It is either perfectly clear water or it is a sort of opalescent fluid, looking very like poor milk-and-water, and it is really the fluid of a cyst developed in connexion with the epididymis and generally containing spermatozoa.

So much for hydrocele. Now for the other tumours of the scrotum. We have in the ward at this moment an old man who has had *hamatocele* following upon a hydrocele. A *hamatocele* is a collection of blood in the tunica vaginalis, which may arise in more than one way. It may be an acute *hamatocele* resulting from injury. A man has received some blow, a kick on the scrotum, and almost immediately he finds a swelling. This is partly due, no doubt, to blood effused under the skin, an ordinary bruise, but in many cases you also find a distinct collection of blood in the tunica vaginalis. A recent *hamatocele* is much more globular in shape than a hydrocele, as you might expect, for a hydrocele is a very slow affair, and, as it forms, it distends the tunica vaginalis and gives the characteristic pyriform shape. But if you take an ordinary healthy tunica vaginalis and suddenly distend it, of course it is more or less globular, and so a recent *hamatocele* is globular rather than pyriform.

In the patient to whom I refer the *hamatocele* was distinctly pyriform for this reason: he had a hydrocele first, which had been tapped on more than one occasion, and on the last occasion, for some reason or other, I cannot tell why, it filled with blood. Now people are sometimes uncharitable enough to say that because a hydrocele has been converted into a *hamatocele* the surgeon must have made some blunder—perhaps pricked the testicle. I can assure you that it does not at all necessarily follow. I am not responsible for this case, because another surgeon operated; but I have had the same thing occur to myself, and I am sure that I did not prick the testicle. Moreover, I must confess that I have pricked the testicle perhaps on more than one occasion, and to my knowledge *hamatocele* has not been produced. The rational explanation of the occurrence of a *hamatocele* no doubt is this; that you have got an old patient who has had hydrocele for years, and who has been tapped several times. The veins of the tunica vaginalis and the scrotum are all more or less distended and varicose, and when you suddenly withdraw a good many ounces of fluid which have been supporting these veins one of them gives way.

However it may be produced, the symptoms of a *hamatocele* are of course very characteristic. In the first place, it does not feel so elastic as a hydrocele. It feels more doughy, because, if you think of it for a moment, there is a large quantity of clot in the sac. Then it feels heavier, because a clot of blood in the sac gives rise to a sense of weight; it is heavier to the surgeon's hand, and the patient says it feels heavier than it did before, when it was an ordinary hydrocele. Then, of course, it is not translucent; you cannot make it translucent by any means you can adopt, because no light can find its way through a clot of blood. You may tap a *hamatocele* if you like, and draw off the fluid portion of the blood, but, if there is a large clot left behind, the only way is to lay the sac open and turn it out, and let the wound granulate from the bottom.

Presuming that we have no fluid in the scrotal swelling at all, but that it is solid, it must of course be some form of tumour of the testicle. You may, however, have a fluid tumour combined with a solid tumour, and that is what we call *hydro-sarcocele*. The hydrocele must be tapped, and the fluid drawn off before you can thoroughly examine what the *sarcocele* behind is, and it is well always after you have tapped a hydrocele to examine the testicle and see if it is healthy or not.

Now let us take the solid growths which you have in the scrotum, and first of the acute inflammation of the testicle, which you may meet with either as the result of injury or of disease. A man gets an injury to the testicle, followed, it may be, by acute orchitis; but a much more common event is that he has had gonorrhoea, and that the inflammation spreads along the vas deferens to the testicle, and then he gets acute orchitis. But there is a difference between the two forms. In the case of injury, the body of the testicle is first enlarged and inflamed, and the epididymis is often comparatively healthy. In the case of gonorrhoeal disease it is really epididymitis; the inflammation travels first to the epididymis, and when that has become inflamed it spreads more or less to the body of the testicle, and if you see the case early the body of the testicle may perhaps be comparatively healthy. In both cases, let the cause be what it may, you will have much the same symptoms as regards the extreme painfulness of the testis and the redness of the scrotum. The redness of the scrotum is almost pathognomonic of an inflamed testicle, unless the patient has got extravasation of urine, for those are really the two things producing redness of the scrotum. An inflamed testicle is exceedingly tender, and you can almost tell a patient with orchitis, when he walks into your room, by the way in which he straddles his legs and the careful manner in which he sits down on the corner of a chair. In the case of the gonorrhoeal testicle, you of course feel the cord, and you find the vas deferens considerably enlarged. But remember that, as a rule, you will not find the gonorrhoeal discharge. When the testicle becomes inflamed, the gonorrhoeal discharge ceases, for a time at all events; and one of the symptoms of the testicle getting better is that the gonorrhoea is reproduced.

Then, to go on to more chronic forms of orchitis, when you see a testicle with a history of having been enlarged for some months, it is very important to make out what the cause of the disease is. Of course, you may have a syphilitic testicle, or you may have a

tubercular testicle, or you may have a testicle which is enlarged simply from irritation in the urethra. It is very important not to make a mistake in diagnosis, and not to jump at once to a conclusion that all cases of enlargement of the epididymis are tubercular. I notice a tendency in the present day to put everything down to tubercle. Well, tubercle has a good deal to be responsible for, no doubt; still it is a mistake to suppose that every enlarged epididymis is due to tubercle when the patient has perhaps a stricture which will sufficiently account for it. The first thing is to examine the testicle carefully and see which part is enlarged. If the body of the testicle is healthy and the epididymis alone is enlarged, then it becomes a question whether it is tubercular epididymitis, beginning in the epididymis and spreading from that to the body of the testicle, and also perhaps up the cord; or whether it is a case of epididymitis depending upon irritation of the urethra, in which the inflammation has travelled down the cord the whole length of the enlarged vas deferens. A careful examination of the cord will soon settle that question. You can put a few questions to the patient as to whether he has had gonorrhoea or gleet, whether he makes a good stream of water, and so on. It is not a bad plan, if you have any doubt about it, to examine the urethra; you will do no harm; and if you find there is a stricture you had better treat that first, and then hope that the testicle will clear up. The importance of the diagnosis is this, that if it is a tubercular case mercury will do the patient a great deal of harm; and if, on the other hand, it is a case of chronic inflammation due to irritation, mercury will do a great deal of good. There are cases, I quite allow, where you are obliged sometimes to give mercury tentatively in order to see whether the case will or will not improve under its influence. Where the history is obscure you may not be quite sure which you have to deal with, and it is better in such a case to give mercury for a time and watch it, and then see whether the patient improves or not. On the other hand, supposing we have a testicle enlarged and particularly hard, with very little mischief about the epididymis and none in the cord, and especially if you have a small hydrocele as well, what is the probable diagnosis in that case? In all probability it is syphilitic—late secondary syphilis. You find the patient has had syphilis; he has been treated for it, and thinks himself perfectly well. Latterly, however, he finds his testicle has become enlarged, and here is the result. Those are syphilitic cases which can be rapidly cured by small doses of mercury, not by iodide of potassium alone. There is another form of syphilitic testicle which you sometimes get—a gumma of the testicle. That is a much later disease, which you get in patients whose health has entirely broken down. They have a gummatous deposit in the testicle as in the tongue or other organs, which tends to break through the skin, and these cases are best treated with iodide of potassium.

Then to go back for one moment to the tubercular testicle. No doubt, if you could persuade people to submit to what was the best thing for them, in many cases it would be best to castrate them. You have a nucleus of a tubercle, say, in the epididymis of one testicle, and if you could get it out of the man's system it would be the best thing for him. But in the case of a young man of twenty-five, who has simply one small nodule on his testicle, neither he nor his friends would for a moment hear of castration, and you would have to fall back upon other methods, and fortunately in those early cases other methods answer very well. The best thing for a patient of that kind is to send him for a long sea voyage. It is astonishing what a long sea voyage will do in these cases. The nodule disappears, and the patient comes back perfectly well, and often remains in good health. If you get a case that is more advanced than that, I quite agree that, if it is tending to produce an abscess, the sooner the patient loses the testicle the better; because you can assure him that one testicle is quite as good as two for all practical purposes, and he had better get rid of that nucleus of mischief before it spreads up the vas deferens. For in later days we find not only the vas deferens enlarged, but the vesiculae seminales affected. The patient has great irritability about the bladder, and if you put your finger into the rectum you find the vesiculae seminales and prostate enlarged and thickened, and even abscesses in them. Those cases where you have tubercular mischief about the neck of the bladder are very painful ones, and very little can be done to relieve

the patient from suffering infinite torture. Improve, then, the patient's health in the case of a tubercular testicle as far as you can by cod-liver oil, syrup of iodide of iron, and a sea voyage beyond all. Failing an improvement in that way, remove the testicle before it involves the surrounding parts, and particularly before anything like *fungus testis* is formed. We still occasionally see cases of *fungus testis*. Do not confuse *fungus testis* with malignant *fungus*; the benign *fungus* is simply the result of an abscess in the testicle, the protrusion of a granulating mass, partly composed of granulation tissue and partly of tubuli semeniferi. You may cut it away and possibly bring the skin over it, as recommended by the late Professor Syme, but the best thing is to castrate the patient.

One word with regard to the other diseases of the testicle which come into the question of the diagnosis of scrotal tumours. We have various forms of tumour of the testicle, malignant or semi-malignant, all of which are characterised by rapidity of growth. There is a remarkable form of sarcoma which is occasionally found in the testicle—chondrosarcoma of the testicle. It is an exceedingly hard form, but contains true sarcomatous elements; and it is an exceedingly dangerous form for the patient, because almost invariably there are secondary deposits. True cancer which is found in the testicle is of the medullary form. The history of it is usually one of great rapidity, beginning in the body of the testicle involving the skin very rapidly over it, then bursting through the skin and forming a malignant *fungus* if it is allowed to go on. In these cases the only thing to do is to remove the testicle as early as possible before the cord is affected, and, if possible, through a healthy portion of cord, following the cord up some little distance, so that you may get to the really healthy part.

A SECOND SERIES OF CASES OF ABDOMINAL SECTION, INCLUDING ELEVEN COMPLETED OVARIOTOMIES.

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ABOUT twelve months ago I published¹ a statement of all my cases of abdominal section up to the end of 1886. In the present paper the record is completed up to the time I left Manchester. This supplementary series consists of twenty cases, extending over a period of fifteen months. As before, the ovariectomies are placed in a separate table. They are eleven in number. Although in two of these the disease proved to be sarcomatous, and recurred some months later, so far as the operation was concerned they all made a good recovery. Up to March, 1888, therefore, my record shows a consecutive series of thirty-one successful cases. Comparatively speaking, this number is of course a small one. But when it is remembered that it means four and a half years' continuous work without a death, and that the cases were taken as they came, without any selection, it will be seen that, small as the number is, it is not without significance, especially in reference to the value of antiseptic treatment² in abdominal surgery.

The cases in the table do not call for lengthy comment. In the first case (No. 46) it will be observed that the second ovary was also slightly enlarged and cystic, but was not removed, owing to its being embedded in a dense mass of deep-seated adhesions. The result so far has justified this course. No operator willingly leaves diseased structures unremoved, but sometimes I feel sure it is the wiser course.

¹ THE LANCET, July 30th and Aug. 6th, 1887.

² It is well to remember that antiseptic treatment includes much more than the mere employment of certain germicide solutions. This is but one small part of it, and perhaps not even the most essential part. It is incorrect to describe a method of treatment as antiseptic simply because these agents are used, and it is equally incorrect to refuse to admit that a certain method of treatment is antiseptic merely because the use of these agents forms no part of it. The latter mode of treatment may, in reality, better deserve to be called antiseptic than the former. Much of the dispute which is still going on as to the value of the antiseptic method in abdominal surgery arises from the want of a clear understanding as to what does and what does not constitute antiseptic treatment. Properly speaking, antiseptic treatment includes every precaution adopted to prevent sepsis, and the more of such precautions an operator takes the more thoroughly antiseptic is his method.

The attempt to separate the adhesions in this case would have added greatly to the risk of the operation, and there would, in my opinion, have been no proportionate gain. The patient is at present fairly comfortable; if the diseased ovary should give trouble hereafter, it will be time enough then to consider the propriety of attempting its removal.

Nos. 48 and 50 were the two cases of malignant disease to which allusion has been already made. No. 48 was the wife of a tramp. The abdomen was very large, the disease had grown very rapidly, and the emaciation was extreme. The operation was undertaken with little hope of success,

years the patient had three severe abdominal operations, from each of which she recovered with marvellous rapidity, the temperature on no occasion reaching 100°. The ovarian tumours presented no appearance that excited suspicion of malignancy; but the development a few months after the last operation of a number of hard, painful tumours in the front of the chest and elsewhere left little doubt as to the disease being sarcoma.

In only three out of the eleven cases was the second ovary normal; in four cases it formed a tumour of sufficient size to necessitate removal; in three cases, being only

COMPLETED OVARIOTOMIES.

SERIES III., JANUARY, 1887, TO MARCH, 1888 (TREATED ANTISEPTICALLY, BUT WITHOUT SPRAY).

No.	Name.	Age.	Civil condition.	Date of operation.	Nature and weight of tumour.	Adhesions.	Drainage, glass tube.	Condition and treatment of other ovary.	Result.	Remarks.
46	E. A. B.	31	M.	1887. Feb. 23	Cystic adenoma of left ovary, size of cocoon; removed without puncture; weight, 1 lb. 5 oz.	None.	None	Cystic, small, forming centre of mass of firm adhesions involving all the parts right of uterus. Not removed.	R.	Temperature 100° 2' on day of operation, 100° 2' after which it never reached 100°.
47	M. A. B.	35	M.	April 20	Multilocular cyst of left ovary, not very large; contents thick, chocolate-coloured; weight, 5 lb. 8 oz.	Parietal, omental, intestinal.	24 hrs.	Normal.	R.	Attack of peritonitis eight weeks before operation; some pain for first few days; no sickness after first 24 hours; temperature elevated for a week, once reaching 103° (10 P.M. April 22nd). Discharged well May 22nd.
48	E. L.	50	M.	May 6	Cysto-sarcoma of both ovaries, with ascites; right tumour very large, chiefly solid; weight, 16 lb. 9 oz.; weight of left, 6 lb. 8 oz.	Omental.	24 hrs.	See under "Nature of Tumour."	R.	Patient much emaciated; girth at umbilicus 33 in.; peritoneum studded with small solid masses; most abundant in Douglas's pouch. Great collapse after the operation; convalescence rapid. Health good till October; recurrence in pelvis; died (Oldham workhouse) Dec. 24th, 1887.
49	J. A.	33	S.	May 18	Single cyst, right broad ligament; wall vascular; contents chocolate-brown in colour; quantity, 42 fl. oz.; weight of whole, 3 lb. 4 oz.	Parietal, recent.	None	Normal.	R.	Temperature in afternoon of 10th 100° to 100° 4', otherwise under 100° throughout. Recovery uninterrupted. Rice pudding on 20th, chop on 23rd; bowels acted on 24th.
50	A. W.	62	W.	May 25	Multilocular cysto-sarcoma, right ovary; weight, 5 lb. 5 oz.	Insignificant.	60 hrs.	Removed by abdominal section 2 years previously. (No. 31 in former paper.)	R.	Temp. never exceeded 99°. Recovery rapid. A few months later sarcomatous tumours appeared in the chest and other parts.
51	E. F.	33	M.	June 10	Cystic adenoma, left ovary; weight, 21 lb. 10 oz.	Parietal, numerous	72 hrs.	Normal.	R.	History of peritonitis for two months before admission. Temperature on the evening of 10th 100° 8', and of 11th 100°; at no other time did it reach 100°. Fish for dinner on the 14th.
52	J. H.	26	S.	Aug. 17	Cystic adenoma, left ovary; weight, 7 lb. 5 oz.	None.	None	Slightly enlarged. Not removed.	R.	Highest temperature after the operation 99° 8'. Recovery rapid.
53	E. Y.	32	M.	Oct. 19	Cystic adenoma of both ovaries; right, size of cocoon; left, size of orange; combined weight, 3 lb.	None.	29 hrs.	See under "Nature of Tumour."	R.	Highest temp. 100° 2' (Oct. 20th). Meat dinner on 25th.
54	M. R.	21	M.	1888. Feb. 8	Cystic adenoma, left ovary; weight, 2 lb. 3 oz.	None.	None	Slightly enlarged, cystic. Removed.	R.	Highest temperature 99° 4'.
55	F. H.	34	M.	Feb. 29	Cystic adenoma of both ovaries; weight of left, 8 lb. 8 oz.; right smaller, size of orange.	Omental.	72 hrs.	See under "Nature of Tumour."	R.	Temperature 10 P.M. on 29th, 100° 2'; 2 A.M. on March 1st, 100°; otherwise below 100° throughout. Fish dinner on March 6th.
56	A. G.	29	M.	March 2	Small cystic adenoma of both ovaries and fibroma (weight, 2 lb. 2 oz.) attached by pedicle to left ovary.	None.	48 hrs.	See under "Nature of Tumour."	R.	Highest temperature (evening of day of operation) 100°. Discharged cured on March 24th.

The operations in this table were all performed in St. Mary's Hospital, Manchester.

and even when the main tumours were removed it was feared the patient would die from the shock. She rallied, however, and made a rapid recovery, and I have no doubt her life was prolonged several months by the operation.

No. 50 presents several points of interest. A tumour of the left ovary was removed by abdominal section two years previously (Feb. 4th, 1885). The right ovary at that time appeared healthy. On Oct. 13th, 1886, suprapubic cystotomy was performed for the removal of a large vesical calculus. Shortly afterwards the abdomen began to enlarge for the second time, and in May, 1887, a cystic tumour of the right ovary was removed. Thus within a little more than two

slightly enlarged, it was left undisturbed; and in one case it had been already removed.

In the case of six of the patients menstruation came on prematurely as a result of the operation, commencing in four cases on the second day, and in two cases on the third. The discharge in each case lasted three or four days. Of the five patients in whose cases there is no record of such an occurrence, two were fifty or upwards and had ceased to menstruate—one four years previously, the other sixteen.

For the first week the temperature was, in every case, carefully recorded every four hours, night and day; in only two cases did it at any time exceed 101°; and in one of these

the time only lasted eight hours, the temperature at other times never exceeding 100°. In one case the highest point reached was 100·8°, in another 100·4°, in three cases 100·2°, and in one 100°. In the remaining three cases the maximum temperature was below 100°.

Solid food, in the form of fish or chop, was given in three cases on the fifth day, in three on the sixth, in four on the seventh, and in one on the eighth.

The date of the removal of the sutures was the sixth day in four cases, the seventh day in one case, and the eighth day in four cases. In two cases the date is not recorded.

The dressings in all cases consisted simply of dry wool-wool pads, and a many-tailed flannel bandage. Where no drainage was used, the pads were changed for the first time in two cases on the fourth day, and in two on the sixth.

In reference to my somewhat frequent use of the glass drainage tube, I should like to call attention to the results of some recent investigations into the behaviour of pyogenic micro-organisms when injected into the peritoneal cavity. They are well summarised by Mr. Watson Cheyne in his third Hunterian lecture before the Royal College of Surgeons for 1888. It is shown that when the cocci were introduced into the functionally active peritoneum in small numbers only, and suspended in a comparatively small amount of fluid, the extraordinary absorbent powers of the peritoneum were equal to the occasion; the cocci and fluid disappeared, and no harm resulted. If, on the other hand, the cocci were injected in large numbers, or if they were surrounded by such material as blood clot, in which they can develop, or were suspended in a quantity of fluid too large to be readily absorbed, suppurative peritonitis was set up.

The lessons to those engaged in abdominal surgery are obvious. We must do all we can to prevent the introduction of these micro-organisms, and, in case some few should gain an entrance in spite of us, we must remove the conditions that are known to favour their development, first, by thoroughly cleansing the peritoneum at the time of the operation, and, secondly, by employing drainage whenever there is likely to be much subsequent oozing of blood or effusion of serum into the peritoneal cavity. The drainage tube need not, as a rule, be kept in more than twenty-four or forty-eight hours; any fluid, whether blood or serum, poured out after this time is usually too trifling in amount to be a source of danger. Nor is it necessary when drainage is employed to change the dressings so frequently as some authorities would have us believe. The wool-wool pads absorb the discharges so perfectly that two or, at the most, three dressings in the twenty-four hours are all that is usually required.

(To be concluded.)

THE TONSILS (FAUCIAL, LINGUAL, PHARYNGEAL, AND DISCRETE); THEIR FUNCTIONS AND RELATION TO AFFECTIONS OF THE THROAT AND NOSE.

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It has long been known that lymphoid tissue, especially in the form of lymph follicles, is very extensively massed together in the naso-pharynx and pharynx. The most conspicuous of these masses, the faucial tonsils, are very familiar pathologically. Likewise is that mass known as the pharyngeal or Luschka's tonsil, situated in the vault of the naso-pharynx, and which, when hypertrophied, forms post-nasal growths. To a less extent is appreciated that aggregation of crypts and follicles, called the lingual or fourth tonsil, situated at the base of the tongue between the circumvallate papillae and the epiglottis, although its pathological conditions are among the most fruitful causes of many of the paræsthesiæ and dysæsthesiæ of the throat. To the above must be added those discrete patches of follicles on the pharyngeal walls which form the anatomical lesion in chronic granular pharyngitis, and an enumeration has been made of the principal groups concerned in morbid states of this area. To understand why these various tonsils are so pre-eminently and conspicuously affected in diseases

of the throat and nose, it is necessary to glance at their relations to adjacent structures and to the functions which they perform in the channels in which they are found, as far as is known; for there can be no doubt that such very large masses, exhibiting, moreover, some complexity of arrangement and sharing so readily in disease, must serve in the performance of some very important physiological function or functions.

The Faucial Tonsils.—Taking first the faucial tonsils, it must be remarked that physiologists have been very much in the dark as to their true functions, if we are to judge by the statements, or absence of statements, in the different English text-books of physiology; and physicians and laryngologists have not elucidated the matter much. The prevailing view appears to be that the faucial tonsils are essentially organs for the secretion of a lubricating fluid to aid in moistening the bolus of food before deglutition. Now, as the faucial tonsils are developmentally portions of the mucous membrane, there is no reason why they should not be provided with mucous glands to the same extent as the rest of the mucosa, and so secrete a little lubricating fluid, though insignificant in amount compared with that from the salivary glands. But that this secretion is quite a subsidiary and unimportant function of the faucial tonsils is palpable from the facts that in any tonsil, healthy or diseased, infantile or adult, the component tissue is lymphoid, arranged in follicles, with more or less fibrous tissue; and that the secreting mucous glands are very scanty, and, indeed, in the ordinary excised tonsil not demonstrable. No doubt, when these organs have been excised for hypertrophy, the fibroid changes have caused atrophy of whatever gland tubes there might have been. Such fanciful theories as that the faucial tonsils are developed as compensatory organs for warming the inspired air when there is nasal obstruction, that they are reservoirs of nutriment like adipose tissue, and that their function is to keep the liquor amnii from passing into the fetal pharynx require no refutation here. It is to Dr. Hingston Fox in his admirable papers¹ that we are chiefly indebted for a lucid exposition as to some of the main functions of the faucial tonsils. His conclusions are, firstly, that the faucial tonsils act in the prevention of fluid waste in the economy by reabsorbing the buccal secretions to a large extent after their work is done, and especially in the intervals of the deglutition acts; secondly, that they absorb certain of the elements of the food bolus as it is squeezed past them in deglutition; and, thirdly, that they form part of the blood-manufacturing system, and use up any nutriment remaining in the spent buccal secretions, acting, as he poetically expresses it, as "nurseries for young leucocytes, planted by the waterside, and drawing their sustenance from the nutrient stream." The facts on which these views are based may be classified as follows:—Firstly, the *anatomical*. The tonsils are like sponges in texture, consistence, and structure, being riddled with lacunæ or crypts. Every bolus of food must be squeezed against them as it is swallowed, a condition most favourable for the transfer of soluble matters. Then in the intervals of deglutition these spongy organs lie in the glosso-epiglottic fossæ, soaking in the buccal secretions, which fill up all their pores, and are delayed in their passage to the pharynx, if not entirely absorbed. Further, the tonsils are constructed on the type of a mucous membrane corrugated so as to expose a large surface to something, and on these corrugations are thickly studded lymph follicles, as well as in these organs a very rich plexus of lymphatic vessels, which must have some function, and what more probable than the relation suggested of which we have so much confirmatory evidence? Also, these follicle aggregations are situated at places just below the output of the buccal secretions, and in the course which these must take.—Secondly, the *histological*. The faucial tonsils are composed of these lymphoid follicles—almost identical with that of the essential parts of the blood-manufacturing system, the spleen, and lymphatic glands. Moreover, these adenoid follicles are densely crowded with leucocytes in all stages of development and with dividing nuclei. The lymphatic vessel plexus throughout the tonsils is one of the richest in the body.—Thirdly, the *physiological*. The faucial tonsils have very free arterial blood supply, which implies very considerable work done. Next, it is a general law that fluids thrown out in the intestinal canal are

¹ THE LANCET and Journal of Anatomy and Physiology, 1896.

absorbed by the segment of the intestine below, and in this area we have similar structures, the solitary and agminated glands, which are not found elsewhere in the body. Then, as a general rule, in health the tonsils atrophy in middle and late life, when blood manufacture is less active, and, on the other hand, tend to be large in children, when lymphoid tissues elsewhere are abundant and active, and blood manufacture is at its climax for the rapid processes of growth and nutrition. The considerations already stated render the correctness of the above views most probable, and it is the object of this paper to show that clinical and pathological facts harmonise with and corroborate them; and also support the view that the other tonsils are largely channels of absorption.

The Pharyngeal Tonsil.—The anatomy and histology of this body in all essentials is that of the faucial tonsils; there are not so many crypts, nor are they so deep or subdivided, but there are differences of degree. These facts alone would tend to show that its function is not dissimilar—viz., the prevention of waste of some secretion. Now, in the horizontal position of the body, in man, all the nasal and lacrymal secretions are bound to flow over it. Here, then, are all the conditions required on the hypothesis above enunciated; and when the facts from disease are added, the conclusion will be unavoidable that this tonsil saves and elaborates the spent nasal and lacrymal secretions.

The Lingual Tonsil.—An observation was recorded many years ago by Dr. Horace Dobell in THE LANCET, and reprinted in his work on Winter Cough (third edition), that the uvula serves to convey the nasal secretions on to the base of the tongue in a plane anterior to the epiglottis, so keeping the constantly dripping fluids out of the larynx. This view was independently arrived at by me, and published in THE LANCET and in the *British Medical Journal* (vol. i., 1888); but having since found that I have been anticipated by Dr. Dobell, I take this opportunity of crediting him with priority. My paper, however, read before the Harveian Society in 1888 also pointed out, that in the erect posture these nasal and lacrymal secretions were dripped by the uvula on to an aggregation of crypts and follicles on the base of the tongue, such as was concerned elsewhere in the reabsorption of fluids and blood manufacture, and claimed that the same functions took place here. It is obvious that the buccal secretions also to some extent come in contact with the lingual tonsil; also that any portions of fluid not dealt with by the tonsils find the epiglottis keeps them out of the larynx, and run along the grooved lateral spouts of the epiglottis into the pyriform sinuses or hyoid fossæ, when they are swallowed.

Before considering pathological causes which affect pre-eminently one or the other tonsil, it might be as well to state here that usually all the tonsils are more or less involved, and that anatomical lesions are rarely confined to any one.

Commencing first with the pharyngeal tonsil, it must be premised that its morbid conditions are connected with the respiratory current and the channel in which it lies. Of all proximate causes of affections of this body, the most frequent is chronic nasal catarrh, and I shall therefore offer no apology for suggesting an explanation of its genesis. I believe it may be sought in the extreme variations in the temperature, humidity, and purity of the air breathed by civilised house-dwelling mankind, and consequently the great variation in the amount of moistening, warming, and filtering that has to be performed by the erectile mechanism of the nose. The savage, living in a state of nature, does not many times a day rapidly change his air currents from a temperature of 80° or more, and often laden with organic impurity and scorched up by a stove, for one frequently near the freezing point, and of widely different degrees of humidity and purity. The air he breathes is of a fairly constant quality comparatively by day and night. Hence there is a certain normal accommodation of his nasal erectile tissues to the work they have to do, which is not suddenly, frequently, or very materially departed from. We have in these considerations a possible explanation of the freedom of the Red Indians from catarrh, and the effectiveness of their nasal channels for breathing purposes as described by Catlin, who spent many years among them. On the other hand, with us civilised moderns, the frequent and sudden changes lead to corresponding activity in the erectile mechanism of the nose, and this repeated for months and years causes the erectile tissues to get into a state of irritable weakness, and to be permanently erected. There is then

chronic congestion and discharge of a secretion differing somewhat from the normal. The exciting causes being constantly in action, chronic rhinitis is produced, then hypertrophy of the mucosa and narrowing of the passages. All this time the more or less perverted and acrid secretions have replaced the healthy ones, and have passed back constantly to the pharyngeal tonsil, which, having to tackle irritating secretions, gets swollen, inflamed, and in time hypertrophied, forming post-nasal growths, with all their attendant evils. Having had constantly under my observation some hundreds of children for the last five years, I have been able over and over again to trace the whole development of post-nasal growths from ordinary chronic nasal catarrh, and that in children who have lived under the most favourable hygienic régime, except in as far as the above-mentioned variations in the physical characters of the inspired air go; and it is to these variations alone that I can attribute the sequence of events. This state of chronic inflammation and debility of the tissues of the upper respiratory tract is not distinguishable from struma, and is often associated with general anæmia and debility, lymphatic gland affection of the neck, concomitant affections of the conjunctivæ and ear (probably extension of inflammatory mischief up the nasal ducts and Eustachian tubes), and also by the forced substitution of buccal for nasal respiration, leading to depressed vitality of the tissues of the rest of the respiratory tract, facilitating the supervention of pneumonia and bronchitis, and preparing the soil for the invasion of the tubercle bacillus. The above account indicates correctly, I believe, the relation between chronic nasal catarrh and pharyngeal tonsil hypertrophy, and also between the latter and the other morbid states referred to. But there are other causes than this, both of nasal catarrh and of acute inflammation of pharyngeal tonsil, the chief one among them being mechanical irritants, such as ordinary dust, trade dust, pollen, or other finely divided matter, which, carried in by the respiratory current, ultimately find their way back to the pharyngeal tonsil in the secretions which flush the passages, thus causing direct irritation by their presence. In the same way the germs of the specific fevers—measles, scarlet fever, variola, &c.—reach the pharyngeal tonsil and cause it to inflame, block the nasal passages in varying degrees, and, by damming back secretions, to produce anterior rhinorrhœa; similarly Eustachian obstruction, retention of secretions, ear abscess, otorrhœa, and life-long deafness. Attention to the nose and naso-pharynx in specific fevers will be likely to prevent the conditions which are not susceptible of cure. Another cause of pharyngeal tonsil enlargement is to be found in its absorption of irritant matters regurgitated or vomited by infants into their naso-pharynx. This often produces an acute coryza and nasal obstruction, independent of mechanical occlusion of nares by vomited matter, and due to direct irritation and enlargement of pharyngeal tonsil. Irritating vaginal secretions introduced during parturition and exciting snuffles is a well-known cause of posterior nasal obstruction from inflamed pharyngeal tonsil. It is a striking clinical fact that there is an overwhelming preponderance of pharyngeal tonsil mischief in the young. Is the cause to be sought in the smallness of the naso-pharynx, the early blocking of the nose, and the consequent stagnation and decomposition of the retained secretions? Judging from the anterior rhinorrhœa of such an irritating character as to cause eczema and the foulness of the secretions dislodged in digital examination of post-nasal growths, I conclude that this is often so, and that the decomposing secretions keep up the enlargement commenced by an ordinary catarrh.

The lingual tonsil next requires consideration, as it is in relation with the same secretions as the pharyngeal, only especially in the erect position. All that has been said, therefore, as to the causes of chronic catarrh of the upper respiratory tract applies with equal force to lingual as to pharyngeal tonsil diseases, and in this conveyance of the acrid products of inflammation we have the main cause of its abnormal states. But there are many causes besides, especially the presence of deleterious and irritating matters in the alimentary ingesta. I would especially mention alcohol, condiments, very hot fluids, very cold fluids, or frequent alternations of these. Each of these can at times be distinctly traced as the exciting cause of lingual tonsil hypertrophy, which, in its turn, is the anatomical fact in the production of the most obstinate and otherwise incomprehensible paræsthesiæ. In the case of this tonsil, too, morbid influences derived from vitiated blood and secretions are

very manifest. I refer especially to gout and rheumatism. Both the nasal and buccal secretions are surcharged with the poisons of those diseases periodically; and there can be no doubt that the inflammatory condition of lingual tonsil seen, and central angina and constriction complained of, so often in these diseases, and which often precede other symptoms or are alone present, are due to the irritation of the lingual tonsil by the perverted secretions. Evidence confirmatory of this view is found in the fact that antidiathetic treatment speedily cures the condition. The lingual tonsil does not show the same predisposition to be affected in syphilis as do the faucial tonsils. I venture to suggest that the syphilitic poison is excreted with the buccal secretions rather than with the nasal; and, as has already been stated, it is with the former that the faucial tonsils are in special correlation. An interesting observation bearing on lingual tonsil affection in scarlet fever was recorded to me by a pathologist who asked an explanation. In a fatal case he had observed ulcerations and erosions localised in the area of this organ. This pointed to the fact that the secretions loaded with germs and inflammatory products had vented their fury here, and seems singularly confirmatory of the importance of the lingual tonsil. Taking lupus of the nose and throat again, lupoid infiltrations and ulcerations have been found localised in the lingual tonsil area (Chiari and Reil), the infection having clearly been carried over healthy parts to a place where it could enter with the secretions and reproduce the disease. When there is nasal obstruction and substituted mouth breathing, all the impurities of the environment atmosphere enter the mouth, and many of them alighting on the mucous membrane are washed on to the lingual and faucial tonsils. Moreover, work is cast on the linings of the mouth—that of warming and moistening the air—which does not belong to them. Hence drying of the surface and failure of the secretions to wash away the decomposing débris. In the morning the patient complains of a dry mouth and a slight sore throat, due to inflammation of the lingual and faucial tonsils. This at first passes off during the day, but after some time leads to hypertrophy of the irritated structures. Other frequent and potent causes of lingual tonsil abnormalities are tobacco smoking, chewing, and snuffing, their action being irritant to the lymph follicles throughout the upper respiratory tract. Septic influences, bad teeth, neglected dirty teeth, false teeth not kept clean or not well fitting, must be added to the list of common causes of lymph follicle irritation and hypertrophy throughout the whole area under consideration, and must be attended to before a cure can be expected. Lingual tonsil mischief is specially met with in adults, and not so much in children. The reasons I would suggest are that the latter do not indulge in alcohol, condiments, or very hot or very cold fluids; and also that the irritating secretions which in children are penned up in the nose or directed forwards owing to enlarged pharyngeal tonsil to produce a rhinorrhoea, in adults pass on (there being more room in the nasopharynx) to the lingual tonsil.

Concerning the faucial tonsils, the special relation of these to the buccal secretions has been referred to, and also that the factors in the production of disease of the other tonsils affect these likewise. It is unnecessary, therefore, to recapitulate, but it remains for me to remark additional facts. Very often unilateral hypertrophy of a faucial tonsil is seen. How often is it not in relation with a carious tooth on the same side, constantly contaminating the buccal secretions on that side? There can be little doubt that the tonsils are the sites where the poison of scarlatina, measles, and diphtheria usually enter the system, since they are the parts first and most constantly, and often alone, visibly affected; and the lymphatic glands in direct communication with them most markedly, soonest, and most frequently involved. Faulty voice production and excessive use of the voice are very important causes of affections of all the tonsils. Excessive use demands excessive lubrication, and the latter implies excessive absorption on the part of all the lymphoid follicles. Hence the diffusiveness, chronicity, and obstinacy of the changes met with in the throats of clergymen, actors, and Board School teachers. Regarding lacunar or so-called follicular tonsillitis (which, by the way, I have noticed more than once well marked in the crypts of the lingual tonsil), there are two distinct varieties clinically. The first is that in which superficial inflammation and swelling of the mucosa blocks the crypt orifices and causes retention of the shed epithelium and débris.

This form is acute and usually easily curable, and may be brought about by septic or common catarrhal causes. It is painful, and requires sedative and antiphlogistic treatment. This variety often forms the starting-point of a lacunar abscess, or the process may extend deeper and peri-tonsillar abscess or quinsy ensue. The second form is chronic, and depends on a natural or acquired sluggishness with which the desquamation processes of the epithelium lining the tonsillar crypts are performed, and the débris is not normally extruded by a *vis a tergo*. This is not septic or painful, though there may be slight stiffness and discomfort. It is very chronic in course, and difficult to overcome, yielding best, however, to solvent and stimulant local applications. The discrete nodules in the pharyngeal walls partake in the morbid processes going on in the other tonsils, and are similarly affected by the causes acting on them.

It now remains for me to state that it has not been my object in this paper to give details of symptoms and treatment, and merely to indicate the lines upon which nose and throat affections should be treated when, as is generally the case, the various tonsils—the points of maximum irritation—show palpable signs of morbid action; and it must be observed that, when the various methods of treatment in use in the past are considered in the light of the above views as to the functions of the tonsils, it will be seen that these views afford a scientific explanation of the success of those empirical methods which have been hitherto the most approved. These lines would be, firstly, the ensurance of physiological rest to the affected tissues by arresting morbid and lessening profuse secretions, and promoting derivative action into other channels. In acute and sub-acute affections, a blue pill, followed by regular small doses of belladonna, gives excellent results. Secondly, the removal of all causes of irritation and inflammation in the inspired air, whether due to occupation, habits, or conditions of existence, and a similar regulation of the habitual alimentary ingesta. Thirdly, the soothing of any acute inflammation or pain by ordinary measures, i.e., bland fluids, jelly, cocaine, &c. Fourthly, the attack of any diathetic condition which may be causing perversion of secretions—as gout, rheumatism, syphilis, &c.—on general principles. Fifthly, the removal of any hypertrophied tissue—such as enlarged tonsils, post-nasal growths, hypertrophied lingual tonsil, granules of granular pharynx, &c.—which may be occluding any physiological channel or causing mechanical irritation of adjacent parts by the numerous approved methods at our disposal. Sixthly, the prevention of the accumulation or stagnation of any of the secretions of the nose, mouth, or pharynx by cleansing and antiseptic washes.

In conclusion I would say—1. The significance of the various tonsils is in their palpable relation to the blood-manufacturing system and to the outpour of copious secretions. The relations of the tonsils to the rest of the organism can be well appreciated by comparing them with the relations of the sewage farm to the town whose refuse it makes use of, and to which it returns its elaborated products. 2. If any of the secretions delivered to the tonsils become contaminated in any way with irritating matters, whether generated in the system or introduced from without, those tonsils in physiological correlation with the affected secretion show irritative changes varying in degree. 3. The functions and affections of the various tonsils afford the key to the comprehension and scientific treatment—and the prevention—of many of the most intractable and recurrent disorders of the nose and throat.

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ON A GROUP OF CASES TREATED WITH STROPHANTHUS HISPIDUS.

By DAVID G. EVANS, M.D., C.M. EDIN.

THE most accurate method of judging the value of any drug in curing a disease or in relieving symptoms is ascertained by carefully watching the changes it produces in the clinical phenomena of a case. By this form of observation we are able to elucidate theories and to convert them into therapeutical facts. A scrupulous study of a few well-selected cases has precedence over the off-handed manner of arriving at a conclusion by a bare statistical majority. The following cases are small in number, but I believe that my

readers will find them to be correctly adopted, and also studied with sufficient minuteness to illustrate pretty fully the action of *strophanthus* on the cardiac muscle.

CASE 1.—On Sept. 29th, 1887, I was desired to visit A. N—, a military gentleman of great reputation, aged sixty-eight years, who complained of breathlessness, which was greatly aggravated on any exertion. He also complained of palpitation, occasional fits of dry coughing, and a feeling of tightness about the upper region of his chest. He was likewise very weak and languid. Hereditary tendencies pointed to gout. The breathlessness first appeared in August, 1886. Objective examination exhibited a spare individual, well formed, military, 5 ft. 11 in. in height, and 11 st. 9 lb. in weight. Face pale, with an expression of being depressed; and the mouth open, through which he respired. Cyanosis of the *ala nasi*, lips, ears, and nails. A few dilated venules were distributed on each cheek, and the veins of his hands were over-distended with blood. The conjunctivæ were somewhat yellow. On inspecting the præcordial region, a systolic undulatory movement was perceptible in the upper part of the epigastrium, extending for about three inches along the lower border of the lowest cartilage. A slight visible impulse was also present between the sixth and seventh ribs four inches from the middle line of the sternum, and running along the sixth interspace for an inch. Palpation conveyed an irregular action of the heart to the hand, with a distinct thrill accompanying each systole. The cardiac impulse was diffused, and to be felt in the fourth, fifth, and sixth intercostal spaces; it was greatly wanting in force. The point of maximum intensity was in the sixth intercostal space, four inches and a half from the middle line of the trunk, considerably to the left of the nipple line. The absolute and relative cardiac dulness was increased principally downwards and to the left, also to the right of the sternum in a less degree. There was a systolic murmur in the mitral area almost entirely replacing the first heart sound, and which was propagated towards the angle of the left scapula and back; it was very audible over the left auricular appendix. There was also a slightly presystolic rough murmur in the same area. The pulse was 86, rhythm irregular, and in character it was small, feeble, and very compressible. The respiratory system afforded signs of extreme congestion of both lungs. The urine was diminished in quantity; of a muddy yellow colour; sp. gr. 1025; reaction acid; boiling a filtered specimen yielded about half its volume of albumen; the only deposits present were amorphous urates. My diagnosis was mitral incompetence, with failure in compensation, and dilatation of both ventricles, especially the right one. There was great congestion of both lungs, and also to a little less extent of the liver, stomach, kidneys, and to a still less degree of the spleen. The treatment consisted in the administration of the following mixture: Tincture of *strophanthus*, 2½ dr.; spirits of chloroform, 2 dr.; compound infusion of gentian, 6 oz.; two teaspoonfuls to be taken in a little water every three hours. The diet ordered consisted of beef-tea, peptonized milk gruel, eggs beaten up and in custards, milk puddings, fish, &c. On Sept. 30th, the patient was feeling a shade better. Pulse 82. He had taken a little more food. On Oct. 1st he felt that he was improving. Pulse 80. Medicine repeated. On the 2nd he was still improving. Pulse 78. On the 3rd he was decidedly better, the pulse being stronger, and there was less dyspnoea and palpitation. The disagreeable sensation of tightness at the upper part of his chest was subsiding. To cut the history short, the patient was well enough to leave off taking the medicine on Nov. 9th, when he stated that he felt better than he had done for over a year. He remained apparently well until Feb. 7th, when I was sent for again, as he complained of returning symptoms, and I prescribed the following: Tincture of *strophanthus*, tincture of *nuxvomica*, and spirit of chloroform, of each one drachm and a half; compound infusion of gentian to eight ounces; a tablespoonful to be taken three times a day. The patient, unable to wait until my next visit, wrote to me on the 9th, saying what a great amount of benefit he was deriving from taking this mixture, and hoped very much that I would continue it. However, three bottles of the above succeeded in re-establishing compensation, when he felt well enough to discontinue it again. The pulse was now perfectly regular in rhythm and force. The tongue was clean, and appetite good. There was no dyspnoea, and no albumen in the urine.

The patient has remained well since, without any returning symptoms.

CASE 2.—Mrs. V—, aged forty-nine years, complained of being short of breath and of palpitation, which were greatly increased on exertion; she had also a violent cough and anasarca. The patient stated that she had been ailing more or less for two years and a half. She had an attack of bronchitis about Christmas, 1886, and has also had two subsequent ones. She has suffered from rheumatism at times within the last six years, and had an acute attack thirteen years ago. There is a family history of rheumatism on her father's side. Her dyspnoea commenced about two years and a half ago, and was never properly cured, although treated by several medical gentlemen. Height 5 ft. 2 in.; weight 177 lb. Well-nourished, with a moderate amount of adiposity. Cyanosis of lips, cheeks, ears, and nails. Edema of feet, legs, abdominal walls, and chest. Slight undulatory movements synchronous with the ventricular systole were visible in the upper part of the epigastrium. Swelling and pulsations of both right and left jugular veins were present. The action of the heart was very weak, extremely irregular, and at times also intermittent; systolic thrill in the mitral area; percussion dulness increased chiefly downwards and to the left, and no sense of resistance. On auscultation, there was a mitral systolic murmur completely replacing the first cardiac sound and propagated to the maxilla and back, and it could be distinctly heard in the left vertebral groove. The pulse was extremely irregular, at times intermittent, and also very weak. She had congestion of both lungs and bronchi, caused by the backward pressure on the circulation; this same pressure told on the portal circulation, causing enlargement and tenderness of the liver. The spleen and kidneys were also congested to a less extent; but the backward pressure in the line of the circulation had gone beyond this, and was affecting the systemic veins, demonstrated by the above-mentioned edema. The urine was very greatly diminished in quantity, sp. gr. 1026, and contained a very large amount of albumen. The diagnosis was mitral regurgitation, with failure in compensation, &c. The medicinal treatment was the exhibition of the tinctures of *strophanthus* and *nuxvomica*. Compensation was soon obtained under this treatment, the pulse gradually becoming regular and strong. The backward pressure was relieved, and the congestion of the internal organs and edema entirely disappeared. When she left off taking the *strophanthus* there was no dyspnoea or palpitation, no albumen in the urine, and she was well, with the exception that her mitral murmur was still audible.

CASE 3.—E. O—, aged forty-seven, was complaining of a violent pain below the left nipple, together with dyspnoea and palpitation. He came to me for the first time on Jan. 21st, complaining of the pain only, which I then thought was of a neural character, and treated him with sedatives, which afforded him relief for some time. In March he came under the observation of my locum tenens, seeking advice for a return of the same pain, and he was prescribed something similar to what I had previously given him. He resumed work after a fortnight's rest. But he was not destined for a prolonged release of his symptom, and at the end of April I was again consulted, when the other signs above mentioned had become manifested. His height was 5 ft. 4 in., and his weight 10 st. 11 lb. He was well developed and muscular. There was commencing cyanosis of the *ala nasi*, lips, and helix of the ears. Temperament neurotic; tongue slightly coated at its back part. There had been developed an undulatory systolic movement in the upper part of the epigastrium. The apex beat was altered in position, and was thrown into the sixth intercostal space four inches and a half from the middle line of the body and outside the nipple line. Percussion showed that the cardiac dulness was increased downwards, and a little to the left. A systolic mitral murmur, which I had not detected before, was quite audible. It was propagated with the greatest intensity towards the axilla and back, where it became lost. Pulse rapid, weak, and very compressible. Both his lungs were now congested, especially at the bases posteriorly. Urine normal. Diagnosis: Mitral reflux, with commencing failure in compensation. Consequently, I deemed it advisable to try *strophanthus*, and am pleased to say the result was most gratifying. The patient resumed work on May 29th, and still continues to follow his employment.

CASE 4.—Mrs. F—, aged forty-seven, on May 17th complained of being very weak and faint, with some diarrhoea. On examination, I found that she was a tall woman,

well developed, but with her muscles in a very flabby condition. She was lying flat on her back in bed in an adynamic state, with the face pale and expressionless. Her diathesis was not well marked. Temperature 101.4°. Tongue a little coated, very flabby, and with the fungiform papillae abnormally raised. Appetite bad, with thirst, and the odour of her breath disagreeable. There was tenderness on pressure in the epigastrium, but in every other respect the abdomen was normal. There was no visible apex beat, and the cardiac impulse was almost imperceptible to palpation. The first cardiac sound was inaudible, with some accentuation of the second heart sound in the mitral area. There were no murmurs present, and the action of the cardiac muscle was extremely weak. Pulse 110, rhythm regular, and in character very small and weak, with deficient filling of the arteries. I gave her strophanthus and nux vomica, together with astringent powders for her diarrhoea, and her case ended favourably on June 3rd, when she was crossed off my list in an excellent state of health.

CASE 5.—Mrs. B—, aged fifty-seven years, a chronic invalid, who complained of a variety of variable symptoms, but principally of dyspnoea and weakness. I visited her for the first time on Nov. 13th last, when she presented the following condition. A short, stout woman, rather pale in the face, with a melancholic expression. Lips pale, of a bluish colour, and the teeth mostly all decayed. The tongue was coated down the centre with a yellowish-brown fur, being clean at each side of this band. There was anorexia, some thirst, with a sense of flatulent distension, and at times nausea and even vomiting. The liver appeared to be a little roughened on palpation, contracted slightly, and was tender to pressure. No impulse could be felt in the præcordia, and the quality of the heart sounds was very weak on auscultation in the various areas. The pulse was normal in frequency, but remarkably weak and compressible. The other systems were normal. This patient had been greatly addicted to drink for years, and was found to be suffering from chronic dipsomania, with cirrhosis of her liver. Owing to the extremely weakened condition of her circulatory system, I determined to try her with the following mixture: Tincture of strophanthus, 1 dr.; tincture of nux vomica, 1½ dr.; tincture of capsicum, 1 dr.; decoction of cinchona to 8 oz.; two tablespoonfuls to be taken thrice daily. She received considerable benefit from taking this mixture, especially so far as her circulatory system was concerned. Her heart improved so much as to be felt on palpation, and her craving for alcoholic drinks was not by any means so great. I think that possibly her desire for so much alcohol was in a great measure due to the weakened state of her circulation, with an improper filling of her cerebral arteries causing anæmia of the brain; and in order to arouse this flagging circulation she drank alcohol freely.

CASE 6.—H. S—, aged fifty-nine, complained of being short of breath on the least exertion, or in stooping to lace his boots, or even to pick anything from the floor. He also felt a pain in the region of the heart. He had suffered from winter bronchitis for the last four years. He was a short, excessively stout person, with a pale face and gouty diathesis. It required very careful palpation to detect any impulse of the heart, as it was so very weak in its action, but natural in position. In quality the cardiac sounds were very weak at the different areas, especially the first sound in the mitral area. Pulse 78, regular, but weak, soft, and very compressible. The arteries were not degenerated. Diagnosis: Adipose infiltration upon and between the cardiac muscular fibres, causing this heart failure. The tincture of strophanthus and nux vomica, in five-minim doses of each three times a day, afforded him with very great relief. His lips have now become red, being pale and blue before. The face has also assumed a ruddy appearance. The cardiac muscle acts strongly, and the apex beat can be distinctly felt on palpation. The pulse is now 70, very much stronger in character, and the tone is excellent.

CASE 7.—G. S—, aged thirty-four years, came under my care in September, 1887, suffering from enteric fever, having had a very severe attack of this fever, lasting for fifty-three days, and with the intervention of several complications, the principal of them being pneumonia, hæmorrhage from the bowels, and thrombosis of the veins of the right leg. On Oct. 27th his circulation became very weak, and he was in imminent danger of death from cardiac failure. The state of his circulatory system was then as follows: Faintness and dyspnoea, with a marked tendency

to syncope. The apex beat was imperceptible to palpation. In the mitral area both the heart sounds were inaudible; but as the cup of the stethoscope was advanced towards the base of the heart the second sound gradually became audible, and it was distinctly so in the aortic area. Pulse 79, intermittent in rhythm, and remarkably feeble. The arteries were imperfectly filled with blood. The severity of the enteric fever had undoubtedly left this patient with a considerable amount of fatty degeneration of the muscular fibres of the heart. He was ordered a mixture containing a minim and a half of the tincture of strophanthus, combined with nux vomica, every half-hour. As he improved, the medicine was given less often, being ordered every hour, and afterwards every two and four hours. In the seventh mixture the nux vomica was left out entirely, and it was prescribed to be taken three times a day. This medicine evidently saved his life, and he resumed his usual employment last February. He continues to work, and now feels as strong as he ever did.

Remarks.—The most interesting features connected with the first, second, and the sixth cases are derived from the fact of the patients having taken large quantities of digitalis from time to time under the treatment of different medical gentlemen, and this without any very great improvement in any of them. With both of the first two patients I immediately supplanted digitalis by strophanthus; consequently I was in a position to weigh accurately from a clinical aspect the effect of these two drugs in mitral disease. I believe that I can conscientiously assert that our new remedy is vastly superior to the older one (digitalis), especially in mitral complaints and cardiac failures. It thoroughly established compensation, and caused extremely irregular and also intermittent pulses to become perfectly regular, in cases where digitalis had previously failed. It appears to act as a cardiac tonic by stimulating the cardiac muscle into a greater state of contraction, and also by prolonging this state of systole. Acting thus, it raises the blood pressure within the arteries in the various organs, as manifested by the diuresis produced in these cases; and in the fifth case by raising the tone of the cerebral circulation. It also seems to slow the rhythm of the heart, and to steady its diastole, giving it more time to nourish itself through the coronary arteries. In my opinion, when a patient is properly under the influence of strophanthus, it prevents an already dilated heart from assuming the same amount of dilatation after each systole as there previously existed, and this depends on the power this drug possesses in maintaining the cardiac muscular fibres in a state of contraction. I have never found strophanthus to cause the heart to beat irregularly, or to make the pulse more rapid in action, even when given in very large and continued doses, as is repeatedly observed with large doses of digitalis; neither is it cumulative in its action. The addition of nux vomica seems to accelerate and aid the therapeutical effects of strophanthus hispidus.

Anglesey.

CASE OF EXCAVATED MALIGNANT TUMOUR OF THE LUNG.

BY GRAHAM STEELL, M.D.,

ASSISTANT PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY.

W. L—, aged forty-five, a tramcar guard, was admitted into the Manchester Infirmary on Feb. 27th, 1888. He had been in good health till May, 1887, when he suffered from an attack of hæmoptysis, for which he was treated in the infirmary. From this time his health gradually deteriorated, although cough and expectoration did not become features of his illness till the beginning of winter. He began to attend the out-patient room of the infirmary in August, when no physical sign of pulmonary disease could be detected; notwithstanding this fact and the absence of a tubercular family history, the case was regarded as one of phthisis. He attended more or less regularly during the winter, but his chest was not again examined for some time. At one of his visits he complained of a good deal of pain in his chest, and on examining it I was surprised to find the following physical signs: absolute dullness of the upper portion of the right lung, accompanied by great sense of resistance on percussion, and absence of breath sounds over

the dull area, except in the supra-spinous region and upper inter-scapular region, where a few moist sounds were audible, along with a feeble indeterminate breath sound. The veins of the right upper extremity were noticed to be decidedly enlarged. In January he expectorated a considerable quantity of very fetid matter, and from this time his breath became offensive, occasionally unbearably so. He brought up large quantities of sputa at intervals.

The patient's health was evidently fast declining, and, as I had come to the conclusion that his illness was not phthisis in the ordinary sense, I took him into the infirmary. The physical signs at the time of admission were as follows. On inspection, the upper part of the chest on the right side looked distinctly fuller than the left, while its movement was almost annulled. Below, the movements of the chest on the right side and the intercostal depressions appeared natural. On percussion in the infra-clavicular region a simply dull sound was elicited, but on strong percussion a decided though obscure tympanitic resonance became audible; and when the patient opened his mouth a forcible stroke produced imperfectly-developed cracked pot sound. In the right supra-clavicular and clavicular regions, and behind down to the level of the spine of the scapula, there was dullness. In front the dullness did not pass across the middle line. On auscultation, there was absence of breath sounds over the dull area in front; behind, an indeterminate breath sound, accompanied by a few obscure moist sounds, was heard. The veins of the upper extremity and infra-clavicular region were distended, and the right external jugular vein seemed fuller than the left. The sputa were fairly copious in amount and extremely offensive. The right pupil was smaller than the left. Before death, which took place on March 7th, certain changes had occurred. The veins had become more distended, and below the outer half of the clavicle a soft, though not fluctuating, swelling, which did not become larger during coughing or smaller during a deep inspiration, had developed; in front, the dullness had extended to a slight extent across the middle line; behind, the dullness had diminished, having given place to a resonance not very dissimilar to that of the corresponding region of the opposite side; abundant moist sounds had become audible over the left lung and unaffected portion of the right lung, evidently owing to oedema. The temperature during the nine days over which morning and evening observations were made only rose above normal twice, reaching on these occasions 100° 6' and 101°.

The case presented clinically several interesting peculiarities, but it is to be regretted that the sputa were not examined microscopically, as they might have cleared up the nature of the cavity, the existence of which was rendered probable by the symptoms and signs. The following facts represent the clinical evidence, which examination of the case afforded.

A.—Firstly, as to symptoms. 1. An illness beginning with hæmoptysis, followed by indefinite failure of health, cough and expectoration not being present for several months. 2. The complaint of a great deal of local pain. 3. Fetid expectoration, large quantities of which were brought up at intervals, after the manner which we know to be suggestive of a cavity in the lung.

B.—Secondly, as to physical signs. 1. The fulness of the upper part of the chest on the right side, combined with impaired movement of the same part. 2. The distension of the veins of the arm and neck, the subclavian being evidently more involved than the jugular. 3. The contraction of the right pupil. 4. The, at first absolute, dullness of the upper lobe of the right lung; obscure tympanitic resonance with cracked-pot sound on forcible percussion becoming subsequently developed in front. Behind, at a still later period, the occurrence of a similar diminution of dullness, the resonance, however, not possessing tympanitic quality. 5. The essential limitation of dullness to the affected side. Extension across the middle line was only noticed during the last few days of life, and then in very trifling amount.

The conclusions that could be legitimately drawn from the clinical facts just noted were, I think, these:—1. That the disease had begun in the lung (A 1, B 5). 2. That the whole of the upper lobe of the right lung was more or less consolidated (B 4). 3. That the upper lobe of the right lung contained cavity (A 3, B 4). 4. That whatever the cause of the consolidation, it was such as to produce centrifugal pressure (A 2; B 1, 2). 5. That the mediastinal dulness

differs from a lung dullness by passing across the middle line on the one hand, and on the other by its not involving the whole of the upper lobe of the lung so that it does not reach the costo-humeral angle, much less the posterior aspect. In these respects the dullness present in the case before us corresponded to a lung dullness, rather than to a mediastinal dullness, although at last to a very slight extent the middle line was transgressed. Intra-thoracic tumours are generally mediastinal, and rarely pulmonary. In the present case the evidence from symptoms as well as signs pointed to the lung as its seat, supposing, from the pressure symptoms and signs, that a tumour existed. Lastly, granting that there was a tumour of the lung, it was necessary to admit that the tumour was excavated. Lung tumours are rare, excavated lung tumours excessively so.

Post-mortem examination by Dr. HARRIS, pathologist to the infirmary.—Pleura: Both sides presented very tough old adhesions, which were firmer on the right than on the left side. On the right they were so tough as to require very great labour to remove the right lung from the chest. There was no pleural cavity remaining on the right side, and in the little space left on the opposite side there was no effusion. Lungs: The uppermost lobe of the right lung was voluminous, extending as far as, but not beyond, the median line in front. The whole of the interior of that lobe was hollowed out into an irregular cavity, which was filled with thick greenish-yellow material, which to the naked eye looked like pus, and emitted a very foul and peculiarly sickly odour. The walls of the cavity were very irregular, and formed by a soft greyish-white new growth. The growth forming the walls was in very small amount; in the greater part of the circumference of the cavity it did not exceed three-quarters of an inch in thickness. At the upper part of the cavity, however, there was a mass the size of a Tangerine orange, which projected into the interior of the space. It appeared as though there had been a large growth occupying the whole of the uppermost lobe, which had broken down in the centre, forming a space not unlike an abscess cavity. The growth was very soft, of greyish-white uniform appearance, with no indication of there being an alveolar structure. The appearance was uniform, like that of the round-celled sarcoma or the soft lympho-sarcoma. The growth everywhere extended up to the visceral layer of the pleura, and only at a few points could any trace of lung tissue be seen. The pleura over the cavity was only slightly thickened, and was adherent, as elsewhere, to the chest wall. The middle and lowermost lobe presented no abnormal appearances; there was no growth in either, nor in the pleura over either lobe. Percussion over the cavity in the uppermost lobe after the lung was removed from the body, but before any incision was made into the organ, gave a shallow tympanitic note. The left lung presented no abnormal appearance except in the apex, where there was a well marked cicatrix and puckering of the apex. The apex was depressed over an area the size of a half-crown piece, in consequence of the cicatrix in the lung tissue beneath. No caseous deposit. The pericardium presented no abnormal appearance. The heart showed engorgement of the right side with black blood, partly fluid, partly coagulated; no other abnormal appearance. The trachea presented no abnormality. The mucous membrane of the large bronchi was hyperæmic. From the bronchus leading to the uppermost lobe of the right lung was exuding some foul material similar to that found in the cavity in the corresponding lung. The liver weighed 3 lb. 8 oz. The spleen weighed 6 oz.; it was pale and somewhat soft, but in other respects presented no abnormal appearance. The kidneys were somewhat soft, but were otherwise normal. The œsophagus and stomach were healthy, as were also the peritoneum, intestine, and rectum. Microscopic examination of the tumour showed it to be a lympho-sarcoma.

Manchester.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The first meeting of the thirty-third session (1888-89) was held at the Royal West Kent Dispensary, Greenwich-road, on Oct. 12th, when the following officers for the ensuing session (1888-89) were elected, after which the President delivered the inaugural address: President:—Dr. Peter Horrocks. Vice-Presidents: Messrs. Thomas Moore and J. Poland. Council: Drs. Ernest Clarke and Alexander Forsyth; Messrs. G. H. Cable, Peter Cooper, Mc Gavin, J. Brindley James, and Fredk. Moon. Treasurer: Dr. Prior Purvis. Sec. H. W. Roberts. Librarian: Dr. Ernest Clarke.

CHRONIC INFANTILE SCLEREMA AND PARALYSIS.

By ANGEL MONEY, M.D., M.R.C.P.,

ASSISTANT PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN.

BY this name it is desired to designate an affection of considerable rarity, characterised by slowly developing sclerema and weakness, ending in death, usually with convulsions, and often affecting many children of the same parents. The facts, as far as they are known to me, may first be narrated.

F. G—, aged five months and a half, was first seen on Aug. 22nd, 1884. The mother, an intelligent woman, brought the child because it was going the same way as her first-born. The history was given as follows. When the child was two months old she began to turn her hands in by a rotation movement of the shoulder, and it was also noted that the arms and legs began to grow limp and helpless, but which limb first showed the flaccidity cannot be ascertained. The mother thought that the "back" had always been helpless. The infant was very thin at the age of two months, but since then the skin had gradually got firmer and fatter, and the mother observed that a great fold or bar had developed above the buttock, just as with the first child. When seen, the child was able to take food well. The bowels, rather confined, acted once a day; micturition was natural. The infant took ample notice, the special senses seemed natural, and there had been no fit or squinting. The temperature in the rectum was 98° 8'. The feet and legs felt firm and fat, and a regular thick fold existed above the nates; a great tendency to rotate in the arms at the shoulder was as remarkable as was the constant tendency to inversion of the right thigh at the hip joint. The big toes were drawn up on the dorsum, and the feet over-arched. A feeble cry, no knee jerk, with some rather flabby sclerema and fatness about the shoulders and lower parts of the neck, completed the positive morbid signs. On September 15th the right leg was noted to be everted and lying on the outer aspect; both legs dropped heavily when raised and let go; there was marked talipes equinus and varus; the child was a little sallow; the eyes moved well; laughing and frowning were feeble; the whole aspect was one of limppness and great quietude, but there was no tenderness. The skin and subcutaneous tissues of the left forearm were tough and infiltrated; the colour of the skin of the hand parts was natural, but, if manipulated, developed a bluish-red hue. Whilst examining the child some irregular clonic spasms of the facial and lingual muscles were noted. A strong faradic current elicited no reaction in the legs, arms, or forearms, and only slightly in the face; the occipito-frontalis and orbicular acted a little, the left side better than the right. On Oct. 19th the notes state that the cry had grown very much feebler, and the general limppness had become intense. The face was equally flushed and sweating; the breathing was almost wholly diaphragmatic; râles were heard in the chest. On Oct. 28th the patient was getting weaker. The breathing was more difficult, 50 per minute, and commencing with a sort of jerk. The face was still twitching at times. The urine collected contained no albumen or sugar. She "sometimes goes as cold as if she were dead." Heart beating 144 per minute. Arms still very much rotated in; sclerema more widespread, involving trunk; head sweating profusely. Death occurred on Nov. 7th. The brain only was allowed to be examined, and no sign of disease was detected either with the naked eye or microscope. Sections of the medulla oblongata particularly seemed normal. The first baby died at the age of four months and a half, was "queer" from birth, never sat up, turned its arms in, and had the tough skin.

B. G—, sister of the above, was brought to me at the age of three months. She began to be affected when six weeks old; the left arm first showed weakness, and later the right arm. The cry was noted to be weak as early as two weeks after birth. On Jan. 13th, 1888, when first seen, there was well-marked limp palsy of all four limbs and head; no knee jerks, talipes equinus of both feet; sclerematous state of limbs, shoulders, and buttocks, with the characteristic transverse fold across the loins. The urine was luckily collected once; it was watery and almost pigment-

less, contained no albumen or sugar, and gave 1 per cent. of urea. The bowels acted naturally twice or thrice a day. The pulse was 120; the respiration about 36, but rather variable. I saw the child at her home in Camberwell several times, and on the last occasion noted that all the four limbs and head "flopped" back when held up; the sclerema thickened the skin of both legs and both arms symmetrically, but the dorsa of the hands and feet were but slightly affected; a thin fold could not be picked up. The skin of the abdomen and chest was soft, but the fold picked up by the finger and thumb was too thick. The thickness of the lower limbs stopped quite abruptly at the level of the iliac crest, and symmetrically on the two sides. The sclerematous skin did not pit; its colour was slightly reddish blue. The skin of the back was soft, but a thin fold could not be nipped up with the finger and thumb. There was no excess of moisture, but the skin was not dry. The thighs had a slightly glazed appearance on the surface. Both feet were strongly extended at the ankle joint. The skin of the sole and palm was rather closely applied to the subcutaneous tissue, but yet there was not that sclerematous condition which obtained elsewhere. The hair on the scalp was natural. There was some power of movement in the upper limbs at all the joints, but the fingers seemed least paralysed; the only movement in the lower limbs was a very trifling flexion of some of the toes. The superficial reflexes appeared to be in abeyance everywhere. The facial muscles were not paralysed, nor the tongue; no spasms were noted. The ocular muscles appeared normal, as also the pupils. The breathing was almost entirely abdominal; the chest walls receded bilaterally; the alae nasi worked; and there was some blueness of the lips and nail-beds. This child was treated by frictions with oil; arsenic, strychnia, and mercury were given internally. In neither of the children was there any evidence of syphilis. A boy aged two years and a half, the only other child, was perfectly healthy, and well grown in stature and weight. All three females of the family were affected, and all three died. In all the affection began about the same time (? was it really congenital); the first died at four and a half months, the second at eight, and the third at nine months.

Are these cases simply examples of sclerema neonatorum? Even if so, there are points of great interest. Paralysis failed to elicit muscular contraction where the limppness and paralysis were most marked. Would a simple skin-bound leg cause such extreme talipes equinus? Are local clonic spasms of the face symptoms of the last days of sclerema neonatorum? The clonic spasms can hardly be regarded as due to cyanosis and asphyxia; and suppose for a moment they were so due, why did the other muscles of the body not suffer spasm? We should be forced to admit something wrong with them or their nervous correspondents, because twitching fingers are—in my experience at least—quite as early, quite as much signs of asphyxia as flickerings of the face. There is no reason why the hypoglossal and spinal accessory nuclei or their muscular endings should not likewise discharge. Granted that the debility of sclerema neonatorum is a marked feature of that disease, are we sure that the want of movement is not a true paralysis? Questions are asked, but for the present this interrogative state of mind is the most scientific. Circulatory troubles hardly existed in my cases; the lung mischief must probably be regarded as due to the paralysis of the intercostal muscles and diaphragm, together with the soft yielding chest walls. The long duration of the cases proves that they did not belong to sclerema neonatorum as ordinarily witnessed, though chronic and subacute forms have been described. Suggestions of the relationship between infantile palsy, sclerema, and myxœdema have much occupied my attention. We know, however, so little that is certain. The following facts are interesting:—A condition of skin resembling, in its not pitting, myxœdema, and some forms of sclerosis, may be seen in infantile palsy and in other spinal paralyses. Likewise in certain cases of exophthalmic goitre an œdematous state of the integuments, which hardly, if at all, "pits," has been set down as "vaso-motor œdema," but at least the suggestion of its dependence on the nervous system requires consideration. In one of the last cases of sclerema and paralysis above mentioned the thyroid (and thymus) seemed natural at the necropsy. The spinal cord was healthy, and the skin (sections kindly prepared for me by Mr. A. E. Barton, lately clinical assistant and house physician at University College Hospital) showed the infiltration of the cutis with the wax-like deposit, and

a decided overgrowth of nuclei around the sweat glands and vessels of the skin, the latter condition corroborating Rasmussen, who believes the essential element in the changes in the skin to consist in this marked development of lymphoid cells, especially in the peri-vascular sheaths of the minute bloodvessels of the skin and subcutaneous tissue.

TWO CASES OF INTUSSUSCEPTION OF THE BOWEL.

By F. R. HUMPHREYS, M.R.C.S., L.R.C.P. LOND.

CASE 1.—Edwin W.—, aged two years and a half, was taken ill at 11 A.M. on Jan. 21st, after a good breakfast at 8.30 A.M. Sickness, followed by diarrhoea (with a streak of blood in it) and abdominal pain, were the first symptoms. The pain was intermittent, but very frequently repeated, and the child turned over on to his stomach on each recurrence, seeming to be in considerable pain. He was first seen early in the afternoon. He was then vomiting everything that he took, while at the same time he was complaining of hunger. The pulse was 118; respiration thoracic, 32; temperature 99.2°. The liver dulness extended half-way to the umbilicus. The abdomen on the right side was rigid and dull, and there was a lump to be felt about two inches to the right and one inch below the umbilicus. However, I was assured that there had been a considerable flow of blood with the urine, so that the case, with this point strongly and clearly impressed on me by the friends, looked like one of renal trouble. At 9.30 P.M. I was told that the previous blood came from the bowel, and that since then about two ounces and a half of blood (which I was shown) had also come from the bowel; this was nearly pure blood, and there were no clots. On examination of the abdominal tumour previously noted, distinct peristaltic movement was noticed in it, though it did not appear to have altered its position; it was about the size of a large walnut. On examination of the urine, there were plenty of phosphates, but no albumen. The diagnosis, therefore, was that of intussusception. I attached a No. 8 gum-elastic catheter to a Higginson's enema syringe, and injected about eight ounces of warm water into the rectum, passing the catheter about three inches in, when, after a little difficulty with the last half-ounce, something seemed to give, and the child moving, the catheter slipped out; only slight force was used. On examination of the abdomen, the lump had disappeared, and the colon seemed to be full of water. Chloroform was unnecessary, the child being very good. A pad and bandage were then placed on the abdomen, the pad being over the right iliac fossa. He returned about four ounces of water, slightly blood stained, on being placed in a chair a few minutes later. Next day (the 22nd) I was told he had had a good night, there having been no sickness, pain, or passage of blood, and the bowels were easily and naturally open. The abdomen was rather tender, but no lump was to be felt, and the child appeared to have nearly quite recovered. Later in the day pain came on again, the right knee being drawn up and the head and body thrown back during the paroxysm; but, unlike the first attack, the child was not restless. There was dulness and tenderness at the spot where the tumour had originally been noticed. Temperature 99°. This pain continued at short intervals till Feb. 9th. There was sickness on Jan. 23rd and 26th, and on the 27th Mr. Charters J. Symonds saw him with me. He considered the diagnosis a correct one, and thought there was probably some localised inflammatory affection remaining. When seen in the evening there was a constant gurgling in the right iliac fossa. He was given increasing doses of opium up to seven minims and a half every four hours, but without any effect on the pain. A glycerine enema, suggested by Dr. Fly Smith, was then (Feb. 3rd) tried, and seemed to act well, both in emptying the rectum and relieving the pain. On Feb. 8th the child had fallen off a great deal from the constant pain, and had become very pale and weak. He had also cut two upper molars. On the 10th the pain had left him. A light fish dinner was ordered, the child craving for it. He had an attack of erythema fugax on March 1st, but had nearly recovered from that on the 3rd. He had been taken for a good long walk, and appeared quite well.

Notes by MR. CHARTERS J. SYMONDS.—The unusual

feature in this case was the persistence of pain after the reduction. This pain, moreover, was situated just at a point where the lump was observed to have disappeared, and was periodic in character, being evidently determined by peristaltic action. It appeared possible that the intussusception had been incompletely reduced, the caecum when threatened by congestion having a tendency to retain the depression. As opposed to this view was the absence of gurgling or the rising of a coil when the pain occurred. The only other suggestion in explanation of the prolonged symptoms was the injury inflicted by the strangulation. That this was severe was proved by the escape of so large a quantity of blood; and to the swollen condition remaining, and the succeeding local enteritis, or rather colitis, must be attributed the continued pain.

CASE 2.—In this case the patient was an infant only eight and a half months old. It was first seen on Aug. 9th. The history given was, briefly, that it had been in perfect health up to 3 A.M. on the 8th. At this hour it was seized with vomiting and pain, and a few minutes later passed a bloody stool. From that time up to 11 P.M. on the 9th there was incessant vomiting and constant flow of blood-stained mucus and serum. Once a little solid darkish material passed. When seen, the condition was as follows. The child was a fine one; it had been brought up at the breast. It lay on its back, with the knees drawn up, but every now and then put itself in the opisthotonos position, or one approaching it. It looked drawn and anxious. The pulse was full; the tongue red. Examination of the abdomen showed no change apparent to the eye; to the touch there was resistance under the right rectus midway between the umbilicus and pubes, and dulness on percussion. The abdomen was generally tender, but especially at the dull area. Under chloroform the diagnosis was no clearer. Per rectum the bowel was empty as far as the sigmoid flexure. Nothing like a tumour was to be made out anywhere. In spite of this the signs pointed to intussusception; so, letting the child get over the chloroform first, I injected a pint of water with a Higginson's enema syringe through a No. 8 catheter passed well into the rectum, and at the second attempt the water was retained. Dissolved in it was a little boracic acid, as the discharges smelt very foul. After injecting slowly about sixteen ounces the child suddenly stopped crying and appeared to watch attentively the sensations it was experiencing in its abdomen, and the expression became relieved. I injected about four ounces more to make sure of the reduction. The blood-flow ceased at once. The vomiting went on for twenty-four hours longer, the temperature rising to 101.2° F., but most of this disturbance was accounted for by the child being in the act of cutting its teeth. It made a rapid and perfect recovery.

These cases appear to illustrate the ease with which intussusception can be managed if diagnosis is early and treatment prompt. A consideration of the mechanical problems involved in the process of reduction of an intussusception seems to show the following results. If we take the invaginated portion as wedge-shaped, it is evident that the base of the wedge may be considered as pointing upwards in the direction of the stomach or downwards towards the rectum, according as the invaginated part is swollen sufficiently to dilate the intestine outside it, or as it is smaller than its own neck where the compression takes place. If the wedge's base be directed downwards, then, since the intestine is fully dilated, and since a force applied to a mass of liquid under such circumstances acts equally in all directions, then a considerable part of the forces which act on the sides of the wedge tends to drive it downwards. This resultant will, at any rate, tend to retard, and to a considerable degree, the reduction of the bowel. If, on the other hand, we have previously emptied the oedematous parts by pressure, either from within or from without, then we have the wedge's base directed upwards, and all the force applied at the rectum end tends to drive the invaginated bowel in the desired direction. As regards the other forces called into play, I think we need only consider that one which acts at the neck of the invagination in an upward direction, and half of whose power acts on the outer intestinal wall is at once lost; and that one which dilates the intestine. The former it is unnecessary to consider further; the latter, brought into play as it is on the same principle as is employed in a manual press, may be enormous, and quite capable of capturing the intestine if not kept carefully under proper control.

Queen's-crescent, Haverstock

SYMMETRICALLY GROUPED COMEDONES.

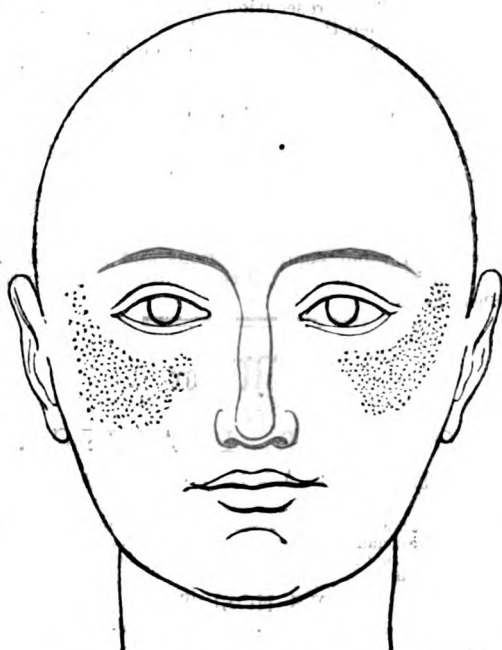
By H. RADCLIFFE-CROCKER, M.D.,

PHYSICIAN TO THE SKIN DEPARTMENT OF UNIVERSITY COLLEGE
HOSPITAL, AND PHYSICIAN TO THE EAST LONDON
HOSPITAL FOR CHILDREN.

DR. THIN'S interesting communication on "Grouped Comedones" in adults, in THE LANCET of Oct. 13th, recalled to my mind a case that occurred in my practice.

A lady, aged about thirty-five years, who had previously been treated by me for acne rosacea and atonic dyspepsia, came in June, 1886, with a precisely similar condition to that described by Dr. Thin, limited to the cheeks as in the accompanying diagram. The comedones were very minute,

FIG. 1.

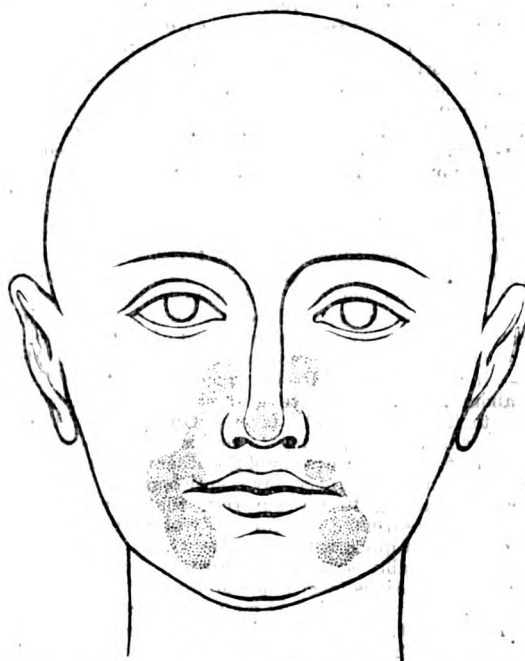


closely set, giving a dirty appearance to the skin, and she stated that the affection had been present about a fortnight, dating from one morning, when she noticed that her cheeks were rough and slightly swollen, which a day or two later acquired the dirty aspect. (Fig. 1.) The affection was soon cured with a similar treatment, but somewhat milder than that recommended by Dr. Thin; the part was rubbed every night with a piece of moist flannel and "mouilla" soap, a liquid glycerine soap less irritating than soft soap.

In comparing the diagram of this case with that of Dr. Thin's, one cannot but notice the similar distribution on the cheeks and the symmetry of the affection in both. I am inclined to lay much more stress on this symmetry than Dr. Thin appears to do, for, though it is not absolute in all parts, it is sufficiently striking, and points to an internal origin; and, if this be so, it places these cases in a different category *quod* etiology from the cases of grouped comedones in children which I described four years ago. In children, there is strong reason to believe that the comedones are of local origin, probably bacterial, and possibly to be ascribed to the dirty caps or similar sources of infection, or, at all events, due to a local irritant. Although Dr. Thin has met with three cases, I cannot help thinking that the affection of "symmetrically grouped comedones" is a rare one, as it is too striking to be overlooked; and, in addition to the one mentioned, I am sure I have only seen one other case, a boy ten years old, in the East London Hospital for Children, suffering from general tuberculosis, who had a group on each cheek immediately in front of the ear. On the other hand, irregularly grouped comedones in children are now fairly common, and, as mentioned in my work on "Diseases of the Skin," I have once seen a similar condition on the abdomen of an old man.

Since the above was written another case has come under my notice—a lady, aged thirty-one, who suffered at times from dyspepsia, of which the prominent symptoms were flatulence and flushing after meals. Her first attack of this unpleasant affection was when she was abroad in the spring, when her digestion was upset by the foreign mode of living. After her general health had improved, she got rid of the comedones, but in August last they appeared, under similar circumstances, as badly as ever. The distribution is delineated in Fig. 2, and this, I think, throws some light on the distribution in the lower part of the face in Dr. Thin's case, in which the two small groups are imperfect developments of the larger groups round the mouth in my case; and, although in neither his case nor mine is the symmetry exact, the difference is not greater than it is in a large number of admittedly symmetrical affections. Now, the areas of the cheek

FIG. 2.



patches, both in Dr. Thin's and my Fig. 1, correspond to a frequent distribution of various skin eruptions—e.g., lupus erythematosus, many cases of eczema, &c. This localisation depends, doubtless, on an anatomical arrangement, probably of the vascular distribution under some nerve domain. I do not mean to imply that the disease is of nerve origin, but that the distribution is determined by a definite vascular area. The causes of this curious outbreak of comedones cannot be certainly determined until more facts are recorded, but my cases suggest that digestive derangements play an important part in the etiology.

The cases of two brothers, recorded by Mr. Verrall in THE LANCET of Oct. 20th, are an additional fact in favour of local contagion in "comedones in children."

Harley-street, W.

A CASE OF SPORADIC SCARLET FEVER, ORIGINATING *DE NOVO*.

By SURGEON-MAJOR R. D. MURRAY, M.B.,
OFFICIATING CIVIL SURGEON OF CHUMPARUN, BENGAL.

CASES of scarlet fever are so extremely rare in India that the publication of the following case may be of interest, especially in connexion with the much-disputed point of its etiology. Clevers, in his last work ("A Commentary on the Diseases of India"), writes: "I never saw any form of scarlatina in Lower Bengal, or any disease which could be fairly mistaken for it; neither has any medical man with whom I have discussed the subject met with a genuine and

unmistakable case in that great province. Writing in 1864, Dr. Peet, who had great experience in the Bombay Presidency, said: "Scarlet fever is altogether unknown in Western India." Deputy Surgeon-General G. Mackay, an officer of large experience, who spent all his service in the Madras Presidency and was for several years civil surgeon of Ootacamund, never saw a case of the disease in India. A few cases have been reported from time to time as having occurred at military stations in the families of soldiers recently arrived from England—imported cases. One case was reported by Dr. Maunsell in 1870, at Simla, in the person of a young officer of artillery; and another case by Dr. A. Garden, in 1869, at Saharanpore, which he regarded as doubtful, and called "erythema scarlatiniforme." Chevers, again, says: "The facts and arguments adduced by Staff Surgeon Bradshaw and others fail to convince me that scarlatina has ever been known to originate *de novo* in India. But since he, Dr. Garden, and Dr. R. D. Murray consider that they have seen it so originate there, all practitioners have doubtless remained on the watch for its appearance." In the *Indian Medical Gazette* for May, 1876, I published an account of three cases which occurred in Calcutta shortly before, and to which Dr. Chevers alludes above. They were country-born children of European parentage and of the same family, and were admitted to the General Hospital, where I was attached for general study on first arrival in the country. The cases excited much interest among the hospital staff. They were first supposed to be dengue, as scarlet fever was said to be unknown in India; but their true nature speedily declared itself, and Drs. Ewart and Raye both agreed with me in pronouncing them to be genuine cases of scarlet fever, although neither of them had ever before seen a case in India. One was a case of scarlatina maligna, and proved rapidly fatal, with sloughing of the throat. The disease did not spread in the hospital, and no more cases were heard of in Calcutta.

On April 20th last I received a telegram from Mr. G. C., indigo planter at P—, in the north of this district, and about fifty miles off, to go and see his wife, who had been attacked with "scarlet fever." On my arrival the same evening, and fully expecting to find a case of measles, had prickly heat, erythema, or some of the other nondescript rashes so common in this country, my scepticism was at once disarmed by finding, to my surprise, that Mr. G. C.'s diagnosis (made from a careful study of "Moore's Family Medicine") was quite correct. Mrs. G. C. is a young lady of remarkably strong constitution, but has suffered much from malarious fever since going to P— about two years ago. It is a notoriously malarious locality in the sub-Himalayan tract, and very lonely and isolated. The patient arrived from England about six years ago, and has not been home since. On April 18th she had a rigor, preceded by malaise, and followed by strong fever, loss of appetite, headache, sore throat, &c. On the 19th the fever continued, and on the 20th the characteristic scarlet-fever rash made its appearance on the face, trunk, and extremities. It was especially marked on the chest and legs. She is naturally very fair skinned. On getting up on the morning of the 20th and looking at herself in the glass, she was "horrified" to find herself "all scarlet." There was the strawberry tongue very well marked, and likewise the sore throat, which was the only symptom that caused her much uneasiness. There was the usual congestion of the fauces, with enlargement of the tonsils and difficulty in swallowing. When I arrived in the evening the temperature was 103° F. and the pulse 120; she said the pulse was much higher the previous day. On the morning of the 21st she was feeling better, the temperature and pulse having fallen to 101.2° and 92 respectively. The bowels were regular, and menstruation was going on. The subsequent history of the case is one of uninterrupted convalescence and *desquamation of the entire cuticle*, which was not completed till the lapse of six weeks. The cuticle of the heels was very persistent, and had to be softened with poultices before it could be removed. The urine was not examined, but there was throughout no appearance of dropsy or even oedema. Albuminuria and nephritis occur in about 13 per cent. only of cases of scarlet fever.

So far, the case was a typical one of scarlatina of a mild type. The only European inmates of the house besides the patient were her husband and child, but neither of them contracted the infection. Directly the disease was identified, the child, aged two years, was isolated in another part of

the house, and sent away the following day to a friend's, some twelve miles off. Mr. G. C. remained with his wife till she was well. Neither of them had had scarlet fever. The house remained in quarantine until the completion of desquamation on June 1st, and then it was thoroughly fumigated and disinfected. The patient was not allowed to write letters for fear of transmitting infection. There have been no more cases in the vicinity, and none of the native servants were attacked. In fact, there is no record of an authentic case occurring in a native of India.

The above case is one of more than ordinary interest and importance in these days of bacteriology. Here we have an unequivocal instance of the disease occurring sporadically and originating *de novo*. It would appear to be a refutation of the theory of the bacillary origin of the disease. I say so in no carping spirit, for I have the very highest admiration for the important and brilliant researches of Klein, Edington, and Jamieson, to whom a knowledge of the case may possibly be of some value in the prosecution of their inquiries. The cows which supplied the family at P— with milk were all very carefully examined, but no trace of any disease such as that found at Hendon could be discovered in their teats and udders. This would seem to corroborate the position taken up by Mr. Crookshank as to the Hendon disease being vaccinia, and not scarlatina, in the cow. No microscopic examination of the blood was made for bacilli or streptococci, as I had not the necessary lenses at my disposal. Mrs. G. C. assured me that she had not received letters or parcels from infected houses in England. Nowadays there is a possibility of the transmission of infection in this way, with our rapid communications and frequent intercourse with friends at home, if the germ theory be correct.

Motihari, Bengal.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUYS' HOSPITAL.

SUPPURATING BUBONOCLE; OPERATION; RECOVERY.—
SEVERE BURNS; NECROSIS OF ASCENDING RAMUS AND
CONDYLE OF JAW; SEQUESTROTOMY; RECOVERY.

(Under the care of Mr. BRYANT.)

IN the first of the following cases the surgeon was guided to a diagnosis by the history, the local signs and general state pointing more to simple abscess than to the condition found at the operation. How far the taxis may have helped to produce the suppuration it is difficult to say, and the account throws no light on this point. The attachment of the omentum to the internal ring was not disturbed, so the peritoneal cavity was not open to the entrance of septic material. The chief interest in the second case consists in the formation of a sequestrum involving the parts described, there being apparently no sufficient reason for such necrosis, and in the complete mobility of the lower jaw which followed the removal of the diseased bone. Mr. Bryant refers in the last edition of his work on Surgery (vol. i., p. 618) to two other cases of a similar kind, in both of which an equally good result followed removal of the condyle and ascending ramus of the jaw. The account of the progress of the burn under treatment, including the frequent recourse to skin grafting, and the result effected by it, will also be noted.

Irreducible suppurating bubonocle; exploration; removal of suppurating omentum; recovery. (From notes by Mr. Tressider and Mr. Clowes.)—L. S—, aged twenty, was admitted under the care of Mr. Bryant on Dec. 22nd, 1887, and was discharged on Feb. 11th, 1888. About ten days previously to admission the patient found a small swelling in the left groin, not painful until six days before, when he had a dull, heavy sort of pain there. His bowels were very constipated. He took pills on two

occasions, which relieved his bowels four times in the ten days. Two days afterwards he saw a surgeon, who advised him to come into the hospital. He had had the taxis freely applied before admission.

On admission the patient had a small hard swelling in the left groin, which was irreducible, and gave no impulse on coughing. It was not very painful. He felt sick, but had not vomited. His bowels had not been opened for three days. Swelling dull on percussion. It was regarded as an irreducible omental hernia, and next day Mr. Bryant operated under an anæsthetic. An incision three inches long was made over the swelling, in the direction of Poupart's ligament. When the skin and tissues were cut through, pus escaped, and a piece of suppurating omentum was seen. An aneurysm needle was passed through the upper parts of the omentum, and it was ligatured with catgut and cut off. The superficial epigastric artery was the only one that had to be twisted. The wound was then plugged with iodoform gauze and left to granulate up.

Dec. 24th.—Was ordered a simple enema; a draught containing twenty grains of bromide of potassium and a drachm of syrup of chloral in an ounce of water; milk and beef-tea.

25th.—The draught was repeated.

30th.—Wound dressed. Healthy granulations appearing.

Jan. 2nd.—Temperature normal; 100·8° on the previous evening.

3rd.—Temperature normal. Bowels open after enema.

15th.—Temperature 102·6°; 102·0° on the previous evening. Wound opened, as there was pus under the upper edge of the wound. Quinine ordered.

16th.—Bowels opened after enema. Temperature on the previous evening 104°; at 4 A.M. this morning it dropped to 101°.

The wound gradually closed, and on Feb. 2nd he got up. He left the hospital on the 11th, wearing a truss. In October he was quite well.

Extensive burn of left arm and thigh; alveolar abscess; necrosis; removal of the left condyle of the lower jaw; complete movement. (From notes by Messrs. Deane and Nisbet).—E. K.—, aged forty, a hop-packer, was admitted on Dec. 27th, 1885, and was discharged on May 17th, 1886. Readmitted on June 22nd, 1886; discharged on July 3rd, 1886. Third admission on Sept. 20th, 1886; discharged on Jan. 18th, 1887. Family history good. No serious illnesses before admission. The history of his present trouble was that on Dec. 26th, 1885, about 3 A.M., he was asleep in front of the fire on a chair, when he fell into the fire, and burnt his left arm from the shoulder to the wrist. He also burnt his left thigh in two places.

Condition on admission.—There was a small burn on the left scapula near the axillary process; another burn extended along the outer and posterior region of the arm; passing over the elbow, it extended to the back and outer border of the forearm nearly to the wrist. There was a good deal of sloughing in the wounds; they were also very foul. The burns on the buttock and thigh consisted of two large ones, circular in shape; there were also smaller patches of burns here and there, all very sloughy. They were dressed with boracic acid and vaseline ointment.

Jan. 5th, 1886.—Patient complained only of pain in the buttock; the dressings were changed to iodoform and vaseline.

7th.—The burns looked healthier. Sloughing and foulness of wounds were nearly all gone. The burns did not extend down to the muscle. Granulations were springing up profusely.

12th.—About twenty-five grafts were put on the burns on the arm.

13th.—More grafts were put on the arm to-day from the prepucio. Wound healthy.

19th.—The patient had a tooth extracted.

Feb. 1st.—The skin-grafting was continued. Some pieces had taken and were growing. The patient got up for an hour the previous evening.

8th.—About fifty pieces of skin were grafted on to the leg. Wounds looked healthy.

15th.—The patient had slight hæmorrhage with his stools on Sunday, so he was put on farinaceous diet. Some of the pieces of skin did not appear to take. Some fresh pieces were put on.

20th.—An abscess formed in the mouth; it was opened from the outside of the cheek. A good deal of discharge came away. Burns healing up gradually.

28th.—The abscess was still discharging. The burns on the leg and arm were dressed every other day. They were healing gradually.

March 5th.—There was still a small amount of discharge from the abscess. The burns were doing well.

11th.—Ordered subnitrate of bismuth powder as an application to the arm.

27th.—Two large skin grafts were applied to two of the wounds on the leg. The patient seemed about the same.

April 4th.—The dressing with bismuth was discontinued, as it did no good. The wounds were healing very slowly.

May 8th.—The wounds on the arm and leg were now healing up, the granulations looking healthy. The swelling on the face was about the same size, and there was a small amount of discharge from it. The temperature varied a good deal.

11th.—Chloroform was administered, but, the patient being troublesome and the pulse becoming weak, ether was substituted. Several small pieces of necrosed bone were taken away from the left alveolar process, but the mass of bare bone felt, not being loose, was not taken away. On putting the finger along the internal part of the lower jaw, it was found to be hard and swollen.

17th.—The patient left the hospital; he went to a convalescent home for a month or more, by which time it was hoped that the bone of the lower jaw would be fit for removal. The wounds on the arm and leg were nearly healed, and there was only a slight discharge from the wound on the face.

On June 22nd the patient was readmitted for disease of the lower jaw. His face was much swollen on the left side, from the lower border of the jaw to the zygoma. Just below and behind the angle of the jaw there was a discharging sinus; and inside the mouth, immediately behind the last tooth, there was a second opening, which appeared to be continuous with the one outside. A good deal of fetid discharge came from the external opening. The patient looked better than he did a few weeks previously, but still he did not seem healthy.

On June 25th the patient was placed under chloroform, which he did not take well, becoming very blue, chiefly from persistently holding his breath. The anæsthesia was completed with ether. A probe was passed into the external opening of the sinus in the left jaw, but nothing definite could be determined. The opening was enlarged, and, on inserting the finger, dead bone forming the angle and part of the ramus of the inferior maxilla was felt. On introducing the forefinger of the other hand into the mouth, it was found that the exploration of the external opening had not caused any bleeding into the mouth, and on manipulation with the two fingers, one in the external opening and one in the mouth, it was found that the whole jaw moved together, the necrosed bone not being at all loose yet. The wound was dressed with iodoform gauze and a lead bandage. The patient recovered quickly from the anæsthetic. He complained of great pain in his two back teeth.

July 1st.—The wound has been dressed daily since the operation. A fair amount of discharge came from it. The patient complained of pain in his jaw and teeth, with some headache.

On July 3rd the patient left the hospital.

On Sept. 20th the patient was readmitted. He had a very large swelling, hard to the touch, on the left side of the face. He complained of pain at the angle of the jaw, where there was a discharging wound. He felt a sort of crackling at the joint when he moved his jaw, as in eating. There had been the same pain and discharge all the time he had been out. He had dressed the wound himself.

Oct. 5th.—The patient was put under chloroform, and Mr. Bryant operated. The wound at the angle of the jaw was enlarged by making an incision upwards. On probing, no loose bone was felt, but a long sinus was found running up to the condyle; through this the forceps was introduced, and the whole of the condyle of the jaw bone with its neck was removed. The patient took chloroform very badly, as he had done on the two previous occasions. Some little alarm was felt, as he once stopped breathing. It was a long time before he was properly under its influence. He did not vomit.

8th.—Good deal of discharge; not quite sweet. Temperature rose to 102·6° last night.

20th.—Almost the whole of the side of the face is still much swollen; it seems to consist of a bony growth. The measurement over the front of the top of the head and under

the chin (round the largest part of the swelling) is twenty-four inches. Temperature normal.

29th.—The temperature has been gradually rising. The swelling is perhaps rather less in the front, but the patient complains of pain, and there is perhaps slight fluctuation to be felt. Not much discharge. A probe seems to run upwards and forwards somewhere behind the jaw.

Nov. 7th.—Pus was let out by an incision just over the zygoma.

15th.—There is still some discharge. The probe passes in about two inches in a direction almost directly inwards.

29th.—A probe passes in two inches, inwards, upwards, and backwards; no bare bone can be felt. Discharge less; lower original wound quite healed. In the afternoon the patient complained of a headache and being unwell, so he went to bed. Temperature 101.8°; later in the evening, 102°. 30th.—Temperature normal.

Dec. 2nd.—The patient was up to-day. Some dead bone was felt on probing the lower sinus.

19th.—To-day an incision was made behind and below the left ear, and pus evacuated.

21st.—Patient still complains of pain about his left ear, and there is a little fluctuation in front of the last incision, from which there is some discharge. There does not appear to be any communication between the last incision and the old sinus as far as one can tell with probing.

Jan. 11th, 1887.—Two small pieces of dead bone came away from the anterior opening.

15th.—No discharge. The sinuses have closed; dressing left off. There is good movement of the lower jaw.

WEST HERTS INFIRMARY.

CASE OF URETHRAL STRICTURE.¹

(Under the care of Mr. F. C. FISHER.)

Stricture of the urethra, with perineal fistula, treated by external and internal urethrotomy.—H. W., aged forty-eight, a bleacher and dyer, was admitted on Sept. 10th, 1885. He had suffered from gonorrhœa when young, and also from stricture for a "length of time," but could not give any dates. He was very emaciated and cachectic-looking. Three fistulae were present in the perineum, which was tender and boggy. It was decided not to touch the urethra for a day or two. He was given a saline purge, and acetate of potash, tincture of hyoscyamus, and infusion of buchu in a mixture.

Sept. 17.—A No. 2 English gum-elastic catheter could not be passed. The perineum was poulticed, as there were signs of a fresh abscess forming. Tongue dirty.

18th.—Feels very weak, and had a doubtful rigour.

22nd.—Ether was given, and Mr. Fisher performed perineal section without a staff. The perineal tissues were quite disorganised by suppuration. A No. 12 catheter was passed into the bladder by the perineum and tied in. Evening temperature 98.4°. Twenty minims of liquor opii sedativus were given at night.

23rd.—Had a good night. The operation had given much relief. Evening temperature 100.6°. The liquor opii sedativus was repeated.

24th.—Morning temperature 100.6°; evening 101.4°. A fresh tube was introduced with indiarubber tubing attached, and the urine drained off at the foot of the bed.

On Sept. 27th the morning temperature was 100.8°, and evening 98°. From this time his temperature remained normal, and he rapidly gained flesh, and expressed himself as feeling more comfortable than he had done for a long time. An abscess afterwards developed about the right external abdominal ring. It was poulticed, and on Nov. 11th was opened. A probe passed easily down the outside of the pelvis, but could not be made to appear in the perineal wound.

Nov. 19th.—A fresh tube was put into the bladder. Pus came from both wounds. The abdominal wound rapidly closed.

23rd.—A No. 5 gum-elastic catheter was passed per urethram into the bladder, which was now washed out with a weak solution of quinine and acid.

On Dec. 5th, ether having been administered, Mr. Fisher performed internal urethrotomy with Maisonneuve's urethro-

tome. A full-sized staff (No. 12) was then passed into the bladder, and the perineal wound, which had closed a good deal, was enlarged and a drainage tube inserted. A No. 12 silver catheter was afterwards passed daily through the stricture to meet the perineal tube, and the urethra syringed out with a weak disinfectant. No urethral fever ensued. The man made an uninterrupted recovery, and on Dec. 24th was discharged, being able to pass a No. 12 catheter for himself, and with the perineal wound soundly healed. He passed the catheter twice a week for one month, then once a week, and afterwards once a month. He was then ordered to do without it for six months, and then report himself. This he did on Jan. 6th, 1887, and as a No. 12 silver catheter passed easily he was sent away for one year. When seen in Jan. 1888, the same-sized catheter passed easily, as it did also in the following October.

Remarks by Mr. FISHER.—It was owing to some stricture cases published by Mr. Reginald Harrison that I was led to use this combined operation of internal and external urethrotomy, and to him I am exceedingly grateful. The object of his paper was to show, in his opinion, how urethral fever might be avoided in cutting operations affecting the urethra. His idea was that urethral fever was caused by the septic urine passing over the freshly cut urethra; remove this and urethral fever ought not to ensue. Accordingly, having performed internal urethrotomy, he passed a large staff, and made a perineal puncture and freely drained the bladder with a tube about the size of the little finger. He found in all his cases that there was not any urethral fever; and more than this, the new urethral splice did not seem to have that characteristic of contraction which urethral wounds when bathed in urine seem to have. The urethrotome makes a V-shaped gutter, and the edges are kept apart by daily catheterisation for about ten days, and cleansed with a disinfectant. I inferred from Mr. Harrison's paper that he had hopes of a permanent cure by the method, and not only continual alleviation, such as is produced by ordinary methods. In my own case, the urethra was impervious to instruments—a rare condition,—so I merely drained the bladder by the perineum, and waited until the man had recovered his health. The rest to the urethra was very beneficial, so that ultimately a No. 5 catheter was passed. The stricture now, three years after the last operation, and of which there has been practically no treatment, shows no sign of recurrence. I think this seems to bear out Mr. Harrison's opinion that there is a fair chance of having produced a permanent cure. I do not intend losing sight of the man.

WORCESTER GENERAL INFIRMARY.

A CASE OF RECURRENT FIBRO-SARCOMA OF THE THIGH, WEIGHING TWELVE AND A HALF POUNDS; SUCCESSFUL AMPUTATION THROUGH THE TROCHANTERS.

(Under the care of Mr. HYDE.)

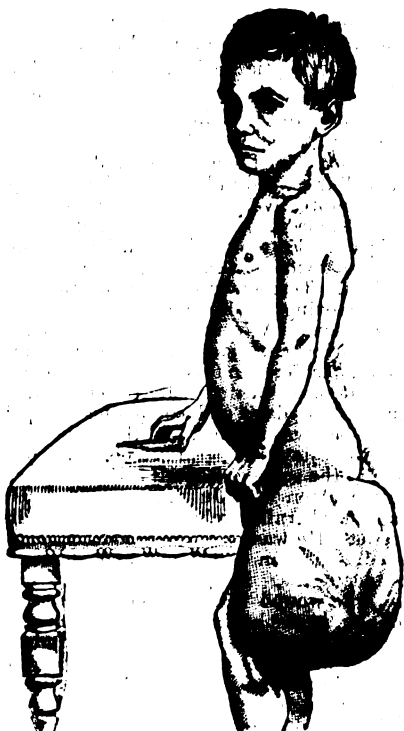
FOR the account of this case we are indebted to Mr. T. P. Gostling.

F. C., aged seven, was admitted on Sept. 7th, 1887. When one year and a half old a tumour was noticed growing in the centre of the posterior surface of the left thigh. This was removed by Mr. Hyde in 1882, and was found to be not adherent to the bone. No microscopical examination of the tumour was made. The parents stated that soon after the wound had healed a fresh tumour appeared in the same situation, and it continued to increase in size until the date of readmission to the infirmary.

Condition on admission.—The patient is 43½ in. high, thin, fair, and of slender build. He weighs 3st. 10lb. without his clothes. There is no complaint of any pain, but the boy suffers from evident inconvenience in walking, and running is an impossibility. When standing, the internal malleoli are 4 in. apart, although with an effort he can bring them together. The left hip and knee are constantly kept slightly flexed, and most of the weight of the body falls on the right leg, although he can stand alone on either. He walks a little lamely, and moves his left foot in a semicircle. The left hip cannot be fully flexed owing to the tension of the hamstring, but it can be fully extended. The left knee can only be flexed to a right angle, as it then comes in contact with the lower edge of the tumour, but it can be fully extended. From the left thigh a large tumour projects backwards and to each side, but the growth does not project forwards. The skin over

¹ Abstracted from a paper read before the West Herts Medical Society on Oct. 1st, 1888.

this growth is everywhere smooth and tense, and numerous large veins are seen through it, especially on the posterior aspect. On this side there is, a little to the outer side of the middle line of the growth, a scar about four inches long running from above down, and in the centre of this scar there is an eczematous patch about the size of a shilling. The hamstring muscles, sartorius and rectus, can be easily traced over the surface of the limb and tumour. The tumour itself is everywhere elastic, but does not fluctuate in any situation. It appears to be firmly attached to the posterior surface of the femur, but the front and sides of that bone can be easily made out. The swelling itself is not pulsatile, but pulsation can be felt on its side in the line of the femoral vessels. In its greatest circumference, $3\frac{1}{2}$ in. above the upper margin of the patella, the tumour measures $29\frac{1}{4}$ in. The greatest length, in a line from the cleft between the buttocks to the centre of the popliteal space, is 10 in.; the greatest breadth, $3\frac{1}{2}$ in. above the upper margin of the patella, is $8\frac{1}{2}$ in. Viewed from the front, the tumour projects from the middle line of the femur—to the right 5 in., and to the left $3\frac{1}{2}$ in. (See engraving. Viewed from



behind, only a strip of the right thigh, $1\frac{1}{2}$ in. wide, can be seen, the upper border of the tumour reaching half-way across the right buttock. The abdominal and thoracic organs were healthy.

Operation.—On Sept. 13th, 1887, the patient being under the influence of chloroform, two ounces of brandy in warm water were injected into the rectum, and the limb, being held at right angles to the body, the posterior flap was formed by dissection at first, only skin and fat being taken, and the base of the flap being thickened by muscle. The limb was then extended, and the anterior flap formed in the same manner, care being taken to cut the great vessels last. The flaps were both made by cutting from right to left, and were of the same size, and the angle of the wound occupied the same situation as in an amputation by transfixion at the hip joint. The bone was cut through at the middle of the great trochanter. Digital compression was relied on throughout to control the bleeding. The wound was closed with silver sutures, drained from each end, and dressed antiseptically.

The next morning (Sept. 14th) the temperature rose to $102^{\circ}6$, and the stump was found to be distended with blood clot, but after this date the temperature gradually came down to normal. Unfortunately only the inner third of the wound healed by first intention, and on Sept. 18th

the end of the bone protruded, but by careful strapping the ends of the flap were kept in fairly good position, so that on Sept. 24th the situation of the wound was occupied by a level granulating surface. On this date the patient was sitting up in bed, and he left the infirmary on Nov. 12th, walking on crutches, with the stump perfectly healed. On Sept. 20th, 1888, a year after the operation there was no sign of recurrence.

Description of the part removed.—The skin being reflected by a longitudinal incision, it was found that the muscles, vessels, and the great sciatic nerve were spread out over the surface of the tumour, being only connected to it by some loose connective tissue. The limb was lifted up at this time and the tumour dropped clean away from the bone, not being adherent to it in any situation. On section, the growth was found to consist of distinct lobes divided by septa of rather loose connective tissue. The lobes being again divided by fibrous trabeculae, which branched in all directions, the spaces between them being occupied by greasy-looking, yellow material. The surface of the tumour did not "cup," and it felt very firm and hard against the knife. The growth contained no vessels visible to the naked eye. Microscopically, it was found to consist mainly of masses of fat separated from each other by strands of connective tissue, containing a large number of small spindle-shaped cells. The limb weighed 5 lb. and the tumour $12\frac{1}{2}$ lb., making together $17\frac{1}{2}$ lb., being just over one-third of the weight of the whole patient.

Remarks by Mr. HYDE.—The extraordinary size of the tumour and the rapidity of its growth are somewhat remarkable, while the recovery of the patient after the loss of a limb weighing just over one-third of his entire weight is also worthy of record. Digital compression was relied on for the control of hemorrhage, as I considered it in this case the best and safest, the situation of the tumour rendering the elastic tourniquet inapplicable. The size and seat of the tumour prevented amputation by transfixion, and I therefore decided to take skin flaps from the surface of the tumour. The amputation was done through the trochanters, as giving a better prospect of recovery than disarticulation at the hip joint. Had any sign of disease of the bone been found, I should have removed the head of the bone.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Mortality of Abdominal Section.

THE first ordinary meeting of this Society for the present session was held on Oct. 23rd, Sir E. Sieveking, President, in the chair.

Mr. W. A. MEREDITH read a paper entitled "Remarks on some points affecting the Mortality of Abdominal Section, with Tables of Cases," of which the following is an abstract. The purpose of the paper was to draw attention to certain points affecting the present death-rate after abdominal section, and with this view operations for ovarian growths were chosen as being to some extent representative of the entire subject under consideration. As a basis for the inquiry, the results of the author's own work in this connexion, amounting to 126 operations, were examined with regard to the chief causes influencing the mortality, special reference being made to the ten deaths which occurred in the series of 104 completed ovariectomies. All the operations were performed with strict antiseptic precautions, including the use of the carbolic spray. He was now less inclined than formerly to look upon the latter as an absolute essential to the safeguards of antiseptic abdominal surgery, but he still considered it valuable as the most convenient and effectual means of antiseptic irrigation at our disposal when dealing with the peritoneal cavity. Both ovaries were removed in seventeen cases, two of which terminated fatally, but in neither instance was the result in any way attributable to the removal of the second ovary. Complete enucleation was performed in five cases, all successful, the resulting rent in the broad ligament being closed by means of a continuous silk suture. He advocated the use of the drainage tube in all cases of ruptured or inflamed cysts, in any case where irritating or septic fluid had escaped into the peritoneum, in all operations com-

plicated by serious injury to bowel or urinary bladder, in every instance where washing out had been resorted to, and in all cases of severe operation in middle-aged or elderly women. For washing out the peritoneum, where necessary, he advocated the use of plain, recently boiled water; cooled as required by the addition of a saturated solution of boric acid. Discussing the mortality, he was inclined to believe that in large series of cases the average death-rate would never be less than 5 or 6 per cent. Of the ten deaths in his series two were from septicæmia, one from intestinal obstruction, one from hæmorrhage, one from dysenteric diarrhoea, two from chest complications, and three from exhaustion; three of these deaths were from preventable causes. Twelve successful operations for the removal of diseased uterine appendages were next reviewed. In seven patients, in whom both appendages were removed, complete arrest of menstruation followed. He had found that in cases of chronic ovarian mischief about 90 per cent. were the subjects of obstinate constipation, and in them tonic purgative treatment, by lessening pelvic congestion and preventing the formation of scybala, was followed by marked relief of symptoms. Included in a series of ten exploratory operations were two incomplete ovariectomies. Both patients had been tapped, and the death of one was directly due to the difficulties encountered in the attempt to separate universal adhesions which had resulted from this treatment. In conclusion, it was shown that the increased success of abdominal section for ovarian disease during the past ten years was chiefly attributable to the diminution in the number of deaths from septicæmia. For purposes of comparison he took three successive groups of operations, which represented three separate periods during the last twelve years, and gave their average death-rate from septicæmia alone. In 100 consecutive cases taken from Sir Spencer Wells's work, when the clamp was used and before the employment of antiseptics, the mortality was ten, or one to every ten patients. In 150 cases recorded by Mr. Thornton in the sixty-fourth volume of the Medical and Surgical Transactions, which were treated antiseptically and with intra-peritoneal ligature of the pedicle, there were five deaths, or one to every thirty patients. In his own series of 104 cases there were two deaths, or one to every fifty-two patients. The chief factors which had contributed to this increased success, he thought, were as follows:—(1) The general adoption of the intra-peritoneal treatment of the ovarian pedicle; (2) the application of the antiseptic system to abdominal surgery; (3) the gradual abandonment of the practice of tapping abdominal cysts; (4) the increase in our knowledge respecting the proper use and management of the drainage tube; (5) the recent introduction of the plan of freely washing out the peritoneal cavity in cases complicated by the extravasation of blood or other fluid.—Mr. ALBAN DORAN had seen great advantages follow both the antiseptic and the non-antiseptic systems of treatment. He thus summed up the influences which he thought contributed to lessening the mortality after ovariectomy: The skill and experience of the operator; early operation; a good hospital and efficient nurses, amongst the latter emulating being a great factor in favour of good results; the use of antiseptics, not only for their own value, but because they drilled the operator into habits of forethought; drainage, when the tube was frequently pumped out; and gently flushing the peritoneum with a great bulk of warm fluid, which checked hæmorrhage, washed out clots, and prevented shock by keeping the peritoneum warm. He condemned the use of a ward nail-brush, which he believed to be a frequent carrier of infection.—Mr. KNOWSLEY THORNTON objected to stitching up the rent in the peritoneal capsule after enucleation. A number of small vessels were torn; hæmorrhage or serous effusion might occur into the sac, which led to tension, nerve disturbance, inflammation, and suppuration. If the rent were left open the case did much better, as the fluid flowed into the peritoneum and was rapidly absorbed. Tapping of cysts should not be resorted to, the escape of fluid in some cases leading to infection of the peritoneum. Ruptured cysts rarely needed drainage if carefully sponged out. He thought that flushing often acted by breaking up septic material into tiny particles, which were unable to defend themselves against the power of the peritoneum. He maintained that efficiently performed oophorectomies always stopped menstruation. In cases of ovarian disease it was only necessary to remove the troubled ovary or tube—not both. It was

sufficient to empty the drainage tube once in twelve hours under the antiseptic method, but to do so every hour was not too often where no antiseptic was used.—Mr. MERRITT replied that he did not consider the opening made in the broad ligament to enucleate a cyst was comparable with the peritoneal wound made in the removal of a kidney. Women at the menopause were passing through a critical time, when kidney trouble often developed, which would hinder ready absorption of peritoneal fluid; he was therefore inclined to extend the advantage of drainage to them. Flushing out the peritoneum not only checked hæmorrhage, but also avoided the undue irritation of the membrane caused by excessive sponging.

MEDICAL SOCIETY OF LONDON.

Lacerated Wound of Brain.—Removal of Aural Ectoderm.—Method of Raising the Epiglottis.

AN ordinary meeting of this Society was held on Oct. 22nd, Mr. J. Knowsley Thornton, M.C., Vice-President, in the chair.

Dr. FLETCHER BRACH read a paper on a case of Recovery from a Lacerated Wound of the Brain. The boy was attacked by an epileptic patient with a window pole, the end of which entered the brain two inches and a quarter above and one inch to the right of the occipital protuberance to the extent of about an inch. He was quite conscious when seen and explained how the wound had occurred. A pad of boracic lint soaked in boracic lotion was applied, and over this some protective, the whole being secured by some plaster and a bandage. He passed a quiet day and did not complain of pain. He took milk well, but was sick once or twice. He was evidently suffering from shock, but was quite conscious. Temperature taken in the evening was 100° F. On removing the dressings next morning, a hernia cerebri was seen. A central hole was cut in some layers of boracic lint, soaked in boracic lotion, and the protective, plaster, and bandage were again applied. This treatment was carried out throughout. He was restless during the day, and complained of pain in his head. An ice-bag was applied, and the milk with ice was continued. Next day, the hernia cerebri had disappeared, and the hole in the scalp and skull was filled with blood-stained brain matter. On July 27th, eight days after the accident, another hernia cerebri appeared, but disappeared two days after. He was very abusive while the wound was being dressed, and often called out and shouted, due, no doubt, to meningitis. He was restless at night up to Aug. 6th. The wound had then closed, and he did not complain of pain in the head. The temperature was normal, but the pulse was 104. He remained in a quiet condition up to Aug. 8th, when the temperature went up to 100°, and restlessness again was noticed. On August 16th a cerebral abscess broke through the closed wound, and a quantity of greenish-coloured pus escaped. The wound gradually closed up again, and on August 19th the boy was in a quiet condition and his temperature normal. An abscess in the left thigh appeared on Sept. 1st, discharged on the 5th, and on the 30th the boy was up and about the ward. Two things were noticeable in this case: first, there was no paralysis, because the motor parts of the brain were not involved; secondly, when he went to school again in the asylum, he took up his lessons where he had left them off, showing that his intellect had not suffered. In addition to the local treatment above mentioned, he was given at first tincture of opium in five-minim doses, and afterwards draughts composed of ten grains of chloral and fifteen grains of bromide of sodium, to subdue the restlessness and alleviate the pain in the head.—Mr. KNOWSLEY THORNTON spoke of a case related to him by Dr. Image of Bury St. Edmunds. A boy, aged about seven, was playing in a farmyard, when a man engaged in filling a manure cart struck him accidentally on the head with a muck fork, one of the prongs of which, laden with filth, passed through his skull. He was dressed with cold compresses, and made a perfect recovery. He asked if children bore those accidents better than adults.—Dr. SYMES THOMPSON was of opinion that children bore accidents to the brain better than adults. He referred to a case of cerebral abscess he

had recently seen successfully treated at Cape Town.—Dr. C. E. BEEVOY asked if there were any hemiopia or affection of the sight, as the lesion was occipital. Last Christmas he was shown a boy who had sustained compound fracture of the frontal bone, the result of a kick from a horse. Much straw and dirt were introduced, but the case recovered without special antiseptic treatment.—Dr. FORBES WANSLOW inquired if Dr. Beach had traced these cases up to adult age. He felt sure that though at first no bad symptoms resulted, yet later, in cases of extravasation of brain, epilepsy or some other nerve lesion would develop.—Dr. ANGEL MONEY asked what relation the hernia cerebri bore to the pulse rate.—Dr. BEACH replied that in his experience children with brain wounds did well; in imbecile children wounds anywhere did astonishingly so. There was no hemiopia or squint. He had not traced the after-history of patients with cerebral injury. The pulse fell after the first hernia cerebri appeared, whereas it rose after the development of the second.

Mr. MARMADUKE SHEILD read an account of a case of Aural Exostosis removed by means of incision of the cartilaginous canal, and the application of the chisel. The patient was a woman twenty-seven years of age, who had been under the care of Dr. Bunn of Norwood. She had long suffered from uncomfortable sensations in the right ear, and for three weeks before admission had become quite deaf, with attacks of agonising pain in the right ear and side of the head. She was first seen on Sept. 10th. It was found on examination that a large exostosis springing from the posterior wall of the canal almost blocked that passage, a mere chink being left anteriorly. As the symptoms were so acute, it was determined to attempt to remove the whole exostosis with the chisel. The details of the operation were described. The essential points were the incision of the auricle posteriorly at its junction with the skin over the mastoid, dissecting down to the bone in this region, incising the cartilage, and peeling away the membrane from the bone and from the exostosis. The growth being thus brought under command, a small sharp chisel was applied to the bone at its base, and it was easily cut away and removed. The auricle was replaced and readily united, the scar being quite concealed. All pain was lost, and the hearing was now most satisfactory. Reference was made to the performance of this operation abroad, and to its adaptability for the removal of impacted foreign bodies. A suggestion was made that its performance might facilitate the operation of drilling when this was considered needful; the growth being so much more under the eye and touch of the surgeon, a short drill-head could be employed, and thus the risk of swerving or slipping obviated. The question of the true structure of exostoses in this region was raised, and attention was drawn to the fact that it was remarkable that true "ivory" exostoses should so often occur on a portion of bone developed from cartilage.—Sir WILLIAM DALBY thought there were two conditions in which incision of the cartilaginous canal would be useful—(1) where it was difficult to operate because the external meatus was smaller than usual or was swollen, and (2) where immediate operation was necessary. Bony growths in the canal had been divided into two classes—those which grew from the posterior wall, true exostoses, which were not particularly hard, and hyperostoses, which were usually multiple and of ivory density. In the large proportion of ivory exostoses there was no occasion for operation, the passage being sufficiently large for hearing, but they required removal where dried scabs and matter became pent up behind them. He referred to the satisfactory results he had recently obtained with a drilling machine which made 2000 revolutions per minute, the cutting power being very great, the force required small, and there was no fear of slipping.—Mr. SHEILD, in reply, said that hyperostoses were rarer than true exostoses, and usually followed some irritation. They had broad bases, and created less obstruction than the other variety.

Dr. BENJAMIN HOWARD read a paper on "A New and Only Way of Raising the Epiglottis," of which the following is an abstract:—The epiglottis, as regards its functions, from the time of Plato to that of Magendie was conspicuous as a subject of dispute. Respecting the epiglottis as a factor in apnoea, on the contrary, that which was taught at the first has been taught ever since, and is to-day everywhere the rule of universal practice. This teaching is—(1) that in apnoea the epiglottis falls backwards and closes the glottis;

(2) that the elevation of the epiglottis is the first thing in order and in importance, as without this respiration, whether natural or artificial, is impracticable and the result fatal; (3) the only way by which the epiglottis can be elevated is by means of the tongue; as the tongue is brought forwards the epiglottis is moved upwards. As a summary of results of prolonged and repeated investigations and experiments the author proposed to show:—1. The effect of traction of the tongue, what is done by it, and what is not done by it. 2. A new and only way of raising the epiglottis. 3. Some important changes in the relations of certain parts of the upper air passages to each other, induced by complete extension of the head and neck. By the aid of a series of diagrams made by the author from sketches he had made from nature he then showed: (1) Contrary to general belief, traction of the tongue, however and whatever the force employed, does not, and cannot, raise the epiglottis as supposed. Because (a) the tractile force supposed to be exercised upon the epiglottis is arrested chiefly by the frenum lingue, and through the muscular fibres within is expended upon the inferior maxilla, into the genial tubercles of which they are inserted; (b) the surviving force is expended almost entirely upon, and intercepted by, the anterior pillars of the fauces; (c) for any tractile force which might survive a continuous and sufficient medium for its transmission to the epiglottis is wanting. Proof: The glosso-epiglottidean fossa being filled with water, the subject being so placed that the floor of that fossa is formed in part by the fallen epiglottis itself, traction upon the tongue, however forcible, does not cause the water to be spilled. As the author had just been publishing an improved way of seizing the tongue for the above purpose, this discovery was a great disappointment, and a great dilemma, as no other way of raising the epiglottis seemed to have ever been contemplated. After a search by no means easy or short, he discovered (2) the only way by which the epiglottis can be certainly raised, which is by extension of the head and neck. By this means its elevation is instant and complete; because (a) by a three-linked chain of which the hyo-epiglottic ligament is the lower link, the body of the hyoid bone the central link, the combined genio-hyoidei and mylo-hyoidei muscles the upper link, the epiglottis is so coupled to the inferior maxilla, just where it has its greatest range of motion, that above a certain point, as the lower jaw is moved upwards, the epiglottis instantly, irresistibly, and inevitably moves upwards exactly in unison till it is erect. The customary wrenching asunder the clenched teeth, in proportion as it depresses the body of the lower jaw, antagonises a distinct effort of nature to maintain the elevation of the epiglottis, and specially favours, sometimes helps, sometimes greatly increases, its depression. The author indicated on his diagrams the way in which other anatomical causes of obstruction in addition to the epiglottis respectively bar the air way, for all of which he submitted a positive and complete remedy, and showed (3) the way in which by extension of the head and neck, carried to the utmost completeness, the backward fallen tongue, the velum palati, and uvula are all simultaneously shifted from the air way, and the entire pharynx is enlarged throughout, as follows: (a) The tongue, the dorsum of which before fell by gravitation upon the then horizontal posterior wall of the pharynx, falls upon the now horizontal arch of the palate. (b) The velum palati, by means of the great tension of the palato-pharyngeal muscles, is pulled away from the posterior wall of the pharynx, the entire membrane being stretched tightly forwards and downwards behind part of the dorsum of the tongue, forming a partition which helps to shut the tongue out of the pharynx, and into the mouth, where it belongs, and with part of the dorsum forms the anterior wall of a new post-oral air way, thus created and maintained. (c) The pharynx, anteriorly, is stretched far forwards by the extremely tense sterno-thyroidei muscles acting through the thyroid cartilage. By the genio-hyoidei and mylo-hyoidei muscles acting through the os hyoidei, the base of the tongue and the velum palati are shifted forwards in the manner already described, the posterior nares being shifted by the extension of the head by its occipito-vertebral articulation about sixty degrees. Posteriorly, the wall of the pharynx is shifted back its whole length by the extension of the cervical vertebrae upon each other, in all about thirty degrees, the extension being particularly great just opposite the glot-

tion. Thus, the upper air way, which before was a tortuous, angular, flaccid canal—barely, and if at all uncertainly, permeable—is made an enlarged, firm, but slightly curved tube, free throughout, from the glottis to the nares. The way to make complete extension of the head and neck: Having, by bringing the patient to the edge of the table or bed, or by elevation of the chest, provided that the head may swing quite free, with one hand under the chin and the other on the vertex, steadily but firmly carry the head backwards and downwards; the neck will share the motion, which must be continued until the utmost possible extension of both head and neck are obtained. Sometimes a slight elevation and extension of the chin merely will at once check stertor, or irregularity of breathing, but, understand, the extension, which can in no case do harm, should be always rather more than appears necessary. It should never be forgotten, however, that the full effects of extension, as above described, can be secured with certainty, only by making the extension complete as directed. That the customary pulling forwards of the tongue is followed by relief the author admits to be true in some cases, but in some cases only, and then it is not by the raising of the epiglottis. In the stage and in the case in which the backward fallen tongue happens to be the chief cause of obstruction, by pulling forwards the tongue that cause of obstruction is removed, nothing more; but there are other cases, other stages, in which it does no good at all. From over 13,000 fatal cases of asphyxia in England alone during the last three years, the author selected over 100 unequivocally attributed to the administration of anaesthetics, and in which, in all probability the tongue was skillfully pulled forwards in the recognised way, but the patients died. The author would be sorry to pretend to state of what they died, but he could not avoid the belief that in each case the epiglottis in all probability was not raised, and continued unlifted till death was complete. It could but be thought a happy feature, that instruments, the delays in getting them, in using them, the occasional violence and the invariable wounding with them, yet the utter helplessness without them, were in the procedure submitted so entirely superseded. It was not pretended that never before had the epiglottis in this way been lifted. For more than twenty years the author himself had published and illustrated a certain position in the treatment of apnoea. This position inevitably opened the epiglottis, but he did not know it. The old-fashioned swinging by the feet, the *à la bas*, the inversion of the entire body, the chucking under the chin, the jerking the angle of the jaw—in each of these the good done, and which was the only and all-sufficient reason for the habit, is an interesting corroboration. Each tended to raise the epiglottis, but the operator did not know it. Further corroboration is in the familiar position instinctively assumed by the croupous, the diphtheritic, the asthmatic, the dying. A diligent search has failed to discover a single record in which any observer states that by pulling forwards the tongue he has seen the epiglottis raised. Nor is there a single reference to anybody who is supposed to have seen it. On the contrary, the facts here submitted have all been many times examined, and have been verified by distinguished anatomists at demonstrations made by the author at the Royal College of Surgeons, England, at King's College Hospital, and at Guy's Hospital; and at the Hôpitals la Pitié and Salpêtrière, Paris. The position of complete extension enables certain operations on the throat and pharynx to be done in anaesthesia without the usual peril from drainage into the trachea. The sum of what has been submitted is:—1. That, contrary to universal belief, traction of the tongue cannot raise the epiglottis. 2. By sufficient extension of the head and neck, whether by volition, instinct, reflex action, or by the effort of another—whether in the healthy, the dying, or the dead—the epiglottis is instantly and beyond prevention made completely erect. 3. By complete extension of the head and neck the tongue and velum are as respiratory obstructions, simultaneously with the epiglottis, removed, and without a moment's delay the entire air way can be straightened, enlarged, and be made free throughout by the nearest person. If syncope happen to be the chief or a secondary factor, this also thus gets the quickest and best correction. The author expresses the hope, as he has the confident belief, that the facts submitted will be found to be permanent additions to our means of averting death.

OPHTHALMOLOGICAL SOCIETY.

Stereoscopy by Difference of Colours.—Partial Hyperostosis of Frontal Bone.

THE first ordinary meeting of this Society for the present session took place on Thursday, Oct. 18th, Mr. Henry Power, F.R.C.S., being in the chair.

A paper was read by Dr. GROSSMANN, of Liverpool, on *Stereoscopy by Difference of Colours for the Normal and Colour-blind Eye*. He said that, when a boy, he had often noticed how strongly marked in some stained glass windows the red parts seemed to stand out from the surrounding surface. When a student he learned that this phenomenon was due to the difference of accommodation; the red rays, being less refrangible, required a greater accommodative effort than the blue ones, in order to be united on the retina. The eye, therefore, made the conclusion that the red was nearer than the blue. Lately, Dr. Einthoven had investigated this matter, and found the real reason to consist in the excentricity of the eye, and the symmetrical arrangement in the fellow eye, whereby the red rays were united on a more temporal spot of the retina than the blue rays. Also the position of the pupil was of such great influence, that shifting it artificially, for example, by partly covering its outer or inner half, would be sufficient to reverse the impression. Dr. Einthoven considered the phenomenon a purely stereoscopic one, with very little accessory help from the part of the accommodation; according to him, it disappeared completely when one eye was closed. Recently Dr. Grossmann's attention was drawn to this point again, and he had come to a somewhat different result. In his own case the phenomenon was attributable principally (if not solely) to accommodation. He arranged the two colours in a simple way, so that they formed a perspective drawing, and the stereoscopic effect was hereby greatly facilitated. When this figure was shown to some colour-blind (red-green blind) individuals, they also perceived the red nearer than the blue, both for binocular and monocular vision. This showed that with them also the act was principally one of accommodation. Dr. Grossmann now made figures with compound colours, using a bluish-red and a green. In this figure the red appeared nearer than the green to the normal eye, while the reverse took place for the red-green blind. Hereby another proof was given that the red-green blind eye perceived the blue only in the bluish-red, while the green was perceived as yellow, corroborating Hering's theory of four fundamental colours, and contradicting the Young-Helmholtz theory of three fundamental colours: red, green, and violet.—Mr. POWER had frequently noticed, when looking at a carpet with a pattern composed of lighter and darker colours, that the lighter after a while stood out the more plainly of the two, and this he felt sure was due, not to difference of colour, but simply to the relative lightness and darkness of different parts of the pattern.—Mr. BRAILEY found that those sitting near him agreed with him that the squares exhibited gave results exactly opposite to the theories of Dr. Grossmann.—Mr. DOYNE found he could alter at will and make either colour, the red or the green, more prominent. He thought it probable that the small error of refraction present in the majority of eyes would be sufficient to produce the difference.—Dr. GROSSMANN, in reply, said that if Dr. Einthoven's explanation were the only one, with exclusion of accommodation, it was certain that the stereoscopic effect would only take for one meridian, ordinarily for the vertical lines. If the pupil were not quite centric, it would ordinarily be situated towards the nose. Just as we could not see stereoscopically well horizontal parallel lines, but could easily distinguish vertical ones, this would be the case for lines of different colours. However, Dr. Grossmann placed parallel lines on a disc, and turned them round, when the stereoscopic effect remained, though weaker.

Mr. A. Q. SILCOCK exhibited a case of *Partial Hyperostosis of the Frontal Bone*. The patient, aged twenty, was first seen at the Moorfields Hospital in May, 1883. She then presented a swelling over the left eyebrow, round in outline, with smooth surface, hard and bony to the touch. The left eyeball was displaced forwards, downwards, and outwards. The swelling had existed for two years, and was said to be increasing in size; there was a history of a blow on the eyebrow. Iodide of potassium was given for some weeks,

but without effect, and she was lost sight of till May, 1888, when the swelling had become considerably larger. On May 10th much of the frontal bone was removed with trephine and gouge-forceps, but it was found impossible to extirpate the growth; since then no recurrence had taken place. He had shown the case on June 14th, and described it then as an ossifying sarcoma of the frontal bone; he brought it forward again because he desired to correct an error in diagnosis, as he now considered it a simple hyperostosis. Microscopically there was seen a richly cellular and ill-developed connective-tissue growth undergoing ossification. A description of two somewhat similar cases would be found in Virchow's work on Tumours. Hyperostoses presented greater uniformity than did exostoses, and they did not show themselves in the form of a tumour, properly so-called.

The following living and card specimens were shown:—

Mr. SILCOCK: (1) Connective-tissue Tumour in each Orbit; (2) Sarcoma of both Orbits.

Dr. TEMPEST ANDERSON: Instruments—(1) Simple Eye Speculum; (2) Method of applying Ointments to the Eye; (3) a Bench for Operating on the Eyes of Children.

Mr. GUNN: Double Proptosis.

Dr. W. J. COLLINS: Melanosis of Conjunctiva.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The History of Sewage Disposal Inquiries.

AT a meeting of this Society on Oct. 19th, Professor W. H. CORFIELD, the President, delivered an address on the above subject. After briefly describing the way in which the question of the disposal of sewage has forced itself upon our attention in recent times owing to the rapid increase of the population and its aggregation in large towns, and also to the general adoption of water-closets and the consequent more serious pollution of rivers, Dr. Corfield proceeded to summarise the conclusions arrived at by the various Royal commissions and committees which have been appointed to investigate the subject, commencing with the report made for the Poor-law Commission on the Sanitary Condition of the Labouring Population of Great Britain by Mr. Edwin Chadwick in the year 1842. He pointed out that in this report the advantages of the water-carriage system, as being the cheapest and most effectual method for the removal of excretal matters, was insisted on. The results obtained by the utilisation of the sewage of Edinburgh by irrigation were also described in the same report. The inquiries of the Health of Towns Commissioners in 1844 and 1845 confirmed the conclusions arrived at by Mr. Chadwick, which were amplified in the report of the General Board of Health in 1851 on the practical application of sewage water and town manures to agricultural production. The Royal Commission on the Sewage of Towns (1858-61) made a series of careful investigations into the various methods of sewage disposal, and came to the conclusion that "the right way to dispose of town sewage is to apply it continuously to land, and it is only by such application that the pollution of rivers can be avoided." The same result was arrived at by the Select Committee on the Sewage of Towns in 1862, who added that "solid manure cannot be manufactured from town sewage with commercially profitable results." The Royal Commission on the Pollution of Rivers, appointed in 1868, issued six important reports after a series of most elaborate investigations, and came to the conclusion that sewage can only be effectually purified by passing it through the soil. They also formulated a list of standards of purity for effluent waters discharging into rivers. The Birmingham Sewage Inquiry Committee, after examining the various systems in use at different places, arrived at the conclusion that "the best method of dealing with the sewage of the borough is that of intermittent downward filtration on the smallest area of land at the greatest convenient distance from the outfall, so as to command as large an area as possible for the ultimate utilisation by farmers." In 1869 the British Association appointed a committee to inquire into the subject; the labours of this committee extended over eight years, and they issued as many reports. They devised a more accurate method of taking samples of sewage than had before been practised, and also made a

series of most important quantitative experiments by which they determined the percentage of the manurial ingredients of the sewage actually recovered in the crops on the sewage farm. The results of all these investigations not only caused irrigation on land for the purification of sewage to be widely adopted in this country, but also induced some other countries, and notably Germany, to adopt the same plan. Owing to the serious nuisance caused by the pollution of the Thames by the sewage of London, the Royal Commission on Metropolitan Sewage Discharge was appointed, and issued two important reports in 1884. They came to the conclusion that the sewage of the metropolis must not be discharged in its crude state into any part of the Thames, that the solid matters should be precipitated and the liquid portion be allowed to escape into the river as a preliminary and temporary measure, but that ultimately the liquid must be purified by application to land. The Metropolitan Board of Works, instead of setting to work to see how the recommendations of the Royal Commissioners could be carried out, "felt themselves unable to concur in the conclusions at which the Commissioners had arrived," and have not only continued their plan of attempting to deodorise the sewage while discharging it into the river as before, but have apparently, in spite not only of the reports of the Royal Commission, but of all the commissions and committees which have investigated the subject, determined to adopt chemical precipitation as a permanent measure, for they are building huge tanks for the purpose, and have actually embarked on a scheme for carrying the precipitated matters out to sea in barges. They have also secured the services of Sir Henry Roscoe to advise them as to the methods of deodorisation, but that eminent chemist, in reporting on the results of his investigations, has given them the following significant warning: "I offer no opinion as to the processes of precipitation by chemical treatment, as this question was not submitted to me by the Board. Looking, however, at the broad question of the permanent disposal of the metropolitan sewage, and believing that the use of deodorants ought to be regarded only as a temporary expedient, I feel convinced that sooner or later the recommendations of Lord Bramwell's Commission will have to be adopted, and that the sewage, whether previously clarified or not, must either be filtered through land or discharged into the estuary at a point not higher than Sea Reach. The growth of the metropolis during the quarter of a century which has elapsed since the adoption of the present main drainage and outfall system has been so enormous that arrangements which worked satisfactorily up to some few years ago are now found to be inadequate, and will of course become more so as time goes on." The President continued: "Can anything be more conclusive or more condemnatory of the action of the Metropolitan Board of Works? A Royal Commission is appointed especially to investigate the matter; the Board, whose duty it is to provide for the disposal of the sewage of London in the best possible manner, calmly ignores the conclusions arrived at by that Commission, and pursues a course condemned by it, while their chosen adviser informs them that sooner or later the recommendations of the Commission will have to be carried out. I protest, in the name of the Society of Medical Officers of Health of the country, against such a state of things, and against the further carrying out of a scheme which, while being enormously costly, will not only not settle the question, but will rather increase the difficulties of settling it effectually, and will be pointed out by succeeding generations as a disgrace to the sanitary work of the nineteenth century."

PROPOSED MEDICAL ASSOCIATION FOR DUMBARTONSHIRE.

A meeting of the Dumbartonshire medical men was held in the Elephant Hotel, Dumbarton, on Friday, the 19th inst., when steps were taken to form a Dumbartonshire Medical Association. The following gentlemen were appointed office-bearers:—Honorary Presidents: Sir G. H. B. McLeod, M.D. (Glasgow); Professor McCall Anderson, M.D. (Glasgow). President: W. A. MacLachlan, M.D. (Dumbarton). Vice-Presidents: Dr. Cameron (Old Kilpatrick); Dr. McLellan (Alexandria). Secretary: James MacLachlan, M.B., C.M. (Bonhill). Treasurer: Dr. Allan (Dumbarton). Committee: Dr. Gilmour (Duntocher); Dr. Stevenson (Clydebank); Dr. Wylie (Clydebank); Dr. James Wilson (Dumbarton); William Butchart, M.A., M.B., C.M. (Clydebank).

Reviews and Notices of Books.

Die Krankheit Kaiser Friedrich des Dritten, dargestellt nach amtlichen Quellen und den im Königlichen Hausministerium niedergelegten Berichten der Aerzte Prof. BARDELEBEN, Generalarzt I. Kl. und Kgl. Geh. Ober-Med. Rath in Berlin; Prof. von BERGMANN, Generalarzt I. Kl. und Geh. Med. Rath in Berlin; Dr. BRAMANN, erster Assistent der Kgl. chirurg. Klinik in Berlin; Prof. GERHARDT, Geh. Med. Rath in Berlin; Prof. KUSSEMAUL, Geheimer Rath in Strassburg i. E.; Dr. LANDGRAF, Stabsarzt in Berlin; Dr. MORITZ SCHMIDT, Sanitätstath in Frankfurt-a.-M.; Prof. SCHRÖTTER, Vorstand der Laryngol. Klinik in Wien; Prof. TOBOLD, Geh. Sanitätstath in Berlin; Prof. WALDEYER, Geh. Med. Rath in Berlin. 8vo, pp. 103. Kaiserl. Reichs-druckerei, Berlin. 1888.

The Fatal Illness of Frederick the Noble. By Sir MORRIS MACKENZIE. London: Sampson Low and Co. 1888.

[SECOND NOTICE.]

IN our previous notice we gave a brief historical résumé and criticism of the events that transpired from the commencement of the Emperor Frederick's illness to its fatal close. There remains for consideration the "medical protocol concerning the result of the examination of the body of His Majesty." In the first place, it must be noted that the terms of this protocol are not sufficiently explicit as regards the cavity noticed in the region of the larynx, which was plugged with cotton-wool and bismuth, as it is said, for embalming purposes. This cavity, Sir M. Mackenzie alleges, was that of a diffuse abscess which formed in consequence of Professor von Bergmann having torn up the pretracheal tissues whilst unsuccessfully attempting to insert a cannula, and which had ceased to secrete pus during the last few days of the illustrious patient's life. Further, in Sir M. Mackenzie's opinion, the "several ounces of pus secreted daily" came from this abscess, and found their way into the windpipe either at the tracheotomy wound or by an ulcerative perforation lower down. Now nothing could have been easier than to have settled the disputed facts by post-mortem observation. From Sir M. Mackenzie's version it would seem that the trachea was not examined throughout its entire length, and that therefore any destruction of tissue in front of the windpipe caused by Professor von Bergmann's alleged clumsy manipulation, or any ulcerative perforation therefrom, or any injury inflicted by the "badly fitting cannula" could not have been determined. Against this contention there are certain passages in the protocol above referred to. It is there recorded (1) that situated in the skin and partly in the subcutaneous tissue on the right of the edge of the opening leading to the cavity filled with wool was a pale flat protuberance, 2 centimetres high, 1.5 wide, and 0.5 thick. There can be little doubt that this nodule was of cancerous nature, and had either formed in continuity with the laryngeal growth or had sprung up from lymphatic infection. In favour of the former hypothesis is the fact that "the underlying muscles were entirely free." (2) A definite description is given of the extent of the gangrenous surface of the cancerous and necrotic tissues of the larynx and upper part of the trachea. It seems certain that the upper part of the trachea was destroyed in the same way as the cartilage of the larynx; in fact, the lower edge of the sloughing ulcer is said to have been formed by the trachea. Now it is obvious that any false passage Professor von Bergmann may have made would be situated below the tracheotomy wound; but what says the protocol in explanation of the allegation? "This lower end [meaning the lower edge of the tracheotomy wound] was moderately clean cut, extending through the mucous membrane and presenting small grey granulations which

covered an area of about half a centimetre. Then followed normal mucous membrane over the still existing tracheal rings. In the tissue of the still existing part of the trachea there was no evidence of cicatrization, but purely normal conditions." If this quotation accurately represents the truth, there is an end of the question as regards tracheal perforation and endotracheal injury below the tracheotomy wound. (3) Although incisions were made on both sides of the neck, the underlying muscles were found to be entirely free, a circumstance one would scarcely have thought to have obtained in the presence of a diffuse cellular abscess—that is, if the incisions were made of reasonable length. The protocol, it will be remembered, was signed by Sir M. Mackenzie, as well as by the German pathologists and physicians. It seems, then, that either Sir M. Mackenzie was not cognisant of all that was contained in the protocol, or that in the hurry of the moment he did not grasp the import of the text, for on page 215 of his recent work we find the following words: "An immense abscess cavity is found after death just in the place where Bergmann made the false passage." The protocol, as we have said, evidently refers this cavity to the region of the larynx, and not to the pretracheal space below the tracheotomy wound. Surely the discrepancy could be rectified, but in the present daggers-drawn attitude of the parties to the controversy we fear no such desirable end will be achieved.

It has not been denied that the tissues of the larynx were necrotic during life, and therefore the plea put forward by Professor von Bergmann in proof of the groundless nature of Sir M. Mackenzie's charge of his having made a false passage—viz., that only the upper surface of the tracheotomy tube was blackened by sulphuretted hydrogen—seems to us of little weight, although as far as it goes it rather supports than undermines Professor von Bergmann's defence.

Our readers will refuse to believe that men of Professor Virchow's and Professor Waldeyer's standing would fabricate a lie to bolster up the damaged reputation of a colleague. The case resolves itself then into one of mistaken pathological identity on the one side or the other. We cannot agree with the suggestion that the alleged abscess cavity in front of the trachea was not recognised because little or no pus had been secreted during the last few days of the late Emperor's life, since that would be running counter to the first principles of morbid processes.

OUR LIBRARY TABLE.

On the Preventive Treatment of Calculous Disease and the use of Solvent Remedies. By Sir HENRY THOMPSON, F.R.C.S., M.B. Lond., Surgeon Extraordinary to H.M. the King of the Belgians, Consulting Surgeon and Emeritus Professor of Clinical Surgery to University College Hospital, &c. Third Edition. London: J. & A. Churchill. 1888. — This brochure contains three lectures delivered at University College Hospital. That on the solvent treatment of calculi is little if at all altered, and, although important, will not attract so much attention as the two others, which deal with a matter of the highest practical interest in all cases of urinary calculus—viz., their prevention. This important subject is discussed in two excellent lectures, and the treatment advocated is partly dietetic and partly medicinal. Fats and sugar in all forms are to be rigidly excluded from the dietary, and the medicine most commended to prevent the excretion of too large a quantity of uric acid is the combination of Carlsbad water with Hunyadi Janos water. For the details of the treatment, however, we must refer our readers to the excellent text of Sir Henry Thompson himself.

L'Alcoolisme Etude Médico-Sociale. By Dr. E. MONIN. Paris: Octave Doin. — In this remarkable work, which

obtained for the author the first prize of the Société Française de Tempérance, Dr. Monin has endeavoured to expose the dangers and disorders produced by alcoholic drinks, not only in those who indulge in them, but also in their dependants. He refers also to the action of alcohol on the different races and professions, soldiers, women, children, &c. It is a complete dissertation on the subject of which it treats. Dr. Monin, who is a prolific writer, has written this work in such a way that it will be found interesting and comprehensible even by those who have not received a scientific education. The work opens with a most interesting preface from the pen of Dr. Dujardin-Beaumetz, whose cogent remarks may be considered worthy of notice here. "It may be said that, according as civilisation advances, man seeks in drunkenness a compensation for, and forgetfulness of, the annoyances and sorrows which result from the daily struggles of life. But alcohol destroys the body as well as the mind. If the law should be pitiless for those prisoners of the working classes, it should also protect and favour the use of healthy drinks. Wine is not useless, it is a tonic drink; and France, which possesses renowned vineyards, cannot, like our neighbours of the other side of the Channel, preach absolute abstinence from alcoholic drinks. What should be combated and repressed is the abuse of these drinks and their adulteration. This is the doctrine that the Société Française de Tempérance has always upheld." The last chapter contains some philosophical and economical views, as well as remarks on the treatment of alcoholism, which will be found both interesting and useful.

Another World; or, the Fourth Dimension. By A. T. SCHOFIELD, M.D. Pp. 92. London: Swan Sonnenschein and Co. 1888. — This brochure is an earnest and entertaining protest against the doctrines of materialism. The author's aim has been to demonstrate the existence of an unseen and yet all-seeing universe outside the range of our consciousness of external objects. His contention is that it is impossible to form an accurate conception of the attributes of those existing in the fourth dimension; but of their existence, and of some of their relations to the world of three dimensions, he argues from analogy in a sufficiently interesting way. His conclusions merit consideration, although they are open to all the attacks ordinarily directed against analogies. The allegorical tone is somewhat irritating in some of the chapters.

Artificial Plants ("Flora Artefacta.")—We have received from Messrs. Southall Bros. and Barclay, of Birmingham, some samples of the artificial plants arranged by Christine Jench, under the scientific supervision of R. Stein, inspector of the Royal Gardens, Breslau. These plants are life-size representations of living specimens which cannot always be obtained in the fresh state, and appear to be well adapted for teaching purposes. These submitted to us are accurate in form and coloring, and supply a much clearer notion than could be derived from any engravings or diagrams. The series includes many medicinal plants which are rarely seen in this country in the fresh state. They are supplied at moderate prices.

Illustrations: a Pictorial Review of Knowledge. Conducted by FRANCIS GEO. HEATH. London: W. Kent and Co.—This is an extremely well got-up volume, suitable for the young and the more mature. The illustrations are remarkable alike for their variety and their excellence; and, on the whole, the same remark may be applied to the text.

The Leeds Company of the Volunteer Medical Staff Corps were inspected on the 20th inst. by Deputy Surgeon-General Jaggan, principal medical officer of the northern military district, who, at the close of the proceedings expressed his pleasure at the work he had seen carried out.

Analytical Records.

VAPOUR CONES.

(THE CHEMICAL CARBON COMPANY, LIMITED, BASINGSTOKE; AND H. MENDE, 62, HOLBORN VIADUCT.)

SOME time ago we noticed these cones with approval, but the manufacture has been so much improved and the applications so considerably extended that a few additional remarks are called for. The cones are all alike. They are hollow, and several inches in height. When ignited on the clay supports supplied with them they deflagrate quietly and slowly from the top downwards, producing a steadily increasing heat. Inside each cone is placed a small flask containing the substance which is to yield the vapour. A plug confines the substance, but readily permits it to escape in the gaseous form under the influence of heat. In this way a definite and sufficient fumigation is produced with the greatest ease and with no danger, if care be taken to place the clay base on a non-inflammable surface. The samples submitted to us contained fifteen varieties of remedial agents, including stramonium, bromine, the chlorides of mercury, chlorine, carbolic acid, ammonium chloride, sulphur (for baths), and sulphurous acid. We have tried the cones, and in some cases examined the contents of the flasks, and have obtained most satisfactory results. We believe the invention to be a valuable one. The cones, it will be seen, are entirely different from, and in many respects superior to, pastilles; for not only do they convey into the air definite weights of the volatile agents, but they permit the use of bodies so volatile that they could not be carried in any kind of pastille.

EUCALYPTUSINE.

(H. & T. KIRBY, NEWMAN-STREET, OXFORD-STREET, LONDON.)

A fragrant and most refreshing essence, in which it requires no analysis to detect the delicate aroma of the eucalyptus. The value as a disinfectant of the eucalyptus oil has been exaggerated, and we must treat this essence rather as a useful and pleasant toilet preparation than as a rival to the active chemical preparations which are required in serious zymotic disease, but we by no means deny its value. A few drops give an invigorating perfume to a large volume of water, and so used will be welcome in the sick chamber, the bath-room, and the nursery. It is said to act as a deterrent to mosquitoes and other animal pests. If this be so, it will indeed be a blessing in many families.

THYMOL TOILET POWDER.

(H. & T. KIRBY, NEWMAN-STREET, OXFORD-STREET, LONDON.)

We find in this powder, besides the characteristic, well-known, and valuable thymol, zinc oxide, starch, and a fine powder insoluble in acids. Such a cosmetic is not to be specially recommended, although it cannot be stigmatised as noxious in itself.

BEEF BOUILLON.

(BRAND & CO., MAYFAIR.)

This is a good, soluble, and palatable beef preparation. It represents a thoroughly cooked meat; for the microscope shows much muscle fibre, while chemical analysis proves the absence of coagulable albumen. Such liquid foods, produced at moderate cost, are invaluable for general use, and we are glad to learn that their sale is extending.

CAFFEINE, PREPARED FROM DENATURED TEA.

(HOWARD & SONS, STRATFORD, ESSEX.)

A pure and beautifully crystallised preparation. The form of the crystals and the well-known reaction with nitric acid and ammonia proved its identity beyond a doubt. The fact that millions of the human race have become dependent to some extent upon the plants which

contain caffeine confers a singular interest upon the alkaloid. Its therapeutic action is even now but ill understood.

PROF. KREMIANSKI'S MEAT POWDER.

(GOSPODIN, SEREDINTSKI, KHARKOFF, RUSSIA. LONDON: T. MAXWELL.)

Our analysis of this food gave the following results in parts per cent.:

Water &c., volatile at 100° C.	12.30
Fat	7.90
Albuminoids	65.90

(Containing nitrogen, 10.45.)

Ash	4.04
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(Containing 20.76 per cent. P_2O_5 .)

This is therefore a most nutritious and very concentrated food.

UNIVERSAL DIGESTIVE TEA.

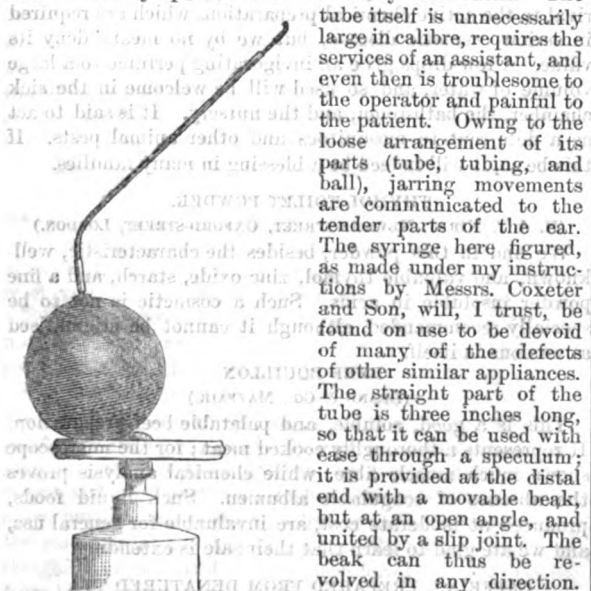
(UNIVERSAL DIGESTIVE TEA COMPANY, LIMITED, CORPORATION-STREET, MANCHESTER.)

At the request of the proprietors we have repeated the examination of this tea, which we recorded in a former notice. We regret that we cannot alter our previous opinion. The alkalinity of the tea is a trifle higher than is usual, but otherwise we can find nothing noteworthy in regard to it. The tannin was about normal.

New Inventions.

NEW SYRINGE FOR THE MIDDLE EAR.

In old-standing cases of chronic suppuration of the middle ear, and in other lesions in aural disease, one of the first conditions calling for treatment is thorough irrigation of the tissues involved. It may, I think, be safely stated that hitherto appliances for such a purpose have been all alike defective, and some positively injurious. Hinton's method of forcing fluid through the cavity is not devoid of risks; while the nearest approach to a good instrument—viz., Martmann's tympanic tube—has many drawbacks. The



tube itself is unnecessarily large in calibre, requires the services of an assistant, and even then is troublesome to the operator and painful to the patient. Owing to the loose arrangement of its parts (tube, tubing, and ball), jarring movements are communicated to the tender parts of the ear. The syringe here figured, as made under my instructions by Messrs. Coxeter and Son, will, I trust, be found on use to be devoid of many of the defects of other similar appliances. The straight part of the tube is three inches long, so that it can be used with ease through a speculum; it is provided at the distal end with a movable beak, but at an open angle, and united by a slip joint. The beak can thus be revolved in any direction. The proximal end of the straight tube is bent at an open angle, and continued for an inch; and to this is fixed by a slip joint a one-ounce balloon. The calibre of the tube throughout is one millimetre, and the syringe, when put together, feels light and solid, so that in its use no jarring need be communicated to the parts when it is placed *in situ*. Again, the fineness of the tube, and the direction given it at the

proximal end, render it possible to keep it well in view during operation. With this instrument it is perfectly possible to thoroughly cleanse every part of the tympanic cavity, no matter how small the perforation and where situated. I allude to cases such as are generally met with in practice. The movable bent beak permits of the irrigating fluid being conveyed in all directions, and, if necessary, suction can be applied. Sinuses leading down to diseased bone in the meatus &c. can also be treated, and, where conditions permit, the Eustachian tube can be flushed. All such procedures can be carried out by the operator himself unassisted, and without the slightest discomfort to the patient. With various solutions, such as solution of sulphate of soda (5 per cent.), or perhaps one or other of the digestive ferments suggested by Dr. McBride, the most tenacious exudation membrane can be readily got rid of, and in a much shorter period than I have found when using other appliances. I have often observed, after even the first application of the syringe, in perforations, the opening blocked by such membranes, washed out of the middle ear and lying thus ready to be disposed of. Subsequent treatment of the mucosa by corrosive chloride usually restores a healthy tone to the parts, with a cessation of inflammatory processes and discharge. There is very little need, if any, for the use of powders (boracic acid &c.) or strong caustics, provided the tough membranous exudation deposits referred to are got rid of. Until these are dislodged, the discharge continues and granulations flourish. With the effective aid rendered by this syringe I have been enabled to restore fairly good hearing in cases where a loud watch was heard on contact only: in one case of thirty years' standing, in another of fourteen years, in another of eight years, and in all of whom ear treatment had been more or less tried. I do not claim everything for the use of this syringe in such cases. Lesions in the neighbouring parts must be treated concurrently, the permeability of the Eustachian tube must be upheld, and the naso-pharynx appropriately treated.

WM. ROBERTSON, M.D. Glas., &c.

Newcastle-on-Tyne.

SANITARY WOVEN HORSEHAIR ABDOMINAL BELT.

We have received from Messrs. Arnold and Sons, West Smithfield, one of their patent sanitary woven horsehair abdominal belts, for which they claim, amongst other advantages possessed by the material of which it is made, that it combines lightness with firmness, that it is non-absorbent, thus earning its title "sanitary," and is of great durability. All these qualities will recommend it to the consideration of the profession; whilst its durability will be of special service in hospital practice, where the element of expense enters so largely into the consideration of surgical appliances. It is a frequent experience to find patients suffering from commencing ventral hernia, due to the yielding of the scar after operation, neglecting to wear the necessary support because of the expense of providing a new one, the one provided by the hospital at first having worn out whilst the scar was still pliant and yielding. The patentees say that the sanitary woven horsehair material can also be applied in the manufacture of respirators, trusses, every description of pad, chest protectors, corsets, knee-caps, and a long list of other appliances.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The directors of the Society held their quarterly court on Wednesday, Oct. 10th. The President, Sir James Paget, took the chair at 8 o'clock. One member was elected, and the death of one reported. Applications for grants were received from sixty-three widows and thirteen orphans, and a sum of £1377 was recommended to be distributed among them at the next meeting. A fresh application for relief was read from a widow, for herself and three children, and a grant at the rate of £60 per annum was made. It was resolved to celebrate the centenary of the Society by a present of £5 to each widow on the funds and £3 to each orphan; the present, amounting to £346, to be made on Oct. 29th, the anniversary of the first meeting of the Society.

THE LANCET.

LONDON: SATURDAY, OCTOBER 27, 1888.

THE Royal College of Physicians has this year kept its "commemoration day" in a spirit befitting the occasion; for, whatever may be urged in opposition to display and revivals of ancient practices, there can be no doubt that the academical robes, which, in obedience to the wishes of the College, were donned by so many of the Fellows, added an unwonted brilliancy and dignity to the scene, and helped to relieve the somewhat sombre surroundings amidst which the Harveian Oration has for years past been delivered. The audience, which included many highly distinguished members of other professions, was further gratified by the tone and character of the oration itself. Dr. LATHAM wisely resolved that the best way to celebrate the discoverer of the circulation of the blood was to dwell upon the latest advances in our knowledge of the causes of disease, so many of which have been gained by the simple, patient method of investigation of nature which HARVEY pointed out as the guiding principle of all genuine seekers after truth. The result has been a most suggestive and learned discourse, which did more than merely mark the limits of knowledge yet attained, for it pointed the way whereby we may hope to still further unravel the mysteries of disease.

"Probably no other discovery since that of the circulation of the blood appears to be so full of promise in elucidating the causes and courses of some diseases as this one," said the Harveian orator in reference to the discovery of the rôle of micro-organisms in disease; and there is much truth in the statement, for in the whole history of medical science it would scarcely be possible to indicate any such marked revolution in ideas as that which has been and is taking place with respect to the etiology of disease, from the introduction of what has even now become the dominant factor in pathology. It is no passing fancy or theory, which will be set aside by the next generation, and be as forgotten as some of the old "systems" that have had their day. For in spite of much scepticism, the study of bacteriology continues to make steady progress, and to add to the sum of knowledge very definite and positive facts. Nevertheless, the wider the subject grows the more intricate it becomes, whilst new problems are constantly presenting themselves for solution in connexion with it. Thus the mere discovery of a micro-organism in the blood and tissues, which in the earliest days of the "germ theory" was held to be the proof of the bacterial nature of a disease, now goes for very little. There are numberless ways in which such an invasion may occur, without having any pathological significance. The whole alimentary tract teems with microbes, and the pulmonary organs are not so constituted as to filter the air that contains myriads of these microscopic organisms, the presence of which therein can only be revealed by skilfully contrived experiments. A further test was required to prove that a microbe was pathogenic. It must be isolated, and cultivated outside the body; and, to our

thinking, few experimental methods are more striking, elaborate, and accurate than those devised (primarily by KOCH) for these ends. It was a great advance surely to demonstrate that these infinitely minute fungoid organisms could be sown on a culture medium and their growth observed "each after its kind"; so that a drop of water or a bubble of air could be proved to contain several distinct species of microbe. But more than that was needed to show that bacteria were related to disease, in a manner similar to that in which they were proved to be essential to the processes of fermentation and putrefaction. The disease must be reproduced in animals by inoculating them with the cultures. It is well known with what measure of success these procedures have been followed; but yet the experimentation led to new problems for solution. The immunity of certain species of animals to the effects of such inoculation, the effect of attenuating the virus, and the discovery of protective inoculations are some of the fruits of such researches, embracing questions of the highest practical importance. Doubtless the history of the subject contains many errors in observation and inference; but the sum of it all is the addition of sound facts, and the formation of hypotheses, not a few of which have come to be accepted as true interpretations of the phenomena observed.

But there is one question—and it is this which formed the main burden of Dr. LATHAM's oration—which even more than the discovery of a specific germ must engage the most profound study. Granted that a bacillus is the cause of anthrax and tubercle, and a spirillum that of relapsing fever, how does it operate in producing the disease, and in what relation does it stand to the blood and tissues of the infected organism? The remarkable investigations of METSCHNIKOFF have thrown light upon part of this question, so that it can hardly be disputed now that there is a distinct antagonism between the living cells of the body and the foreign parasitic intruder. The great founder of cellular pathology himself recognises this, although, with pardonable enthusiasm, he points to it as a confirmation of his views of the paramount importance of cell life in nutrition and in disease. But the question does not rest here. From what is known of the operation of similar micro-organisms outside the body, as in the processes of fermentation and putrefaction, it is inferred that they have allied functions within the body, and that the effects, which we style disease, are the result of the action of poisons produced through the operation of the microbe in its own limited sphere. Dr. LATHAM has done good service in pressing this question home, and in demonstrating upon chemical grounds the possibility of production of such poisonous products from disintegrating albumen. He showed, too, how, even without the intervention of micro-organisms, such products (as from fatigue) may be produced; whilst his suggestion that, under certain conditions of lowered vitality, the body is exposed the more readily to the operation of bacterial infection, with all its untoward results, is in strict harmony with what is known of the causes of disease. In the face of the new problems suggested by these considerations, is it not true that increase of knowledge brings increase of toil? There is set before the investigator a vast field of research, embracing the changes in the body which

contain the earliest departure from health on the one hand, changes that predispose to disease on the other, and stand more the changes initiated and maintained by the specific contagium (virus or microbe) concerned. No longer can we be content with signalling the effects produced in organs and tissues; we must hope to unravel the inner mysteries and make plain the secret workings of morbid processes. For this we must look to the physiologist and to the chemist; for the more we know of the intimate processes of nutrition in health, the higher will be our prospect of learning what is the nature of disease; and the outcome of all this research will be a sounder pathology and more rational therapeutics. In the latter respect it may teach us, as Dr. LATHAM suggested, the futility of attempts to destroy the virus within the body, and show us that our aim should be to so maintain the vitality of the cells of the body that they may resist the action of the virus. It is then to the "predisposing" causes that the attack must mainly be directed, and chief among these are the influences which deteriorate the normal healthy constitution of blood and tissue. On the question whether specific diseases arise *de novo*, or, in bacteriological terms, whether non-pathogenic organisms can become pathogenic, we will not now offer an opinion. Dr. LATHAM agrees with those who think that this is probable, and the idea has been frequently shown to be more in harmony with evolution than the exclusive doctrine of specific germs. Yet, as with organic life on a large scale, we may grant its possibility in the remote past, without admitting that conditions are now present for it to occur. It is, moreover, a question that lies outside practical medicine, and, once admitted as a universal explanation, might operate harmfully in minimising the importance of contagion. Of more pressing interest are the problems alluded to above, and we trust that one effect of Dr. LATHAM's philosophic discourse will be to quicken the spirit of investigation towards their solution.

THE Americans are a wonderful people. Last year they were fortunate enough to have the International Medical Congress at Washington; this year they have had one but little less important in its influence on the profession. The meeting of this year was also called a Congress—the Congress of American Physicians and Surgeons. But it was by no means made up of American physicians and surgeons only—it was largely fortified by many European practitioners of eminence, and especially by our own countrymen. Sir SPENCER WELLS, Sir WILLIAM MAC CORMAC, Dr. PRIESTLEY, Dr. ORD, Dr. FERRIER, Dr. PYE-SMITH, Dr. GRAILY HEWITT, Mr. DURHAM, Mr. VICTOR HORSLEY, Mr. HARRISON, and many others attended, and either read papers or took an active part in the proceedings. Whether it is that our brethren have discovered an efficient prophylactic against sea-sickness, or that they despise such slight ailments, it is obvious that they are becoming more indifferent to the passage across the Atlantic. Probably it is the very kind reception they meet with on the other side which leads them to regard the ocean as only a bond of connexion instead of a barrier, and to regard a run to the States in the late summer as one of the most pleasant ways of taking a holiday.

The Congress itself deserves some description. It is made up of about fifteen associations for the promotion of medical and allied sciences. According to the *New York Medical Record*, which has devoted forty-eight extra pages to a report of the proceedings, the Congress at its birth was composed of eleven societies. At this session it has admitted the American Gynecological Society. Two new societies—the American Pediatric Association, and the Association of American Anatomists—were organized during the session, and have asked for admission to the Congress. The American Association of Obstetricians and Gynecologists have also made application for admission to the Congress, which is to meet every three years at Washington. This is the first meeting. The number of registered associates of the Congress, members of one or other of the component societies, was about 1400. The Congress is ruled by its Executive Committee, which is made up of one member from each participating society. Its President is elected by the Executive Committee, and for this, the first Congress, Dr. JOHN SHAW BILLINGS was elected president. In calling the meeting to order, and announcing the plan and president of the Congress, Dr. WILLIAM PEPPER, chairman of the Executive Committee, explained that the deliberations which led up to this Congress began about four years ago, before the attention of the profession was occupied with the International Medical Congress, and that all action was deferred till there should not be the semblance of interference with that important meeting. All Parliamentary and political subjects are excluded, and the function of the Congress is designed to be absolutely scientific. It will be noticed that this Congress has quite a novel constitution. Other congresses and associations are made up directly of members; this is composed of associations. Its members must be members of these component associations, and its expenses are paid by the participating societies. Dr. PEPPER in his opening statement said that close study of the conditions of the Congress led the Executive Committee to feel that if this organisation were to have the effect of favouring the multiplication and subdivision of special societies, it would be nothing less than a calamity, and to guard against this it is provided that new associations shall be affiliated only by the unanimous vote of the Executive Committee. We shall be curious to see whether the rule of the executive is sufficient to check the mushroom-like growth of societies which seem to overlap and overpower one another, and which, we confess, seems to us rather encouraged by the constitution of this Congress. Certain it is that the multiplication of societies in the States needs no forcing. It is carried on to an unfortunate extent. We have already given prominence to an illustration—the Association of Genito-urinary Surgeons. There is no guarantee that we shall not have many subdivisions of this group. The proceedings of the Congress afforded many illustrations of labelings a group of men as if they had special care of bits of the body, or special skill in dealing with them. We shall instance only one or two. The palpation of the ureters in the female was treated of in the American Gynecological Society—for the proceedings are reported under the head of the separate societies—not in the Association of Genito-urinary Surgeons. In one page of our contemporary's report we

find "Residence in High Altitudes as a means of Cure for Laryngeal Phthisis" treated in the American Laryngological Association, on Tuesday, Sept. 18th, and on the same day the American Climatological Association was engaged in the "Study of the Climate of Colorado for Pulmonary Diseases." Be this as it may, we have a Congress on a new basis, very different from the American or British Medical Association, where any individual may become a member without being a member of any medical society. In the American Congress case he becomes associated with the Congress in virtue of his membership of a society. It is as if, in place of the existing constitution of the above associations, it were made up of members of all associated medical societies, and governed by an executive committee made up of nominees of these societies. In other words, the Report of the Congress is the report of the proceedings of twelve or fifteen separate societies, many with almost identical names and objects. It certainly seems to us that to bring all these societies to Washington to air their individuality before the world and the President of the United States is to stimulate their multiplication.

We cannot pretend to give here any abstract even of the scientific work reported by the Congress, or rather by its various component societies. It certainly was work of the most varied kind, and some of it, judging from necessarily brief reports, of high excellence. Dr. LUSK reported three cases of Cæsarean section by SANGER's method, in which the mothers recovered and two children survived. The great question of Cerebral Surgery received brilliant illustration both from American authors and from our distinguished countrymen, Dr. FERRIER and Mr. VICTOR HORSLEY. Dr. HERTZMANN, of New York, read a good paper on the value of Salicylic Acid in Skin Diseases, especially hyperidrosis, lichen planus, furunculosis, callosities, pruritus ani, &c. Personal observations of 500 cases of Skin Disease in the Negro, by Dr. MORRISON, of Baltimore, were instructive. Acne, eczema, scabies, and favus are not common; lupus is rare; though the negro is prone to pulmonary tuberculosis. The question of Laparotomy in all its bearings was fully discussed. The President's address was on the subject of Medical Museums, and was characterised by that breadth of learning and suggestion which we might expect from Dr. BILLINGS. In concluding our notice of this important gathering, we may express a hope that its reports in a complete form will ere long be available for general use.

WHILE we are by no means disposed to take a pessimistic view of human life and progress, and while we hold to the belief that the tendency of human affairs is towards the attainment of a higher plane of morals and practice, we think there are at present some disquieting signs of a temporary declension in the public tone and taste which is worthy of the consideration of all thoughtful men. We refer to the growth of a taste for sensationalism, as shown by the character of journalism, fiction, and the stage. With some honourable and noteworthy exceptions, the daily press aims at serving up a constant succession of highly spiced dishes to its readers, and takes care to report at inordinate length, and often with objectionable minuteness, the details of the latest murder, divorce, or fashionable scandal. The Whitechapel tragedies have afforded a typical case in point;

and what with gruesome descriptions of the victims, elaborate conjectures as to the precise mode and motive for the crimes, and interminable theories as to the best means of discovering the criminal, one would think that the thoughts of the entire nation were practically absorbed in the contemplation of revolting wickedness. We are far from thinking that such events could or should be hushed up or ignored. Murder is the most anti-social of crimes, and so strikes at the root of individual safety and security that it justly claims immediate and earnest attention. What we deprecate is not reasonable publicity as regards the fact of crime, but the prurient and demoralising amplification of its sickening details. We protest against such pandering to low passions on no mere grounds of sentiment or pietism, but on the far more solid foundation of scientific evidence regarding its corrupting influence. Familiarity with crime is seldom wholesome, and to the weaker and more ill-balanced minds is assuredly perilous. The knowledge as well as the sight of the means to do ill deeds oft makes ill deeds done. The exploits of "Jack the Ripper," as detailed for our delectation at the breakfast table day after day, are likely not only to hurt the consciences of innocent minds, but to fire the imagination, and perchance kindle the emulation, of those just hovering on the verge of criminal violence. It is in vain that such descriptions are accompanied by sententious and virtuous moralisings. When we have befouled ourselves with pitch there is little advantage in calling for a looking-glass and owning with compunction that pitch is very black and altogether objectionable.

The same drift towards sensationalism is seen in the popularity of the realistic novel. There is much virtue in a phrase, and when we call a novel realistic the unwary may take the epithet as implying that such fiction delights in truth and fact rather than in idealism. But the realism which M. ZOLA has popularised in France, and which threatens to invade us in England, does not consist in the truthful portraiture of all aspects of human life, but in the deliberate and systematic choice of what is vile and corrupt for the purposes of fiction. It is as if a painter, determined to paint nature and nature only, were to neglect the wood, the stream, the ocean, and human beauty, and fill his canvas with nothing but sores and ulcers and deformities. Such art would be realistic at the expense of sacrificing its true ends—namely, the promotion of pleasure by means that elevate and ennoble. A healthy all-round genius, like SHAKESPEARE, whose admirable equipoise is as wonderful as his insight, will, no doubt, often dwell on the darker sides of human life, and will occasionally say things hardly fit "*virginibus puerisque*," but he will be sure to paint man as a rational, self-controlling being, and not as a wanton savage. MATTHEW ARNOLD once said that our French neighbours were unhappily "given over to the worship of the great Goddess Lubricity." What has been the result? Alone among great nations France has to lament a declining population, one of the most certain indications of waning national prosperity. The domestic virtues may be very commonplace, but they are indispensable. Nature will quietly punish with extinction the nation which systematically ignores them.

The condition of the stage in England affords so many

grounds for hopefulness that we are the less inclined to dwell upon its defects. The revived and universal recognition of the magnificence of the great Elizabethan drama, the immense popularity of the British comic opera, which can be witty and amusing without ribaldry and indecency, and the favour accorded to such dramas as those of the late Mr. ROBERTSON,—these are all wholesome signs. But we see the other side in the popularity of the melodrama and the spectacular displays which hold the boards in some of our leading theatres. The pantomime may suit the child, but, if dramas which rise no higher in the intellectual scale than pantomime find a wide popularity, it speaks ill for the maturity of taste of those who should have put away childish things.

It may be a question how far this craving for excitement is simply the outcome of the over-tension of modern civilisation. The Anglo-Indian needs curry to whet his jaded appetite, and the modern Englishman lives at such high pressure that simple pleasures may cease to amuse him. If so, the admission is a disquieting one. The return to nature, the reversion to simpler, healthier, less exhausting occupations and pleasures, may be difficult, perchance impossible, but something might be achieved if it were even recognised that such a return is a consummation to be desired. Mr. BALFOUR, in his recent remarkable address to the Church Congress on Positivism reminds us that nation after nation has achieved a high level of culture, and after a little time has wearily laid down the burden of advanced civilisation. The question is, Can this burden be lightened so that at least it may be carried a little longer? The sensationalism of the day is one of its elements, and tends to the exhaustion of the emotions without any corresponding benefit. We must discourage it and seek to keep it in check by all the legitimate means at our command.

WE have on many occasions expressed an opinion upon the merits of the Medicine Tax, and adduced what seem to us very good reasons for urging its complete and speedy abolition; but that that consummation is still very far off, and that much has yet to be done in the way of educating public opinion and moving the Government in the matter, is brought home to us by a neat little volume which has just been issued from the office of the *Chemist and Druggist* under the title of "Handy Book of Medicine Stamp Duty." Its preparation has been entrusted to Mr. E. N. ALPE, of the Inland Revenue Department, and if we considered only the excellence of his workmanship we should be quite disposed to wish his book a long as well as a prosperous career. As a guide to what is and what is not comprised within the purview of these perplexing statutes, the work is calculated to be very useful to chemists and druggists and to others whom it concerns. But its use will pass away with the repeal of the Acts which it expounds, and we cannot, even out of complacency with a well-wrought piece of work, desire or expect that this will be long deferred.

In a brief introductory chapter a sketch is given of the history of these Acts, and, as pains have been taken to make the story accurate, it possesses a permanent value. Like so many other burdens upon the British taxpayer, this impost was invented at a time (1783) when the Chancellor of the

Exchequer was grappling with the financial troubles involved in a great war; and not without reason does Mr. ALPE remark that "it was scarcely to be expected that in a period marked by yearly deficits and unsatisfactory budgets so flourishing and profitable an industry" as that of the trade in proprietary medicines should escape attention. In such circumstances the impost may even have been justifiable. Necessity knows no law, and something very like a necessity presided at the Treasury in those days. But the necessity has long since passed away—the tax remains. The reason of its perpetuation is, no doubt, that no serious and well-directed effort has yet been made to procure its abolition. Modified it has been from time to time, according to the exigencies of the hour. Generally with a view of securing a better grip upon the taxpayer has the Legislature taken this problem in hand, and one after another those ingenious expedients have been devised which now inflict so serious a loss upon the public, and such grievous annoyance from time to time upon individuals. But the course of legislation has not been by any means uniformly in this direction. Thus in 1815 an exemption was made in favour of the vendors of confectionery, and in 1833 a similar advantage was secured by the dealers in mineral waters.

The mischievous operation of this tax, which has led to its repeal in these instances, is by no means confined to the particular industries which have received relief. On the contrary, it is rooted in the nature of the tax itself, and affects, and must affect, any industry which is made to contribute. A cynic may, indeed, rejoin that, so far as the majority of proprietary medicines are concerned, it would be no public loss if they were affected to the point of being kept out of the market altogether. There would be much truth in the observation, for the indiscriminating administration of nostrums on the faith of an advertising puffer, is a most pernicious practice. But, unfortunately, the tax does not make such medicines unpopular. On the contrary, the Government stamp directly and powerfully conduces, among the more uninstructed classes of society, to a belief in the soundness of the medicament to which it is affixed. The duty does not come out of the manufacturer's or vendor's pocket, but out of his customer's; and the circumstance that he has to pay the duty in advance enables him to invest money which shall pay him the full return of his ordinary business profit without incurring the smallest risk or trouble in turning it to account. This is where the mischief creeps in. The public does not want medicine, as it does mineral waters, in bulk. The high price, therefore, to which it is driven up by the duty is not a matter of prime importance; but it is of great importance to the taxpayer that he is required for every 6d. that he pays in to the national exchequer to pay 1s. or 1s. 6d. to a number of intermediaries whom the method of collection adopted in this instance interposes between himself and the Revenue Department. This is an evil more serious even than the great hardship which arises to individuals who innocently offend in ignorance—an ignorance to which the habitual attitude of the Revenue authorities largely contributes, when these latter arouse themselves, as they occasionally do, and go forth seeking whom they may devour. The produce of this

tax is so inconsiderable, having never reached in the gross so much as £200,000, that it might easily be provided for by some quite unobjectionable alternative when the Budget is being arranged, and we hope that those most directly interested will take care that this is brought prominently to the notice of the Government upon the first opportunity.

Annotations.

"Ne quid nimbis"

THE PRIVILEGES OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

IT seems to us impossible for the present agitation against the Council of the Royal College of Surgeons to cease until the Fellows of that College have their privileges much extended and the Members also have their just claims recognised. A meeting of the Association of Fellows will be held to-day (Friday) at 36, Grosvenor-street, W., at 5 P.M., in furtherance of these reforms. What are the privileges of the Fellowship of the College of Surgeons of England? Remarkably few. 1. A Fellow possesses a recognised professional status for candidature at a public hospital. 2. He may be elected as a member of Council in his own College. 3. He may vote at an election of members of Council. Now a schoolboy can look up in Latham's Dictionary of the English Language the definition of the word "Fellow." He will find it to be, "*Member with full rights and privileges of a corporation.*" It appears to us that Fellows of the Royal College of Physicians of London do really enjoy full rights and privileges of a corporation; for the whole management of the College of Physicians is vested in the Fellows, their Council being an executive and not an initiative one. The Fellow of the College of Surgeons is ridiculously far behind. Even at the annual meeting of his own College, he may attend, probably speak, but not give an effective vote. He has delegated his whole duty to the Council of his College; giving them a free hand, while his own are tied. His representatives may act as they please, and are absolutely irresponsible to their constituency during their term of office. This total absence of power of control over the Council of the College of Surgeons, as well as over the general management of their College, is felt to be a real grievance, which might well be remedied by putting a Fellow of the College of Surgeons on a level with a Fellow of the sister College of Physicians. At present a Fellow of the College of Surgeons holds a rank about corresponding with that of a Member of the College of Physicians; with the exceptions already given, he is outside the College, and takes no part in its management whatever. This is a confession to be made with feelings of humiliation. An increase in the power and collegiate status of a Fellow of the College of Surgeons would be a most powerful incentive for Members to seek the higher title of Fellow, and we admire the spirit of liberal conception pervading the elevation of a Member of the College of Physicians to that of Fellow. We trust, for the true interest of the College of Surgeons, that such moderate reforms may be carried. It is but natural that the artisans who select any machinery should regulate the works. Many Fellows are reluctant to associate their names with a College adopting such a narrow and antiquated policy as prevails at Lincoln's-inn-fields, nor are they in the frame of mind to recommend coming men in surgery to subject themselves to the non-yielding discipline of the Council after submitting to their examinations. The "hall mark" of the College is a recognised one, but nowadays men look for both good

training prior to their examinations and liberal treatment after becoming Members or Fellows, instead of simple subjection to the stamp of the assayer. We would remind our readers that the annual meeting of Fellows and Members will be held at the College on Thursday, November 1st, at 3 P.M.

MORTUARIES.

ALLUSION has been made in previous issues of THE LANCET to the defective state of the mortuaries in some of our larger towns and cities, as well as those of more rural districts. What is virtually the public mortuary of the large and wealthy city of Liverpool is a mere shed, partly of bricks, partly of wood, with a supply of cold water only, and no other conveniences whatever. At the recent inquest on one of the Whitechapel victims, Mr. Phillips, the divisional police surgeon, spoke in the severest terms of the state of the mortuary in which he had been required to make the post-mortem examination; and from the observations which were made by the coroner and jury it would appear to have been most unsuitable for the purpose of a mortuary pure and simple, especially so for the important object of a medico-legal inquiry. Still more recently comes a complaint from Walton, which is now rapidly becoming a very populous northern suburb of Liverpool. The body of a man was found in Anfield cemetery under circumstances which left no doubt that he had committed suicide by some corrosive poison. The body was removed to the mortuary, and a post-mortem examination was made by Mr. Anderson, who thus described the place: "It was dirty and filthy, and if the whitewash were touched it came off. There was no arrangement by which water could be obtained, and consequently the floor and table were left covered with blood and not in a condition to be seen by the jury. In the interest of common decency it should be altered." It appears that the mortuary belongs to the local board, who had been appealed to by Mr. Anderson, but had done nothing. The foreman of the jury stated that £50 had been spent on the place, and Mr. Anderson added that a proper water supply was all that was required. These facts reflect much discredit on the local sanitary authorities, especially when it is borne in mind that they not only have power to provide and maintain a mortuary out of the public funds entrusted to them, but that they could be compelled to do so by the Local Government Board. They cannot plead ignorance of what is required, or expense, in extenuation. Experience could be obtained from any modern workhouse, hospital, or infirmary; the expense, even including first outlay, would be comparatively small. They are also empowered to provide proper places for the reception of bodies during the performance of a post-mortem examination. It cannot be tolerated that the bodies of human beings should be relegated to places which would be condemned as unfit for slaughterhouses for cattle, and which present every appearance of "make-shift." Many will remember the scandal which was created some years ago, when a gentleman of good position occupying an important position in Somerset House died suddenly at his post, and his body was removed to the mortuary then existing in the churchyard of St. Mary-le-Strand. This was a wooden structure thoroughly unfit in all respects as a shelter for the dead, while it was only with the greatest difficulty that the surgeon who was ordered to make the necessary examination could do so. The scandal thus caused led to a new and improved condition of things. In former years, when railway accidents were treated with indifference, hopes used to be expressed that a bishop might be among the victims of the next accident so that an inquiry might follow. Are we to wait for the death of another Government official under similar circumstances, or of a member of some local sanitary board, before proper

mortuaries are provided? We might plead for some regard on behalf of the medical practitioners, whose health is seriously involved in the discharge of their duties under such unfavourable circumstances. But we would prefer not to narrow the issue to such limits, nor to speak of the coroner's jury and other officials, who are compelled to visit mortuaries, however bad they are. Respect for the dead is a feeling which is shared by all, from the highest to the lowest, and it is this feeling which should prompt the erection and maintenance of proper mortuaries and post-mortem chambers wherever they are now wanting.

MEASLES AND SCHOOL CLOSURE AT BOOTLE.

THE epidemic of measles at Bootle is extending, and its extension appears, in the main, to be due to two causes. In the first place, the sanitary department of the Council have decided to withdraw the fee formerly paid for a voluntary notification of infectious disease, and they are therefore now in the position of not being able properly to control the movements of children living in infected houses. In the second place, and as a natural consequence, certain elementary schools are centres of infection; and, if the information we have on this point is correct, there is a distinct misapprehension on the part of the Town Council, as sanitary authority, as to their duty and powers in this matter. It is stated that the Board School managers have arrived at the conclusion that if the schools were closed the children would meet in the streets and play there, and that they may therefore just as well continue their attendance at school. There is no question that consideration should always be given to such a subject before school closure is decided on; but the decision does not rest with the school managers; on the contrary, it is for the sanitary authority, who have the power of ordering the closure, to seek skilled advice on that and other points from their medical officer of health before they act. Such an adviser would doubtless bear in mind that, with respect to some infectious diseases, experience has already shown that, under circumstances of aggregation very akin to that obtaining in schools, they acquire a special potency for mischief and for spread, and the degree of danger attending the maintenance of such aggregation, as opposed to the risk of play in an unlimited amount of moving air, would in every case of contemplated school closure be duly considered. But when once the sanitary authority have decided to close the schools on the advice of their health officer, the school managers are bound to comply with the order, even if they determine on an appeal to the Education Department.

THE ISLINGTON MEDICAL SOCIETY.

THIS Society held its first meeting for the session on Tuesday at 1, Highbury-place. The attendance was good. The principal feature of the evening was an address by Mr. Henry Power on the therapeutics of the more common diseases of the eye. Mr. Power ran over the list of such affections. He expressed his attachment to the old and classical treatment of specific iritis, which, indeed, continues to hold its ground, in spite of all changes of practice, with all practitioners that realise their responsibility and the value of eyes. On the other hand, he confessed to an entire revolution in the treatment of ordinary catarrhal conjunctivitis in its acuter forms. The old strong solutions of nitrate of silver had disappeared from the ophthalmic surgeon's table, and even the vinum opii, and had given place to soothing treatment, especially to weak solutions of cocaine, one or two daily applications of which conferred immediate relief and soon cured. Mr. Power expressed somewhat strongly his preference, in most cases of

disease of the lacrymal sac, of soothing and medical measures over surgical procedures, which were often unsuccessful, and sometimes worse than that. Even in the hands of ophthalmic surgeons probing the lacrymal duct and other such operations required to be done with much care. Being asked his opinion as to the performance of iridectomy as a preliminary to cataract operations, he said he had, as a rule, abandoned it. He warned his hearers against the careless use of atropine in patients over fifty or with any glaucomatous tendencies, and eulogised the action of eserine in such cases.

SENSITIVE DENTINE.

ONE of the difficulties to be overcome in tooth filling is the occasional extreme sensitiveness of the dentine; and it requires considerable courage on the part of the patient to submit to the necessary cutting. Healthy dentine is endowed with but little sensibility, for if a tooth be accidentally chipped so as to expose a portion of the dentine without opening the pulp chamber, it can at first be touched without giving rise to pain, but after twenty-four hours' exposure to the fluids of the mouth it becomes irritable. Hyperæsthesia of the dentinal fibrils may follow any form of exposure—that due to caries, erosion, or fracture; and when present it varies considerably in intensity, not only in different teeth but in different parts of the same tooth. Immediately under the enamel, in proximity to the pulp, especially the fibres radiating from the cornua of and just beneath the appreciably softened carious bone, are the situations of greatest sensibility. The two former are explained by anatomical facts. The dentinal fibres end at the periphery by forming a dense network, and open into the so-called inter-globular spaces, which, however, are filled with protoplasm similar to that contained in the lacunæ of bone, the whole forming the granular layer of Tomes, and near the pulp the fibrils are both more numerous and of larger calibre. The deepest portion of the diseased bone is probably most sensitive, because here the calcareous material has been removed, exposing the fibrils, while it has not gone far enough to destroy them. It will readily be understood from this that superficial cavities are often very sensitive; then, as the disease progresses and this portion of the dentine is destroyed, there comes a time when there is but little pain from contact with acrid fluid or solid substances, but acute sensitiveness is again met with as the pulp is approached. Other things being equal, soft teeth, from their relative greater quantity of organic matter, will be more sensitive than hard teeth, although there are many exceptions to this rule; also the teeth of the young more than those of the aged. The various methods of treatment may be summed up under the following heads: (a) operative measures, (b) desiccation, (c) cauterisation, (d) local anaesthesia; and this is probably the order of their efficiency, although combinations are often valuable. (a) Sharp instruments, rapid motion of the engine, and taking advantage of anatomical knowledge by cutting away from the pulp and its cornua and across the line of the fibrils, will suffice in most cases. After the insertion of a temporary plastic filling for a few months, it will generally be found that most of the sensitiveness has disappeared; and this is the best of all treatment if the patient is under constant supervision. (b) In order to get thorough dryness, the rubber dam must be adjusted and the cavity swabbed out repeatedly with cotton wool dipped in CHCl_3 or absolute alcohol, or, better still, a current of hot air passed through the cavity. Chloride of zinc acts partly as a desiccator and partly as an escharotic, but its application is usually very painful, and its use contra-indicated when the pulp is near. (c) Carbolic acid, chloride of zinc, nitrate of silver, and caustic soda all have their advocates—carbolic acid, perhaps,

being the most general favourite. Arsenious acid left in for a few hours is most efficacious, but, owing to the numerous cases of death of the pulp resulting, is now rarely resorted to. (d) Cocaine alone, or in conjunction with sulphuric ether, although of great use as a local anæsthetic in treating pulps, has not proved of much service for sensitive dentine, as it is not readily absorbed. Other drugs, such as menthol and aconite, are equally disappointing. Dr. Ottolengui's method seems, as far as experience has gone, to give good results. He first dries the cavity with hot air, and sometimes uses carbolic acid as an escharotic, and then anæsthetises the dentine with ether spray. It is maintained that the pain produced is far less than the operation of cutting by any other method. It may be interesting to note the statement that, where teeth are forcibly wedged apart for the sake of gaining room for filling, the pain of excavating is much diminished, presumably from constriction of the nerve as it enters the apical foramen. Cocaine injection into the gum, as used for extractions, has also been recommended, but has not given encouraging results.

GREAT ANTI-SWEATING DEMONSTRATION AT GLASGOW.

At the City Hall, Glasgow, a large meeting has been recently held for the purpose of urging the Town Council to apply practically some of the remedies we have advocated as likely to mitigate the evils of the sweating system. Dr. Charles Cameron, M.P., occupied the chair, and urged that THE LANCET reports on sweating had justified the extension of the House of Lords commission of inquiry to the provinces. Mr. Neil McLean, speaking on behalf of the Scottish Tailors' Society, declared that they were ready to endorse and prove the accuracy of THE LANCET reports on sweating at Edinburgh and Glasgow. With the single exception of wishing to restrict, by some legal enactment, the immigration of unskilled pauper labour, all the remedies he advocated were identical with those urged in these columns. Miss Clementina Black, representing the Women's Trade Union League, related how in London she had seen women employed at embroidery work on Government uniforms. This was a skilled trade, and yet these women only earned 1d. per hour. No greater social injury could be inflicted than that which resulted from the reduction of wages. Insufficient wages led to every form of degradation and crime. But in this the buyers, as much as the employers, were to blame, and the public should form associations pledged to purchase only from such shops as were proved to pay the workpeople employed sufficient wages for them to live healthy and respectable lives. One of our Special Sanitary Commissioners, who was present as our representative, was then invited to speak. He pointed out that in Glasgow, under the same roofs, some apartments were let out for purposes of debauchery and others employed as sweating dens. Sweating, crime, and debauchery went hand in hand in the city. They could not expect women to be healthy, respectable, and virtuous on 4s. or 5s. a week. It was for the Town Council, as the custodian of public prosperity, to set the good example by building wholesome model workshops, and insisting, in all town contracts, that a just rate of wages should be paid. The laws of health, the laws of humanity, were higher than the laws of supply and demand. This, in any case, had been fully realised by the Paris municipality, and our Commissioner read the text of the Paris bye-law, abolishing the sweating system, imposing a nine hours day, and stipulating that the highest rate of wages prevailing in the various trades concerned should be paid for all work done for the town. Other speakers spoke in the same strain. The greatest unanimity and enthusiasm prevailed through-

out, the resolutions, including a vote of thanks to THE LANCET, were carried without the slightest opposition, and on all sides the warmest feelings of satisfaction were manifested whenever allusions were made to the active campaign which we have undertaken against the sweating system.

RHYTHM OF MUSCULAR RESPONSE TO VOLITIONAL IMPULSES IN MAN.

As a guide to the mode of action of the cerebral and spinal motor centres the observations of Mr. W. Griffiths in the *Journal of Physiology* follow on those of Messrs. Schäfer and Horsley, and are of great physiological and some pathological interest. The waves seen in a myogram taken from a voluntarily contracting muscle are graphic representations of contraction, and are not due to mere vibration. The number of waves per second in the muscle tracing varies in different individuals. The average number of waves per second in a myogram of the biceps muscle is greater than that of the muscles of the ball of the thumb contracting voluntarily in the same individual, the weight in the former case being held in the outstretched hand, in the latter suspended from the first phalanx of the thumb. The number of muscular responses per second in a voluntarily contracting muscle has been found to vary from eight to thirteen when the muscle is not made to overcome any force external to the body. This range of variation is probably too wide, the higher numbers being due to resistance offered by simultaneous contraction of antagonistic muscles. The average number of muscular responses per second in a voluntarily contracting muscle varies with the weight lifted. There is a gradual increase in the number of responses as the weight is increased up to a certain maximum number; any increase in the stretching weight beyond this point is accompanied by a decrease in the number of the responses. The average number of responses varies with the time during which contraction lasts. Increased activity produces an increase up to a certain point, then a decrease; and this phase of decrease is in most cases accompanied by consciousness of fatigue. The number of responses presented by an unweighted muscle, and the same muscle in a state of *dead strain* contracting voluntarily, is fairly constant, and is the lowest number of responses obtained from a voluntarily contracting muscle. The myogram waves become more extensive as the muscle becomes fatigued.

DEATH CERTIFICATES AND UNQUALIFIED ASSISTANTS.

It is a constant cause of surprise to us that medical men continue to get into trouble through the employment of unqualified assistants, or through using them in a wrong way. The last instance in point is one in Oldham, where Dr. James Gledhill and his unqualified assistant have both been summoned before the police court in connexion with a certificate of death in the case of a child named Shaw, seen during life only by the assistant, and that only once. The statements made and apparently admitted at the first hearing of the case were that the father went for this certificate, and the assistant filled in one already signed by Mr. Gledhill. The assistant pleaded guilty. It was further stated at that stage that Dr. Gledhill was in the habit of signing blank certificates of death, and that when he went away in August these were left for his assistant or anyone to use, and that his assistant did use them. On the second hearing, Dr. Gledhill having meantime been summoned for aiding and abetting, counselling, and procuring the other defendant to make a false certificate, the assistant withdrew the statement that he had used a certificate signed by his principal,

and said he had signed Mr. Gledhill's name himself—"He put Mr. Gledhill's name to it." Dr. Gledhill explained how, for his own convenience, he kept certificates ready signed, and how, when the Registrar wrote to him about this particular case, he (Dr. Gledhill) believed that the assistant had taken accidentally one of these signed certificates. The assistant explained the discrepancy between the statements on his first and second appearance on the ground that he was flurried. The magistrates dismissed the case as regards Dr. Gledhill, but they regarded the case of the assistant as a very bad one, and fined him £5 and costs. The fine and costs together amounted to £8 18s. The lesson of the case is to confirm the warnings so repeatedly given to all unqualified assistants and their principals. We entirely accept Dr. Gledhill's statement that he signed his certificates for readiness and convenience merely. But we can no more approve a medical man signing a blank certificate than a blank cheque, and the latter might, in easily imaginable circumstances, be the less dangerous proceeding.

SACCHARIN.

THE true position of saccharin is becoming somewhat hard to define. Its employment in the preparation of many substances liable to duty has already been prohibited, but this course of action was quite compatible with the possession of the most harmless properties. In a recent text-book on therapeutics, the author, when dealing with saccharin, appended the following disparaging foot-note: "The present is probably as good as any other place in the book to notice a substance whose use in practical medicine depends upon its lack of medicinal properties." Still of late there have appeared several paragraphs in various journals referring to the report of a commission of Paris doctors, and their adverse verdict has already served to disquiet many diabetics, who had hitherto placed full confidence in saccharin. In the abbreviated form in which it has reached us, this report does not amount to very much. It starts with the assumption that saccharin is antiseptic; but this fact rests upon a very slender foundation—its power of retarding putrefactive changes in the urine eliminated during its employment. The main conclusions of the French commission are that it seriously troubles the digestive functions and increases dyspepsia, and should be prohibited as an article of food. These statements are not in accordance with those of very many previous observers, who have studied the action of saccharin, and found it to be mainly negative. Large quantities have been taken by men, and have been administered to animals, without causing any symptoms of any kind. The report merits attention, although it is so widely at variance with previous experience that it seems probable that some oversight has led to these conclusions.

HOSPITAL VISITING.

EVERYTHING which tends to bring forward an appreciative acquaintance with the work carried on in our hospitals serves a good purpose in making known the needs of these institutions. The order and cleanliness displayed in the wards, the number of urgent cases always ready to fill available beds, and the mute eloquence of wards closed from lack of funds, appeal strongly to those visiting a London hospital for the first time. Visits of inquiry, visitors who come to see and to learn, are always welcome, and one of the residents, the matron, or the secretary, will probably be ready to walk round the wards with those who care to come. Against a phase of "slumming," however, in accordance with the lines indicated by a writer in the *Queen*, our hospital authorities are likely to protest. They do not want their time to be occupied by "some

queen of fashion" on whose hands the "day hangs heavily"; for them the "lovely face bent on atonement" possesses no charms unless it comes to do work in the wards, or to leave an additional name upon the roll of subscribers. The presence of the sick should rebuke those who, for a fashionable craze, take up hospital visiting as a cleanly form of "slumming." The languid curiosity of idle people may be turned into interest by the "refined manners and gracious bearing" of the matron, but our "ladies of fashion" are in the way unless their attentions extend beyond flattering words and a "triumphant march." It is otherwise with those who come to offer their services to read to the sick or to visit them on the regular visiting days. The sense of loneliness is intensified when the waifs and strays see "friends" going to other beds and know that it is hopeless for them to look for visitors. On these visiting days there is undoubtedly room for additional workers, but their work must be of a self-effacing character. As a fashionable occupation hospital visiting is open to objection. Those who take up such serious work from such unworthy motives are likely to find themselves extremely out of place and to receive many rude shocks.

SCOTTISH BRANCH OF THE QUEEN VICTORIA NURSES' INSTITUTE.

To provide nurses for the sick poor in their own homes is no new idea in Scotland, and many agencies exist throughout the country for this purpose. Some of these train the nurses they have engaged specially in district work before they become staff nurses; others assume that hospital training is sufficient. A greater amount of training and of self-reliance is, however, essential in an efficient district nurse than in an average hospital nurse, because the former has not the advantages of the latter in the way of appliances and constant medical supervision, and the trustees of the surplus of the Women's Jubilee Fund have decided to devote £300 yearly towards a Scottish branch of the Queen Victoria Nurses' Institute, with a central training home in the Scottish capital. This sum, however, which, considered by the standard of population, is over the proportion that Scotland might expect, is insufficient for the purpose, and it is obvious that, if a separate branch is to exist, the scheme must be supported by the assistance of the public. An appeal for this assistance has now been issued, and as soon as a suitable house is found, and funds provided to fit and furnish it, a small staff of nurses will be engaged, and the home opened to receive probationers for training in district work. It is also hoped that hereafter, if the funds sufficiently increase, the Scottish committee may be able to grant sums of money towards the first establishment of local homes, when the districts cannot afford the whole expense of supporting the nurses.

THE MEDICAL SESSION IN ABERDEEN.

AT the opening of the session, Professor Struthers met with a very hearty reception from a class believed to be the largest yet seen in the school. After a feeling allusion and a high tribute to the great loss of the school by the retirement of Professor Brazier, he dilated on several subjects. He rejoiced over medical bursaries in the University now worth £700 a year, and over the progress made in providing suitable laboratories for the school. He spoke with gratitude of the response of Government to their appeals. He referred to the delay in the extension of the infirmary buildings, and, with that fine belief in everything Scottish for which the Professor is famous, complained especially of the managers, "believing in London architects instead of Scotch ones." The only English thing Professor Struthers believes in is students from England, and he thinks it very

good for them to go to Scotland, and especially Aberdeen. And it must be admitted that he takes good care of them, and gives a good account of many that do repair to that seat of learning. In the class of *Materia Medica*, Professor Cash spoke, as he was entitled to do, on the unreasonableness of the disbelief in medicine. He vindicated the power of medicines, and insisted on the responsibility of medical students for acquainting themselves with all agents and resources for the cure and relief of suffering.

DEATH "ACCELERATED BY DEFECTIVE DRAINAGE."

At an inquest held last week the jury returned a verdict that the deceased had died from pleuro-pneumonia accelerated by defective drainage, and the circumstances are of sufficient public interest to induce us to comment on it here. Offensive smells were observed in a house in Battersea, and the landlord's agent having been informed of the matter, he sent a man to cleanse the drains, and this man left some of the refuse in the yard. Two boys living in the house were affected with sore throat, but no serious illness occurred. The nuisance, however, continued, and on four separate occasions the drains were taken up, but each time without beneficial result. The house was therefore vacated on October 5th, and three days later the deceased, who was three years of age, became ill and died. An examination of the house drains showed that the drainage system was combined with that of the adjoining house, that they were in direct communication with the sewer, that they were only jointed with clay, and were unevenly laid. The jury censured the landlord's agent for not sending competent men to do the work, but exonerated the parish authorities from all blame in the matter. We have no reason to be dissatisfied with the verdict that death was accelerated by the conditions described; there is, indeed, much reason for believing that pneumonia may be caused by such unhealthy surroundings; but it will be interesting to know whether the District Board have exercised their powers under Section 82 of the *Metropolis Local Management Act* for ascertaining if the drainage of the house was in accordance with the requirements, and whether they have taken any steps, in accordance with Section 83 of the same Act, for the infliction of a penalty on the person who has improperly made or altered the drains. Unless these powers are exercised, the inhabitants of Battersea will have no promise of security against similar occurrences in the future. It would not be amiss to ask whether any regulations as to house drainage exist in Battersea.

THE EPIGLOTTIS IN ASPHYXIA.

THE paper read by Dr. Benjamin Howard at the last meeting of the Medical Society of London raises again the important question of the best means to adopt when respiration fails under an anæsthetic. Dr. Howard maintains that the chief cause of the difficulty is the falling back of the epiglottis over the laryngeal orifice, and that the only way of obviating this is by extending the head and neck, the method of drawing forward the tongue being generally useless. These conclusions are not entirely in accordance with the results of previous observers, nor, we think, so far as lingual traction is concerned, with the experience of the majority of those engaged in the practical administration of anæsthetics. Sir Joseph Lister so long ago as 1861 pointed out that the profound stertor of chloroform inhalation depended upon a laryngeal cause, the epiglottis not being folded back during the obstruction, and, though traction on the tongue abolished the obstruction and stertor, it did not in the least degree move the base of the tongue, epiglottis, or hyoid bone. Hence he believed

that the benefit of lingual traction was not to be explained mechanically, but was developed reflexly through the medium of the nervous system. And in 1870 he referred to the value of forcibly pushing up the chin in cases where the tongue had fallen back. Since then the necessity both for elevating the chin and drawing forward the tongue has been frequently insisted on—the evidence, indeed, in favour of the latter practice being especially strong. The discussion of this most interesting subject has been deferred to a future meeting, when it is hoped that evidence on these points from those actively engaged as anæsthetists will be forthcoming.

MANCHESTER AND SALFORD.

It is eminently satisfactory to learn that the prospect of the administrative union of Manchester and Salford is improving. A meeting was recently held in Manchester to promote the proposed amalgamation, at which the report of a committee of inquiry was presented. This report expresses the opinion of the committee that amalgamation would not only reduce the cost of administration, but also tend to secure greater efficiency; stress being laid upon the facts that the population of the two urban sanitary districts is strictly homogeneous, and that they are only divided by an obscure and essentially arbitrary boundary line. From a sanitary point of view it is not easy to overrate the drawbacks to efficient administration due to the dual system of government, or the advantages that may be expected from amalgamation, quite apart from the obvious economy of the proposed union. Under the recently passed Local Government Act both Manchester and Salford are created county boroughs, but there would appear to be no obstacle in the way of their union as one county borough. Manchester and Salford united would have an estimated population of 604,500, and would thus rank as second only to London among the largest towns of the United Kingdom, even if opportunity were not taken to still further enlarge the county borough by adding to it some of the surrounding and contiguous urban sanitary districts, which are merely suburbs of Manchester. The death-rate during last year was equal to 28.7 per 1000 in Manchester, and did not exceed 22.2 in Salford, the rate in the city and borough combined being 26.0. Without doubting that amalgamation would lead to more efficient sanitary administration in the combined county boroughs, it is beyond question that the death-rate in Manchester has been somewhat over-stated by its separation from that portion which has hitherto had a separate municipal existence, and which contains its most rapidly increasing suburbs.

CANADIAN MEDICAL ASSOCIATION.

THE twenty-first annual meeting of the Canadian Medical Association has recently been held at Ottawa (*Canada Lancet* for October), Dr. G. Ross, of Montreal, presiding. At the first day's proceedings Dr. Girdwood, of Montreal, drew attention to the question of registration in Great Britain, and suggested the appointment of a committee to inquire and report upon what terms reciprocity of registration may be obtained between the different provinces and the mother country, and other colonies. The President, in the course of his address, advocated the establishment of a Dominion annual register at Ottawa. Dr. F. J. Shepherd of Montreal read a paper on Recent Advances in Surgery; and in the sections papers were read by Dr. T. W. Mills of Montreal, on the Influence of the Nervous System on the Nutritive Processes; Dr. Alloway of Montreal on Emmet's and Schröder's methods of operating upon the Cervix uteri; Dr. Howard of Montreal on Ophthalmoplegia externa, and others. It was decided to hold the next annual meeting at Banff Springs.

THE RIGHTS AND DUTIES OF MEDICAL OFFICERS OF HEALTH.

A DISPUTE having arisen at the Rawmarsh Local Board meeting regarding some of the duties of the medical officer of health, notice has been given to the effect that at the next monthly meeting the following resolution will be moved: "That the medical officer of health be requested not to enter any house as medical officer merely because of the existence in it of an infectious case which is attended by another medical man, and that he leave the disinfection of such houses to be ordered by the medical attendant; or if ordered by himself, then only after communicating with that attendant." We regret that anyone should have thought it necessary to move such a resolution, for, whilst it embodies certain principles which medical officers of health will fully endorse, it at the same time would be likely to hinder some of the most important work which a medical officer of health has to do. Speaking generally, we may state that where infectious disease is present in any house or premises, the medical officer of health has primarily to do with the local circumstances with which the disease is associated, and the medical attendant has primary concern with his patient. No medical officer of health can fulfil his duty to the public or to his authority if he neglects the investigation of local circumstances favouring disease, and it must necessarily be for him to judge whether on such a point he can accept and endorse the views of the medical attendant or not. Therefore to order that a medical officer of health shall not enter any house merely because of the existence in it of an infectious case would be to instruct that officer to neglect one of his most essential duties. It is perfectly true that the medical officer of health has no legal right of entry on any premises merely because of the existence there of an infectious fever, but householders and occupiers are, as a rule, quite willing to admit such an officer, in order that causes of disease, if found, may be abated, and medical practitioners are, almost without exception, ready to co-operate with them in such work. As to the disinfection of infected premises, this can rarely be done in a thoroughly satisfactory manner by occupiers unaided by the local sanitary staff; and whilst it is a rule, which is generally observed, that a medical man attending any case should be consulted as to the time and circumstances for performing such work, it is rare to find that medical practitioners care to take upon themselves the responsibility for such work. If they do, the medical officer of health is almost invariably satisfied to leave it to them; but cases may, at times, arise in which he may have a different duty in the matter. The observance of the most ordinary professional courtesy should do away with the necessity for passing any such resolution as that referred to, and it is to be hoped that no more will be heard about it.

HOSPITAL PROVISION FOR DIPHTHERIA.

WE learn that at the last meeting of the Metropolitan Asylums Board a letter was read from the Local Government Board announcing the intention of the latter authority to introduce into Parliament a Bill which shall make it clear that the managers can deal with diphtheria, and adding that, if in the meantime the managers determine to admit such cases into any hospital under their control, the Board, with the view of removing any difficulty with the auditor, would be prepared to sanction any expenditure incurred in the treatment of such cases which in the opinion of the auditor was not open to question otherwise than on the ground referred to. We understand that the medical superintendents of the different fever hospitals have been communicated with, and that they have replied that they can accommodate persons suffering from this disease.

There is, therefore, no longer any obstacle in the way of the immediate admission of cases of diphtheria into the hospitals of the managers, and all that remains is for the Asylums Board to make the necessary arrangements. We presume that the managers have satisfied themselves that from a public health point of view the step which is about to be taken is desirable.

METROPOLITAN SEWAGE DISPOSAL.

THE Inaugural Address of the President of the Society of Medical Officers of Health, an abstract of which we publish on another page, once more raises the subject of metropolitan sewage disposal. Dr. Corfield's address is of especial interest at the present moment, because a new body is about to be created to take over the duties of the Metropolitan Board of Works; and one of the first and most important questions with which they will have to deal is that which he discussed at some length before the Society last week. Dealing with the subject in a comprehensive way, he reviewed the results of past inquiries as to the best method of disposal of sewage, and showed that the experience of the past, an experience which may safely guide in the future, pointed to the purification of sewage by its application to land. This view was forcibly expressed by the Commission on Metropolitan Sewage Discharge; but, as is well known, the recommendation of this Commission was not accepted by the Metropolitan Board of Works, who felt themselves unable to concur in the conclusions at which the Commissioners had arrived. Instead of at once adopting the course recommended by the Commission, they have sought the advice of Sir Henry Roscoe as to the best methods of deodorisation, and have made permanent arrangements for discharging the effluent directly into the river. Sir Henry Roscoe, however, has told them that the use of deodorants ought only to be regarded as a temporary expedient, and that he feels convinced that sooner or later the recommendations of Lord Bramwell's Commission will have to be adopted, and that the sewage, whether previously clarified or not, must either be filtered through land or discharged into the estuary at a point not higher than Sea Reach.

There is, therefore, complete concurrence of every competent opinion as to the method which London requires, and the persistent expenditure of public money in the construction of works which must eventually be abandoned deserves more than verbal censure. It is with a feeling of relief that those Londoners who have studied this matter look forward to the creation of the County Council in supercession of the Board that has been guilty of this reckless conduct. It is earnestly to be hoped that the County Council will not hesitate to reverse the policy of their predecessors, and we would recommend every would-be county councillor to carefully study Dr. Corfield's paper so as to be able to form an independent judgment on this subject. This, perhaps, is the more necessary seeing that the officers of the Metropolitan Board of Works are by the Local Government Act of this year transferred to the new London County Council.

NOCTURNAL INCONTINENCE IN CHILDREN.

No investigation in etiology can be more complex than the attempt to find out the whole mechanism of causation in any given case of enuresis. M. Reymond, in *La Province Médicale*, No. 40, brings Cowper's glands into the list of causes of enuresis; he contends that these are in action even in infancy, and argues that erections with some mucous emissions are sufficient proof of their activity. Dilatation of the urethra is recommended with a view to remove the morbid state of irritability of the orifices of these glands. M. Reymond does better to recall attention to such reflex sources of irritation as preputial adhesions,

phimosis, and urethral lesions. In some cases the passage of a bougie in male children, or the swabbing of the inner surface of the bladder and urethra of the female with some astringent and antiseptic lotion, has effectually cured the annoying symptoms.

THE MEDICAL OFFICER OF HEALTH FOR RUTHIN.

THE Ruthin Urban Sanitary Authority have acted towards their medical officer of health in a manner which deserves to be widely known. Dr. Lloyd-Roberts, who has been medical officer of health for the district since 1876, and has served it faithfully and well, resigned his office recently, so as to enable the authority to obtain from the Local Government Board a contribution towards his salary; his resignation and re-election were therefore matters of mere formality, and the one ought to have followed the other as a matter of course. A local practitioner, however, applied for the office and was elected, notwithstanding the efforts of the Mayor, whose conduct throughout the proceedings deserves commendation. An act of injustice of this kind cannot pass unnoticed; it is discreditable to the authority, and will be mischievous in increasing the already strong feeling of distrust which the profession feel towards the public health service. We consider the vacancy was merely technical, and Dr. Roberts as entitled to re-election without the slightest opposition. When we learn that "the Council had not been particularly pleased by the way in which Dr. Roberts had presented his reports," we are left under the impression that he had not hesitated to tell the truth. Ruthin, we judge from the speeches reported in the local journals, hungers for notoriety; the Town Council have certainly done their best to attain it. Whether it is of the kind they wish for it is for them to decide.

COMPULSORY ISOLATION IN GREENOCK.

AN important discussion took place at the last meeting of the Greenock Police Board when the minutes of the Public Health Committee were considered. Scarlet fever being somewhat widely prevalent in the town, it was asserted that the extension of the disease was in part due to the fact that, owing to the fear of compulsory removal to hospital, parents did their utmost to disguise the existence of infectious disease in their homes, instead of notifying it; and that, in consequence, children from infected houses continued their attendance at school and otherwise contributed to the spread of infection. From some of the statements made, it seems that, on the part of some parents, this attitude has been adopted; but, on the other hand, the powers of the authority are hardly in excess of those which they should possess. It was also explained by Baillie Anderson that, although compulsion in the matter of removal to hospital could only be exercised in cases where there was insufficient lodging and accommodation, and even then only on the warrant of a sheriff or two magistrates, he could not remember a single instance during the past three or four years in which they had had to apply for a warrant to enforce removal; whereas parents and the public made considerable demands on them to provide means of hospital accommodation for their sick children. There can be no question that the compulsory powers such as the Greenock authorities possess require very careful handling; but the statement of Baillie Anderson must be taken as disposing absolutely of the charge of cruelty which was advanced against the authority. On the other hand, it must be remembered that the isolation in question is only carried on in the interests of the public themselves, and that those who keep secret cases of scarlatina, and so distribute the infection amongst other children, are themselves guilty of a greater cruelty against

those children and their parents than is at all likely to be brought about even, by a somewhat excessive use of powers such as are in force at Greenock. Whilst it is important that nothing should be done to estrange the sympathy of the public in the great work of disease prevention which is in progress in our country, the responsibility of individuals towards their fellows in this matter needs to be firmly held in view.

ELECTRIC PROSTRATION.

SEVERAL cases of this new malady are reported from Creusot, France. It affects workers under electric light. The light exceeds 100,000 candle power, and it appears that it is this excess of light, and not the heat, which produces the nervous symptoms. A painful sensation in the throat, face, and temples is first noticed, then the skin becomes coppery red, and irritation is felt about the eyes; much lacrymation ensues, and these symptoms then disappear, whilst the skin peels off in five days. The effects are comparable to those produced by walking over fresh snow in the sunlight, and may be regarded as a sort of "sun-burning."

SMALL-POX SCARE IN TORONTO.

OWING to a prevalence of small-pox in Toronto, a question has arisen whether sufficient precautions have been adopted to prevent importation of the infection from Buffalo. The weight of evidence goes to show that, in so far as vaccination is concerned, the authorities in Buffalo are acting in a manner that is satisfactory, and that in this respect they have not much to learn from Toronto.

GASTROSTOMY.

THE patient which Dr. James Murphy, of Sunderland, exhibited at the Glasgow meeting of the British Medical Association last August, who had the operation of gastrostomy performed on him on Sept. 9th, 1887, died on Oct. 15th, 1888, thus having lived for 402 days. Nothing has ever passed the seat of obstruction since two days before the operation. The immediate cause of death was a violent hæmorrhage from the descending aorta, which had been ulcerated into by a small opening from a mass of carcinoma about the size of a walnut, which had completely obliterated the œsophagus.

THE HARVEIAN DINNER.

THE revival of the Harveian dinner must be reckoned a distinct success. Rather more than eighty Fellows dined together in the reading-room, both town and country being well represented. After an entertaining anecdote connected with the "loving cup," the President gave the usual loyal toast in eloquent terms. Dr. Wilks proposed the "Health of the Harveian Orator, Dr. Latham," and, after a brief speech from the Senior Censor, Sir Alfred Garrod, the Fellows adjourned to the Library.

THE PECULIAR PEOPLE.

THE Peculiar People continue to act peculiarly and with much impunity, save in the loss of their children. The last instance is one, investigated by the coroner, of a child aged eleven months dying with convulsions. It had been ill from its birth. The poor woman who stood in the relation of mother to this unfortunate child told the coroner she had had twelve children, and eight of them had died before the age of three. They left everything "to the Lord." One of "the People" said that if they were in a ship with a hole in it they would "do the same." The jury thought it no use censuring the mother, and we fear they were right.

TESTIMONIAL TO MR. BARWELL, F.R.C.S.

AN interesting ceremony took place at Charing-cross Hospital on Tuesday of last week, in the presence of a large number of former and present students, who attended to show their esteem and respect for Mr. Barwell, F.R.C.S., who for over thirty years has been connected with the hospital. Lord Kinnaid, in the name of a large number of friends, colleagues, and former pupils, presented a handsome book-case to Mr. Barwell, who briefly and touchingly acknowledged the same.

DR. GAMALEIA AND CHOLERA.

It is announced that the Paris Academy of Medicine has accepted the offer made by Dr. Gamaleia, of Odessa, to submit himself to experimentation in order to test the efficacy of his method of inoculation for cholera. We trust that his confidence in his remedy will be fully justified by the result.

THE Commission of Inquiry into the Sanitary Condition of Rotherhithe, conducted under instructions from the Home Secretary by Mr. Cubitt Nicholls and Mr. Shirley F. Murphy, held its first sitting this week. Mr. Reader Harris, as the representative of the Mansion House Council on the Dwellings of the Poor, was heard on the question of the necessity of such an inquiry, after which it was decided that before another sitting the Commissioners would examine the condition of the houses for themselves.

MESSRS. LONGMANS announce the publication this month of a new novel, by Dr. B. W. Richardson. The work, which is of a classical and historical character, is based on those events of the second century in which the Jews, long oppressed by the Roman yoke, tried to regain their liberty and their country under the leadership of a fighting Messiah called by them Bar-Cochbas, "The Son of a Star," from which the novel takes its name.

THE next Bowman Lecture will be delivered before the Ophthalmological Society at 11, Chandos-street, Cavendish-square, on Friday, Nov. 9th, at 9 P.M., by Henry R. Swanzy, M.B., F.R.C.S.I., of Dublin. His subject will be "The Value of Eye Symptoms in the Localisation of Cerebral Disease."

MR. JOHN MARSHALL, F.R.S., and MR. JONATHAN HUTCHINSON, F.R.S., have become Vice-Presidents of the Bethnal-green Free Library.

DR. ARTHUR W. EDIS has been elected an Honorary Fellow of the American Gynaecological Society.

GRIMSBY AND DISTRICT HOSPITALS.—The Earl of Yarborough, the president, occupied the chair at the annual meeting of the subscribers, held at the Town Hall on Monday. The annual report records the continued efficiency of the institution. The system (organised during the year) of "home nurses" had so far worked satisfactorily. The new wing to the institution, the gift of the Mayor (Mr. Alderman Henry J. Veal), is fast approaching completion. The year began with a deficit of £931. The Jubilee year afforded the committee an opportunity for making a special effort, by which they realised £1672. With this sum and a legacy they have received the debt had been discharged, and £759 added to the Endowment Fund.

VACCINATION GRANT.—Dr. Hutchison has, for the seventh time, received a first class award from the Local Government Board, for successful vaccination in the No. 1 district of the Chipping Norton Union, Oxfordshire.

Pharmacology and Therapeutics.

CASCARADYNE TABLETS (SANDELL'S).

These tablets are coated with chocolate, like tamar indien, but the taste of the concealed "cascaradyne" is by no means disagreeable. We have prescribed them in cases of chronic constipation due to anaemia or to habit of body, and have found them to effect their purpose satisfactorily. They contain cascara, senna, tamarinds, and prunes.

SACKER'S CASCARÆ SAGRADÆ APERIENT FRUIT LOZENGES.

These are prepared from the bark of the Rhamnus purshiana. Their taste is rather pungent, but spicy and aromatic. Several patients say that they like them, especially after dinner, as the sucking of them appears to improve digestion; if true, this can be easily explained on the circumstance that they act as powerful stimulants, at least to the salivary secretion.

SACKER'S COMPRESSED PELLETS.

We have prescribed the compressed pellets of terpin hydrate, cocaine, and compound cocaine; the last mentioned contain chloride of ammonium, chlorate of potash, and borax. The disagreeable taste of chloride of ammonium is well known; but these pellets are as little disagreeable as possible. These preparations are excellently made.

SCHIEFFELIN'S SOLUBLE COATED PILLS.

Pills of valerianate of quinine, iron, and zinc; of terpin hydrate; of Warburg's tincture, one pill representing one drachm of the tincture; of strophanthus tincture, one-twentieth of a grain; of aloin, strychnine, and belladonna, have been submitted to us. They are convenient and undoubtedly genuine preparations. The first-named pill has proved of service in many varieties of neurasthenia, hysteria, and epilepsy. Terpin hydrate is prescribed in chronic catarrhal conditions of the respiratory and other mucous membranes. The strophanthus pill is an excellent one, and the pill for chronic constipation has been proved by long experience to be a valuable combination. The convenience of the pills of Warburg's tincture is obviously great for travellers proceeding to tropical climates.

FLUID EXTRACT OF MANACA.

Manaca, or mercurio-vegetal, is the Brazilian name for *Franciscoa uniflora* of the natural order Scrophulariaceæ. The fluid extract is said to be antisyphilitic, purgative, diuretic, emmenagogic, catalytic, and antirheumatic, especially indicated in syphilis, scrofula, meningitis, and rheumatism in any form.

PICHÉ.

The therapeutical parts of *Fabiana imbricata* are best extracted in a fluid medium, and this fluid extract has been prescribed with success in the treatment of renal colic, prostatitis, cystitis, and catarrhal inflammations.

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FROM the calendar of this institution, which has just been published by the Council, it appears there are 1122 Fellows of the College (of whom 703 obtained the Fellowship by examination, 10 were elected as Members of twenty years' standing, and 2 are *ad eundem* Fellows), 17,027 Members, 890 Licentiates in Midwifery, and 646 Licentiates in Dental Surgery. The holders of the diploma in Public Health (granted in conjunction with the Royal College of Physicians) number 6.

During the past collegiate years 735 candidates presented themselves in Elementary Anatomy and Physiology, 547 of whom passed in both subjects, 98 in Elementary Anatomy,

and 44 in Elementary Physiology; 48 candidates were referred in both subjects; 26 candidates presented themselves in Elementary Anatomy, 25 of whom passed; 113 candidates presented themselves in Elementary Physiology, of whom 80 passed and 33 failed. The examiners are appointed in conjunction with the Royal College of Physicians. The fees received from candidates for this examination amounted to £4166 2s. 9d., the examiners receiving in fees £591 5s. Of 871 candidates who presented themselves in Chemistry, 568 passed and 303 were referred. Of 769 candidates who presented themselves in Materia Medica, 509 passed and 260 failed. The examiners in Chemistry and Materia Medica are elected by the Royal College of Physicians.

The examiners in Anatomy and Physiology for the Second Examination are appointed in conjunction with the Royal College of Physicians; they have conducted the Primary Examination under the old regulations, as well as the Second Examination of the Examining Board; 889 candidates presented themselves for examination in Anatomy, and 546 passed and 343 were referred; 881 candidates presented themselves in Physiology, of whom 519 passed and 362 were referred. The fees received for these examinations for candidates amounted to £4423 18s., the examiners receiving in fees £1700 15s.

The Board of Examiners in Anatomy and Physiology for the diploma of Fellow, elected by the Council from the Fellows of the College, held during the past year two examinations; 137 candidates presented themselves, of whom 62 passed and 75 were rejected. The fees received amounted to £903, and the fees to the Board to £616 10s.

The Court of Examiners, elected by the Council from the Fellows of the College, conduct the Third or Final Examination in Surgery of the Examining Board, as well as the Pass or Final Examination under the old regulations, and the Pass or Final Examination for the Fellowship. During the year the Court has held two examinations for the Fellowship, and four for the Membership; at the former there were 88 candidates, 44 of whom passed and 44 were referred. For the Membership 862 presented themselves, of whom 473 passed and 389 were referred. The fees paid by candidates amounted to £11,055 9s. 6d., and the fees paid to the Court of Examiners and the Examiners in Midwifery amounted to £5350 6s. 8d. The Examiners in Medicine under the Scheme for an Examining Board in England are elected by the Royal College of Physicians. Of 291 candidates who presented themselves for this examination during the year, 228 passed and 63 were referred. The Examiners in Midwifery under the Scheme are elected in conjunction with the Royal College of Physicians, and have examined 331 candidates, of whom 239 passed and 92 were referred.

The Board of Examiners in Dental Surgery has held three meetings for the examination of 43 candidates, 31 of whom received the diploma. The fees paid by them amounted to £325 10s., the Board receiving £135 9s.

With regard to the finances of the College, it appears that the income amounted to £40,654 19s. 7d., derived principally, as already shown, from the fees paid by candidates for the diplomas of the College—viz., £20,933 1s. 9d.; Erasmus Wilson Bequest, £11,899 12s. 1d.; sale of stock, £4637 19s. 4d.; rents from chambers adjoining the College, £1815 15s. 5d.; dividends on stock, £654 2s. 8d.; sale of calendar, trust funds &c., £714 8s. 4d.

The expenditure for the year amounted to £40,017 11s. 3d., the largest item being £8398 9s., fees paid to examiners, the next largest amount being for extension of College premises, £8152 7s. 11d.; salaries, wages, and pensions for officers and servants in the three departments, library, museum, and office, amount to £4699 14s. 6d.; taxes, rates, diplomastamps, and insurance absorb the sum of £1451 6s. 8d.; half expenses for Examination Hall, £2919 13s.; purchase of stock, £7518 15s.; Savoy estate, £1800 14s. 7d.; fees to Council, £318 3s. Under miscellaneous items, alterations and repairs, fuel and light, printing, stationery, trust funds, lectures, &c., about £5000 appears to have been expended.

PORT SANITARY AUTHORITY, CHESTER.—At a meeting of this authority, held last week at the Flint Town Hall, which was attended by representatives of the sanitary authorities respectively of Chester, Rhyl, Flint, Holywell, and Hawarden, it was resolved to take over the Mostyn Infectious Diseases Hospital, and to offer the Holywell guardians £100 for the building and its fittings.

DUBLIN MEDICAL SCHOOLS AMALGAMATION SCHEME.

A SPECIAL meeting of the Fellows was held on Tuesday, the 23rd inst., for the purpose of considering the scheme of amalgamation of the school of the College with the Carmichael and Ledwich Schools of Medicine; also the opinion of the law adviser and actuaries, and the observations of the professors of the College and of the proprietors of the respective schools thereon, and to consider any proposed bye-law having reference to the proposed scheme. The meeting was largely attended, about ninety Fellows being present.

After some preliminary observations, the President, Mr. Henry Fitzgibbon, called on the Secretary of Council to read the opinion of Mr. S. Walker, Q.C., on the proposed amalgamation. This was to the effect that, although the scheme did interfere with the tenure and emoluments of the existing professors, it did not alter the case that their position was bettered; he did not think they could put forward a claim for compensation, but the professors, if they chose, had a right to say they were professors until the first Tuesday in next May, and though the Council might then declare their offices vacant, their position could not in the meantime be altered without their consent. This was a right which any existing professor could enforce by injunction in the Court of Chancery. The President next called upon Mr. Thomson to lay before the meeting the scheme which had been formed by the Council and the bye-laws which had been adopted.

Mr. Thomson spoke of the importance of the subject before the meeting. It involved very radical changes in regard to certain institutions, which he believed would have a most important effect on the school of that College and a beneficial one on medical education, and moved the following resolution: "That the scheme now submitted by the Council to this special meeting of the Fellows, providing for the amalgamation of the Carmichael College and the Ledwich School of Medicine with the Royal College of Surgeons in Ireland, be and is hereby approved of, subject to such alterations as may be required to bring it into accord with the Charter and bye-laws of the College, and subject also to such being shown by the Carmichael College and the Ledwich School of Medicine as will be satisfactory to the legal advisers of the College."

Dr. Kidd seconded the resolution.

Professor Macnamara stated that the professors were not influenced in reference to their emoluments, but he objected on behalf of his professorial position, as the terms put before them and advised by Mr. Walker had not been carried out, and he therefore called on the Fellows to reject the scheme.

Dr. Robert McDonnell remarked that he was always of opinion that the school of the College was a sort of a log on the neck of the College, and he had aimed at setting it free from any connexion with the College beyond any other school. While alive to the many objections made, the scheme they had framed was the best they could lay before them.

Mr. Myles then moved, as an amendment, that before proceeding to consider the scheme a guarantee be asked from the proprietors of the Ledwich and Carmichael Schools that they were prepared to accept the scheme in the event of any or of all of their nominated candidates being defeated in the elections for the new chairs.

Mr. Hamilton seconded the amendment. He believed that the scheme should be referred back until the contracting parties had shown their willingness to join the scheme and their power to make the contract.

Mr. Corley said that Sir William Stokes had stated that Professor Stokes had been got rid of, but this was not the proper phrase; he had resigned voluntarily. The trustee of the Carmichael Schools, Mr. M'Donnell, had given permission to transfer the building and the prize fund to the school.

Mr. Lentaigne supported the amendment. He said the Ledwich proprietors had only consented to the scheme which involved the illegal principle of cooption. There was no documentary evidence that they had signed any other letter than that which was printed in the circular, and which ex-

pressly stated this. With regard to the question of the legality of the amalgamation, he asserted that it was altogether illegal. Mr. John Murray's opinion to that effect had been sent round to the Fellows, and, in addition, he now produced an opinion from Mr. William Kenney, Q.C., which emphatically corroborated the statement that the proposed scheme was illegal, and could not be carried out.

A division having been called for, the result was: for the amendment, 34; against, 55; it was therefore lost by a majority of 21.

Mr. Myles moved another amendment: that, having regard to the fact that the control of the Council over their own school had been a failure, the meeting refused to hand over the new school to a system of control which was wholly inefficient.

Mr. Lentaigne supported this, and Sir George Porter pointed out that it was only right that the Council should have control of the school, and objected to the amendment.

The President said that this amendment would reflect on the Council, and, accordingly, it was withdrawn by Mr. Myles.

Mr. Thomson hoped his resolution would satisfy the wishes of those present. To carry on a system of amendments at that time was not wise; the principle of amalgamation having been carried, all interests would be carefully protected.

A division being taken, the resolution was declared to be carried by a considerable majority.

The following bye-laws, adopted by the Council on the previous day, were passed unanimously:—"1. In view of a consolidation of the School of the College with the Carmichael and Ledwich Schools, the Council shall elect the following professors, who, with the existing professors of the College, shall form the professorial staff of the combined schools—viz., one additional Professor of Surgical Anatomy, two additional Professors of Surgery, one additional Professor of Medicine, one of Chemistry, two of Midwifery, one of Materia Medica, one of Medical Jurisprudence, one of Botany and Zoology, two of Ophthalmology, one of Pathology, and one of Pharmacy; and such professors and teachers may be appointed on any such day or days and after such notice as the Council shall determine. 2. As it is intended that eventually there shall be but one professor in each of the following chairs—Medicine, Botany, Chemistry, Materia Medica, Midwifery, Medical Jurisprudence and Ophthalmology—until that occur, vacancies arising in any of these chairs shall not be filled, and one-quarter of the total fees received shall be reserved for each vacancy which shall arise, to be applied by the Council as directed by the scheme for combination. 3. Any vacancies arising in the chair of Surgery shall not be filled so long as the professors thereof shall exceed two, and until there be but two, no deductions shall be made from the receipts on account of the general fund, but after that period one-quarter shall be deducted to be applied by the Council as directed by the scheme."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

*Diphtheria at Midsomer Norton.*¹—Dr. Blaxall has reported on one of those obscure occurrences of diphtheria which are becoming more and more common, and in which the infection can be traced back a certain number of stages after which all clue is lost, and in which nothing definite can be ascertained as to the etiology of the disease. On a population of 4420 persons living under fairly ordinary, but by no means satisfactory, sanitary circumstances, twenty-seven families suffered from diphtheria during the spring and early summer; the total attacks being forty and the deaths six. The Chapel school was first associated with the definite disease, but before this was recognised it appears that there was sore throat of a suspicious character; and,

indeed, a careful inquiry into the surrounding districts showed that diphtheria, first appearing as an epidemic at Timsbury in the Clutton rural district, spread to different places, amongst which Dunkerton in the Bath rural district may especially be named, until it arrived at Midsomer Norton, where its main spread was associated with attendance at a given school. There seems some indication that a series of throat affections which were locally regarded as being "mumps" &c. formed the connecting links between the several attacks and outbreaks of the well-marked disease, and Dr. Blaxall suggests whether these may not have taken their place in a progressive development from so-called sore throat into true diphtheria. Mere suggestion is too often the only result of carefully conducted inquiries into diphtheria, but it is certain that, apart from exhaustive investigations such as very properly continue to be made, we have little hope of arriving at any such conclusion with regard to the character and source of the diphtheria poison as will suffice for the adoption of measures which may be expected to eradicate an increasingly fatal form of infectious disease from our midst.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5582 births and 3780 deaths were registered during the week ending Oct. 20th. The annual rate of mortality, which had been 18.2 and 21.0 per 1000 in the preceding two weeks, was again last week 21.0. During the first three weeks of the current quarter the death-rate in these towns averaged 20.0 per 1000, and was 0.1 above the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 16.0 in Leicester, 16.1 in Brighton, 16.4 in Bradford, and 16.5 in Hull. The rates in the other towns ranged upwards to 26.7 in Bolton, 28.2 in Plymouth, 29.3 in Sunderland, and 29.8 in Blackburn. The deaths referred to the principal zymotic diseases, which had been 505 and 461 in the preceding two weeks, were last week 465; they included 129 from diarrhoea, 122 from measles, 63 from scarlet fever, 58 from "fever" (principally enteric), 53 from diphtheria, 40 from whooping-cough, and not one from small-pox. No death from any of these zymotic diseases was registered during the week in Halifax; while they caused the highest death-rates in Salford, Blackburn, and Bolton. Diarrhoea showed the greatest mortality in Portsmouth, Preston, and Bolton; measles in Blackburn, Wolverhampton, and Leeds; scarlet fever in Sunderland, Derby, and Blackburn; "fever" in Preston, Salford, Bolton, and Birkenhead; and whooping-cough in Cardiff. The 53 deaths from diphtheria in the twenty-eight towns showed a further increase upon recent weekly numbers, and included 36 in London and 6 in Manchester. Small-pox did not cause a single death in any of the twenty-eight great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained no patient during the week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 1003 at the end of the week, and showed a further increase upon numbers which had risen in the preceding eight weeks from 774 to 983; 101 cases were admitted during the week, against 92 and 119 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding seven weeks from 130 to 311, further rose last week to 364, and exceeded the corrected average by 18. The causes of 74, or 2.0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bradford, Sunderland, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Wolverhampton, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17.0 and 20.4 per 1000 in the preceding two weeks, was again 20.4 in the week ending Oct. 20th; this rate was, however, 0.6 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 12.6 and 15.8 in Leith and Edinburgh, to 21.3 in Glasgow and 43.8 in Paisley. The 517 deaths in the eight towns showed a

¹ Fyfe and Spottiswoode, East Harding-street, E.C.; Adam and Charles Black, Edinburgh; and Hodges, Piggis, and Co., Dublin.

urther increase of one upon the numbers in recent weeks, and included 27 which were referred to diarrhoea, 24 to measles, 10 to scarlet fever, 8 to diphtheria, 7 to "fever" (principally enteric), 6 to whooping-cough, and not one to small-pox; in all, 82 deaths resulted from these principal zymotic diseases, against 45 and 60 in the preceding two weeks. These 82 deaths were equal to an annual rate of 3.2 per 1000, which exceeded by 0.6 the mean rate from the same diseases in the twenty-eight English towns; the rate in the eight towns ranged from 0.0 in Leith to 3.4 in Greenock and 2.9 in Paisley. The deaths attributed to diarrhoea, which had been 18 in each of the preceding two weeks, rose last week to 27, of which 10 occurred in Glasgow, 7 in Dundee, 3 in Aberdeen, and 3 in Paisley. The 24 fatal cases of measles showed a further increase of 10 upon the numbers in recent weeks, and included 22 in Paisley, against numbers ranging from 3 to 12 in the preceding five weeks. The deaths from scarlet fever also showed an increase upon recent weekly numbers; 6 occurred in Glasgow and 2 in Greenock. The 8 deaths from diphtheria corresponded with the number in the previous week, and included 3 in Glasgow and 3 in Edinburgh. Of the 7 deaths referred to "fever" 5 occurred in Glasgow, and of the 6 fatal cases of whooping-cough 4 were returned in Glasgow and 2 in Aberdeen. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 76 and 100 in the previous two weeks, further rose last week to 106, but were 2 below the number in the corresponding week of last year. The causes of 59, or 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 23.3 and 23.6 per 1000 in the preceding three weeks, further rose to 24.2 in the week ending Oct. 20th. During the first three weeks of the current quarter the death-rate in the city averaged 23.7 per 1000, the mean rate during the same period being 18.4 in London and 16.6 in Edinburgh. The 64 deaths in Dublin last week showed a further increase of 4 upon the numbers in the previous two weeks; they included 7 which were referred to "fever" (typhus, enteric, or ill-defined), 7 to diarrhoea, 6 to whooping-cough, 1 to measles, 1 to scarlet fever, 1 to diphtheria, and not one to small-pox. Thus 23 deaths resulted from these principal zymotic diseases, against 37 and 25 in the preceding two weeks; these were equal to an annual rate of 3.4 per 1000, the rate from the same diseases being 2.7 in London and 1.0 in Edinburgh. The deaths referred to "fever," which had been 7 and 3 in the previous two weeks, rose again last week to 7; the fatal cases of diarrhoea, on the other hand, further declined from 19 and 13 in the preceding two weeks to 7. The deaths from whooping-cough were within one of the number in each of the previous two weeks. Four inquest cases and 3 deaths from violence were registered; and 42, or more than a quarter, of the deaths occurred in public institutions. The causes of 18, or 11 per cent., of the deaths in the city were not certified.

ZYMOTIC DISEASE AND INFANTILE MORTALITY IN FRENCH TOWNS.

The official report upon the sanitary condition of the largest French towns in July has just been issued. It appears that in the fifty-one French towns, which at the time of the last census in 1886 had a population exceeding 80,000, and having an aggregate population of rather more than six and a quarter millions, 258 deaths from typhoid fever were reported during the month, against 238 in May and 203 in June; the annual death-rate from this disease in these towns in July was 0.49 per 1000, which was almost three times the rate from the same disease in the much larger and more densely populated twenty-eight English towns. The deaths from small-pox in these French towns, which had declined in the first six months of the year from 261 to 149, were 153 in July, of which 14 occurred in Paris, 14 in Havre, 23 in Montpellier, 20 in Beziers, 15 in Certe, and 22 in Perpignan; the 153 in July were equal to an annual rate of 0.29 per 1000, which was more than seven times the rate from this disease in the largest English towns. Diphtheria was more fatal in the French towns during July than either typhoid fever or small-pox, and caused 278 deaths, showing a slight decline from the number in the previous month; these deaths were equal to an annual rate of 0.53 per 1000,

which was more than three times the rate from this disease that prevailed in the English towns. The deaths from diphtheria in the French towns included 110 in Paris, 28 in Marseilles, 25 in Bordeaux, 15 in Grenoble, and 13 in Nice. The deaths attributed to diarrhoea in these fifty-one French towns were 1287, and were equal to an annual rate of 2.46 per 1000, against 0.68 in the English towns; thus diarrhoea mortality was more than three and a half times as great in the French as in the English towns. As summer diarrhoea is mainly an infantile disease, it may be interesting to note the rate of mortality from all causes in the French towns, among infants under one year of age, which was during July equal to 169 per 1000 of the births registered during the month; infant mortality in the English towns, measured in the same manner, did not exceed 130 per 1000. The real excess of infant mortality in the French towns is considerably greater than appears from the figures given above, for all infants dying in France previously to registration are recorded as stillborn, and are not counted as deaths. It is probable that in England a certain small proportion of the children who die in the first day of life are, in spite of the legal enactments to the contrary, buried as still-born, and so escape registration; but the deficiency of registration thus caused must be far more than outbalanced, so far as comparison with France is concerned, by the state of the law in that country, which practically permits *all* deaths of infants occurring before registration to be recorded as still-born, and not to be entered in the death register.

Correspondence.

"Audi alteram partem."

THE TEACHING OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—Allow me to make a few remarks in reference to the correspondence which has been elicited by your admirable article on the use of anaesthetics (THE LANCET, Sept. 15th). Unlike some of your correspondents, I am in the happy position of holding views which agree in every particular with those which were so ably advanced in the article in question, and I feel sure that most, if not all, of those who instruct in the administration of anaesthetics will rejoice with me at the appearance of so many substantial arguments against the use of chloroform for general purposes.

Let me ask those who quote statistics of deaths under anaesthetics to consider the value of conclusions based upon such numerical statements. There is, I venture to think, abundant proof that, under the present inadequate system of recording observations, all such statistics are not only worthless but misleading. Let us picture a recently qualified student who, in his reading, meets with the soothing and familiar statement that "Professor X. has employed chloroform so many thousand times without a single death." In the first place, the reader of this barren record does not, in all probability, take into account the professor's skill, and the experience which he (Professor X.) obtained prior to the commencement of his so-many-thousand cases. In the second place, no mention is made of the number of times the professor had to perform artificial respiration and to adopt other restorative measures to rescue his patients from the clutches of impending death. The professor may, from constant practice, have become remarkably nimble in the treatment of emergencies; but of this we are not informed. In the third place, the unsuspecting reader may not be aware of the facilities which exist for imputing fatalities to causes other than the anaesthetics employed. In the fourth place, no information is given respecting the methods practised by the professor in the administration of the chloroform. Lastly, it should be borne in mind that there is always the possibility of Professor X. having judiciously selected his cases. For these and other reasons which will suggest themselves to anyone who reflects for a few moments, I am inclined to the belief that statistics of death—whether from ether or chloroform—become worthless as they are at present compiled. I will next attempt to show the pernicious effects which are produced by such statistics, more especially when they refer to chloroform. It is, I think, clear that they chiefly appeal to and influence the inexper-

rienced practitioner, who, having administered anæsthetics at his hospital to a very limited extent, goes into practice with the fullest confidence in the safety of a drug which, as he probably informs his friends who have not read the article from which he has obtained his information, has been administered by Professor X. "so-many-thousand times without a single death."

I trust I may not be proceeding beyond the limits of the present discussion if I mention a point which seems to me to deserve particular notice in connexion with deaths under chloroform. I allude to the frequency with which healthy individuals have succumbed to the administration of this anæsthetic. What is the explanation of this fact? Some writers have advanced the view that robust and healthy persons are more susceptible to the influence of chloroform than those whose constitutions have been more or less undermined by disease. But surely this view is opposed to what we know of the action of most poisonous drugs; and, so far as my own experience in the matter goes, I should certainly say that, *ceteris paribus*, the weaker the individual the more readily does he yield to the anæsthetic influence of chloroform. I am inclined to believe that there are two main reasons why those in the enjoyment of fair or good health are especially liable to become the victims of chloroform poisoning. 1. The absence of serious organic disease is likely to engender a certain degree of carelessness in the administrator—carelessness which, if the patient were the subject of any constitutional affection such as phthisis or morbus cordis, would probably be replaced by watchfulness and caution. The high pressure at which we have to work at the present day is frequently responsible for the want of caution to which I have alluded. Patients in good general health do not, as a rule, suffer from any condition demanding prolonged anæsthesia; so that when a minor operation on a healthy individual is about to be performed, there is a tendency to look upon the whole matter as a trivial one. It frequently happens that either a light and transient anæsthesia is induced, or that the patient is overdosed with the anæsthetic. Although I believe that the dangers incidental to a light narcosis have been over-estimated, I freely admit that it is difficult to explain many of the deaths which have occurred by any other hypothesis. With ether, a light form of anæsthesia is, of course, far less likely to be productive of dangerous symptoms than with chloroform. 2. The other reason why persons in good health are more likely to be placed in serious danger than others is that struggling and excitement are far more common in such persons than in the weakly, anæmic, and debilitated. The muscular navy, more especially if he has been addicted to alcohol, will, as a rule, struggle violently during the process of chloroformisation. The administrator, who is anxious not to cause greater delay than is necessary, proceeds to push the anæsthetic, and during the deep respirations which accompany or immediately follow the struggling a considerable quantity of chloroform is inhaled in a few seconds, and dangerous symptoms ensue. Had the patient been, for example, an anæmic child, the subject of old-standing hip disease and incipient phthisis, greater care would have been taken, the period of excitement would, as is usual in such cases, have been feebly marked, and so the risk of an overdose would have been very greatly reduced.

I would next draw the attention of your correspondents who hold that chloroform is the most suitable anæsthetic for general purposes to the following considerations. Let us imagine that we have before us what may be termed an average patient; let us suppose that he is about to undergo an operation of average length and importance; and, lastly, let us arrange that he shall be anæsthetised by a practitioner possessing but a rudimentary knowledge of the use of anæsthetics. Now what I would most strongly insist upon is this: that it would be comparatively easy to kill such a patient by the injudicious administration of chloroform, but a matter of considerable difficulty to do so by the injudicious administration of ether. This is surely a most important point. In recommending an anæsthetic for general use we must consider the inexperienced rather than the experienced. I do not propose to take part in any discussion on the relative merits of ether and chloroform; all I do is to submit the foregoing hypothetical, but nevertheless common, case to the consideration of your correspondents, and to state that, with the knowledge we at present possess, I should consider it highly prejudicial to the interests of the public to recommend chloroform as an anæsthetic for general purposes.

In conclusion, I would express the gratification which I

feel when I recognise that the practice of employing one anæsthetic for all cases is gradually becoming obsolete. I can only compare the practitioner who uses ether, chloroform, or any particular anæsthetic, exclusively, to the physician who is in the habit of prescribing an opiate for the relief of cough, whatever the latter may depend upon. I would submit that there may be as much tact and forethought necessary in deciding upon the most appropriate anæsthetic as in solving other problems in therapeutics; and it is for this reason, amongst others, that systematic teaching in the selection and administration of anæsthetics should form a part of the recognised curriculum in every medical school.

I am, Sirs, your obedient servant,

FREDERIC HEWITT,

Instructor in, and Lecturer on, Anæsthetics
at the London Hospital, &c.

George-street, Hanover-square, Oct. 23rd, 1888.

To the Editors of THE LANCET.

SIRS,—My main object in writing the letter which you were kind enough to insert in your issue of the 13th inst. was to insist upon the importance of the science of anæsthetics as a distinct branch of medical education. In this respect I am pleased to find that my opinions are completely in accord with those of Mr. Foy. Such being the case, the questions as to whether or not I have misunderstood the general sense of Mr. Foy's letter of the 22nd ult., or whether I have overstated the facts with regard to the use of ether in America, must be left to your readers, who have no doubt already drawn their own conclusions. I should, however, like to make one slight correction in my letter of the 13th. By a printer's error I am represented as saying that I did not admit "either the advisability or practice of such a proceeding"—i.e., legislative interference with the administration of anæsthetics. What I really wrote was somewhat stronger—viz., "I do not admit either the advisability or justice of such a proceeding"; and I again find myself in agreement with Mr. Foy, in deprecating, and deprecating most strongly, what he very justly terms "hysterical legislation" in the matter. My own position, and I believe that of many other anæsthetists, with regard to the use of chloroform, is as follows:—1. I fully admit that chloroform is a most valuable anæsthetic, and in certain cases the only one admissible. Here, again, I am at one with Mr. Foy; but I maintain that the number of such cases is much over-estimated, and, *per contra*, that the use of ether is in the majority of instances distinctly called for. 2. The comparative ease with which a patient can be deeply anæsthetised by the use of chloroform, so far from telling in its favour, I look upon as a distinct disadvantage, inasmuch as it tends to careless administration, and to emphasise the convenience of the surgeon at the expense of the safety of the patient. 3. When it is desirable to do so, the unpleasant taste of ether, and many of the objectionable after-effects, can be obviated by the use of nitrous oxide as an introduction to the free administration of ether. But both this "combined method" and the administration of ether by itself require special forms of apparatus, and more or less skill in their use. As far as ether itself is concerned, perfectly satisfactory inhalers, at once portable, simple, and inexpensive, are available; the necessary skill and experience should be obtainable in our schools. Unfortunately, this is not always the case, and I am firmly persuaded that until systematic instruction in anæsthetics becomes more general, so long will the indiscriminate use of chloroform prevail, and the death-rate from anæsthetics remain abnormally high. On the other hand, with the recognition of "instruction in anæsthetics" as an integral portion of the medical curriculum, we shall find the use of ether becoming more universal, and the death-rate correspondingly diminishing.

I am, Sirs, yours truly,

Pemberton-road, N., Oct. 1888.

J. FREDK. W. SILK.

QUIETENING MEDICINES.

To the Editors of THE LANCET.

SIRS,—It is a pity that Dr. Savage, in laying the ghost which has been stirred up anent restraint, should raise another. This he certainly does when he makes the very pointed remark, "No patients are ever kept quiet by means of drugs."

I know what Dr. Savage's views are on the harmfulness of those terrible "quieteners," chloral and hyoscyamine, and I thoroughly agree with him that if anything is likely to destroy a patient's chance of recovery it is the reckless use of such remedies. Since a lunatic suffering from insomnia dropped dead at my feet, after taking his evening dose of chloral, some seventeen or eighteen years ago, I have never prescribed that awful life-destroyer! I never prescribed a dose of hyoscyamine in my life, for I had the advantage of Dr. Savage's experience and opinion, as set forth in the *Journal of Mental Science*, before I thought of using it. At the same time I must look at such remedies in the light of the "governor" of a steam engine, which does not assist or retard, but regulates progress. It is the experience of all that the most harmful of drugs have their proper use; and in some hands opium itself is a very harmful drug, but we know how it is regarded as the "sheet anchor" of the physician in inflammatory disease; and so I find is *hyoscyne*, which is as constant a preparation as morphine, useful in many cases. In excitement it will allay that symptom, and in profound melancholia it will certainly excite hilarity.

But if Dr. Savage has not used "quietening medicines" at Bethlem Hospital, what has he used? The following is a comparative table of one year's cost of medicine in Bethlem and St. Luke's Hospitals respectively, compiled from the Linnay Blue Book in 1887:—

Name of asylum.	Average No. of patients resident.	Cost of medicine.	Cost per head per annum.
Bethlem	234	£270 0s. 6d.	£1 5s. 0d.
St. Luke's	193	73 8s. 6d.	0 7s. 7d.

Surely this shows economy practised in one asylum, in which, besides the usual staff, there are two visiting physicians; and almost recklessness in another, which is not blessed with officers, who ought not to be purely ornamental! I find in practice here that the more painters I employ the more paint is used. Ought it not to be so in the matter of physicians and physic?

Yours faithfully,

Stapleton Asylum, Oct. 13th, 1888. GEO. THOMPSON, M.D.

THE MONOPOLY OF HOSPITAL APPOINTMENTS.

To the Editors of THE LANCET.

SIRS,—Two correspondents have already called attention to the above eminently unsatisfactory condition of affairs. Theoretically at least, hospitals exist for two purposes—the treatment of the sick poor and the education of the medical profession. In the opinion of many, doctors connected with a hospital are supposed to possess more skill and knowledge than those who are not. No doubt the *élite* of the profession hold hospital appointments. But as it is the opportunities and surroundings which make the individual, so it is considered that the performing of hospital duties elevates and improves the medical tone of a doctor. Holding that the hospitals are for the benefit of medical men, and for the improvement of their finances, I venture to suggest that the field of work in them should be greatly extended. Some time ago I called attention to the above in connexion with the Liverpool hospitals. It will scarcely be believed that there are only ninety-four visiting doctors connected with our eighteen chief hospitals, and, further, that many of these are connected with one, two, and in some cases three, different hospitals. (Dual appointments should be done away with.) There are also twenty-four resident doctors, and twenty-two dental surgeons. The consultants number thirty-nine, but in many cases these are acting surgeons to other hospitals. In 1885 there were 11,376 in-patients and 244,831 out-patients treated. Liverpool has a population of about 600,000, and 425 medical men. By subtracting the number of hospital patients, plus the number treated by the Poor-law, from the population, we get an average of 600 persons to each medical man. It is a low average, and therefore the men have enough time to spare for other work.

I have lately, in connexion with my prize essay, "The Financial Condition of the London Hospitals," collected statistics from 180 of the London hospitals. I find from the 1886 reports that during the previous year 50,935 in-patients and 1,179,661 out-patients were treated. To do all this work there were 742 visiting and 189 resident doctors. There were 287 consultants and 188 dentists. These figures

speak for themselves. To me it has always seemed to be a mockery when a physician or surgeon walks through four or five large wards. Two would be quite sufficient for his ability to find ample scope, while the others should be given to another man. As long as this monopoly, with its rigid exclusiveness, goes on, so long will it be found that medical men will establish private hospitals for themselves, as is now done in America and Germany, and will endeavour to withdraw subscriptions now given to other hospitals to their own institution. And who can blame them? A "hospital ring" is as unpleasant a body to deal with as can be found. It degenerates into a system of trickery whereby their friends and relatives are hoisted into appointments, while it excludes the hopeful and well-educated men from attaining their due eminence. As long as the being on a hospital staff is the royal road to a good-class practice, so long should this path be open to all anxious for advancement. In my opinion every respectable and highly qualified medical man in a town or city should serve from five to eight years on a hospital staff. In this way the "higher education" would be open to all; the medical profession would, as a whole, be elevated, and the non-medical public would be greatly benefited. At the same time, all those little vexatious restrictions as regards the attainment of the higher degrees in medicine and surgery should be withdrawn. If our journals have not the power or will—for most of our medical papers are managed by hospital men—to bring about the necessary reform, then I would strongly recommend that medical men take every opportunity to educate those of their patients who subscribe to hospitals, by letters to the daily papers, and by conversation regarding the present unsatisfactory state of affairs; for the medical man who thinks he is going to make any influence on the "hospital ring," and induce them to widen this circle, is a fool, and deserves to be excluded.

N.B.—It should be noted that there are 4852 medical practitioners in the metropolis.

I am, Sirs, yours truly,

Liverpool, Oct. 15th, 1888.

ROBERT R. RENTON, M.D.

REFORM AT THE COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—May we through your columns remind Members of the Royal College of Surgeons of England that the annual meeting of the Members and Fellows of the College will be held in Lincoln's-inn-fields on Thursday next, the 1st prox., at 3 P.M. Though the College Council has gained the point of obtaining a Supplemental Charter, in order to empower it to hold land &c. of greater annual value than hitherto, still the Privy Council most markedly alluded to the fact that it was avoiding the disputed point. We may therefore hope that at no far distant date a further Charter may be obtained from the Crown granting the equitable and moderate demands of the Members. Let Members therefore assemble on Thursday in numbers as large as on former occasions, and assist us in passing resolutions emphasising the determination of the great body of the corporation to make its voice heard in the management of the affairs of its own College.—We are, Sirs, your obedient servants,

WARWICK C. STEELE, } Hon. Secs. Assoc.
WM. ASHTON ELLIS, } M.R.C.S.

Oct. 25th, 1888.

"TREATMENT OF PUERPERAL SEPTICÆMIA."

To the Editors of THE LANCET.

SIRS,—In answer to Dr. Tayler's courteous criticism of part of my paper in THE LANCET of Oct. 13th, I may say that my experience has led me to the conclusion that the value of the vaginal douche with solution of permanganate of potash in puerperal septicæmia is in many cases very far from an "utter waste of time." In fact, in all those cases where the source of infection is situated in the vagina—the source of infection is not always in the uterine cavity—I have frequently had the very best results by merely washing out the vagina with Condy's fluid reduced with warm water. The obvious objection in these cases to making a vaginal examination with the finger renders it, I think, desirable, in the first place, always to make a tentative experiment upon the vagina. My reason for not carrying out the "uterine toilet" as described in my paper before the 20th was because until

that date I did not despair of my patient's recovery under the treatment then adopted. To carry out the treatment described on the 20th it was absolutely necessary to use the uterine hook, in the first place, to bring the uterus within convenient distance; and, in the second place, to fix it. I would submit that describing the prick of the hook as "inflicting a wound" is a somewhat unusual way of putting it. Nor do I think that a wound, when the patient is already in a profoundly septicæmic condition, would in any way aggravate that condition.

I claim that in swabbing over the cavity of the uterus with a pledget of cotton wool saturated with an antiseptic caustic, such as iodised phenol, there is a great advantage to the patient over merely washing out the uterus with an antiseptic fluid by means of a syringe. In the first place, because I found the internal surface of the uterus in this case lined with a thick, exceedingly tenacious, sanguinolent mucus, which could only be removed by a tolerably energetic application of the pledget, and would, I am sure, have been left entirely untouched by a stream of solution of permanganate of potash ejected by any ordinary syringe; in the second place, iodised phenol possesses caustic properties, and by cauterising the endometrium its antiseptic influence would somewhat affect the septic uterine tissue, and the cauterised tissue would form a barrier against further infection.—I am, Sirs, yours faithfully,

Newcastle-on-Tyne, Oct. 23rd, 1888.

S. McBEAN.

THE CONTAGIOUS DISEASES ACTS.

To the Editors of THE LANCET.

SIRS,—My letter on the Contagious Diseases Acts seems to have failed in explaining clearly my views regarding them. I may think that those Acts are urgently needed, that they are perfectly justifiable, and that they would be very effective; but it seems mere waste of time to discuss them, since any proposal for their restitution is utterly impracticable, and ten members of Parliament cannot be found to advocate them openly, whatever they may say in private. The course I advocate includes education of the public as to the effects of syphilis; compulsory notification of infectious diseases; punishment of anyone who infects another with small-pox; compulsory examination and seclusion of small-pox cases; punishment of the exposure of an infected person in any way likely to inflict grievous bodily harm on another; classification of syphilis with the most malignant form of small-pox. There is no need to concentrate attention on venereal diseases, or to treat them as some peculiar and mysterious ailments which have no relations to other diseases.

I am, Sirs, yours very truly,

Oct. 22nd, 1888.

A MEDICAL MUSER.

BIRMINGHAM.

(From our own Correspondent.)

MEDICAL MISSION.

THE annual meeting of the friends and subscribers of the Birmingham Medical Mission was held on the 18th inst. The report showed that there was an adverse balance of £70 odd. During the past year, 3877 cases had been treated at the mission, and, including those treated at their homes, 18,111 consultations had been given, an indication of the activity with which the work had been carried on. A savings bank and a temperance society had also contributed to the good influences effected by the mission; and though the cause had been hampered by want of funds, it was considered to be a matter of congratulation that so much had been done with the means at command. A vote of thanks was given to the Medical Superintendent, Dr. Crabbe, for the zeal and energy with which for so many years past he had conducted the work of the mission.

QUEEN'S COLLEGE.

The twenty-second annual meeting of the governors of Queen's College was held on the 18th inst. The report showed that the College was in a prosperous condition, and that last year had witnessed the largest number of entries on the record. Of 193 students in attendance during the year, 135 had passed one or more examinations by the different examining bodies. Notable additions had been

made to the museum, which had been rearranged and increased, while various structural changes had been effected in the building. Good order and discipline had been maintained, and there was every reason to look forward hopefully and with confidence to the future.

NEW EYE INFIRMARY AT WOLVERHAMPTON.

A new building for the treatment of eye cases was opened by the Earl of Dartmouth on the 23rd inst. Erected by the liberality of Mr. Philip Horsman, the new infirmary consists of a main block for in-patients and a wing for out-patients with separate approaches. The sanitary and ventilating arrangements have been carefully superintended, and the building is heated with hot-water apparatus. Admirably planned, the execution of the work has left nothing to be desired, and it is to be hoped that the attendance of patients will justify the completeness of the work.

BOILER EXPLOSIONS.

Accidents of this kind are in the present day fortunately rare, yet, though considered to be preventable, they occasionally happen, in spite of the greatest care exercised in inspection and management. A lamentable instance lately occurred at a large flour mill in the town, where four lives were lost. The boiler was laid down in 1876. It was found that it had been regularly cleaned and repaired, as well as officially inspected from time to time, yet suddenly, without warning, it exploded and scattered havoc and death around. There were no signs of wear in it, no evidence of its having been overheated, and the flues were intact; but it was found that where it had been bound with iron rings there were some defective seams beneath. These had escaped observation in the inspection from the fact of being covered, and yet had come to give way at last. It was stated in evidence that in the present time more care is given to the joinings where rivets enter, and that such accidents are much less likely to happen than in former years. A fact which may convey comfort where new boilers are placed does not afford much consolation in cases where they have been in use for any length of time, even under careful supervision.

Birmingham, Oct. 24th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE-ON-TYNE.

IT is announced that the Princess Louise is to visit our city on Nov. 5th, her Royal Highness having consented to open the College of Physical Science here. Many people at a distance confound this new building with the new Medical College, but they are quite distinct buildings. The College of Physical Science is also in connexion with the University of Durham, and at one time it appeared likely that it might combine with the Medical College and so have one magnificent building; some obstacles, however, arose, and the scheme was abandoned. So we have two buildings where one might have looked and done better; but, as it is, these two buildings are very complete of their kind, and will enrich the architectural features of our city.—I regret to say that the Local Government Board have declined to sanction the retiring allowance made by the guardians, and carried by a large majority, as a superannuation to their late workhouse surgeon, Mr. N. Hardcastle, who served the union faithfully for the long period of thirty-five years. The objections of the Local Government Board are, at all events, hardly logical—namely, that as Mr. Hardcastle still holds the office of prison surgeon in this city he cannot be considered incapable of fulfilling his ordinary duties. Now, a man might be able to do one-half of his work very well, and yet find the whole too much, as I believe is the case with Mr. Hardcastle. The guardians have, however, determined to bring the case again before the Board, and it is to be hoped with success the next time.

MIDDLESBROUGH.

I regret to mention the death of Dr. T. Craster, the oldest practitioner in Middlesbrough, which took place on Tuesday, Oct. 16th. Dr. Craster, who was in his fifty-ninth year, had been in declining health for some time, but on the day preceding his death alarming symptoms set in, and he was visited by Dr. Embleton, from Newcastle, who

saw him in conjunction with his friend Mr. Longbotham, but he sank rapidly and died during the night from pneumonia. Dr. Craster belonged to an old Northumbrian family, and was intimately connected with Newcastle. At one time he was a lecturer in the school here, but about thirty-two years ago he removed to Middlesbrough, where he was very successful, seeing a good deal of the rise of that remarkable town. Dr. Craster has left a widow and six children.

MUNIFICENT GIFT OF A HOSPITAL.

A meeting of the members of the various public bodies, clergy, &c., was held in Langholm Town Hall on Oct. 16th to present an illuminated address to Mr. Thomas Hope, a citizen of New York but a native of the town, who had resolved to build a hospital for the relief and cure of persons, natives or residents of the town or neighbourhood, to be named the Thomas Hope Hospital. It was further stated that Mr. Hope had already purchased a site for the building, at a cost of £1500, and made it over to trustees.

HARROGATE BATH HOSPITAL.

It is announced that Miss Rawson, of Nydd Hall, Yorkshire, has just given her second subscription of £5500 towards the cost of the Rawson Convalescent Home in connexion with the Harrogate Bath Hospital.

Newcastle-on-Tyne, Oct. 23rd.

EDINBURGH.

(From our own Correspondent.)

EDINBURGH WATER SUPPLY.

THE water supply of the city, to which I referred a short time ago, is a capital text on which to base a municipal address, a fact of which several of the candidates for civic honours have availed themselves to the full. There can be no doubt that the matter will be thoroughly threshed out, but what the ultimate result of the discussion will be it is at present impossible to foretell. There is already a feeling that, if waste were prevented, the supply would in all probability be sufficient for some years to come. This is undoubtedly the case; but the position must be faced that some time, and that ere long, there will have to be a very material increase in the water-storage accommodation. It would therefore be politic for the Water Trust, whilst using all the means at their disposal for the prevention of waste, to make every inquiry as to possible future sources of supply, and to take such preliminary steps as may be necessary to prevent a too hurried construction of water-works, should a series of dry summers reduce the water supply below what is required by a growing city like Edinburgh.

EDINBURGH UNIVERSITY COURT.

Amongst other business at the University Court, it was reported "that an Order of Her Majesty in Council has been received approving of the alteration of Section 5 of Ordinance No. 5 (Edinburgh, No. 2), under which an increased amount of practical instruction in midwifery will be required of candidates for graduation in medicine." It was also agreed to apply for an alteration of the Edinburgh University Financial Ordinance, to enable the University authorities to make a grant of £500 from the General University Fund towards the cost of the Students' Union.

At the same meeting the following gentlemen were recognised by the University as teachers of medicine, in addition to those mentioned last week: Mr. A. G. Miller, F.R.C.S.E., Lecturer on Clinical Surgery, Edinburgh; Mr. Patrick Geddes, Lecturer on Botany, Dundee; and Mr. J. Rymer Patterson, B.Sc., Teacher of Practical Chemistry, Edinburgh.

STUDENTS' UNION.

With reference to the above minute about a grant to the Union, it may be mentioned that the Acting and Buildings Committee, on which are acting many of those in high authority, have already authorised an expenditure of £14,000—viz., for the site near the University New Buildings, £2000; endowment set aside in the hands of trustees, £1000; building and portion of fittings &c., £11,000. They have at present some £70 in hand with

which to meet an estimated expenditure of £3000 for baths, gymnasium, furniture and fittings, &c. The building is now practically finished, and, were funds forthcoming, the very handsome Union, with its large hall, dining and committee rooms, gymnasium and numerous recreation rooms, might be thrown open to the students early in the coming year. There can be little doubt that the Acting Committee have done their share of the work well as far as they are able, and it remains for the students and their friends to come, and that quickly, with the money still required to complete the Union in the style worthy of the portion already finished.

THE TRIPLE QUALIFICATION.

There is evidently a weeding-out process going on at the examinations for the triple qualification of the Royal College of Physicians and Surgeons, Edinburgh, and Faculty of Physicians and Surgeons, Glasgow. The results of the quarterly examinations have just been published, from which we learn that at the first examination there were sixty-five candidates, with nearly 47 per cent. of rejections. For the second examination seventy-seven candidates appeared, over 47 per cent. failing to satisfy the examiners; whilst of eighty-four candidates at the third examination the percentage of rejections was only 24. For the licence in Dental Surgery of the Royal College of Surgeons, seven gentlemen passed the first professional examination and three the final.

REQUESTS TO EDINBURGH MEDICAL INSTITUTIONS.

Several of the medical institutions in Edinburgh have, under the trust settlement of Mrs. Janet Simpson, of that city, received considerable bequests: the Royal Infirmary, £500; the Royal Hospital for Sick Children, £200; the Hospital for Incurables, £200; and the Convalescent Home connected with the Royal Infirmary, £200. In addition to these, several smaller bequests are mentioned. All the legacies are payable free of duty, and the residue of the estate is to be handed over to the Royal Infirmary.

Edinburgh, Oct. 23rd.

DUBLIN.

(From our own Correspondent.)

COLLEGE OF PHYSICIANS.

THE annual meeting was held as usual on St. Luke's Day, the 18th inst., for the purpose of electing candidates for the Fellowship and office-bearers for the ensuing year. As mentioned by me last week, Dr. Lombe Atthill was duly elected President of the College, and Dr. Foot was selected as Vice-President. Almost all the outgoing examiners were re-elected, and, as usual, Dr. Aquilla Smith was elected a representative of the College on the General Medical Council. Two gentlemen were admitted to the Fellowship—viz., Messrs. Henry Bewley and John Molony.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

The annual meeting of the Academy takes place on Friday, the 26th inst., for the purpose of electing a president and other office bearers, and to make such alterations in the rules of which notices of motion have been given. The General Council in their report state that the number of Fellows has increased to 223, as compared with 211; and that the student associates have fallen to two, as contrasted with thirteen the previous session. The subscription for these latter is only 5s. a year, and it is a subject of regret that more third-year students, who alone are eligible, do not take advantage of joining the Academy in larger numbers. The Council suggest as the advisability of the Academy inviting each year a distinguished member of the profession to give an address on some branch of medicine, and that a sum of twenty-five guineas should be allocated for this purpose. Considerable interest is felt in the contest for the presidency between Drs. Gordon and Kidd.

PROPOSED AMALGAMATION OF THE DUBLIN MEDICAL SCHOOLS.

As a reply to certain statements made in a circular issued by those professors of the College who dissent from the proposed amalgamation between the College and the Carmichael and Ledwich Schools, a circular has been recently issued

to the Fellows by eight gentlemen, seven of whom are members of the Council of the College. They state that the scheme now before the Fellows was adopted at a meeting of the Council, at which the dissentients only numbered two; that it was approved of by the Carmichael and Ledwich Schools; and that of the thirteen professors of the College, seven, or a majority of one only, have protested against it. The question of co-opting the professors from the Carmichael and Ledwich Schools, so strongly objected to by the dissentient professors, was, they remark, openly and clearly abandoned after discussion at the Council before the publication of their circular. Further, they show that the dissentient professors, under the proposed scheme, instead of being damaged in a pecuniary sense, will, on the contrary, gain an increase of £350 on their average income for the past five years, and will be free of registrars' fees, cost of prizes, and, in the case of the surgery chair, freedom from cost of subjects.—The meeting of the Fellows of the College to consider the scheme on Tuesday, the 23rd inst., was a very important one, and the details will be found in another column. I may state, however, that although some personalities were used, the arguments for and against the scheme were temperately put, and the proceedings were conducted generally with good temper and with an evident desire that all parties should have an opportunity of stating their views. Mr. Thomson's resolution, to the effect that the scheme be approved of, subject to such alterations as might be required to bring it into accord with the Charter and bye-laws, and a satisfactory title shown by the proprietors of the Carmichael and Ledwich Schools, was adopted by a considerable majority.

ROYAL UNIVERSITY OF IRELAND.

A meeting of Convocation will take place next week. Among the matters for discussion will be, it is believed, the present method of electing the Fellows; and a suggestion will be made to utilise the Pathological Museum for medical students generally.

Dublin Hospital Sunday will be held on Nov. 11th.

Dublin, Oct. 23rd.

PARIS.

(From our own Correspondent.)

RESEARCHES ON ALCOHOL.

CONTINUING his researches on alcohol, as reported in THE LANCET of the 13th inst., Dr. Laborde performed some experiments on animals with it, employing three different procedures to introduce it into the system—viz., by intravenous injections, subcutaneous injections, and ingestion by the stomach. These three procedures gave results absolutely comparable, but it is to the first that he gives the preference, because not only are the effects more rapid, but it is the most certain for the study of the toxic properties of a substance. Dr. Dujardin-Beaumetz condemned the method of intravenous injections, as he accuses them of modifying the results by the destructive action which the medicaments injected might exercise on the blood itself. Professor Bouchard defends this method, but only from an experimental point of view. It is the only means by which one can establish the exact dose sufficient for a toxic substance to cause death. Every other mode of introduction of a poison in the organism leaves the experimenter in a state of uncertainty. By the stomach one does not know what is absorbed or what is eliminated, or what is arrested in the liver, or destroyed before it reaches the blood. By hypodermic injection one can better estimate the amount absorbed, but that which acts is still unknown. On the contrary, the direct introduction into the blood permits one to establish with exactitude, for every toxic substance, the precise dose which is necessary to kill a living being of a given weight. It is useful for a medical man to know that it requires to have in the blood forty times more of a salt of soda than of a salt of potash to cause death. These precise notions can only be furnished by intravenous injections. Hence M. Bouchard advocates these injections for experimental physiological study. As regards their employment in therapeutics, he thinks that the time has not yet arrived

to recommend them. He sees, however, but one exception to this, and that is watery injections into the veins in cases of dehydration of the blood, particularly in cholera, as practised by M. Hayem.

ELIMINATION OF SOLUBLE VACCINAL MATTER.

At a recent meeting of the Academy of Sciences, Professor Bouchard communicated, in the name of MM. Charrin and Armand Ruffer, a work on the elimination with the urine of soluble vaccinal substances. The authors show that the soluble substances manufactured by the microbes can traverse the body of the animal and be eliminated with the urine, whilst still preserving their property of conferring immunity. The production of vaccinal matter should be attributed directly to the microbes, and not to the cells of the living organism.

VALUE OF TURPENTINE AS A PROPHYLACTIC AGAINST PHOSPHORUS-NECROSIS.

At the meeting of the Council of Public Hygiene of the Department of the Seine, a Commission was appointed to ascertain the value of vapour of essence of turpentine as a prophylactic against the necrosis caused by phosphorus in workmen employed in the manufactories of lucifer matches.

M. PASTEUR AND BACTERIOLOGY.

M. Pasteur, who has returned to Paris from a convalescent trip, has resumed his seat at the Academy of Sciences, and at its meeting of last week presented a work of Professor Macé, of Nancy, on "Bacteriology." In doing this, M. Pasteur objected to the term bacteriology as being defective, since it lacks generality. He prefers the words microbiology, microbial, and microbes, to those of bacteriology, bacterian, and bacilli, as the word microbiology may be applied to all sorts of micro-organisms. Bacteriology constitutes only an isolated chapter of microbiology. This view, according to M. Pasteur, is very accurate, for there are bacteria only among infinitely small beings; there are also bacilli, vibrios, &c. Bacteriology is therefore an improper expression.

The Prince of Wales, accompanied by his aides-de-camp, paid a visit to Pasteur's Institute. He was received by the illustrious *savant*, who furnished the Prince with long and interesting explanations about his antirabic inoculations. A Paris paper, in noticing this fact, made the remark that within a few hours afterwards M. Pasteur (as would a prince, for he may be looked upon as a prince of science) returned the visit of the Prince of Wales.

Paris, October 23rd.

THE SERVICES.

ARMY MEDICAL STAFF.—Deputy Surgeon-General Randolph Webb is granted retired pay (dated Oct. 24th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon and Honorary Surgeon-Major Wm. Warman Coleman, 3rd Kent (Royal Arsenal) Artillery Volunteer Corps, to be Surgeon-Major, ranking as Lieutenant-Colonel (dated Oct. 24th, 1888); and Acting Surgeon Thos. Finlayson Dewar, M.B., 1st Volunteer (Devonshire) Brigade, Western Division, Royal Artillery, to be Surgeon, ranking as Captain (dated Oct. 24th, 1888).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Thomas George Wilson has been placed on the Retired List at his own request, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets.

VOLUNTEER CORPS.—*Royal Engineers*: The Severn Division: Alfred Rees, Gent., to be Acting Surgeon (dated Oct. 24th, 1888).—*Rifle*: 2nd Volunteer Battalion, the Essex Regiment: Honorary Assistant Surgeon H. Laver resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated Oct. 24th, 1888).—2nd (Angus) Volunteer Battalion, the Black Watch (Royal Highlanders): Surgeon and Honorary Surgeon-Major J. Traill resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated Oct. 24th, 1888).—2nd Volunteer Battalion, the Worcestershire Regiment: Acting Surgeon J. B. Grewcock retires on account of ill-health (dated Oct. 24th, 1888).

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary comitia of the College took place on the 25th inst., Sir Andrew Clark, Bart., President, in the chair.

Sir Hugh R. Beevor, Bart., M.B., Surgeon-General C. Planck, Dr. Ernest S. Reynolds, Dr. W. H. Spencer, Dr. T. S. Wilson, and Dr. T. O. Wood were admitted to the Membership.

The President nominated Sir A. Garrod and Dr. Munk to be Vice-Presidents of the College, and Dr. Jas. Pollock to be Harveian Orator for 1889.

A communication was received from the Colonial Office, informing the College that an Intercolonial Medical Congress would be held in Australia from Jan. 7th to 12th, 1889.

Another communication (through Her Majesty's Consul at Havana) referred to an invitation to English physicians from the medical faculty in Cuba to study yellow fever, the faculty offering any such physician the use of their laboratory as well as free board and lodging. It was resolved to ask Her Majesty's Government to appoint a physician to undertake such an investigation.

The audited accounts for the year and the quarterly report of the Finance Committee and balance sheet were presented and approved.

A report from the Council was read upon some Recommendations of the General Medical Council with regard to Professional Education and Examination. The Council reported that the scheme of education and examination now carried out by the two Colleges was in harmony with the proposals of the Medical Council. The reports of the inspectors of examinations were acknowledged with thanks.

On the recommendation of the Committee of Management the following regulation (to take effect from the 1st May next) in the Second Examination was adopted:—"A candidate is required to present himself for examination in Anatomy and Physiology together until he has reached the required standard to pass in one or other of those subjects; but no candidate will be allowed to pass in one of the subjects without obtaining at the same time at least half the number of marks required to pass in the other subject."

Drs. Stevenson, Ballard, Thorne Thorne, and Corfield were re-elected Examiners for the Diploma of Public Health, and Dr. Norman Moore was re-elected a member of the Committee of Management of the Examining Board in England.

On the motion of the Registrar, it was resolved to admit Walter Balls Headley, M.B. Camb., being resident in Australia, to the Fellowship *in absentia*, any bye-law to the contrary notwithstanding.

UNVEILING THE BUST OF THE LATE DR. WILSON FOX.

ON Thursday evening, the 25th inst., in Taunton Shire Hall, the Hon. W. H. Portman unveiled the bust of the late Dr. Wilson Fox, Physician-in-Ordinary to the Queen, who died on May 3rd, 1887. The bust bore a suitable inscription, and stated that Dr. Fox's talents commanded the admiration and his character won the esteem of all who knew him. It was pronounced an excellent likeness. Drs. Beddows (Clifton) and Winterbotham (Bridgwater), and Messrs. Alford, Edward Liddon, and Farrant, of Taunton, spoke of the eminent character of the deceased. Mr. R. A. Kinglake, chairman of the county bench, has been instrumental in promoting the movement.

JUBILEE MEMORIAL HOSPITAL EXTENSION.—A new children's ward, as a Jubilee Memorial, has just been erected as an extension of the Newport Infirmary, and was formally opened by the Mayor on the 17th inst. Accommodation is provided for fifteen beds. All the cots have been presented, and the cost of the first year's maintenance of thirteen out of the fifteen has been provided. The total cost of the building and furnishing is £1500. Improvements in the infirmary have also been effected at an outlay of £1000.

Obituary.

SAMUEL ELLIOTT HOSKINS, F.R.S., F.R.C.P., &c.

WE regret to record the death, in his ninetieth year, of Samuel Elliott Hoskins, of Guernsey. After a short experience of preparation work for the Bar, Mr. Hoskins commenced study for the medical profession in 1818 at the united hospitals of Guy's and St. Thomas's. He obtained the licence of the Society of Apothecaries in 1821, became a Member of the Royal College of Surgeons in 1822, a Licentiate of the Royal College of Physicians of London in 1834, and a Fellow of that body in 1859. After a short period of study in Paris, Mr. Hoskins returned to Guernsey and devoted the remainder of his long and useful life to the practice of his profession and to scientific and antiquarian research. Soon after his return to the Channel Islands he elaborated a chart of stethoscopic signs and carried out an investigation into the solubility of calculi within the body. The former work was published in London, favourably reviewed in our columns, and rapidly passed into a second edition. The latter occupied many years of his life, and was associated with his translation of Scharling's work on Calculi, which was published in 1841. His results presented to the Royal Society in 1843 gained him his election to the Fellowship. If we exclude a very clever research into the causes of the failure of the percussion caps of the 46th Regiment (the results of which were confirmed by Faraday and approved by the great Duke of Wellington), all Mr. Hoskins's further work was associated with Guernsey. His best-known observations concern the climatology of the island. They were at the time unique, and are still quoted with well-merited respect. His paper on the "Origin and Progress of Cholera and Small-pox in 1849" was written at the request of the Epidemiological Society. His work entitled "Charles II. in the Channel Islands," is well known; his less ambitious papers on "The Carved Oak Chests of the Channel Islands," and on the "Outposts of England," less so. About 1859 Mr. Hoskins retired from active professional life, and passed the remainder of his life in historical research. Loved for his kindness, respected for his integrity, Mr. Hoskins was one of the most widely known men in the Channel Islands, and his death is mourned by all who knew him, and who realised that he had reached the contentment which is great gain. He lived his life, and laid it down with the satisfaction that he had not been born in vain.

Medical News.

UNIVERSITY OF GLASGOW.—The following gentlemen have passed the Third Professional Examination for the degrees of M.B. and C.M., including, in the cases marked with asterisks, the subject of Pathology:—

Robert Hillhouse Adam, M.A.,* J. Grant Andrew,* C. Bannatyne, Thomas Dun Bertram, James Boag,* John Cunningham Bowie, R. Broom, B.Sc.,* John Brown,* J. Richmond Bryce, William Bryce,* Leslie Buchanan,* Wm. Cairns, J. Angus Cameron, John Clarke, Thomas Connell Craig,* John Crawford,* Duncan Davie, Archibald Fairlie, M.A.,* Alex. C. Farquharson,* I. Fletcher, Thomas Forrest,* James Alex. Gentle,* J. Gilchrist, W. Groome, Thomas A. Haig, Fredk. Hare, A. Biggam Houston,* J. Hudson, Wm. Hutchinson,* A. Jaffray Hutchison, M.A., C. Fdk. Laing, J. T. Brown Laverick, T. Brough Law, J. Lloyd, J. Livingstone Loudon,* Thomas Dryden Moffat, Andrew Moyes, Wm. B. Muir,* Wm. Murray,* A. M'Call,* B. C. Macdonald,* G. Godfrey Macdonald,* J. Macdonald, Dugald Macdougall, Patrick Fraser Macgregor, John M'Kie,* R. M'Leay,* R. Alex. M'Leay,* J. A. Macpherson, C. Nicol Macquarie, R. Alex. Paton, A. A. Pratt, Alex. Prentice,* Ferdinand Rees,* Oswald Rees,* Andrew Robertson, W. J. Robertson, M.A., Douglas Wills Russell,* Robert Steel, M.A.,* Paul Stewart, John Cockburn Symon,* Andrew Stewart Tindal,* Alex. Watt,* Adam Crawford White,* John Wotherspoon.*

THE new children's ward of the Newport Infirmary was formally opened on the 16th inst. It has been erected at a cost of about £1500.

ON the 19th inst. two new wards were opened at the St. Helen's Providence Free Hospital, the cost of the addition being about £2000. The hospital, which, prior to the enlargement, would accommodate twenty-four patients only, will now accommodate eighty-four.

MEASLES IN THE POTTERIES.—An outbreak of measles of a severe kind is reported from the Potteries. The epidemic appears to be of a more than usually fatal type.

A PUBLIC mortuary and coroner's court have just been erected for the parish of Marylebone by the vestry in the disused burial ground, now a public garden, in Paddington.

MEDICAL MAGISTRATES.—The names of Mr. Thos. H. Gibson, M.B., C.M. Edin., and Mr. R. Wilson Gibson, M.B., C.M. Edin., both of Orton, have been placed on the Commission of the Peace for Westmoreland.

THE LANCASHIRE MEDICAL MISSIONARY.—Dr. Fenn, sent out by the Society of Friends' Foreign Mission Association, has settled at Antananarivo, and it is stated that the new hospital there will soon be completed.

FOOTBALL CASUALTIES.—Whilst playing football, on the 10th inst., in the Halesbury College grounds, Hertford, Frank Whitbread broke his left collar-bone; and in a match played at Durham on Saturday last, between two teams of the Durham City and the Gosforth Football Clubs, a young man named Wilson seriously injured his leg and was carried off the field.

A GIFT TO LANGHOLM, N.B.—At a meeting of the inhabitants, held at the Town Hall, Langholm, on the 6th inst., it was announced that Mr. Hope of New York had resolved to found an institute in Langholm (his native place) for the care and relief of sick or infirm persons being natives or residents in the town or neighbourhood. It is to be named the Thomas Hope Hospital.

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.—The autumn general meeting of this Association will take place at 30, Sackville-street, London, W., on Wednesday, Oct. 31st, at 5 P.M. The members and their friends will afterwards dine at the Hôtel Victoria, Northumberland-avenue, Professor Macalister, F.R.S., President, in the chair. Tickets are obtainable from Dr. Abraham (Hon. Metropol. Sec.), 11, Nottingham-place, London, W.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.—The committee of this institution have found it necessary to increase the accommodation for administrative purposes, and are taking steps to provide it. It is proposed to erect outside the present building, and on land adjoining the hospital, a mortuary and post-mortem examination room, and also a nurses' house with dormitories for the nursing staff apart from the wards, and a home when off duty for the private nurses of the institution affiliated to the hospital. The estimated outlay for the land and buildings is about £7000, of which £2527 has been subscribed.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. Alfred Backhouse, late of Pilmor Hall, Darlington, has bequeathed £1000 to the Darlington Hospital.—Mr. Edward Dickinson, late of Nottingham, has left by his will £1000 to the Nottingham General Hospital, and £500 each to the Nottingham General Dispensary and Nottingham Blind Asylum.—The governors of St. Peter's Hospital, London, have received from the executors of the late Miss Louisa Mackellar £250. The executors of the same lady have forwarded to the secretary of the Great Northern Central Hospital, Holloway-road, London, £1000.

PRESENTATIONS.—Dr. James Adams, M.D., F.R.C.S., has been presented, on his leaving Ashburton, with an address from the subscribers to the Ashburton and Backfastleigh Cottage Hospital, expressing their regret on losing the valuable services which for fourteen years he has rendered to the Institution.—Dr. J. A. Mackenzie has been presented by the Farnworth Branch of the St. John Ambulance Association with a writing desk, as a slight token of their appreciation of his services. In addition to the public class, Dr. J. A. Mackenzie has trained a bearer company in connexion with the 1st Volunteer Battalion of the Manchester Regiment. All the members of his Volunteer class were reported qualified. He was presented at the conclusion of the course with a handsome silver-mounted walking cane subscribed for by the men. This was in January last. In April last twenty-six policemen belonging to the Farnworth Division of the Lancashire County Constabulary obtained certificates

in first aid after a course of instruction from Dr. Mackenzie. The constables showed their appreciation of his services by presenting him with a gold Albert chain and pendent.—On the 12th inst., Dr. E. Percival Cockey was presented with a very handsome writing table by the past and present resident medical officers of St. Mary's Hospital as a token of their esteem and friendship on his retirement from the post of medical superintendent of that institution.—At the last monthly meeting of the Wentworth Lodge of Freemasons, No. 1239, Bro. Dr. W. R. Thomas, who has lately removed from Sheffield to Bournemouth, was presented with a massive silver loving-cup, subscribed for by a large number of brethren, whose names were inscribed on a beautifully illuminated address.—Mr. A. R. Anderson, F.R.C.S. Eng., had presented to him on Monday last at the General Hospital, Nottingham, by the resident staff and numerous other friends, a walnut library table and chair, a dining-room clock, and a brass newspaper stand, on his resigning the post of senior resident medical officer.

COLLEGE OF PHYSICIANS IN IRELAND.—The following office-bearers have been elected for the ensuing year:—President: Lombe Atthill. Vice-President: A. Foot. Censors: A. Foot, Andrew Horne, C. Nixon, and Joseph M. Redmond. Additional Examiners: E. McD. Cosgrave, S. Myles MacSwiney, and G. F. Duffey. Examiners in Midwifery: J. R. Kirkpatrick and William J. Smyly. Examiners under the Conjoint Scheme: Chemistry and Physics: Isaac Ashe and Walter G. Smith. Materia Medica and Pharmacy: G. F. Duffey and Francis Quinlan. Physiology: J. M. Purser. Medicine: A. Foot, J. Magee Finny, J. H. Benson, and C. Nixon. Midwifery: Andrew Horne. Hygiene and Forensic Medicine: Stephen M. MacSwiney and Joseph Redmond. Examiners for the Membership: A. Foot, George F. Duffey, Stephen M. MacSwiney, J. M. Purser, F. Quinlan, and C. Nixon. Examiners for the Diploma in State Medicine: Chemistry: Walter Smith. Climatology, Meteorology, and the Geographical Distribution of Disease: J. W. Moore. Vital Statistics: S. M. MacSwiney. Hygiene: C. Nixon. Medical Jurisprudence and Pathological Anatomy: G. F. Duffey. Treasurer: A. Smith. Registrar: J. W. Moore. Representative on the General Medical Council: A. Smith.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THIRD OR FINAL EXAMINATION.

PRINCIPLES AND PRACTICE OF MEDICINE.

October 9th, 1888, from 3 to 6 P.M.

Candidates must answer at least four of the six questions. Candidates unable to answer four questions must report the fact to the presiding examiner. The candidate should confine his answers to the points asked in each question, and deal with them in the order indicated.

1. Give the anatomical relations of the abdominal aorta in its whole extent. How would you differentiate an aneurism of this vessel from other abdominal tumours? 2. What is the pathology of pulmonary apoplexy? On what diseases does it follow, and what are its most usual consequences? 3. What are the symptoms of ulcerative endocarditis, and the morbid appearances found after death? For what other diseases is it liable to be mistaken? 4. Discuss briefly the diagnosis of a case of ordinary phthisis in its earliest stage. What are the physical signs most commonly met with at this period of the disease? 5. Describe the characters of a case of facial erysipelas. What local and constitutional treatment would you adopt? 6. Describe the symptoms and treatment of paralysis agitans. Give the differential diagnosis between the symptoms of this disease and disseminated sclerosis.

Note.—This paper also applies to candidates for the Licence of the Royal College of Physicians of London.

MIDWIFERY AND DISEASES OF WOMEN.

October 10th, 1888, from 3 to 6 P.M.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. Describe the changes in the ovary which precede, accompany, and follow normal menstruation. 2. Give the signs, differential diagnosis, and treatment of hydramnios. 3. What are the causes of uterine inertia in the second stage of labour? How would you recognise the condition? On what principles would you treat the patient? 4. Describe the causes and treatment of pruritus vulvæ. 5. State the causes which may require the dilatation of the unimpregnated uterus, and describe how it should be done. 6. A woman at the close of the eighth month of pregnancy is taken in labour, and after the pains have continued regularly some hours, the membranes rupture. On being sent for, you find the pelvis blocked by a large hard mass, and, on introducing the finger with difficulty up to the brim, you feel the head of the child, which is unable to enter the pelvis. Write a commentary on this

case, especially referring to the probable nature of the mass felt, and the treatment of the case.

Note.—This paper also applies to candidates for the Licence of the Royal College of Physicians of London.

EXAMINATION ON SURGICAL ANATOMY AND THE PRINCIPLES AND PRACTICE OF SURGERY.

October 12th, 1888, from 1.30 to 4.30 P.M.

Candidates must answer at least four (including one of the first two) of the six questions, and are strongly advised to answer all six questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. Mention the situation of the various groups of lymphatic glands found in the pelvis and lower extremity; and state the sources from which they receive lymphatic vessels. 2. Mention the relative positions of the several structures in immediate relation with the shoulder joint; and describe the operation of excision of the head of the humerus. 3. Describe the symptoms and the structural changes of carbuncle in the different stages of the disease. Give the treatment, local and general, which you would adopt. 4. Describe the after-treatment of a case of tracheotomy. Mention the complications which may arise, and how you would meet them. 5. Describe the constitutional and local effects which may follow severe burns, and give their appropriate treatment. 6. What fluid swellings may present themselves in the popliteal space? Give their differential diagnosis and state briefly the treatment appropriate in each.

Note.—This paper applies also to candidates for the Pass Examination for the Diploma of Member of the Royal College of Surgeons of England.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BLACK, GEORGE, M.R.C.S., L.S.A., has been appointed House Surgeon to Guy's Hospital.

BOURNS, N. WHITEHEAD, M.D. Brux., L.R.C.P. Ed., M.R.C.S., has been appointed Administrator of Anesthetics to the Westminster Hospital.

BOX, M. H., M.R.C.S., L.S.A., has been appointed Medical Officer for the Churchill District, Ayrbridge Union.

CARNALL, EDWARD, M.R.C.S., L.S.A. Lond., has been appointed Resident Medical Officer to the Westminster General Dispensary.

CARTER, ROBERT J., M.R.C.S., L.S.A., has been appointed Resident Medical Officer to the Royal Hospital for Children and Women, Waterloo-bridge-road, S.E.

COLMAN, WALTER STACY, M.B. Lond., M.R.C.S., has been appointed Senior House Physician to the National Hospital for the Paralysed and Epileptic, vice Dr. Walter Hull, resigned.

CROWTHER, T. M. D. Aber., M.R.C.S., L.S.A. Lond., has been reappointed Medical Officer for the Luddenden District, Halifax Union.

GARDNER, ERNEST FREDK., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Guy's Hospital.

GARDNER, FRANK GOWER, M.R.C.S., L.S.A., has been appointed House Surgeon to the Stourbridge Dispensary, vice C. Daly, M.D., resigned.

GRIFFITH, T. WARDROP, M.D. Aberd., Professor of Anatomy, Yorkshire College, has been appointed Honorary Physician to the Leeds Public Dispensary.

HARRISON, EDWARD, M.A., M.B., F.R.C.S., has been appointed Medical Officer to the Humber Industrial School-ship Southampton.

HARRISON, JAMES, M.B. Edin. and C.M., has been appointed House Surgeon to the Tynemouth Infirmary and Dispensary.

HEBB, RICHARD GRAINGER, M.A., M.D. Cantab., has been appointed an Assistant Physician to the Westminster Hospital.

JONES, M. D., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for Ruthin Rural District.

LEDWARD, M. P., M.R.C.S., L.S.A., has been appointed Junior Assistant Medical Officer to the Salop and Montgomery Counties Asylum, Bicton Heath, Shrewsbury.

LOYD, JAMES H., M.R.C.S., L.R.C.P., & L.M. Ed., has been appointed Medical Officer to the Kenilbeare District of the Tiverton Union, vice R. Bryden, M.R.C.S., resigned.

O'NEILL, J. GOWER, has been appointed Medical Officer and Public Vaccinator for the Elston and Causton Districts of the Southwell Union, vice T. F. Greenwood, resigned.

PENNELL, GEORGE HERBERT, M.R.C.S., L.R.C.P., has been appointed House Physician to Guy's Hospital.

POCKLEY, F. ANTUL, M.B., C.M. Edin., M.R.C.S., has been appointed Lecturer in Ophthalmic Medicine and Surgery for the University of Sydney.

RIGDEN, ALAN, L.R.C.P. Lond., M.R.C.S., has been appointed Senior Assistant Medical Officer, Salop and Montgomery Counties Asylum, Bicton Heath, Shrewsbury, vice Denning, resigned.

ROBERTS, JOHN LLOYD, M.R.C.S., L.R.C.P., has been appointed House Physician to Guy's Hospital.

RUSSELL, J. S. RUSSEN, M.B., M.S. Edin., has been appointed Junior House Physician to the National Hospital for the Paralysed and Epileptic, vice Dr. T. Williams, resigned.

SAVERY, FRANK, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Royal Infirmary, Hull.

SHELMERDINE, H., M.B. Edin. and C.M., has been appointed Medical Officer for the Waterbeach District, Chesterton Union.

VINACE, J. H., M.B. Lond., M.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Physician to St. John's Hospital for Diseases of the Skin, vice Morgan Dockrell, M.A., M.D., B.Ch., elected a Physician.

WATSON, JOHN, M.B. Durh., L.R.C.P. Lond., &c., has been appointed Senior Assistant House Surgeon to the Royal Infirmary, Hull, vice F. Savery, M.R.C.S., promoted.

WILSON, R. A., M.B., C.M. Edin., has been appointed Assistant Medical Officer of the Rubery Hill Asylum, near Bromsgrove, vice J. Cuthbert, L.R.C.S., resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BOOTLE BOROUGH HOSPITAL.—House Surgeon. Salary £80 per annum with board and residence in the Hospital.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Three Clinical Assistants. The fee is £5 5s. for three months.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

FEMALE LOCK HOSPITAL, Harrow-road, London, W.—Assistant House Surgeon. No salary, but board and lodging.

HOSPITAL FOR WOMEN, Soho-square, London.—Clinical Assistants in the out-patient department in November. Fee for course of three months, £5 5s.

LEEDS FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Surgeon, married, for Bischoff House Surgery of this Association. Salary £200 per annum. Cleaning and travelling allowances £65, and all Midwifery fees. Residence, coals and gas, provided, drugs supplied, and rates paid.

MEDICAL INSTITUTE OF ANCIENT ORDER OF SHEPHERDS, Bristol.—Medical Officer. Salary £140, and unfurnished residence.

PARISH OF LAMBETH.—Two District Medical Officers. The salary for each appointment will be £100 per annum, with extra fees as specified in the Orders of the Poor-law Board and Local Government Board.

ST. MARK'S HOSPITAL FOR FISTULA, &c., City-road, London, E.C.—Honorary Surgeon. Also Honorary Assistant Surgeon.

WILTS COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £100 per annum, with board, residence, attendance, and washing.

WIRRAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN.—Honorary Medical Officer.

Births, Marriages, and Deaths.

BIRTHS.

CAHILL.—On the 17th inst., at Seville-street, Lowndes-square, S.W., the wife of John Cahill, F.R.C.S., of a daughter.

CALEB.—On the 2nd inst., at Abbotsford, Lahore, Punjab, the wife of C. C. Caleb, Esq., M.B., M.S., Professor of Physiology in the Medical College, Lahore, of a daughter.

HARDWICK.—On the 21st inst., at Ferneliffe Villas, Newquay, Cornwall, the wife of Arthur Hardwick, M.B., L.S.A., of a son.

MACAMARA.—On the 12th inst., at the Royal Naval Hospital, Malta, Mrs. Hugh Macamara, of a son.

SOUTAR.—On the 11th inst., at Barnwood, near Gloucester, the wife of James Greig Soutar, M.B., of a son.

TWEEDY.—On the 22nd inst., at Gardiner's-row, Rutland-square, Dublin, the wife of H. C. Tweedy, M.D., of a son.

UPTON.—On the 22nd inst., at Medina-villas, West Brighton, the wife of Herbert Chrippes Upton, L.R.C.P., of a son.

MARRIAGES.

ACKLAND—KENSINGTON.—On the 18th inst., at the Church of All Saints, East Budleigh, Devon, by the Rev. William Frederick Green, M.A., Vicar of the Parish, assisted by the Rev. Charles Rees Price, M.A., of Budleigh Salterton, John McKno Ackland, M.R.C.S. Eng., &c., of 24, Southernhay, Exeter, to Ida, younger daughter of Edward Thomas Kensington, Esq., of Westbourne, Budleigh Salterton, Devon.

ENGLAND—ATRINSON.—On the 17th inst., at All Saints', Moulton, Geo. F. England, L.R.C.P. Lond., &c., to Eliza, younger daughter of Wilson Atkinson, of Moulton.

JOHNSON—KENT.—On the 3rd inst., at Hallstatt, Upper Austria, Frederick Miller Johnson, M.D., C.M. Edin., to Eveline Annie, daughter of the late Samuel Saville Kent.

MACLAREN—LOWE.—On the 18th inst., at Isla Mount, Coupar Angus, by the Rev. F. R. MacDonald, Parish Minister, Surgeon-Major George Gilbert MacLaren, M.D., Indian Medical Service, to Cecilia Anne, fourth daughter of John Lowe, Solicitor.

PECHELL—BRIGGS.—On the 24th ult., at St. Mark's Church, Bangalore, India, Augustus A. Pechell, M.B., A.M.S., third son of Sir G. Brooke Pechell, Bart., Alton, Hants, to Mabel, youngest daughter of the late Colonel Briggs, Madras Staff Corps.

DEATHS.

DAVIS.—On the 9th inst., at Wreckington House, Gateshead, Robert Davis, M.R.C.S., L.S.A., aged 64.

FOX.—On the 21st inst., at Welland House, New Barnet, Herts, Ellenor, wife of William A. Fox, L.R.C.S.E.

GRIFFITH.—On the 14th inst., at Aix-les-Bains, Griffith Griffith, M.D., of Hyeres.

MULLAR.—On the 19th inst., at Oxford-road, Kilburn, London, F. G. William Mullar, M.D., M.R.C.S., L.S.A. Edin., son of the late Arthur Mullar, of Fanton, Brittany, and Edinburgh, aged 66.

RAYNES.—On the 18th inst., at Potton, Bedfordshire, Henry Raynes, M.R.C.S., L.S.A., in his 81st year.

WILLIAMS.—On the 19th inst., at The Elms, Wheatley, Oxon., Leonard Williams, B.A., M.B. Cambridge, aged 42.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, October 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10.30 A.M., and each day at the same hour.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
 MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. J. H. Morgan: Case of Large Hairy Mole on the Back of Frontal Meningocele.—Dr. J. D. Savill: (1) Case of Tetanus cured by Chloral Hydrate; (2) Section of Median Nerve followed by Lesions of Muscle and Skin.—Mr. W. J. Walsham: Peculiar Abnormalities of the Clavicles in a Boy the subject of Rickets and Lateral Curvature of the Spine.—Mr. Bernard Pitts: Some cases of Partial Arthrectomy of the Elbow-joint.—Mr. Colcott Fox: Congenital Rupture of the Sterno-mastoid.—Cases by Dr. Beevor, Mr. Marmaduke Shield, and others.

Tuesday, October 30.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
 THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M. Dr. Charles Kelly: Sanitary Law—General Enactments, Public Health Act, 1875, Model Bye-laws.

Wednesday, October 31.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

Thursday, November 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
 HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Arthrectomy versus Excision of Knee. The following gentlemen will also show cases and take part in the discussion:—Messrs. John H. Morgan, E. Owen, C. B. Keetley, Walter Pye, A. M. Shield, Arthur Barker, B. Wainwright, and Clutton. Council at 8 P.M.

Friday, November 2.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
 THE PARKES MUSEUM (74A, Margaret-street, Regent-street, W.).—8 P.M. Mr. A. Wynter Blyth: Sanitary Laws and Regulations Governing the Metropolis.
 WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Specimens to be shown:—Dr. Drewitt: Thoracic Aneurysm.—Mr. Lloyd: Uterine Tumours.—Dr. Coombie: Abdominal Aneurysm.—Mr. Dunn: Pathological Specimens.—Dr. Abraham: Microscopic Sections, Neoplasms of Skin. Clinical Cases:—Mr. Keetley: (1) Case of Ligature of Femoral for Popliteal Aneurysm; (2) Ligature of Common Femoral for Femoral Aneurysm. Papers:—Mr. Keetley: Cases of Abdominal Section for Suppurative Peritonitis.—Mr. Ballance: The Treatment of Popliteal Aneurysm.

Saturday, November 3.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, October 25th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Oct. 19	30.29	S.E.	45	44	81	56	41	..	Foggy
" 20	30.37	S.E.	43	41	80	55	40	..	Hazy
" 21	30.42	E.	43	41	82	56	36	..	Foggy
" 22	30.47	W.	47	45	66	53	42	..	Foggy
" 23	30.33	S.W.	40	39	60	51	35	..	Foggy
" 24	30.15	S.W.	38	38	62	54	37	..	Foggy
" 25	30.00	S.W.	53	51	81	62	38	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors." Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

AN ASPIRING CHEMIST.

F. H. K., M.R.C.S.—We think with our correspondent that for a chemist to propose to a medical man to work with him, the latter to be dependent on a small share of the profits, and to continue such work till the chemist has got through his preliminary examinations and all the ulterior steps of his medical education, and then to be absorbed into a partnership with the chemist, is a fine instance of audacity. The letter is at once a caution and a study, and we append it. It lets us see, too, into the profits of a chemist's business—even when he is kind enough not to visit.

"—, —, Oct. 9th, 1888.

"DEAR SIR,—I shall be pleased to see you at the — Hotel, —, on Thursday, between 12 and 4. I have a drug business at the above address, and for the past three months have had a medical man living with me and working up a practice, my prescribing having become too onerous. He leaves me owing to family reasons. There is no question of covering, as I do not visit. The terms offered are that I retain three-fifths of the net profit under £500, with a proviso that the medical man receives at least £150 per annum. Of the profit over £500 I retain half. I intend going up in December for the Medical Prelim., and propose going backwards and forwards to hospital every week after the practice is thoroughly established. In the event of my passing, we should enter into a regular partnership on equal shares. The takings for September of the practice average £600 a year, in spite of the fact of its being harvest time and a very healthy period. I expect during the winter months to average over £70 a month, and there is scope for great increase. Kindly write me to the —, stating if I may expect you there, and oblige,

"Yours truly,

Dr. Hammond.—The regulations would most probably have to be complied with.

M. A. C. should consult her medical attendant on the matter.

METHOD OF APPLYING HOT MOIST FOMENTATIONS.

To the Editors of THE LANCET.

SIRS,—I am indebted to the ingenuity of a lady patient for the following simple but effective mode of applying hot moist fomentations. She puts a square yard of flannel into one of the patent potato squeezers, pours boiling water upon it, and squeezes it; and this is done so effectively that the bedclothes &c. are not made wet and uncomfortable by the application of the flannel, as they are when it is simply wrung out by the hands. I thought it worth recording for the benefit of my medical friends.

I am, Sirs, yours faithfully,

Harrogate, Oct. 20th, 1888.

THOS. BRITTON, M.D.

"SHIP SURGEONS."

To the Editors of THE LANCET.

SIRS.—A correspondent points out in your last issue (page 799) that some of the steamship companies are obtaining surgeons on their vessels for nothing. Certainly; and why not? If your correspondent took the trouble to make a tour of the shipping offices in search of a berth as doctor, he would see for himself that any number of men are offering their services in return for a voyage out and home, and an applicant may consider himself very fortunate if he succeeds in getting a berth even on these terms. If shipping companies or owners have twenty applicants for each ship they send out, they can hardly be blamed for saving the £10 a month. Dividends stand before doctors. Many shipping people have often told me they regard carrying a surgeon merely a legal form; and it is only a question of a very short time when passage instead of pay will be the general rule, except perhaps in such lines as the P. & O., who maintain a regular staff for their fleet. The public know well enough the state of the profession. They see the fierce competition to give services for nothing; they see London swarming with sixpenny dispensaries; they see the head doctors, as they call it, giving advice for nothing at the hospitals; and in the country clubs and benefit societies of every description getting work for pay that a Chinese would blush to receive. The score of examining bodies are flooding the country with medical men, and if they could turn out ready-made doctors at the rate of a thousand a day, they would. With them it is only a question of *£ s. d.* Now, if these money-making institutions were swept away, and one respectable portal only existed through which to enter the profession, we should soon see a change in all ways for the better, and working for nothing on sea or land would be a thing of the past.

I am, Sirs, yours very faithfully,

Oct. 22nd, 1888.

TRUTH.

Mr. J. Marshall.—Teddington lies wholly on the gravel and sand bed of the Thames Valley; Twickenham stands on the same formation, but there is a patch of brick earth at Strawberry-hill; the north-western part of Richmond lies on the same formation, the remainder on London clay; Mortlake, Kew, and part of Gunnersbury are also on gravel and sand, whilst the northern part of Gunnersbury is on brick earth. The boundaries of these formations will be seen from the Drift Geological Map of London and its Environs, issued by the Geological Survey of England. It can be obtained at Messrs. Stanford's of Charing-cross.

S. S.—Specimen copies of the questions set at the examination in psychological medicine are to be found in the recent numbers of the Journal of Mental Science.

F. T. C. D. is referred to a report of the meeting in our present issue.

OBSCENE POSTERS.

To the Editors of THE LANCET.

SIRS.—In reply to the letter of "Medicus" in your issue of Oct. 13th, allow me to say that this Society is doing what it can in the matter, and that I shall be glad to communicate with any of your readers who will co-operate. The laws at present inadequate except in certain places, where, as at Sheffield, a local Act has effectually extirpated the abomination. Your readers will do well to exert their influence to introduce similar Acts throughout the country, and in support of a Bill to the same effect which has been drafted, and will, we hope, be brought before Parliament next session.

The obscene poster is, however, only one form of quack advertisement, and it will be of little use to scotch this snake unless we are prepared to deal with the bold announcements of self-styled "eminent medical electricians" and the like, which appear regularly in many of the most respectable newspapers and magazines. Some of these advertisements cover wholesale imposture professing to claim genuine medical guarantees, and are mischievous in proportion to their seeming harmlessness and plausibility. While these remain unchallenged by the medical profession, we can do little to check the extortionate trade upon the nervous apprehensions of a deluded public.

I am, Sirs, yours faithfully,

HERBERT EVERITT, Lieut.-Col.

Secretary, Church of England Purity Society.

Bridge-street, S.W., Oct. 15th, 1888.

JEFFRIES AND HILLS FUND.

To the Editors of THE LANCET.

SIRS.—The following additional sums have been received since the publication of the last list. There is still a balance of about £60 to collect.

I am, Sirs, your obedient servant,

C. B. KERTLEY.

10, George-street, Hanover-square, W., Oct. 18th, 1888.

Ed. Hy. Cardwell ..	£5 0 0	F. (Sheffield) ..	£0 10 0
G. Granville Bantock ..	2 2 0	Ed. O'Ryan ..	0 10 0
Geo. A. Rae ..	1 1 0	Alfred C. E. Harris ..	0 10 0
Arthur Roberts ..	1 0 0	L. A. B. ..	0 5 0
C. G. Woodd ..	0 15 0	Ed. Knight ..	0 5 0
Henry Stear ..	0 10 0		

Mr. Ford (Killing) is thanked for his communication. Sodie chloride has been, *inter alia*, frequently employed as a solvent of diphtheritic membrane.

OBSERVATIONS BY A SHIP SURGEON.

To the Editors of THE LANCET.

SIRS.—The resources of a ship's medicine chest are usually limited. Perhaps some of your readers may be interested in the following observations made during three years at sea in all climates.

In cystitis in children, powdered cubebs made into confection with jelly or honey, half a teaspoonful frequently, with frequent drinks of weak lime juice, promotes a speedy cure. No washing out is necessary. A mustard leaf over the pubes is valuable. In all cases of cuticular inflammation, no remedy is superior to resin ointment. In erysipelas, burns and scalds, eczema, &c., it is invaluable, but it must be applied thickly on lint, and if properly used no ointment excludes air so effectually. I prefer it to white paint, and so do the patients. The point is to plaster it on freely. In gonorrhoea the best injection is a weak solution of permanganate of potash, with a little glycerine added. If the lotion produces the least pain, it must be further diluted. In pruritus ani and inflamed piles, a morphia suppository, one-sixth of a grain, gave instant relief where ointments and lotions failed. In hot climates, the itching produced by sweat and chafing is sometimes intolerable. The internal administration of morphia often produces paralysis of the bladder. Some patients are more affected than others. I have often remarked the inability to void urine which accompanies the use of morphia. Chlorodyne does not, however, produce this symptom. Carbolic glycerine is very valuable; its affinity for water, abstracting serum from the blood, the elasticity and consequent removal of tension which it imparts to swollen cuticle, together with its antiseptic action, rank it first among ordinary dressings. In hay fever and influenza stuff the nostrils with lint soaked in carbolic glycerine, and the pain, sneezing, and swelling disappear, and the inflammation does not extend down the air passages. As a local application (diluted) to the gums after tooth extraction, or in any similar case, no dressing will be found so soothing. In chronic dysentery try from five to ten minims of chlorodyne, from twenty to thirty minims of tincture of catechu, from ten to twenty minims of castor oil, olive oil to half an ounce; mix and repeat frequently. This has succeeded where ipecacuan and freshly prepared bael fruit failed. The mixture must be well shaken. In bleeding piles a rhubarb pill every morning after breakfast will give relief.

These remarks are only intended to show what can be done with an ordinary medicine chest, as I have often heard ship surgeons complain that their stock of drugs was too limited. Ergot, resin ointment, carbolic glycerine, morphia, and liquor arsenicalis should find a place in every chest.

I am, Sirs, yours faithfully,

Birkenhead, Oct. 23rd, 1888.

C. F. NAISMITH, L.R.C.P.E.

J. C. D.—It is generally held that the examination for the diploma in Public Health granted by the University of Cambridge and by the Conjoint Board in London cover the same ground and are much alike as regards severity. The Colleges of Physicians and Surgeons never issue any list of books for any of their examinations, leaving to candidates to judge, from the syllabus of subjects and from previous papers, what works to study. Cambridge University issues at its depot in Paternoster-row, E.C., a list of the questions given at the last examination, and appended to this is a list of books recommended for study. As new works have been issued, the list has become so long as to be bewildering, and candidates for either examination must select one or more out of the many books named in each subject. Candidates are especially expected to be acquainted with the most recent researches in sanitary medicine, and these are largely embodied in the reports of the Medical Officer of the Local Government Board. The examination at Cambridge is held in October; that in London in June and December.

Quæstio vexata.—The description of the circumstances of the dispute is too vague to warrant the expression of an opinion on our part.

COMBINATION.

To the Editors of THE LANCET.

SIRS.—Week after week the cry of the long-suffering general practitioner ascends in your columns. Abuses are exposed and reforms suggested *ad infinitum*, but nothing practical is done. The hearts of those who respect and honour their profession grow sick with long-deferred hope. Will not someone who commands the respect and confidence of the profession take the lead in this matter? As a beginning, let means be taken to carry out the first of the four suggestions of your correspondent, "J. H. T.," in your last issue (p. 724)—namely, "that every member of the profession be canvassed as to the desirability of forming an association for the protection of the profession." Let us concentrate our attention on this one thing only; for having once secured combination, the rest will soon follow. Our wants are reasonable, the power is in our own hands, and we have but to ask with a sufficiently united voice to obtain what we want.

I am, Sirs, your obedient servant,

Oct. 14th, 1888.

ALPHA.

Perplexed.—A medical student has no legal standing as a medical practitioner. He cannot recover for attendance, sign vaccination certificates, &c. But in the case supposed the Medical Council has no jurisdiction. It has to do with registered practitioners only.

CIGARETTES.

To the Editors of THE LANCET.

SIRS.—When on the Continent I noticed that there had been a discussion relating to the effect of cigarette smoking upon the throat. With the assistance of Mr. Chambers, the greatest authority on tobacco in London, I have made a study of the tobacco grown in different parts of the world; and it is well known that tobaccos, almost more than theobroma cocoa and other plants, depend for their flavour entirely on the soil. Setting aside the question of the action of burnt paper upon the throat, it is recognised that one of the varieties of tobacco that comes from Smyrna is used as a mixing tobacco because of its creating a tickling sensation in the throat, seeing that it has strength and a good flavour at the same time; but it is only those who are accustomed to live near where this tobacco is grown who can support it when smoked in a pure state. I make no doubt that the manufacturers of tobacco, finding that this was useful on account of its flavour, have put a certain quantity into the cigarettes that have come to this country. I need hardly refer to the immense difference there is between the manner of smoking tobacco in this country, as a rule, compared with the native manner of always inhaling it. In my experience, the Malays can inhale the strongest tobacco, and even the cross-breds between Chinese and Malays come next. In China a native invariably pitches upon the quality or strength of his tobacco according to the powers of his throat to endure the sensation of the smoke passing down into his lungs without making him cough.

I am, Sirs, yours truly,

Oct. 18th, 1888.

THOS. CHRISTY, F.L.S.

M.B.—Perhaps the best deliverance on the Use of the Ophthalmoscope in Insanity is the paper by Dr. Charles Aldridge in the first volume of the West Riding Asylum Medical Reports. For the condition of the urine in the insane Dr. Blandford's Index to the Journal of Mental Science may be consulted.

Mr. T. Christy.—We should like to examine a specimen of the apparatus.

THE TESTIMONIAL FEVER.

To the Editors of THE LANCET.

SIRS.—We have lately been suffering from a violent attack of the "testimonial fever." From one hospital alone I, in common with many of my friends, have had three consecutive appeals—one for a retiring physician, who has, I am happy to see, got his portrait painted; a second for a surgeon who retired many years ago, and whose portrait seems to "hang fire," since it has found its way into the "agony column" of *The Times*; and, lastly, for a surgeon about to retire. Now, if report speaks truly, two more surgeons of this hospital must shortly retire, and the senior physician cannot hold office many years longer. Are we to be expected to subscribe for all these gentlemen? And, in fact, is it not time that this testimonial humbug was exploded?

I am, Sirs, yours obediently,

October, 1888.

A. K. C.

Dr. Bourke (Hanover, Cape Colony).—The subject was discussed in our impression of the 6th inst., page 683.

Mr. Bellamy.—Yes.

ERRATA.—The Bolton Infirmary case reported in our "Mirror" last week was under the care of Dr. Garstang, not of Mr. Kingsford, from whom the report was received.—The rendering by our report last week of the motto of the British Nurses' Association requires amending. It is "Steadfast and true," not "Steady and true."—In Mr. W. G. Spencer's paper read at the Pathological Society on the 16th inst., and an abstract of which was published in our last number, page 760, the proportion of the male population of France who required treatment for varicocele before entrance into the army was given as 32 per 1000: it should have been 3·2 per 1000.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an additional advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

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The Freeman, Fireside News, The Women's Gazette, Denbighshire Free Press, Oldham Daily Standard, North British Daily Mail, Herts Advertiser and St. Albans Times, Herald and Weekly Free Press, Daily Telegraph (Sydney), Hertfordshire Mercury, Scottish Leader, Surrey Advertiser, West Middlesex Advertiser, Olago Daily Times, Reading Mercury, Milwaukee Sentinel, Western Morning News, &c., have been received.

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Introductory Lecture

ON THE

DIFFERENCES BETWEEN CHILDREN AND ADULTS IN REGARD TO MORBID ACTION AND THE EFFECTS OF TREATMENT.

Delivered at the Hospital for Sick Children, Oct. 15th, 1888,

By W. H. DICKINSON, M.D., F.R.C.P.,

HONORARY FELLOW OF CAIUS COLLEGE, CAMBRIDGE; SENIOR PHYSICIAN TO ST. GEORGE'S HOSPITAL; CONSULTING PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN.

GENTLEMEN,—The advantages or disadvantages of separate hospitals or wards for children have been discussed with a general bias of late years in their favour. It has been said with truth that to give a special care to sickly children is to enfeeble the race. We know that among the Spartans feeble or deformed children were disposed of by exposure; while I am told that, among the New Zealanders, infants whose physique was not considered satisfactory, on consultation between the family and the priest, were forthwith knocked on the head and utilised as food. But such direct means of promoting the survival of the strongest are repugnant to the sentiments of modern civilisation, the tendency of which is to take care of the individual, and let the race take care of itself. The only question before us now is how to keep with us the weak and ailing, not how to get rid of them. It was formerly maintained that to congregate sick children together was not the best way of doing this. Such communities, it was urged, must necessarily be especially liable to the spread of infectious diseases; while to mix children with grown persons, particularly with women, must lighten the labour of nursing, as many of the older patients would find occupation and pleasure in ministering to the wants of the younger. As to the first objection, it is true that it is not safe to associate a patient with diphtheria with others who have not got it, or one with scarlatina, measles, or whooping-cough with children who have not got, or have not had, the disease in question. But in this hospital we have separate wards for diphtheria, scarlatina, and measles, and trust soon to have, as a most necessary addition, one for whooping-cough. As to the second consideration, it must be said with regret that convalescent females are seldom eager, and sometimes positively refuse, to act as nurses. Nursing, to be willingly and well done, must be by those whose special duty it is; and the nursing of sick children is undoubtedly better done in a children's hospital, where the nurses acquire familiarity with the ways and needs of childhood, than in a general hospital, where their opportunities of doing so are but small. Another advantage which pertains to the aggregation of sick children is the special knowledge which the medical officers acquire to the undoubted advantage of their patients. For there are many and important points of difference between children and grown persons in the course of disease and the action of remedies, which cannot be learned by any arithmetical consideration of age or weight, or otherwise than by clinical observation. I therefore think that, whether we look at the sound teaching of doctors or the successful treating of patients, the two inseparable as cause and effect, the collection of children in separate hospitals, or in special wards in general hospitals, is beneficial; and I would urge every student about to become a practitioner to spend some time in some such place as I have indicated. In a general ward he sees few children, and has few opportunities of becoming acquainted with their peculiarities. That he should do so in his own interest as well as in theirs will be evident to anyone who will consider how large a proportion of an ordinary mixed practice children form, and how deeply their ailments engross the attention of their seniors.

I propose to take as the chief subject of my discourse to-day the differences between children and adults in regard to morbid action and the effects of treatment. Children die in greater proportion than adults, though all due allowance

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may have been made for the fact that there are more of them. The less the age, as a rule, the greater the number. The trap-doors and pit-falls which beset the bridge of life are more thickly placed at its entrance than later on, and though they become more numerous again towards its end, there are fewer travellers left to encounter the dangers. One-third of those who are born die before the completion of their fifth year.

It is often said in a case of illness, and sometimes with truth, "The youth of the patient is in his favour"; but it may sometimes be said with equal truth, "It is to the advantage of this patient that he is not young." We may be old, battered, gouty, and atheromatous, every part about us blasted with antiquity; our arteries are apt to break, and that suddenly; but we get slow, and some of our disorders partake of our disposition. Youth is the period of active nutrition, while degeneration is the slow accompaniment of age. The active nutrition of youth is by no means an unmixing advantage, for it imparts its character to all diseases which depend on production and growth. Besides this, the activity of nutrition calls for a proportionate supply, and entails liabilities when that supply is insufficient or unsuited which keep pace with the demand made by the tissues. "Old persons," says Hippocrates, "endure fasting most easily; next adults; young persons not nearly so well; and most especially infants, and of them such as are of a particularly lively spirit." Chossat found by experiment that young animals bore fasting worse than older ones. At the siege of Paris we are told that those who suffered most from want of food were the very young, nursing mothers, the sick, and the wounded, among all which classes the mortality from this cause was great. And it needs no multiplication of testimony to prove what is almost self-evident—that as infants require food more often than older children, and children more often than adults, so the effects of its absence or insufficiency must present themselves in some similar ratio.

The quick exhaustion of childhood might be exemplified in other ways. The apparently disproportionate effects of loss of blood are well known to surgeons; let us hope that they are chiefly made known to physicians by the writings of a bygone age, in which we may without difficulty find cases which would seem likely to have ended otherwise than they did had leeching or some other mode of depletion been less liberally employed. I may add a word in the same direction about diarrhoea. This is very common among infants; I cannot here discuss its causes or management. Our out-patient physicians treat cases by scores, and mostly with success. But one of the medical experiences which one is least desirous of repeating is the rapid and unexpected sinking which sometimes occurs in this disease and time of life. This may take place with a rapidity and absence of warning which has no parallel among older persons, at least in this country. No disorder so lightly looked upon calls for more watchful care. When death occurs, it is with every organ ostensibly sound; death has been caused by the drain of fluids, and that long before any such result would have occurred at a greater age. I need not point to rickets as a disease almost peculiar to early childhood, and which is continually due to defects in quantity or quality of the milk provided as food. It is not perhaps so generally known that a similar deficiency is apt to make infants scorbutic. There is land scurvy as well as sea scurvy, and from this young children suffer far more often than grown people. Sore gums, purpura, and hæmorrhages, especially by way of the kidneys, are often met with in infants, and always, so far as I have seen, from one of two causes, the absence of fresh milk or the use of fresh milk of an inferior quality. Fresh milk, if good, whether from the woman or the cow, is antiscorbutic; but, curiously enough, that property is not possessed, or not to the same extent, by condensed milk. I do not profess to explain this, but have seen many proofs of it in the appearance of scurvy under some artificial preparation of milk, and its disappearance under milk fresh from the cow. Perhaps if we could fully explain this it might teach us something about scurvy.

Another result of the active nutrition of childhood is to be seen in the rapid exaggeration of fibrous tissue, which is the essential change in certain diseases to which children as well as grown people are liable, and in the quick growth of tumours. As to tumours, look at the astonishing rapidity with which sarcomata, say of the kidney, increase in size. Such a tumour of the kidney is seldom suspected until it has

reached a tangible bulk, and it will often fill the greater part of the abdominal cavity and cause great abdominal swelling within a few months of its first detection. How different in these respects is the tumour of the same class which presents itself in middle or declining life. Here we may be long puzzled by obscure symptoms before a growth can be recognised, and then years may elapse before any great size is attained, which indeed may never come to pass. In later life I have seen a tumour of this nature as hard as a scirrhus cancer, and as slow in its progress as this usually is. I have never seen this in childhood, when the tumours are generally soft, and may even fluctuate.

A similar rate of progress is to be discerned in diseases which consist, not of new growth, but of exaggeration of the old, such as cirrhosis of the liver and interstitial nephritis. Cirrhosis of the liver is not very common in childhood; but it is by no means unknown, and so rapid may it be that it may reach its fatal ending before the second year of life has concluded. It is always characterised, so far as I have seen, by a profuse overgrowth of fibrous tissue, the hypertrophic process so far outstripping the contractile that the organ is greatly increased in bulk, and the increase of its fibrous tissue is conspicuous to the naked eye. I could adduce in exemplification of what I may call cirrhotic precocity quite a long series of cases ranging at death between the ages of one year and eight months and twelve years. The causes are not always the same; syphilis has its place, and so has alcohol, which is sometimes intruded as a cause of disease at a time of life which should be a sure protection from it. And alcohol when thus administered to the young does its work as an organic irritant with a rapidity and luxuriance of result of which later life affords few examples. Like the cirrhotic liver, the granular kidney sometimes presents itself in childhood, and then displays to the morbid anatomist a profusion of fibrosis, while clinically symptoms and secondary changes, cardiac and arterial, are hurried forward at a rate which has no parallel afterwards.

Among the diseases which childhood accelerates is one which is happily rare at this time of life—diabetes mellitus. Rapid progress to inevitable death is the leading characteristic of the disease as it now presents itself; and it may be added that the rapidity is, roughly speaking, in inverse proportion to the age at which it occurs; the less the age the greater the rate. It is not too much to say of diabetes mellitus, for no such statement applies to diabetes insipidus, that the former disease may cause death in a child in as few months as it sometimes takes years to run its course in an older person. I cannot speculate as to why this is. We have as yet discovered no new growth to point an analogy with the sarcomata and fibroses, nor can we invariably associate the rapidity with the advance of exhaustion; for though diabetes in these circumstances may kill by this means, yet it often does so by toxic agency.

Let us glance now at inflammatory disorders, and see how these vary with age in their incidence and effects. When inflammation is mixed with tubercle the disease may be said to occupy an intermediate position between growths and inflammations, or rather to display an admixture of the two. Among the inflammatory diseases to which children are especially liable, the most fatal are those of the brain. It is not necessary within these walls that I should dwell upon the frequency of tubercular meningitis in childhood; but the question may be put, Is the leading character of the disease tubercular or cerebral. Miliary tuberculosis is not extremely common in childhood excepting in this shape, and tubercles of other kinds are considerably less frequent in childhood than afterwards. But the brain in childhood is the seat of activity, the like of which exists nowhere else. It doubles its weight in the first two years, and is being educated, not by the School Board, but by the almighty universe, at a rate which, if it could be kept up, would make the angels envious. That an organ in which there is so much going on should sometimes go wrong is not to be wondered at, or that it should go wrong in the direction of inflammation. It may be added that infants and young children are affected more numerously than used to be thought by meningitis, which is inflammatory but not tubercular.

Let us look at inflammation of the lungs, and at the differences which it presents at different periods of life. When I speak of inflammation of the lungs, I mean an inflammatory disease which leads to consolidation. This is, of course, sometimes mixed with bronchitis, and so far inseparable from it; but I exclude bronchitis *per se*, and

also cases which have been recognised as broncho-pneumonia or lobular pneumonia. It is well known that pneumonia is a large cause of mortality in childhood, particularly in early childhood. More deaths occur from this cause in the first five years of life than in any subsequent twenty, and more between five and ten than in any subsequent period of the same length. This is because children are more often attacked, not because when attacked they more often die. Having had the privilege of experience at two hospitals, I have had under my care a considerable number of cases of pneumonia at all ages. I have sorted the notes, so as to include only lobar pneumonia or pneumonia, such as during life cannot be distinguished from it. I have included attacks described as pneumonia, or lobar pneumonia; I have excluded all described as capillary bronchitis, broncho-pneumonia, or lobular pneumonia. It can scarcely be that lobular pneumonia has not been often, though unintentionally, admitted among the cases at the earlier ages, but in every one at least there was evidence of inflammatory consolidation of the lung. I find, as shown in the accompanying table, that of ninety-one cases up to the age of twelve, collected from this hospital and St. George's, ten ended fatally, or about one in nine. Between the ages of twelve and twenty the mortality was one in ten. From the age of twenty-one upwards, of eighty-nine cases twenty ended fatally, a mortality of rather more than one in five. Thus it appears that individuals under twenty-one years of age have on an average twice the chance of recovering from pneumonia which pertains to persons over that age. There is no abrupt difference on the completion of the twenty-first year, but the statement fairly compares early with advanced life. It is the more significant because differences of treatment do not intervene, all the cases having been under the care of the same physician—myself.

Mortality of Lobar Pneumonia in relation to Age.

	NO. OF CASES AT AGES INDICATED.		
	0 to 12 years.	13 to 20 years.	21 years and upwards.
Died	10	2	20
Recovered .. .	73	16	57
Relieved or uncertain ..	8	2	12
Total number of cases ..	91	20	89

Maximum Temperature in Pneumonia.

	NO. OF CASES AT AGES INDICATED.		
	0 to 12 years.	13 to 20 years.	21 years and upwards.
Reached 99°; under 100° ..	0	0	1
„ 100 „ 101 ..	2	1	2
„ 101 „ 102 ..	9	0	1
„ 102 „ 103 ..	11	2	12
„ 103 „ 104 ..	22	3	19
„ 104 „ 105 ..	20	8	13
„ 105 „ 106 ..	11	2	7
Total number of cases ..	75	16	55

It might have been expected that children, with their mobile tissues and active nutrition, would give a higher range of temperature—in other words, would be more combustible—than older persons; but this does not appear to be the case to any marked extent, nor does the disease appear to run a decidedly quicker course in early life than later. Among children we have the problem complicated by mixture with lobular pneumonia; but, nevertheless, we have among them many cases which are apparently lobar, and often end as it does, abruptly. With those that do so the temperature appears to fall on about the same day, the seventh or eighth, whether the patient be old or young—as if the date were determined by the disease with little modification from the circumstances in which it works.

While upon the subject of the chest I may say a word

about empyema. Children are more liable than grown persons to suppurative pleurisy, but they are more easily treated for it. A larger proportion of the young than the old are to be cured by simple aspiration without the establishment of a continuous drain.

Among the inflammatory disorders to which children have a special liability are endocarditis and pericarditis in connexion with rheumatism. Acute rheumatism is less frequent in childhood than afterwards, but it involves the heart proportionately more often. This fact was long ago pointed out, I think, by Peter Mere Latham. In childhood and age the cardiac and articular affections appear to vary inversely. In youth the heart is early and frequently affected. A child may have pericarditis, and we may smell the rheumatism to which it belongs, but there may be no articular affection, or only enough, to speak vulgarly, to swear by. In elderly people their joints are often red and painful for weeks, while their hearts escape from first to last. It is better to be old and racked in the joints than to be young with an insidious clutch upon your heart-strings. What practice teaches, or, at least, has taught me, with regard to all acute rheumatisms, but most emphatically when children are the subjects, is the early and free use of alkalies, which have an effect in saving the heart not possessed by salicylic acid or anything else.

There are other diseases which, like pneumonia, cause the greatest number of deaths in early life, but are the source of the greatest danger in advanced life. Of the deaths from measles, over 90 per cent. occur in children under five years old; but the attacks are numerous rather than dangerous. The contrary holds later on, when the danger of the disease increases together with its rarity. You will remember that Major Pendennis excused himself from visiting his sick nephew on the ground that his illness might be measles: "He had never himself had the measles; they were dangerous when contracted at his age." Diphtheria, like measles, is most frequent in early life; but, unlike measles, it is now not less dangerous than afterwards, but is probably more so; for with children it is especially apt to take the form and name of membranous croup, which is one of the most fatal diseases to which children are liable. With regard to the continued fevers the case somewhat differs. These disorders are more dangerous in advanced life than earlier; in childhood, at least in early childhood, they are less frequent as well as less dangerous than later. Typhus seldom presents itself in childhood, and then carries little risk. According to Dr. Murchison, typhus is most frequent between thirty and forty; it kills most after fifty. Under ten the mortality of typhus is but 3.27 per cent. of those attacked; after fifty the mortality is 57.03. A distinguished physician became aware that he had caught this disease; his friends sought to lessen his apprehensions, but he said, "I know what typhus means after sixty," and his anticipation was verified. Typhoid, according to Murchison, is most common between twenty and thirty, and kills most within this decade. The danger of typhoid, however, presents less variation with age than does that of typhus; it varies in the same manner, but not to the same degree. Under ten it kills 11.36 per cent. of those attacked; over fifty, 34.94 per cent. Typhoid is so rare in infancy that under two it need scarcely embarrass our diagnosis. Murchison once ascertained by post-mortem that this disease had existed at the age of six months; and I once was assured of its presence by a most unequivocal eruption in a child of between two and three years old, whose symptoms, chiefly cerebral, delirium, and screaming pain in the head, had presented an apparently hopeless prognosis in the way of meningitis. But, as a rule, typhoid, though a disease of childhood, is not one of infancy.

I might turn from diseases to drugs, and show in how many particulars their action differs in early and later life. The intolerance of opium in infancy is well known. Not so well known, perhaps, is the extraordinary tolerance of belladonna which children share with rabbits. My late colleague, Dr. Fuller, once gave daily to a girl ten years old seventy grains of the Pharmacopœial extract, a grain and a half of which acted upon myself most unpleasantly; and he showed that this insusceptibility was common to the time of life. Mercury is said seldom to salivate in childhood, and the way children thrive upon it in congenital syphilis is remarkable. But in other diseases I have witnessed not a few instances of salivation from its use, and two in which the cheek was perforated. One, which ended fatally, was that of a boy with nephritis, to whom a single dose of five grains

of grey powder was given as an aperient; the subject of the other was a girl with obstinate eczema, which yielded at last to minute repeated doses of calomel, but with the penalty described. I have already referred to alcohol. Children are extraordinarily susceptible, the younger the more so, both to its beneficial and its injurious influences. I have never seen delirium tremens in a child, or recognised alcoholic paralysis; but I have seen, as I have said, early and rapid cirrhosis from this cause. Alcohol naturally leads to feeding, and that to nursing, a large part of which, at least in the medical diseases of children, is comprised in the judicious selection of food and its liberal and regular administration. In most severe diseases alcohol forms an essential part of it. The feeding of sick children calls for conscientious watchfulness and judgment by night and day, which makes all the difference in the result. It follows from what I have drawn your attention to as regards the nutrition of children, and it is no less a matter of experience, that children need better nursing, or, in other words, better feeding, than grown people. With many of their diseases, whether of exhaustion, of inflammation, or of fever, we have more in our hands, the more depends on what we do, or rather on what the nurses do for us, the younger the patient. The physician may be inattentive, and it may happen that the patient may be none the worse, but the vigilance of the nurse must know no pause. I cannot express by figures, but cannot put too strongly in words, the difference in the chance of recovery from some of the disorders I have referred to under such nursing as this hospital affords and that which is to be found in the homes of the poor. I have warrant for saying that the mortality of typhoid is here considerably less than the general average belonging to the time of life, and no doubt the statement could be extended to other disorders of the inflammatory and febrile type. I have to thank Mr. Priestley, our medical registrar, for some particulars with regard to typhoid, a disease as to which the question is not so much medicine as nursing. Since the foundation of this hospital in 1852, 506 cases of typhoid have been treated in it, of which forty-nine ended fatally, giving a mortality of 9.64 per cent. Dr. Murchison tells us, with regard to the London Fever Hospital, that at that excellent institution the mortality of typhoid under the age of ten was 11.36 per cent. The age of our cases ranged from two to twelve, the extra age being somewhat to our disadvantage. Without pushing this comparison too far, we may, at least, be satisfied with this testimony as to the nature of our nursing, and the influence which such nursing has upon some of the diseases of children.

Let me place together the conclusions we have come to. Children differ from grown people in their greater susceptibility both to exhaustive and recuperative influences. Such of their diseases as are of the nature of growths partake of the rate of progress which belongs to the period of development. This applies to the fibroses as well as to isolated tumours, though the fibroses are far more infrequent than afterwards. Many inflammatory disorders, particularly of the brain, are more common in childhood than later, but with regard to many inflammations the power of recovery is greater. Those of the lungs are more frequent and cause more deaths, but in the individual the prospect is better. Acute rheumatism is comparatively infrequent, but when it occurs it brings greater danger to the heart. Some febrile complaints are more frequent and some less so than afterwards, but as a rule their proportionate mortality is less. There are special differences in the action of drugs, the most important of which is the greater influence of alcohol for good and evil. Finally, children respond to treatment, as they often succumb to disease, more readily than do older patients, so that with them our responsibility is the greater. Let me end as I began by begging all who are about to enter upon the duties of miscellaneous practice to study for themselves the peculiarities to which I have alluded, as well as many others which their own observation will reveal to them; and to do so there are no better opportunities than those which this hospital affords.

UNIVERSITY OF OXFORD.—Notice is given that the Linacre Professor of Human and Comparative Anatomy being temporarily disabled for the performance of the duties of his office, a deputy will be appointed to perform the duties for one year from January 1st, 1889. The deputy will be appointed by the persons who would appoint the professor if his place were vacant.

ABSTRACT OF A
Clinical Lecture

ON A CASE OF

TUMOUR OF THE BLADDER TREATED BY
PERINEAL DRAINAGE,

Delivered at the Manchester Royal Infirmary, Jan. 26th, 1888,

By F. A. SOUTHAM, M.B. OXON., F.R.C.S.

GENTLEMEN,—You may remember that in a clinical lecture delivered last summer I described a case of papilloma of the bladder, where the tumour was successfully removed by combined perineal and suprapubic cystotomy. This morning, I propose to bring before your notice a case of cancer of the bladder, where, though an operation was performed, it was merely of a palliative nature, an attempt being made, not to remove the growth, but simply to relieve the symptoms from which the patient was suffering by providing free bladder drainage. [The distinctive features of papilloma and carcinoma of the bladder having been mentioned, the following case was then described.]

The patient, a man aged forty years, came under my care as an out-patient last October with the following history. Fifteen years ago he was admitted into this hospital suffering from symptoms of calculus vesicæ, and lateral lithotomy was performed by Mr. Heath. I have here the stone, which Mr. Heath has kindly lent me to show you; it is of very large size, measuring $2\frac{1}{2}$ in. by $1\frac{1}{2}$ in., and consisting mainly of oxalate of lime with a coating of phosphates. He informs me that owing to its dimensions some difficulty was experienced in extracting it from the bladder. At the present day, since the revival of the "high operation," many surgeons would remove a calculus of this size and nature not by lateral but by suprapubic lithotomy. The patient made a good recovery from the operation, and, with the exception that a little urine ever afterwards continually escaped from the anus, he enjoyed good health until last June. He then began to suffer from pain and difficulty with increased frequency in micturition, and the following month for the first time noticed the presence of blood in the urine in small quantities. When he came under my care in October these symptoms had become much more urgent. He was obliged to pass urine two or three times an hour, the act of micturition being attended by great pain and severe straining; the urine, which was alkaline and very offensive, was only faintly tinged with blood, except just at the end of micturition, when a few drops of almost pure blood were generally passed. The bladder was sounded, but no stone could be felt; its wall appeared to be somewhat roughened on the right side. On digital examination per rectum, nothing abnormal could be detected; and on passing a speculum, no fistulous opening could be seen to account for the escape of urine from the anus. Palliative treatment having been tried for a time without any benefit, the patient was advised to come into the hospital, in order that his bladder might be explored through a perineal opening, for, in the absence of a calculus, the symptoms pointed either to a chronic cystitis attended by hæmorrhage, or to the presence of a new growth, probably of a malignant nature; it was thought that bladder drainage would be the best way of treating whichever of these conditions happened to be present. On Nov. 15th perineal urethrotomy was performed in the usual manner. On introducing the finger into the interior of the bladder, a firm, extensive, sessile growth, with an irregular, nodulated surface, could be readily felt springing from the right lateral wall; it was quite fixed, and appeared to involve the whole thickness of the vesical wall and also infiltrate the surrounding tissues. As it was evidently of a malignant nature, no attempt was made to remove it. The bladder was washed out with boracic lotion and a tube left in the perineal opening. The operation was followed by almost complete relief to the symptoms from which he had previously suffered, the severe pain which had attended the frequent and ineffectual attempts to pass urine entirely disappearing. The after-treatment consisted in washing out the bladder daily with boracic lotion through the

perineal opening in which the tube was retained. On the second day the urine was almost free from blood, and afterwards remained so. After the twelfth day the patient was able to sit up in the ward for several hours each afternoon, the end of the tube being secured with a clip so as to prevent the urine from escaping. Three weeks after the operation, as some difficulty was experienced in reintroducing the tube into the bladder, owing to the contraction of the perineal wound, the patient was anaesthetised, and the opening dilated with the finger. It was then found that the growth had increased considerably since the operation, for it encroached more on the interior as well as on the base of the bladder. From the rectum the infiltration of the base could now be easily distinguished, and about an inch from the anus a fistulous communication (not previously present) between the bladder and bowel could also be felt. After this date the patient gradually became weaker, and sank from mere exhaustion on Jan. 1st. Towards the last he complained of severe attacks of pain of a neuralgic character, shooting from the right loin down the back of the thigh on the same side; to relieve this opium was given internally in full doses. On examining the bladder after death, a large firm irregular growth, about two inches in diameter, was found springing from the right side and encroaching upon the base. As you see from the specimen, it involves the whole thickness of the bladder wall, and also infiltrates the surrounding tissues on the same side. In the centre and towards its upper part is a small aperture, which communicates with the rectum at a distance of between five and six inches from the anus. Just behind the prostate and a little more than an inch from the anus a second fistulous communication is present. In addition to the main growth, there are several smaller ones, varying in size from a pea to a horse-bean, studded over the vesical mucous membrane. With the exception of the two apertures of communication with the bladder, the rectum is quite healthy. No secondary deposits were present in the lymphatic glands or internal organs. Microscopic examination of the tumour showed it to be of an epitheliomatous nature.

There are several points of interest in connexion with the case, to which I may briefly call your attention.

1. The cause which led to the formation of the fistulous communication between the bladder and rectum after the removal of the calculus fifteen years ago is not very evident. Recto-vesical fistula after lithotomy is sometimes met with as the result of a wound of the bowel with the knife during the operation, but under these circumstances it is usually situated low down near the anus, not at a distance of nearly six inches from it, as in the present instance. Probably owing to the large size of the calculus a laceration of the vesical mucous membrane was produced during the manipulations which accompanied its extraction, and this was followed by ulceration of the bladder wall extending into the rectum.

2. The development of the cancerous growth in the bladder was probably not (as sometimes happens) due to the irritation of the calculus, for an interval of fifteen years elapsed between the removal of the stone and the first indication of the presence of the disease. It was more likely the result of the prolonged irritation kept up by the recto-vesical fistula. Mr. Reginald Harrison, in the last edition of his work on Diseases of the Genito-urinary Organs (p. 199), speaks of "malignant fistulae," and says that "instances will occasionally be met with where urinary fistulae become epitheliomatous." He quotes a case where a perineal fistula after many years underwent this change. Probably the case before you may be referred to this class, and the fact that the growth appears to have commenced at the vesical orifice of the fistula supports this view.

3. Hæmaturia was never a prominent symptom, for throughout the whole course of the case the amount of blood at any time present in the urine was very slight. This is not the rule in cancer of the bladder, for bleeding is often free, and towards the last it may be as profuse and persistent as in papilloma. In this instance, as in most cases of cancer (as Sir H. Thompson has pointed out), hæmaturia was preceded by evidences of bladder irritation—viz., pain and increased frequency in micturition. This rule, however, is not constant, for in a case of epithelioma of the bladder in the hospital last year, under Mr. Whitehead, profuse hæmaturia coming on suddenly was the first indication of the presence of the disease, and for about two months the only symptom that was present. In a case of scirrhus of the bladder—an extremely rare condition—

recently in the medical wards, under Dr. Dreschfeld, hæmaturia, on the other hand, was a very late symptom, blood being observed in the urine for the first time only two days before death.

4. As regards the effect of the operation, bladder drainage through a perineal opening acts beneficially in two ways. By providing an outlet in the most dependent position, the urine is enabled to continually escape from the bladder; consequently, any accumulation of fluid in its interior being prevented, it is not excited to contract; the pain and straining which attend the frequent attempts at micturition at once cease, and the viscus is maintained in a condition of physiological rest which is productive of great relief. At the same time, by means of the perineal opening the bladder can daily be thoroughly irrigated with some antiseptic lotion, and by this means not only is the offensive character of the urine, which of itself is a source of irritation, corrected, but the inflammation of the bladder wall is also relieved. In this case the pain which accompanied the ineffectual and almost constant attempts to pass urine was completely relieved by the operation. Towards the last, however, when the disease extended beyond the bladder, the pain was probably due to another cause—viz., the pressure of the growth itself on the nerves of the sacral plexus. This, of course, was not affected by bladder drainage, and the only way of affording relief under these circumstances was to keep the patient under the influence of opium.

5. The case illustrates very well the impossibility of removing a cancerous tumour of the bladder; this is owing to the fact that the growth soon involves the whole thickness of the vesical wall, and in many instances rapidly spreads beyond it, infiltrating the adjacent tissues; the condition is therefore very different from what exists in papilloma, where the growth does not extend deeper than the submucous tissue. Though several attempts have been made to resect a portion of the vesical wall along with the tumour, this is only practicable in cases where the upper portion of the bladder is involved, a condition which is quite exceptional, for cancer, like other forms of neoplasm in this situation, usually springs from the base and lower part of the viscus. Some surgeons recommend that in cases of cancer the prominent portions of the growth should be removed either with forceps or by scraping; but even partial removal is attended with considerable risk; for if, as often happens (and as is illustrated by the specimen before you), the bladder wall is softened or thinned in places by the extension of the cancerous ulceration, it is in danger of being torn or perforated during the attempt at removal, and these are complications very likely to prove fatal from the supervention of pelvic cellulitis and peritonitis. It has been claimed in favour of partial removal that hæmorrhage is thereby arrested; but the arrest of bleeding will generally be found to be quite as complete after simple bladder drainage, owing to the condition of complete rest in which it enables the bladder to be afterwards maintained. Perineal urethrotomy and the insertion of a tube in the bladder is a comparatively simple operation; it is attended by very little danger, and gives all the advantages without any of the risks which accompany attempts to remove the growth.

6. It is interesting to note that, although the disease in the bladder is far advanced, there are no secondary deposits in the pelvic or lumbar glands. In this respect—viz., in the somewhat slow implication of the lymphatic glands—cancer of the bladder differs from the same disease in other parts of the body—e.g., in the tongue, breast, testis, &c. In a considerable proportion of cases, however, if the disease has not run a rapid course and the patient lives sufficiently long, the neighbouring glands, as well as other tissues and organs, will be found affected with secondary deposit.

7. In conclusion, I would call your attention to the condition of the kidneys. On the right side, owing to the fact that the vesical orifice of the ureter is blocked by the growth, the gland is converted into a mere sac, almost all the renal structure having disappeared. In the cortex of the left kidney there are two small cavities, each containing a number of calculi varying in size from a pin's head to a pea; in other respects the gland is apparently healthy, though somewhat enlarged, probably in consequence of the double work which it was called upon to perform, affording a good example of the condition which is described as "compensatory hypertrophy."

A SECOND SERIES OF CASES OF ABDOMINAL SECTION, INCLUDING ELEVEN COMPLETED OVARIOTOMIES.

By C. J. CULLINGWORTH, M.D., F.R.C.P.,
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(Concluded from page 805.)

THE cases of abdominal section other than the ovariectomies were nine in number, and constitute even a more miscellaneous assortment than my former series of such operations. I have tried in vain to tabulate them in a convenient form, and must content myself with giving a brief summary of the main facts of each case.

Case 1, that of M. E. M—, aged twenty-three, married, was operated upon in St. Mary's Hospital, Manchester, on Jan. 19th, 1887, on account of an abdominal tumour of obscure character, with signs of peritonitis and ascites, which from the history appeared to have originated suddenly a month previously from the rupture of an intraperitoneal cyst. There were found a small cystic tumour of the right ovary (which was removed), a uterine tumour having all the appearance of a pregnant uterus at the fifth month, and general peritonitis, with much flaky lymph and considerable effusion of serum. No remains of the ruptured cyst were discovered. The patient died on the eleventh day from septic pneumonia. At the necropsy the uterine tumour was found to consist of a large thick-walled cyst in the substance of the left broad ligament and posterior wall of the uterus, containing a straw-coloured gelatinous fluid, in which floated much membranous material. Unfortunately the fluid was thrown away by mistake without microscopical examination. The specimen was exhibited at the Obstetrical Society of London, with a full clinical history of the case, which will appear in the Transactions for the current year. It was pronounced by two eminent pathologists (Mr. Shattock and Mr. J. Bland Sutton) to be in all probability a hydatid cyst. If that be so, and I see no reason to doubt it, it seems reasonable to suppose that the cyst that had ruptured a month previously was also a hydatid cyst connected with some part of the peritoneum, the thin walls of which had, at the time of the operation, become so rolled up or disintegrated as to escape detection.

In Case 2 the patient, E. B—, aged forty-seven, was operated upon in a private ward at the Eccles and Patricroft Hospital on March 7th, 1887. She had a large abdominal tumour, partly cystic, partly solid, thought to be ovarian. On opening the abdomen, there were found a large cystic tumour of the left ovary, weighing 12 lb. 3 oz., occupying the whole of the left side of the abdomen, and a small cystic tumour of the right ovary, both of which, being non-adherent and having good pedicles, were easily removed. There then came into view a large, highly vascular tumour of malignant aspect, springing by a short thick pedicle from the upper and posterior part of the uterus, filling up the pelvis and dipping deeply into Douglas's pouch. The tumour had displaced the uterus upwards and forwards, the cervix being tightly jammed against the pubes. The mere touch caused a most alarming hæmorrhage from the surface of the tumour, which the brittleness of the tissues made it impossible to arrest. For the moment it seemed as though the patient must inevitably die on the operating-table. The mass was adherent to the intestines and to the peritoneal surfaces in Douglas's pouch. A portion of the wall of the tumour was left attached to the intestine; the parietal adhesions were quickly and carefully separated; the tumour was lifted out, the pedicle ligatured, and the mass, which weighed 3 lb. 11 oz., removed. There was no further loss of blood. The peritoneum was carefully sponged, and a glass drainage tube inserted at the lower angle of the wound. This was kept in for seventy-two hours. The patient went on well for the first three days, the highest temperature being 99° 2". She then began to be restless, depressed, and thirsty, though still without rise of temperature. On the morning of the sixth day she vomited an enormous quantity of brown, ill-smelling fluid, after which she gradually sank, dying at 11 o'clock the same evening. The post-mortem examination showed the cause of death to be obstruction of the bowel.

Just above the ileo-cæcal valve the ileum for two inches of its length was nipped by the surrounding adhesions and completely occluded. A quantity of clotted blood filled Douglas's pouch.

Case 3 was that of an old lady sixty-six years of age, whose abdomen was enormously distended by an obscurely fluctuating tumour. She had been under the care of a cancer curer, who had left his mark on the front of the abdomen in the shape of a raw suppurating surface, 5 in. by 4 in., produced by the application of caustics. The abdomen was opened at the patient's own house on April 9th, 1887. The peritoneal cavity was found to be filled with a transparent jelly-like material, of which twenty-five pints were removed. Springing from the fundus uteri was a sub-peritoneal fibroid that had undergone calcareous change; it was of stony hardness, and weighed 3½ lb. The ovaries were not discovered. The operation was prolonged and severe. The condition was so satisfactory on the evening of the third day that the drainage tube was removed. At 1 A.M. on the following day the patient awoke cold and faint. Twenty-four hours later there was a copious discharge of thin offensive fluid from the lower angle of the wound. This continued; the temperature rose slightly; the patient gradually sank, and died on the sixth day at 11 P.M. No necropsy was permitted.

Case 4 was one of intra-peritoneal abscess. The patient, M. E. B., aged twenty-one, single, stated that she had had an illness, accompanied with severe pain in the lower part of the abdomen, ten weeks before admission, just at the end of a menstrual period. She had not menstruated since. The abdomen was, on admission, tender and painful, and was uniformly distended to about the size of a six months' pregnancy. The percussion note over the tumour was tympanitic. No fluctuation could be detected. The uterus was normal in length, and somewhat fixed. The case was watched in hospital for two months. The pain and tenderness subsided, but the swelling increased, and it was decided to make an exploratory incision. This was done on June 8th, 1887. All the contents of the peritoneal cavity situated below the umbilicus were matted together and to the anterior abdominal wall by firm adhesions. By careful separation of the omentum and intestines a tense swelling was at length reached, deeply seated in the right side of the pelvis. All the organs in the pelvis, including intestine and bladder, were firmly adherent to each other and to the pelvic walls, forming an inextricable mass. The uterus and ovaries were not recognised. During the separation of adhesions an opening was accidentally made into the swelling, and a quantity of thin blood-stained pus escaped, mixed with a good deal of white flaky material. The aperture was enlarged by the finger (the wall of the abscess being very friable), and the interior of the cavity explored. It was found to be lined by smooth walls, and was very irregular, dipping here and there amongst the viscera and passing upwards a considerable distance into the abdomen. On passing a sound into the bladder, it was found that the bladder itself formed part of the abscess wall. With great difficulty, on account of the friability of the tissues and the depth of the abscess from the surface, the edges of the opening were stitched to the edges of the abdominal incision, and the upper part of the abdominal wound was closed. The cavity was then washed out with warm water and a glass drainage tube inserted. The operation lasted an hour and a half. The patient from this time rapidly improved in her general condition. She had some sickness, pain, and rise of temperature for the first day or two, but was able to take fish on the eighth day, and on the fourteenth was allowed to sit up a little. There was a free purulent discharge through the indiarubber drainage tube (which had been substituted for the glass one after the first twenty-four hours) for several months, and it was not until Nov. 24th that the tube was finally removed. In the meantime the patient was able to walk about and make herself useful in the wards. When she left the hospital she was very stout and in excellent health, and when I heard of her last (in June, 1888) she was well.

With regard to Case 5 I have a confession to make. For the first time in my life I operated in a case of pregnancy, mistaking it for disease. The patient, a single woman, aged thirty-two, complained of much pain in the left side of the pelvis, and had a centrally situated and obscurely fluctuating tumour in the lower part of the abdomen, reaching to midway between the umbilicus and the pubes. She had not menstruated for seven months. The history

and symptoms pointed to pelvic inflammation with abscess, and on Aug. 10th, 1887, I made an exploratory incision. Immediately on reaching the peritoneal cavity I recognised the pregnant uterus, whereupon I at once closed the incision and sent the patient back to bed. She was no worse for the operation, the temperature only once reaching 100°. On Aug. 29th, nineteen days afterwards, she was delivered of a putrid fœtus of about the fifth month. As she had not menstruated for seven months before admission, and the fœtus was not expelled until she had been a month in the hospital, it seems probable that the uterus had for three months contained a dead fœtus. The pains complained of were no doubt ineffectual efforts at expulsion.

Case 6 was that of a woman, named C. G., forty-five years of age, married, who had a large abdominal tumour, chiefly solid, but presenting signs of fluctuation in the centre, and first noticed about a year previously. There had been severe menorrhagia for three years, and the patient was emaciated, pale, and weak. For the last three months there had been a highly offensive vaginal discharge. The sound passed four inches into the uterine cavity. The diagnosis was fibro-cystic, or possibly malignant, disease of the uterus. An exploratory incision was made on Sept. 7th, 1887, with the view of removing the uterine appendages if the conditions justified it. The tumour was uterine, but its nature was uncertain. The cervix and lower segment of the uterus were much thickened. In the pelvis the tumour was surrounded by firm adhesions, both in front and laterally. A number of very large veins were visible beneath its peritoneal covering. The central portion contained fluid. A small trocar was introduced and fifty-four fluid ounces of watery blood were drawn off, thereby considerably diminishing the size of the tumour. The opening made by the trocar was closed by four carbolised silk sutures. The ovaries were not discovered, being buried in the pelvic adhesions. There was nothing in the nature of a pedicle to the tumour, and it was not thought advisable to do anything more. The wound was accordingly closed without drainage. No rise of temperature followed the operation. On the sixth day the sutures were removed. Immediately after the removal of the last suture, the patient coughed and the wound reopened along its whole length. A quantity of ascitic fluid escaped and the intestines came into view, a knuckle of small intestine protruding through the wound. The edges of the wound were brought together again by four fresh sutures, and an indiarubber drainage tube was inserted for twenty-four hours. For some days the temperature rose, but in a week the patient began to improve. The wound united, and by the end of October the patient had so far improved as to be able to sit up all day, and even walk about a little. Her appetite had improved, and she had gained some colour. The girth of the abdomen had diminished by five inches. The patient went home on Oct. 29th, and remained fairly comfortable for several months. In July, 1888, I heard that she had applied to my successor for readmission, the tumour having increased in size, and the symptoms having again become urgent.

Case 7 was a widow (M. L.) aged forty-two, never pregnant, who had for four years been disabled from following her occupation on account of severe uterine hemorrhage, dysmenorrhœa, pain in the pelvic region, backache, and bearing down due to uterine fibroids. It was decided to remove the uterine appendages if possible, to check the hemorrhage and relieve the pain. Accordingly, on Sept. 28th, 1887, an exploratory incision was made at St. Mary's Hospital. The ovaries and tubes were not found, being lost in a mass of peritonitic adhesions. The incision was therefore closed. The patient died fifty-five hours after the operation from purulent peritonitis, evidently of septic origin. I was unable to make out where the fault lay, but that there was some septic offence committed at the time of the operation either by myself or someone else I have not the smallest doubt.

Case 8 was an intra-peritoneal abscess, much resembling Case 4. E. J., aged twenty-three, commenced to be ill in September, 1886, two months after her marriage, owing, she thinks, to bathing in the sea while she was menstruating. She had severe pain in the lower part of the abdomen, and very shortly there was noticed a swelling immediately above the pubes—where there was dulness on percussion from an inch below the umbilicus to the top of the symphysis. Menstruation became too frequent and profuse. On July 12th, 1887, the question of pregnancy having been raised, an examination was made under chloroform. The

uterus was found normal in size and antverted. Behind it was an obscure swelling extending into the abdomen as far as the umbilicus. Menstruation was now regular, and had been for the last four months. The pain was better, the sensation of bearing-down almost gone, and the general health much improved. Soon after this things changed for the worse; the pain increased, and the patient's health began seriously to suffer. On Sept. 22nd the retro-uterine swelling had increased, and gave evidence of fluctuation; there was distinct bulging of the vaginal roof in the right lateral fornix; the abdominal swelling was more prominent and exceedingly tender, but nowhere absolutely dull on percussion. The patient had now become absolutely incapable of the least exertion. There being no improvement after three weeks' absolute rest, I determined to make an exploratory incision. This was done on Oct. 12th, 1887. At the posterior part of the pelvis on the right side there was found, walled in by adherent viscera, a large abscess, from which twenty ounces of yellowish-green pus were evacuated. The abscess cavity extended downwards into Douglas's pouch, and upwards to a distance of two inches above the level of the umbilicus. The inner surface of the wall of the abscess was at the upper part rough and irregular; smooth below. The whole abscess was deeply seated, the abdominal viscera, matted together by adhesions, lying between it and the anterior abdominal wall. With great difficulty the very friable tissues at the margin of the opening were stitched to the edges of the abdominal incision, the upper part of the abdominal incision being closed by sutures. A glass drainage tube was passed into the abscess cavity. (On the fourth day an indiarubber drainage tube was substituted for the glass one. The abscess cavity contracted very slowly, pus continuing to be discharged freely for several months. On March 10th, 1888, the tube was removed, and the patient was allowed to go home. Pus was still issuing freely from the sinus, which had not closed when I last heard of the patient. I very much regret that I did not operate sooner in this case, instead of waiting for definite signs of suppuration.

The last case (No. 9) of the series was a married woman (Mrs. D—) aged fifty-two, in whom an exploratory incision was made, at her own home near Manchester, on March 9th, 1888, on account of a very large, irregular, solid abdominal tumour, accompanied with ascites and oedema of the lower extremities. The swelling was first noticed about Christmas, 1887, and had grown with great rapidity. The patient was a stout, heavy woman, with pale flabby tissues and weak circulation. The operation was undertaken almost as a forlorn hope. The abdominal cavity was found to be filled with cancerous growth, which it was impossible to remove. An enormous quantity of ascitic fluid was allowed to drain away, and the incision was then closed. The patient quickly sank, and died twelve hours after the operation. Under any circumstances she could not have survived many days.

The mortality in this short series of cases was excessively high, but it must be allowed that the proportion of desperate cases was altogether unusual. Of the five patients who died, three were the victims of malignant disease. Had I been solicitous for favourable statistics, I should in each of these cases have declined to operate. It is not, however, in my opinion, the duty of an operator to select his cases with a view to enhancing his own reputation, but to take that course which in each case appears to him the best for his patient.

Brook-street, W.

A CASE IN WHICH THE GLADIOLUS WAS TREPHINED FOR PUS PENT UP IN THE ANTERIOR MEDIASTINUM.¹

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Mrs. X—, aged thirty-five years, tall, fairly well nourished, and of energetic habits, was a patient of my friend Dr. Jardine of Richmond. She was admitted to St. Thomas's Home for surgical treatment. I saw her first on August 31st, 1887. She complained of a discharging abscess over the front of the upper part of the chest,

accompanied by constant and severe pain and great tenderness along the breast bone; also of fever, anorexia, general malaise, loss of strength, and want of sleep. The notes of August 31st are as follows: "Two years ago (after the birth of the last child) she had a severe illness, and was in bed for more than three months suffering, she says, from 'inflammation of the lungs.' Since that time she has never been quite well. Three months ago, after she had experienced for many weeks a good deal of pain in the middle of the chest, a lump about two inches in diameter formed over the upper part and left side of the sternum. This was treated in various ways, but the skin becoming involved, an incision was made by Dr. Jardine, and much pus evacuated. Since this time—that is, since two months ago—a sinus has formed, through which pus daily escapes in variable quantities. During the last three or four months she has suffered more or less continuously with fever, which she described as 'Mauritius fever,' having had much experience of a like character in that island in former years. She has had several children and no miscarriages. The family history is good. There is no tubercular taint, and with the exception of the illness here described, that following the last confinement and the 'Mauritius fever,' she has always enjoyed good health. The pulse is 100; temperature 100°; tongue slightly furred. The skin over the front of the sternum and for about eight inches beyond its left border is red, oedematous, and apparently undermined. A sinus, whose external opening corresponds to the site of the incision which had been made two months before, leads down to the left second costal articulation, where bare bone can be felt, and the probe, when appropriately bent, can be passed still further into a space behind the gladiolus. The sternum itself is acutely tender to palpation, and is the seat of a constant dull aching pain. Pain is caused by a deep inspiration or any movement of the shoulders and arms or abdomen, which involves a muscular strain on the sternum. Three or four days ago another swelling was noticed to be forming over the left fourth, fifth, and sixth costal cartilages. This has been gradually increasing in size, and all the tissues around are inflamed, red, and 'boggy.' For several days the discharge from the old sinus above has been less copious than usual. No other abnormal signs are present except some doubtful friction, pleural or pericardial, over the middle line in front. Hot fomentations locally and quinine internally were ordered."

Two days later, the general and local state not having improved, the patient was placed under ether, the sinus freely opened up, and the lower "boggy" swelling incised. The probe then travelled easily between the left fourth and fifth cartilages, close by the left border of the gladiolus, into the anterior mediastinum, as it did when passed through the upper sinus. Chlorinated soda poultices were now applied, and the prone position enforced as much as possible; it was hoped that in this way a free discharge of pus would be encouraged.

During the next three days no marked change occurred. The amount of pus which escaped was certainly not large, but the poultices gave a good deal of relief and local comfort.

Sept. 6th.—More pain. Less pus. Had a slight shiver in the afternoon. Temperature 102.4°. Feels very ill and weak. Complete anorexia. Larger doses of quinine ordered.

7th.—Condition much the same. Evening temperature 104°.

8th.—Since last note the temperature has not been below 102°, and this evening a rigor occurred in which the thermometer registered 103°. Sinuses almost dry. Oedema and boggy swelling increasing over front of chest. Dr. Hobhouse examined the chest, and found râles generally over the lungs, and friction sounds in front over their anterior borders. Sternum exquisitely tender. No percussion possible. Some pain complained of about left shoulder joint.

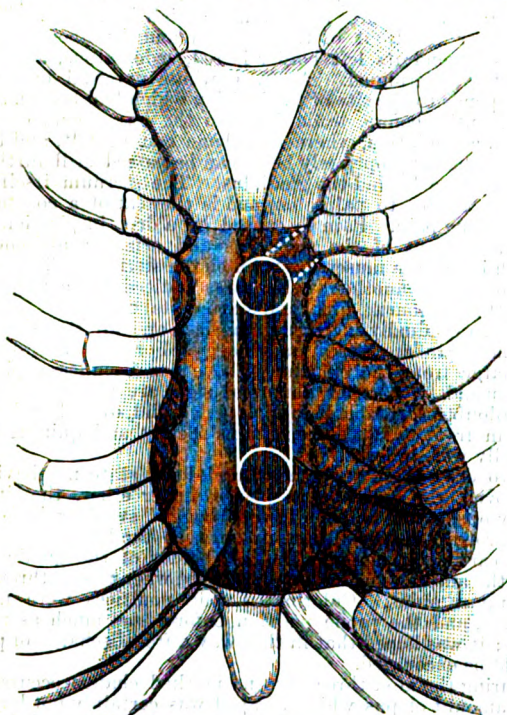
9th.—Another rigor. Temperature 103°. Pain and stiffness of left shoulder increased. No appreciable swelling of joint. Lung signs as before. Patient seems very ill.

10th.—Another rigor this afternoon. Temperature 104°. Mr. Pitts, who saw the case to-day, agreed with me that the mediastinum must be explored for pus, which was apparently there pent up.

11th.—Temperature 101°. The patient having been placed under the influence of ether, the two wounds were connected by a curved incision, the convexity of which was towards the right, so that the centre of the sternum was

¹ Read before the Medical Society, October 15th, 1888.

exposed. A transverse cut was afterwards made to give more room. The gladiolus having been cleared of the superficial tissues, the periosteum was raised from the median line and pushed outwards on each side by an elevator. There was as yet no sign of disease; the anterior surface of the bone seemed quite healthy. A trephine (a little less than five-eighths of an inch in diameter, which would make an opening through which my finger would easily pass) was then placed over the upper part of the gladiolus a little to the left of the median line. After it had passed through the outer layer of compact tissue it soon became evident that the cancellous tissue beneath was carious. The circle of bone removed was very thick (more than a quarter of an inch), and permeated with pus; its inner surface was eroded. It was then determined to remove another circle of bone lower down (see diagram), and to cut away the portion of bone intervening between the two openings made by the trephine, so as to obtain ample room for exploration. The bridge of bone between the first trephine hole and the second left costo-sternal articulation, into which the probe had been previously passed, and which was diseased, was also cut through by the forceps and taken away. On looking



The portion of bone removed is shown by white lines. The normal position of the lungs and pericardium is indicated. (Half natural size.)

now into the anterior mediastium, a layer of thick creamy pus was seen on the front of the pericardium, and, on passing the probe through the lower sinus, it was seen to emerge above much of the pus, which was collected in largest quantity below the level of the inferior trephine aperture, and which had no doubt gravitated downwards as far as the lower limit of the inter-pleural space. The purulent collection was carefully syringed and wiped away. On exploring with the finger the posterior surface of the sternum the entire posterior aspect of the gladiolus was found to be carious. A Volkmann's spoon was then bent to the required angle and introduced into the mediastium, and the whole of the carious tissue removed, the spoon being guarded by a finger from injuring the pleura or other important structures. This took some time, and a by no means small quantity of carious material was brought away. The left second costo-sternal articulation was also scraped. When no more soft or diseased bone could be scraped away, the cavity was irrigated with sublimate solution (1 in 1000) at 100° for some time. Sublimate wet dressings (1 in 1000) were then gently packed in through the sternal opening to fill the mediastinal space, whilst a dry dressing of the same character was applied externally.

I need not give the details of the convalescence. The patient made a rapid and complete recovery. By the end of December she had regained her strength and the large wound had completely healed. The temperature never rose above normal. In forty-eight hours no râles in the lungs and no friction sounds in front were audible. The opening in the sternum seemed gradually to be filled in by fibrous tissue. The local treatment consisted in sublimate irrigation (1 in 1000) twice a day until the fluid could no longer gain access to the mediastinum. The dressing was wet (1 in 1000) sublimate gauze until nothing could be passed beyond the sternum. Care was always used to wet only that portion of the gauze which passed within the chest, so as to avoid any irritation of the surrounding skin. Occasionally the dressings caused pain (for which fact I can offer no explanation), when they were changed to carbolic, eucalyptus, or iodoform for a day or two; but the daily morning and evening sublimate irrigation was never suspended. The healing process was practically completed without suppuration.

This lady is now in the West Indies. I heard of her the other day—that is, about thirteen months after the operation,—and she is quite well.

Remarks.—Though caries, gummatous periostitis, and necrosis not rarely attack the sternum, I do not know of any case exactly like the above, or one in which such radical treatment has been applied to the posterior surface of the gladiolus. I took it from the first that the illness of the patient two years before I saw her had been puerperal or septic in origin, and had left some focus of disease in the inter-pleural space. Caries of the posterior surface of the gladiolus seemed to be the most likely cause of her condition; but the fact was not lost sight of that it might be due to breaking down of lymphatic glands, or possibly some still more obscure affection. The history of Mauritius fever increased the difficulty of diagnosis. The indications of pus retention were, however, pretty plain, and the critical state bordering on pyæmia to which she was reduced necessitated prompt and active measures for her safety. At the operation, on examining the lateral or pleural boundaries of the anterior mediastinum, they appeared to be thickened and pushed away from the median line, leaving the whole posterior surface of the gladiolus exposed. The thickening of the pleura was no doubt due to the fact that the membrane had formed for three months part of the wall of the abscess cavity; and it had an important bearing on the risk involved in injuring the membrane during the operation which I carried out. By scraping the posterior surface of the gladiolus I could not hope to eradicate all the germs of the disease; and the completely successful issue of the case was, I think, in no small degree due to the constant association of the diseased surfaces during convalescence with corrosive sublimate. The sternum has been trephined for abscess or foreign body in the mediastinum, for paracentesis pericardii, and the operation has been suggested in order to facilitate the ligation of the innominate. The two prominent symptoms of mediastinal suppuration appear to be dyspnoea and constant severe pain. Mr. Hilton¹ published a case in 1863 of sternal caries in a medical man, in which for many months the diagnosis was uncertain, but in which the above symptoms were present. Mr. Marshall,² in a lecture delivered at the Brompton Hospital for Consumption in 1882, pointed out the difficulties surrounding the correct diagnosis of some cases of mediastinal abscess, in which an intercostal bulging devoid of all signs of inflammation has an impulse on coughing, or an apparently expansile pulsation communicated from the heart. Dr. Eustace Smith³ published in 1884 the case of a child who died from suppuration of the mediastinal glands in the East London Hospital for Children. The pus pointed at the second left interspace and at the episternal notch. The disease was tubercular. A mediastinal abscess has been said to have been discharged through the foramen sternale,⁴ an opening in the lower part of the gladiolus, which is occasionally present as a developmental defect. Many of the cases of mediastinal abscess, whether acute or chronic, and whether associated with sternal caries or not, have a distinct history of traumatism. Dr. Goodhart⁵ in 1876 showed at the Pathological Society a specimen of diffuse mediastinal inflammation. The disease had proved

¹ THE LANCET, vol. i. 1863.

² Ibid., vol. i. 1882.

³ Medical Times, vol. ii. 1884.

⁴ Treves' Surgical Applied Anatomy, chapter on Thorax.

⁵ Path. Soc. Trans., vol. xxviii.; and THE LANCET, vol. ii. 1876.

rapidly fatal, and had commenced a few days after the man had received a severe blow on the sternum. Dr. Goodhart quotes from Dr. Pye-Smith, who collected fourteen cases of mediastinal suppuration from the post-mortem records of Guy's Hospital. No fewer than seven of these were acute cases. Mr. Walker⁶ read before the Sheffield Medico-Chirurgical Society in 1884 a case of mediastinal abscess, with pleurisy, following a blow on the sternum; and the late Sir W. Ferguson⁷ reported in 1858 a case of caries with abscess, due to the impact of a cricket ball, which he successfully treated by gonging away the disease. Perhaps the most remarkable case of mediastinal suppuration on record is described by Dr. Cooper.⁸ A gun exploded, and a large piece of iron lodged in the mediastinum of a man and set up extensive suppuration. As a last hope, an operation was performed, sufficient bone being removed to allow of a free exploration. A large quantity of pus was evacuated. The piece of iron was discovered resting against the descending aorta, behind the heart, and was extracted with the greatest difficulty by forceps!! The patient made an excellent recovery. Dr. Marks of Milwaukee⁹ describes a case in which he made two trephine holes through the lower part of the gladiolus in order to remove a bullet from the anterior mediastinum of a man. It had lain there for a long time, producing constant suppuration. Its situation had not been determined, in spite of many examinations by different surgeons, until Dr. Marks passed along a sinus leading into the chest the stem of an ordinary clay pipe, which on withdrawal showed unmistakable signs of the presence of lead. The patient after the extraction of the bullet quickly convalesced. In conclusion, I may remark that it appears that those cases of mediastinal abscess which have been operated upon—or in other words, freely drained—have recovered; whilst those in which no operation has been done—or in other words, those in which the pus has been unable to escape—have died. This statement clearly defines the danger of allowing pus to be pent up in this region as elsewhere, emphasises the need for and the success attending prompt surgical interference, and claims the mediastinum as fit ground for the exercise of the surgeon's art.

Harley-street, W.

CASE OF SYMMETRICAL GANGRENE (RAYNAUD'S DISEASE).

BY JOHN J. WEAVER.

HOUSE SURGEON, SOUTHPORT INFIRMARY; LATE HOUSE SURGEON,
OLDHAM INFIRMARY.

THE following case has been kept under observation for over sixteen months. I am indebted to Dr. Fort of Oldham for permission to make notes of the case while the woman was under his care as a private patient, and although, at my request and with Dr. Fort's permission, she came on several occasions to the Oldham Infirmary, she was at no time an infirmary patient. The case presents some symptoms which, I believe, have not previously been recorded in connexion with this disease.

D. H—, aged forty-five, has been a widow for the last ten years, and is now living with her daughter. Her occupation consists in doing the housework at her daughter's and occasionally a little washing. Has always had good health, having had no previous illnesses beyond slight colds. There is no history of rheumatism, syphilis, chilblains, or gout, and she has not been exposed to malaria. She has always lived either in Manchester or Oldham. The patient states that she has been in pretty easy circumstances, and has never had to work very hard. She could always get plenty of food. As to alcohol, she says that she has been drinking warm porter lately; previously she took a little whisky now and then. I had no reason, however, to think she was in any way given to excess. She has not been exposed to wet or cold, and there is nothing injurious in her dwelling or surroundings. The woman is the eldest of thirteen children; six sisters and one brother are living and healthy; the others she knows

little about. She was married at twenty years of age. Her husband died, aged fifty-five, from "bronchitis" (two winters). She has had six children, the last two being twins; four are living and healthy. The twins died, one from "teething" when fourteen weeks old, and the other from scarlet fever when two years old. No miscarriages. No history of similar or any related (nervous or vascular) disease in family. The patient's father died, aged forty-two, from "ulcerated throat" (had a silver tube in the throat); her mother died, aged forty-nine, from "natural causes" ("asthmatical and bad cough"). The patient says that she had been feeling poorly for three or four weeks; her appetite failed, and her fingers at times would feel stiff. On New Year's Day (Saturday, Jan. 1st, 1887) she went out to shake carpets, and found that her hands became stiff; she could move the fingers, but could not hold anything. On the following day (Sunday) she got up early in the morning, and began washing the children (her daughter's) in warm water, and soon her fingers began to feel stiff, and, in addition, now became very painful (the first feeling of pain in them), so that she "had to give up doing anything." The whole length of the fingers and the ends of the thumbs were painful. The pain was described as "like after snow-balling," and the fingers were blue-looking and cold. She warmed her hands and put her fingers into mustard-and-water; the pain was then "dreadful." The same night (Sunday) she could not sleep on account of the pain; the fingers, as soon as they were made warm by putting them against the body, became exceedingly painful, as though someone was "sawing them off." The pain generally commenced in the right hand, but in a few minutes afterwards would follow in the left hand. She always knew that when it had commenced in one hand it would soon begin in the other. While the pain lasted she was always very thirsty, and would drink a pint of tea in a short time. On the second night she drank freely of port wine, "about a gill," with quinine in it. She volunteered the statement that, though she drank freely of this, it did not make her sleep or feel intoxicated. This state of things lasted on and off for three weeks, there being also two or three attacks of pain during the day, but the worst at night. The patient always prepared something to drink when the pain came on; a small wineglassful at a time would quench the thirst. She called in Dr. Fort on Tuesday (Jan. 4th). The hands were rubbed during the first week, and medicine taken. During the second week the hands were wrapped in cotton wool and dry mustard, and linseed-meal poultices were applied during the third week. The patient states that the poultices then gave most relief. About a week after the first application of the poultices, the fingers in their whole length, from the metacarpo-phalangeal joints downwards, swelled up "like bladders." The patient thought the doctor would have pricked them when he came. They remained swollen about twelve hours, and then the swelling went down as suddenly as it had come on, and the skin then appeared to dry up. The skin on the palmar surface of the fingers and thumbs, from the metacarpo-phalangeal joints down to the last inter-phalangeal joints, then began to peel, and the ends of the fingers below the peeling began to turn black, but did not peel. The skin on the dorsal surface of the fingers and thumbs was rough, but did not peel. There was pain in the thumbs at the same time as in the fingers, but it was not so great as in the fingers, nor did they turn black. If the thumbs, however, were left out of the poultices they began to ache very much. About this same time, as the hands began to get a little easier, a "jumping pain" commenced on the plantar surface of the patient's heels, and when she put her feet near the fire the big toes of both feet smarted and "lurched" (just as the fingers had done) at their ends. There was no pain in the smaller toes. She put her feet in mustard-and-water, and also rubbed the heels with dry mustard; the heels hurt "like pins-and-needles" when she walked. The pain in the feet lasted about a week.

Present state (March 5th, 1887).—The patient is a thin woman of blue-looking complexion, as though cold. Nose blue, and some acne on nose and face. She states that she has never been very stout, but thinks herself thinner than last six weeks than she has ever been before. During the last winter she has not felt so well as formerly. Right hand: There is a dry, black slough on the palmar surface of the first finger, extending above the last inter-phalangeal joint; on the dorsal surface of the same finger a brown discolouration extends a little above the nail. The skin is

⁶ THE LANCET, vol. I. 1884.

⁷ Ibid, vol. I. 1863.

⁸ Trans. Med. Chir. Association, San Francisco, 1857; see also *Ranking's Abstracts*, vol. I. 1868.

⁹ *American Medical Record*, June, 1888; and *Medical Record*, U.S.

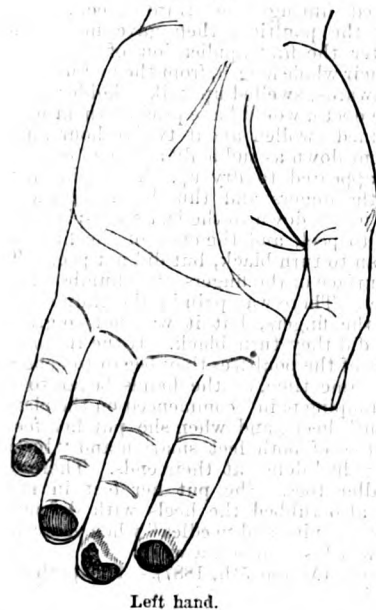
peeling off about a quarter of an inch further on to the finger than the slough extends. There is a small slough on the end of the ring finger, and a larger one on the tip of the little finger. There is a distinct depression (just shown in Fig. 1) on the end of the middle finger, but no slough. The patient cannot pick up a pin—cannot feel it. She feels

FIG. 1.



pressure on the ends of the fingers, as they are rather sore. Sensibility of thumb, middle finger, and palm of hand unaffected. Left hand: There are sloughs on all four fingers; none of these sloughs extend round to the dorsal surface of the fingers. (Fig. 2.) Nails normal on thumbs and fingers of both hands, except on the first and little finger of the right

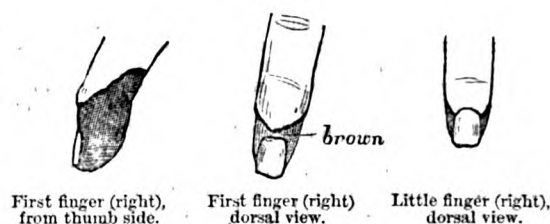
FIG. 2.



hand; the patient states that they are not growing on these. (Fig. 3.) Pulses at wrists: In the right forearm there is a distinct radial pulse, and a faint ulnar pulse; in the left forearm the radial pulse is with difficulty felt, but there is a distinct ulnar pulse. The feet are cold; no sloughs. She states that her feet are always cold. The posterior tibial arteries are easily felt at both ankles; the dorsal artery of the foot

is distinctly felt in the right foot, but not in the left. Renal system: The patient has always passed a large quantity of urine; had to get up once or twice in the night for the last ten years. Never noticed anything peculiar about her urine during her illness; no hæmaturia. Urine (examined March 7th, 1887): Sp. gr. 1018; acid reaction; no albumen

FIG. 3.



or sugar; slight cloud of mucus; nothing microscopically. The last time of menstruation was in the first week of the new year, during the present illness: twice together then within a short time. On the second occasion she states that she lost a large quantity of blood, "just like a confinement," and felt much weakened by it. The hæmorrhage lasted three days; she took medicine for it. She had been very regular previously; has seen nothing since. As regards her mental state, she says that her memory is not good; also that she is easily made nervous by the children crying. She has slept very well since she began to get better; she slept very badly, constantly waking and dreaming, for about a month before the illness began; previously she had always slept well. Hearing good. Sight good; reads small print; never uses glasses. The optic discs could not be examined on this occasion on account of the patient's oversensitiveness to the reflected light of the mirror: pupils small. Knee jerk normal and well marked; no ankle clonus. No affection of joints; patient walks well. Heart normal; no murmur. Pulse 96 per minute. No sign of arterial degeneration, excepting the condition of the arteries in the forearms. No eruption on the skin, which is in a normal state of moisture; no discolouration (except fingers). Lungs normal at apices and bases; she states that she has an occasional winter cough. Bowels regular; appetite good until two or three weeks before illness; could eat "nothing" during illness; no diarrhoea at any time; no vomiting.

Treatment.—From Dr. Fort I learnt that during the earlier part of her illness the patient had been "very nervous and excitable," and that her pulse was very feeble. The medicine prescribed was as follows: quinine; ergot for a few days while the menorrhagia lasted; afterwards iron and digitalis. Some days the patient kept her bed, but generally got up. Her diet consisted of beef-tea and broths for three weeks, rice puddings, not much solid food, principally fowls. She was taking iron at the end of the second week before commencing to poultice the hands.

On March 7th I saw the patient at the infirmary. Just after coming in (not a very cold day) the fingers of both hands from the metacarpo-phalangeal joints to the tips of the fingers were of a peculiar stony-blue colour, and very cold. In the right arm there was distinct pulsation, though weak, in the radial artery, and a faint ulnar pulse; in the left arm the radial artery was hardly to be made out, but there was a distinct ulnar pulse. In the feet the posterior tibial arteries were distinctly felt in both; the dorsal arteries were not felt in either foot. On examining the eyes after putting a few drops of atropine into them, the pupils dilated up well, but unevenly, more especially the left pupil. On the pupillary edge (nasal side) of the left iris a small linear patch of pigment was noticed. The patient states that seven or eight years ago she had "pain and inflammation" in her eyes, which lasted about a week. It came on after a day's washing, with a pain coming from the "back of the head into the eyes." She did not consult a doctor for it, but bathed the eyes, and the attack passed off. The optic discs (by the indirect method) appeared redder and less distinct than normal; the vessels appeared obscured in both discs (more extensively in the right than the left) on the nasal (real) side of the discs; the edge of the disc could not be made out in this part. On the temporal edge of the right disc a curved line of pigment, also a small arterial twig running from it towards the centre of the disc, could be clearly seen.

July 11th.—State of fingers: All sloughs, except that on the end of the first finger of the right hand, have now disappeared, leaving flat white scars; nails growing on all fingers but the first finger of the right hand; the fingers still easily become blue when cold. No pain in the toes now. The condition of the forearm arteries at this and other dates is given in the table.

Sept. 29th.—After some delay, caused by the change of the patient's address, Dr. Little, of Manchester, kindly examined the patient's eyes for me, and found them then as follows: "There is no optic neuritis; the fundi are normal. There is hypermetropia about $\frac{1}{2}$, and presbyopia $\frac{1}{2}$. The discs are vascular, as they are often in hypermetropic eyes. I observe there is an iritic adhesion in the left eye, showing a former iritis, but it has done no harm to the sight."

Nov. 7th.—The patient is looking and feeling much better; looks fuller in face, and has lost the cold and blue look; the acne about the face has disappeared. The hands are warmer than usual, though the day is damp and cold. The slough from the first finger of the right hand came off in August without loss of bone, but of the whole pulp of the finger. The fingers are now all normal, except the first and little fingers of the right hand, which are very pointed and have badly formed nails. Up to this date there has been no return of menstruation. The patient dreads the approach of winter. She states that on one occasion lately, on going out of doors without much covering on her arms, she had an attack of pain and loss of use of one hand, but the attack passed off without further injury.

Dec. 1st.—Saw the patient with Dr. Fort. We carefully examined the median and ulnar nerves of both forearms, but could detect no tenderness along their course. If anything, they appeared less sensitive to pressure than usual. The forearm arteries were also again carefully examined, and found as recorded in the table. The grasp of the hands is good, but the patient states that she has not so much power in the hands as she used to have; they feel weak "about the wrists." Lately she has felt pains in the feet, and has put them into mustard-and-water. She has been taking for some weeks a mixture containing half-drachm doses of liq. hydrarg. perchloridi, with four-grain doses of iodide of potassium.

22nd.—The above mixture has lately been changed by Dr. Fort to one containing six-grain doses of iodide of potassium with infusion of calumba. Pulse 100 per minute; the pulse where felt cannot be obliterated by pressure. Veins of arms normal. Being anxious to try the effect of nitro-glycerine, I gave the patient one nitro-glycerine tablet (containing $\frac{1}{15}$ min.). Ten minutes after taking it no effect had been produced on the arteries or on the pulse-rate. A second tablet was then given her; still no effect was produced, except perhaps that the left radial pulse could be felt faintly. The pulse-rate before and twenty minutes after taking the two tablets was 100 per minute. Left twelve tablets with patient; one to be taken occasionally when the feeling of pain and coldness in the hands came on.

April 2nd, 1888.—Saw the patient at Oldham. Pulse-rate 92 per minute. She states that she began to menstruate again the early part of January of this year. Had not "seen anything" till then since the same time last year. The menstrual hæmorrhage was very copious in January and February of this year; it had been slight the last two months. Since the menstrual discharge in January her feet have felt sore and cold; she has had to wear slippers instead of her ordinary boots; also has had aching pain in the shin bones. She noticed nothing of the nature of sloughs in the menstrual discharge. She says that she cannot now handle anything that is cold; a numbness comes over her hands if she does. The patient is anæmic and looks ill. She has acne pimples on the face, just as she had during her illness last year. She considers that she has been as ill as she was last year, but that this year her hands and feet have escaped. She states that the nitro-glycerine tablets, which she took when she felt her hands becoming cold and painful, gave her a sense of warmth. She attributed the recurrence of menstruation to the fact that she had been taking wine more freely at the time.

July 26th.—Dr. Fort states by letter that "the patient is in good health at present, and has remained so since you last saw her. I am quite of your opinion that the condition of the arteries is improving."

Remarks.—The above case differs from previously recorded cases of symmetrical gangrene in the fact that, in addition to the usual symptoms of the disease, there were also

present menorrhagia and the peculiar, apparently spastic, condition of the arteries of the forearm. With regard to the menorrhagia, it seems to me to be allied in nature with the hæmaturia observed in several other cases of this disease, and perhaps also, taken in connexion with a case recorded by Dr. Collins Warren (quoted in St. Bartholomew's Hospital Reports, 1880, vol. xvi., p. 23), in which hæmorrhage from the nose took place, "frequently for over a period of two weeks" before the affection of the fingers began, points towards a hæmorrhagic tendency in the disease. The condition of the forearm arteries in the above case was considered peculiar, and was all along very carefully noted. The following table gives at a glance their condition at different dates:—

State of Pulsation in Arteries of Forearm.

	RIGHT ARM.		LEFT ARM.	
	Radial.	Ulnar.	Radial.	Ulnar.
March 5, 1887	Distinct	Faint	Very faint	Distinct
" 7 "	"	"	Hardly to be felt	"
July 11 "	"	"	Faint pulsation in both.	"
Nov. 7 "	"	Doubtful if felt	Cannot be felt	Distinct
Dec. 1 "	"	Cannot be felt	Doubtful if felt	Very faint
" 22 "	"	"	Cannot be felt	Distinct
April 2, 1888	"	Very faint	Faint	"

From this table it will be seen that while the right radial artery and the left ulnar were generally normally distinct, considerable variations took place in the right ulnar and left radial arteries. The fact that these two latter arteries were at one time patent and at another time not to be felt appears to me to point to the affection of the arteries being of a spasmodic nature. If this is so, the observation is of interest in connexion with the observation in one case by Raynaud¹ of spasmodic contractions of the retinal arteries, contractions, however, alternating with the local attacks in the extremities. Several cases of Raynaud's disease observed in this country having been syphilitic, and on account of the presence in the above case of evidence of old iritis in one eye, and the condition of the forearm arteries, the question of syphilis was kept carefully in mind both by myself and Dr. Fort. We could, however, find no further evidence whatever of such a taint. The prognosis in symmetrical gangrene is not so invariably favourable as is generally stated, or as is implied in the statement of one observer that "life is not endangered by this disease, no fatal cases having been recorded."² In this country several fatal cases have been recorded.³ The body of a child who had died of the disease was shown at the Pathological Society of London by Dr. Southey.⁴ With regard to treatment, the intense pain in the extremities in the early stage of the disease seemed best relieved locally by friction. Warmth was then unendurable. Dr. Barlow in one of his cases found friction with cold water shorten the attacks.⁵ As general treatment, iodide of potassium, though perhaps not given in sufficiently large doses, seemed of doubtful use. A good deal of improvement in general health observed in the summer months disappeared again as winter approached. The nitro-glycerine given in December last, when the patient appeared threatened with another attack, though apparently having no immediate effect upon the arteries, possibly had some influence in preventing further destruction of the extremities during the following winter. The recurrence, however, of free menstrual hæmorrhage shortly after its administration, and after the absence of such hæmorrhage for twelve months, seemed to me to contra-indicate a continuance of the drug.

Southport.

¹ Archives Générales de Médecine, 1874, p. 11.

² Pepper's System of Practical Medicine, vol. v., p. 1262.

³ Brit. Med. Jour., vol. ii. 1882, p. 1167; and vol. i. 1886, p. 70.

⁴ THE LANCET, vol. ii. 1882, p. 1086.

⁵ Trans. Clinical Society, London, 1888, vol. xvi., p. 179.

MEASLES IN THE POTTERIES.—Owing to the continued epidemic of measles in the Potteries district, the Hanley School Board has decided to close all schools under their control, and to recommend the closing of all Sunday schools.

THE CHEMICAL INCOMPATIBILITY OF ANTISEPTIC AGENTS.

By PERCY BOULTON, M.D., M.R.C.P. LOND.,
PHYSICIAN TO THE SAMARITAN FREE HOSPITAL.

THE question of the utility of antiseptic agents is one of exceeding interest, so much so that the medical press teems with papers on the subject, and one of the latest of these appeared in the *British Medical Journal* on April 28th, 1888, by Dr. Boxall. In July, 1867, I wrote to THE LANCET that I had found that iodine in solution was bleached by carbolic acid. This was not then known, and I considered it likely to be valuable, as the carbolised iodine was available for many purposes where iodine was inadmissible owing to its staining properties. I have used this combination ever since, and iodised phenol frequently for intra-uterine medication; and it is rather startling, after twenty years' experience and most excellent results, to be told by Dr. Boxall that the substances are incompatible and probably inert. Perchloride of mercury is not an elementary substance, but is usually obtained by the action of common salt on sulphate of red oxide of mercury. The union of carbolic acid and iodine forms a colourless salt, which is soluble in water, and which, I believe, an active but perfectly safe antiseptic. Mr. E. Owen has employed it, and speaks favourably of it in his "Surgical Diseases of Children" as an antiseptic lotion in abscess connected with diseased vertebrae, and also in a more recent paper on psoas abscess. Mr. Walsham has lately reported its use for washing out the peritoneal cavity. I have employed decolourised iodine repeatedly for washing out large parametric abscesses, always with good results; and I use it both for vaginal and intra-uterine douching in midwifery practice, in the following proportions: liq. iodi, 2 dr.; sol. acidi carbolici (1 in 20), 2 oz.; aquæ ferventis ad 20 oz. The iodine is added to the hot water and makes a strong mahogany-coloured solution. When the carbolic solution is added it speedily becomes as clear as drinking water. No doubt a chemical change takes place, for the air of the room and the clothes of those in it are impregnated with an iodine-like odour, which in midwifery practice I consider one of its most valuable properties. I think that a portion of the free iodine is vapourised, not fixed, as Dr. Boxall suggests, and that the solution contains what for convenience may be called carbolate of iodine. The change takes place equally well in a closely stoppered bottle, so that it is pretty certain that the iodine is not entirely lost. Dr. Apjohn, Professor of Chemistry in Trinity College, Dublin, made an analysis in 1870, and reported that the solution contained a considerable quantity of iodine in combination with carbolic acid; moreover, the sense of smell and taste will convince anyone that the solution contains these and is potent. Be this as it may, the resulting compound is, I am sure, anything but inert. I believe that it is better than either iodine or carbolic acid, having the advantages of both and the disadvantages of neither.

I suppose that none will deny that sublimate solutions have caused many deaths and a good deal of mercurialism of a severe type, with such symptoms as diarrhoea, dysentery, albuminuria, hæmaturia, salivation, &c. In one maternity hospital in London, of 170 cases fourteen suffered from hydrargyriæmia and one died, and I have myself twice seen ugly symptoms following the use of perchloride solutions. Even the strongest advocates of sublimate would not use it post partum repeatedly in the same case, nor in other conditions if the fluid was liable to be retained, and this fact is equivalent to acknowledging that it is a remedy to be used only occasionally with caution and under strict supervision. It is a little too potent for general use. Sanger has proved by experiments on animals that corrosive sublimate is the most dangerous of antiseptics, causing glomerulo-nephritis; and he advises surgeons to avoid using antiseptics in operations on the thorax or abdomen, and suggests the use of a solution of common salt. In my opinion the carbolic iodine solution is by far the best general antiseptic in the lying-in chamber.

I cordially agree with Dr. Boxall, and join with him in saying, "Let the chemists tell us the nature of the bodies produced, and let the germiculturists determine their anti-

septic value"; but it is well to remember that the human body and a test tube are not the same thing. The late Hughes Bennett showed by laboratory experiments that calomel did not act on the liver, but few practitioners would endorse this, nor do I admit that twenty years' experience counts for nothing as against any new theory of incompatibilities. My notion of incompatible substances is that they either precipitate each other or form poisonous or inert compounds. The mixture of carbolic acid with iodine does none of these things. While on this subject, I may add that I know no greasy preparation which is at the same time so efficacious and so harmless as this: iodoform, 1 dr.; ol. eucalyptus, 1 dr.; vaseline, 1 oz. It may be a mixture of incompatibilities, but I have learnt to trust it in a manner which has given me much peace of mind and satisfaction. Whenever it is necessary to plug the vagina, it is only required to smear the tampons with this to be certain that they will remain absolutely sweet for twenty-four hours. This is an experiment which does not require an expert.

Seymour-street, W.

CASE OF
CHRONIC GASTRITIS WITH DILATATION.

TREATED BY INDUCING A POULTICE RASH ON THE
EPIGASTRIUM; CURE.¹

By J. G. G. CORKHILL, M.B. VICT.,
RESIDENT PHYSICIAN SMEDLEY'S HYDROPATHIC ESTABLISHMENT,
MATLOCK.

THIS case belongs to a class of cases which, from the difficulty of diagnosis and the obstinate resistance to most of, if not all, the ordinary methods of treatment, is a source of great anxiety and perplexity to the physician, for, in spite of all his best efforts and skill, the patient goes on from bad to worse, until, worn out by care and exhausted for want of nourishment, he is frequently only relieved by the friendly arrival of death. From the symptoms detailed below it may be surmised that the gastric dilatation was caused by the blocking of the pyloric orifice by the inflamed and swollen gastric mucous membrane, which in turn arose from injudicious feeding, imperfect mastication, and irregularity of his habits. The treatment employed in this case is by no means new, but it is still unknown, or only imperfectly known, to the great majority of the profession. No medicine was administered throughout the whole course of treatment. Bread poultices were applied to the epigastrium, and in forty-eight hours a rash began to develop presenting all the characters of miliaria; a day or two later it resembled eczema impetiginodes, and from its surface a purulent, foul-smelling discharge, having a very acid reaction, began to flow. In effect the applications remained the same throughout the whole course of treatment, though in the morning and evening the appliances were renewed, whilst the parts were thoroughly cleansed each time, yet the discharge became thin and serous, and less and less offensive, until at last the rash dried up and disappeared, leaving the patient quite free from all trace of his former dyspepsia. It is evident that something other than a mere local dermatitis was effected by the action of the poultices, for without other applications save those to the epigastrium there frequently develops, as in this case, a general rash over the whole surface of the body, which may vary in intensity from simple erythematous to bullous or even carbuncular inflammation, and which disappears only when the original rash has exhausted itself.

Mr. J. W., aged forty-eight years, came under observation on April 19th, 1888, complaining of great pain in the epigastrium, with feeling of distension, much flatulence and acidity, and the rising of fumes from the stomach having a very fetid odour, besides very frequent vomiting of very large quantities of acrid liquid of a frothy nature. Most members of his family are, or have been, troubled with affections of the liver; no cancerous history. The man is a spinner, and has a good deal of outside exercise. He was frequently much hurried over his mid-day meal, and almost always bolted his food. He partook moderately of alcohol until five years ago, since which time he had been a total abstainer. For the past six or seven years he had

¹ For the notes of this case I am partly indebted to my colleague, Dr. Hunter.

been troubled with indigestion, distension after food, and constipation, off and on, which disappeared after medicinal treatment at home or a visit to Harrogate. Eighteen months ago he "began to belch up fumes," which he called "Harrogate fumes." He was relieved from this trouble from time to time by taking purgatives. Whilst on a visit to Harrogate twelve months ago, vomiting was added to his other symptoms, which continued until October, when it became very much more troublesome, and occurred as often as three times a week. Dilatation of the stomach was then diagnosed, and the stomach was washed out three times a week until January of this year. On Jan. 5th he vomited a very large quantity of matter like "brewer's barn," and then had a copious hæmorrhage from the stomach. He was kept in bed, and in a day or two mustard plasters were applied to the epigastrium, and a mixture containing dilute hydrocyanic acid given internally. At the end of a week he felt better, and was sent to Southport; but again the distension returned, and he saw a homœopath, who ordered a "medicine," a "powder," and "wet compresses" to the abdomen. He seemed a little better, and returned home to Huddersfield, but in four or five days the vomiting again became very troublesome, and there was a second attack of hæmatemesis, though not so bad as the first. In a day or two he was again somewhat better, and was ordered to take Carlsbad salts in the morning, which he did for six or eight weeks. On April 10th the vomiting recurred, and in spite of the fact that he was taking pills of nitrate of silver (half a grain three times a day), it continued and occurred five or six times per diem until his admission, being always very copious and frequently "barmy." Until Jan. 5th his diet had, as a general rule, been as follows:—Breakfast: Bacon, bread-and-butter, and coffee. Dinner: Joint, with vegetables, milk puddings with eggs, and stewed fruits or stewed rhubarb. Tea: Bread-and-butter and sweets, with one cup of weak tea. Supper: Bread and milk, or cheese and bread. Since this date, however, he had lived almost exclusively upon milk and Benger's food.

When first seen, he was emaciated in appearance, anxious and excited about his condition, exhausted from his long railway journey, and had frequent vomiting. He said he had lost 3 st. in weight in the past twelve months. On examination, the heart was normal, but the pulse 100, very small and compressible. The lungs were normal. The tongue was covered with a thick yellow fur. The bowels were regular each morning after taking Carlsbad salts. There was much distension, and almost constant eructation of fetid gases; also very frequent vomiting. Appetite almost *nil*. The liver dulness was quite obliterated by the distension of the stomach. No lump could be felt in the abdomen. The urine was passed in fair quantity; high coloured; clear; sp. gr. 1030; acid; fixed phosphates; no albumen; no sugar.

Bread poultices were applied to the epigastrium night and day, and a hot waist pack every forenoon. His diet consisted of small quantities of Benger's food, alternating with pancreaticised oat flour, every two hours.

April 21st.—A slight vesicular rash, resembling miliaria, has appeared under the poultices. He vomited once on the evening of the 19th and once on the 20th.

May 1st.—Has not vomited since the 20th. The rash now resembles eczema impetiginodes, and for the last four days there has been a copious discharge of foul-smelling pus. Pulse 88, fair. Tongue cleaning. Weight increased 1 lb. His diet since May 26th, for breakfast, consisted of pancreaticised oat flour, with rusks and cocoa from the nibs, and without sugar and milk; for dinner, boiled fish and boiled rice and a little plain rice pudding; and for tea, boiled fish, rusks, and cocoa.

7th.—Feels much better and stronger; he "can now run upstairs." He has no inconvenience after food. The rash is very active, and discharges just as in last note, but the colour is now brown and the consistence very thick. Has gained 3½ lb. in weight. His diet is the same, but to-day boiled fowl has been added. The bread poultices have been discontinued, and wet pads substituted. The day's treatment now is: before breakfast, a tepid spray; in the forenoon, a hot waist pack; and in the afternoon, a tepid spinal sponging.

14th.—The rash is still very active, but the discharge is inodorous, and a papular eruption has appeared almost all over the body, which is very itchy and causes him to lose his sleep. No digestive trouble. Has lost 2 lb. in weight.

21st.—Keeping well, the rash discharging less. Pulse 68, compressible. Tongue clean. Bowels constipated; motions

of a dark colour. Lost 2 lb. more in weight. Stewed apples added to other diet at dinner-time.

June 4th.—Rash discharging very little. No indigestion. Tongue clean. Bowels costive. Has gained 4 lb. since last note. Sleeps now all night.

On June 12th he left the establishment cured.

Matlock.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

AN ADDITIONAL TREATMENT OF POST-PARTUM HÆMORRHAGE.

By RAINSFORD F. GILL, M.B. LOND., M.R.C.S. ENG.

As I feel sure that the following method of treatment in severe cases of post-partum hæmorrhage may be instrumental in saving life, I venture to make it known. It consists in the substitution of rectal injections of saline solution in place of transfusion, or rather in those cases where the performance of transfusion is impossible from want of the necessary apparatus. I feel convinced that it proved efficacious in a case to which I was called a short time ago, and in which, on arrival, I found that the patient had lost an enormous quantity of blood and was delirious, with vomiting &c., so that nothing could be retained. Before I succeeded in stopping the hæmorrhage she was in a very collapsed condition, and on pouring a teaspoonful of fluid down her throat it was immediately rejected. I then thought of using rectal injections, which were rapidly absorbed, so that within two hours she was again conscious and able to retain fluids given by the mouth. I venture to think that if I had not used the injections in this case I should have lost the patient, and it is precisely in such cases where the practitioner is without a transfusion apparatus that the rectal injections are so useful, as he will always be provided with the syringe. I should recommend that only two or three ounces of fluid be injected at a time, and that the injections be repeated every ten or fifteen minutes, using a tepid solution, and of course employing all auxiliary methods of relieving the existing shock to the system.

South Hampstead, N.W.

NOTE ON THE DOSAGE OF CHLOROFORM.

By ALEX. G. R. FOULERTON, L.R.C.P., M.R.C.S.,
RESIDENT ASSIST. SURG., ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

IN THE LANCET for September 1st is published the history of a death under chloroform at Westminster Hospital, the actual cause of the fatal result being asphyxia from occlusion of the larynx by a pharyngeal new growth. In it the following occurs:—"The patient took the anæsthetic well, and in about two minutes and a half was fully under its influence.....the amount of chloroform given was a drachm and a half." In relation to the foregoing, I wish to ask a question, and the more readily here because the death was *under*, and obviously not *from*, chloroform: What is the maximum amount of chloroform that can be safely administered to a healthy adult in a given time? Arising from this is a second: What is the shortest time in which chloroform anæsthesia should be induced? The answers are to me—as one holding the belief that, given a careful administrator and a subject free from cardiac disease, the advantages of ether over chloroform as a general anæsthetic are much exaggerated at the present time—of considerable interest. Looking back through my anæsthetic book, I find that, in the case of adults, the administration of a drachm and a half of chloroform in my hands occupies as a rule about seven minutes, whilst the time which elapses before anæsthesia is perfect varies from five to eight minutes, averaging, however, nearer to the latter than to the former. It may be added, too, that the anæsthetic has always been administered on a single layer of lint, and therefore a smaller proportion of it would reach the lungs than when, as in the case in question, a

Junker's inhaler is used. The practical point which arises from this is, that if in an adult anaesthesia can be safely induced with chloroform in two minutes and a half, then one of the special advantages claimed for ether—viz., saving of time—at once disappears. My own idea is that the sudden introduction into the system of sufficient chloroform to cause anaesthesia in so short a time as two minutes and a half would not be ~~unattended~~ by considerable danger, even supposing that the heart sounds were to auscultation perfectly healthy. And it is in the hope of obtaining from others confirmation or refutation of this that the note has been written. A short time ago I tabulated, for another purpose, 199 deaths from chloroform reported in the medical journals, and occurring chiefly during the first thirty years of its use. In thirty-six of these cases the fatal dose and period are both given. The list, disregarding details as to age and method of administration, is as follows:—

Cases.	Dose.	No. of minutes after commencement of inhalation at which death occurred.
1	0 dr. 20 min.	4
1	0 " 25 "	5
4	0 " 30 "	1, 4, 5, 15
1	0 " 40 "	4
7	1 " 0 "	1, 1½, 2, 2, 4, 4, 20
1	1 " 15 "	4
4	1 " 30 "	2½, 6, 15, 15
9	2 " 0 "	1½, 2, 4, 5, 5, 6, 7, 8, 20
2	2 " 30 "	3, 6
4	3 " 0 "	3, 10, 10, 14
1	6 " 0 "	6
1	8 " 0 "	20

As matter of interest in connexion with this table it may be mentioned that in twenty-three of the thirty-six cases particulars of post-mortem examination are given; in fifteen there was macroscopic evidence of heart disease, whilst in the remaining eight no change of structure was observed. On going carefully through this table, perhaps eliminating one or two cases the accuracy of which one is almost forced to doubt, it will, I think be acknowledged that the majority of the cases possess a common factor—viz., a disproportion between the amount of chloroform given and the time occupied in giving it. The table, on the other hand, is scarcely large enough to permit one to form a very positive opinion upon it alone. The point I would urge is that some definite standard for the administration of the drug should be adopted. If this were done I think that fewer deaths from chloroform would be reported. Personal idiosyncrasy has much to do with the action of all drugs, but that fact does not prevent the Pharmacopœia from laying down standard doses for the guidance of those who may not have had sufficient practical experience to enable them to prescribe active drugs without some hint as to the dose which may be used with safety. Why, then, should so extensively used a drug as chloroform be an exception? My own rule is never to administer it at a faster rate than a drachm in five minutes, and after complete anaesthesia has been induced the quantity necessary to maintain that state falls in converse proportion to the length of time that the operation lasts. And this rule is, I believe, in accordance with the practice of most of those who are in the habit of administering chloroform to any extent.

ON A CASE OF PURPURA HÆMORRHAGICA.

By WILLIAM MILLIGAN, M.B., C.M.,
HOUSE PHYSICIAN, NORTHERN HOSPITAL, LIVERPOOL.

THE following case may be of interest to the readers of THE LANCET.

H. V—, a waiter, aged fifty-three, was admitted into the Northern Hospital, Liverpool, suffering from a severe attack of purpura hæmorrhagica. The patient was a stout, able-bodied man, of temperate habits, and with no specific history. There was a large crop of purpuric spots upon both legs and arms. The eruption, which had been preceded by rheumatic pains, began in the lower limbs, and was suc-

ceeded a few days afterwards by a copious crop of petechiæ in the upper limbs. There was no pain after the eruption appeared. No special cause could be found for this condition. The organs were healthy, with the exception of a history of chronic bronchitis. His diet had been simple, but nutritious, and, according to his own account, he had been in excellent health for some time past. He was put upon ferruginous preparations, and a liberal diet was allowed. For about eight days he seemed to be making good progress, his temperature remaining normal and his appetite good. On the ninth day of his stay in hospital he was suddenly seized with pain in the right side of the abdomen. The lumbar and iliac regions were tender on the least pressure, and there was slight dulness on percussion. Under treatment the pain became somewhat better during the afternoon. About 1 A.M. on the following morning the pain became very intense, the amount of dulness was greatly increased, and the patient appeared to be in a very collapsed state. The pain became more and more intense, the heart's action extremely feeble, and there was difficulty in respiration, followed by a very sudden death.

Necropsy.—The thoracic organs were healthy, with the exception of slight emphysema over the anterior margins of both lungs. The lower half of the small intestine was extremely congested, and towards the ileo-cæcal valve was almost black. The cæcum and ascending colon were also of a very dark colour. On opening up the intestines, they were found to contain a large quantity of semi-fluid, grumous-looking blood, with numerous clots lying in it. This effusion was found in the lower two feet of the small intestine, in the cæcum, and in the ascending colon. The other abdominal organs were healthy.

Remarks.—At all times purpura hæmorrhagica is a severe and dangerous disease, and one must bear in mind that the diseased condition of the capillaries may not only be found in the skin, but also in the viscera, so that the possible occurrence of internal hæmorrhage must not be neglected. Cases have occurred of sudden hæmorrhage into the base of the brain during an attack of purpura, but hæmorrhage into the bowels is rare.

Liverpool.

CASE OF SUDDEN DEATH DURING LABOUR.

By W. McD. ELLIS, M.D. (BRUX.), M.R.C.S., &c.

The following case appears to me to be of sufficient interest to be worthy of record.

Mrs. T—, aged twenty, was delivered naturally of her first child on Oct. 16th, at 1 P.M. She was attended by a midwife, and was allowed to sit up in bed and talk, the placenta not having been expelled. I was sent for at 5 P.M.; and on arrival found the woman dead, the history being that while sitting up talking she had suddenly fallen back, become slightly pale, giving one or two gasps, and then died. There had been no flooding; and from what I could see, the amount of blood lost was very small indeed. The uterus was not enlarged, still contained the placenta, and could be felt about three fingers' breadth above the symphysis. At the post-mortem examination the tissues were of a fairly good colour. The uterus was quite normal, containing no clots. The placenta was adherent over a small area, but not firmly. No laceration of cervix. The heart was quite empty, the left ventricle being firmly contracted, while the right was flabby; no valvular disease. There was no clot in the pulmonary artery. Other organs contained a fair amount of blood. The lungs, with the exception of a small patch of consolidation at the left apex, were normal. Other organs healthy and of good colour. The brain was normal, not unusually pale.

Bath.

OPEN SPACES.—On the 24th ult., Mr. Matthew Walker, chairman of the Local Board, laid the memorial stone of a new public park (comprising six acres and a half) for Pudsey. The total cost will exceed £2200. The Metropolitan Board of Works last week agreed to grant a loan of £15,000 to the Hackney District Board, and £2500 to the vestry of Islington, as contributions towards the purchase of Clissold Park. Loans were also granted by the Board to the vestries respectively of St. Pancras, Hampstead, and St. Marylebone, for the extension of Hampstead Heath, amounting altogether to £55,000.

A Mirror

OF

HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

SARCOMA OF UPPER JAW; OPERATED UPON FIVE TIMES IN NINETEEN MONTHS; NO RECURRENCE FOUR YEARS AFTER THE LAST OPERATION.

(Under the care of Mr. CHRISTOPHER HEATH.)

THIS case is one which affords considerable encouragement to the surgeon in the removal of sarcomatous growths of the upper jaw. Five operations were performed for the removal of a growth described as a myxo-sarcoma and for recurrences. The patient was under treatment for a period of nineteen months, and now, after four years, there has been no further evidence of the disease. Mr. Heath is therefore justified in regarding the patient as cured. A glance at the engraving will show that this has been effected with very little deformity. It is comparatively seldom that such a satisfactory result can be recorded, rapid recurrence being rightly regarded a sign of great malignancy, the recurrent growths being usually softer, more vascular, and of deeper extent. Much depends, in these cases, on the assistance given by the patient himself, who, by recourse to operation in the earliest signs of return of the disease, may hope for ultimate cure.

R. R.—, a man aged fifty-three, was admitted on Oct. 2nd, 1882. There was no family predisposition to new growths. About two years before admission he received a blow from a chain on his right cheek, and in June, 1882, he noticed a swelling of his right cheek just below the eye. This swelling had steadily increased, and on admission to the hospital it was about an inch and a half broad, and extended from the nose in a direct line outwards over the malar bone, passing immediately below the eye, which it partially closed. The growth was fixed to the bone, and the skin over it, though not implicated, was stretched and red. The lymphatic glands in the neck were not enlarged.

On Oct. 4th, Mr. Heath made an incision from the zygoma along the lower margin of the orbit and the side of the nose to the upper lip, which he divided; he then reflected the healthy soft tissues, sawed through the malar bone, snipped across the nasal process of the superior maxilla, and wrenched away the growth with the upper part of the jaw. The bleeding was arrested by ligature and the actual cautery. The wound was dusted over with iodoform. The lip was adjusted with two harelip pins, and the rest of the cheek flap was sutured with silver wire and silk sutures. The parts removed consisted of the nasal process of the upper jaw with part of the nasal bone, the upper part of the antrum with the growth attached, and part of the malar bone and the pterygoid processes. The growth was circumscribed; it measured three inches in the horizontal diameter and two in the vertical; it was growing from the outer wall of the antrum, the cavity of which had not been penetrated. The growth had a faint pinkish colour and firm consistence. The microscopical appearances were those of a myxo-sarcoma. On the second day after the operation the patient's mouth was washed out with permanganate of potash lotion, and afterwards the washings were repeated three times daily. The temperature reached 100° F. on the third day after the operation, but was normal afterwards. The wound healed by first intention, and the patient convalesced rapidly. He was discharged on the sixteenth day after the operation.

The patient was readmitted five months later (March 27th, 1883). He stated that about two months previously he noticed some fulness about his right cheek. On admission, the right lower eyelid was very oedematous, but apparently healthy. The upper margin of the remains of the malar bone and zygomatic arch and the anterior and lower third of the temporal fossa were all obscured by a firm growth.

Posteriorly the growth reached to within half an inch of the external auditory meatus, above to the junction of the upper and middle thirds of the temporal fossa, and below it covered the whole of the malar region and the outer third of the upper jaw. The skin over it was healthy.

On March 29th a horizontal incision was made over the malar bone, and another at right angles to the outer end of this. The flaps were then reflected and the growth exposed; the outer wall of the orbit, the zygoma, and the malar bone were sawn through, and the growth, with the detached pieces of bone, was wrenched away. Diseased portions of the temporal muscle and the upper part of the masseter were then removed piecemeal. The lower part of the orbit was found to be diseased, so a free incision as for removal of the whole upper jaw was made, and, after sawing through the hard palate, the remains of the upper jaw, with the anterior third of the soft palate, were removed. Some masses of growth being still visible, the actual cautery was applied to them and the cavity was packed with lint smeared with Vienna paste. The cheek and lip were adjusted as in the last operation. The plugs were removed, on the day after the operation, and the cavity was syringed out with Condy's fluid. It was afterwards syringed daily with a solution of chloride of zinc, and large pieces of slough were by that means removed. For eleven days after the operation the temperature ranged between 100° and 101·4°, and then kept about normal. The patient made a good recovery, and was discharged on the twenty-fifth day after the operation. The centre of the incision over the malar bone had not healed. The cavity inside the mouth was granulating. The right eyelids were much swollen, and there was a little discharge from the conjunctiva. The patient returned two months later, when his right eyeball was removed, as suppuration had occurred within it. He was discharged on the sixth day.

The patient was admitted again about five months later (Nov. 28th, 1883). He stated that he had noticed a return



of the growth for about two months. Beneath the lower eyelid there was a hard mass about the size of a pigeon's egg; it extended from the free margin of the lid to the scar of the previous incisions beneath the eye. This mass, including the whole of the lower eyelid and the outer end of the upper eyelid, was removed with Paquelin's cautery. Plugs of wool, smeared with chloride of zinc paste, were packed into the wound. The mass removed contained some new growth, but the greater part of it was composed of dense cicatricial tissue. The patient quickly recovered from the operation, and was discharged in about ten days. He, however, returned again in five months (May 6th, 1884), and stated that he noticed a small lump on the lower edge of the wound about two months after leaving the hospital; it had since reached the size of a chestnut; it occupied the lower and outer part of the orbit. The growth was freely removed by cutting round it with the actual cautery. The patient was discharged on the ninth day after the operation.

The man came to see Mr. Heath in June, 1888 (four years

after the last operation), with regard to another matter. There were no signs of recurrence, and the patient had been perfectly well since the last operation. (See engraving.) The woodcut, taken from a photograph, shows the appearance of the patient at the present time, the prominence seen in the cavity of the wound being due to a vulcanite palate fitted by Mr. Hutchinson, which enables the patient to eat and talk with perfect comfort. Ordinarily he wears a black patch over the orbit, and thus entirely conceals the deformity.

SALOP INFIRMARY.

A CASE OF RUPTURE OF THE GALL BLADDER; PERITONITIS; DEATH; NECROPSY; REMARKS.

(Under the care of Dr. EDWARD CURETON.)

FOR the following notes we are indebted to Mr. J. F. Harries, house-surgeon.

A. C—, aged forty-five, was admitted on the evening of Oct. 6th. She said that she had scarlet fever when a child, and, beyond always being subject to bilious attacks, had enjoyed good health until the past two months, when the attacks became more frequent, and were attended with severe pain in the right side, vomiting and straining to vomit, but no marked jaundice. Her friends stated that she had been a free drinker for some years. On Tuesday morning, Oct. 2nd, without any definite cause, she was suddenly taken with acute pain in the abdomen, which was most severe upon the right side. She vomited frequently, and had continued to do so up to the time of her admission. No food had been taken, and the thirst had entirely prevented sleep. The bowels, which had previously been regular, acted at the commencement of the attack, but not since.

Condition on admission.—The patient is a stout woman, and looks older than she is. The skin is dry and slightly jaundiced; she lies upon the right side, with the knees drawn up. The face is pinched and anxious; the extremities are cold and cyanosed. She complains of great pain in the abdomen, which is distended, tympanitic, and very tender, particularly in the hepatic and right iliac regions. Pulse 110, irregular and compressible. Heart sounds feeble. Lungs normal. Temperature 100° 2'. The tongue is dry and furrowed. She has occasional hicough, and rejects all food. The vomited matter is strongly acid, and contains no bile. Urine: sp. gr. 1025; bile stained, and containing one-eighth albumen.

The pain was relieved by a third of a grain of morphia subcutaneously, hot fomentations were applied to the abdomen, and a small quantity of ice was ordered to be sucked. At midnight the nurse reported that the patient had slept two hours. She still complained of great thirst, but the pain was relieved. Another injection of morphia was given at 2 A.M., after which she slept more or less for seven hours. She had vomited three times with much straining. A small quantity of peptonised milk had, however, been retained. She passed about one ounce of urine of the same character. During the following day the patient lay in a semi-comatose condition, only rousing herself from time to time to vomit. No pulse was perceptible at the wrist, and the respirations were hurried and shallow. At 9 P.M. the note is: "Occasionally the patient cries out as if in pain, the pupils are much contracted, and the urine is passed unconsciously into the bed. There has been no action of the bowels, but flatus has been passed. The extremities are cold and blue; abdomen more distended, and dull in the flanks." During the night her condition became worse, and the temperature, which had previously ranged between 98° 2' and 100°, rose rapidly before death, which took place at 8 A.M. on the morning of the 7th.

Necropsy.—An examination of the region of the liver only was possible. The peritoneal cavity contained some serum mixed with bile; the peritoneum was injected, and covered here and there with patches of partially adherent bile-stained lymph. The coils of intestine were congested and adherent to one another. Four gall stones, each about the size of a hazel nut, were found in the right iliac fossa. On examining the under surface of the liver, a rent which would admit three fingers was found in the fundus of the gall bladder; the edges of the rent were irregular. The inner surface of the gall bladder presented a honeycombed

appearance, and its walls were thin and friable. No stone was found in the duct.

Remarks by Dr. CURETON.—This interesting case has been recorded because we were able post mortem to verify the diagnosis arrived at during life, and also as being by no means a common occurrence. The presence of gall-stones in the gall bladder had set up inflammation of its coats, with thinning of the affected structures, the result of ulceration of the mucous surface, ending in perforation, which latter may have been occasioned during some kind of exertion, such as stooping, which would be likely to press unduly on the viscera of the abdomen, more especially in a fat person, and after partaking of a hearty meal.

WEST HERTS INFIRMARY.

CARIES OF SPINE WITH ABSCESS; OSTEOTOMY FOR DEFORMITY OF TIBIÆ; REMARKS.¹

(Under the care of Mr. F. C. FISHER.)

Caries of spine with left psoas abscess.—Mr. Fisher was asked to see C. P—, a girl three years old, in the spring of 1887. The mother complained that the child limped. She had pain and rigidity in the left hip, and jarring the left trochanter caused pain. The case was looked upon as one of early hip disease, and was treated by rest in bed and the application of a long splint from the axilla to the foot, with a weight and pulley. In a few weeks there was free and painless movement in the hips, the child could run about, and all lameness seemed to have gone. In two months the symptoms returned, and it was found on examination that there was a prominence in the situation of the last two dorsal and the two upper lumbar spinous processes. The child was admitted into the West Herts Infirmary on June 30th, 1887. She was put to bed, and kept at rest as much as possible, till July 19th, when a plaster-of-Paris jacket was put on. Slight extension was made by causing the child to hold the rung of a ladder with her hands raised above the head, thus compelling her to stand on tip-toe. She left the infirmary on July 21st. On Sept. 5th it was noticed that she walked in a very crooked manner. She was readmitted, and the plaster removed, when, in addition to the spinal prominence, deep-seated fluctuation could be detected in the left iliac region. Counter-pressure in the loin enabled a swelling the size of a cricket-ball to be grasped. There did not appear to be any alteration in the contour of the abdomen. The temperature was normal. The child was fairly nourished, and did not complain of pain.

At a consultation it was decided to apply a long splint and paint the iliac region with iodine, and wait to see if the fluid would become absorbed. At the end of three months the child was *in statu quo*, and Mr. Fisher decided to open and freely drain the cavity. Accordingly, on Jan. 2nd, 1888, chloroform having been given, an incision was made over the abscess about an inch above the fold of the groin and external to the epigastric artery. After cutting through the muscular structures, the wall of the abscess could be felt, and a pair of sinus forceps were thrust through it, and rather less than half a pint of sweet pus evacuated with a little broken-down tissue. The bodies of the vertebrae and the anterior surface of the transverse processes were explored with the finger, but no carious bone was detected. A counter-opening was made in the loin at the edge of the erector spine, and two large-sized drainage tubes inserted. Strict Listerian precautions were observed.

The wound was dressed daily for the first week, then every other day until Jan. 13th, and after that twice a week. The temperature never rose above 99°. On Jan. 16th there was very little discharge from the posterior opening, and the tube was removed. On the 20th the anterior tube was removed, and on the 23rd both openings had healed. The patient was ordered to be kept in bed. On Feb. 9th there was a slight collection of pus under the anterior cicatrix, causing it to bulge. The cicatrix was opened up under the spray, and about a dessertspoonful of pus let out. The sinus now became very troublesome, apparently healing under a scab, and a little drop of discharge oozing out. This went on until June 9th, when the wound seemed soundly closed, and the child was discharged wearing a poroplastic jacket. After she had been out a week or so the sinus

¹ Abstracted from a paper read before the West Herts Medical Society on Oct. 1st, 1888.

again discharged, and then finally closed. The child was shown to the meeting. The movements of the spine were good, and she walked without any lameness.

Remarks.—Mr. Fisher said that one of the points of interest in the case was that the real disease (pyoæ abscess from spinal caries) simulated hip disease, and so misled him at first. He asked the opinion of the meeting as to the advisability or non-advisability of waiting in these cases as soon as an abscess is diagnosed. With our present system of antiseptic treatment, he believed the wisest course was to evacuate these abscesses at an early date. Even if, after waiting months, one of these cold abscesses did dry up, it always left a caseated mass, liable on any slight irritation to break down and form an abscess. In the ante-Listerian period, it used to be considered a serious thing to open one of these large abscesses, as secondary inflammation of the sac wall and the pyogenic membrane usually took place, accompanied by long exhaustive fever; and, even if recovery ensued, the patient was often the victim of lardaceous disease. It will be an interesting thing to notice, now that we have got rid of some of these long-suppurating processes, if we hear as much of lardaceous disease as we formerly did. Mr. Fisher also called attention to the complete absence of fever after the opening of the abscess.

Osteotomy for rickety tibia (anterior curve).—E. D.—, aged three years, was admitted on March 24th, 1888. The patient is a very weakly-looking child, with mental faculties very poorly developed. She seems to have no power of distinct articulation. The lower extremities are very rickety, the thighs and tibia being much curved, the latter anteriorly. The right tibia being more curved than the left, it was decided to operate on that part.

The operation was performed on March 28th, under chloroform, strict Listerian precautions being used. At the most prominent part of the right tibial curve, about an inch from the ankle joint, a small longitudinal incision was made, and a wedge-shaped piece of bone removed, dividing the tibia. The fibula being also curved, force was applied, and most probably a green-stick fracture of the fibula produced. The leg was brought into a straight line, and the tendo Achillis divided to avoid any tension or displacement. No hæmorrhage of any consequence occurred, and a ligature was not required. The wound was powdered with iodoform, covered with protective and gauze, and left to heal up under a scab.

March 29th.—Wound dressed; looking well. Temperature 100° 3'.

April 12th.—The wound is now a superficial ulcer, and nearly healed. Temperature ranging from 96° to 97°.

24th.—Temperature gone up to 100° 6'. Slight cough. Child restless, and refuses her food. Urine healthy.

25th.—Temperature 102° 6'. Stethoscopic examination of the right lung showed signs of consolidation.

30th.—Temperature 99° 6'. Child improving. Dressings removed.

May 2nd.—Limb sound and straight.

15th.—Limb put up in plaster-of-Paris, and patient discharged.

June 14th.—The child now seems quite herself, and has good use in the limb.

On Sept. 11th Mr. Fisher operated on the other leg in the same manner. The limb was dressed the next day, and also on that day week, when the wound was found covered by a thin leathery scab of iodoform. On Oct. 11th the dressings were removed, and the wound was found to be healed. The limb was ordered to be put up in plaster-of-Paris, and the child to be discharged and brought up in a month. Bony union had taken place.

Remarks by Mr. FISHER.—One feature in the case was the extraordinary subnormal temperature after the first operation. I believe the temperatures to be reliable, as in several instances they were taken by the house surgeon, Dr. Thomas; on one occasion the thermometer was held in the armpit for fifteen minutes and the temperature was only 94° 2', and was taken again with another thermometer with the same result. The attack of pneumonia I consider to have been of a septic nature. The ward seemed to be in an unhealthy state, as there were two cases of aloughy tonsillitis originating in it at the same time.

MEDICAL MAGISTRATE.—The name of Mr. Alex. Hendry, M.A. Aberd., M.B. and C.M. Edin., has been added to the Commission of the Peace for the county of Banff.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Empyema: Loss of Vision; Bilateral Cerebral Softening.—Persisting Aptyalism.—Dermoid Cyst of the Tongue.

AN ordinary meeting of this Society took place on the 26th ult., Dr. W. H. Broadbent, F.R.C.P., President, in the chair. There were present Dr. Weir Mitchell, on a visit to England, and Dr. Greenhow, a former President of the Society.

Dr. H. HANDFORD read a case of Empyema, with loss of vision in the right eye, afterwards in both; hemiplegia; death; cerebral softening, involving especially the angular gyri and occipital lobes. A young woman, aged eighteen, married two years, developed symptoms of left pleurisy, and in March, 1887, she was tapped, and about two pints of pus evacuated. No drainage tube was inserted, and the wound soon closed. She was delivered of a stillborn seven months' child, and six weeks later was admitted into the Nottingham General Hospital. On June 11th an incision was made in the left fifth interspace and the posterior axillary line by Mr. Wright, and a large quantity of pus removed. A tube was inserted, and antiseptic absorbent dressings applied, but the pleural cavity was not washed out. The patient improved considerably, the discharge lessened, and the tube was left out, but somewhat later had to be reinserted. The discharge remained sweet. On July 29th the patient had an imperfect rigor, with some rise of temperature. On Aug. 15th she complained of pain and aching in the right eye without apparent cause. On Aug. 14th there was marked loss of vision in the right eye; she could trace the movements of a hand, but not count the fingers. On Aug. 16th the fundus was pale, and there were signs of slight neuro-retinitis. On Sept. 5th there was total blindness of the right eye, not even perception of light remaining. The pupil was dilated and insensible to light, but moved in sympathy with the left eye. The margins of the disc were not sharply defined; the retinal arteries rather below the average size; veins not distended; very slight effusion of lymph along the lines of the vessels and radiating from the disc; yellow spot visible and normal in appearance. Rest of retina pale and bluish; no hæmorrhages. The left eye presented similar changes, but to a slighter degree. Vision of left eye fairly good. The loss of vision was attributed to a cerebral cause, which it was hoped might be functional, as the patient developed about the same time a remarkable emotional condition. On Sept. 8th some dimness of vision was complained of in the left eye. On the 19th the left eye began to improve. Slight perception of light also returned to the right eye. She complained of loss of power on the right side, but when requested could move the right arm and leg freely, although with less power than the left. There was also some difficulty in speaking. A few days later she was taken home, and very shortly hemiplegia became complete, and there was absolute loss of sight in both eyes. She only answered "Yes" and "No," and that at random; there was some excitement and very great loss of mental power. She died about the end of September. At the inspection, post mortem, very extensive white (ischæmia) softening was found on both sides, affecting chiefly, but not confined to, the white matter. That portion of the grey matter which derives its nutrition from the vessels of the pia mater was not much altered. The softening affected chiefly the occipital lobes, and the angular, temporo-sphenoidal, and part of the ascending parietal convolutions on the right side; on the left, the occipital lobe, the angular, supra-marginal, and first temporo-sphenoidal convolutions, and much of the frontal lobe. The corpora quadrigemina, basal ganglia, and optic tracts presented no naked-eye departure from the normal. There were no distinct abscesses in the brain or in any of the other organs; nor was there any heart disease, valvular or other. The loss of sight was the first symptom of brain affection, preceding the earliest symptoms of aphasia and hemiplegia by about five weeks. Further, there was nothing of the nature of hemiplegia. The microscopic appearance showed degeneration and disappearance of the nervous elements, copious infiltration with leucocytes, and proliferation of the neuroglia, forming a dense network.—Dr. BROADBENT suggested that the loss of vision might

in the first place have been hysterical.—Dr. ANGEL MONEY remarked that transient monoplegia, hemiplegia, and hemichorea had been noted in the same side as the empyema. The loss of sight might reasonably have been hysterical at first.—Dr. HADDEN referred to the fact that abscesses in the brain after empyema were not attended by abscess elsewhere; three cases had recently come under his notice; the abscess was on the same side in two cases. He showed pictures of the brain of two of the cases. Some believed washing out of the pleura to be the cause.—Dr. DE HAVILLAND HALL related a case of abscess in the brain following empyema.—Dr. D. W. FINLAY said that the bone need not be involved in the suppuration, for bronchiectasis might be complicated by abscess in the brain.—Mr. MAKINS said that in one of Dr. Hadden's cases the resection of the ribs had been performed twice, and the case was very chronic; he did not think the washing out of the pleura or surgical treatment had much to do with the development of the cerebral abscess.—Dr. BARLOW believed that in Dr. Handford's case there might have been cardiac thrombosis, from which an embolus may have proceeded to the cerebral arteries, and so produced the softening. Ulceration leading to the passage of septic material into the pulmonary veins, and so into the left side of the heart, was probably the mechanism of production of the cerebral abscess in cases like those under discussion.—Dr. HANDFORD, in reply, said that there was not any sign of suppuration in the brain in his case, and he was inclined to think that spasm of the arteries, combined with cardiac debility, might have led to the cerebral softening.

Mr. JONATHAN HUTCHINSON read a paper on Persisting Aptyalism ("dry mouth"). The paper consisted chiefly in the narrative of another case of what has been named dry mouth. The subject was a lady of fifty, a widow in good general health, but who had passed through much trouble. The condition of aptyalism came on without any definite cause, and not very suddenly. In the course of a few months her tongue, cheeks, lips, and palate became absolutely dry. They had remained in this condition without any alleviation for about four years. The tongue was clean, red, and much sulcated. Its dryness was such that the lady had difficulty in making herself understood in talking. The pharynx was also dry, but there was no defect of secretion in the nose, and no difficulty in the flow of tears or of moisture in the conjunctivae. She perspired freely, and, indeed, her face and forehead were liable to perspire on any slight emotional excitement. Mr. Hutchinson gave a brief summary of the cases previously recorded, five in number, and remarked upon the very close similarity which they bore to each other. The first case, to which the name had been applied, was one brought forward by himself at the Clinical Society two years ago. The subject had been ably investigated by Dr. Hadden last year, who then brought forward a second case at this Society, and narrated the particulars of two others. One of the latter was recorded by an anonymous writer under the name of suppression of the saliva in the *Medical Times and Gazette*, as far back as November, 1868. In all these five cases the patients were women past middle age, and in all the condition, having once begun, had proved to be persistent, whilst in none had it been the precursor of any other disorder of the nervous system. Although the condition had persisted for three or four years, up to the present date there had been no material depreciation of the patient's health, a fact of some interest when it is remembered that the salivation of the food was completely arrested. Dr. Hadden had recorded in his case some benefit from the persistent use of jaborandi. This remedy had been tried for short periods in the author's first case, but without obvious benefit. In his second case he had only seen the patient once, but she had previously been under much treatment, and had probably tried that drug without definite benefit. The disease was, he remarked, evidently a very definite one, and probably no doubt a number of cases of it would soon be placed on record. Its essence consisted in a complete and seemingly permanent arrest of all salivary and buccal secretion. He had originally used the term of "dry mouth" for it; but would now propose as a more accurately descriptive term the name of "persisting aptyalism."—Dr. HADDEN thought "dry mouth" a better term than "aptyalism."—Dr. BROADBENT had seen a case of the kind in which no drug except iodides effected any improvement.—Mr. HARRISON related two cases, both in women; one aged forty-three, the other forty-six. Mercury, jaborandi,

pilocarpin, and iodide yielded no good results.—Dr. GLOVER asked whether mercury relieved any cases.—Dr. HUGHLINGS JACKSON remarked on the sudden onset of some of the cases; he supposed that the equivalent of the cells of Clarke's column in the medulla oblongata might be the seat of the disease.—Dr. RADCLIFFE CROOKER related two cases, both in elderly women; one had much ulceration also; neither could be cured; one was relieved by local treatment.—Dr. ANGEL MONEY asked if the patients had previously shown a great tendency to dry mouth under the influence of nervous excitement.—Mr. HUTCHINSON, in reply, defended the use of the term "aptyalism." He remarked that no case had been related as occurring in men. Dr. Money's question was answered in the negative.

Dr. BEAUFOY GREEN (Kendal) read notes of a case of Dermoid Cyst of the Tongue. The patient was a man, aged thirty-one. He had suffered from the condition all his life, the tumour growing slowly larger, until at last speech, as well as respiration, were materially interfered with. There was some trouble with the breathing during anaesthesia, owing to the falling back of the tongue; this was not overcome until a thread had been passed through the tongue, with which it could be held forward. The cyst was ruptured during its removal—a circumstance which somewhat interfered with rapid healing. Nevertheless, careful washing out of the cavity left after removing the cyst secured complete recovery within a short time of the operation. The man resumed his work as a platelayer, and seemed quite relieved of his trouble.

The following living specimens were exhibited:—

Dr. ANGEL MONEY: 1. Infantile Left Hemiplegia, with perforation of the right parietal bone, probably due to injury, and through which the brain could be seen to pulsate. 2. Lichen Ruber, with tylosis of five years' duration, in a boy aged nine.

Dr. PASTEUR: Stiffening of many Joints in a girl aged seven, with exostoses of the ulna.

Mr. HARRISON CRIPPS: Multiple Molluscum Fibrosum in a middle-aged woman.

MEDICAL SOCIETY OF LONDON.

Meningocele.—*Hairy Mole of Buttock.*—*Skin and Muscle Lesions following Nerve Section.*—*Congenital Atrophy of Clavicles.*—*Partial Arthrectomy.*—*Fracture of Spine.*—*Congenital Deformity of Forearm and Hand.*—*Congenital Papilloma of Axilla.*—*Chronic Rheumatoid Arthritis.*

A MEETING of the above Society was held on Oct. 29th, the President, Sir William MacCormac, being in the chair. It was a "clinical evening," and many cases of unusual interest were exhibited.

Mr. J. H. MORGAN showed a child, aged sixteen months, with a Meningocele at the base of the nose. The girl was the first child, was quite healthy, and in all other respects was well formed. The tumour was observed at birth, and it at first increased out of proportion to the growth of the child. At twelve days of age it was taken to Mr. Makins at the Evelina Hospital, who on several occasions evacuated cerebro-spinal fluid with a fine trocar, and on nine different occasions injected small quantities (from five to fifteen minims) of Morton's solution. No bad effects followed, but there was no marked diminution of the tumour. The child now presented a smooth swelling, commencing at the middle of the forehead and running down to the middle of the nose, where it expanded towards the inner angle of each eye. The skin over all was natural in colour. At the upper part was a bony prominence, which terminated at the base of the nose in a sharp uneven edge, which could be traced along the lateral margins. The soft part of the swelling which protruded between them was reducible, and pulsed synchronously with the brain. No further treatment had been attempted.—Dr. ROUTH inquired whether the fluid evacuated had been examined to prove its cerebro-spinal origin.—Sir WILLIAM MACCORMAC thought that the fact that nine separate injections of Morton's fluid proved futile was an argument against the efficacy of that treatment, and also against the idea that the swelling communicated with the interior of the cerebral ventricles.—Mr. JESSETT asked if there had been fits as a result of the injections or independently of them.—Mr. MORGAN replied that he had

Mr. Makins' statement that the fluid was of cerebro-spinal nature. The child had had no fits.

Mr. MORGAN also showed a boy under his care for hip disease, but who had a very large deeply pigmented Hairy Mole covering the whole of the left lumbar region and buttock. Besides the long smooth hairs, the epithelium was heaped up in masses forming thick crusts. Several smaller and less pigmented moles were scattered about the loins and thighs, but their situation bore no relation to nerve distribution. *Nævus pilosus* was a bad name for these growths, for they contained no erectile tissue.

Dr. T. D. SAVILL brought forward a case of Tetanus cured by Chloral Hydrate, in which lesions of skin and muscle had followed excision of a part of the median nerve. The patient was a man aged twenty, who was admitted Sept. 20th, 1887, into the Paddington Infirmary, having developed a severe attack of tetanus fourteen days after a slight injury to his wrist, caused by falling on a heap of rubbish. The wound had healed up readily, and gave him no concern. The attack was of typical character. He was treated by large doses of chloral hydrate, which twice had to be stopped on account of the sickness. On each occasion there was great increase in the severity of the spasms, and marked amelioration on resuming the drug. He recovered in three weeks' time. The median nerve, which supplied the seat of injury, had been divided on Sept. 28th, and half an inch was excised. This was to give the patient an additional chance. The wound healed by first intention. This was followed by atrophy and paresis of the muscles supplied by this nerve, anæsthesia, sores on the fingers, reddening of the skin, and profuse perspiration. Treatment by massage and electricity proving useless for these conditions, the nerve was cut down upon at the seat of the first operation, and a fusiform thickening of it, one inch in length, removed. Since the second operation the condition of the arm had improved. (This paper will be published in full in a future number of THE LANCET.)—Mr. BALLANCE related an interesting case that was under his care in August. A boy had his leg crushed, producing a compound fracture. The soft parts were much bruised, and the tissues begrimed with mud and dirt. The wound was carefully cleaned and dressed, and the boy did well for ten days. Then it was noticed on dressing that the muscles of the leg quivered. The next day the whole limb was in a condition of rigidity, and amputation was performed. The day following general tetanus developed, and on the fifth day he died. This was one of the few cases in which the tetanus had been observed to commence locally. Tetanus was a traumatic infective disease caused by the introduction of morbid material into a wound. He had, with Mr. Lingard, performed numerous experiments with regard to its infectivity. Twelve rabbits were inoculated according to M. Pasteur's method with portions of the central nervous system of a patient dead of tetanus. Only two exhibited symptoms; these were killed in an early stage, and from them the disease could not be transmitted by inoculation. A patient under the care of Mr. Clutton with punctured wound of the leg developed tetanus; the wound was excised. Two rabbits were then chloroformed and inoculated, and both died of tetanus. This went to prove that the micro-organisms which produced the disease were only found in the wound, and that the nervous symptoms were caused by a chemical poison manufactured by them. Bacilli had not been found in the blood or in sections of the central nervous system.—Sir WILLIAM MAC CORMAC asked why the nerve was divided in Dr. Savill's case.—Dr. SAVILL replied that it was a chance shot; the injury affected the median nerve and was an irritative lesion, and it was hoped that section might do good. He believed it was a mistake to remove so much of the nerve.

Mr. WALSHAM showed a boy aged eleven with a peculiar Abnormality of the Clavicles. He was the subject of lateral curvature of the spine and had suffered from rickets. The clavicles, as far as their sternal two-thirds were concerned, were normal, but the acromial third was apparently absent, the finger in this situation coming upon the coracoid process. The sternal portions terminated in blunt extremities, which were either free or at any rate merely loosely attached by some indistinct fibrous bands to the coracoid process. There was no history of any injury to the clavicles. The boy had never had any pain or trouble indicative of fracture, and, as far as he could remember, the parts had always been in their present condition. The arms could be raised to their full

extent, in which position he was able to support considerable weight; nor was there any tendency of the shoulders to drop forward. The skull presented a typical rickety appearance; the anterior fontanelle remained still unclosed, and the pulsation of the brain could be distinctly felt beneath it. From the fact that there was no history of any injury to the clavicles, that both clavicles were affected, and that the acromial portion, clearly absent on the left side, was, in Mr. Walsham's opinion, absent also on the right, he regarded the case as one of congenital malformation, rather than as one of ununited fracture. The case was further of interest as showing how little disability was caused by the absence of the support of the clavicles.—Mr. OWEN thought that on the right side there was an ununited fracture of the clavicle.

Mr. BERNARD PITTS exhibited three cases of Partial Arthrectomy of the Elbow. The first was a boy, aged six years and a half, in whom the lesion followed an injury received ten months before. An abscess was found beneath the skin, with pain and rigidity of the joint. The disease was confined to the outer half of the articulation, and had burst through the capsule, the proliferating synovial membrane being found protruded. An incision was made, and much synovial tissue scraped away with a spoon and cut away with scissors. The head of the radius and capitellum of the humerus were carious; the diseased bone was removed with a scoop. The wound was washed and put up in sublimate wool, and soon completely healed. Motion was now somewhat limited. The second case, in a boy eight years of age, was not so severe. There was pulpy swelling on the outer side of the joint, with pain and rigidity. Granulation tissue was found sprouting through the capsule. The diseased synovial tissue was freely cut away with scissors, and the wound gradually healed. Good motion was obtained. The third case, in a child two years of age, was similarly treated, and gave an excellent result. He called attention to the facts that the disease often remained localised for months to one particular part of a joint, and to the great advantage of early interference.—Sir WILLIAM MAC CORMAC said that this procedure combined a minimum of operative interference with a maximum of good result, especially where the disease was limited to one part of a joint.

Dr. BEEVOR showed a case of Fracture of the Spine. Twelve months ago the patient, a middle-aged man, fell from a tree forty feet high, and lit upon his feet. He was unable to move his legs for ten weeks after the accident, but since then had been gradually improving, and had been walking about for the last seven months. He had blunting only of sensation as high as the knees for a fortnight, and for three weeks had a slight weakness of the sphincters, which then passed off. At present he could stand up without support if the feet were somewhat separated; he could walk with the help of a stick. He could not dorso-flex either ankle, nor could he extend the right knee. He had slight power of flexing and extending the toes. The knee jerks were both absent. There was angular curvature extending from the tenth dorsal to the second lumbar vertebra, the twelfth dorsal being the most prominent. The principal points of interest were the slight and temporary impairment of sensation and sphincter power, and the amount of recovery after so grave an injury.

Mr. JAMES BLACK brought forward a patient with Congenital Deformity of the Forearm and Hand. She was a woman aged forty-two, a cook, with great enlargement of the soft tissues of the right thumb, thenar eminence, index finger, and flexor aspect of forearm. It felt like a diffuse lipoma, but he was inclined to look upon it as a hygroma that had undergone fatty degeneration. There was grating in both shoulder joints on movement, which he believed was due to rheumatoid arthritis.—Mr. MORGAN referred to a case of hygroma he had exhibited last year, which was strikingly like the present case; the tissues were, however, softer.

Mr. SHEILD showed a case of Congenital Papilloma of the Left Axilla. It was a foliaceous papillary growth, and small brown warts passed from it in a line down the chest, their spread being no doubt greatly influenced by the moisture of the part.—Dr. COLCOTT FOX had seen many cases of congenital papilloma in which lines of warty growths followed the course of the nerves from the back of the neck, from the axilla down to the fingers, and from the vulva on to the perineum.

Mr. SHEILD likewise demonstrated a case of Chronic Rheumatoid Arthritis of the Knee. The patient, an elderly

man, had had a swollen and painful knee for two years, which came on without apparent cause. Six weeks ago the joint became fixed, and there was effusion into its cavity. There was no grating or creaking, and no evidence of syphilis or locomotor ataxy. The part was rubbed with sulphur and mercury ointment, and sulphur and guaiacum were given internally.

Dr. COLCOTT FOX brought an infant, aged two months, illustrating the so-called "Sterno-mastoid Tumour" of newly born infants, which was due to more or less extensive rupture of, and diffuse or localised extravasation of blood into, one or both of the sterno-mastoid muscles in the act of birth. This accident generally occurred with breech presentations, much more rarely with forceps deliveries and turnings, and sometimes in natural labours which were not particularly tedious and where little force was used. The right muscle was injured more frequently than the left. The swelling was hard or more or less doughy or elastic, painless, and covered by normal skin as a rule. The extravasation usually resolved, but might go on to suppuration. A hard small cicatrix might be left, and the muscle might permanently shorten and its nutrition suffer, forming a variety of congenital torticollis. The nature of the changes had been verified several times on the living subject and post mortem.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

THE first ordinary meeting of this Society was held on Oct. 12th, Dr. Spottiswoode Cameron, President, in the chair.

The PRESIDENT gave an address on the Advantages possessed by Country Practitioners in the Observation of Disease. The paper will be published *in extenso*.

The Use of Antiseptics in Labour and the Puerperal State.—Mr. WM. HALL, referring to Dr. Cullingworth's recent lecture on this subject, said there could be no doubt that in certain cases the contagium which caused puerperal fever was conveyed to the patient by the medical attendant or the nurse. He pointed out the great reduction in the mortality from this cause in lying-in hospitals since the introduction of antiseptic precautions, notably in Vienna (viz., from twenty-eight to four deaths per 1000), with more than 8000 confinements, and this while some of the assistants were daily performing operations on the cadaver. Similar results were obtained in Paris and London. He had attended numbers of confinements with cases of infectious disease contiguous, but none of these suffered from puerperal septicæmia. With regard to the details of management of a case, he used mercuric chloride to cleanse his hands and those of the nurse, and this, he thought, was the most important precaution of all; but as an injection he thought it had certain dangers. He preferred "Salufer" (aluminium silico-fluoride), which was non-poisonous, non-irritating, and cheap. He used a solution of forty grains to one ounce to bathe his hands on every occasion before making a vaginal examination, and for the purpose of washing instruments. No greasy lubricant was used. He did not recommend syringing unless there was pyrexia or the discharge was fetid. He had known severe uterine colic from too vigorous syringing by nurses. The results, however, of washing out the uterus in suitable cases were surprising.—Mr. C. J. WRIGHT described some portable antiseptics for the use of accoucheurs. When injections were used, he preferred them as hot as could be borne, and he kept up pressure on the uterus during their administration.—Mr. H. BENDELACK HEWETSON referred to cases, already published, of septic infection by nasal and aural discharges, where a suppurating molar tooth and an offensive nasal discharge affecting the operator were shown to be the cause of surgical failure, and described two cases of similar character. 1. A practitioner complaining only of deafness was found to have a slight but offensive aural discharge, and was in a very depressed constitutional and mental condition. Inquiry elicited that he had been of late very unfortunate in his midwifery practice. Since the treatment of these conditions no further disaster had occurred. 2. A case of puerperal septicæmia led to the examination of a recently engaged medical assistant, who was found to be suffering from a syphilitic affection of the septum nasi, with offensive discharge. He thought that puerperal infection was frequently conveyed through such unsuspected channels as these, especially in the case of nurses.—Dr. BRAITHWAITE

thought the slight extra labour involved in strict antiseptic precautions amply repaid by the saving of anxiety of attending cases of puerperal septicæmia. He preferred phenol as an antiseptic, on account of its anæsthetising effect on the vulva.—Mr. CROFT said that during the period he had been obstetric resident at the Leeds Infirmary 930 cases had been attended, with one death from puerperal septicæmia. Carbolic acid was generally used. He had seen bad effects from mercuric solutions in the hands of nurses. He showed some glass tubes for syringing, which were cheap and easily cleaned.—Dr. JOHNSTONE related a case of puerperal septicæmia occurring in his practice some years ago. After that for nine years he had no similar case. He then attended three cases in forty-eight hours. One of those died, but he adopted very strict precautions, and the disease had not spread. He asked the questions: 1. Is routine syringing advisable? 2. Is a medical man who has a case of puerperal septicæmia justified in continuing his midwifery practice?—Dr. PURDY disapproved of routine syringing. He thought opinions as to the best antiseptics and the best precautions were very conflicting, and believed that strict cleanliness could be ensured without their use.—Mr. GODFREY CARTER believed that antiseptic precautions would render it possible for a medical man to attend midwifery cases safely, though he might have a case of septicæmia under treatment. If this were generally accepted, it would be a great boon to general practitioners.—Dr. HELLIER thought more frequent observations of temperature should be taken. He praised tincture of iodine as a convenient antiseptic.—Dr. HALL, in reply, said he thought that with our present knowledge of the causes of septicæmia and of the good effects of antiseptics, a medical man was justified in continuing his practice when he had a puerperal fever case.

Mr. MAYO ROBSON showed a successful case of Nerve Grafting.

Pathological Specimens &c.—Dr. CHURTON: Gliomatous Growth of Pons Varolii. Dr. ALLAN: Bladder with three ureters; Hair from Dermoid Cyst; Uterus with Myomatous Growths.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

AT the annual meeting held on Thursday Oct. 11th, Dr. Hume, the President, in the chair, the Hon. Secretary, Dr. Oliver, read the annual report, in which it was shown that the Society was in a flourishing condition both as regards its finances and the number of its members. Eighteen new members had been added to the Society during the year, making the number of its members 172.

Dr. Auvard of Paris was unanimously elected an honorary member of the Society.

The following are the officers appointed for the next session:—President: Dr. Murphy, of Sunderland. Vice-Presidents: Drs. Hume, Philipson, and Anderson, and Mr. Morgan. Hon. Secretaries: Drs. Oliver and Limont. Committee: Drs. Drummond, Gowans, Mears, Arnison, Mantle, and James Drummond, and Messrs. Williamson, Page, and Black.

Dr. Hume, in vacating the chair, spoke of the continued prosperity of the Society, and alluded to the loss which it had sustained by the death of one of its former presidents, Dr. Luke Armstrong.

The first meeting of the Society for the session was then held, Dr. Murphy being in the chair. A vote of thanks having been proposed to the retiring President, and replied to by Dr. Hume, Messrs. Anthony Bell and R. C. Benington were elected members of the Society.

Rodent Ulcer under process of cure.—Dr. Herbert Bramwell exhibited a man, seventy years of age, who was treated successfully by the application of chloride of zinc paste. The patient had been ill for five years. Remarks were made by Drs. Gowans, James Drummond, and Hume.

Spina Bifida treated by Morton's Method.—Dr. George Taylor exhibited an infant five months old which had been successfully treated. Neither Dr. Lyon nor Mr. Page had had such good results; both said they had seen sudden death follow the injection. Dr. Drummond said he had seen sudden death in infants thus affected where no injection had been made. Dr. Gilson spoke of the investigation of the Clinical Society bearing upon this method of treatment.

Urinary Calculi.—Mr. Page exhibited calculi removed by the suprapubic method from a boy aged sixteen. Weight of stones 3½ oz.

Drawings of Pathological Specimens.—Dr. Drummond exhibited, in the ante-room, a beautiful and assorted collection of drawings of morbid specimens removed by him in the post-mortem room of the Newcastle Infirmary. A cordial vote of thanks was awarded to him for the opportunity afforded to the members of seeing the collection.

Villous Tumour from the Bladder.—Mr. Rutherford Morison exhibited this specimen, which was removed from a man aged sixty-three, who recovered. A microscopical preparation of the same was shown.

Water-logged Kidney successfully removed.—A paper on this subject was read by Mr. Page, and a specimen shown. Remarks were made by the President and Dr. Hume.

Allingham's Modification of Anterior Colotomy.—A paper was read by Dr. Arnison, in which he expressed a preference for this operation. Remarks were made by Mr. Page, Mr. Morison, and the President.

Other papers by Dr. Oliver and Dr. Drummond were taken as read.

Reviews and Notices of Books.

Diseases of the Skin: a Manual for Practitioners and Students. By W. ALLAN JAMIESON, M.D., F.R.C.P. Ed.; Extra Physician for Diseases of the Skin, Edinburgh Royal Infirmary, and Lecturer on Diseases of the Skin, School of Medicine, Edinburgh. With Woodcut and eight Coloured Illustrations. 8vo, pp. 546. Edinburgh: Young J. Pentland. 1888.

THIS is the first volume in Pentland's Medical Series, and is dedicated to Sir Douglas MacLagan. It does credit to both author and publisher, and is an excellent book of its kind, sound in matter, thoughtful, and practical. It is not a complete handbook of Skin Diseases, and several of the rarer and relatively unimportant affections are but briefly referred to, whilst others, such as the acute and some chronic specific diseases and others not commonly seen in this country, are omitted altogether. The bulk of the work is devoted to the diseases most likely to come under the notice of the practitioner, such as acne, eczema, urticaria, psoriasis, and lupus. The book is especially noticeable for the excellent style of the author's writing, and for a more complete exposition of the uses of many remedies and methods of treatment brought forward in recent years than is to be found in any other work. Dr. Jamieson is an enthusiastic supporter of Unna's methods and preparations, and not without good reason, though some of us may find it hard to discard altogether old favourites like the oleate of zinc and benzoated zinc ointments, and many will perhaps hesitate to relegate tarry and mercurial applications to a lower range of usefulness. The author's experience, however, on this matter will be very acceptable to the profession in these islands, and his book will no doubt be the means of introducing to many some undoubtedly valuable means of cure. Dr. Jamieson has chosen the plan of giving an outline of the symptoms of diseases and filling in the picture by the addition of numerous illustrative cases, often of much interest, but which of course have enlarged the book to a considerable size. There are also some coloured illustrations, not without merit, of erythema multiforme and gangrenosum, of acne varioliformis, of acute, chronic, and warty lichen planus, of tuberculosis of the skin and circumscribed scleroderma of the scalp. We cannot think, however, that the last two will be very useful. After a careful perusal of the work we can heartily recommend it, and think it will prove very acceptable, to the general practitioner more especially. There are but few points, and those minor ones, to which we feel disposed to take exception. The subject of urticaria might with advantage be more fully discussed in a future edition, and further illustrative cases and successful methods of treatment added.

Synoptical Index of the Regulations for the Duties of Superintendent Registrars, Registrars of Births and Deaths, and Registrars of Marriages; and incidentally also of the Statutes relating to the Registration of Births, Deaths, and Marriages in England and Wales. Compiled by JAMES LEWIS, Inspector of Registration, author of "Digest of the English Census of 1871." London: Knight and Co. 1888.

THE civil registration system is one of the just boasts of this country, and yet it is astonishing how very little knowledge of it is possessed, even by those who are brought into more or less contact with it, or have duties arising out of it. One reason of this is the voluminous nature of the official regulations under which the Acts for registering Births, Deaths, and Marriages are carried out. These regulations are made by a Secretary of State, or the Registrar-General, with the approbation of such principal secretary. They are contained in three separate books—one for the Superintendent Registrars, one for Registrars of Births and Deaths, and one for Registrars of Marriages. These three books include nearly 600 pages. Each has a table of contents, but none of them has an index. In these circumstances, it may be imagined what a great service Mr. Lewis has performed for registrars of every degree in constructing a synoptical index, with exact reference to each volume of official regulations. With such an aid, reference to a particular subject or duty in any part of any volume is easy; and the understanding of any duty or point is simplified by Mr. Lewis's short and clear synopsis. There are many persons besides registrars who will feel grateful to Mr. Lewis for this aid to an understanding of registration work and duty—e.g., medical men, clergymen, ministers, and coroners. Mr. Lewis is too well known as a statistician, and in all matters connected with registration, to make it needful for us to say anything in commendation of this little book, which really seems to render it possible for busy men in various professions to acquaint themselves with the chief parts of our registration system, and inexcusable for men who have to work it to commit mistakes.

The Octocentenary Festival of the University of Bologna, June, 1888. By JOHN KIRKPATRICK, Professor in the University of Edinburgh. James Thin, publisher to the University. 1888.

IN a kindly, gossiping vein, Professor Kirkpatrick gives a detailed account of the proceedings at the commemoration of the eight hundredth birthday of Bologna University, and, by way of appendix, he offers the reader translations of Professor Enrico Panzacchi's "Carmen Seculare" and of Professor Carducci's address. To these latter we cannot accord the praise to which the Professor's narrative is fairly entitled. A plain prose version of Panzacchi's fine ode would have done better justice to its import and movement than the mediocre verse into which it is rendered; at least the exigencies of metre and rhyme would not have constrained Professor Kirkpatrick to give

"For thy fathers, too, have journeyed
Often to this bourne of rest"

as an equivalent for

"L'istesso tuo cammino
Fecero i padri tuoi,"

where the context, to say nothing of the whole spirit of the ode, shows that the University was no "bourne of rest," but a *palestra* of the highest and most unwearied exercise, intellectual and moral. Not less infelicitous is the translation of Carducci's address, of which the subtle beauties, the "liquid lapse" of the periods, and the rich poetic colouring of the language have no counterpart in the English. We share Professor Kirkpatrick's regret that a place has not been found for Pellicioni's version of Professor Jebb's Greek ode in his little volume, any more than for the beautiful original; but the reader will find some compensation in the noble Latin of Professor Gandini's concluding address in the characteristically high-souled letter of congratulation from the late Emperor Frederick of Germany; and in Professor von Holtzendorff's vigorous stanzas, entitled "Nord und Süd."

THE LANCET.

LONDON: SATURDAY, NOVEMBER 3, 1888.

THE mischievous results alike to mind and body which do and must ensue from the highly competitive character of the examinations in which too much of our educational work of to-day finds its goal have long been apparent to those who have been accustomed carefully to consider this question. The general public, however, has been a little sceptical about them, and it is well that they should be stated in such a form and with such authority as the public at large cannot fail of perceiving and respecting. It is, therefore, with no small satisfaction that we have read the vigorous protest with which the current number of the *Nineteenth Century* opens. A list of signatory names extending to thirteen pages is almost unprecedented in the history of Review literature, and when the names are not only counted, but also weighed, it will be found that they represent a large section—should we not rather say many sections?—of the intellectual life of our day. The memorial which they have signed will therefore make a considerable impression, if only by reason of the endorsement which it carries; but it is adapted also to convey a large measure of enlightenment to those to whom the subject is more or less new. For, indeed, much that is there said is very admirably put. The serious mischief of sacrificing physical development to the supposed necessities of mental training is, for example, stated with great force and clearness. This is a point upon which we have so often insisted that it is difficult for us to recur to it without falling into almost verbal repetition; but we are glad to see that its force is felt not by medical men alone, but by men and women of all orders, and that the truth—from our point of view the truism—that a process which shatters the body cannot be good for the mind, is gradually coming into general recognition.

It must not be supposed, however, that the physical mischief is the only, or even that it is clearly the most, serious mischief which critics of our modern educational methods discover. The obliteration of variety of type in the finished product is hardly less prejudicial to the highest success. The form of competition which makes most for progress is, as the whole course of biological development shows, not a competition of individual with individual, but of type with type. The individual who vanquishes others by his personal superiority confers upon those others no benefit. He covers himself, may be, with glory, or he secures for himself some advantage of a more substantial kind; but it often happens that he perishes in the end without a successor, and leaves the community to which for a time he belonged poorer than he found it. Had his divergence from the prevailing type been less pronounced than it was, his influence might have been more beneficial. A system, then, which tends to develop the extraordinary individual, instead of fostering the growth of various typical forms, and to depress all save one or two selected types, can hardly command any strong confidence. If the

conditions of life were so simple that one particular type could necessarily be the best adapted for any and every possible position, and if, furthermore, our teachers sufficiently understood those conditions to be able to single out the fittest type, then it might be safe and wise to proceed upon this exclusive method. But the extravagance of these hypotheses affords a measure of the unsoundness of the plan, and serves to show how extremely unwise it is, by organising a system of examinations which shall compel all educational success to assume one or two particular forms, to shut out what the authors of the *Nineteenth Century* protest aptly call the “never-ending struggle between different forms and methods, each to excel the other.”

So far all seems clear, but a much more perplexing problem now advances to the front—the problem, namely, of what remedy is to be applied. Our present system—if system it may be called—is a great, though not very coherent, whole; and it looks exclusively to examination tests for its credentials. The examination is the only machinery which we possess for testing the excellence of methods employed and the work done, and, for better or worse, it is so firmly rooted that eradication is plainly out of the question. But it does not follow that the examination test is incapable of improvement. The method commonly adopted at present is to examine the breadth of the student's knowledge rather than its depth. Questions are set which are expressly intended to enable the well-crammed candidate to distance his competitor. The unsuccessful one may be by far the more surely grounded in principles; he may possess greater skill in the methods of his art; he may be capable of turning his knowledge into work on a much larger scale; his potentialities may be much greater than those of his rival; but if his intellectual purse is less amply stored with the current coin of the examination room, he needs must fail in the competition. Clearly there is room for improvement here. The object of examination should be to test a student's capabilities rather than his acquirements; to examine him rather than his book lore; just as the object of education should be, to quote the language of Lord ARMSTRONG, “the development of faculties and valuable qualities rather than the acquisition of knowledge.” Is it too much to hope that, as the outcome of a discussion which has been most happily inaugurated, some new sense of these important truths will be brought home to those in whose hands lies the direction of the work of education?

ANY communication from the pen of Dr. CLIFFORD ALLBUTT is sure to deserve and receive the attentive and respectful consideration of the profession. His recent article in our columns upon “Davos as a Health Resort” comes opportunely at a time when the wisdom of sending consumptive patients to the Alpine and other elevated sanatoria is being vigorously combated by many who regard the practice as a mere vagary of therapeutic fashion—popular mainly through its novelty, and destined to speedy oblivion. This is not the view of Dr. ALLBUTT, who, like the great majority of those who have studied the question practically on the spot, still believes that better, more rapid, and more enduring results can in a certain minority of cases, still difficult to define with precision, be obtained at high altitudes than in the lowland resorts.

Dr. ALLBUTT begins by drawing attention to the strides made recently at Davos in hygienic reform, and pays a just tribute to the energy of the little municipality in the canalisation of the river Landwasser and in the matter of main drainage. It cannot be impressed too earnestly upon the authorities of all health resorts that no natural advantages of situation or climate are any guarantee against the penalties which Nature remorselessly exacts for any infringement of her laws; and that they, in common with every large aggregation of humanity, must offer the elementary essentials of healthy existence—pure air and pure water—before their special advantages can be allowed their just weight. Davos has recognised this obvious fact, and deserves to profit from its enterprise. The canalisation of the river has almost, if not altogether, prevented the generation of mists which in former days were wont to rise from the bed of the valley when the Landwasser had overflowed its banks. The improvement in the matter of hotel accommodation has been not less thorough and creditable, and no one need allow any doubt on the question of material comfort to prevent him from resorting to Davos, if such a step should be on other grounds desirable.

Dr. ALLBUTT does not attach much importance to the fears which have been so generally entertained regarding the evils likely to accrue from the threatened overcrowding of the little valley in the Grisons. Davos-Platz is, he says, full enough, but there is ample room at the closely adjacent village of Dörfli, where he thinks a large sanatorium might be built in a sheltered elevated situation after the model of Falkenstein in the Taunus mountains. Such an institution at Dörfli would, in Dr. ALLBUTT'S opinion, be likely "to beat the record of Falkenstein, as its climatic advantages would be tenfold greater." We must bear in mind, however, that mere elevation is in itself a very imperfect, if not wholly, misleading gauge of the success likely to attend any sanatorium. More important than altitude *per se* is the proportion of fine sunny days and freedom from treacherous blasts; and not less vital is the facility for obtaining adequate medical advice and oversight. On this point Dr. ALLBUTT earnestly insists, believing that mischief results at Davos not only from the obvious error of indulging too freely in amusement, but from the patient's disposition to overdo his doctor's advice regarding the advantages of fresh air and vigorous exercise. One good reason, indeed, for dissuading patients with much emaciation or febrile disturbance from resorting to the mountains is that such cases are quite unfit for the vigorous life which is encouraged at Davos and other such places, and which has undoubtedly been the secret of some of their most remarkable successes. But *alii alius curantur*; the change from the invalidism of home to the mountaineering and tobogganing of Davos, which often proves so signally beneficial to the patient with a small inactive lesion and fair constitutional vigour, may, unless studiously guarded, only prove the death warrant of the feverish and debilitated victim of active phthisis.

Dr. ALLBUTT protests with much show of reason against any attempt to cut down hotel prices at Davos to starvation point, and urges that a liberal dietary cannot be sacrificed on the altar of economy. Our patients must be instructed that the treatment of phthisis is both slow and expensive,

that in most cases three years of time and from three to five hundred pounds of money will be required, and that those to whom these conditions are impossible would do well to take their chance of improved methods of treatment at home. We heartily concur in this advice, however hard it may be to give or receive, and are quite persuaded that if taken to heart it will prevent much needless misapprehension and disappointment. The climatic treatment of phthisis is no holiday ramble, no pleasurable jaunt for six months and then home again. It is long, expensive, difficult of judicious direction, often disappointing; but, withal, it is the most hopeful remedy at our disposal in dealing with the terrible burden which tuberculosis entails upon the sufferer.

No part of this subject is more important than the proper choice of cases for high altitudes, and none is more difficult. In Dr. ALLBUTT'S opinion, "the persons likely to benefit are those of good physique, who bear cold well, who digest well; who are comparatively young—say not more than forty years at most,—and who have single cavities or limited consolidations." These rules are generally admitted and recognised, but Dr. ALLBUTT is at variance with a large preponderance of professional opinion when he distrusts the effects of the Alpine regions upon chronic pneumonias and pleurisies. Such cases are generally believed to do well—often exceptionally well—at Davos.

Regarding the effect of the Alpine climate upon children, Dr. ALLBUTT does not speak authoritatively, but inclines to the view that it is "neither highly curative nor even highly prophylactic" in such cases. This is a most important matter, upon which ample and unassailable evidence is much to be desired. The prophylactic treatment of phthisis, which we trust has a great and beneficial future before it, must begin in childhood, and few questions can be more important than the determination of the most suitable climate for the children of tubercular families. Dr. ALLBUTT inclines to the view that they do better at sea than in the mountains, and we suspect he is right. Everyone who has had the necessary opportunities for observation must have been struck with the rude health usually enjoyed by children on shipboard, whereas there seems no evidence at hand to indicate that they benefit in any peculiar degree by life at high altitudes.

THE Presidential Address on Secondary Dementia, delivered by Dr. CLOUSTON at the annual meeting of the Medico-Psychological Association in Edinburgh in August last, went far to invest with a new life and interest the practically defunct residuum of mind characteristic of a class of cases which largely abound in our lunatic asylums. How can we avert dementia? This is the problem which Dr. CLOUSTON sets himself to work to solve; and wherever there is anything practical to be done, he is not the one to sit down and wring his hands in despairing helplessness; even when the task appears most unpromising and hopeless. Two-thirds of all the insane of the kingdom, he tells us, are demented; and, looking at the incidence of dementia in the new cases, he finds that out of every hundred insane persons sent to asylums every year forty sink into dementia. He knows no typical example of secondary dementia in a patient who became insane when

over thirty years of age. His puzzle is to know—not why a tissue, the highest infinitely in function, should be liable to perturbations and derangements, but why it should be subject to a permanent failure early in life in so many cases. He hangs his hopes upon the period of adolescence, with all its potential energising resources, and he asks himself and all concerned, How can we avert dementia?

Dr. CLOUSTON "would define mental disease as a tendency to dementia," but as a definition we are not by any means prepared to accept this in the abstract, although we are quite willing to recognise the utility of the phraseology in relation to his after-treatment of the immediate subject in hand. "The disordered mentalisations that we call melancholia, or mania, or stupor, or delusional insanity, which commonly precede dementia, are in many cases the mere preliminary symptoms and early stages of dementia. In every attack of mania we treat its symptoms as potential dementia; every melancholic attack is a threatened dementia. How to arrest this terrible disease in its incipient stages is our practical work in life."

It is impossible not to admit the sequential relations of dementia to mental disease; for it is of the nature of a truism to say that mental disease—all mental disease—tends to dementia; and the natural outcome of this state of things is that propounded by Dr. CLOUSTON—viz., to make it our duty to avert, if we can, the incurable dementia by the right treatment of the mental disease, whatever may be its form, which inevitably tends to dementia, and so, as he says, arrest this terrible disease in its incipient stages.

After making allowances for what is inscrutable in the processes of mentalisation, we are not so satisfied as Dr. CLOUSTON is that in dementia, secondary dementia, we have "a kind of disease which is absolutely unique in nature, with no analogy in any other morbid state." Dr. CLOUSTON himself tells us that dementia is not merely the "goal of all insanities," but the goal of all mental life. He says, "If a man live long enough, decay happens to his mental faculties by an inevitable law." Let us try to realise, in extension of time, what the wear and tear of a mind must be during a six weeks' or three months' attack of acute and noisy delusional mania, or of intensely agonising melancholia, day by day and night by night, with unceasing round of morbid activities. Let us consider what years (compressed into a few weeks) this must mean of an ordinary humdrum mental life of healthy and wholesome activity. If the healthy and wholesome activity must inevitably end in dementia, what wonder if the acute mania or the agonising melancholia does so. Indeed, we are rather led to wonder that it ever fails to do so. As a matter of fact, the process of dementia is an expression of the recuperative capacity of a mind-organ or brain which has been more or less reduced to a state of exhaustion; and the probability of a resultant dementia will be found to bear an inverse ratio to the amount of the recuperative capacity. And so it may be taken to be with other tissues and other organs and their functions, in the matter of the relations between recuperative power and physical exhaustion. With a given amount of exhausting mental disease, the tendency to dementia will be greater in cases where the brain has a hereditary or inherent defect, and less where the brain is not so originally

defective: a matter which would affect prognosis in individual cases; for, as Dr. CLOUSTON says, the man who has a hereditary tendency to dementia runs the risk of dying mentally before his time. It is impossible for us to follow Dr. CLOUSTON through the physiological and other details of his subject, but they are most instructive and suggestive. He traces out a typical gradation of brain conditions in successive generations leading up to typical secondary dementia or mental extinction in the end; he deals with the genesis of dementia clinically; and he goes on to show that the secondary dementia of adolescence is the most typical of all the dementias, because its symptoms are the most complete and the most essentially mental. The following are conclusions at which Dr. CLOUSTON has arrived as to how dementia can be averted, and they are worth noting. "In some cases I believe it can be averted by prophylaxis through right modes of life in childhood, by physiological modes of education, by the selection of employment suitable to the capacities of the organism. In others I think it can be averted, even when its prelude has begun in the shape of an attack of mania, by right treatment and management, the principles being adopted of rapidly fattening the patient, by life out of doors, regular exercise, the use of tonics and sexual depressants. In others I think it can be averted by stimulating treatment, moral and medicinal, during the stage of secondary stupor after the primary excitement has passed off. In other cases I believe no prophylactic measures, no sort of treatment of its primary attack of mania, would be of any avail. The ancestry had transgressed the laws of nature in their modes of life or in their sexual unions, and the progeny must pay the penalty of mental death to stop a bad mental stock."

Dr. CLOUSTON'S address is worthy of careful study on social as well as on psychological grounds.

PROFESSOR BUCHANAN delivered the opening address in the Glasgow University on Oct. 23rd, and had the courage to tackle several questions of considerable delicacy. We cannot say that he finally settled so many questions as he raised; but it is a service to raise questions and make some contribution to their solution. They were all questions of great interest to students, and especially to the students of Glasgow. We have only to enumerate the subjects to show how pertinent they were, and how the mere mention of them would be likely to stimulate the thought and effort of Glasgow students. Free trade or protection in the practice of medicine; the efficiency of preliminary examination; the admission of women to graduation and to the practice of medicine; free trade or protection in the teachings of medicine; the amount of time to be spent over the several parts of medical education; the sufficiency or otherwise of the Western Infirmary as a field for the teaching of clinical medicine and surgery, apart from the great additional resources of the Royal Infirmary. The latter is a burning question in Glasgow. Professor BUCHANAN deals with it boldly and somewhat ingeniously. He defends the clinical teaching of the Western Infirmary, and quotes the favourable opinion of Mr. CALDWELL, M.P. for the Rollox Division of Glasgow and chairman of the Western Infirmary, who had paid a personal visit to see and study for himself the modes

of clinical teaching pursued in that institution. To the objection that the infirmary has only 400 beds, he answers that University College, London, has only 200, King's College 220, Charing-cross 180, Westminster 215, and St. Mary's 281. He points out that students are not allowed to "drift about," but have to choose one of the eight clinical teachers among whom the 400 beds are divided, though anything of special interest in any clinique is announced for the benefit of the whole body of students. The 400 cases so divided give, he argues, eight hospitals with fifty beds each. One fifty is very much like another, and practically enough for teaching purposes. We cannot say that we are convinced by this reasoning that the Glasgow University does well not to include in its clinical teaching resources the enormous material of the Royal Infirmary. Mr. CALDWELL's opinion is that of a respected layman, and he is himself the chairman of the Infirmary, whose sufficiency he naturally believes in. To argue the sufficiency of beds in the Western Infirmary from the smaller numbers still in several of the hospitals to which the London schools are attached is very unsatisfactory. University College is no doubt an excellent school, but it would be more effective still as a school if it had twice the number of beds. Moreover, the numbers of the students of the University of Glasgow is much greater in proportion to the beds of the Western Infirmary than those of University College Hospital to its students. What is wanted is not only that students should see cases, but, within reasonable limits, the more cases the better, and, above all, a number sufficient to give to each student the opportunity of acting as dresser and clinical clerk. This is the defect of the Scottish schools, and in Glasgow it is an inexcusable defect, with its great richness in hospital beds.

Another question of much delicacy was handled by Dr. BUCHANAN in a very practical way—viz., that of the admission of women to the medical profession. He regarded this question from the protectionist point of view, as if the objection to the exclusion of women was primarily an affair of protection to men jealous of their competition. We think, rather, that the objection is based on the essential unfitness of women for a calling so exacting and laborious, and withal irregular in its demands, as ours. Medicine is about the most unsuitable calling for women, whose organization is too delicate and sensitive to bear the strain of a medical life. Professor BUCHANAN did well, however, to give his hearers the facts of the success of women in the London University examinations, where, at the August examination, of nineteen passes for honours ten were women. In Anatomy, of six who took honours three were women; in Physiology, of six, four were women; in Materia Medica, of seven, three were women. These figures may well make men blush a little, and resolve to treat their fair rivals with all respect. Professor BUCHANAN rightly said that these able ladies were selected specimens. But of course the men trying for the London degree were also, in some sort, selected specimens. The facts are interesting. But they have little bearing on the ability of women to stand the wear and tear of the medical profession. Professor BUCHANAN highly approves the medical training of women for Zenana practice, but thinks their general entrance into the profession would be "a mistake in

political economy." We cannot undertake to keep women from mistakes in political economy. They must protect themselves. But we adhere to our often-expressed view, that of all professions ours is the least suitable to women.

Professor BUCHANAN touched on other aspects of medical education, which we have not space to notice. He recommended that medical education should begin in summer by a three months' course on Physics and Botany. Like a good anatomist, he desiderated more time for teaching Anatomy. He confessed that he would like to see more liberality in the university curriculum in respect of the recognition of outside teaching, though he would always insist on a certain amount of university teaching, which was now so much demanded in London. On the difficult question of protection to medical men from quackery and illegal practice he spoke without much comfort to his young friends, admitting the failure of all past efforts so to protect regular medicine, and hoping that they would be more successful.

THE request of the College of Physicians to the Government for a medical commission to be sent out to Havana to study the subject of yellow fever, was a natural response to the invitation conveyed through the Colonial Office from the Medico-Chirurgical Society in that city. That invitation is a generous one in its offer to accommodate any English *savant* with board and lodging, and allow him the free use of the Society's laboratory and material. But it is hardly to be expected that any investigator would undertake the responsibility and trouble, unless he proceeded with full credentials and received adequate remuneration for his services. Nor is the College of Physicians called upon to initiate such a step, the value of which is to be measured by its hoped-for results to the English communities in the districts where yellow fever forms so frightful a scourge. The necessity for such an inquiry is obvious, for the etiology of yellow fever is by no means worked out. As an instance of the remarkable differences of opinion upon the subject, we may refer to the categorical statement of Dr. STERNBERG, alluded to in another column. That physician was commissioned by the College of Physicians of Philadelphia to inquire into the matter, and in his report he positively asserts that there is no evidence to support the conclusions of either of the two investigators who have declared the discovery of the microbe of yellow fever, and based thereon a practice of protective inoculation. The better known of these is Dr. DOMINGOS FREIRE of Rio Janeiro, who some four or five years ago announced that he had discovered the yellow fever organism, and embodied his researches in a large volume. His facts and conclusions were not received with much enthusiasm by bacteriologists in this hemisphere, and that for many reasons; but last year M. PAUL GIBIER was sent from Paris to study the subject in the light of Dr. FREIRE's statements. M. GIBIER prosecuted his researches in Havana, where Drs. FINLAY and DELGADO had already succeeded in cultivating a micrococcus, which Dr. FREIRE believes to be the same as he discovered. The upshot of M. GIBIER's inquiry may be gleaned from the fact that there now lies before us a pamphlet by Dr. FREIRE, entitled "*Refutation des Recherches sur la Fièvre Jaune faites par M. P. Gibier à la Havane.*" In fact, M. GIBIER did not arrive at the

same conclusions as Dr. FREIRE. The latter even claims that M. GIBIER did see and describe the micro-organism which he had previously found in the intestinal contents and vomit, as well as another organism in the blood. Dr. FREIRE says these organisms are identical, and that they possess the property of producing a black pigment (to which he attributes the black vomit of the fever) when cultivated. M. GIBIER does not admit their identity, but asserts that the microbe in the intestine is a bacillus, that in the blood a micrococcus. In Dr. FREIRE's opinion nothing has been added to previous knowledge, nor have his results been upset, by M. GIBIER's researches. Indeed, Dr. FREIRE intimates that, had not M. GIBIER been bent on discovering something new, he must have seen that the results of his microscopical and bacteriological researches tallied with those he refutes. There are other arguments advanced in Dr. FREIRE's pamphlet which it is not necessary to repeat; they bear upon the procedure adopted by M. GIBIER.

There can be no question, then, that great difference of opinion exists, and that the subject is worthy of thorough study, not only from the bacteriological standpoint, but from the side of prophylaxis and treatment. So far as British possessions go, the study of yellow fever ranks next in importance to that of cholera; and it is time that more attention was paid to it by our nation from a scientific point of view. We trust that the Treasury will accord a favourable reply to the request of the College, which may well be entrusted with the selection of one or more qualified experts willing to undertake a grave and serious duty, not wholly free from risk. There are precedents in the Plague Commission of 1879, and in the more recent Cholera Commission; and if the results of these inquiries were less positive than might be wished, they, at any rate, added something to our knowledge of the etiology of these diseases. Yellow fever is quite as deadly a scourge as either plague or cholera; whilst, in the face of Dr. FREIRE's statements as to the efficacy of his vaccinations,¹ it is incumbent on every State concerned to institute inquiries which shall either substantiate his assertions, or, in refuting them, shall do all that science can to determine the nature of the disease, and direct how best to protect the community from its ravages.

Annotations.

"Ne quid nimis."

COLLEGE REFORM.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons was held at 36, Grosvenor-street, W., on Friday, at 5.30 P.M. Present: Mr. George Pollock, chairman; Messrs. Barnes, Alban Doran, Richard Davy, Macnamara, Norton, Willett, Tweedy, and Allingham. The minutes of the previous meeting were read and confirmed. After discussion, the following resolution was unanimously carried, a copy of which has been forwarded to every Fellow of the College who is also an Associate:—"That, inasmuch as an amended Charter has been so

¹ Dr. Freire's vaccinations with "attenuated virus" in the years 1885 and 1886 amounted to 6524. Of these eight died from yellow fever. In the same period the mortality amongst the "non-vaccinated" was 1667 out of a total population of 160,000 in the infected area. In other words, the mortality of the vaccinated was rather more than 1 per 1000, that of the non-vaccinated 1 per 100.

recently granted to the Royal College of Surgeons of England, beyond the President of the Fellows' Association entering a formal protest, it does not appear desirable that any specific resolution bearing upon the Reform of the College should be submitted on the part of this Association to the meeting of Fellows and Members to be held at the College on Thursday, Nov. 1st, 1888." This resolution it was agreed should be posted in time to reach the Fellows prior to the annual meeting of Fellows and Members. The form and the terms of this protest were drawn up by the President and Mr. John Tweedy.

THE ARMY MEDICAL SCHOOL.

AT a time when the War Office is credited with the intention of abolishing the Army Medical School at Netley, it may not be amiss to inquire what special instruction is given by Government in the other departments of the army, and at what cost. We do not include under this head the Royal Military Academy at Woolwich and the Royal Military College at Sandhurst, which are schools for the cadets prior to being appointed officers; we refer to those institutions which are intended for the instruction of officers in the specialties of the branches of the service to which they belong. These are four in number: the Artillery College at Woolwich, the School of Gunnery at Shoeburyness, the School of Military Engineering at Chatham, and the Staff College at Sandhurst. From the Army Estimates we find that the first of these involves an annual cost of £7729; the school of Gunnery requires £11,618; that of military engineering, £14,686; and the Staff College, £7715; making a total for these four establishments of £41,748. To this we might add the School of Musketry at Hythe, which costs £6418. The Army Medical School at Netley stands in the Estimates for £7591; but if it were abolished this would not all be saved, as it would be necessary to increase the staff of the invaliding hospital to replace the assistant professors, who materially assist in the duties. We do not for a moment wish to object to the sums expended on the military schools, for we believe that the country gets value for them in the shape of increased efficiency in the service; but we must express surprise that, when so large a sum as nearly £50,000 is expended in improving the quality of the purely military officers, it should be proposed to deprive that department which is entrusted with the duty of keeping them in a state of health and efficiency of the means of acquiring that special instruction which is undoubtedly necessary to qualify them for their important work. It has been said that this special instruction may be obtained at civil schools before joining the service; but this we cannot admit. It might as well be said that the instruction given at the School of Military Engineering could be as easily acquired in civil establishments. We believe that, if the special instruction given at the Netley school were withdrawn, we should lay ourselves open to a repetition of the disasters of the Crimea. We sincerely trust that there may be a strong expression of public and professional opinion against a measure which may expose our army to the evils arising from an insufficiently educated medical service. We are prepared to admit that there may be defects in the system of instruction at Netley, but this surely is a reason for reorganisation, not for abolition. An inquiry into this subject by a strong committee of experts seems imperatively called for before any steps are taken which might impair the usefulness of an institution which has certainly contributed to bring the Army Medical Department to a higher pitch of efficiency than it ever before attained.

METROPOLITAN ASYLUMS BOARD.

THE Westminster guardians have recently charged the Metropolitan Asylums Board with extravagance in the administration of imbecile asylums and of their hospitals for infectious disease. A detailed statement has therefore been prepared in reply to these allegations, the managers showing that the number of officers in the imbecile asylums, to which exception had been taken, is, in the opinion of the Lunacy Commissioners, below rather than above that required, and the managers are necessarily guided by them on this point. The Board is often placed in an unfavourable light through the fluctuations in the amount of prevalence of infectious disease, and this has been especially the case in the administration of the hospital ships; a single patient requires the services of doctor, nurse, cook, and servants, and the staff is obliged to be in a state of preparedness to deal with a sudden influx of patients. At times, therefore, the cost of administration, if estimated upon the number of patients, appears excessive; but this is unavoidable if these institutions are to be ready at any moment to supply the wants of London. There is no question that the more intelligent of the ratepayers would rather bear the cost of the maintenance of a staff at times when its services are but little required, than witness a break down of the administrative system when fever or small-pox becomes epidemic. Another subject has also engaged the attention of the Board. It will be recollected that Dr. Griffiths, medical officer of health for Clerkenwell, has recently called attention to the reappearance of scarlet fever shortly after the return of patients who had been discharged from the Board's hospital. Dr. Collie readily disposes of any suspicion entertained that this had been due to the too early discharge of the patients, or to the friends accompanying them bringing infection from the hospital. The managers, however, with a view to guarding against the likelihood of such an accident, have determined that in future patients discharged from the convalescent institutions shall be sent direct to their homes, and shall not (as has sometimes happened) be removed in the first instance to one of the hospitals situated in London.

ANTHRAX IN SWINE.

SINCE among veterinarians some difference of opinion exists as to whether swine are capable of suffering from anthrax, or whether cases described as anthrax may not be instances of septic poisoning, Professor Crookshank, at the request of Professor Brown, of the Agricultural Department of the Privy Council, carried out some experiments to ascertain the nature of the disease induced in swine by the ingestion of the offal of animals that have died of anthrax. He communicated his results to the Glasgow meeting of the British Medical Association in a paper, of which we have received a reprint. Professor Crookshank proved that the disease produced in swine by experimentally feeding them with anthrax offal was anthrax, which could also be produced in swine by injection of the blood of a bullock which died of anthrax, or transmitted to swine by injection of the blood of the spleen of a guinea-pig inoculated with the disease; and, lastly, produced in swine by direct injection of a pure cultivation of the anthrax bacillus. He was enabled to isolate the anthrax bacillus from cases occurring in the practice of Mr. Wilson of Berkhamstead, and concludes that anthrax can be communicated to swine, both young and old. A yellowish jelly-like oedema of the subcutaneous areolar tissue extends from the point of entrance of the virus, and, if the "disease is induced by ingestion of anthrax offal, the tonsils are found to be ulcerated, and constitute the point of access of the bacilli to the blood. In such cases the characteristic symptom is enormous swelling around the

throat." The anthrax bacilli are very scantily present in the blood, due probably to the septic organisms which may readily have gained entrance at the same time from the offal consumed. As the anthrax bacillus rapidly disappears in presence of putrefactive organisms, failure to produce anthrax by inoculating guinea-pigs or mice from swine during an outbreak must not, if Pasteur's or some other form of septicæmia be present, be held as conclusive against the outbreak being anthrax.

MUSIC IN MEDICINE.

FROM the time when medical knowledge was first embodied in rules of practice, and probably from a much earlier period, music has held a recognised place in the treatment of disease. Though handed in connexion with the most diverse maladies—for example, with gout and insanity,—it has for obvious reasons been chiefly effective in dealing with certain forms of nervous disease. This is only what one would expect from its natural action. It cannot be named along with many drugs in point of apparent accuracy of result. Its place is not in any ordinary catalogue or pharmacopœia. It belongs rather to that group of natural recreative forces which are active in every healthy life, and which operate against the morbid weakness of any part by increasing the vigour of the whole. In so far as it affects the body, it must clearly do so only through the mind and the nervous system. This accounts for its known value in the treatment of mental disorders. Nor can its obscure action in different physical states be otherwise explained. By acting as a refreshing mental stimulant and restorative it braces the depressed nervous tone and indirectly that of the other tissues. Thus there is something to be said for the old custom of exorcising pestilences by the sounds of music. Calmed and inspired by harmony, the tonic energies of will and nerve combined to oppose a wholesome bodily tone to the invading scourge, and to prevent that tissue laxity which has often provided the nidus of disease. A similar process is relied on by those who turn to music among other diversions for some relief from the pain of tonic neuralgia. In no class of diseases, however, are we likely to derive so much benefit from the use of so pleasant a remedy as in those affecting the mind itself. In melancholia and allied states of depression its value is generally admitted in our own day. Ancient practitioners were also cognisant of its usefulness in this respect. We must all have felt how suitable is its infinite variety and facility of expression to the changing moods of the sane, and it is therefore the less difficult to understand how straying minds are pleased and settled by its charm. Certain it is that its beneficial effect is in this case considerable, and our readers, though possibly unable to acquire a knowledge of the art, should at least possess, and if needful assert in practice, a sense of its therapeutic value.

INFANT FEEDING IN CITIES.

THE problem of rearing children increases in difficulty with the growth of civilisation and with the struggle for existence among the poorer classes. Young mothers, if employed away from home, are often forced to leave their infants in charge of others. Every hospital physician is familiar with the wizened-faced infants brought for advice by a neighbour or distant relative while the mother is at work, and experience teaches how often these poor children are being done to death through improper feeding. A typical case is reported from Salford, in which the mother went to work in a mill, leaving her child of four weeks old in the care of a relative, who fed it with cornflour and milk. The doctor explained the circumstances to the jury, and said the husband was only in receipt of 18s. a

week, and that the mother had therefore to work in order to assist in maintaining the household. The jury found the usual verdict, "that the child died from natural causes, accelerated by improper feeding." We feel disposed to take exception to the coroner's remark that "as yet no remedy had been found." In London, at least, the remedy is already supplied efficiently in many districts by *crèches*, where the infants can be left for the day, under trained management, for a sum which certainly scarcely covers the expense of the nourishment supplied. The establishment and proper maintenance of these *crèches* in poor districts afford a fitting outlet for the impulses of the benevolent.

MONUMENT TO SPALLANZANI.

IN Lazzaro Spallanzani the Italian intellect is seen to rare advantage, in its ingenuity, its clearness, its brilliant inductive power. To these qualities he added the moral one of love of truth for its own sake, which imposed on all his research a painstaking, conscientious character, not universally associated with the scientific work of the Latin peoples. Even in these days his contributions to what we know of the digestive function, of the circulation, of the organs of special sense in the lower animals, are still referred to with advantage; while the geologist and naturalist who are well read in the literature of their special subjects recall with pleasure their first perusal of the famous "*Viaggi alle due Sicilie e in alcune Parti degli Apennini*" ("*Travels to the Two Sicilies and in some regions of the Apennines*"). A monument to this fine genius and enthusiastic teacher has long been a cherished project with his compatriots, and subscriptions for it have been made in all parts of the peninsula, and even beyond it, by physiologists in particular and men of science and of letters in general. The work was consigned to Fornaciari, a gifted young sculptor of Reggio-Emilia, and in its completed state has just been unveiled at Scandiano, in the ex-Duchy of Modena, Spallanzani's native town. It represents the physiologist, in standing posture, examining intently through the microscope an object of histological research, and it effectively conveys the impression of keen, intelligent, patient observation. Concurrently with the unveiling of the statue, a tablet was inserted in the façade of the Casa Mattioli, where Spallanzani was born. The inscription from the pen of Professor Nabarro Campanini, of Reggio, a poet of distinction, is as follows:—

Questa casa
dove LAZZARO SPALLANZANI nacque
il giorno XII gennaio MDCCXXIX
accolse distribuito in sei stanze
l'insigne Museo
che egli adunò ai propri studi
chiamando
per cinque lustri insino al milleottocento
visitatori dall' Europa.

(This house, in which Lazzaro Spallanzani was born on the 12th day of January, 1729, received the noble Museum which, distributed over six rooms, he collected for his own studies, attracting visitors from all Europe for twenty-five years up to the nineteenth century.)

The Museum was presented to the city of Reggio in 1800, a year after its constructor's death. The ceremony of the unveiling was of the traditionally festive character in which Italians delight, and an oration *de circonstance* was read by Dr. Moschiari, a young lawyer. That this duty was not discharged by one of the many distinguished physiologists, native or foreign, in whom Italy now abounds, and that the representation of men of science was so restricted as not to have included a single name of note in the several departments in which Spallanzani was a master, is at present the subject of animated comment throughout the peninsula. Professor James Moleschott, who holds with such acceptance the chair of Physiology in the University of Rome, has sent to the journals a rather indignant protest against the

provincial, not to say parochial, character of a commemoration towards which so many foreigners had liberally subscribed, and at which they would have been proud to assist. Public opinion seems to side with him in this regret that from a genius so cosmopolitan in its scope and influence the tribute of the collective European schools should on such an occasion have been so conspicuously withheld.

BURIAL REFORM.

JUDGING from the numerous meetings which have been recently held of the Church of England Burial Reform Association, and the unanimity which always prevails, the cause of burial reform would appear to be making very satisfactory progress. Within the last month meetings have been held in Liverpool and York; while at the recent Church Congress held in Manchester, Mr. Seymour Haden had the opportunity of advocating the cause of the earth-to-earth burial against the practice of cremation as urged by the Rev. Mr. Haweis. This gentleman had but few supporters among his reverend brethren, who all appeared to prefer burial as the proper mode of disposal of the dead. Now that the Association is concentrating all its energies upon what are the two great blots of our modern burial system—(1) the strong imperishable coffin, and (2) the vault or bricked grave,—we trust that these meetings will continue, and that the Association and its indefatigable secretary, the Rev. F. Lawrence, will not cease their efforts until success has been achieved. The more immediate object of the Association now is to obtain signatures to a memorial to be presented to the Home Secretary praying for an inquiry into the present working of our cemeteries, and into the burial laws, with a view to their codification and simplification. These objects are such as all members of the medical profession must consider most desirable. The various Acts of Parliament and Orders of Council, which control the action of all modern cemeteries in these kingdoms, are sufficiently numerous to be always embarrassing, sometimes contradictory, and greatly in need of codification and simplification. The time, moreover, has arrived when some restriction must be placed upon the undue monopoly of large parts of burial grounds by family vaults, catacombs, bricked graves, and all similar devices for defeating the real object of burial—the restoration of the body to its parent earth. The latter also involves some modification of the present coffin, which should be of some perishable material, such as wickerwork or *papier mâché*, instead of the huge, massive polished oak coffins now in use. These restrictions and modifications cannot be justly regarded as any undue interference with the liberty of the subject or any infringement of private rights. No one has a right to cause his own body, or to assist any one in having his or her body, buried in such a manner as to be prejudicial to the health of the living. Burial conducted in accordance with sanitary laws will accomplish the resolution of the body in the course of a few years without prejudice to the health of anyone. This of itself ought to be sufficient to ensure the promotion of burial reform; but there are still stronger arguments behind. The only mode of burial really in accordance with the law of the land is that which we have just indicated, for the judgment of the late Lord Stowell, which has never been controverted, condemns imperishable coffins, vaults, and bricked graves as all beyond a parishioner's rights, and burial in the earth as the only lawful mode of burial. Unfortunately, these sanitary and legal arguments are not palatable to bereaved relatives, since they partake too much of the utilitarian view. Hence the importance of the work now being done by the Church of England Association, since its objects are the carrying out of the Order for the Burial of the Dead in

its original simplicity. In it there is no mention of a coffin, and it ordains that while the prayer of committal is read earth shall be cast upon the *body*. This same order is used by many Nonconformists; while the Roman Catholic Church, in its office for the dead, urges upon all present with solemn repetition to remember that man is dust and unto dust he shall return.

SCURVY IN THE RUSSIAN NAVY.

DR. A. P. LEVITSKI has published as a graduation thesis an interesting work on scurvy in the Russian navy from 1835 to 1884. During this period of fifty years the total number of cases of scurvy was 114,266. In the first half of these fifty years 6 per cent. of the men were affected, during the second half 2.2 per cent., and during the final quarter of the period only 1.6 per cent. This improvement seems to have been due to the better care that has been taken of the men in recent years, and especially to the improvement in their dietary. The cases have been less numerous at sea than ashore, and this difference is ascribed to the ration of meat allowed at sea being nearly double that allowed on shore. Climate alone appears not to play any part in the etiology of the disease. It occurs in all latitudes, and is sometimes very rife in the tropics. During the first half of the fifty years referred to, the Black Sea fleet suffered less than the Baltic fleet, and the Archangel fleet showed a scurvy rate only half as high as the Black Sea fleet, and less than half that of the Baltic fleet. In the latter half of the fifty years the rate in the Archangel fleet was only about a quarter of that of the Baltic fleet. During autumn and winter the disease, as a rule, almost disappears, both at sea and on shore. The general sickness rate has increased in recent years, while the scurvy rate has, as we have seen, diminished in a marked degree. In the Archangel, Black Sea, and more especially in the Caspian fleets the sickness rate from fever has lately been very high, being nearly 40 per cent. in the Caspian fleet ashore and 55 per cent. afloat; but, nevertheless, in all these fleets the amount of scurvy has been insignificant. Again, catarrhal and febrile affections are more frequent at sea, scurvy being, as above mentioned, more frequent ashore. The main factors in the etiology of scurvy are fatigue and insufficient nourishment. Thus it has been observed, over and over again, both at sea and on shore, that an outbreak of scurvy has followed an increase of work, the diet being of the ordinary kind; also that such outbreaks could be checked either by diminishing the work or by improving the diet, especially by increasing the meat ration.

COUGHING IN CHURCH.

WHOEVER has attended a place of worship must have noticed that the storm of coughing which prevails therein, and the throat clearing, which moves like a rabble of wrong notes before the church music, are not wholly natural phenomena. They are to a large extent avoidable evils bred of habit and thoughtless imitation, and their very desirable reduction is therefore by no means hopeless. Even where a basis of disease underlies the explosion a little self-control could usually do something to lessen its force or its frequency. The same is of course doubly true in the case of the merely habitual cougher. A variety of medicinal aids might, moreover, be used in support of such voluntary efforts. There is, lastly, the option of refraining from the use of the voice in worship should every other means fail to assure that reasonable degree of quiet which is natural and decent in public worship. Remonstrance on the part of the officiating clergyman affords another possible remedy, and a preacher must indeed be often tempted to reprove this form of disturbance as much in the interest of his hearers as himself. Occasionally his judicious interference might be useful. We

cannot doubt that it has from time to time been resorted to. It must be remembered, however, that nowhere are tact and temper so needful as in the pulpit, and that, however easy of use this corrective may appear, it would be unwise to establish any set method of restraint in a case where so much depends on personal discretion. A notice affixed at each entrance door would probably better answer the same purpose. In one respect, indeed, both clergymen and their lay assessors are open to some degree of blame in the matter. The arrangements for heating and ventilation are defective in almost every church. By seeking out and amending any evident errors in these respects the official members of a congregation would at least be doing what they could to abate the coughing nuisance.

INCREASE OF DIPHTHERIA MORTALITY IN LONDON.

MORTALITY in English towns, speaking generally, stands out in favourable comparison with that recorded in most foreign towns, and especially favourable is this comparison as regards the mortality from diphtheria, which is by far more fatal in nearly all European and American than in English towns. The recent increase of diphtheria in London is, however, on this account none the less worthy of attention. If we look at the statistics of mortality from this disease in the whole of England and Wales, we find that the annual rate was 187 per million in the ten years 1861-70, this being the first complete decennial period for which the information is obtainable. In the succeeding decennium the rate fell to 121 per million; while in the first seven years of the current decennium the mean rate rose again to 155, the highest rates in these seven years being 185 in 1884 and 168 in 1885. Prior to 1855 diphtheria was not separately returned in the Registrar-General's reports, attention being then forcibly directed to the disease through the exceedingly fatal epidemic that prevailed in France. Since that date the years of its greatest mortality in England were 1858 and 1859, when it caused death-rates of 339 and 517 per million respectively. While in England diphtheria may be called mainly a rural rather than an urban disease, it has been pointed out by the Registrar-General in his forty-seventh annual report that there are two special diphtheritic areas in England and Wales: the south-eastern area, consisting of London and of eleven surrounding registration counties; and the western, or Welsh area, consisting chiefly of North Wales and Shropshire. With regard to the mortality from diphtheria in London, which is the centre of the largest diphtheritic area in England and Wales, the disease was first separately returned in 1859; it caused in that year a death-rate of 284 per million, which has not since been equalled in London, although in 1863 the rate nearly approached it, and was 275. The mean rate in the metropolis in the ten years 1861-70 was 179 per million, while in the following decennium it declined to 122, the lowest rates being 80 in 1872 and 88 in 1877. During the first seven years of the current decennial period 1881-90, the death-rate from diphtheria in London has shown a marked increase; the lowest rate in these years was 171 per million in 1881, the highest rate was 241 in 1883, and the mean annual rate in the seven years was 217. Thus during the last seven years (1881-7) the rate of mortality from diphtheria in London has considerably exceeded that recorded in any similar previous period of which record exists, and has also exceeded the mean rate in the whole of England and Wales, which was not the case thirty years ago, when the disease first became fatally prevalent in England. It is worthy of note that while, as is stated above, the death-rate from diphtheria during the last seven years averaged 217 per

million in London, it did not exceed 113 in the twenty-seven great provincial towns which are scattered throughout England and Wales, and in which the death-rate from other zymotic diseases considerably exceeded that which prevailed in London.

DOMESTIC ANIMALS AS VEHICLES OF INFECTION.

It is reported from Chicago that a by no means inconsiderable local outbreak of scarlatina has been brought about by a cat, which acted as the means of conveying the infection. It has long been known that almost anything which can serve as a vehicle for carrying the desquamating epithelium of scarlatina patients may act as an intermediary between sick and healthy; and although recent study of the specific fevers tends to show that the period in which these diseases are most likely to be communicated is the acute stage rather than that of convalescence, it must be admitted that some of these diseases can be conveyed by such methods as the reception and subsequent discharge of infectious material from the coat of a cat nursed by patients. But that anything like an outbreak of scarlatina should be directly brought about by such a cause is contrary to experience, which goes to show that this disease is not often communicated from one person to another through the agency of a third party who is free from the disease; and it is far more probable that any extension of scarlatina in the case referred to was due to infection contracted directly from the first person to whom the disease was conveyed. But our main object in referring to the incident is to draw attention to the fact that the domestic animals do constitute a distinct danger to man, in so far as some of the specific infectious fevers are concerned. As yet we know nothing about any disease in the cat which can lead to scarlatina in the human subject. But it is probably highly different as regards diphtheria; for a number of instances have been placed on record in which, whilst diphtheria has been prevalent in the human subject, a similar if not the same disease has been ascertained to exist amongst cats; and it is certain that in some prevalences there has been close association between the human sick and the affected animals. We are at present only just on the borderland of a wide subject—namely, that of the relationship of diseases of the lower animals to diseases in man; and we may possibly learn hereafter that, apart from the origin of infective diseases in the lower animals, the latter may serve as media for communicating infections to an extent as yet not understood. Certain it is that the manner in which dogs, cats, and other domestic animals are at times fondled by those to whom they belong, and to whom they become attached, is not free from risk.

THE STUDY OF LEGAL MEDICINE IN BELGIUM

DR. MALVOZ has just read a valuable paper on this subject before the Medico-Chirurgical Society of Liège. After pointing out the splendid system for teaching State medicine in vogue in France, Germany, and Austria, he discussed at length the existing state of affairs in Belgium. His conclusions were that at present there is no such thing as practical instruction in forensic medicine and toxicology in any of the Belgian universities, and that the organisation of such practical teaching could be easily effected and at small cost. He maintained that, in the university towns, the professors of legal medicine should be specially appointed to carry out all medico-legal investigations, and that for this purpose they should be supplied with special laboratories. A degree in legal medicine should be created, and the magistrates and law officers throughout the country should give preference, in all medico-legal cases, to men holding this diploma.

BANGKOK HOSPITAL, SIAM.

WE have received a report of the work of the Bangkok Hospital in Siam. The report, which is designedly without any attempt at classification in a regular way, and is published mainly for the information of lay subscribers to the institution, contains a brief *résumé* of the work done since its inauguration two years ago. From this it appears that the sum total of all nationalities treated at the hospital was 3684. Siamese are naturally first in point of numbers with 1256, Chinese next with 846, Indians 764, Europeans 628, and other nationalities 190. The monthly average of patients, both in-door and out-door, was about 160. The institution is young, and the only one of its kind in Siam; hence we were pleased to receive the pamphlet under notice as an interesting record of professional work in an out-of-the-way part of the world. Siam, though growing in importance and rapidly advancing in civilisation, is still capable of much improvement. It is a priest-ridden country, and in Bangkok, the capital, it is estimated that out of a population of 600,000 there are no less than 20,000 Buddhist *phras*, who are extremely jealous of their inheritance as sole guardians of the bodies as well as the souls of the people. For the same reason, too, there is a great reluctance among Chinese to adopt the Western modes of treating diseases; but both Siamese and Celestials are alike decided in their preference for the European strangers' skill in surgery and in the use of the knife. Mr. R. T. Darwin, the resident medical officer at the hospital, to whom we are indebted for the report which forms the subject of this notice, informs us that in Bangkok the chief ailments among Europeans arise from malaria and bowel disorders; these are, however, amenable to hygienic and prophylactic measures, and easily brought under control if taken in hand in time.

THE RABBIT PEST IN AUSTRALIA.

A BRIEF and interesting account of the experiments undertaken by the Commission appointed to investigate the extermination of rabbits has been furnished by Dr. Bancroft.¹ The experiments took place at Rodd Island, Port Jackson, N.S.W., where a laboratory was erected with specially constructed pens formed of close wire netting, within which the animals were confined. The first experiments were those suggested by M. Pasteur—viz., to sprinkle the vegetables upon which the rabbits fed with a liquid containing the microbes of chicken cholera. All the rabbits so fed died, but the greater number of others not fed with the virus survived, notwithstanding that they were in contact for several days with the dead rabbits. In a further experiment carried on in a larger enclosure provided with artificial burrows, all rabbits treated with chicken cholera died, with one exception—"a wild rabbit, which seems none the worse after having eaten three strong doses of the chicken-cholera cultivation." Hares are found to die, like rabbits, from chicken cholera—a disease, by the way, which has not yet appeared in Australian fowl-yards. In the experiments where artificial burrows were used there were some indications of contagion, one rabbit not fed on the virus having died of the disease; but Dr. Bancroft points out that sufficient time had not elapsed to say much of the contagious property, upon which, of course, would depend the value of the suggested method as an exterminating agent. But in his opinion the dissemination of zymotic diseases among rabbits—such as chicken cholera and rabbit septicæmia—is not to be favoured until more is learned of their powers of inflicting injury, so that most thorough investigation is needed before they are introduced into

¹ The Queenslander, Sept. 16th.

Australia. He has himself observed that the coccidium parasite—which lodges in the liver—is a common affection in rabbits, and thinks there would be no great difficulty in infecting rabbit colonies with this parasite, “which has not been shown to be of much danger to other forms of animal life.”

YELLOW FEVER.

DR. G. M. STERNBERG, who was commissioned by the College of Physicians of Philadelphia to investigate the methods of protective inoculation as practised in Brazil (by Dr. Domingos Freire) and in Mexico (by Dr. Carmona y Valle) reported that facts concerning the endemic and epidemic prevalence of the fever justify the belief that its cause is a micro-organism, which can under suitable conditions be propagated outside the body, as well as be capable of transport to a distance; also that, as a single attack of yellow fever, however mild, mostly protects from future attacks, there is reason to hope that such protection might be gained by inoculation. The yellow fever germ probably gains entrance into the body by the respiratory or alimentary tracts, or through the surface of the body; or it is possible that it multiplies in insanitary localities and develops a volatile poison which contaminates the air. The former hypothesis, that it enters the body and multiplies within it, is, he thinks, the more probable. Hitherto the germ has not been found in the blood and tissues of those attacked, for Dr. Sternberg does not confirm the alleged discovery made by Dr. Domingos Freire. Nor is there, in Dr. Sternberg's opinion, any satisfactory evidence that the method of inoculation practised by Dr. Domingos Freire has any prophylactic value, and the same applies to the claims put forward by Dr. Carmona y Valle, of Mexico.

THE PREVENTION OF CRIME.

AMONG the various measures devised for the prevention of crime, none are more worthy of attention than those adapted to reclaim the character of young offenders against the law while as yet they have not known the hardening contact of prison life. In dealing with cases of this kind, a judge, as is well known, has considerable discretionary power. Besides the ordinary prison sentence, he has at his disposal the machinery of the reformatory and industrial schools, and it rests with him to decide whether a young culprit should be made to learn the evil of his ways by summary punishment, by systematic training, or by both of these means. That each has its value cannot be denied. At the same time, it is in our view equally certain that imprisonment is in all such cases very undesirable, and should, if possible, be dispensed with. When we consider the want of sense and of previous instruction in moral principles, and the temptation, strengthened by poverty, which underlie many such delinquencies, we cannot but think that something else than prison discipline is needed for their correction. There is no doubt that this opinion prevails upon the bench also. Were it otherwise, the membership of industrial schools would be less than it is. We do not pretend that mere physical or intellectual culture, alone or together, will make a bad boy good. Over and above this there is needed a careful, helpful, and hopeful devotion to the training of the moral nature. To educate without regarding this vital matter is to drive every screw but the loose one. In many cases, however, punishment is as needful as instruction. In dealing with these, a suggestion lately put forward, that some form of corporal chastisement is preferable to the contaminating restraint of a prison, appears to be an eminently sensible one. Before leaving this subject we cannot in justice omit to mention another agency besides those already

referred to, whose work is a standing example of success well earned under discouraging conditions. This is the benevolent effort sustained by Mr. George Hatton and others, under the name of the St. Giles's Christian Mission. The work of the mission consists in seeking and helping with food, clothes, work, or money, prisoners who have served their time in gaol and have been discharged. Its value to these friendless people is very great, and perhaps it is not less to the unconscious public among whom they emerge as unemployed convicts. The Mission also supports a home for young boys who have been saved from the consequences of a first conviction. We have said enough in indirect advocacy of this part of its operations. It is needless to add that a project so entirely charitable as this work among prisoners cannot thrive on insufficient funds, and we may fairly ask that its recent appeal for subscriptions to the amount of £400 may be so answered as to justify a still further expenditure of its useful energies.

INDUCTION OF PREMATURE LABOUR.

M. BAYET, interne in Prof. Kufferath's clinic in Brussels, describes in *La Clinique* an attempt made under the Professor's direction to induce premature labour by means of the so-called elythro-ptyergoid apparatus of Chassagny. This apparatus, about which a good deal of discussion has recently taken place in Belgium, consists essentially of a pig's bladder, which is folded up and introduced into the uterus, and subsequently distended by means of the injection of water, similarly to the “colpenyter” which is used in German clinics. The patient in M. Bayet's case was a young woman of strong constitution, but with a rachitic pelvis, the conjugata vera being only six centimetres and a half, as measured by Van Haevel's pelvimeter. The woman was in the eighth month of pregnancy. M. Kufferath gave her the choice of having premature labour induced at once, or of waiting until her full time, and then submitting to Caesarean section, with the hope of bringing forth a living child. She naturally selected the first of these alternatives. With this object Chassagny's apparatus was introduced, and allowed to remain for half an hour in the uterus; it caused, however, severe pain, and was extremely difficult to keep in its place, besides which it produced erosions in the vagina, causing a bloody discharge. Further attempts were subsequently made, but these proved so painful and caused so much ulceration and oedema of the vagina that they had to be discontinued and the patient left alone for five or six days. These attempts to produce premature labour having entirely failed, a soft bougie was introduced, and in three or four days' time with a successful result. An attempt was made to deliver the woman with forceps, but the head refused to engage the brim, Tarnier's basiotribe was therefore applied, and the head crushed in all directions, after which extraction was easily effected. The patient made a good recovery. M. Bayet remarks that Chassagny's apparatus gave a very different result from that described by M. Hubert, who reported that he had been able to induce premature labour in an hour by its means. M. Bayet also remarks that it is impossible thoroughly to disinfect an apparatus composed of a pig's bladder, especially as it is necessarily introduced folded up, and therefore full of creases. Regarding the effect of the basiotribe, it is noteworthy that the child when born was, legally speaking, alive, its respiratory and cardiac movements continuing, indeed, for about two hours, besides which it cried faintly. Of course, as the brain was completely reduced to a pap-like mass, life, such as it was, depended entirely on the medulla oblongata; still it is well to remember that in delivery by means of cephalotripsy it is possible that the child may be born “alive,” and may therefore inherit property.

UNIVERSITY OF BRUSSELS.

THE annual academical gathering took place on the 15th ult. in the Gothic Hall of the Hôtel de Ville. The Burgomaster (M. Buis) presided, being supported by the new rector of the University (M. Vanderrest), the vice-rector (M. Depaire), and a large number of professors. The report showed that all the faculties were in a flourishing condition, the number of inscriptions for the year 1887-88 being 1795. In the Faculty of Medicine the number of students had very much increased, as also in that of Science. Through the death of Professor James, a vacancy had been caused in the Faculty of Philosophy and Literature. Dr. Tournay has been nominated *docteur agrégé* in the Faculty of Medicine, and M. Achille Herlant professor in the School of Pharmacy. The rector (M. Vanderrest) pronounced the usual opening discourse. He dwelt mainly on the question of socialism, and was of opinion that it would be better to establish a school of Political and Moral Science in connexion with the Faculties of Philosophy and Law than to found a separate Faculty of Sociology.

PTOMAINES AND GASTRIC VERTIGO.

VERTIGO A STOMACHO LÆSO is the result, according to M. Gaube and others, of autochthonous poisoning, the poison being a base belonging to the group of cadaveric alkaloids or the ptomaines of M. Gautier. The fæces and the urine of individuals suffering from digestive derangements accompanied by dilatation of the stomach contain the poison. The dilatation may be a symptom of the presence of the poison, which is an uncrystallisable base having alkaloidal qualities, and forming soluble crystalline salts with muriatic acid. It is absorbed into the circulation, and determines giddiness by its effect on the brain, just as is imagined to be the case in uræmia. Injected under the skin of young rabbits, half a milligramme of the hydrochlorate of this ptomaine caused coldness of the ears, extremities, and surface of the body within the first hour, and much urine was passed; in twelve hours appetite was lost, the fæces became soft and the urine scanty; death occurred in from thirty to thirty-six hours after the injection, the head of the animal being held in such a manner as to suggest giddiness.

COMMON LODGING HOUSES IN EDINBURGH.

To judge from the report made before the Public Health Committee of the town and the various comments published by the local press, it would seem that the condition of the common lodging houses in Edinburgh is very inferior to that which prevails in London. There is, it is true, a rule that the accommodation shall provide 400 cubic feet of air per inhabitant. This is more than the space required in London, where 300 cubic feet is the general rule, though we have known places where it is only 250. Indeed, it is one of the shortcomings of that otherwise most excellent statute—the Common Lodging Houses Act of 1851—that no precise space is mentioned as the minimum amount of cubic feet for each lodger. It would appear, however, that the 400 cubic feet is given only when the lodging houses are not especially crowded, while it is precisely to prevent special overcrowding that such regulations are drawn up. Thus it may be asserted that the rule is not strictly enforced. Worse than this, however, is the promiscuous intermingling of sexes. In the lower lodging houses this promiscuity has prevailed without let or hindrance, and health, order, and decency have alike suffered. Now it is proposed that all lodging houses shall be divided into three distinct classes—one for married couples and their families, another for males, and a third for females. But the Edinburgh lodging house-keepers will, it is said, rebel against this, and

seek to avoid the law by converting their dormitories into private apartments. It is therefore fortunate that public opinion has been raised on the question, or otherwise the town authorities would not possess the strength to cope with the evil. We trust that the Scotch press will not neglect any opportunity of laying bare these social sores, and thus force on the necessary reforms.

MEDICAL SOCIETY, KING'S COLLEGE.

THE inaugural meeting of this Society for the session 1888-89 was held at King's College in the general library on Oct. 25th, when Mr. W. J. Penny, F.R.C.S. (the recently elected assistant surgeon), delivered an address upon "Antiseptics in the Provinces." In the course of his remarks, he criticised provincial surgery before the introduction of antiseptics, and emphasised the need of attention to details in the employment of the Listerian method. He maintained that many of the adverse views which were occasionally heard were due to an imperfect acquaintance with the system and its inadequate application in the hands of those working under the direction of the surgeon. Considering that everyone who studied under Sir Joseph Lister was a potential "antiseptic nucleus," he urged the importance of attention to practice, rather than literature, and the value of a "microscopic purity." The meeting, which was well attended by students, visitors, and some members of the staff, was brought to a close with the customary vote of thanks.

THE GOVERNMENT AND THE SWEATING SYSTEM.

THE army accoutrement makers, at a public meeting held at the Nelson Coffee Tavern, Lower Marsh, have joined in demanding the remedies we have recommended to prevent the sweating system. Like the trades of Glasgow, they insist that the Government should follow the example of the Paris municipality, and not grant any contract which gives rise to the sweating system. They confirm our assertion that sweating is practised for work done for Government, and urge that, if contractors will not employ the workmen in their own factories, and will not pay the proper trade rate of wages, the Government should build factories of its own and do the work itself.

CADAVERIN.

It has been held to be demonstrated that several ptomaines are capable of provoking suppuration in the rabbit without the presence of micro-organisms. Behring has attempted to ascertain whether iodoform can prevent such a suppurative process. Cadaverin and iodoform are mutually destructive, so that the former loses its pyogenic properties. Perhaps the utility of iodoform in dressing wounds results from this action, since iodoform appears not to be a microbicide.

ANOTHER FASTING MAN.

WE very much regret to learn that another of those absurd exhibitions of a thirty days' fast has been commenced in Edinburgh. This time it is a Frenchman, Monsieur Alexandre Jacques, who essays the task to demonstrate the utility of a certain herb, for which he claims extraordinary sustaining and nourishing properties. As usual, plenty of volunteers have come forward to watch the proceedings, which are reported to have commenced on October 25th at the Douglas Hotel in Princes-street. Monsieur Jacques considers that by this exhibition he will best demonstrate the value of this plant, and he thinks so highly of his "secret" that he says he has already declined £600 for it,

trusting that by this trial of its efficacy he will be able to command a higher price. The scientific value of these exhibitions is extremely small, and, whatever the financial result of the present trial may be, we trust that this will be the last occasion on which we shall have to refer to a test of endurance as ridiculous as it is useless.

THE UNIVERSITIES OF EDINBURGH AND ST. ANDREWS.

THE vacancy created by the promotion of the Lord Advocate to high judicial office is one of great importance. It ought to be filled by a medical man. The great majority of the electors of the University of Edinburgh are medical graduates. We are not prepared to say that at a crisis like the present political principles can be disregarded. But at least it is to be lamented that the strife of parties is such, and so grave, that an academic seat has to be filled by one who is not in professional touch with most of his constituents. Is it not possible out of this rich constituency to choose one who would worthily represent the great body of medical graduates? We appeal to the medical members of the constituency.

CEREBRO-SPINAL TUBERCULAR MENINGITIS.

THE morbid process in cases of this disease need not be limited to the meninges, the actual substance of the spinal cord being invaded. A single nodule of grey granulation has been found at times embedded in the medulla oblongata, and looking as if it exactly replaced the natural tissues. Very likely odd symptoms of "meningitis" may receive an explanation from such an occurrence.

MEDICAL SOCIETY OF LONDON.

WE understand that the subject of early surgical interference in cases of syphilitis and inflammations in the region of the cæcum will be brought before the Medical Society at its meeting on Monday, Nov. 5th, at 8.30 P.M. The subject will be introduced by Dr. Bull of New York, and, as it is of great importance, it is hoped that a full discussion will follow.

PORRO'S OPERATION.

ON Thursday morning, at the Middlesex Hospital, Dr. William Duncan performed Porro's operation on a rachitic patient aged about twenty-seven, thirty-six inches in height, with extreme pelvic deformity, the conjugate measurement being only an inch and a quarter. The child, which was nearly full time, looked strong and healthy, and both mother and child appeared likely to do well. We hope to publish details of the case later.

LECTURES AT THE COLLEGE OF SURGEONS.

THE Morton Lecture on Cancer and Cancerous Diseases will be delivered in the theatre of the College on Thursday, Nov. 29th, at 4 P.M., by Sir Spencer Wells. The subject of the Bradshawe Lecture, which will be given by Mr. Hutchinson, at 4 P.M. on Thursday, Dec. 6th, has not yet been announced.

FOREIGN UNIVERSITY INTELLIGENCE.

Dorpat.—Professor Unverricht, of Jena, has been offered the Professorship of Medicine vacated by Professor Schultz on his removal to Bonn.

Madrid.—Don Antonio Fernandez Chacon, Professor of Midwifery in Valladolid, has been elected, after competition, to the chair of Midwifery. Professor Calvo y Martin has resigned his position as Dean of the Faculty of Medicine

on account of ill health. He will probably be succeeded by Señor Letamendi. The number of entries both in the Medical and in the Pharmaceutical Faculties has shown a distinct decrease this year, the numbers being in the two Faculties respectively 708 and 505, or 176 less than last year in the Medical Faculty, and 46 less in the Pharmaceutical.

Montpellier.—M. Blasé, *agregé*, has been appointed *Chef des Travaux* in Anatomy in succession to M. Carrien.

Munich.—Professor Sachs, of Würzburg, has received an invitation to occupy the chair of Botany lately held by Professor Nägeli.

St. Petersburg (Military Medical Academy).—Dr. Joh. Miertsevski, Professor of Mental and Nervous Diseases, having come to the end of the usual twenty-five years' service on the teaching staff, has been reappointed for five years.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Alexander Zagorski, Emeritus Professor of Physiology in St. Petersburg, at the age of eighty-one.—Dr. W. Haeckermann, Extraordinary Professor of State Medicine in Greifswald, and one of the oldest members of the teaching staff of that university, at the age of seventy-two.—Dr. E. Bogdanovski, Professor of Clinical Surgery in the Military Medical Academy, St. Petersburg, suddenly, during the progress of an operation in his wards.—Dr. Alex. Polunin, formerly Professor of Medicine in the University of Moscow, in his sixty-eighth year. Professor Polunin is well known as the translator of Canstatt's Pathology, Virchow's Pathology, and other German works into Russian.

THE Ladies' Humane Education Committee of the Brighton Branch of the Royal Society for the Prevention of Cruelty to Animals have drawn up a statement, in which they urge the establishment of an abattoir in the town on the plea of humanity and on sanitary and economical grounds. They point out that, in relation to this question, Brighton is behind the times, and earnestly ask the electors, in the approaching election of town councillors, to give their votes to those candidates who will pledge themselves to deal with the question in the way they desire.

DR. WILLIAM OSLER has resigned the office of Professor of Clinical Medicine at the University of Pennsylvania, which he has held during the past few years, and has accepted the appointment of Professor of the Practice of Medicine at the Johns Hopkins University, Baltimore, together with that of physician to the hospital. Dr. Osler, it may be remembered, delivered the Galstonian Lectures at the Royal College of Physicians in 1885, taking for his subject "Ulcerative Endocarditis."

AT the meeting of the Harveian Society on the 15th inst. Mr. Mitchell Banks will read a paper on the "Permanence of the Radical Cure of Hernia."

NEW HOSPITAL FOR INFECTIOUS DISEASES, FAVERSHAM.—A hospital has been erected by the guardians for the Faversham Union (as the rural sanitary authority) for the isolation and treatment of infectious cases, and will shortly be ready for the reception of patients. It is built on a site at the summit of Beacon Hill, given by Mrs. Wheeler and the late Mrs. Bullen. The cost of the buildings is nearly £1100.

THE SANITARY INSTITUTE.—At a meeting of the Council of this Institute held on the 25th ult., Sir Douglas Galton, K.C.B., F.R.S., in the chair, thirty-eight members and associates were enrolled.

OPENING OF THE SESSION IN SCOTLAND.

GLASGOW UNIVERSITY.

THE winter session of the medical classes in connexion with Glasgow University was opened with an address by Professor Buchanan. The proceedings took place in the Bute Hall, which was well filled with students and their friends. Principal Caird occupied the chair, and most of the professors of the faculty were present. Professor Buchanan, in the course of his address, said that he wished to suggest certain topics for the consideration of his hearers, upon which he thought they might take some action, because they were perhaps aware that probably before the end of the current session for the first time the students would be recognised by the State as a corporate body in the University. He was about to take up two topics of importance. The first was Free Trade as against Protection; and, secondly, some considerations with regard to the Curriculum and Examination. Should the study of medicine be regulated or influenced simply by the principles of free trade? and the same with teaching, and the same with practice? When he was a student the principles of free trade regulated the entrance into the profession. All that a student had to do was to pay his fee, get his name enrolled, and sit on the benches. No questions were asked. He continued to do so till the end of four years, and then he was examined in one day from botany to medicine. He either came out a doctor or not a doctor. In 1860 free trade was abolished, and now they were under protection; and the protection consisted in demanding that the student should pass a preliminary examination before he began his studies. Was there any other kind of restriction? What about sex? What about women? More than half of the honours of the University of London in anatomy, physiology, and materia medica at the August examination were taken by women, as against all comers from all schools. He thought it right that women should be encouraged in this profession for the sake of going to India and practising in places to which women were not admitted. Professor Buchanan next proceeded to state the question, whether the teaching of medicine should be regulated upon the principle of free trade or upon that of protection. He would say protection for the student rather than protection for the teacher. In the meantime there was restriction for the teacher, and that restriction was founded upon two totally different principles. The one was that a teacher must belong to a guild; the other, that the teacher must defer to a tribunal—an impartial tribunal, the University Court—which was entitled to grant the right of teaching to any person who applied, if he satisfied the Court that he was qualified to teach. The next question was a more difficult one. In connexion with the giving of a degree, should the teaching be confined to that given within the University, or should it be open to all? At present the teaching for a degree was, in the main, given within the University, but the students had the right to take a portion of it outside. With reference to that, he was of opinion that the permission should be made more liberal than it is. But the very essence of a Scotch degree is that a part of the teaching must be within the University. If the power of granting degrees by examination alone were extended to the Scotch universities, it would be accompanied by a condition that the test should be made analogous to that of London, with the result that the Scotch M.B. would be out of the reach of those who now obtain it. By all means, Professor Buchanan remarked, liberalise the conditions, but retain, in part at least, the principle which has made Scotch universities what they are. With regard to the question of free trade as against protection in private practice he should say almost nothing. In 1860 the Government declared that every practitioner who wished to have his name upon the Register should pay five guineas for the registration. What had they got for that? Had they got any protection? No. There had been no suppression of quackery, as it was called. It was for those who are beginning the profession to see if they could do better and give themselves the protection which had not yet been obtained. Professor Buchanan next suggested some alterations in the plan of study. Among the most important was the securing a larger share of a student's time for anatomy, the foundation on which rest all the practical branches of

the profession. Professor Buchanan concluded his address by a review of the various objections which have been raised of late to the clinical teaching in the Western Infirmary, and maintained that the charges were unjustifiable and without foundation.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.

On the 25th ult. Dr. Milne delivered the introductory address at this institution, the subject being a historical review of the early progress of chemical science. To the ancient Egyptians, he remarked, we must look for the first indications of chemical knowledge, and when in the year 640 the Arabians overran Egypt they no doubt soon learnt what the Egyptians knew. Perhaps the most celebrated of the Arabian alchemists was Geber, whose works on alchemy were believed to be amongst the earliest contributions to chemical literature. Up till this time chemistry, such as it was, was practically without a theory, if we excepted the old Aristotelian one of the existence of only four elementary bodies—fire, air, earth, and water. Up till the thirteenth century chemistry would appear to have been studied, not for its own sake, but chiefly with the view of aiding the alchemists in their phantom-like pursuit of the philosopher's stone and the elixir vitae. A curious circumstance noticed by the lecturer was that many of the more important chemical facts known to the ancients were connected with that branch of the science now known as organic chemistry. Proceeding with his historical review, Dr. Milne referred to the work and discoveries of such men as George Ernest Stahl, who followed Boyle, Black, Priestley, and Cavendish in Britain, Scheele and Berzelius in Sweden, and Lavoisier in France; and concluded by alluding to the investigations of the German chemist Liebig, the French chemists Dumas and Chevreul, and our own immortal Michael Faraday.

THE HOWARD ASSOCIATION.

FROM the recently issued report of the Howard Association, it appears that the past year has been a specially laborious and active one. In no preceding point of its existence have the committee and their secretary been more closely engaged in efforts for the specific object for which this body was instituted—viz., the promotion of the best methods of the treatment and prevention of crime. In addition to a continuance of the ordinary operations of the Association, the chairman of the committee and their secretary have prepared and issued two books on General Penology and Social Reform, which, it is believed, will be of much utility, both at home and abroad. During the year there has been issued a new and carefully revised edition of the valuable work on Social Wreckage, in which Mr. Peek has embodied further observations on Poor-law relief, on which subject he was examined by the Select Committee of the House of Lords. In addition to these labours on the part of their chairman, with which it has afforded the committee pleasure to co-operate as far as possible, their secretary, Mr. Tallack, has been closely engaged in preparing for publication a volume of about 420 pages, now just issued, entitled "Penological and Preventive Principles, with special reference to Europe and America, and to the Diminution of Crime, Pauperism, and Intemperance; to Prisons and their Substitutes, Habitual Offenders, Sentences, Neglected Youth, Education, Police, Statistics, &c." This book embodies the conclusions derived from many years of home and foreign observation, inquiry, and correspondence, in relation to the important subjects which have come under the cognisance of the Howard Association. The committee have, as in former years, maintained their interchange of communication with persons in the colonies practically interested in the diminution of crime and pauperism, and much information on those questions has thus been diffused.

For the first time for some years the income of the Association has not actually decreased during the twelve-month, but has slightly exceeded that of last year. Yet this has not been adequate to relieve the balance sheet from a continuing debit of considerable amount, or to meet the

necessarily increased expense of special outlay, on the part of the Association. The financial year now ended still leaves a debt of £86. It is much to be hoped that the committee will during the ensuing year be placed in a position to extend as far as possible the particular efforts now being made by them to diffuse the principles and promote the objects of the Association.

JUDICIAL STATISTICS, 1887.

THE "Judicial Statistics" (Part 1) are in some sense the "Black Calendar" for England and Wales. They depict in concise form the dark and seamy side of our social life. The returns for 1886-87 show a decrease of 1·4 per cent. in the total number of the criminal classes at large and known to the police, as compared with the numbers in 1885-86. There is a decrease also in the number of houses of bad character, equal to 8·1 per cent. The number of convictions for murder in 1887 was 35, the same number as in the previous year. As compared with the preceding year, the numbers of the criminal classes (including known thieves and depredators, receivers of stolen goods, and suspected persons) for the year 1886-87 show a decrease of 499, or 1·4 per cent. The metropolis, however, shows an increase for the year of 1·8 per cent., and the commercial ports an increase of 5·9 per cent., as compared with the decrease shown in "pleasure towns" and in towns depending upon agriculture, and in towns connected with the manufacture of various kinds of goods. The criminal classes numbered 58,150; of these, 33,599 were at large and 24,551 were under confinement (in prisons and reformatories).

The apprehensions in 1886-87 were in the proportion of 44·9 to the number of crimes committed. The two winter quarters, as usual, show the greatest number of offences committed, but the two summer quarters show the larger proportionate number of apprehensions. There were 163 murders in 1886-87, as against 171 in 1885-86. Of the 163, 47·2 per cent. were murders of infants aged one year and under. There was one murder to every 173,564 of the estimated population for the year; one attempt to murder to every 404,158; one manslaughter to every 129,182; and one case of shooting, stabbing, wounding, &c., to every 37,671.

The following is a very remarkable illustration of the stable nature of certain figures under circumstances of great variety:—In the total number of persons proceeded against, the percentage of males to females in 1886-87 was as 82 to 18, in 1885-86 it was exactly the same, and in 1884-85 it was practically the same (81·9 to 18·1). The proportion of the number of males convicted to the total convicted in 1886-87 was 83·3 per cent., and of females 16·7 per cent. In 1885-86 the proportions were 83·2 and 16·8.

Coroners' returns for the year 1887 show that as many as 30,030 inquests were held, as against 28,940 for 1886. Amongst the verdicts returned by the coroners' juries were: murder 196, manslaughter 154, suicides 2227, accidental death 11,983, found dead 2043. The inquests upon persons executed numbered 29 (6 women), as against 19 (1 woman) in the preceding year. The proportion of inquests on males year by year remains remarkably uniform, the percentage to the total number of inquests being, in 1887, 66·0; in 1886, 66·7; in 1885, 66·9; in 1884, 67·4; in 1883, 67·7; in 1882, 67·8; in 1881, 67·5.

The number of criminal lunatics under detention during the year ending Oct. 31st, 1887, amounted to 801, as against 890 during the previous year. Of the 801, as many as 292 had committed murder—namely, 179 males and 113 females. Of the total male criminal lunatics, a proportion of 30·2 per cent. have committed murder; while of the total female criminal lunatics a proportion of 54·3 per cent. have committed murder.

DEATH WHILST UNDER CHLOROFORM.—At an inquest on a young woman, at Nelson, Lancashire, on the 24th ult., the evidence went to show that death resulted while the deceased was under the effects of chloroform administered prior to the extraction of teeth. The jury returned a verdict of "Death from misadventure."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Llanwddyn, by Dr. F. PARSONS.—The village of Llanwddyn, in the upper part of the valley of the river Vyrnwy, in Montgomeryshire, has some especial interest at the present moment, since it lies in the basin of the valley which will constitute the new reservoir for the Liverpool waterworks. The valley is somewhat characteristic of spots which have often been the seat of diphtheria; it is enclosed by mountains at the head and on either side, the bottom being a flat strip, half a mile in width, of alluvial meadows and peaty morass, believed to be the bed of an ancient lake. In this shut-in moist valley lies the village, which was in 1838 severely attacked with diphtheria, and which again in 1880 exhibited the disease in a fatal form, there being at the same time a wide prevalence of mild sore throats. Since then no diphtheria has been recorded until the present year, although some suspicious entries are included in the death registers for the intervening period. Facilities for importation have been especially prevalent of late, by reason of the large number of workmen employed in the works inaugurated by the Liverpool corporation, and which are now practically completed. By Sept. 19th thirty-eight cases of diphtheria had occurred in twenty-three households, and there had been nine deaths; there had also been a number of attacks from sore throat, tonsillitis, &c. The diphtheria was also preceded by pneumonia, but, having regard to the special exposure to which the workmen were subjected, it is difficult to assign a zymotic cause to this disease. Free communication between sick and healthy was rendered the more easy by reason of the form and character of the workmen's huts, and of the temporary character of many of the arrangements which existed. General sanitary circumstances, water and milk supplies, and antecedent affections of the lower animals were all inquired into, but nothing definite as to the source of the disease could be made out as the result. But, on the other hand, it is noteworthy that the dwellings known as Quarry Huts, and which occupy a higher and drier situation than the rest of the village and its outlying huts, had, up to the date of the inquiry, escaped the infection; these dwellings were also, as a rule, cleaner than the remainder. On Dr. Parsons' recommendation a "Home" was established for the isolation of the sick; and having regard to the uses to which the valley is now forthwith to be put, he urged that of the houses in which diphtheria had occurred all such portions as could easily be destroyed should be burnt, and that accumulations of manure and filth should be removed wherever these existed in the bed of the new reservoir. When this is filled, it is intended that the first water shall be run off with a view of cleansing the basin.

Diphtheria at Llanasa and Whitford, by Dr. PARSONS.—These parishes are in the rural sanitary district of Holywell, and nineteen cases of diphtheria, with five deaths, had occurred there this year up to August. In Llanasa fifty cases and twenty-six deaths took place in 1884-85, after which the disease seemed to have disappeared until the present year. For this outbreak no definite cause could be ascertained, but there is a record of attacks of sore throats, at times characterised by ulcers on the tonsils, which may have constituted the connecting links between the 1884-85 outbreak and that of this year; and it is especially noteworthy that some of these occurred in families which in both outbreaks suffered from diphtheria, and, as regards one family, this took place notwithstanding change of residence. We are here face to face with some of the most obscure points relating to the etiology of diphtheria, such as the periodic progressive development and subsequent loss of a property of infectiveness, and the possibility of a recrudescence of the diphtheria poison occurring, under trivial circumstances of congestion or inflammation, in throats that have at a former period been the seat of undoubted diphtheria. How far faulty sanitary circumstances can be regarded as lighting up anew the process of infectiveness

cannot be stated; but it is noteworthy that diphtheria does cling to certain spots where there are, amongst other things, such defective sanitary arrangements as relate especially to drainage and excrement disposal.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bolton Urban District.—The borough of Bolton, with a population estimated at 112,354 to the middle of 1887, had last year a death-rate of 21·3 per 1000. Zymotic diseases were responsible for 411 deaths, and they included 344 fatal attacks of the so-called seven principal zymotic diseases. Scarlet fever prevailed widely; 721 cases were recorded, and of these 37 died, the epidemic being mild in type. There were also 31 fatal attacks out of 107 recorded cases of enteric fever, and the cause which led to this fatality is regarded as one that must have operated pretty generally over the various parts of the town. Speaking in some detail as to the compulsory notification of infectious disease, Mr. Sergeant claims for it that it has distinctly operated to reduce the general mortality, and that from certain specific causes; and he shows, by comparing the period 1877-86, since which such notification has been in force, with the preceding decennium, when no such system was in operation, that there has been a marked reduction in the deaths from the several continued fevers, from small-pox, and from scarlet fever. As to small-pox, it can very generally be held in check in country towns by notification and immediate isolation; but, although scarlatina has declined as a cause of death in Bolton, those two preventive measures have, in this borough as in others, not done all that was hoped for from them. No less than 296 patients were received in the excellent isolation hospital, 292 of them being scarlatina cases. The total cost of maintenance per head was £4 5s. 6½d., or 14s. 3d. per week. But the average expenditure received increase during 1887, owing to the repainting and decoration of the hospital and its wards. Excellent tables and diagrams summarise a large amount of matter bearing upon the vital statistics and sanitary state of the borough.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5816 births and 3930 deaths were registered during the week ending Oct. 27th. The annual rate of mortality, which had been 21·0 per 1000 in each of the preceding two weeks, rose last week to 21·8. During the first four weeks of the current quarter the death-rate in these towns averaged 20·5 per 1000, and was 0·3 above the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 15·7 in Derby, 16·0 in Leicester, 16·5 in Brighton, and 16·7 in Norwich. The rates in the other towns ranged upwards to 25·4 in Blackburn, 25·5 in Cardiff, 29·1 in Huddersfield, and 32·8 in the city of Manchester. The deaths referred to the principal zymotic diseases, which had been 461 and 465 in the preceding two weeks, further rose last week to 472; they included 169 from measles, 93 from diarrhoea, 63 from "fever" (principally enteric), 53 from scarlet fever, 47 from diphtheria, 45 from whooping-cough, and only two from small-pox. The aggregate deaths from these zymotic diseases caused the lowest death-rates last week in Bradford and Birkenhead, and the highest rates in Manchester, Leeds, and Cardiff. Measles showed the greatest mortality in Leicester, Liverpool, Leeds, Huddersfield, Portsmouth, and Cardiff; diarrhoea in Brighton, Portsmouth, and Preston; "fever" in Derby, Salford, Sunderland, Halifax, and Cardiff; scarlet fever in Leeds, and whooping-cough in Norwich. The 47 deaths from diphtheria in the twenty-eight towns showed a decline of 6 from the number in the previous week, and included 31 in London, 5 in Manchester, 2 in Nottingham, and 2 in Halifax. Small-pox caused 1 death in London and 1 in Preston, but not one in any of the twenty-six other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained no small-pox patient at the end of the week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 1009 at the end of the week, and showed a further increase upon numbers which had risen in the preceding nine weeks from 774 to 1003; 81 cases were admitted during the week, against 119 and

101 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding eight weeks from 130 to 364, further rose last week to 522, and exceeded the corrected average by 134. The causes of 83, or 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Birkenhead, Bolton, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Sunderland, Sheffield, and Portsmouth.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·4 per 1000 in each of the preceding two weeks, declined to 19·8 in the week ending Oct. 27th; this rate was 2·0 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 9·8 and 12·8 in Leith and Perth, to 20·9 in Glasgow and 47·2 in Paisley. The 500 deaths in the eight towns showed a decline of 17 from the number returned in the previous week, and included 26 which were referred to measles, 15 to diarrhoea, 9 to diphtheria, 9 to whooping-cough, 7 to scarlet fever, 3 to "fever" (principally enteric), and not one to small-pox; in all, 69 deaths resulted from these principal zymotic diseases, against 60 and 82 in the preceding two weeks. These 69 deaths were equal to an annual rate of 2·7 per 1000, which exceeded by 0·1 the mean rate from the same diseases in the twenty-eight English towns; the rate in the eight towns ranged from 0·0 and 0·4 in Leith and Edinburgh, to 3·4 in Greenock and 22·8 in Paisley. The fatal cases of measles, which had been 9, 14, and 24 in the preceding three weeks, further rose last week to 26, of which 23 occurred in Paisley and 3 in Greenock. The deaths attributed to diarrhoea showed a considerable decline from the numbers in recent weeks, and included 9 in Glasgow and 3 in Dundee. Of the 9 deaths from diphtheria, 5 occurred in Glasgow, 2 in Edinburgh, and 2 in Paisley. The 9 fatal cases of whooping-cough exceeded the number in the previous week by 3, and included 6 in Glasgow and 2 in Paisley. The 7 deaths from scarlet fever showed a decline of 3 from the number in the previous week; 4 were returned in Glasgow and 2 in Dundee; and 2 of the 3 deaths from "fever" occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had increased in the previous four weeks from 74 to 106, further rose last week to 114, but were 2 below the number in the corresponding week of last year. The causes of 46, or 9 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had risen from 23·3 to 24·2 per 1000 in the preceding three weeks, declined to 21·9 during the week ending Oct. 27th. During the first four weeks of the current quarter the death-rate in the city averaged 23·3 per 1000, the mean rate during the same period being 19·1 in London and 16·5 in Edinburgh. The 148 deaths in Dublin last week showed a decline of 16 from the number in the preceding week; they included 12 which were referred to diarrhoea, 5 to whooping-cough, 4 to "fever," 3 to measles, 1 to scarlet fever, and not one either to small-pox or diphtheria. Thus 25 deaths resulted from these principal zymotic diseases, against numbers declining from 37 to 23 in the preceding three weeks; these were equal to an annual rate of 3·7 per 1000, the rate from the same diseases being 2·7 in London and 0·4 in Edinburgh. The deaths attributed to diarrhoea, which had declined from 19 to 7 in the previous three weeks, rose again to 12 during the week under notice. The 5 fatal cases of whooping-cough showed a slight further decline from the numbers recorded in recent weeks. The deaths referred to different forms of "fever," which had been 3 and 7 in the preceding two weeks, declined again to 4 last week, and the three fatal cases of measles exceeded the number in any recent week. The deaths of infants showed a decline, while those of elderly persons differed but slightly from those recorded in the preceding two weeks. Five deaths from violence and 6 inquest cases were registered; and 56, or more than one-third, of the deaths occurred in public institutions. The causes of 12, or more than 8 per cent., of the deaths in this city were not certified.

Correspondence.

"Audi alteram partem."

SACCHARIN: A DISCLAIMER.

To the Editors of THE LANCET.

SIRS,—In an annotation contained in your last issue, you say that the true position of saccharin is becoming somewhat difficult to define, and refer to the paragraphs that have been recently appearing in various journals in which it is spoken of in an adverse way upon the strength of a report of a commission of Paris doctors. My name having been freely made use of in France in relation to this matter, I will ask you to allow me, through the medium of your journal, to state that the opinion which has been circulated as emanating from me is an entire misrepresentation. The history of the affair is this: During the past summer I received a visit from Dr. Worms of Paris. In the course of conversation reference was made to saccharin, and I was asked whether I had seen any ill effects arise from its employment by diabetic patients. Shortly after this interview a copy of the *Bulletin de l'Académie de Médecine* reached me containing a statement made by Dr. Worms to the Academy that he had learnt from me that I, like he, had observed dyspeptic troubles after the prolonged use of saccharin in a certain number of patients. The following transcript of the letter I at once wrote to Dr. Worms will perhaps best serve to give a view of how the matter actually stood:—

"I was surprised beyond measure to read your representation, in the *Bulletin de l'Académie de Médecine*, of what I said to you regarding saccharin at our interview during your recent visit to London, as it stands diametrically opposed to the words I uttered; and I am at a loss to understand how such an error could have arisen. What I said was that I had never known any dyspeptic troubles to be occasioned by its use, and that I was in the habit of freely recommending its employment. I stated that I had sometimes met with persons who spoke of it as having a flavour that they did not like, and that sometimes an impression of sweetness was left for a considerable time in the mouth, which was said to be unpleasant. Beyond these effects, which can scarcely be called dyspeptic troubles, I have never known it give rise to any ground of complaint. In justice to those whom your statement might deter from deriving the comfort of its employment, I think steps should be taken by you to correct the erroneous statement that has gone forth."

In reply to this letter, Dr. Worms wrote stating that the difference between us was to be accounted for by his considering that the persistence of a sweet taste in the mouth was to be ranked as a dyspeptic trouble, and saying that he would (as he afterwards did) take the opportunity of making an explanatory statement to the Académie de Médecine. But a report when started seldom loses in being reproduced. The gain is sometimes great, and the following extract from a Parisian journal of recent date shows the expansion that has here occurred: "Le docteur Pavy, de Londres, connu par ses nombreux travaux sur le diabète, estime que les diabétiques soumis à la saccharin paient bientôt, par des maux d'estomac et des troubles intestinaux, le léger adoucissement apporté à leur dur régime." "I intended nothing more in my conversation with Dr. Worms than to state that the slight aromatic or kind of bitter-almond flavour which belonged to the earlier specimens of saccharin, and which in the more recently prepared product is almost completely absent, did not fall in with the taste of some persons. We are accustomed in sugar to an article possessing a sweet taste pure and simple, and an aromatic character added to this, whilst pleasing to some, may not be acceptable to the palate of others, but it is only rarely that I have heard the objection expressed. The persistence of a sweet taste in the mouth I had no idea would be looked at otherwise than as a physiological phenomenon. This was, and is, my own reading of it. With its intense sweetness the liability is open for the nerves of taste to be too strongly impressed by too large a quantity of the article being brought into contact with

them. The effect, as in the case of other sapid substances, to be looked for is a duration of impression standing in proportion to the intensity of impression exerted. Thus, without any intention of implying more than I have stated, I am first represented as saying that saccharin is productive of dyspeptic troubles, and later on this is made to grow into the specific allegation that diabetics employing saccharin soon pay through stomach ailments and intestinal troubles for the slight alleviation imparted to their severe regimen! In another place I am represented as having recently declared to Dr. Worms that I had abandoned the use of saccharin amongst my diabetic patients because it had gradually diminished their appetite and strength.

It is not for me to speculate upon the grounds for the misrepresentation that has been put forward, but it is evident that there has been a motive power at work to depreciate the article in question in public estimation, and that not over-scrupulous measures have been brought into use for carrying this out. Sugar employed with our food not only serves to render it agreeable to the palate, thereby promoting its being taken with zest, but contributes in itself under conditions of health as an alimentary article. Saccharin fulfils the first purpose, but is not of a nature to possess any virtue in relation to the second. It cannot, therefore, take the position of a representative of sugar, and, I need hardly say, should not be used to give a fictitious sweetness in lieu of sugar. It stands upon its own ground, however, regarded purely as a sweetening agent, and I know of nothing to preclude its use with perfect safety from harm by those whom circumstances may render it advisable to employ it in place of sugar. To the diabetic it must undoubtedly be looked upon as a great acquisition. To the unduly stout it may also be regarded as fitted to render similar service. There are others also who, for reasons well founded or not, desire to avoid sugar, and to these it affords the means of giving effect to their wish without having to sacrifice anything as regards sense of taste. It is a striking attribute that it should have the power of affecting our nerves of taste in what may be appropriately designated the transcendent manner it does. In other respects, no special effects are exerted by it. It is nowhere authoritatively contended that it possesses any irritant or directly injurious properties. Vague dyspeptic troubles are spoken of without any proof or reliable evidence that such are occasioned by it. The most specific charge against it is that it may interfere with digestion through the antiseptic power with which it is endowed. The answer to this is that it becomes quickly absorbed from the digestive system, to be eliminated from the body in an unchanged state, and thus does not remain within the sphere of capacity for operating in the manner alleged. Moreover, if the circumstances stood otherwise, the quantity required to be employed for flavouring purposes is so minute that little room is afforded for any material action to be exerted in the direction named. It is no valid ground of argument, it is true, to say that other articles that we admit into our dietary as condiments possess antiseptic properties or the power of exerting a restraining influence over fermentative changes in organic matter. Salt, vinegar, and the spices all act as antagonistic agents to change; indeed, we make use of this principle of action appertaining to them when they are brought into use for preservative purposes.

It is under a sense of duty that I have written this letter. I have no feeling otherwise to actuate me. A scare has been started against saccharin upon the ground of hurtful effects having been observed to follow its employment, and I have been falsely represented as participating in this assertion. Under such circumstances, to remain silent would give sanction to the statements that have been circulated.

I am, Sirs, yours obediently,

F. W. PAVY.

Grosvenor-street, W., Oct. 29th, 1893.

* * Dr. Pavy has apparently misunderstood our remarks upon the value of saccharin. By saying that its true position was becoming hard to define, we merely indicated that it was being repressed in certain quarters as an article of diet, while it had no pretensions to the position of a drug. The nearest approach to a definition afforded by Dr. Pavy is that to the diabetic it is "a great acquisition," with which we cordially agree. Our concluding remarks sufficiently indicated that we suspected there might be, as Dr. Pavy suggests, some "motive power at work to depreciate the article in question."—ED. L.

SUCCESSFUL LAPAROTOMY FOR INTUSSUSCEPTION.

To the Editors of THE LANCET.

SIRS,—I read with much interest in your issues of Aug. 4th and 11th Mr. Barker's papers and statistics on laparotomy for intussusception, and with some surprise his statement that, "as a matter of fact, there has not been, so far as I know, a single case of successful laparotomy for intussusception recorded in London for all these (twelve) years, except Mr. Godlee's, until the present case." As London experience offers so little encouragement to the relief by operation of a malady so sudden, distressing, and fatal, you may think it worth while to publish in your widely read journal the following case which occurred in my practice two years ago.

I was called in the afternoon of Sept. 4th, 1886, to see H. B., aged eight and a half months, who, I was told, had been quite well till an hour previously, when he was taken with pains in the bowels, sickness, and frequent attempts to pass a stool, a little bloody mucus being all that passed. The child, a fine infant, looked very ill, and on careful examination a tumour could be felt in the right iliac region, so the nature of the case was clear. The child was put on opium and belladonna, and a large enema slowly administered. No relief being obtained by next morning, Dr. Snowball, surgeon to the Hospital for Children, was called in consultation, and we obtained the parents' consent to operate at 2 P.M. if other attempts to reduce the intussusception failed. At that hour the infant was put under chloroform by Dr. Hewlett, massage applied to the abdomen, and the bowel inflated by the bellows, while the child was held head downwards. For a moment it seemed as if the intussusception had disappeared, but it was soon again detected, and Dr. Snowball proceeded to operate about twenty-four hours after the accident. On opening the abdomen a considerable amount of serum was seen, but the intestines were bright and not sticky. The intussusception was easily found in the ileo-cæcal region; it was not brought to the surface, and required some careful manipulation to free it, otherwise the operation was of the simplest character. The impaction of the bowel was so tight as to render it highly improbable that any inflation of the colon within safe limits could have freed it. The abdomen was well cleansed with dry sponges, the wound united with silver wire, and antiseptic dressing applied. No spray was used; the sponges had been boiled in carbolic water. The subsequent treatment consisted in small doses of opium, a teaspoonful of breast milk every half-hour, and a little ice to suck. Recovery was all but perfect. The infant lay in his bed contented and smiling, as if nothing had happened, and did not even cry to be nursed; he really was a very good boy. The temperature during the first two days did not exceed 100° F.; on the third day it rose to 102°, and there was a little sickness and yellowness of the conjunctivæ. A grain of calomel was given, followed by five grains of sulphate of soda, and the wound examined, which was uniting well, but was puffy at the lower angle. The division of a suture allowed a teaspoonful or two of rather offensive pus to escape. The child's bowels were comfortably moved, and thenceforward convalescence was uninterrupted. For some months the cicatrix had to be supported by a metallic pad, and then became as firm as the rest of the abdominal walls, and he is now as lusty for his age as if he had not had so narrow an escape.

During thirty years' practice I cannot recall a case of well-marked intussusception of the bowel in infants that recovered, but one, which happened about seven years ago, before I left England. The age of the patient was a little more than a year, and the intussuscepted bowel could be felt through the rectum; but the parents declined operative aid, so there was nothing but to promote euthanasia by opium. After days of suffering, which wasted the child to a shadow, the strangulated portion sloughed, the lumen of the bowel was re-established, and the child recovered. I cannot but contrast the slow, painful, and dangerous efforts of nature with the (if not quite) *lute*, at least the *cito* and *jucunde* results of operative procedure. As with hernia, to give the operation a fair chance there must be no delay in performing it when it is found that reduction cannot be effected otherwise.—I am, Sirs, yours obediently,

FRAS. WORKMAN,

Formerly Assistant Surgeon, Royal Berks Hospital.
King-street, West Melbourne, Sept. 21st, 1888.

SHAKSPEARE AND THE CIRCULATION OF THE BLOOD.

To the Editors of THE LANCET.

SIRS,—Another very striking passage, showing that Shakspeare had some knowledge of the circulation of the blood, is to be found in the description of the poisoning of Hamlet's father. It also shows the poet's acquaintance with infection, the rapidity of absorption, the coagulation of the blood as when an acid is dropped into milk, and the cutaneous eruption which frequently follows.

He in the porches of mine ear did pour
The leperous distilment: whose effect
Holds such an enmity with blood of man,
That, swift as quicksilver, it courses through
The natural gates and alleys of the body;
And with a sudden vigour it doth posset
And curd, like eager dropping into milk,
The thin and wholesome blood; so did it mine;
And a most instant tetter bark'd about
Most Lazar-like, with vile and loathsome crust,
All my smooth body.

I am, Sirs, your obedient servant,

October, 1888.

S. W.

THE USE OF ANÆSTHETICS.

To the Editors of THE LANCET.

SIRS,—As Mr. Foy, in a letter which he recently addressed to you, quoted from my work, "Anæsthetics, their Uses and Administration," I think it best to define very clearly the position I adopt in the matter. Mr. Foy's remarks might, to those who have not read the manual in question, give the impression that I am an upholder of the use of chloroform as a routine anæsthetic. Mr. Foy, I venture to think, has not quite grasped the drift of your leading article upon the use of anæsthetics; for, as I understand your words, you say that chloroform should not be used save in cases when a safer agent—ether or a mixture—could not be exhibited. If this be your contention, I must certainly say that my experience corroborates your view. The sum of my teaching, and what is epitomised in the book from which Mr. Foy quoted, is as follows. For operations involving removal of the tongue, the jaws, plastic operations about the palate, lips, and nose, chloroform is the most convenient, although not the safest anæsthetic. For all other cases I recommend either nitrous oxide alone, or that agent followed by ether according to Mr. Clover's method. If nitrous oxide be not procurable, ether should be employed by itself. It is easy to obtain rapid and satisfactory anæsthesia when ether is used without gas. A Clover's "small portable regulating inhaler" allows the anæsthetist to administer at first a very dilute ether vapour, and gradually increase the amount of ether as the air passages accommodate themselves to its irritating vapour. When well-marked pulmonary, renal, or arterial disease exists, undiluted ether may be disadvantageous, but every case must be judged of by itself, since other conditions—cardiac, or connected with general asthenia—often complicate such diseased states, and render the exhibition of chloroform most perilous. It then becomes a choice of evils: whether to operate upon an unanæsthetised patient; to risk bronchial, renal, or arterial troubles brought about by ether; or incur the grave risk to life by the use of chloroform. I believe the dictum to be true that "the individual who can stand an operation can stand an anæsthetic." In the next place, my experience has indicated that by a judicious use of various dilutions of ether, most if not all persons the subjects of pulmonary disease can be safely anæsthetised. The dilution to which I refer is made with either chloroform simply (in varying proportions according to the case), or with chloroform and alcohol. There is no particular merit in the so-called A. C. E. mixture, and slavish adherence to it is a mistake. When its proportions are used, care should be taken to employ the following specific gravities: absolute alcohol, 0.795; chloroform, 1.493; ether, 0.720. Commonly, less chloroform than 1 in 6 is requisite. Again, many means are ready to the hand of the skilled anæsthetist before he falls back upon chloroform, and when he does he is fully aware of the dangerous character of the agent with which he is working. The great danger of chloroform is the apparent facility with which anyone can induce narcosis by its use, and thus tyros and persons of small experience are led to volunteer the anxious and onerous task of chloroforming

almost recklessly, and certainly without duly realising the gravity of their undertaking. The wide experience of your correspondents, Mr. Foy and Mr. Nelson Hardy, would rob chloroform of some of its risks, but it must be remembered that the large majority of general practitioners receive little early instruction in anaesthetics, and are comparatively seldom called upon to practise anaesthetising. Chloroform risks cannot be foretold, and its dangers are seldom successfully combated; other risks, however, can be usually foreseen, and its dangers are readily recognised and their effects counteracted by treatment.

I am, Sirs, your obedient servant,

DUDLEY WILMOT BUXTON,

Mortimer-st., W., Oct. 1888. Anaesthetist to Univ. Coll. Hospital.

THE HARVEIAN ORATION.

To the Editors of THE LANCET.

SIRS,—I have perused the Harveian Oration delivered before the Royal College of Physicians by Dr. P. W. Latham with the greatest amount of interest and unmingled pleasure. Thoughts such as those therein expressed have long been present to my mind. By tracing out the paths stated, and following up a like line of speculation—mere suggestions though some of them of necessity are,—I believe that ultimately the many mysteries that at this moment enshroud medicine will disappear, the black cloud that envelops all diseases be rent in twain, and we shall be able to combat death, or at least view human ailment in a clear and unclouded light.

Let me give one or two illustrations of that lecture. In a letter to THE LANCET of July 7th of this year on "Is Eczema Contagious?" I said: "Some cases are, others are not, contagious. The direct causation of the latter kind is a germ, and this germ has not in the first place the power to produce a specific disease; but, being placed under varied and at the same time suitable surroundings, assumes a definite character, and then exerts its sway. May it not be that the epidemic of pneumonia, which is at present prevalent in the neighbouring town of Middlesbrough, had such a starting point? (Given a harmless microbe planted on a favourable soil—e.g., a marsh, with cold damp east winds,—typhoid pneumonia breaks out," &c. I might and could have gone further, but suffice it to say what I actually meant was this: It is necessary for contagious pneumonia to affect a person that the system, and consequently the most vital parts of it, the lungs, become below par in their vitality, ptomaines are liberated into the lymph stream or blood; the excretory glands—e.g., the kidneys and liver—fail either to neutralise or dislodge them, the non-specific bacteria find access to the contaminated fluid, feed on the animal poisons, perhaps at the same time liberating others, and ultimately cause pneumonia.

To take another example. In THE LANCET of Sept. 22nd I advocated the administration of small doses of liquor potassae in the treatment of eczema. I was not in a position to explain how it acted, but that it might be by preventing certain fermentative changes which I believe to take place in the blood of many eczematous patients. In other words, it acts as a direct antidote to leucomaines or alkaloids which exist in the living body independently of the action of bacteria. Were I able I should certainly examine the blood of such cases in the full anticipation of finding them, but I fear this must be left to abler hands than mine. Many years ago (in 1865) it was thought that an important discovery had been made. Indican—supposed to be due to a retardation of the process of declension of the complex to the more simple products of function and secretion, and this retardation due to accumulation of urea and other products of waste in the blood, owing to deficient renal secretion—was credited with being the cause of eczema. In nine out of ten such cases indican was detected in pathological quantities, and urea in considerable amount in the serum. This indeed was a step in the right direction, but should have gone further, and investigated, what I now wish to be done—namely, the leucomaines. In a memorandum I made some months ago, I find the following quotation: "Popular notions often have a substratum of reason in them; and, just as it was once the custom to bleed people at the spring and fall, so it is now the custom, in many parts of the country, to take opening medicine at these times. Why is this? Simply because the effete material—leucomaines—which has been

continually accumulating during the winter and summer needs expulsion. The body needs cleansing. It is this effete material which, acting on a lowered vitality, caused by the wear and tear of the seasons, lights up an acute eczema." We must discover more about ptomaines and leucomaines, and then in very truth will it be time enough to ask with regard to eczema and all other inflammatory affections: "Why do the blood-vessels dilate? How is the migration of the colourless corpuscles to be explained?"

I am, Sirs, yours truly,

Stokesby, Oct. 23rd, 1888.

J. A. WETHERILL, M.B.

QUIETENING MEDICINES.

To the Editors of THE LANCET.

SIRS,—I shall not occupy much space in replying to the letter of Dr. George Thompson, but I think it better to explain, first, that, though I used the various narcotic remedies at Bethlem from time to time, I never used any continuously with the sole object of producing quiet. In the rather heavy bill for medicines &c. at Bethlem are included consultation fees for special advice in difficult surgical and medical cases, as well as fees for operations and the cost of instruction of some of the nurses in massage. To compare the two hospitals of St. Luke's and Bethlem is absurd, for while last year at the former there were fifty-one admissions, at the latter there were 323. I may add that for hypnotics last year the whole cost was under £4.

I am, Sirs, yours truly,

Henrietta-street, W., Oct. 31st, 1888.

GEO. H. SAVAGE.

"PROTECTION OF THE MEDICAL PROFESSION."

To the Editors of THE LANCET.

SIRS,—I read "J. H. T.'s" letter with interest. I quite agree with him as to the expediency of forming an association of the profession outside and independent of the Medical Council, at the meetings of which the combined voice of the acting members of the profession could make itself heard in matters affecting our welfare. As regards limiting the number of candidates to correspond with the number of vacancies, as is the case in the services, I do not see how that could work well, for various reasons—e.g., a large number of those admitted to the profession go abroad, and so do not compete with us at home; and how would "J. H. T." compute that in order to control the number of candidates? Again, it would be a great injustice to cripple the expansion of rising schools of medicine by limiting the number of their students. No; let us admit all who duly qualify themselves. I should be glad to see some control over the minimum fees and salaries, such as "J. H. T." suggests. It would undoubtedly raise the status of the profession in the eyes of the public, because what is got cheaply is valued cheaply; and some of the salaries offered by public bodies amount to sweating the overdriven medical hack—that is, in institutions where salaries are given. With reference to giving services for nothing, I do not object to occasional services of that sort where circumstances point to it; but I hold it to be an injustice on the part of some of the well-paid practitioners to give free consultations at certain hours—an injustice to the struggling practitioners. Such practices should be disallowed, and the patients told to go elsewhere if not prepared to pay a high fee. If they will pay no fee—even the minimum—then they should be referred to the union medical officer. While gladly welcoming internal reform, I would as gladly welcome external. I think it a case of the greatest injustice for the authorities to demand an expensive training and a qualification from a man before he is legally entitled to practise, while they sit quietly aside and allow quacks to flourish everywhere. Their conduct is like that of a gardener who, after planting his seeds, goes to sleep and lets his plants become competitors with the weeds that quickly spring up, and then expects visitors, learned and ignorant alike, to admire his progeny and cull the flowers from them only, forgetting the while that the weeds may choke some of his plants, and that the visitor may be too ignorant to avoid the weeds. Human nature has a weakness for the successful quack in medicine as well as in other things, supposing him to be endowed with virtues far above

the ordinary legitimate practitioner. Let the police have power to demand the production of the certificate of registration of all those whom they suspect, whether they consult in rooms, sit in chariots, or harangue the mob from the top of a barrel; and if that cannot be produced, "haul them up." A system such as that would be superior to laying the duty of prosecution on medical men, because, practically, prosecuting a quack does them little or no pecuniary good, even supposing the quack desists, for the people who supported the latter would avoid the prosecutor of their favourite, and go elsewhere for advice and medicine. I think the external reform of the profession demands immediate attention, and I hope someone centrally placed will take up the project of an association.

I am, Sirs, yours truly,

GRADUATE.

Oct. 13th, 1888.

LIVERPOOL.

(From our own Correspondent.)

PRIZE DISTRIBUTION AT LIVERPOOL UNIVERSITY COLLEGE.

A NEW departure was taken this year by the Senate and Medical Faculty of the Liverpool University College. Instead of the usual introductory address, followed by the delivery of prizes, this latter took place on the evening of Oct. 20th in the buildings of the College, the Mayor of Liverpool (Mr. Oakshott) delivering the prizes. Mr. Edgar A. Browne, senior surgeon to the Liverpool Eye and Ear Infirmary, delivered an address, in which he urged the importance of a higher education. The address was very well received, Mr. Browne having the happy knack of conveying in a felicitous and humorous manner advice which otherwise might fail to attract.

THE OPENING OF THE SESSION AT THE LIVERPOOL MEDICAL INSTITUTION.

The Liverpool Medical Institution has reached its jubilee, and the session for the present winter commenced on the 11th inst. In accordance with the usual custom, the President, Dr. William Carter, delivered an inaugural address, choosing for his subject "The Principle of Disinfection in Medicine." Dr. Carter is opposed to specialism for reasons which he gave at length, the principal one being the obscuring of the view of the great general principles, caused by the time required for studying specialities and the overburdening of the student's curriculum. These were calculated to enhance the special at the expense of the general. Deducing from the experiments of Cash, of Roux and Chamberland, Gamaleia and Bouchard, he expressed a hope that a protection would be discovered against tuberculosis, and also that specific diseases might, in the strict sense of the word, be cured. He alluded to the discovery of Ollivier, and urged that what was wanted was a disinfectant medicine repressing the injurious activity of non-oxidative cell life, but at the same time not interfering with the harmless oxidative changes.

THE WEATHER AND THE HEALTH OF LIVERPOOL.

At the last meeting of the Health Committee, which was the concluding meeting of the municipal year, the chairman described Liverpool as one of the healthiest of cities, and this appears to be borne out by the figures which he quoted from the medical officer's report. The deaths from zymotic diseases are less than has ever been previously recorded, and the death-rate, which averaged 20 per 1000 throughout the year, was lower than that of former years, notwithstanding the increase of population. The weather has been unusually mild, both before and since October 18th, suggesting St. Luke's summer. Measles is assuming rather serious proportions, though fortunately it is of a very mild form. Its spread is frequently caused in the following way. The youngest child of a family is seized; the other children are sent to school until it is clear that the case is measles, when their attendance is stopped. But unfortunately they continue to attend at a Sunday school, and so in densely populated neighbourhoods the disease spreads. This fact offers a practical warning which should not be disregarded.

SELLING INDECENT LITERATURE.

A man was summoned before the stipendiary magistrate for selling indecent prints in the streets. Two boys had

been found in the act of selling them, and subsequently gave evidence against the prisoner, who had employed them among a total of fifty men and boys. He was fined 40s. and costs in each case, and warned that a repetition of the offence would be followed by imprisonment.

THE ASSAULT UPON DR. BARR.

Dr. Barr continues to make very satisfactory progress towards recovery, and is going on as favourably as can be expected. He still remains under the care of Mr. Chauncy Puzey and Mr. Damer Harrison.

Liverpool, Oct. 31st.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE-ON-TYNE.

THE usual hospital fund collections were made last Saturday and Sunday. Sunday was rather unfavourable as regards weather, but the Saturday collection would hardly be influenced by this cause. The Saturday collections are becoming a most important feature in the fund, and there is every prospect that this year's collection will be a remarkable one, as the workmen are fully employed in most departments; and it is understood that, while wages are good, one large firm is paying £13,000 per week to their men, most of which would be circulated in Newcastle and Gateshead. At the Royal Infirmary last week the number of patients admitted into the hospital was 52, of whom there were—accidents, 14; minor accidents attended to in accident-room, 100. Among the accidents were fracture of thigh, fracture of leg, lacerated wound of arm, compound fracture of arm and crush of leg, fractured arm, clavicle, and pelvis; brought in dead, 1. Among the more important operations were suprapubic lithotomy, amputations of arm and of leg, excision of elbow, and removal of tumours of the neck and cheek. The special hospitals, too, are in full activity. It may be owing to the remarkable atmospheric changes of late, but at one of the special hospitals 150 out-patients were seen this week.

ST. BEES.

The district medical officer of health, Dr. Fisher, reports an outbreak of measles in the St. Bees Grammar School, which appears to have been introduced by a boy from Workington. The head master has in consequence suspended the work of the school.

ALNWICK INFIRMARY.

The annual meeting of the Alnwick Infirmary was held last week, when the report as to the state of the house was satisfactory. The chairman (Earl Percy) alluded to a matter which had come under his own notice on going to visit a militiaman who had been admitted with a fractured leg. He had found lying in the same room as the injured man the body of a patient who had died during the night. This Earl Percy thought improper. It also transpired that it was usual to put dead bodies in the committee room. Most people will agree with Earl Percy that this should be avoided by providing a proper deadhouse.

PENRITH.

A prosecution under the Dentists Act took place at Penrith last week. It was shown that the defendant was not on the Register, and was practising as a dentist; on the other hand, it did not appear that the prosecution was instituted on public grounds, while the defendant had been in practice with his two brothers, who were dead, but had been registered. The magistrates evidently considered the case a weak one, although the letter of the law had been broken, so they imposed a nominal fine of 2s. 6d. and costs. We have many worse cases than this in our own profession, and a prosecution is not thought of. The Dentists Act is too young yet for weak cases.

"HERE" BEER.

At the Stockton police-court last week a herbalist was charged, at the instance of the Excise authorities, with selling herb beer which contained more than the maximum allowance of alcohol. It was shown that the herbalist had been sufficiently cautioned as far back as January, 1887. The analyst from Somerset House stated that the herb beer

in question "contained 6·4 per cent. of proof spirit, and was fully as strong as ordinary public-house beer." Anything containing over 2 per cent. of proof spirit was classed as beer. The defendant was fined £2, the full penalty being £10. Newcastle-on-Tyne, Oct. 30th.

EDINBURGH.

(From our own Correspondent.)

UNIVERSITY OF EDINBURGH: THE PRINCIPAL'S ADDRESS.

IN view of the kind of audience he had to address on Saturday, Sir William Muir was, perhaps, acting wisely in giving to his remarks a somewhat wide range. In recounting what might be called the domestic events of the year, he had to call attention to a certain diminution in the numbers of matriculated students, although in medicine the numbers were higher than in any previous year. To give some idea of the growth of the University Medical School during the last half-century, he pointed out that the number studying medicine in the session 1833-34 was 718; in 1886-87 the number was 1872; whilst in 1887-88 the number had risen to 1898, out of a total matriculation of 3482. Another point of interest brought out was that, although there has been a slight falling off in the number of graduates in medicine (the total being 253 as against 267 last year), there has been an increase in the number of science graduates from 25 to 35. The Principal comforted his hearers with the thought that the slight diminution in the numbers matriculated might probably be accounted for by the increased activity in the commercial world, accompanied by an increased demand for fairly well educated young men, who were thus diverted from the channels of university life and learning.

THE ROYAL MEDICAL SOCIETY.

Another address, but of a somewhat different character, was delivered by Professor Greenfield on Friday, Oct. 27th, at the opening meeting of the 152nd session of the Royal Medical Society. Several former presidents and many past members of the Society were gathered, along with present students, to take part in what is looked upon as one of the most important events of the minor medical calendar. The Professor, who was loudly applauded, said that he spoke somewhat as an outsider (he is an honorary member of the Society), but he could now understand that the enormous prestige and world-wide reputation enjoyed by this Society were well grounded. The names of those on the roll of past presidents, and of others prominently connected with the Society, were those of men known to fame by their discoveries and writings, and few of them, he thought, had failed to justify, in after life, the opinion formed of them by their fellow-students. Speaking of the men from whom he had learnt much, Dr. Greenfield mentioned three, two of whom were thoroughly imbued with the methods of Edinburgh teaching. Sir William Jenner belonged to no school. His manner of imparting instruction was all his own, and was pointed, incisive, and, like his diagnosis, was presided over by something almost like genius. Wilson Fox and Murchison, on the other hand, were men trained partially in the Edinburgh School, and who had adopted many of her methods. Speaking of Murchison, Dr. Greenfield said that his life ought to be written by someone who knew him well, as it would be a pity if the example of such a life as his should be lost to all except those who had come into personal relation with him.

EDINBURGH COMMON LODGING HOUSES.

One of the Edinburgh evening papers, in a leaderette, points out that "the Public Health Committee have not been in too great a hurry in setting about the reforming of the common lodging houses of Edinburgh. The condition of these places, from a sanitary and from a moral point of view, has been a disgrace to the community." This may sound rather strong language; but when we learn that it was unanimously agreed to recommend the Town Council to make a rule and regulation to the effect that common lodging houses should be licensed only in classes—"first, for married couples and their families; second, for males; and third, for females,"—it may be gathered that there must have been most serious laxity in the management and inspection of these lodging houses. It can scarcely be con-

ceived how houses licensed and inspected by the city and police authorities should ever have been allowed to exist without the above regulations; but such, from the terms of the above motion, seems undoubtedly to have been the case.

PROPOSED NEW DENTAL HOSPITAL.

The directors of the Edinburgh Dental Hospital and School are making arrangements with the managers of the Royal Infirmary to take over the large building, No. 5, Lauriston-lane, near the new laboratory of the Royal College of Physicians. It consists of a large house of four storeys, and will afford ample accommodation for all kinds of dental surgical and mechanical work, for teaching, and for a janitor's house. Considerable alterations are contemplated, and the premises throughout are to be fitted with modern accessories and apparatus. Altogether the premises are much larger and more convenient than the present hospital in Chambers-street.

Edinburgh, Oct. 31st.

DUBLIN.

(From our own Correspondent.)

ROYAL UNIVERSITY OF IRELAND.

THE annual meeting of Convocation was held on Oct. 30th, presided over by Lord Emly, Vice-Chancellor of the University. The Annual Committee reported that a memorial had been received from lady graduates and undergraduates of the University, requesting that Convocation would advise their admission to the lectures of the Fellows of the Royal University, a privilege at present denied to them; and the committee recommended that the grievance should be removed if possible. They further recommended the Senate to deal with Dr. Pye's motion in reference to the medical curriculum, which Dr. Pye considered did not provide sufficient protection to the public as regards the professional knowledge of their medical graduates, forasmuch as the regulations permit and suggest that a student shall obtain degrees in medicine, surgery, &c., after a professional training of three years. The Annual Committee having been re-elected, a ballot took place for the election of a representative on the Senate. There were two candidates, Dr. Knight and Professor Leitch; the latter obtained 433 votes, Dr. Knight polling 326. The Senate met the same day, and decided that the examination for the Travelling Medical Scholarship, which had been announced for the present month of October, should be postponed until the medical examinations to be held next spring.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

The sixth general annual meeting was held at the College of Surgeons on the 26th inst., and a good deal of interest was felt as to the result of the contest between Drs. Samuel Gordon and G. H. Kidd for the Presidency of the Academy. It was believed that the contest would have been a closer one than actually occurred, and the large majority which Dr. Gordon obtained was a surprise to many. One explanation of this result may have been that the Fellows generally considered that there was a tacit understanding that a physician and a surgeon should alternately occupy the presidential chair. The only contest for the presidency of any of the various sections that occurred was in that of Obstetrics, when Dr. W. J. Smyly was elected by a majority of votes. At the commencement of the meeting, Dr. Robert McDonnell, who had been present, made a personal explanation as to the reasons for his resignation of office, and the next business was the consideration of the report of the General Council for the past year. Among other matters, it was suggested for consideration whether the Academy should not invite a distinguished member of the profession to address the Fellows and Members on some branch of medicine, the lecturer to receive an honorarium of 25 guineas. Dr. Grimshaw proposed to omit the sum mentioned, and that a reasonable sum should be expended by the Council, which was seconded by Mr. E. H. Bennett and adopted. Dr. Duffey had a series of notices of motion in respect to alterations of certain rules of the Academy, among the rest as to the tenure of the presidencies of sections. These offices, with the exception of the medical section, are only held for one year, and he wished the term to extend to three years. A discussion took place, a good many being in favour of two years, and, on a division

this latter duration of office was carried; and, at the suggestion of Mr. Story, it was resolved that this rule should not come into operation during the present session.

ROYAL COLLEGE OF SURGEONS.

Only about one-third of the candidates for the second professional examination held conjointly by this College and the College of Physicians satisfied the examiners at the recent examinations. A meeting of a number of the rejected candidates has been held, and I am informed that it is their intention to petition the Council and the Committee of Management of the Conjoint Scheme, pointing out the severity of the examination, and requesting that the examination may be reopened, or that they may be permitted to take out their hospital and lectures this year, which, under ordinary cases of rejections, they would be prohibited from doing.

THE RECENT CASE OF POISONING AT THE HARDWICKE HOSPITAL.

Allusion has been made to the death of a medical practitioner, Mr. Panter, who was accidentally poisoned in this hospital by the administration of a solution of morphia in place of a draught containing bromide of potash. The coroner, the jury, and the friends of the deceased expressed themselves satisfied as to the way the accident had occurred; but the members of the corporation, or rather a portion of that body, are not satisfied, and at a meeting of the Public Health Committee of the corporation the following resolution was adopted in reference to this matter:—"That, in the opinion of this committee, the public safety requires an exhaustive public investigation into the circumstances which rendered possible the death of Mr. Panter by poison in the Hardwicke Hospital, and that the recurrence of such misadventure indicates the necessity for better provision by law in regard to the custody and use of poisons in public hospitals; that a copy of this resolution be sent to the Local Government Board, the governors of each of the city hospitals, and to the members for the city."

CORPORATION GRANTS TO CITY HOSPITALS.

A special meeting of the Dublin Municipal Council was held on Monday for the purpose of allocating the sum of £5000 among certain hospitals in the city. Some of the grants were only conditional: for example, that to Sir P. Dun's Hospital was made subject to the isolation of wards containing infectious cases from those in which non-infectious cases are treated; that to Steevens' Hospital to certain requirements recommended by the Finance and Leases Committee; and that to the Rotunda Lying-in Hospital to amending their Charter so as to secure additional Roman Catholic representation on the board of governors. As it is very improbable that the governors of the Rotunda Hospital will enter upon the question of the religion of the members of their board, it is expected that the grant of £250 will not be allocated by the corporation.

RICHMOND HOSPITAL, DUBLIN.

Sir William Stokes having resigned the surgeoncy of this institution and transferred his services to the Meath Hospital, the vacancy occasioned by his retirement will be filled by the governors, in whose hands the appointment lies, on Thursday, Nov. 8th. There are several candidates for the post, but it is rumoured that the resident surgeon will most probably be elected.

ACCIDENT TO A MEDICAL PRACTITIONER.

Mr. Crosbie, of Ardfer, county Kerry, met with a severe accident last week. While in the act of putting on his overcoat a revolver fell out of the pocket; it went off, and the bullet entered his abdomen. Up to the present the bullet has not been extracted, and his condition has caused grave anxiety to his medical friends.

Dublin.

FOOTBALL CASUALTIES.—In a match, Bradford against Blackheath, on Saturday last, H. Kitchen had one of his legs fractured below the knee. On the same day, in a game played at Maidenhead, G. Peckover fell and fractured his collar bone; and at Lytham, a man named Sumner sustained a like accident.—Sidney Collis, a youth eleven years of age, whilst playing in a match at Gorton between the Denton Ramblers and Gorton Rovers, on the 20th ult., received a severe blow on the head, and suffered great injury to the brain, and died on the 21st inst.

PARIS.

(From our own Correspondent.)

THE PARIS FACULTY OF MEDICINE.

THE winter session of the Faculty of Medicine of Paris opens on Nov. 3rd, and the following is a list of the professors who are to lecture during the session:—Prof. Farabeuf, Anatomy; Prof. Gariel, Medical Physics; Prof. Dieulafoy, Medical Pathology; Prof. Gautier, Medical Chemistry; Prof. Bouilly, Surgical Pathology; Prof. Duplay, Operative Surgery; Prof. Duval, Histology; Prof. Cornil, Pathological Anatomy; Prof. Laboulbène, History of Medicine and Surgery; Prof. Brouardel, Medical Jurisprudence. Clinical Medicine: Prof. G. Sée, at Hôtel Dieu; Prof. Potain, at La Charité; Prof. Jaccoud, at La Pitié; Prof. Peter, at Hôpital Necker. Clinical Surgery: Prof. Richet, at Hôtel Dieu; Prof. Verneuil, at La Pitié; Prof. Trélat, at La Charité; Prof. Le Fort, at Hôpital Necker. Special Subjects: Prof. Ball, Mental Pathology and Diseases of the Encephalon, at Sainte-Anne Asylum; Prof. Grancher, Clinical Diseases of Children, at the Hospital for Children; Prof. Fournier, Syphilitic and Cutaneous Maladies, at St. Louis Hospital; Prof. Charcot, Diseases of the Nervous System, at the Salpêtrière Asylum; Prof. Panas, Clinical Ophthalmology at Hôtel Dieu; Prof. Tarnier, Clinical Obstetrics, at the Clinical Hospital.

DOUBLE PLACENTA WITH SINGLE PREGNANCY.

At the meeting of the Academy of Medicine of last week Dr. Guéniot exhibited a double placenta which he found in a case of single pregnancy. Each placenta represented the volume of that of a pregnancy of seven or eight months. The umbilical cord, at first apparently single, was divided into two cords just before reaching the placenta, the blood-vessels being apportioned between them. There are only a few examples of this kind recorded in obstetrical works, which may have very grave importance from a medico-legal point of view: for instance, in cases of alleged infanticide, where a woman delivered of only one child with a double placenta might be charged with having had twins, one of which she might be accused of having destroyed.

BINIODE OF MERCURY SPRAY IN TUBERCULOSIS.

Drs. Miquel and A. Rueff have published a work on the treatment of pulmonary tuberculosis by sprays with the biniodide of mercury. The experiments of Dr. Miquel having shown him that the biniodide of mercury is microbicide in solutions of 1 in 100,000, he was induced to try it against pulmonary phthisis, and this he has done in conjunction with Dr. Rueff. They have established spray apparatus at the Rothschild Hospital, and have submitted phthisical patients to the vapours of the biniodide of mercury, or rather the iodo-hydrargyrate of potassium. The following is the formula of the solution employed for the sprays: biniodide of mercury one part, iodide of potassium one part, distilled water one thousand parts, all by weight. But whether medicamentous liquids in the form of spray penetrate into the trachea, the bronchial tubes, and their ramifications is a question that has not yet been satisfactorily solved. Denied by some, this penetration is admitted by others, and appears to have been demonstrated by the experiments of Drs. Miquel and Rueff. It may however be observed that of twenty-seven patients submitted to this treatment nineteen were improved and eight remained stationary; the improvements were therefore at the rate of 70 per cent. In these cases attenuation of the pulmonary lesions was obtained, and particularly diminution of the expectoration and increase in the weight of the patients. In two cases even the disappearance of bacilli was established.

THE SCHOOL OF ANTHROPOLOGY OF PARIS,

which has been thirteen years in existence, is not a Government school, but yet it is officially recognised as an institution of public utility. It was founded by the late Paul Broca, and lectures, open to the public, are delivered daily by a regular staff of professors. The winter course opens on Nov. 5th, and the following is a list of the professors with the subjects to be lectured upon:—M. M. Lécourneau, History of Civilisation; Mathias Duval, Anthropogeny and Embryology; G. de Mortillet, Prehistoric Anthropology; G. Hervé, Zoological Anthropology; Topinard, General Anthropology; Manouvrier, Physiological Anthropology.

Paris, Oct. 30th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual meeting of the Fellows and Members of the Royal College of Surgeons of England was held on Thursday, the 1st inst., at the College. Mr. W. S. Savory, President, occupied the chair, and was supported by a considerable number of members of the Council. There was a very good attendance of Fellows and Members, the tiers of seats in the theatre being well filled.

Mr. SAVORY, in opening the proceedings, said that he supposed, as in former years, his hearers would take the annual report as read. Its arrangement was somewhat different on this occasion, the various subjects treated of in it being now more distinctly separated, with a view to its being more easily understood. Beyond this, there was no alteration in the report.

No opposition being offered, it was taken as read. The President then called upon the Secretary to read the first of three resolutions which were to be moved on the part of the Association of Members of the Royal College of Surgeons of England.

The resolution, which was then read, was as follows:—"That this meeting of the Royal College of Surgeons of England is of opinion that it is necessary for the interests of the College that immediate steps be taken to proceed with the consideration of all the matters relating to the constitution and charters of the College and to the rights and claims of the Members thereof which have been under discussion in the course of the recent proceedings before the Privy Council, referred to in the report, and to submit to the Privy Council, for embodiment in a further Supplemental Charter, proposals for the settlement of the said matters according to the general sense of the College; and that the Council of the College be invited to appoint a committee to consider with representatives of the Associations of Fellows and Members of the College the matters to be included in the petition for such further Supplemental Charter."

Dr. G. DANFORD THOMAS, as the mover of the resolution, hereupon expressed the hope that it might be the pleasure of the meeting to first discuss a motion which it was the intention of Mr. Tweedy to propose.

Permission having been granted, Mr. TWEEDY moved:—"That while welcoming some of the changes introduced by the Supplemental Charter, such as the extended eligibility of Fellows to sit in the Council, this meeting hereby expresses its regret that no provision has been made for giving effect to the recommendations contained in certain resolutions passed at a general meeting of Fellows and Members convened by the President for the purpose of receiving suggestions or recommendations respecting alterations to be made in the Charters, and held in the College on March 24th, 1888—namely, that Fellows and Members should be invested with a larger share in the management of the College; that no alteration should be effected in the constitution or in the relations of the College without the consent of Fellows and Members specially convened to discuss such alteration; and that the President of the College should be elected annually by the Fellows." He did not, he said, intend to introduce extraneous matter, or to occupy the time of the meeting with a speech. His resolution referred to a meeting held on March 24th, 1884, which was specially summoned to receive a report from the Council of the College respecting changes in the Charter of the College, and to receive suggestions as to those or other alterations. He supposed that the Fellows and Members constituted with the Council the integral part of the College, but the legal point he would not now discuss. All the proposals of the Council at this meeting in 1884 were accepted by those assembled, with one exception—viz., the proposal relating to the mode of altering the terms of examining for the Fellowship. This was lost at the time, but had since been withdrawn. Further suggestions were made and embodied in a resolution to the effect that Fellows and Members should have an equal share in effecting any alteration in the constitution of the College, and that the President should be elected annually by the Fellows. He wished to enter a formal but emphatic protest against the disregard shown by

the Council of the College to the wishes of the Fellows and Members, which wishes were expressed in response to an invitation. In private life we should, he said, know how to deal with such a matter, but a corporate conscience seemed to be somewhat different. No reason was given, no explanation was vouchsafed, and there was nothing inserted in the Supplemental Charter in deference to the wishes of Members of the College.

Mr. WICKHAM BARNES formally seconded this resolution.

Surgeon-Major INNES regretted as deeply as any Member that the Council had not yet seen its way to meet the wishes which had been expressed. At the same time he congratulated every Fellow and Member upon the result of their application to the Privy Council. He believed there was on the part of the governing body a strong desire to meet the wishes of the Fellows and Members, and he could not say where the difficulty in doing so arose. One thing was certain, that the obstruction was diminishing, and in proof of this he instanced the progress which had been made during the past year. He deprecated acerbity, and put trust in the generosity of the Council. To a certain extent he supported Mr. Tweedy, but would not, for his own part, press the matter so far.

The resolution was then put to the vote and carried almost unanimously.

Dr. DANFORD THOMAS then rose to move the resolution which stood in his name, and which had already been read. The Association of Members, he said, approached the Council of the College with a pacific feeling. They desired to terminate the condition of affairs which had prevailed for so many years, and under which they were so unjustly excluded from a share in the management of their own corporation. They had no voice in the disposal of the funds of the College, no vote in its management. The resolution was pacifically worded. Every legitimate method would be tried to attain their object before greater publicity was invited to the matter. He asked the Council to put aside all feeling, and to consider the matter carefully and dispassionately. The Privy Council had granted the petition of the Council as to the Supplementary Charter with the exception of points on which some dispute existed. The gist of the resolution lay in the last clauses, in which the appointment of a committee was asked for. He suggested that the Council should take the sense of the College on the subject and be guided by it.

Dr. G. MACDONALD seconded the motion.

Mr. NELSON HARDY asked if the Fellows and Members of the College who did not belong to either of the Associations were to be left out of the proposed committee.

The resolution was then put to the meeting, and declared carried.

Sir GUYER HUNTER, K.C.M.G., M.P., then proposed:—"That this meeting of the Royal College of Surgeons of England disapproves the manner in which the funds of the College are at present administered, as appears by the report now presented, and in particular declares that the pulling down of the College property at No. 38, Lincoln's-inn-fields, now producing a rental of £200 per annum, and the consequential proposals for building on that site at large cost a house for the conservator, are contrary to the interests of the College, and resolves that the Members and Fellows of the College ought to be consulted as to all extraordinary expenditure." This resolution, he said, dealing as it did with a question of finance, formed a corollary to the previous proposal. Circumstances had driven him far away from that institution with which he was when a lad intimately connected, but certain facts had been brought to his knowledge respecting the management of the affairs of the College which had induced him to head a deputation to the Privy Council, and to be present at that meeting. He was amazed at the smallness of the rights enjoyed by Members of the College. The political franchise had been extended to the illiterate, and he was astonished that an educated body of gentlemen like the Members of that College should not have a voice in its management. He thought that if large expenses like those referred to in the resolution were to be incurred, the first thing which would have occurred to the Council would be that those who contribute so largely to its funds should be consulted. The situation was becoming more strained every day, and the dissatisfaction was continually extending. Before long the matter would be brought to the notice of the House of Commons.

Mr. JOSEPH SMITH, who seconded the resolution, thought

that the Fellows and Members should be consulted before such vast sums as the Erasmus Wilson bequest were dealt with. Such a sum might be spent in the advancement of the art of surgery, or it might be frittered away amongst builders, architects, and lawyers. The scientific and surgical qualifications of the members of the Council were beyond doubt, but the same could not be said of their business capacity.

Mr. W. G. DICKINSON moved as a rider the addition of the following words to the amendment: "And hereby appoint a committee consisting of Messrs. Pollock, T. Holmes, E. Hartley, C. M. Jessop, Jabez Hogg, and Dr. R. Gooding to advise on that behalf with the Council and the Finance Committee, and report to the next meeting of the College." This provoked considerable discussion, and was eventually discarded.

Surgeon-Major INNES advised the withdrawal of the motion.

Mr. SPENCER WATSON supported the withdrawal of the amendment, and as a matter of form moved the previous question, which was seconded by Surgeon-Major INNES, and, a vote having been taken, was declared lost.

Mr. ALBAN DORAN entirely sympathised with the Members of the College, but pointed out that the question involved in this resolution was entirely distinct from College politics.

Mr. ASHTON ELLIS contended that, had the Members kept silence on the subject, they would by their very silence have sanctioned the expenditure, and that they could not do. The rent of the house in which it was proposed to lodge the Conservator might be estimated at £500 per annum, and this was totally disproportionate to his salary, which was £600 per annum.

Mr. CHRISTOPHER HEATH said that it was not probable that another charter would be granted to the College for another ten or twenty years. It seemed to be the idea that there was a certain amount of income which the Council of the College absorbed to itself. This was not true. Examiners were elected from outside the Council, and were not overpaid. Examining was for him the hardest work of the week. Those who attacked the Council possessed no details of the matter, and he contended that the recent expenditure on the College building and on the house for the Conservator was perfectly justifiable.

Mr. GEORGE BROWN asked if the President and Council would accept the resolution if passed. It was at their own discretion, and if they declined the present discussion was merely a burlesque.

Dr. EDWARD HAUGHTON said that this resolution showed a want of knowledge on the part of Members. It was premature for them to criticise the action of the Council, but the display of more confidence in the Members by that body would have been better.

Mr. JABEZ HOGG thought that Mr. Heath and other speakers had missed the point. It was only extraordinary expenditure by the College upon which they desired to be consulted.

Mr. WALTER RIVINGTON proposed that part of the resolution should be omitted, and that it should read as follows:—"That this meeting of the Royal College of Surgeons of England resolves that the Members and Fellows of the College be consulted as to all extraordinary expenditure."

Mr. E. BERDOE, having seconded the amendment, and Sir Guyer Hunter and Mr. Smith having accepted it, the resolution as amended was carried.

The third resolution on the part of the Association of Members was to have been proposed by Mr. Jabez Hogg and seconded by Dr. R. Gooding. It was as follows:—"That, in view of the contentions put forward by the Council in the course of the recent negotiations for a Supplemental Charter, this meeting of the Royal College of Surgeons of England hereby reaffirms the ancient rights of all the Members of the College, declares that all powers and property vested in the Council are held by them in the nature of a trust for all the said Members, asserts the constitutional right of the Members to meet together for the discussion and furtherance of the interests of the College, and resolves that the claims recently made by the Council to prevent and to restrict such meeting and discussion, and in particular the restrictive provisions and penalties for that purpose introduced in Section XVII. of the bye-laws, are against common right and are illegal and void."

Mr. SAVORY said that the resolution could not be accepted.

The laws must be conformed to. The resolution was contradictory to the terms of the College bye-laws. If such laws are illegal they could be challenged in a court of law, but not in a meeting convened in accordance with them.

Mr. SMITH proposed that the Council be urgently requested to cause to be forwarded to the Secretary of the Privy Council a copy of the first resolution.

Mr. HARTLEY seconded the motion, and it was carried.

Mr. E. BERDOE moved a vote of thanks to the President and Council of the College.

Mr. GANT seconded the motion, which was carried.

Mr. SAVORY acknowledged the compliment, and said that he always felt it a privilege to work for the advancement and prosperity of the College.

The proceedings, which lasted for a little over two hours, then terminated.

THE SERVICES.

WAR OFFICE.—Surgeon-Major, with the honorary rank of Brigade Surgeon, Hubert Rothwell Greene has been permitted to commute his retired pay (dated Oct. 12th, 1888).

INDIA OFFICE.—The Queen has approved of the under-mentioned Officers of the Indian Military Forces being permitted to retire from the Service:—Brigade Surgeon H. Vandyke Carter, M.D., of the Bombay Medical Establishment (dated Aug. 31st, 1888); Brigade Surgeon George Yeates Hunter, of the Bombay Medical Establishment (dated Oct. 27th, 1888); and Surgeon-Major Charles Hatchell, of the Bengal Medical Establishment (dated Oct. 20th 1888).

ADMIRALTY.—Royal Naval Artillery Volunteers, Liverpool Brigade: Richard Foster Owen, to be Surgeon, instead of Honorary Surgeon, as previously announced (dated June 14th, 1888).

The following appointments have been made:—Staff Surgeon George D. Twigg, to the *Hecla* (to date Nov. 6th, 1888); Surgeon Sidney H. Youel, to the *Ganges* (to date Oct. 30th, 1888); Surgeon Wm. J. Colborne, to the *Hecla* (to date Nov. 6th, 1888); Staff Surgeon John A. Robertson, to the *Penelope* (undated); Staff Surgeon Richard D. White, to the *Hotspur*, and Staff Surgeon Miles O. C. M'Swiny, to Haslar Hospital, temporarily (both dated Oct. 25th, 1888); and Surgeon John W. Slaughter, to the *Pheasant* (dated Oct. 30th, 1888).

VOLUNTEER CORPS.—*Artillery*: 1st Inverness-shire: Acting Surgeon H. W. Mann is appointed Second Lieutenant (dated Oct. 27th, 1888).—*Rifle*: 4th Volunteer Battalion, the Durham Light Infantry: Acting Surgeon W. J. Brown, M.B., is appointed Surgeon (dated Oct. 27th, 1888).

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen, having conformed to the bye-laws and regulations and passed the required examinations, were at a meeting on the 25th ult. admitted Licentiate of the College:—

Adamson, H. Geo., St. Barthol.	Douty, E. H., Camb. and Middlx.
Andrew, F. Charles, Manchester.	Dowling, Edwd. A. G., St. Barth.
Barker, Fred., St. Thomas's.	Dugan, Francis, Guy's.
Beaver, Robt. Atwood, Liverpool.	Eaton, Oliver, Manchester.
Blaxall, Frank R., Univ. College.	Farmer, Fredk. Reginald, Guy's.
Boycott, Arthur N., St. Thomas's.	Farrar, Reginald A., St. Barthol.
Bray, Hubert A., King's College.	Firth, J. L., King's and Univ. Coll.
Briscoe, John Edward, Leeds.	Foster, M. G., Camb. and Univ. Coll.
Broadway, S. A. W. E., Charing-cr.	Franklin, Lawrence, St. George's.
Burland, Herbert, Manchester.	Gomez, Anthony C., Univ. Coll.
Cahill, William Arthur, Guy's.	Gornall, John P. J., Manchester.
Cant, Frederick, Manchester.	Gott, Henry, Leeds.
Cheale, Montague, St. Barthol.	Grant, Hope, Edin. and London.
Cheate, Arthur H., King's Coll.	Graves, Charles, St. Mary's.
Cheetham, Chas. F., Manchester.	Grosvenor, W. Wm., St. Barthol.
Cholmeley, Wm. F., St. Barthol.	Halley, William, Charing-cross.
Clapham, John T., St. Barthol.	Hanson, Arthur S., St. Mary's.
Collington, Frank Arnott, Guy's.	Hayward, C. W., Edin. and Liv'pl.
Cooke, Montague P., Middlesex.	Heasman, Wm. G., St. Barthol.
Cooke, Thos. A. Burnard, Guy's.	Hewer, Alfred E., St. Barthol.
Copeland, Wm. H. L., St. Thos's.	Hewlett, Clarence Wm., Guy's.
Cornier, Harry, London.	Hill, Geo. Leonard, Birmingham.
Cressy, Charles James, Guy's.	Hodgetta, C. A., Toronto, Canada.
Cross, Edwd. John, St. Thomas's.	Hudson, Frank Horace, Bristol.
Day, Francis W. H. L., Univ. Coll.	Humphrey, Geo. H., St. Barthol.

* Candidates who have not presented themselves under the Regulations of the Examining Board.

Hutt, Chas. Edward, St. Barthol.
Johns, John Francis, London.
Joslen, Hubert, Guy's.
Keller, O. E., Zurich and Leipzig.
Kemp, George Lajus, Guy's.
King, Richard Henry, St. Barthol.
Le Fouvre, Wm. Philip, Guy's.
Lewis, Benj. Morgan, Univ. Coll.
Liston, Waller L., St. Mary's.
Locke, Charles Alfred, Univ. Coll.
Mackay, Percy Barnard, St. Geo.'s.
Metcalfe, George, Newcastle.
Miers, Arthur, Leeds.
Morland, C. H. Duncan, St. Geo.'s.
Nicholls, Alfred Robt., Middlesex.
Norton, Henry Harvey, St. Mary's.
Nuttall, Alfred Edw., St. Barthol.
Ogle, Cyril, St. George's.
Oliver, George Henry, Leeds.
Ormerod, C. Evelyn, St. Barthol.
Owen, Harold Edward, London.
Owen, John Lewis, Edinburgh.
Padbury, George John, Guy's.
Parry, Albert Alex., Melbourne.
Pearse, Albert, St. Bartholomew's.
Pedley, Samuel Edward, Guy's.
Phipps, Hy. Hostache, Univ. Coll.
Prosser, A. Bennett, Birmingham.

* Candidates who have not presented themselves under the Regulations of the Examining Board.

UNIVERSITY OF CAMBRIDGE.—At a congregation, held on the 25th ult., the degree of Doctor of Medicine was conferred on the following gentlemen:—

John Phillips, St. John's; Robert Lawford Knaggs, Gonville and Caius; Hector William Gavin Mackenzie, Emmanuel.

About 124 freshmen, entered this term, have announced their intention of studying medicine.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the quarterly examinations in Edinburgh for the triple qualification held in October, the following out of eighty-four candidates passed the final examination and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P.S. Glas.:—

Mrs. Caroline Keith, Walthof; Miss Florence Sorby, Sheffield; George Edwin Deamer, Lincolnshire; Frederick Fairbairn Armytage, Huddersfield; Miss Mary Susanna Ackworth, London; Robert Boyle, Glasgow; Richard Eden Walker, Canada; William Hamilton Merritt, Canada; Thomas Warren, Armagh; Henry Soltau, Exmouth; Jehangir Jamshedji Cursetji, Bombay; William Mussen, County Down; Richard Henry Barber, Worcester; Edmond William St. Vincent Ryan, Cork; John Adams, Melbourne; Hugh William Baillie, County Down; Robert George Reid, Victoria; George Ogle Moore, Australia; Robert Mills Simpson, Ontario; Charles Edward Salmon, Edinburgh; Charles M. Leod, Canada; Frederick Thomas Anderson, India; Arthur Septimus Thompson, South Shields; Frederick Naylor Stewart, Newport, Effe; John Samuel Ledgerwood, County Down; John Stewart Merrilles, Melbourne; Richard Patrick Byrne, Cork; John Stewart Boyd, Renfrewshire; William Henry Webster, York; Donald McLachlan, Tobarmony; Roger Bernard Burke, Cork; James Alexander Greig, Edinburgh; John Ferris, Devonshire; William Williams, Anglesea; Francis Malcolm Bovill, London; Edwin Andrew Cuthbert Hindmarsh, Calcutta; George Stevens Pope, Madras; Alfred Moxon, Rugby; Miss Elizabeth Simpson Mitchell, Canada; Miss Nettie Ogilvie, Glasgow; Wm. Armstrong, Manchester; C. J. Milligan, Belfast; E. Gerald R. Whitcombe, India; Percy Walker Thompson, Toronto; R. Rudland, Coventry; E. Lerode Chalke, Madras; J. H. Brice, Warwickshire; Harold W. Kingcombe Read, Devonshire; W. A. Passe, Ceylon; J. H. Wilson, County Cork; R. D. Pritchard, Carmarvonshire; K. Orr Harrison, Forfarshire; J. Michael O'Dwyer, Cork; C. L. Howe, Lancaster; Luther Watson, Huddersfield; Gwilym Evans, South Wales; John Henry Carson, County Down; J. W. Harbinson, Belfast; John R. Mason, Lancashire; Wm. T. Blackledge, Lancashire; C. W. O'Connor, County Limerick; F. Murphy, Cork; J. H. Gordon, Birmingham; G. Cornick, Tabriz, Persia.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates, having passed the qualifying examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society:—

Baly, Price Pritchard, Queen's College, Birmingham.
Burrows, Henry Ambrose, Royal Infirmary, Liverpool.
Chamberlain, Edward Beatty, London Hospital.
Lee, Henry Boynton, Sheffield and Leeds.
MacLeod, Harold Hay Brodie, King's College Hospital.
Mead, Theophilus William, St. George's Hospital.
Potter, Paul de Cressé, Manchester Infirmary.
Raynes, Sidney Herbert, London Hospital.
Williams, John Cobden, Royal Southern Hospital, Liverpool.

The following have passed the Primary Examination:—
Chemistry, Materia Medica, Botany, and Pharmacy.—Bennett, J. M., Liverpool; Wrench, W. M., St. Thomas's Hospital.
Anatomy and Physiology.—Brand, G. H., King's College Hospital; Burrell, F. D., St. George's Hospital; Cotton, W. F., St. Bartholomew's Hospital.
Anatomy only.—Hicks, R. M. M. B., St. George's Hospital.
Physiology only.—Covey, E. A. E., St. Bartholomew's Hospital; Nicolas, J. D., King's College.

*Quirk, Thos. Augustus, St. Barth.
Reed, John Sleeman, Univ. Coll.
Reynolds, Ernest James, London.
Rigby, W. Bradshaw, St. Barthol.
Rilot, Charles Fredk., Middlesex.
Ring, John, Middlesex.
Roberts, Richd. Lewis, Univ. Coll.
Robertson, John, Guy's.
Bolston, Thos. Restarick, Guy's.
Scott, Thos. Wilfred, St. Barthol.
Shaw, John Custance, St. Barthol.
Slyman, W. Betenson, St. Barthol.
Smith, Herbert A., King's College.
Spencer, Thos. Edwd., St. Barthol.
Stanforth, John Wm., Sheffield and St. Thomas's.
Stevens, Wm. Edward, Bristol.
Thompson, G. Hobson, St. Barthol.
Thorp, Charles Glover, Guy's.
Tunncliffe, Francis W., St. Barthol.
Turner, Edgar Olive, Univ. Coll.
Walker, Alex. Hope, Char.-cross.
Ward, Walter Fisher, St. Thos.'s.
Watkins, Walter, St. Barthol.
Wells, Frank Barber, Univ. Coll.
Williams, Robert Edwin, Guy's.
Wright, Thomas Nesbitt, Guy's.
Young, James, Manchester.

The following have passed the Final Examination:—

Surgery.—Basu, B. M., Lahore Medical College Punjab Univ., and Guy's Hospital; Dawber, J. H., Middlesex Hospital; Henley, H. R., King's College; Joscelyne, A. E., London Hospital; Molyneux, Edward, Liverpool University College; Roberts, A. E. G., St. Mary's Hospital; Stone, E. C., Women's Medical College, Toronto; Symons, H. B. T., Charing-cross and Aberdeen.
Medicine, Forensic Medicine, and Midwifery.—Gilmour, J. C., Guy's Hospital.
Medicine and Forensic Medicine.—Molyneux, Edward, Liverpool University College.
Medicine and Midwifery.—Twigg, F. G., London Hospital.
Midwifery.—Coates, W. H., Durham University and London Hospital; Stephen, G. C., McGill University, Montreal; Stone, E. C., Women's Medical College, Toronto.

THE 106th anniversary of the Nottingham General Hospital was celebrated on the 25th ult., when satisfactory financial, medical, and general reports were presented and adopted.

HYDROPHOBIA.—Another patient treated for the bite of a rabid dog at the Pasteur Institute is said to have died. The treatment extended from Sept. 12th to Oct. 3rd. On Oct. 10th hydrophobia set in, and the man succumbed on the 14th.

NEW CEMETERY FOR WILLESDEN.—At a public meeting held at Willesden, the question of the need of the proposed new cemetery was discussed, and the ratepayers will on Saturday (to-day) be asked by a poll to express their assent to a resolution which affirmed the desirability of a certain site for the purpose.

OPHTHALMIA IN POOR-LAW SCHOOLS.—An inspection has just been made of the Central London District Poor-law Schools at Hanwell, with a view to ascertain what remedy could be found for the present serious state of affairs arising from the contagion of ophthalmia among the children. Dr. Bridges, the medical inspector of the Local Government Board, and Mr. Smith, the architect, have issued their report, which was read at the meeting of the managers of the schools on Monday, and to which we shall have to refer on a future occasion.

ST. JOHN AMBULANCE ASSOCIATION.—The Duchess of Connaught has attended a course of nursing lectures with a St. John Ambulance class at Poona, India, and has passed a very satisfactory examination. Her Royal Highness obtained the "first aid" certificate some weeks previously. The class was instructed by Surgeon C. R. Kilkelly, Army Medical Staff, and examined by Dr. Hodson. At Neath, Glamorganshire, on Saturday last, certificates of this Association were presented by Miss Greenfell, Swansea, to each of the sixty-seven members who presented themselves for, and all of whom succeeded in passing, the examination. The chair was occupied by the Hon. H. C. Bruce (son of Lord Aberdare). After the presentation of the certificates an illuminated address, subscribed for by the members, was presented to Dr. David Llewelyn Davies (the lecturer of the classes) in recognition of his valuable services. The members of the Tondy Class of the Association have recently presented Drs. W. E. Thomas and George W. Dick with handsome silver-mounted walking sticks in recognition of their services in instructing them. All the members who presented themselves for examination passed.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The 20th of October being the centenary of the foundation of the Society, it was celebrated by the presentation to each of the sixty-three widows now on its books of the sum of £5, and by a gift of £3 to each of the twelve orphan children. In the evening the President of the Society, Sir James Paget, most hospitably entertained the vice-presidents, directors, secretary, and honorary solicitor at dinner at his house. After dinner the "loving cup" (in two magnificent silver tankards) was passed round, "in presentium salutem in memoriam absentium." Afterwards Sir James, in a short and graceful speech (the gist of which we hope to reproduce in our next impression), referred to the happy combination in the Society of the principle of thrift with that of the true charity of relieving the fatherless and widows in their affliction, and earnestly commended the welfare of the Society to the hearty and zealous support of all present. In the drawing-room, after dinner, a short address to Sir James Paget was agreed to and signed by all present; this the President kindly accepted as a lasting memorial of the gratifying event.

TRIPLETS.—Dr. Wm. Skene of Cardiff writes that on Oct. 3rd he delivered a patient residing at Cathays of triplets—two males and one female,—all three being quite healthy on the 24th ult. The Queen's bounty of £3 has been received in this case.

A GIFT TO DARLEY DALE, DERBYSHIRE.—Under the will of the late Sir Joseph Whitworth, Bart., Lady Whitworth and her co-executors are giving to Darley Dale an institute for educational and recreative purposes, a hospital, and a smaller hospital for infectious diseases. The estimated outlay is upwards of £25,000.

UNVEILING THE BUST OF THE LATE DR. WILSON FOX.—Last week, we briefly noticed the unveiling of this bust in the Shire Hall, Taunton, by the Hon. W. H. Portman. The interesting ceremony was attended by a large number of members of the profession and of inhabitants of the town. Letters were referred to by Mr. R. A. Kinglake from (amongst others) Sir James Paget and Sir William Jenner, expressing regret at their inability to be present on the occasion. The sons and brothers of the deceased attended the ceremony. The bust is placed over the main entrance to the corridor leading to the Crown and Nisi Prius Courts, and bears an appropriate inscription. Mr. Kinglake remarked that Somerset, for the first time in its history, had done special honour to the medical profession by setting up a memorial to the late Dr. Wilson Fox. The Hon. W. H. Portman then expressed the pleasure he felt in undertaking the agreeable duty of unveiling the bust. Dr. Beddoe (Clifton), Dr. Winterbotham, Dr. Edward Liddon, and Dr. Alford having borne tribute to the late eminent physician, Mr. Arthur Wilson Fox expressed the pride with which not only he, but all the members of his family, looked at the honour done that day to his distinguished father. After a vote of thanks, proposed by the Mayor of Taunton, had been passed to the Hon. W. H. Portman for presiding, the meeting terminated.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—The following officers have been elected for the ensuing year:—President—Samuel Gordon. General Secretary—W. Thomson. Medical Section: President—L. Atthill. Council—J. H. Benson, A. Foot, T. Grimshaw, R. A. Hayes, J. Little, T. Wm. Moore, A. Montgomery, Jno. Moloney, S. M. Mac Swiney, Conolly Norman. Section of Surgery: President—Henry Fitzgibbon. Council—J. Kellock Barton, William Colles, Charles Coppinger, A. H. Corley, H. G. Croly, K. Franks, Edward Hamilton, E. S. O'Grady, Sir William Stokes, Wm. Thornley Stoker. Section of Obstetrics: President—William J. Smyly. Council—J. J. Cranny, Prof. Dill (Belfast), R. Fleming, Andrew Horne, J. R. Kirkpatrick, Frederick Kidd, J. Lane, A. Vernon Macan, Thomas M. Madden, S. Mason. Section of Pathology: President—J. Magee Finny. Council—A. W. Baker, C. B. Ball, E. H. Bennett, A. H. Benson, H. Bewley, J. Lentaigne, J. Purser, J. A. Scott, W. G. Smith, J. B. Story. Section of Anatomy and Physiology: President—Ambrose Birmingham. Council—H. St. J. Brooks, H. Broomfield, Daniel Cunningham, F. Henston, Edward Ledwich, J. M. Purser. Section of State Medicine: President—S. M. Mac Swiney. Council—E. Cosgrave, Thomas W. Grimshaw, J. W. Moore, Charles F. Moore, J. Malet Purser, J. M. Redmond.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. Robert Ash Charleton, of Clifton, Bristol, has bequeathed £200 to the Bristol Hospital for Sick Children. —Mrs. Adeline Maxwell Harrison, late of 32, Eaton-terrace, Eaton-square, London, has left 19 guineas each to the Royal Hospital for Incurables, Putney, and the Chelsea Dispensary, Sloane-square. —The Fishmongers' Company, London, has forwarded a donation of £105 to the Royal Hospital for Women and Children, Waterloo-bridge-road. —Mr. John Griffith, late of Hanover-terrace, Regent's Park, has bequeathed £4000 each to the London Hospital, Guy's Hospital, Middlesex Hospital, and St. Mary's Hospital, Paddington. —An anonymous donor has forwarded £500 to the fund for maintaining the cruising hospital ships of the mission to Deep-sea Fishermen. —The executors of the late Miss Louisa McKellar have forwarded £150 to the Golden-square Throat Hospital, London, £2000 to Guy's Hospital, £550 to the Royal Westminster Ophthalmic Hospital, £200 to the Mission to Deep-sea Fishermen, and £250 to the Paddington-green Children's Hospital.

HOSPITAL SUNDAY COLLECTIONS IN BIRMINGHAM.—The amount collected this year in aid of the amalgamated charities, fourteen in number, has reached the sum of £3629 12s. 2d., and it exhibits a distinct advance in comparison with the previous year, when it was £2736 odd.

BOOKS ETC. RECEIVED.

- BAILLIÈRE, TINDALL, & COX**, King William-street, Strand, London.
Select Methods in the Administration of Nitrous Oxide and Ether; a Handbook for Practitioners and Students. By Fred. Hewitt, M.A., M.D. Cantab. 1888. pp. 48.
On the Surgery of the Knee Joint and the responsibility placed on the Physician and General Practitioner by the Modern Progress of Surgery. By C. B. Keetley, F.R.C.S. 1888. pp. 25.
- CHURCHILL, J. & A.**, New Burlington-street, London.
Alpino Winter in its Medical Aspects; with notes on Davos Platz, Wiesen, St. Moritz, and the Maloja. By A. Tucker Wise, M.D., L.R.C.P., M.R.C.S. Fourth Edition. 1888. pp. 160.
- CROSBY LOCKWOOD & SON**, Stationers' Hall-court, Ludgate-hill, E.C.
Antiseptics. A Handbook for Nurses. By Annie M. Hewer. 1888. pp. 78.
- GERMER, BAILLIÈRE ET CIE**, 108, Boulevard St. Germain, Paris.
Congrès Français de Chirurgie, 8me Session. Paris, 1888. Procès-verbaux, Mémoires et Discussions publiés sous la direction de M. le Dr. S. Pozzi, Secrétaire Général. Avec 28 figures dans le texte. 1888. pp. 679.
- KEGAN PAUL, TRENCH, & CO.**, Paternoster-square, London.
Chats at St. Ampelio. By John A. Goodchild. 1888. pp. 233. Price 5s.
- LONGMANS, GREEN, & CO.**, London.
The Illustrated Optical Manual, or Handbook of Instructions for the Guidance of Surgeons. By Surgeon-General Sir T. Longmore, C.B., F.R.C.S. Fourth Edition. Enlarged and Illustrated by 74 figures. 1888. pp. 239. Price 14s.
Transactions of the Clinical Society of London. Vol. 21. 1888. pp. 315.
The Tongue as an Indication in Disease. By W. Howship Dickinson, M.D., F.R.C.P. 1883. pp. 114. Price 7s. 6d.
Force and Energy. A Theory of Dynamics. By Grant Allen. 1883. pp. 161. Price 7s. 6d.
Lectures to Practitioners on the Diseases of the Kidney amenable to Surgical Treatment. By D. Newman, M.D. 1883. pp. 472. Price 16s.
The Son of a Star. A Romance of the Second Century. By Benjamin Ward Richardson. In three volumes. 1883. Price 25s. 6d.
- LIVINGSTONE, E. & S.**, Teviot-place, Edinburgh.
Anatomy: Part 1. The Upper Extremity. (Catechism Series.) 1889. pp. 64. Price 1s. 6d.
- J. LEBÈQUE ET CIE**, Paris et Bruxelles.
Précis du Cours d'Exploration Clinique et de Diagnostic Médical professé à l'Université de Bruxelles. Par le Dr. E. Spehl. Année 1887-1888. 168 figures dans le texte. pp. 602.
- MASSON, G.**, Paris.
Revue des Sciences Médicales en France et à l'Étranger. Dirigée par Prof. Georges Hayem. Seizième Année. Tome 32. 2e fascicule. 1888. pp. 800.
- OLIVE & BOYD**, Edinburgh.
The Transactions of the Medico-Chirurgical Society of Edinburgh. Vol. 7, New Series. Session 1887-88. pp. 248.
- OBSTETRICAL SOCIETY**, Berners-street, London, W.
Transactions of the Obstetrical Society of London. Vol. 30, for the year 1888. Part 3, for June and July. Edited by Percy Boulton, M.D., and F. H. Champneys, M.D.
- SAMPSON LOW & CO.**, Limited, London.
The Fatal Illness of Frederick the Noble. By Sir Morell Mackenzie. 1888. pp. 246.
- SIMPRI, MARSHALL & CO.**, London.
The Natural History of Local Boards, or Local Government as it is. 1888. pp. 306.
- THE TROY PRESS CO.**, New York.
Fifth Annual Report of the Bureau of Statistics of Labour of the State of New York for the year 1887. By C. F. Peck, Commissioner. 1888. pp. 792.
- THE NEW SYDENHAM SOCIETY**, London.
Selected Monographs: Raynaud's Two Essays on Local Asphyxia, Klebs and Crudele on the Nature of Malaria, Marchiafava and Celli on the Origin of Melanæmia, Neugebauer on Spondylolisthesis. Vol. 121. 1888.
- CHAPMAN & HALL**, London.
Modern Methuselahs, or Short Biographical Sketches of a few Advanced Nonagenarians or actual Centenarians who were distinguished in Art, Science, Literature, or Philanthropy. By John Burn Bailey. With an introductory chapter on Longevity. 1888. pp. 460.
- WARD, LOCK & CO.**, Salisbury-square, London, E.C.
Our Nurses, and the work they have to do. By H. C. O'Neill and Edith A. Barnett. 1888. pp. 197. Price 2s.

Sur la Pelade : Nature, Transmissibilité, Origines, Modes de Propagation et de Transmission, Prophylaxie publique et privée; par M. Ernest Besnier, 1888).—Chemical Notes and Equations, for the use of Students; by R. Milne Murray, M.A., M.B. Edin., F.R.C.P.E. Third edition, 1888, price 2s.—The Significance of the Epiblastic Origin of the Central Nervous System; by Dr. Geo. W. Jacoby (Louis Weiss, 64, Ann-street, New York), 1888.—A Plea for the more general adoption of Antiseptics in Midwifery Practice; by C. J. Cullingworth, M.D., F.R.C.P. (J. and A. Churchill, New Burlington-street, London, 1888), price 1s.—Some of the Advantages of the Union of Medical School and University; by W. H. Welch, M.D. (From the New Englander and Yale Review for September, 1888).—Hydrophobia: a Review of Pasteur's Treatment; by W. Collier, M.A., M.D. Cantab., M.R.C.P. (H. K. Lewis, Gower-street, London, W.C., 1888).—The Necessity of a Sanitary Reform in Infant Rearing: why and how it should be effected; by F. E. Clotten (published by the Author at 80, Lord-street, Liverpool), 1888, price 1s.—The Writer's Time-saver, by Geo. Speedwell (Truelove and Shirley, St. Paul's Churchyard, London), price 6d.—Curve Pictures of London for the Social Reformer; by Alex. B. Macdowall, M.A. (Sampson Low, Marston, Searle, and Rivington, Limited, Fetter-lane, Fleet-street, London, 1888), price 1s.—On the Vomiting of Pregnancy and Menorrhagia; by John Meredith, M.D. Edin. (J. W. Arrowsmith, Quay-street, Bristol, 1888), price 1s.—Der Klumpfuss und seine Folgen für das übrige Knochengerüst; Nach Neuen Untersuchungen; von Dr. G. Hermann von Meyer (Gustav Fischer, Jena, 1888).—Réfutation des Recherches sur la Fièvre Jaune faites par Mr. P. Gibier à la Havane; par le Dr. Domingos Freire (Pinheiro and Co., Rio Janeiro, 1888).—The Holy Bible, with about 200 full-page illustrations; by Gustave Doré, No. 1, price 4d. (Cassell and Company, London).—Cassell's New Popular Educator, Part 1, price 6d. (Cassell and Company, London).—Index Medicus: Authors and Subjects, vol. x., No. 9, September, 1888 (Trübner and Co., and Lewis, London).—Records of the Woolwich District, Part I; by W. T. Vincent (Woolwich, Jackson).—Magazines for November: Good Words (with Diamonds in Darkness, a Christmas story), Sunday Magazine (with Little Snow-flakes, Christmas stories), Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper, Scribner's Monthly; The World of Adventure, illustrated, Part I (Cassell & Co.)

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ADYE, W. J. A., M.R.C.S., L.S.A., has been appointed Medical Officer for the Third District of the Bradford (Wilts) Union.

ALEXANDER, JAS. WHITEHEAD, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glas., has been appointed Resident Clinical Clerk to the West Riding Lunatic Asylum, Wakefield.

ALEXANDER, ROBERT REID, M.D. Aberd., has been appointed Medical Superintendent of the Male Department, Hanwell Lunatic Asylum, vice Dr. Henry Rayner, resigned.

BLORE, J., M.B. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Manchester Royal Infirmary.

BOYD, A. J., B.A., M.D., B.Ch., M.B. Dub., has been appointed Medical Officer of the Third District of the Ware Union.

BROWN, JOHN, M.B. Vict. Univ., L.R.C.P. Lond., &c., has been appointed Physician to the Southall Fever Hospital, Bactup, and reappointed Medical Officer of Health for the Borough of Bactup.

CALLAGHAN, JAS. LEWIS, L.R.C.S.I., L.R.C.P. Edin., & L.M., has been appointed Medical Officer for the No. 8 District of the Houniton Union, vice Dr. F. A. O'Meara, deceased.

CLAYTON, CHARLES H., M.R.C.S., L.R.C.P., has been appointed Assistant Resident Medical Officer to the North-west London Hospital.

CLEGG, JOSEPH, M.R.C.S., L.S.A., has been appointed Assistant Medical Officer to the Manchester Royal Infirmary.

DICKINSON, W. W., M.R.C.S., L.S.A., has been appointed Medical Officer to the Uffculme District of the Tiverton Union, vice R. Bryden, M.R.C.S., resigned.

FOX, W. PIERCE, L.R.C.P., L.R.C.S., has been appointed Medical Officer to No. 6 District in the parish of Lambeth, vice W. Arthur, M.R.C.S., L.S.A., resigned.

FURBER, EDWARD P., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the North-west London Hospital.

GLASSINGTON, CHAS. W., M.R.C.S., L.D.S. Ed., has been appointed Medical Tutor to the National Dental College.

HARRIS, THOS., M.D., M.B., M.R.C.P. Lond., M.R.C.S., has been appointed Assistant Physician to the Manchester Royal Infirmary.

HENSLEY, ARTHUR E., M.R.C.S., L.S.A., has been appointed House Surgeon to the Paddington-green Children's Hospital, vice George A. Sutherland, M.B., C.M., whose appointment has expired.

JOHNSTON, A., M.B., C.M. Glas., has been reappointed Resident Medical Officer to the Barnes Convalescent Hospital, Chisle.

MACDERMOTT, R. J., B.A., M.B., M.Ch. Dub., has been appointed Medical Officer for the Second District and the Workhouse of the Petworth Union.

SUZUKI, S. M., M.R.C.S., L.R.C.P. Lond., has been appointed Fleet Surgeon in the Imperial Japanese Navy and commissioned as Superintendent of the Tokio Naval Hospital, and Professor to the Naval Medical College, Tokio; also has been appointed Assistant Physician to the Tokio Charity Hospital.

TAYLOR, H. C., M.D., M.B., C.M., L.R.C.P., L.R.C.S. Edin., has been appointed Honorary Surgeon to the Nottingham General Hospital.

WHITEHEAD, HENRY E., M.R.C.S., L.R.C.P., has been appointed Resident Assistant Medical Officer to the Islington Workhouse Infirmary, St. John's-road, Upper Holloway, vice J. A. Gray, resigned.

WILD, R. B., M.D. Lond., B.Sc., has been appointed Pathological Registrar to the Manchester Royal Infirmary, vice Dr. T. Harria.

[ERRATUM.—The announcement in our issue of the 12th ult., that the medical vacancy in the Seventh District of the Tending Union had been filled by the appointment of Dr. T. Pigg, was inserted in error. The letters "M.R.C.P." placed after the name would make it obvious that the announcement was the result of an inadvertency, for which we must express regret.]

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

GRANTHAM FRIENDLY AND TRADES' SOCIETIES MEDICAL INSTITUTION.—Resident Medical Officer. Salary £150 per annum, and midwifery fees, with residence, coals, gas, and rates free.

LANCASHIRE COUNTY ASYLUM, Rainhill, near Liverpool.—Resident Medical Superintendent. Salary £1000 per annum, with certain allowances.

NEWCASTLE-UPON-TYNE BOROUGH LUNATIC ASYLUM.—Superintendent. Salary £450 per annum, with furnished quarters, coals, gas, washing, and vegetables.

VICTORIA UNIVERSITY AND YORKSHIRE COLLEGE, Leeds.—A Joint Lecturer on Forensic Medicine.

Births, Marriages, and Deaths.

BIRTHS.

BAILEY.—On the 27th ult., at The Hollies, Lee-terrace, Blackheath, the wife of Henry Fredk. Bailey, M.R.C.S., L.S.A., of a daughter.

FOURCRE.—On the 28th ult., at Tollington-park, N., the wife of R. P. Fouracre, M.R.C.S., of a son.

GRIPPER.—On the 29th ult., at The Poplars, Wallington, Surrey, the wife of Walter Gripper, M.B. Camb., M.R.C.S., &c., of a son.

HENTSCH.—On the 24th ult., at Southampton-street, Camberwell, S.E., the wife of John Page Hentsch, M.R.C.S., of a daughter.

MARRIAGES.

BEECHAM—BEASLEY.—On the 30th ult., at St. John's the Divine, Fairfield, Liverpool, William Beecham, L.R.C.P., &c., of Bethune-road, Stoke Newington, London, youngest son of Thomas Beecham, of Mursley Hall, Winslow, Bucks, and St. Helen's, Lancashire, to Maud, eldest daughter of Thomas Beasley, of Fairfield.

MAUNSELL—KEYMER.—On the 24th ult., at St. Mark's Church, Wandsworth, John Maunsell, M.D., L.R.C.S. Ed., of Salisbury House, Clapton-square, Hackney, to Ada, daughter of the late John Keymer, of Friday-street, and Mrs. Keymer, of St. Mark's House, Wandsworth-common.

PIETERSEN—JONES.—On the 1st inst., at St. George's, Hanover-square, by the Rev. Canon Rowsell, assisted by the Rev. W. Barter, James Frederic Gerhard Pietersen, M.R.C.S., L.R.C.P.L., of Bannatyne, Etchingham Park, Finchley, eldest son of the late J. F. G. Pietersen, of Cape Town, Cape of Good Hope, to Ida Sydney, second daughter of Sydney Jones, F.R.C.S., M.B., of 16, George-street, Hanover-square. No cards. At home Dec. 4th and 6th.

SIMPSON—JAMIESON.—On the 10th September, at Toorak Presbyterian Church, Melbourne, by the Rev. J. Ewing, W. J. Simpson, M.D., Calcutta, to Mary, fourth daughter of the Rev. George Jamieson, D.D., old Machar Cathedral, Aberdeen, Scotland.

WILLIAMS—KELLOCK.—On the 24th ult., at Holy Trinity Church, Lee, Hutchins Williams, L.R.C.P., M.R.C.S., to Alice, widow of J. R. Kellock, P. and O. S. N. Co.'s Service.

DEATHS.

INGOLDBY.—On the 30th ult., at Cromer House, Brandram-road, Lee, S.E., Frederick Ingoldby, F.R.C.S.E., formerly of Finsbury-square, in his 70th year.

SCOTT.—On the 22nd ult., at Birkbeck-road, Acton, of angina pectoris, Robert Charles Scott, Fleet Surgeon Royal Navy, aged 62.

VIVIAN.—On the 23rd ult., Edward John Vivian, late Surgeon-Major H.M. Indian Army, of Shorncliffe-road, Folkestone, aged 63.

WILLIAMS.—On the 19th ult., at The Elms, Wheatley, Oxon., Leonard Williams, M.A., M.B. Cambridge, aged 42.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, November 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations 10.30 A.M., and each day at the same hour.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
 ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
 ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—8 P.M. Mr. F. J. Bennett: On Certain Points relating to the Structure of Dentine.—Casual communication by Mr. Boyd Wallis.
 MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Bull (of New York): The Surgical Aspects of Typhilitis and Perityphilitis.—Dr. Gulliver: On a case of Ascites presenting some unusual features.

Tuesday, November 6.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesday and Friday, 1.30 P.M.
 PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Specimens:—Mr. Sheild: Complete Rupture of Left Bronchus from Fractured Rib.—Dr. Griffith: Tubercle of Ovary.—Dr. H. Habershon: Aneurysm of Aorta rupturing into Pericardium.—Dr. H. Weber: Hydatid Cyst of Brain.—Dr. Mott: Two cases of Mediastinal Growth.—Dr. A. Money: Mediastinal Sarcoma in an Infant aged fifteen months.—Dr. Crocker: Case of Paget's Disease affecting the Scrotum. Card Specimens:—Dr. M. Murray: Fatty Tumour in Wall of Stomach.—Dr. Perry: Two Specimens of Acute Intestinal Obstruction produced by Adhesion between Appendices Epiploicae.—Mr. Targett: Internal Rupture of Liver.

Wednesday, November 7.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
 OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Cullingworth and others. Mr. Alban Doran: On Myoma and Fibro-myoma of the Uterus and Allied Tumours of the Ovary.—Dr. Matthews Duncan: On Locking, Retroversion, and Strangulation of Uterine Fibroids in the Pelvic Excavation.—Mr. Meredith: A case of Locked Fibroid treated by Supra-vaginal Hysterectomy.

Thursday, November 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
 OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M.:—Mr. Lang: On Excision of a Corneal Staphyloma.—Messrs. Critchett and Juler: Case of Pseudoglioma. Papers:—Mr. Swanzy: On a case of Congenital Lateral Deviation probably due to a Congenital Lesion.—Mr. Lang: (1) On the Suspensory Ligament and Ciliary Processes as seen after the Removal of the Iris; (2) On Large Circular Hemorrhages in the Yellow Spot Region.—Mr. Berry: On Prince's Operation for Advancement of Recti Muscles.

Friday, November 9.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
 OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—9 P.M. Special Meeting for the delivery of the Bowman Lecture by Mr. Henry R. Swanzy of Dublin, on "The Value of Eye Symptoms in the Localisation of Cerebral Disease."
 CLINICAL SOCIETY OF LONDON.—Mr. E. H. Fenwick: Case of Encysted Stone.—Mr. G. Buckston Browne: Case of Encysted Calculus removed by Supra-pubic Lithotomy.—Dr. Bristowe and Mr. V. Horsley: Case of Paralytic Rabies in Man. Living Specimens:—Dr. J. J. Pringle: Xeroderma Pigmentosum.—Dr. T. D. Savill: Hysterical Contracture and Hystero-epilepsy in the Male.

Saturday, November 10.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 1st, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vaccum.	Maximum Temp. in Shade.	Minimum Temp.	Rain-fall.	Remarks at 8.30 A.M.
Oct. 26	30.06	S.W.	60	58	78	64	53	..	Raining
" 27	30.25	S.W.	61	59	98	69	59	..	Overcast
" 28	30.17	S.W.	60	58	89	67	56	..	Cloudy
" 29	30.24	S.W.	56	55	..	57	55	25	Overcast
" 30	30.02	S.E.	51	50	..	54	50	40	Raining
" 31	30.00	W.	50	47	79	57	46	34	Cloudy
Nov. 1	29.63	W.	48	47	..	50	47	..	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

"THE GROWTH OF SENSATIONALISM."

REFERRING to our article last week on this subject, Dr. G. B. Beale of Tottenham writes as follows:—

"The temporary decline in tone and taste is, I think, easily accounted for. It seems to me to be the direct result of the Board School system, which has educated to the point of being able to read a vast number who before its institution were unable to do so. It has, however, failed to educate them in other ways, and thus, their taste remaining rather for sensation than more refined emotions, they purchase those papers which provide them with what they want, and as the object of the editor is to obtain the 'largest circulation' he prints what will attract the largest class of customers. While on the subject I may say I think the school hours too long, both because too many hours a day are spent without any physical exercise, and also because they withdraw the children too many hours from the home influence, which is as important a part of education as school, and also because only a very small number of hours can be profitably spent over books by young children."

Junior.—To be qualified to vote the occupier of part of a house must be separately rated.

R. Turnbull's medical attendant will no doubt answer the question.

Omega has not enclosed his card.

THE NEW L.S.A.

To the Editors of THE LANCET.

SIRS,—Dr. Peregrine has informed your readers that men who have the new L.S.A. may call themselves surgeons or physicians if they choose. I certainly think one who has passed in surgery is a surgeon, or in medicine a physician. What the new L.S.A. desires is that he may be able to register a qualification which will distinguish him from the old licentiate, who was not a surgeon. Dr. Peregrine further tells us the new men usually sign themselves L.M.S. I for one decline the honour of those three letters until I can register the same. This is really an important matter for men who intend taking the Hall. When presenting themselves they find the fees are raised; they have to submit to a very thorough examination in surgery, which is certainly harder than the examination in medicine and midwifery, and having proved triumphant, they can only register the L.S.A. This seems rather unjust. They have nothing to show the general public in proof that they are doubly qualified men, who can recover fees for surgical as well as medical attendance.

I am, Sirs, yours faithfully,

October, 1888.

QUERULOUS.

THE "METROPOLITAN HOSPITAL"

To the Editors of THE LANCET.

SIRS,—In connexion with the above hospital a new departure has been made, and a provident department established. In your issue of Oct. 20th (p. 780), under the heading "Are Friendly Societies and other Sick Clubs a Delusion?" you condemn medical men who accept large professional responsibilities on terms on which neither good medicine nor adequate attention can be given, &c., and intimate that later on you may have more to say on this matter. In the interests of the profession, and especially of general practitioners in London, I hope that the present departure will be then duly subjected to your criticisms. In this department men, women, and children of all ages are eligible for admission. That fallacious test, a wage limit, is applied. A small entrance fee is next paid, and a card is handed to each member, who forthwith becomes entitled to medical treatment at the hospital or at their own home, provided only one penny per week is regularly paid for so inestimable a privilege. Confinements are also attended upon strictly moderate terms, 15s. being regarded as an adequate fee. From the payments received the medical officers, dispenser, and druggist are paid, and the hospital finances have to be duly augmented. On each card the name of the medical officer is noted, together with the foregoing ambitious scale of charges. How satisfied and complacent must he be when he sees his name on the card and the advertised rates of payments! How proud, too, of his profession, and the dignity of his office! How respectful must be the attitude of his patients, who can display the fact in black and white that they can for so contemptible a sum secure for themselves skilled medical attendance!

I deeply deplore this new departure, as distinctly retrograde and inimical to all that is calculated to advance the dignity, respect, and true interests of our profession, and sincerely hope that some prompt and authoritative expression of opinion may be recorded upon such matters. Apologising for so long a letter,

I am, Sirs, yours faithfully,

Forest-rd., E., Oct. 23rd, 1888. FREDK. E. COCKELL, JUNR., M.R.C.S.

An Old Subscriber.—A medical man can only be held responsible for the treatment of a case so long as he attends it. A medical man called to a case which has been treated by a neighbouring practitioner should seek, if possible, to have the co-operation of that practitioner. It is not, of course, always possible, but it is much more often so than is supposed. In illness patients and their friends are apt to be excited and fickle in their professional preferences, and a right-minded practitioner will not take advantage of such a frame of mind to supplant a neighbour. The case seems to have been more than simple acute tonsillitis. Our correspondent should at least have been informed of the fact that another practitioner had been called in.

Dr. Bennett will see that we have not overlooked the valuable suggestion which he makes.

Mr. Danaud.—We do not prescribe.

AMPUTATION OF TOE DURING PRESENCE OF ERYSIPELAS.

To the Editors of THE LANCET.

SIRS,—I venture to think that the following case may be of some interest to practitioners who, like myself, have been doubtful of the propriety of operating during erysipelas, even if the exciting cause of the erysipelas can be removed by the operation.

On Aug. 20th I saw Mr. C.—, who was suffering from erysipelas of the foot. He had disintegration of a joint of one toe, and a sinus leading to the dead bone. The blush extended as far as the ankle, and the lymphatics were inflamed up the leg, the femoral glands being tender. On subsequent days the inflammation extended up the leg, and the constitutional disturbance was very severe. The blush faded in ten or twelve days; but after a few days quiescence reappeared, and as the inflammation seemed to have a tendency to indefinite recurrence, it was determined to remove the source of irritation. On Sept. 12th the toe was amputated. The wound healed by first intention, except at the extreme end of the handle of the ragnot-shaped incision, which healed by granulation. A slight blush occurred on the 16th at the outer ankle, but it was due to a small collection of matter. The patient made a good recovery, except for the presence of persistent oedema—a symptom that had given him much trouble after former attacks of erysipelas.

I am, Sirs, yours faithfully,

Wolverhampton, Oct. 23rd, 1888.

W. H. T. WINTER.

HYMEN IN THE PREGNANT FEMALE.

To the Editors of THE LANCET.

SIRS,—I think the following case should be placed on record, as it seems to me to have an important bearing on certain medico-legal questions—e.g., rape.

I have just attended in confinement a primipara, aged forty-two, at full term, in whom the hymen existed as a circular membrane with an aperture in the centre, which, however, would certainly not have admitted an ordinary cedar pencil. She told me that "her husband was afraid of hurting her, and had not had connexion with her for some months."

I am, Sirs, yours faithfully,

St. Thomas, Exeter, Oct. 20th, 1888. C. J. VIELAND, M.R.C.S.

PROTECTION IN DIPHTHERIA.

MR. GREVILLE E. SEON of Reading sends us a suggestion as to the self-protection of anyone engaged in examining the throat of a diphtheritic patient, or of a surgeon when performing tracheotomy in such cases, or when examining the wound afterwards. This is designed to protect the eyes, nose, mouth, and face from any membrane or blood which would otherwise reach it when the patient coughed. It consists of a pair of plain glass "goggle" spectacles to protect the eyes, attached to which is a wire frame covered with gauze, silk, or some other material to protect the mouth and nostrils. This contrivance is easily made, and would to a great extent answer the purpose for which it is designed, whilst the inexpensiveness of such a mask would allow anyone in charge of a case of diphtheria to employ it. Children would probably in a short time become accustomed to seeing it used.

Dolgameda.—The notion that piercing the ears acts beneficially on weak eyes is not wholly groundless, though the cases in which such benefit is derived from the practice must be very few.

E. L.—The hypodermic injection of strychnia is commonly practised as a remedy for the craving for alcohol, as well as for morphia.

REMOVAL OF FOREIGN BODIES FROM THE NOSE.

To the Editors of THE LANCET.

SIRS,—May I offer the medical profession through your valuable journal an idea both useful and simple—a method (which occurred to me three years ago, but which I have never published) for the removal of foreign bodies from the nose. After inquiry, I believe the idea to be entirely original. All that is needed is a simple, soft rubber tube, say, one or two feet long, with a hard rubber or wooden tip at one end, but large enough to fill the nostril. This olive-shaped tip is applied to the nostril next to that in which the foreign body lies. The other end of the rubber tube is applied to the lips of the surgeon and a sudden hard blow is made; when (the soft palate having been closed either by the child's crying or by a swallow of water in the case of an older person) the foreign body will fly out. If it does not come with one or two ordinary blows, the other nostril can also be held by the hand of the surgeon, and during the blow the hand suddenly withdrawn; this sudden relief of the compressed air will act with greater force, and will be sure to drive out the foreign body. I have used the method several times and have never had it fail; its best endorsement is its ease of performance and freedom from injury to the mucous membrane. If it proves as serviceable in the hands of my professional brothers as it has with me, I shall be very happy to have made it known.

I am, Sirs, respectfully yours,

Wurzburg, October, 1888.

DR. CHAS. W. DODD.

"HEALTH OFFICERS AND THE LOCAL GOVERNMENT ACT."

To the Editors of THE LANCET.

SIRS,—Under the above heading, in THE LANCET of Oct. 20th, you state: "The number of men thus affected [viz. those who will lose their appointments] will not probably be great." I should think that nine out of ten medical officers of health will be in this position (nearly all of them being annually appointed), unless they can spare the time &c necessary for obtaining a qualification in State medicine; and even if they do this, it does not follow they will be re-elected, the Act, as it appears to me, being framed for the purpose of depriving the existing medical officers of health of their appointments.

I am, Sirs, yours truly,

M.R.C.S.

October, 1888.

"We see no reason for altering our opinion. Our correspondent appears to forget that the requirement of a diploma in Public Health only relates to those officers who will be appointed after Jan. 1st, 1892, to a district or combination of districts having at the last census a population of 50,000 or more inhabitants. Is he prepared to say that at the present time "nine out of ten medical officers of health" hold appointments in respect of districts having populations of this size?—KID. L."

Mr. J. P. McClune's letter is too long for insertion, but the subject of it shall have attention next week.

"THE TESTIMONIAL FEVER."

To the Editors of THE LANCET.

SIRS,—I am glad to see the letter of your correspondent, "A. K. C.," on this subject. It is no doubt a pleasure to one of the leaders of the profession to receive a testimonial, portrait, or bust, or to have some scholarship instituted in his honour, and I am far from saying that these marks of respect are not in many cases fully deserved. But I think this pleasure would in some cases be damped if the recipients, men generally themselves enjoying the emoluments of large and lucrative practices, were fully conscious of the tax which such subscriptions impose upon their junior brethren, many of whom can ill spare the guinea which their position obliges them to contribute. I should like to see some of our leaders publicly set themselves against this practice.

I am, Sirs, yours truly,

F.

London, Oct. 26th, 1888.

ABUSE OF HOSPITALS BY THE WELL-TO-DO.

To the Editors of THE LANCET.

SIRS,—Surely the time has arrived when medical practitioners should cease wearying themselves about what capital letters they should place after their signatures, and face the question how they and those who are now preparing for the profession are to live. I commenced practice here a little over two years ago, and since then seven medical men have opened within half a mile of me, some (most) seeing patients and supplying them with medicine for 4d. I hope you will not feel ashamed to send this statement to your compositors.

Again, there is another matter I wish to touch on. To my personal knowledge there are now attending a hospital as out-patients a lady with an income of £700 a year, a man earning £3 weekly who has a house of his own, and a man who has £4 10s. weekly sending his only child to a hospital for advice, and getting it. These facts are interesting to two classes—poor medical men (an increasing class), and also to the working men and women who give their mites and also their time in collecting for the hospitals and dispensaries.

I am, Sirs, yours obediently,

October, 1888.

M.R.C.S. & L.S.A.

* We shall be obliged to our correspondent for full particulars of the cases he mentions.—ED. L.

Juvenis.—1. The Pravaz hypodermic syringe is constructed to hold a cubic centimetre, or twenty drops. — 2. The diuretic influence of calomel can frequently be obtained by the employment of doses of from three to five grains; but it is often advisable to guard against the purgative action by the simultaneous use of opium. The frequency of administration must be determined by the result obtained. In a case of cardiac dropsy, diuresis, when once started, will continue after the drug is no longer used. The action may be increased by the concurrent employment of digitalis and squilla.

MUSSELS.

To the Editors of THE LANCET.

SIRS,—Having had in my boyhood much to do with fisher folk on the coast of New England, I beg leave to mention the advice they were wont to give to lads who came from the cities to pass their holidays by the sea. It was to the effect that we were never to eat mussels whose shells were grey and corrugated at their margin, but might safely partake of such as had smooth and polished shells, which were of a jet black colour. In fact, we ate of the latter quite to repletion, having previously cooked them, with oysters and clams, in extemporised ovens on the sand.

Not having seen that any of your correspondents upon the poisonous effects of the mussel when eaten have drawn this distinction, I am interested to know if it obtains in England and fails to protect here, as it certainly did protect in the United States.

I am, Sirs, yours faithfully,

Westcroft-square, W., Oct. 29th, 1888.

H. W. JONES, M.D.

TREATMENT OF GLOSSITIS.

To the Editors of THE LANCET.

SIRS,—Will any of your numerous readers kindly suggest what treatment it might be well to try in a case of chronic inflammation and irritation of the tongue. The patient, aged thirty, is otherwise in good health; no history of syphilis; has been a moderate smoker, but has had to give it up in consequence of the irritation. The treatment adopted has been the administration of hyd. corros., Plummer's pill, &c., together with local applications, but with no apparent benefit.

I am, Sirs, yours faithfully,

East Cowes, Oct. 29th, 1888.

EDWARD FAWCETT.

HERNIA.

To the Editors of THE LANCET.

SIRS,—The following is a rather remarkable coincidence with regard to hernia. The father of a family is badly ruptured, also three sons and one daughter. One might suppose that hernia is hereditary.

I am, Sirs, yours truly,

Shepton Mallet, Oct., 1888.

BROWNLOW N. HYATT.

Dr. THIN.—We shall be pleased to receive the paper, and to give it consideration.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Barwell, London; Dr. Pavy, London; Dr. S. Spicer, London; Prof. Crookshank, London; Mr. Stack, Gosberton; Dr. Thomas, Bridgend; Dr. Yates, Bolton; Mr. Blackett, London; Mr. M. Gunn, London; Dr. H. W. G. Mackenzie, London; Mr. Clutton, London; Mr. C. Hancock, London; Sir M. Mackenzie, London; Dr. Savage, London; Messrs. Durand and Co., London; Mr. F. W. Cory, Bournemouth; Dr. Fawcett, East Cowes; Mr. Foy, Dublin; Mr. E. Nock, London; Messrs. Wyleys and Co., Coventry; Mr. Ellis, Bath; Mr. L. Archer, London; Dr. Donald Hood, London; Dr. Sutton, Sittingbourne; Messrs. J. Lobbeque and Cie, Paris; Mr. W. H. Saville, Birkdale; Mr. C. Williams, Port Isaac; Dr. H. W. Jones, London; Messrs. Stanford, London; Mr. T. Laffan, Cashel; Mr. H. M. Doyle, Woolwich; Mr. G. H. De'Ath, Buckingham; Dr. Skene, Cardiff; Dr. J. Ross, Cambridge; Dr. Latham Cambridge; Mr. Y. J. Pentland, Edinburgh; Mr. Workman, Melbourne; Mr. A. C. Swinton, London; Dr. J. A. Bennett; Dr. Neale, London; Dr. G. A. Carpenter, London; Dr. G. Buchanan; Dr. G. B. Beale, Tottenham; Surgeon-Major Dobie, Ootacamund; Mr. S. Snell, Sheffield; Mr. Vielland, Exeter; Mr. Twynan, Sydney; Mr. Brooks, Burnley; Mr. H. B. Allen, Melbourne; Mr. Atkinson, Newcastle; Mr. Williams, Farnham; Mr. Fuller, Bath; Mr. B. N. Hyatt, Shepton Mallet; Dr. Hopkirk, London; Mr. J. H. Waters, London; J. D. H.; M.R.C.P.; F.; Dolgamedd; S. W.; Junior; P. 136, Leeds; An Old Subscriber; C. Penarth; M.R.C.S.; Querulous; Erased from the Register; An Enquirer; Forward; Juvenis.

LETTERS, each with enclosure, are also acknowledged from—Mr. Forde, Drogheda; Mr. Bonnell, Sussex; Mr. Madden, Dublin; Messrs. Oliver and Boyd, Edinburgh; Mr. Newsholme, Sheffield; Messrs. Hooper and Co., London; Mr. Bates, Breconshire; Messrs. Schweitzer and Co., London; Mr. Brooker, London; Mr. Lee, Leeds; Messrs. Cornish Bros., Birmingham; Mr. Heywood, Manchester; Messrs. Carnrick and Co., London; Mr. Mitton, Durham; Mr. Hall, London; Mr. Hart, London; Dr. Mackay, Durham; Dr. Callaghan, Devon; Dr. Shelwell, Finsbury-park; Dr. Taylor, Hulme; Mr. Russell, Liverpool; Mr. Buller, Stourport; Mr. Arbenz, Birmingham; Mr. Stephens, St. Austell; Mr. Dobbins, London; A. Leigh, Chigwell; Worcester, London; M.B.; Delta, Aberbeeg; Matron, Plymouth Omega, Matlock; Deaconess Institution, Chester; Surgeon, Liverpool; G. M., London; W., Fence Houses; G. D., London; H., London; C. O.; A., Sudbury; Locum Tenens, Chester; J. M., Rothsay; Filter, London; M.D., Hampton Wick; Matron, Barrow-in-Furness; Matron, Cardiff; Matron, Southampton; Medicus, Lanes; B. W. R., London; M.D., Crewe; Patella, London; W. F., Leeds; Clair, Leeds; Spes, London; Remo; H. R., London; Matron, Kidderminster; Arcturus, London; Cornubiensis; Surgeon, Leeds.

Northern Weekly Leader, Reading Mercury, Surrey Advertiser, Herald and Weekly Free Press, Leeds Daily News, Hertfordshire Mercury, The Writer, The Queenslander, &c., have been received.

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Post-graduate Lecture

ON
GOUT.

Delivered at Charing-cross Hospital School of Medicine,

By JULIUS POLLOCK, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—I am sure you will all realise the difficulty of which I am placed to-day of having to deal with so large and important a subject as gout in the short time (of necessity) allotted to this afternoon's lecture. In making such a brief epitome of the disease as I am going to lay before you, I have had no choice but to pass over very lightly many interesting details, and to leave out of consideration altogether much that is connected with the disorder it is proposed to discuss.

In dealing with the subject of gout, it is convenient to divide the disease into certain forms or varieties—such as acute, chronic, irregular, retrocedent, and suppressed; but it must be borne in mind that they are all mere modifications of the same morbid condition, the features of which are different in accordance with the stage of the disease, the condition of the patient, and the parts that are involved.

The causes of gout are various, and for purposes of description it is desirable to separate them into predisposing and exciting. One of the most marked of the former is hereditary taint, for it appears that in more than half the cases of the disease the patients have derived their undesirable proclivity from their ancestors. It must be a fine thing to inherit a noble name and vast possessions; but when along with these is entailed a liability to disease, the lot of such persons is scarcely to be envied. It has been thought a grand thing to have the gout—"a notion which evidently originated in the fact of its being peculiarly incidental to the wealthy and the great, to men of cultivated minds and intellectual distinction. Nothing can show more strongly the power of fashion than this desire to be thought to possess not only the tone and manners of the higher orders of society, not their follies merely and pleasant vices, but their very pains and aches, their bodily imperfections and infirmities..... Even the philosophic Sydenham consoles himself, under his sufferings from gout, with the reflection that it destroys more rich men than poor, more wise men than fools."

Age is a predisposing cause of gout. It is more common about or after middle life than in youth; but where the hereditary liability is strongly marked, and the habits of life are careless, the disease may be developed comparatively early. Men are more liable to gout than women, partly, no doubt, from the difference in their mode of living. The earlier attacks of the disease frequently occur in the winter, and the colder time of the year seems to be a predisposing cause. The tendency to gout may be acquired as well as inherited. A diet largely composed of animal food and rich dishes, and washed down with plenty of beer or the stronger wines, especially if the habits are sedentary, will often produce the disease: whilst it may be warded off, even by those who are very prone to it constitutionally, by spare and careful diet and plenty of exercise.

Much has been said and written about the effect of various alcoholic beverages in producing gout, but they do not all appear to be equally injurious in this respect. All kinds of malt liquors and the stronger wines, especially port, have been considered very deleterious; whilst the lighter wines—hock, moselle, and particularly claret—have taken a lower place; and pure spirits, such as brandy, whisky, and gin, have been supposed to be almost harmless. I think with some modification we may admit the general correctness of this view. It is doubtful, however, whether port wine, taken in moderation, has any special injurious effect; and burgundy or champagne, though what are called "light" wines, are in many cases very gouty. Then, again, it is by no means so clear, as was once supposed, that mere alcohol, or the form

that it takes in brandy, whisky, &c., is quite free from mischief; and it is notorious that rum has often been the means of inducing gout. I believe the explanation of the difference of opinion as to the relative injurious effect of various alcoholic liquors will be found very largely in personal idiosyncrasies, and that what has been said about "one man's meat being another man's poison" may be applied to his drink also. While I freely admit that some beverages—beer, for example—are very gouty, I have reason to believe that much of the effect produced depends upon whether the liquor agrees or disagrees in a general way with the individual, and that whatever produces indigestion, malassimilation, or imperfect metabolism will produce gout in the predisposed.

There are other conditions that tend towards gout, such as impaired health, excesses of any kind, the impregnation of the system with lead, and, lastly, a "personal equation" about which we know little or nothing. Of two men, neither of whom is specially liable to gout, and both living an equally careless life, one will have gout and the other not. Why?

The exciting causes of gout are many. A chill, strong mental emotion, over-fatigue, various excesses, mechanical injury—any of these alone, or more surely if in combination, may produce an attack of the disease in a predisposed person. Now look at these causes of gout all round, and you will see that nearly every one of them has a tendency either to increase the formation or retard the elimination of the *materies morbi* of the disease, the accumulation of which in the blood is the *fons et origo mali*.

The course and symptoms of gout.—The earlier manifestations of gout are usually more or less acute in character, and generally come on in the night, or rather in the small hours of the morning. The attack may occur without any warning at all, but more commonly for some time past there have been symptoms of indigestion, heartburn, acidity, and discomfort. After the patient has been in bed and asleep for a few hours, he is awakened by a severe pain in one or other of the great toes, the right more commonly, the affected joint being the metatarsophalangeal. Other parts of the foot, however, may be attacked. The pain is very acute, and gradually gets worse until it is all but unbearable. It is accompanied by symptoms of fever and general disturbance of the whole system, and the suffering continues for some hours, producing great restlessness and misery, until at length it remits and the patient falls asleep. In the morning he finds the affected joint swollen, red, and very tender, and the veins of the foot and leg enlarged and prominent. The attack is generally repeated about the same time for the next few nights, but with diminished severity, until it gradually passes off, leaving the affected joint more or less weak and painful for some time. During the attack of the disease there are usually marked symptoms of dyspepsia and constipation, and the urine is high-coloured and scanty. Though the first paroxysm of gout mostly affects one or other great toe, it may occur in some other joint—the ankle or knee, for instance. Such an attack as I have just described, though it may be, and often is, the first reliable evidence that an individual is gouty, is not the beginning of the disease. For some time previously the morbid material has been quietly collecting in and about the great toe or some other joint, and the paroxysm is only a sort of effort on the part of the system to rid itself of the disease; and no doubt the system often is much relieved by an attack of gout. The patient feels better in health, lighter in spirits, easier in mind and body, than he has been for some time past; and this has led to the mischievous idea that there is something salutary about the disease, and that it is rather to be courted than avoided. It has even been supposed that gout has the power to free the system of other disorders. No doubt for a time the patient is benefited by the clearing away to a certain extent of the poison that has been lurking in his body; but it is liable to collect again, further attacks of gout ensue, and each time the relief experienced is less, and the mischievous effect upon the constitution becomes more and more marked. No; there is no greater mistake than to suppose that gout is a desirable disease, and when it has once thoroughly laid hold of the system there is scarcely any other disorder more capable of doing harm. The first attack of gout may be the last, but that is not usual. Far more commonly, after the lapse of a certain time—it may be some years—another paroxysm occurs, possibly not so severe

¹ Sir T. Watson's Lectures on the Principles and Practice of Medicine. No. 3402.

as the first, and this is generally followed by others, the intervals becoming gradually shorter, until at last the disease passes into a chronic state. In this condition the patient is more or less subject to pain in the joints, many of which will have become affected, and, though liable to exacerbations, will hardly ever be free from his complaint. The effect of these repeated attacks of gout upon the joints is to produce a considerable amount of deformity. They become swollen, distorted, the articulations more or less fixed, and what are termed chalk stones are deposited in and around them. Sometimes these chalk stones ulcerate, and the chalky material is discharged. Apart from the effect produced upon the joints, gout has an injurious action upon the whole system, and we find associated with the disease various morbid conditions, such as dyspepsia, gravel, headache, constipation, palpitation of the heart, dyspnoea, queer aches and pains in different parts, asthma, bronchitis, cirrhosis of the liver, degeneration of the arteries, various skin diseases (such as eczema and psoriasis), inflammation of the eyes, the throat, the testis, the urethra, and the bladder, and albuminuria. This last symptom, which is a very important one, is due to the gradual deposit of the gouty material in the kidney, producing a form of interstitial nephritis, associated with contraction of the organ, and constituting that form of Bright's disease which is often spoken of as the gouty or contracted kidney. Many of the symptoms I have referred to above constitute what is known as irregular gout. Retrocedent gout is that form in which the disease suddenly disappears from the part originally affected, and attacks some internal organ—the head, the heart, or the stomach. Suppressed gout is a term usually applied to those cases of ill-defined ailment, which are relieved by an outbreak of the regular disorder.

The pathology of gout has become much more defined since Sir Alfred Garrod clearly demonstrated the presence of an undue amount of urate of soda in the blood of patients during an attack of the disease. The mode adopted by Sir Alfred for showing this excess of urates is by treating the serum of the blood, or that produced by a blister, with acetic acid. The fluid is then reduced by evaporation, and threads of cotton or linen are placed in it, upon which crystals of uric acid form. There are two theories with reference to this excess of urate of soda in the blood. Dr. Murchison regarded the condition as the result of some functional disease of the liver, resulting in over-production. Sir Alfred Garrod, I believe, considers that it is due to a defective performance of the functions of the kidneys, resulting in retention. There is yet another hypothesis—that of Dr. Ord,—which suggests that from some weak state of the joints urate of soda collects in them, and is then discharged into the blood. Take whichever view we may, there is still some unknown quantity, some personal equation, which is required in addition to the undue amount of urates to produce an attack of gout; for it is admitted that urate of soda may be present in abnormal quantities in the blood, and yet no gout result. With regard to these different views I have no decided opinion to offer you, but I confess that the defective elimination theory of Sir Alfred Garrod is the one that best explains, to my mind, the phenomena of the disease; at the same time the defective elimination may, in some cases at any rate, be associated with over-production. The impregnation of the system with lead, which certainly seems to increase the liability to gout, is supposed to act by interfering with the excretion of urate of soda. The consequence of an excess of urate of soda in the blood appears to be that the salt crystallises in the joints, having a marked preference for that of the great toe, and may lie there dormant for a certain time: until, in fact, some special exciting cause, such as a blow or strain on the joint, an attack of indigestion, a chill, or some other trouble, determines an outbreak of inflammation in the affected joint or joints, and then all the symptoms of an ordinary attack of acute gout are produced. During this inflammatory action the urate of soda is burnt up, as it were, and to a certain extent got rid of. According to Sir Alfred Garrod, the presence of an undue amount of urates in the blood can only be demonstrated during an attack of acute gout, and in the intervals of the disease no excess appears to exist. This rather favours the view of Dr. Ord—viz., that during an attack of the disease the affected joints pour out their urate of soda into the blood. Be this as it may, it would seem that, by and by, when the gouty con-

dition has become chronic, there is always more or less an excess of urate of soda in the blood. Perhaps this may be accounted for by the fact that in course of time urates are deposited in the structure of the kidney and interfere with its secreting functions. Take what view we may as to the exact pathology of gout, there can be little doubt that the essential characteristic of the disease is the deposit of urate of soda in the joints and in other tissues; and we look carefully for the existence of this chalky material in various parts—the helix of the ear for instance—to confirm the diagnosis of the disease. It appears to me that gout may be regarded as a morbid condition of the system, in which we get paroxysms and intervals—periods of activity and periods of repose. In this respect it resembles to some extent ague and epilepsy. At first the paroxysms are strongly marked, with long intervals between them. Gradually the intervals become shorter and the paroxysms less severe, until at length the patient drifts into a more or less dead level of chronic gout, in which he is scarcely ever free from the disease. It is in this stage, a stage in which there is always a certain excess of urate of soda in the blood, that we get the more marked constitutional effects of the complaint.

A few words on the morbid anatomy of gout. It is in and around the joints that we find the principal evidence of the existence of this disease, which consists in the gradual infiltration of the cartilages, the synovial membranes, the bursae, and the surrounding tissues with urate of soda in a soft condition. This generally dries up and becomes hard, constituting the chalk stones or tophi with which we are familiar in and about the joints and other parts. This deposit in course of time proves very injurious to the articulations. The cartilages become destroyed, the ends of the bones are exposed, great deformity and irregularity result, and ankylosis not unfrequently takes place. But it is not only in the joints and their neighbourhood that we find evidence of the existence of gout. Various degenerative changes occur in different parts: such as the lining membrane of the heart and arteries; in the lungs, producing emphysema; in the liver, producing cirrhosis; and in the kidneys, in which may often be detected a deposit of urate of soda after death.

The diagnosis of gout is generally not very difficult. It rests upon a careful consideration of the history of the complaint, the taking into account the heredity and habits of life of the patient, a knowledge of the known symptoms of the disease, and especially upon the detection of some evidence of the deposit of urate of soda in certain parts. We look for this more particularly about the joints, various bursae, especially that of the elbow, and in the helix of the ear. Small deposits of chalky material may often be found in the latter situation very early in the disease, and are most useful in the diagnosis. Acute gout is most liable to be mistaken for acute rheumatism, and chronic gout for rheumatoid arthritis.

In dealing with the prognosis of gout, we may take into consideration, first, an attack of the disease; and, secondly, the general morbid condition. An ordinary outbreak of gout is tolerably free from danger, and the prognosis is very favourable. Most patients get through it. But there are dangers even here. The disorder may attack some internal organ, and prove rapidly fatal, as sometimes happens in retrocedent gout. As regards the general morbid condition, the prognosis is unfavourable. The tendency of the disease is to involve and seriously impair the condition of various important organs and tissues, and ultimately to destroy life. It has been argued that gout does not tend to shorten existence, and instances of great longevity in gouty persons (which undoubtedly there are) are referred to in proof of this view. Of course, if the liability to gout should happily act as a warning to the individual, and lead to great care in habits and mode of life, it may be associated with more than the average amount of health and length of days; but it is not the gout that does this, it is the careful living. Any evidence of kidney mischief makes the prognosis, *ceteris paribus*, so much the worse.

The treatment of gout is conveniently divided into that which is appropriate (1) during a paroxysm of the disease, and (2) during the intervals. In approaching the treatment of an ordinary attack of gout, we must not lose sight of the fact that it tends to get well under any circumstances. Are we, then, to stand by and do nothing? Is the old idea of "patience and water gruel" the best course to pursue? By no means. Much may be done to assist

ture in her efforts to throw off the disease by judicious treatment—general, dietetic, and medicinal.

In an attack of acute gout it is very important to keep the affected part, as far as may be, absolutely at rest, and in such a position as to favour the return of blood from it. It will be well also to keep it warm, and wrapping it in cotton-wool is often of service, since it is most desirable to slow the inflammation to expend itself upon the joint, and not to drive it in to affect, perhaps fatally, some internal part. According to a French author, "*La goutte articulaire est celle dont on est malade; et la goutte interne est celle qui meurt.*" The sudden disappearance of the disease from a joint, in consequence of the application of cold, has several instances been followed by the most alarming symptoms. If the pain is very severe, it may sometimes be relieved by the use of hot alkaline lotions, or by the application of belladonna and glycerine.

The diet of one who is suffering from an attack of acute gout should be restricted, not necessarily to "water and meat," but to slops and a milky diet. All highly nitrogenised food is best avoided, as tending to "feed" the disorder. Stimulants should be either forbidden altogether, or, if that be too severe a measure, nothing more than a little weak whisky, or brandy, or hollandaise, and water allowed. Plenty of diluents are desirable, and usually very agreeable. Various alkaline mineral waters may be used with advantage, such as seltzer, apollinaris, and others; and especially beneficial would appear to be the lithia water, as lithia salts have been found by Sir Alfred Garrod to have a special solvent power on urate of soda. And further, by the use of alkaline diuretics, especially the salts of potash, the kidneys may be encouraged to act, and the urine increased in amount. The skin should be kept warm and in action. Besides these measures, which are intended to assist nature in the solution and elimination of the deposited urate of soda, we should take care to keep the bowels open, and the patient as far as may be in a calm, equable, contented frame of mind—not always very easy of accomplishment. I should have said that some fruit (grapes, for instance) may be allowed, as well as all kinds of wholesome vegetables, well cooked. By and by, as the attack passes off, we get to fish and fowl, or game if it is in season, and a gradual return through convalescence to the ordinary diet.

Although it is better, perhaps, not to be too active in the use of drugs during a paroxysm of gout, it would be foolish altogether to ignore the value of medicine. Some remedies have acquired a special reputation in the treatment of the disease, and foremost amongst them is colchicum. A few large doses may be given at the commencement of the attack, say thirty or forty minims of the wine or tincture, in an alkaline draught, and followed up by the regular administration of smaller doses. In some cases this acts like a charm, relieving all the acute symptoms as if by magic, and in a very short time. How the drug operates is not very well understood. It has been supposed by some to owe its efficiency merely to its aperient qualities, but there must be something more in it than this. Others have objected to the use of colchicum altogether, alleging that, even if it appear to cure the disease, it injures the patient, and that a return of the gout is more certain and more rapid where it is used. About this view there is, I think, considerable doubt. It is more likely that patients, believing that there is an antidote to their complaint, are less careful than they should be between the attacks, and so shorten the intervals. That colchicum acts as an aperient is pretty clear, and in rather a curious way. At first, in many cases, the drug hardly affects the bowels at all, but after it has been taken for a little while a sudden catharsis is produced, resulting in several liquid greenish-coloured stools, attended sometimes with pain and griping, but generally associated with a marked improvement in the gouty symptoms. Under these circumstances the colchicum should be discontinued, to be resumed or not later on, as may seem desirable. With regard to the efficacy of colchicum in the treatment of gout, I may refer to an opportunity I once had of testing its value in rather a satisfactory way. An old friend and patient of mine was liable to attacks of gout, somewhat subacute in character, and for some year or two I treated him *secundum artem*. But on one occasion, at the commencement of a fit, I suggested that we should try the effect of doing without any colchicum at all. To this he readily assented, and I ordered a simple potash mixture. The result was not satisfactory; the attack lingered on for double the usual

time, and at length he begged for colchicum, and under its use the gouty symptoms cleared up in a few days. I know the difficulty that attends a case of this sort. He may have just been going to get better when the drug was given. It is the old question, was it *post* or *propter hoc*? But in my own mind I have no doubt whatever that the improvement was due to the colchicum. When the disease becomes more chronic, and especially when the general health is much affected, colchicum requires to be used with great care and judgment, and in many cases is better dispensed with altogether. Veratria is another drug which is supposed to have a special influence over gout, but I have had no experience of it whatever. Quinine in rather larger doses, colocynth, gualacum, iodide of potassium, and salicylate of soda have all been used in the treatment of gout with more or less success. It is quite possible that the last new fashionable drug, antipyrin, that is supposed to cure almost anything, might be useful in the acute stages of the disease. I must not omit to mention mercury in connexion with this part of my subject. It is sometimes used as a purgative in the form of calomel early in an attack, and in some cases may not be undesirable. Moderate or small doses of blue pill, either alone or in combination with colocynth, are useful from their action on the liver by assisting in the elimination of the morbid material from the body. *Appropos* to this, let me say that I never give any form of mercury to a patient without his knowledge. For some persons have a horror of the drug, and upon a few it exerts a very powerful and mischievous effect. Where the kidneys are affected mercury should not be used. It is better, as far as may be, to avoid sedatives in the treatment of gout. They are apt, especially any form of opium, to diminish the secretions and to lessen the elimination of the poison. Hyosciamus is, perhaps, the least objectionable, but if there is very great pain and restlessness, urgently demanding the use of opium, it is best administered in combination with belladonna or ipecacuanha, and reserved for the night. When the gout becomes chronic, although we may treat it upon much the same lines, it is desirable to be less active and energetic in the application of our medicaments. By this time the health and strength of the patient have often broken down, and he does not require, nor will he bear, the vigorous measures suitable to an earlier stage.

Irregular gout will require special treatment in accordance with the part affected, but the general principles by which we are guided must be leavened by the knowledge that gout is at the bottom of the mischief. In cases of retrocedent gout, the disease usually attacks, as I have said, some internal organ—the heart, the brain, or the stomach. Under these circumstances, we must endeavour to relieve the part affected and to bring back the gout to the joint or joints from which it has fled, where it may revel without danger to life. When the disorder attacks the stomach, there is violent pain at the epigastrium, accompanied by nausea, vomiting, and faintness, which may be generally relieved by some warm stomachic mixture, containing ammonia, rhubarb, and some alkali, with ginger or peppermint; and often stimulants will be found useful. It has been suggested by the profane that when a physician is doubtful as to what is the matter with a patient he attributes his troubles to "suppressed gout." Perhaps there may be some truth in this; but gouty persons are liable to a number of queer ailments, headache, asthma, palpitation of the heart, dyspepsia, acidity, flatulence, and ill temper, which are frequently relieved by a regular attack of the disease or by remedies of an anti-gouty nature.

By far the most important part of the treatment of gout is that which is concerned with the intervals of the disease, and to which I now wish to direct your attention. It is in this stage that so much can be done for the comfort and guidance of the gouty patient. But be careful not to overlook the individual in your efforts to combat his disease. In young and robust sufferers our advice may be plain and simple: Give up rich and luxurious living, renounce all stimulants, take plenty of exercise, avoid all kinds of excess; in fact, attend carefully to the general health, and you will keep the enemy at bay. The recommendation to "live upon sixpence a day and earn it" is not a bad one. But in dealing with the old and infirm, and with those whose health has been broken down by the disease, the case is very different. Here we must make great allowances, and carefully study the particular circumstances of each individual case. Attention to the general health is even more important, if possible, in

such patients than it is in the young and comparatively healthy. We should insist upon the avoidance of all habits and surroundings that tend to impair the digestion, to weaken the body, to worry the mind, and so to promote the accumulation within the system of the gouty material. Over-work, severe mental strain, fatigue, anxiety, and all depressing influences are to be shunned. No doubt it is seldom easy to command the pleasant surroundings, the calm and peaceful life, the freedom from trouble and care, which are so desirable in the maintenance of health; but we must do the best we can, and get our patients to minimise, as far as possible, the evils that cannot wholly be dismissed. A moderate and regular amount of exercise should be taken, avoiding indolence on the one hand and over-fatigue on the other. Where necessary, the bowels should be kept comfortably open by the use of mild, gentle aperients, and all the secretions maintained in good order. A light nourishing mixed diet is the best, not devoid of animal food; the meals should be regular, and the food well chewed. What about wines or spirits?—for beer is generally quite out of the question. I have pointed out in a former post-graduate lecture on Dyspepsia that a moderate amount of alcohol is useful in some persons to assist the digestion, and even in gout it may be required. Probably some spirit-and-water in small quantities is the safest kind of stimulant, but claret agrees well with many individuals, and even a light dry sherry may not prove injurious. We all know the story of the noble earl who was recommended by the vendor to try a well-advertised wine as being free from gouty properties, but who replied that he had tasted the sherry and preferred the gout. With regard to medicines, where any are required, light vegetable tonics will be found very useful, especially in combination with alkalies. Our alkaline gentian mixture, substituting potash for the soda it contains, with or without the addition of a little nuxvomica, is an excellent prescription of the kind. If the patient is liable to indigestion, as is often the case, some ammonia, rhubarb, and potash, with gentian and peppermint, may be given now and then with advantage. Quinine is of no special value as a mere tonic, and iron is undesirable except where there is marked anæmia or albuminuria, and then only the milder preparations should be used, and cautiously.

After an attack of gout it is most desirable that the patient should take a holiday and get some change of air. If this can be combined with a visit to one or other of the well-known watering places, where gouty persons mostly congregate, so much the better. In our own country there are many favourite resorts—such as Buxton, Bath, Cheltenham, Leamington, and others—where a few weeks may be spent with much benefit. It is better still, perhaps, because the change is more complete, to go to one of the foreign spas, such as Vichy, Aix-les-Bains, Homburg, Carlsbad, Wiesbaden, and others. The object of going to such places is usually to take the baths and drink the waters, but some care is required in this respect, as more harm than good may be readily effected. Such treatment is desirable only during the intervals of gout, and is not available by those who have any affection of the heart or kidneys. It should only be adopted under skilled medical advice, either at home or abroad. There are generally physicians attached to these establishments, some of whom may be trusted. The late summer or autumn is, as a rule, the season for these watering places. Some patients visit them annually—which is perhaps the best plan—for a few years. But, valuable as the baths and waters may be, there is little doubt that much of the improvement in health that follows a visit is due very largely to the change of air and scene, the careful diet, and the relaxation from ordinary pursuits that accompany it.

THE QUEEN'S JUBILEE MEMORIAL, WEYMOUTH.

The inaugural ceremony of the Jubilee Memorial, at Weymouth, took place on the 31st ult., in the presence of the Lord-Lieutenant, the High Sheriff, the Mayor and members of the corporation, and a large and distinguished assembly. The idea of a tower with an illuminated clock, as the form of the memorial, was first suggested by Dr. Moorhead, and ultimately adopted. Such a clock is recognised as supplying a long felt want, and a public boon. Sir Henry Edwards, with his usual liberality, presented the clock. Dr. Moorhead gave the inaugural address, and on unveiling the memorial Her Majesty declared the clock to be open for the use and benefit of the public.

Address

MENTAL HYPERMETROPIA.

Delivered at the opening of the Session of the Leeds and West Riding Medico-Chirurgical Society, on Oct. 12th, 1888.

By J. S. CAMERON, M.D., B.Sc. EDIN.,

PRESIDENT OF THE SOCIETY, HON. PHYSICIAN TO THE HUDDERSFIELD INFIRMARY, MEDICAL OFFICER OF HEALTH TO THE BOROUGH OF HUDDERSFIELD, ETC.

GENTLEMEN,—In thanking you to-night for the honour you have done me in selecting me as your president for the year, I cannot but feel that your choice in this matter has been to no small extent guided by the desire of your committee not to restrict the honours of the Leeds and West Riding Medico-Chirurgical Society to the men resident in the town where we meet. I feel that in thanking you for this honour I am at the same time thanking you for an honour done to the town of Huddersfield, of which you have more or less looked upon me as in this matter the representative. The advantages of a Society which, like ours, lays under contribution a large and populous district such as is the West Riding of York are obviously of a twofold nature, enabling, on the one hand, those of us who dwell in the smaller and remoter towns and villages to share from time to time in the benefits derived from intellectual intercourse with those who live in the stronger atmosphere of a medical school; and that we are not indifferent to these benefits is shown, I think, by the not inconsiderable numbers in which we attend the meetings of the Society. On the other hand, we are not without a hope that the reciprocity may not be, as the Irishman said, "all on one side." If we are less conversant with the latest methods or the newest views, we are also working face to face, and I hope not altogether unintelligently, at the great problems of life and health, of disease and death; and it is no little encouragement to remember that the greatest of all modern medical discoveries was worked out by Edward Jenner in a Gloucestershire village.

It has struck me sometimes that one of the few compensating advantages that accrue from the thick November mists which sometimes for days together in these northern valleys shut out from view the horizon, may be that the hazy atmosphere compels those of us who are not already myopic—not, perhaps, without pain, if we chance indeed to be hypermetropic—to examine anew the things nearest us, to withdraw our vision from the distant hills or the lightning conductors on our tall chimneys, and regard the water-marks on the paving-stones, the pimples in the stubble.

Is there not also, gentlemen, a mental hypermetropia which makes it difficult for us to see the common facts around us in our desire to scan with telescopic eye the greater and more glorious general laws which over-ride them? Are we not sometimes, for instance, so impressed with the great general law that "use gives growth," that the blacksmith's arm is strong because his hammer is heavy; that we forget the limitations set by nature to the law, forget that there are bounds to the development of the fibres, and that it is often the duty of the physician, especially in brain work, to pronounce the "thus far," and check rather than encourage that energy of youth which, unadvised, would draw upon its reserves, to be followed too often by the blight of migrainous and neurotic middle life or a hypochondriacal old age? We throw in iron and exhibit arsenic, give quinine and strychnine and phosphorus, lactophosphates, hypophosphites, and perhaps some of the half-explored coal-tar derivatives, to cure the nervous debility which fresh air, sunlight, oatmeal porridge, and a mid-day snooze, in childhood, with a proper adjustment of work to working power, might have altogether prevented. The Procrustes bed of modern school and college work on which everyone must lie, be he big or be he small, and the absurd fallacy commonly read into the old saw, "What man has done man can do," are daily turning into our midst the halt and the maimed, the victims of the hatchet and the rack. *Non omnes omnia possunt.*

though university coaches and modern examiners seem to think we could if we would. We have no right to expect to get twenty-horse power of work out of a ten-horse engine; or, to borrow an analogy from the kindred subject of electricity, we may overcome for a short time even a considerable electrical resistance by a given number of Leclanché cells, but if the work to be done be too near the limits of the potential of the battery—and, above all, if the work be too continuously exacted—the cells will strike, and polarisation reduce the potential to nil. Can we expect any less of the batteries of nerve force? Will they not also polarise if too continuously exercised—if the same group of cells be too persistently called upon—if they have not, like the Leclanché elements, their recreative intervals of rest? Nay, may we not with safety press the analogy even a little further? The electromotive force of a battery of twenty similar pairs is the same whether the cells be twenty test tubes with twenty fine zinc wires for the positive elements or twenty quart jars with twenty zinc rods an inch in diameter; but how much sooner polarisation will put a period to the activity of the former you well know. And is it not so with intellectual work? Do we not often get some of the finest work from men whose brain cells, so to speak, polarise quickly? And ought we to sacrifice that possible good and useful work which can in time be got out of such men for the sake of getting a large quantity of what must necessarily be inferior work in a shorter interval of time? And yet, as it seems to me, unless he is mentally hypermetropic, it is the medical man, and above all the family doctor, who ought to interfere to prevent this waste of health, whether from overwork at school or college, over worry in business, or harassing domestic cares. It is the family doctor who sees the beginnings of the evil. He has perhaps dandled on his knee the precocious boy who should be turned out to grass in some upland farm, instead of being sent in for the "Cambridge local." He has signed, perhaps, the health certificate of the pupil teacher, and condemned her to the intellectual treadmill of the training school.

Again, are we not mentally hypermetropic when, in searching for the germs of disease in milk or water, those too frequent carriers of death, we neglect the badly fitted sink pipe, which though disconnected *secundum artem* from the trapped drain outside the house, has been for years pouring its filth outside the trap into the porous basement walls of the building? Are we not in such cases overlooking the "next-to-nothing" close at hand?

Or, again, with all our boasted advances in pathology, what do we yet know about the causes of a "common cold"? Do we not too often accept the old wife's fable that our patient with croupous pneumonia "caught cold" on such a day, forgetting that the same etiological explanation suffices with the same elderly lady to account for the onset of measles, or of scarlet fever, or even of small-pox? We do not accept it as the chief factor in the causation of these exanthemata; do we well to content ourselves with it in the other? But are ordinary catarrhs sufficiently explained on the hypothesis of a chill? We see a *coriza* run through a whole family, with short intervals between the successive attacks. Are we to conclude that each "cold" was due to a separate chill, or is there a *materies morbi* in the case? Some persons and some families are specially prone to what we call in Yorkshire "influenza colds." Does our mental hypermetropia compel us to overlook, because too near us, the insanitary surroundings of such families?

The progress which followed the study of morbid anatomy was so tremendous that many of us have found difficulty in ridding ourselves of the idea—never actually taught us, however, but almost implied by the mode in which we were taught—that the anatomical appearances were the disease, not, as everyone will now admit, the consequences of the disease. We have been for years studying the causes of death; and not a few of us, knowing the impossibility of remedying the mechanical lesions found in the post-mortem room, were in danger of being landed in a pessimistic fatalism as to our art. When, however, we bring our mental vision to things nearer us, we find in the study, not of the causes of death, but of the causes of disease, an indefinite possibility of usefulness. How many of the acute attacks which appear in the bills of mortality are but acute exacerbations of chronic disease neglected, perhaps unnoticed, till incurable? How many men are at this day going about unconsciously suffering from albuminuria whose only complaint is that they feel rather less energy than of old, and who for this weakness prescribe for

themselves a more nourishing diet, an extra allowance of meat, and an extra glass of grog, and thus at the critical epoch put extra work upon the struggling tissues of the kidney. When such patients have piled on the last straw and "begin to be ill," are we not apt to look upon them as subjects of acute Bright's disease? But is it not in the earlier stages that the hope of medicine lies? It is the causes of disease, and not the causes of death, we can best combat.

Therefore, gentlemen, there is much for all—even those of us who do not dwell in Corinth—to do; and if in the conflict of theories two intersecting lights shall produce a darkness, still, even though the mental haze born of conflicting theories and apparently contradictory observations shall for a time obscure the intellectual horizon of medicine, the mist itself may have its compensating advantages if it compel us to turn our gaze on facts still nearer us and make us examine anew those beginnings of evil, those "next-to-nothings" all around us, which amongst them contain the "promise and potency" of almost every disease that human nature is prone to.

OBSERVATIONS ON THE USE OF GLYCERINE ENEMATA IN CHILDREN.

By GEORGE ALFRED CARPENTER, M.B. LOND.,
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DURING the past four months glycerine enemata have been used at the Evelina Hospital, to the exclusion of purgatives, for the treatment of constipation arising amongst the patients. A large number of children treated in hospital require a laxative, constipation being more or less marked—in some due, perhaps, to defective maternal training in that respect, in others to the sedentary existence consequent on hospital régime, or to a combination of both causes. At the Evelina Hospital children are not allowed to pass more than two days without an action of the bowels, and it may be understood, on perusing the ensuing table, that this custom was followed in every case. It is my intention to tabulate the results of 214 injections occurring in 63 children within the months of April to August of this year; and, in conclusion, to briefly analyse the table.

Results of 214 injections of Glycerine as observed in the Evelina Hospital.

Sex.	Age (in years).	Disease.	Quantity of glycerine used (in drachms).	Time taken to act (in minutes).	Motions.
M.	6	Osteotomy	1	45	1 natural
"	"	"	1½	10	1 solid
"	"	"	"	15	1 natural
F.	"	Pneumonia	1	30	"
M.	3	Knee excision	"	15	"
"	"	"	"	5	"
"	"	"	"	20	"
"	"	"	"	10	"
"	"	"	"	5	"
"	9	"	"	10	"
F.	6	Lymphangitis	"	10	"
"	"	Knee excision	"	20	1 solid
"	"	"	1½	5	1 natural
"	"	"	1	0	0
"	7	Abscess of antrum	1½	5	1 natural
"	11	Spinal	1	230	"
"	"	"	1½	5	1 slight (loose)
"	"	"	"	5	1 natural
"	"	"	2	105	1 solid
"	"	"	1½	125	"
"	"	"	1½	15	"
M.	2½	Elbow excision	1	5	1 natural
"	"	"	"	0	"
"	"	"	"	5	"
F.	7	Pleurisy	1½	5	"
"	"	"	1	2	"
"	"	"	"	5	"
"	"	"	"	2	"
"	"	"	"	5	"
"	"	"	"	2	1 loose

Sex.	Age (in years).	Disease.	Quantity of glycerine used (in drachms).	Time taken to act (in minutes).	Motions.	Sex.	Age (in years).	Disease.	Quantity of glycerine used (in drachms).	Time taken to act (in minutes).	Motions.
F.	7	Pleurisy	1	2	1 natural	F.	11	Osteotomy	1	25	1 natural (slight)
M.	10	Hip excision	1½	5	"	"	"	"	"	0	0
F.	"	Spinal	"	5	"	"	"	"	"	30	1 natural
F.	2	Meningitis	1	0	0	"	"	"	"	10	"
M.	7	Pneumonia	"	10	1 natural	"	"	"	"	6	1 loose
"	"	"	"	2	1 loose	"	"	"	"	3	1 natural
F.	9	Empyema	"	1	1 natural	"	"	"	"	10	"
"	"	"	"	5	"	"	"	"	"	660	"
M.	4	Cleft palate	1½	15	1 solid	"	"	"	"	15	"
"	"	Empyema	1	10	"	"	"	"	"	15	"
"	"	"	"	5	"	"	"	"	"	20	1 loose
"	"	"	"	5	1 natural	"	"	"	"	10	1 natural
"	"	"	"	5	"	"	"	"	"	0	"
"	"	"	"	5	"	"	"	"	"	0	"
"	"	"	"	5	"	"	"	"	"	0	Returned
F.	6	Osteotomy	"	2	1 loose	"	"	"	"	15	1 natural
"	1½	Caseous ostitis of toe	"	5	1 natural	"	"	"	"	0	0
"	8	Facial erysipelas	"	2	"	"	"	"	"	0	1 natural
"	9	Chorea	"	15	1 loose	"	"	"	1½	18	1 solid
"	"	"	"	8	1 natural	"	"	H. C. bronch.-pneum.	1	5	1 natural
"	"	"	1½	75	1 loose	"	"	"	"	5	"
M.	6	Knee excision	"	5	1 solid	"	"	"	"	5	"
"	"	"	"	10	1 natural	"	"	"	"	5	"
"	"	"	"	5	"	M.	"	Struma	"	10	"
"	"	"	"	5	"	"	"	"	"	15	"
"	"	"	"	5	"	"	"	"	"	45	"
"	1	Bowed tibia (rickets)	"	5	1 loose	"	"	"	"	15	"
"	"	"	"	2	1 natural	"	"	"	"	5	"
"	"	"	"	5	"	"	"	"	"	20	"
"	8	Phthisis	"	5	1 loose	"	"	"	"	5	"
"	"	"	"	5	"	"	"	"	"	5	"
"	"	"	"	5	"	"	"	"	"	14	"
"	10	Abscesses of hip	1½	10	1 natural	"	"	"	"	75	"
"	"	"	"	15	1 solid	F.	8	Spinal caries	"	75	"
F.	4	Rickets	2	5	1 natural	"	"	"	"	30	"
"	7	Knee excision	"	255	1 loose	"	"	"	"	30	"
"	"	"	"	10	1 natural	"	"	"	"	10	"
M.	10	Talipes	"	5	"	M.	6½	Phthisis	"	10	"
"	"	"	1½	10	"	"	"	"	"	10	"
F.	7	Knee excision	"	5	"	F.	"	H. C. bronch.-pneum.	"	5	"
"	"	"	1½	10	1 solid	"	"	Double osteotomy	"	10	"
"	"	"	"	25	1 natural	"	"	"	"	5	"
"	"	"	"	0	0	"	"	"	"	5	"
"	5	"	3	15	1 loose	"	"	"	"	20	"
"	"	"	1½	5	1 natural	"	"	"	"	35	"
"	"	"	1	5	"	"	"	Struma	"	120	"
M.	6	(Tubercular ostitis of toe and wrist)	1½	5	"	"	"	"	"	15	1 loose
"	"	"	1	5	"	"	"	"	"	60	1 natural
"	5	Ankle (pulpy)	1½	10	"	M.	5	Hip excision	"	30	1 loose
F.	7	Hip (pulpy)	"	5	"	"	"	"	"	30	1 natural
"	"	"	"	10	"	"	"	"	"	10	"
"	"	"	"	0	1 loose	"	"	"	"	15	2 loose
"	"	"	"	3	1 natural	"	3	Pulpy hip	"	15	1 natural
M.	4	Osteotomy	1	5	"	"	"	"	"	15	"
"	"	"	1½	5	"	"	"	"	"	15	"
"	"	"	1	15	"	"	"	"	"	15	1 loose
"	"	"	"	15	"	"	"	"	"	30	1 natural
"	"	"	1½	15	"	"	"	"	"	30	"
"	"	"	1	5	"	"	8	Knee excision	"	10	"
"	3	Fractured femur	"	115	"	"	"	"	"	5	"
"	"	"	"	5	"	"	"	"	"	5	"
"	"	"	"	90	1 solid	"	"	"	"	20	"
F.	8	Infantile paralysis	1½	30	1 solid (slight)	F.	1½	Pulpy knee	"	5	"
"	"	"	"	10	1 slight (scybala)	M.	10	Typhoid	"	20	1 scybala
"	"	"	"	5	"	"	"	"	"	15	"
"	"	"	2	15	1 solid	"	"	"	"	15	"
"	"	"	1½	5	1 slight (scybala)	F.	6½	Cleft palate	"	15	1 natural
"	"	"	"	15	"	"	"	"	"	30	"
"	11	Spinal caries	"	5	1 solid	"	"	"	"	20	1 loose
"	"	"	"	"	{ Rep. with no effect (castor-oil given)	"	"	"	"	15	1 natural (slight)
"	"	"	3	0	1 natural	"	3	{ Tubercular meningitis	"	5	1 loose
"	"	Tubercular peritonitis	1	1	"	M.	"	Empyema	"	15	1 natural
"	"	"	"	2	"	"	"	Struma	"	15	"
"	"	"	1½	2	"	"	"	"	"	25	"
"	"	"	1	2	"	"	"	"	"	5	"
"	"	"	"	15	"	"	"	"	"	15	"
"	"	"	1½	5	"	"	"	"	"	10	1 solid
"	"	"	"	5	1 natural (slight)	F.	"	Pleurisy	"	15	1 natural
M.	10	Chorea	"	3	1 natural	"	13	Amputation of leg	"	5	"
"	"	"	"	0	"	"	"	"	"	10	"
"	"	"	1½	3	"	"	"	"	"	5	"
"	"	"	1	2	"	"	"	"	"	"	"
"	"	"	1½	2	"	"	"	"	"	"	"
F.	3	Osteotomy	"	2	"	"	"	"	"	"	"
"	9	Pulpy hip	"	8	1 natural (slight)	"	"	"	"	"	"
"	13	Lymphoma	1	15	1 loose	"	"	"	"	"	"
"	"	"	"	25	1 natural	"	"	"	"	"	"
"	"	"	"	15	"	"	"	"	"	"	"
"	"	"	"	5	"	"	"	"	"	"	"
M.	9	Pulpy elbow	"	20	"	"	"	"	"	"	"
"	"	"	"	0	0	"	"	"	"	"	"
"	"	"	"	0	0	"	"	"	"	"	"
F.	11	Osteotomy	"	15	1 loose	"	"	"	"	"	"
"	"	"	"	0	0	"	"	"	"	"	"

It is seen from the foregoing statement that an action of the bowels followed in five minutes or under in ninety-five instances, in ninety in thirty minutes or less, and in four the time was not recorded. Fifteen injections failed to relieve within the above-mentioned times, and intervals varying between thirty-five minutes and eleven hours were noticed in these. If one analyses the fifteen instances in which more than thirty minutes elapsed before any action of the bowels took place, it will be noticed

that they occurred in ten children, of which the most marked as regards the length of time elapsing are the cases of two special patients. It is worthy of note that five of the ten cases were suffering from tubercular disease in some form or another. Three were osteotomies, and in consequence restrained from movements; one was a fractured femur treated in a double Bryant's splint; and, lastly, a case of chorea, in which, as is often the case, constipation was marked. Seven of the ten children were females.

Coming to the failures, it is found that an osteotomy (in a female) was accountable for a want of success on three occasions and a return of the injection, but in this child the injections were attended with success on eighteen different occasions, the bowels being relieved with one exception within the half-hour. In a case of tubercular disease of the spine the first glycerine enema acted efficiently, an evacuation of the bowels occurring in five minutes; but a dose of three drachms failed later on, and a repetition gave no relief. This also was a female child. A knee excision (in a female) shows one failure and three successes, the average time the injections took to act being thirteen minutes. In the case of a child suffering from meningitis the enema was returned, and not repeated. In a child with pulpy elbow there was one failure and two successful injections. A case of suppuration of the antrum is responsible for one failure and one success. Five of these children were females, and one was a male. In all of the failures it will be noted that the bowels were capable of responding to glycerine stimulation at one time or another, and in no case was there complete failure.

As regards the quantity of glycerine used for an enema, one drachm was given to 156 cases, a drachm and a half to forty-eight, two drachms to seven, and on two occasions three drachms were injected. In 154 instances the injections were followed by normal motions, in twenty-six the motions were loose, in eighteen they were of more than natural consistency, in six the enemata were followed by scybala, and in ten (as seen above) they were either returned or failed to act. In no instance were the enemata attended by unpleasant symptoms, either locally or constitutionally.

If we consider the purgatives most generally used for the treatment of constipation in children, we find that with castor oil they are very frequently sick on or after its administration, and it has to be repeated. Confection of senna, too, is very unsatisfactory, although children take it readily enough; and I have known many little patients cry with pain for several hours after its administration. Cascara sagrada also, in addition to its unpleasant taste, is attended with painful bowel contraction, and the bigger children require gradually increasing doses.

It is not my intention, nor within the scope of this paper, to run through and disparage the whole array of laxatives and mild purgatives used in such cases. For many reasons they are not satisfactory to my mind, but I content myself with taking exception to the commoner varieties. Reviewing the results obtained, and comparing them with the purgatives enumerated and others that are occasionally used, I am very favourably impressed with glycerine enemata, which are easy of application, unattended with the slightest pain or discomfort, quick and natural in action, and the failures are but few. For these reasons I think they can be relied upon, in most instances, for the relief of constipation arising in children.

Southwark.

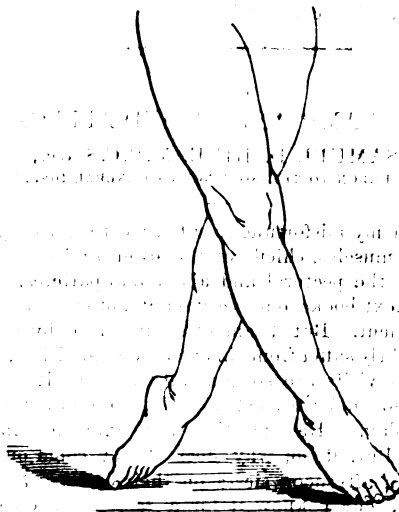
CASE OF INFANTILE SPASTIC PARALYSIS.

By A. J. RICHARDSON, M.A., M.B. CANTAB., M.R.C.P.,
ASSISTANT PHYSICIAN TO THE SUSSEX COUNTY HOSPITAL.

THE details of the following case, which has been under my care in the Sussex County Hospital, are of sufficient interest, I think, to warrant them being placed on record.

T. F.—is four years and eleven months old. His mother has had ten pregnancies. The first seven resulted in the births of living healthy children; the fourth and fifth children being, however delivered instrumentally. The eighth pregnancy resulted in stillborn twin boys, the ninth (during which there is a history of a severe fright) in the patient, and the tenth in a miscarriage. We have thus evidence of a

progressive failure in the reproductive power. There is a remote history of fits on the mother's side; nothing notable on the father's. The patient was born at full term, naturally, head first. There have been no convulsions or fits. At about eighteen months the mother began to wonder that the child did not sit up, and soon afterwards that he made no attempt at standing. She noticed that his legs were stiff and small. He began to talk somewhat late, but can talk fairly now. His memory is remarkably good. The child is healthy looking, of an emotional nature, easily laughing or crying. He lies indifferently on his back or side, and there is no lordosis as he is lying. The thighs are for the most part flexed on the abdomen, slightly rotated inwards, the knees in contact, legs apart, heels separated three or four inches, and great toes crossed. The feet are in the equino-varus position. The arms are kept bent at the elbow to nearly a right angle; pronation predominates. The hands are slightly bent to the ulnar border. The flexors of both thighs are tense, the hamstring tendons standing out; the gastrocnemii are hard, as if firmly contracted. In both arms the biceps are firmly contracted. The muscles of the face all seem to work freely and equally. The movements of the eyes are free in all directions, but occasionally the child squints. On handling the affected muscles, they frequently pass into a state of stronger contraction, but if his attention is otherwise attracted, and he is used to the presence of the manipulator, this does not invariably happen. On attempting voluntary movement the spasm is always aggravated. The patient cannot sit up alone, the



muscles of the back seeming very weak. He can make no real attempt at standing. On supporting him well under the axillæ, so that the feet come to the ground, and requesting him to walk, the feet are at once thrown into a very marked condition of talipes equino-varus, as is shown in the engraving. The toes are dragged up behind the calf of the leg, seeming to scrape up it, then escape over the leg and come down into a position in which the legs are crossed as much as they possibly can be—alternate cross-legged progression. The arms cannot be moved with perfect control, for on attempting any coördinated movements spasms are set up. The elbow is adducted, the arm flexed, and the wrist and fingers hyper-extended. Movements, however, never seem to occur without volition, as in athetosis. The plantar, abdominal, and epigastric reflexes are well marked on both sides. The cremasteric and scapular cannot be obtained. (N.B.—The right testicle is in the groin, and the left apparently not fully developed.) Foot clonus absent; front tap contraction well marked. Knee jerks exaggerated. Deep reflexes in upper extremities all well marked. The pupil is somewhat dilated and reacts to light. Faradaic contraction is well marked in all the affected muscles, and in those which oppose them. Sensation apparently not defective. Soon after his admission into the hospital I was informed that he had two large bruises on the back; about these I could elicit no history, but on observation they were seen to be symmetrically situated on the most prominent parts of the sacrum—in fact, on those spots

which have been figured by Charcot and others as the peculiar seat of acute bedsores. I therefore wondered whether some trophic changes were not setting in. Since then these have entirely disappeared, but other mysterious bruises have occurred on his face and back. I take it, therefore, that on his first coming into the hospital he was kept more rigidly on his back than previously, and that he is in a condition in which trophic changes would easily occur. I believe he has perfect control over his rectum and bladder, although on his first admission into the hospital there seemed some difficulty. Ophthalmoscopic examination cannot satisfactorily be carried out owing to the presence of lamellar cataract in each eye.

Remarks.—From the arms being affected in a very similar manner to the legs, the lesion must, I take it, be above the cervical enlargement. There is no notable difference between the two sides; the lesion is therefore probably double. There is no defect in sensation, so a transverse myelitis can scarcely satisfy the conditions of the problem. Faradaic contractility persisting removes the possibility of anterior polio-myelitis. The case seems to run parallel with some of those reported by Gee,¹ Ross,² Hadden,³ and M'Nutt.⁴ As compared with the carefully detailed cases with post-mortems of Ross and M'Nutt, my case seems chiefly notable by the lack of severity in the symptoms. If, as I believe, the primary lesion is an arrest of development in the motor centres on either side of the fissure of Rolando, we must assume that the centres near the fissure of Sylvius have been spared more than in their cases; that is, that the lesion affects only the upper two-thirds or so of the ascending convolutions.

Brighton.

ON

COMMON CRAMP AND ALLIED AFFECTIONS.

By SAMUEL D. HINE, M.R.C.S. &c.,
FORMERLY SURGEON TO THE NOTTINGHAM GENERAL DISPENSARY.

It has been my misfortune to suffer most grievously from cramp of the muscles, chiefly of the lower limbs, but often affecting also the pectoral and abdominal parietes. I can find in our text-books only very scant notice of this very common ailment. But I am often informed by patients that they nightly suffer from this troublesome visitor. How is it that its visits are so generally nocturnal? I know of many, who suffer almost nightly, who never get an attack by day. Has position any influence in producing it? But, if so, why does it not come on when they enjoy an afternoon siesta on their sofa? I cannot explain why, but I know it for a fact. My own idea is that the main cause of muscular cramp is *pressure*, in whatever way produced. I knew an old lady, twenty-four years ago, who had a very urgent attack of cramp. I was summoned at 11.30 P.M., and, although I resided only half a mile off, when I arrived at the house I found that she was dead. On inquiry from the nearest relative, I made out that, having had a hearty supper of meat and porter at 10 o'clock in the evening, after going to bed quite cheerful and in her usual health, her daughter found her suffering extreme pain from cramp of the chest, and shortly afterwards found her dying. The stomach was distended with undigested food, and the rigor mortis was very marked. Many years ago, at 5.35 A.M., I received a sudden summons from a patient. He was in agonies: cramp in the stomach, cramp in the thighs, and cramp in the cords of his legs. He was a provision dealer, aged sixty-five years. I found him so exhausted with pain that he was very nearly dying from syncope. I ascertained from his wife that on the previous night, about 9 o'clock, he partook of a hearty meal of pickled pork, onions, and red cabbage. A stiff glass of hot brandy and water containing thirty drops of chlorodyne afforded speedy relief. In another case, a gentleman of spare habit was seized at three in the morning with paroxysms of cramp in the thighs and calves. Nothing gave relief until he experienced a copious and very offensive evacuation from the bowels, when the spasmodic action

vanished, and he was able to regain his bed in peace. Now, in all probability, had a warm enema been administered at an early period of the attack he would have escaped hours of acute suffering.

I have asserted my conviction that pressure is the cause of the muscular spasm usually called cramp; but let it not be understood that I look upon this as the *only* cause. By no means. Indigestion, however produced, favours the disease. Cold, external or internal, will bring it on. Certain articles of food and drink, which I will shortly specify, will cause an attack. But let us first look at what I think to be the chief cause—*pressure*. A distended stomach, loaded with food of an indigestible character, is one cause; here the paroxysms chiefly affect the pectoral and abdominal muscles, more especially the rectus abdominis. Gas in the stomach, alias flatulence, is another fruitful cause of pressure; also sulphuret of hydrogen in the transverse colon. The rectum loaded with feces is a frequent parent of this evil offspring; and so likewise is an over-filled bladder. But external pressure will also provoke an attack—e.g. the weight of one leg on another, or too heavy a load of bed-coverings. I have stated that indigestion causes cramp, but how? Acidity develops flatulence, and almost all sufferers from cramp will tell you that they have frequent heartburn. Latent gout is another factor in the production of this distressing ailment. Almost all the sufferers have been hereditarily gouty. The martyrs to cramp are mostly of the upper, well-fed, highly nourished class—the pampered children of luxury and opulence. I have been struck with the fact of its extreme rarity in dispensary and hospital practice: Again, a large proportion of my patients with cramp have been men. The gentle sex are far more exempt. I attribute this to their being so comparatively little prone to self-indulgence in the matter of food and drink. As a rule, women are moderate eaters and drinkers, although truth compels me to say that there are some exceptions.

Now as to cold. My impression is that cold, whether external or internal, by producing a chill on an over-heated surface of body, will produce severe cramp. I remember six or seven years ago seeing a gentleman in the agonies of pectoral cramp. It was September, and he had enjoyed a long tramp after "the pretty brown birds." Perspiring profusely, he sat down under a big oak tree for his luncheon, and then had fallen asleep, lying on the long damp grass, from which the morning dew had not passed away. He was a healthy man, and habitually accustomed to taking long walks and other active exercise. Moreover, he was very temperate in the matter of diet, but his sufferings were so extreme that his gamekeeper and myself had as much as we could do to convey him to his dog-cart. I might multiply instances, but one will suffice—a case of internal cold. A gentleman staying at a fashionable Dublin hotel, took a stroll in the early morning and returned thither. It was the genial month of August, and he was much over-heated, somewhat tired, and very thirsty. He called for a pint of cold milk, which he took at one draught. The effect was instantaneous. He was seized with agonising cramp, pectoral and abdominal, evidently accompanied by spasm of the œsophagus (an uncommon complication of cramp). An emetic of sulphate of zinc gave speedy relief, and he visited the Dargle, the Seven Churches, and the Devil's Glen on the same morning.

The articles of drink productive of cramp are chiefly claret and cider. A patient informs me that if he goes out to dinner and partakes of claret he may surely calculate on a night of cramp. I have known hock act in a similar way; whilst good sound port and sherry are innocuous so far as this affection is concerned. I have found that total abstinence people are not more exempt from cramp than other folk.

As to food. Hard cheese, pork, shell fish, conger eel, pickles, salads, with the two honourable exceptions of lettuce and watercress, are likely to produce cramp.

Unusual and excessive muscular exertion is another parent of cramp. In how many instances have I known young men who, having been shut up day after day in offices and perched on stools, when they have got their holiday and undertaken a tour, fondly imagining they were enjoying themselves, have walked themselves off their legs, and been rewarded for their toil by a night of cramp. And I strongly suspect that many members of Parliament who have sat out long nights of debate and then adjourned to the moors could repeat the same story. The moral of this is: Do not attempt too much; turn not enjoyment into suffering.

¹ St. Bartholomew's Hospital Reports, 1877 and 1880.
² Brain, 1882.
³ Ibid., vol. vi.
⁴ American Journal of Medical Sciences, 1883.

We have considered the *exciting* causes of cramp, and now for those which may be classed as *predisposing*. I think the rheumatic or gouty diathesis, irritable bladder, stricture of the urethra, and stricture of the rectum rank in the first class. Sluggish liver, disease of the kidneys, Bright's disease, and Addison's disease take the second place.

Next as to prognosis. This is usually favourable. But I have certainly witnessed more than one death from cramp; not cramp pure and simple, but occurring to patients affected with extreme age, heart disease, or affections of the liver, supra-renal capsules, or kidneys.

Now we come to treatment. This may be naturally divided into preventive treatment and that of the actual attack. First, preventive. I advise no one subject to this ailment to take fluids within two hours of retiring to rest. A biscuit or dry toast should be the supper, charcoal biscuits for preference. If the main meal is taken early, let the last meal be partaken of not later than 8 P.M. If dinner is a late one, let it not be postponed till beyond 8 P.M. A final visit to the closet before retiring will be conducive to a good night. And now we proceed to the treatment of the actual attack. This is so sudden and so severely painful that we ought, as practitioners, to be prepared for the onslaught. I have been in the habit of prescribing for every crampingly disposed patients the following pill to be taken every second night. It has afforded good results:—Ext. conii, 1 gr.; ext. nucis vom., $\frac{1}{2}$ gr.; ext. belladonna, $\frac{1}{2}$ gr.; pulv. myrrhæ, $\frac{1}{2}$ gr.; gingerine, 1 gr. But for the actual paroxysm local treatment is the thing. In the slighter cases, cold applied by a wetted sponge will afford relief. Friction by the hand, firmly used is also good. But in severe cases I have found belladonna liniment very efficacious; also belladonna liniment with chloroform; and where both have failed to relieve, pure laudanum, actively rubbed in, has proved successful. Where all have failed, I have no hesitation in giving a careful inhalation of chloroform, which invariably succeeds. But this must strictly be avoided in cases complicated with heart or kidney disease.

And now for the allied affections. The cramps of cholera frequently constitute the principal suffering to the patient; but these, being merely symptomatic, may be dismissed with the passing remark that opium does not seem to influence them at all. Secondly, in spinal meningitis cramps of the legs are very severe, and the lower extremities, although proof to any ordinary impressions (punctures by needles or lancets included), are convulsed and tormented by horrible muscular spasms. If the remedies for the primary disease should prove successful, the cramp ceases; if not, it accelerates and aggravates the bitter end. There remains only to notice writer's or scrivener's cramp, which affects the upper extremities. Evidently it is caused by the constrained position of the hand in writing for many hours consecutively. My own experience of this variety of muscular spasm is limited. Nevertheless I have come across a few cases, one in particular. An accomplished clerk in the India Office was laid aside for eighteen months from his duties. Although a very healthy young man, the extra duty to which he had been subjected had grievously told upon his muscles. His general health, however, continued good. He could ride, shoot, or fish; but the moment he took a pen in hand his muscles became perfectly rigid. Ultimately he perfectly recovered and resumed his former position. I believe the best remedies to be long abstention from writing, open-air exercise, sea breezes, and salt water shower baths.

In conclusion, I may briefly summarise this paper by stating as my opinion that common cramp is due to internal pressure, gastric, abdominal, or from the bladder; also to cold. It is exceedingly painful. The suddenness of the attack is only comparable to the rapidity of its departure. It is amenable to treatment, both preventive and remedial. It is worthy of the study of scientific practitioners, and the results will reward them for their labour.

Stockland, Devon.

THE METROPOLITAN POLICE CONVALESCENT FUND.

At a joint meeting of the West-end and Mansion House Committee of this fund, held on the 31st ult., it appeared that the total sum raised is £10,085. It was resolved that funds be paid over in trust to the present Commissioners of Police and their successors to office, and the income appropriated in accordance with the objects of the fund.

A RECENT CASE OF KOLPO-HYSTERECTOMY.

BY FERDINAND ALBERT PURCELL,
SURGEON TO THE CANCER HOSPITAL, BROMPTON.

THE following case is one in which the entire uterus, together with both ovaries and the Fallopian tubes, were removed for malignant disease per vaginam, with recovery, being the sixth case performed by me.

Mrs. Annie H—, of Bristol, aged twenty-five, married, with two children, last born in September, 1886. Confinements good. A family history of cancer; a belief that her mother's uncle died of cancer. Had enjoyed good health. Of a thin slight figure. She was recommended by her medical attendant, Mr. A. Napier Godby Gibbs of Bristol, to go to the Cancer Hospital, with the view of total extirpation of the uterus being performed, where she was admitted under my care on March 26th, 1888. About six months before this she first suffered from a bloody discharge from the vagina, being regular in her periods. A large cauliflower growth, about the size of a Tangerine orange, occupied the vagina, which bled on examination; the entire os and neck were merged in the growth; the mucous membrane felt smooth and sound; the uterus was freely movable. Examined per rectum, the body of the uterus felt larger than natural; the broad ligaments and ovaries also felt normal, and no enlarged glands were made out; no neck, for it was thickened and enlarged from infiltration of the disease upwards. On explaining the condition of the parts to my patient, she expressed her wish for me "to take the whole away, to have the major operation done," as recommended to her by Mr. Gibbs, her medical attendant in Bristol. She was thus prepared for total removal, yet I thought, by dissecting the peritoneal covering off the uterus, and amputating on a line of the internal os, we might get beyond the disease. I elected then to perform Schröder's operation, unless we found it absolutely required total extirpation. Thus it was settled.

On April 3rd the patient was anaesthetised and placed in the lithotomy position (aided by Clover's crutch); the vagina was well drenched out with carbolic water; the mucous membrane was incised around above the disease and dissected upwards, and the growth was removed by means of the galvanic écarateur. On examination of the growth, it was self-evident that we were not clear of the disease. The cooked stump felt unsatisfactory, and the separation seemed to be up to the internal os. I therefore proceeded to total extirpation. The lower uterine arteries on either side were secured and tied, and the parts separated away. A silver catheter was passed into the bladder, and the position of the posterior wall fully determined. Two strong hooks were then inserted into the body, of the uterus, anteriorly and posteriorly, and gentle but firm traction made downwards, which gradually brought the parts into view. The peritoneum was then opened, and, still putting the parts on the strain, the broad ligaments were found to be lapped up against each side of the body; these were transfixed by means of a pedicle needle armed with silk thread, tied, and then, guarded by a pair of pressure forceps, were divided; the tying of these was almost, it may be said, to have been done outside. The entire uterus was removed; then the right ovary was got down, its attachment transfixed and tied, and divided; its Fallopian tube was also removed. The ovary on the left side was treated in the same way; this, however, being cystic, burst under the pressure of the fingers. No bleeding occurred, and I may say the hand or fingers hardly entered the peritoneum. The forceps on the pedicles of the broad ligaments, being gently pulled upon, brought down the stumps for examination, which were found dry. The forceps were not taken off; the parts were drenched out with iodised water and dried; a pad of salicylic wool covered the vulva, and was confined by a T bandage. The patient was then removed to her heated bed.

Examination of the specimen.—The uterus being divided down anteriorly, the growth was seen to have been removed on a line of the internal os, and the disease to have infiltrated upwards towards the body; the body itself was not diseased, but was larger than normal; the appendages were not diseased; the left ovary was cystic.

During the night following the operation she had pain, for which a quarter-grain morphia suppository was passed.

per anum, and a second four hours afterwards. There was no vomiting and no bleeding. She was given a teaspoonful of essence of beef every two hours.

April 4th.—The pad this morning was only slightly soiled. The vagina was douched out with iodised water, and the two pressure forceps removed. A Tait's glass drain was inserted. The urine had been regularly drawn off every four hours, and since 8 P.M. last evening to 8 A.M. measured fourteen ounces.

5th.—At midnight yesterday a free dark-coloured discharge having a fecal smell came per drain and filled the tube. The vagina was freely douched out with iodised water. The patient felt relief, and slept at intervals. The urine was drawn off regularly, and she partook of the meat essence. She complained of pain, for which a suppository was passed. The left labium shows a slough forming, having somehow been touched by the galvanic wire. During the day she partook of some arrowroot, beef-tea, and barley-water.

6th.—Slept well at intervals. Took her food well. Discharge less, but dark and offensive. The urine has a deposit of urates; it is less in quantity. She was ordered a diuretic mixture and two compound rhubarb pills, to be given at bedtime.

7th.—The temperature went up during last evening to 101·8°, and at 2 A.M. an ice-bag was laid over the pubes for twenty minutes, which brought the temperature down to 98·6°. The bowels were moved twice slightly. She partook of very little nourishment during the night. The discharge is changed in character, being white and purulent; it is coming down outside the tube. Complaints of pain in the stomach; relieved by a turpentine flannel. The stomach is quite flat.

8th.—Pain less. Discharge thinner. Urine increased in quantity.

9th.—Bowels moved. She had slept fairly well. Discharge a little more copious. Temperature at 8 A.M. 100·2°. At noon she partook of some confectioner's jelly brought in by her husband, and which she felt disagree with her; the temperature registered 102·6° after it, and then fell to 99°. An enema was administered, which relieved the bowels.

14th.—Since the last report all has been going on favourably. The discharge has greatly diminished; the glass drain is still, however, retained. The vagina has from the first been persistently douched out every four hours, and the urine drawn off. She takes her nourishment well, and has been placed on the ordinary diet. No stimulants have been allowed. Temperature normal. She is cheerful and contented, and thoroughly convalescent.

27th.—Dr. Edis, President of the British Gynaecological Society, made an examination of the patient, and while doing so said he felt something in the vagina, on which I made an examination and withdrew a small round mass, a matted ball. On unravelling it, this was found to be formed of the loops of seven silk ligatures, large and small, that had come away and were lying in the vagina. Through the speculum the vault was seen granulating and healthy, the vaginal mucous membrane sound and vagina roomy.

30th.—Discharged cured.

Dr. Gibbs wrote me, saying, "It will interest you to hear that the mother of your patient consulted me for the first time on April 22nd for a tumour of the right breast of about three years' duration. I have no doubt," he says, "it is a scirrhus; her daughter knows nothing of this." This gives a family history of cancer.

The specimen was shown at a meeting of the British Gynaecological Society on Wednesday, April 25th, 1888.

A recent report of the patient states she is robust and in good health. No recurrence.

Manchester-square.

HOSPITAL EXTENSION AT MILTON.—Alderman Cudlipp, chairman of the committee of the Infectious Diseases Hospital, laid, on the 2nd inst., the memorial stone of a new block, which is the first step in the long contemplated scheme of hospital extension at Milton. The present building contains twenty-four beds, but the projected scheme will bring the total up to 103, which, however, is not expected to be effected for some years. The building thus commenced (only half a block, really) will consist of two wards, with three beds in one and two in the other, with accommodation for nurses, and will cost £900.

THE PUNCTURE OF A VEIN IN HYPODERMIC MEDICATION.

By J. CRAIG BALFOUR, L.R.C.P.E., L.R.C.S.E.

IN the earlier days of hypodermic medication much stress was laid upon the danger of injecting air into a vein, but, so far as I am aware, little was said as to the effect of the drug exhibited when so injected. Now it requires a certain amount of air to be injected before it becomes an element of danger, and only by the grossest carelessness would air be likely to be so introduced; whereas we have always the risk of the injected drug itself, or a portion of it, being thrown directly into the circulation. Notwithstanding the increased popularity of hypodermic injections, and the variety of drugs prepared for use in this way, never until lately had I heard of or met with such an accident, nor had several other gentlemen to whom I mentioned the following case.

The patient, a lady of about fifty years of age, and of a rather nervous temperament, had suffered for some time from a very severe pain in the legs, supposed to be of nervous origin, though she is also rheumatic. This pain was so intense in its character as to preclude all possibility of rest or sleep. For this she had been treated by one of the principal physicians of the town in which she then resided, who, along with myself, had tried nearly every drug we could think of, but without any real success. Some benefit was derived from a course of massage and the application of the interrupted current; but nothing gave any real relief but injections of morphia, which were given in the form of the tartrate, as being a more neutral solution, and less likely to cause any irritation. The strength was 1 in 12, and, although a pretty large dose was required, there was little general effect, and it never seemed to directly cause sleep, as occasionally it was several hours before any was obtained. This treatment had been going on for about eight months when the accident occurred. At first I had always given the injection myself, but latterly had left it to her daughter, whom I had previously instructed. The dose given on this occasion was four minims (fortunately being a smaller one than usual), equal to one-third of a grain, and was injected into the forearm. Being on my way to the room at the time, I was met by the patient's daughter, who was coming out of the room to call for assistance, as she believed her mother to be dying. The injection had been given with the usual caution, and on withdrawing the needle there was no bleeding, although sometimes there was a considerable amount. Almost immediately it was given the patient called out that there was something wrong, as she felt a prickling, burning sensation all over, and a feeling as if her head and hands were swollen to such an extent as to burst the skin. When I saw her she was very flushed, the eyes were protruded, and she was greatly distressed. I gave her at once a dose of tincture of belladonna. She quickly became very excited, and inclined to struggle and cry out, till this stage passed off, when she turned extremely pale, and fell back on the bed in an unconscious state; the lips were blue, the skin was very grey, and the face much swollen; the pulse was very weak and fluttering, and the breathing stertorous. Shortly afterwards there was a convulsive movement with arching of the back, and both breathing and pulse became almost imperceptible. A little whisky was administered by forcing open the clenched teeth, and in a few minutes the stertorous breathing recommenced, and she began very slowly to return to consciousness. Some citrate of caffeine was then given along with some digitalis, as she has a very weak heart. Another dose of the belladonna was shortly administered, and during the rest of the afternoon whisky and coffee were given in small doses at frequent intervals. She was greatly prostrated, and suffered from intense weakness and very severe headache, which continued for two days.

The morphia in this case had none of its usual effect, and no sleep was obtained for over thirty hours. I have since then seen a similar occurrence, but to a slighter extent, as it did not go beyond the prickling, flushing, and subsequent headache. In a similar accident, atropine no doubt, if at hand, might be injected, but in this case the belladonna was more easily obtained and could be given at once. To

inject the drug very slowly is doubtless advisable, as in the case of the violent prickling coming on, as it does instantly should the accident occur, the needle can be withdrawn without having given the full dose, and the effects would consequently be less severe. As a preventive, I do not see that much else can be done, as, if atropine be added to the injection, the question arises, what is the immediate action of the atropine when thrown directly into the circulation?

Redbourne, Lincolnshire.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TREATMENT OF CHRONIC DYSENTERY.

By J. G. M. G. STACK, L.R.C.P. ED.

KNOWING the extreme difficulty often experienced in making any curative attempts over this disease, and not being aware that the same treatment has ever been pursued, I venture to forward particulars of a case of two years' duration, treated with most beneficial results by enemas of iodoform.

G. S—, a sailor in the China trade, contracted, about two years before I first saw him, an attack of acute dysentery; on his return home he was admitted into Greenwich Hospital, and on his discharge from that institution he resided in Liverpool for about eighteen months under medical treatment for chronic dysentery. As there was no improvement in his symptoms, he was advised to take a trip to South America, which he did, coming under my care. He daily passed between four and six stools, calls to which had to be immediately attended to; the first part of the evacuation consisted of a light-coloured slimy substance having the peculiarly unpleasant dysenteric odour, the ordinary motion following which, however, was of very light consistence and small size. He had naturally lost much of his former energy, and was greatly fatigued by the slightest exertion. After a fruitless trial of a variety of remedies—amongst others, mercury internally and by inunction over the left inguinal region, opium and powdered ipecacuanha in large doses, iodide of potassium, iron, &c.,—I at last determined upon trying iodoform by enema. Two grains of iodoform suspended in mucilage of starch were thrown up the rectum by means of a long tube after each motion. At the end of three days the dose had been gradually increased to six grains. In a fortnight's time he was passing but one motion daily, which was in every way normal, with the exception of its small bulk. On our arrival in Liverpool he passed from under my observation, and I regret being unable to give the subsequent history; but for the last three weeks while under my care, and with the enemas discontinued, he had had no relapse, the looseness being completely checked, and the motions presenting no dysenteric characteristics.

Should "Enquirer," whose letter appears in THE LANCET of Oct. 20th, be disposed to give the iodoform treatment a trial, I shall be glad to hear the result.

Gooberton, Lincolnshire.

A CASE OF POST-PUERPERAL PERITONITIS WITH SUBPERITONEAL ABSCESS; OPERATION; RECOVERY.

By JOHN W. TAYLOR, F.R.C.S. ENG.,

SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

IN March, 1888, I was asked to see a patient who was supposed to be dying from puerperal peritonitis. This is relevant to the patient's condition, as the case was considered hopeless, and the consultation was stated at the outset to be solely for the satisfaction of the friends of the patient and her medical attendant. The notes of the case at this date are as follows:—

"A. B—, aged thirty-three, was confined eight weeks ago. Had poor food and very hard work during the whole

of her pregnancy, working until the day of her confinement. So far as can be ascertained, the confinement presented no unusual features, but was followed by great prostration and weakness. It was not until the fifth week that the patient managed to get up and go outside of her house to a church which is only a few doors from her dwelling. She returned very ill, and has been in bed ever since, suffering with great abdominal pain (mainly on the left side), almost constant sickness, and irregular diarrhoea. At our visit she is noticed to be very emaciated, her face anxious and haggard (looks about forty-seven). She is crying with pain, and frequently vomiting a little bilious fluid. On examination a large tumour is found on the left side of the pelvis, pushing the uterus altogether to the right, and fixing it in this situation. The upper limit of the tumour can be felt above the left groin. The whole of the abdomen is greatly distended and very tender, and the tumour, which may be an extensive parametric exudation, is evidently accompanied by acute and serious peritonitis."

The patient was removed the same day to a private operating ward, and on March 9th I opened the abdomen in the middle line. The intestine was very adherent immediately beneath the incision, and there was considerable difficulty in finding the peritoneal cavity on account of this. By extending the incision upwards an opening was found, and the intestine separated from its adhesions, disclosing the upper surface of a large subperitoneal abscess on the left side, which was on the point of bursting, or perhaps had already done so to a very limited extent. As I pressed my finger over its surface in the direction of the left groin the sac or peritoneal wall suddenly gave way, and a considerable quantity of curdy pus was evacuated. The interior of the cavity felt ragged and uneven to the touch of the examining finger, and, so far as the relations could be made out, the abscess and surrounding infiltration was mainly in the cellular tissue below the peritoneum, and neither ovary nor tube was specially involved. A second incision in the abdominal wall was made above the left groin, and immediately over the opening into the abscess. A large-sized rubber drainage tube was passed into its cavity, the abdomen well washed out, and the median incision closed. For three or four days the result was doubtful. The pulse remained exceedingly weak and rapid, varying from 130 to 150 beats per minute, and the prostration was very great. Nutrient enemata were given every six hours, and from the first a little beef-juice was allowed by the mouth. This was retained by the stomach, and was, I consider, of decided benefit in tiding the patient over a time of serious danger. By the close of the first week the pulse had fallen to 110 and there were evident signs of recovery, which hereafter was uninterrupted.

All cases of peritonitis connected in any way with the puerperal period are of special interest, and the question of operative treatment in most of them is a very difficult one to decide. This, except for the emaciated and exhausted state of the patient, was less difficult than many. The physical signs of a local cause were evident, and there can be but little doubt that the thorough surgical treatment of the local condition saved the patient's life.

Birmingham.

A COIN RETAINED IN THE OESOPHAGUS FOUR MONTHS.

By H. MARTIN DOYLE, M.R.C.S.

THE following case came under my observation while in charge of the receiving room at the London Hospital.

The patient, a strong, healthy boy, four years of age, had, while playing with some money, swallowed a halfpenny. He was immediately taken to Charing-cross Hospital, where an emetic was administered, but without any good effect. I saw him four days afterwards. He had been very sick since taking the emetic, had cried a great deal, and complained of pain, which he located about the middle of the sternum. He looked ill, had lost his appetite, and was very restless both day and night. There had been several motions of the bowels, and, although the faeces were carefully scrutinised, the missing coin was not found. As the friends had some objection to the probang or coin-catcher being used, I advised a pultaceous diet and patience. I saw the child some days afterwards, and was informed that he had not yet passed the coin. He, however, appeared to be

quite well, his appetite was good, but he still complained of pain about the middle of the sternum, which was increased on swallowing anything semi-solid. After a few weeks the child lost the pain, and forgot all about the halfpenny. He still remained in good health, despite the gloomy prognosis that some medical men who had been subsequently consulted gave of the case. Four months afterwards, while munching a cake, his father noticed him hicough violently, and was surprised to find that he had brought up the halfpenny, which had turned quite black. I therefore conclude that this coin had been lodged somewhere in the oesophagus, and had no doubt given rise to the pain of which the child had complained. It would probably have been found and removed if the probang or coin-catcher had been used in the first instance.

London Hospital, E.

TOLERANCE TO FOREIGN BODIES IN THE TISSUES.

BY LAUNCELOT ARCHER, M.R.C.S.

ON Friday, Oct. 26th, a young lady consulted me in consequence of a painful swelling over the carpo-metacarpal joint of the little finger. On examination, I found that there was a small abscess in that situation, just pointing. I proceeded to open it, but felt the knife grate upon some hard substance as I cut down. Thinking there was a piece of dead bone, I carefully introduced the forceps and extracted a rough fragment of white marble about the size of a small bean. The patient could give me no explanation of its presence, but, on inquiring of her mother, she stated that when at school fourteen years ago she fell on a newly made asphalt path and cut her hand severely. It was washed and strapped up, and healed without trouble. She felt no further effect from the injury until a week before I saw her, when she struck her hand against the table, and to that accident she attributed the formation of the abscess. The fragment was lodged deep down, just above the joint, and had apparently lain there quite innocuously until the blow started fresh inflammatory action.

Vincent-square, S.W.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

COMPOUND DEPRESSED FRACTURE OF SKULL, WITH PARALYSIS OF EYE; TREPHINING; RECOVERY.—FOREIGN BODY IN THE EXTERNAL EAR, LEADING TO SUPPURATIVE OTITIS MEDIA AND PYÆMIA; DEATH; NECROPSY.

(Under the care of Mr. BRYANT.)

THE first of these cases is a good example of compound depressed fracture of the skull, in which, after removal of the outer table of bone, unusual comminution of the inner table was found to an extent unsuspected before operation. The symptoms of a localised character in connexion with the right eye would appear to have been speedily cured by the removal of the depressed fragments of bone. The second case is an example of the sad consequences which may follow the thoughtless act of placing a foreign body in the external auditory meatus. Aural surgery has only too many records the history of which is similar to this. A substance placed in the ear causes damage to the membrana tympani, which is followed by suppuration in the middle ear, extension of suppuration to the mastoid cells, the membranes of the brain, and death from pyæmia. Too much care cannot possibly be taken in the extraction of substances from this situation, and parents should never

let unskilled hands attempt it. Irreparable damage is often caused before the patient is seen by the medical attendant, and the child is lucky if he escapes with partial deafness.

Compound depressed fracture of right frontal bone; contraction of right pupil; slow pulse; no other head symptoms; trephining and elevation; with removal of bone, including a large area of the inner table. (Reported by Mr. F. E. Williams.) F. B., aged twenty-eight, a labourer, was admitted on Feb. 16th, 1888, and discharged on March 31st, 1888. A brick had fallen from a scaffolding, a distance of twenty feet, and struck the patient on the head. He was unconscious for two minutes after the blow, and was brought to Guy's at once.

On admission, there was a clean, vertical cut, about two inches in length, situated directly over the right frontal eminence; the bone was exposed nearly the whole length of the wound, forming a gutter (with markedly sloping sides), with considerable depression, an inch and a half long. The upper extremity of the gutter ended in a triangular depression, evidently produced by the angle of the brick. There was paralysis of the right eye, loss of sensation, loss of reflex, and also loss of movement of the muscles of the eyeball. There was considerable effusion of blood into the orbit; the pupils were unequal, the right being contracted and not reacting to light. No bleeding from the nose or ears. The patient had not been sick, and there was no paralysis or pain (the right eye excepted). The pulse was 54, and more irregular as to force of beat than as to time; the respiration was 20. Urine normal.

Feb. 16th.—About three hours after the accident chloroform was administered. During the administration of the anæsthetic the patient was considerably convulsed, but not more on one side than the other. The wound was prolonged, and the periosteum raised from the edges of the gutter. A three-quarter inch trephine was applied at the upper extremity of the gutter, and a circular piece of bone removed; it was then seen how great the injury to the inner table was, for three-quarters of the area of the circle removed consisted only of the external table. On prising up the lower fragments, another crack, parallel and external to the former, was found to exist, and the intervening piece of bone came away. In all seven pieces of bone were removed, the inner being fractured over a far larger area than the external table; the dura mater was intact, and there was no effusion of blood between the bone and the dura mater. The edges of the wound were brought together and two stitches inserted, and the wound dressed with iodoform and boracic gauze and Gamgee tissue. Leiter's coil was applied to the head. He was allowed barley water, half a pint of milk, and ice.

17th.—He passed a good night. Takes food well. There is considerable effusion into the right orbit. Temperature about 99°; pulse 46.

18th.—The patient says he feels better. There is some subconjunctival hæmorrhage. Temperature about normal; pulse from 50 to 42. Milk increased to one pint.

19th.—Léiter's coil discontinued. Pulsation of brain can be distinctly seen when dressings are removed.

20th.—Looks bright, and feels well. Takes his food well. Wound healed by primary union, except just at the upper end; stitches taken out. Temperature from 99.2° to 97.4°; pulse 46. Allowed a pint of milk, and the same quantity of barley water.

21st.—Enema of glycerine (a drachm) given. Both eyes react to light. Not much pain. Temperature from 99° to 97°; pulse 48.

24th.—Rise in temperature to 100.2°. Five grains of quinine were given at once, and the temperature came down to 99°. A little retained pus found at the upper end of the wound. The wound was opened, and a small quantity of pus came away.

25th.—He feels well. About three-quarters of a drachm of pus came away. Temperature 101°. The administration of more quinine was followed by a fall of temperature to 99°.

27th.—Wound opened more this morning, and about a teaspoonful of pus came away. Is in good spirits, and answers questions readily.

March 2nd.—Patient's head dressed every morning with iodoform gauze. The wound progressed satisfactorily until the 15th, when it was quite healed. On the 24th he was permitted to walk about. A month later the patient was quite well.

Foreign body in ear; otorrhæa; suppurative otitis media; suppurative meningitis; death; necropsy. (From notes by Mr. J. Roberts.)—J. B—, aged twelve, was admitted on March 19th and died on March 26th, 1888. Whilst in school on the previous afternoon he placed a bit of square slate pencil, about a third of an inch long, in his right ear, and then held his head down on one side and the piece of pencil fell into the ear. He went to a surgeon and had the ear syringed out, with a view of removing the pencil, but this failed, and in consequence he was sent to the hospital.

On admission there was a slight sticky serous discharge from the right ear. There was no pain, but he was deaf on the affected side. There was a slight increase of temperature on the same side, and a dark-looking object was visible at the bottom of the external meatus. Temperature 98° 8'.

March 23rd.—Mr. Tressider removed the foreign body by syringing and forceps. Chloroform was given. There was already well-marked and acute suppuration in the middle ear.

24th.—Chloroform was again given, and Mr. Bryant made a semicircular incision about a quarter of an inch above the tip of the mastoid process. Considerable bleeding ensued, which was stopped with sponges. A periosteal elevator was used to clear the bone, and then Mr. Bryant trephined. Iodoform dressing was applied. There was a communication between the middle ear and the wound made by the trephine. This morning the boy became unconscious, tossing about the bed and whining, being very feverish. At 6 P.M. the temperature was 98°, and at midnight 102°; it afterwards gradually rose to 104° 8'. He was then given three grains of sulphate of quinine, after which the temperature fell to 103° 6'. Later on he had two teaspoonfuls of brandy and another dose of quinine, when the temperature fell to 102°.

25th.—The patient is not so restless this morning. Had a little sleep last night, and consciousness has slightly returned. He gradually became worse towards evening. Temperature at 6 P.M. 104° 8°; then it fell by degrees to 101°.

26th.—Temperature remained about the same until the death of the patient at 2.20 this afternoon.

At the post-mortem examination rigor mortis was present in both arms and legs. There were petechial spots over the posterior surface of the pleuræ. The right lung was in a condition of partial collapse; the posterior half was sharply defined from the healthy anterior portion, and was tough and airless. The left lung was the same as the right. The heart weighed 6½ oz.; there was a little fatty degeneration of the mitral valve. The liver weighed 33 oz.; it was mottled on section and rather tough. The spleen weighed 2 oz.; it was otherwise normal. The kidneys weighed 4 oz., and were otherwise normal. The stomach was healthy. The brain weighed 47 oz.; pus scattered about, especially in the Sylvian fissures; a little in the longitudinal fissures and upper surface of the cerebellum; suppurative meningitis; vessels engorged with blood; consistency of brain diminished, and blood-stained fluid on ventricles; excess of blood everywhere. There was also necrosis of the bone round the internal auditory meatus from acute suppurative otitis media.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.

SUTURE OF THE URETHRA IN A CASE OF PERINEAL SECTION FOR RUPTURE OF THE URETHRA; REMARKS.

(Under the care of Mr. W. L. WOOLLCOMBE.)

IN connexion with the cases published in THE LANCET of Oct. 20th, of suture of the urethra in cases of perineal section, the following case may be of interest, because, although the circumstances of the case are different, the object to be attained was precisely the same, and the results in this case were as favourable apparently as those obtained by Mr. Marmaduke Sheild.

J. D—, a male, aged twenty-four, was brought to the hospital on July 13th, 1888, with free hæmorrhage from the urethra. The patient, a gymnast by profession, was practising some exercises, when he slipped and fell astride a bar. He was immediately seized with severe pain in the perineum, and blood commenced to run freely from the urethra, and continued to do so up to the time of his admission, which was about twenty minutes after the accident. After some difficulty, a full-sized silver catheter was passed into the bladder, and a firm pad placed on the perineum, where it was secured by a bandage, the penis being also bandaged up over the catheter. This, however, did not

seem to affect the hæmorrhage, and blood continued to leak fast along the sides of the catheter, so that the patient quickly lost half a pint of blood. He was therefore placed in the lithotomy position, and an incision about an inch and a half long made in the perineum down to the urethra, which, after being carefully exposed, was opened by a sharp bistoury on the catheter. In the neighbourhood of the bulb was a cavity containing a considerable quantity of clot, which was turned out and two bleeding points tied. Very free oozing still continued, however, from the substance of the bulb; a layer of catgut sutures was therefore introduced, including the edges of the urethra and the bleeding surfaces of the bulb, and these were brought together over the catheter. This effectually checked the hæmorrhage; a superficial layer of silver sutures was then introduced, and the wound dressed with a good pad of iodoform wool. The temperature rose next night to 103°, but dropped in the morning, and never rose again to any notable extent. The catheter was left in ten days, and then removed, and passed every other day for four weeks, after which the patient went home, able to micturate freely and comfortably, and to pass a No. 12 catheter without difficulty. There was a little leakage, amounting only to a few drops during the first ten days, but none afterwards.

Remarks by Mr. WOOLLCOMBE.—I am not aware that a similar operation has ever been found necessary in a case of ruptured urethra, or at all events has been practised; but this man's life was in imminent danger from the hæmorrhage, and the result, I think, fully justified the operation. Neither do I see any reason why a similar operation should not become the standard practice in cases of perineal section, whether for an old stricture or a recent injury. It certainly seems to have saved the patients in Mr. Sheild's cases, as well as J. D—, from what is usually a long and troublesome convalescence after Wheelhouse's operation when the wound is left open, besides being a safeguard against hæmorrhage, which so often necessitates plugging of the wound.

VICTORIA COTTAGE HOSPITAL, GUERNSEY.

A CASE OF SUPRAPUBIC LITHOTOMY: REMARKS.

(Under the care of Dr. CAREY.)

GEORGE C—, aged fifty, stonecrafter, was admitted on Aug. 1st, 1888. He had been suffering for more than seven years from vesical symptoms, but only within the previous fortnight had it been ascertained that a stone existed in his bladder. He was very emaciated, and both body and mind were much enfeebled by long-continued suffering. The urine was slightly muco-purulent, and contained a trace of albumen, but no abnormality existed when the patient left the hospital.

On Aug. 5th, with the assistance of Mr. Robinson and Dr. Collings, the patient was placed under chloroform, and the operation as described by Sir H. Thompson in THE LANCET of Dec. 5th, 1885, was performed. Twelve ounces of saturated boric acid lotion were injected into the bladder, and a similar quantity of water thrown into an indiarubber bag which had been inserted well within the sphincter of the anus. No difficulty occurred in the operation. The fasciæ were divided on a director; no bloodvessels of any consequence were wounded. The bladder, which was easily recognised by its pink appearance, was transfixed by a hook, and an opening large enough to admit the forefinger of the right hand made with an ordinary scalpel, care being taken to avoid the large veins coursing over the surface of the bladder. The left forefinger was then introduced, and the opening enlarged by simply separating the fingers and gently tearing open the bladder to the size required. The removal of the stone was effected by grasping it with the two forefingers, as recommended by Sir H. Thompson. It weighed 258 grains, and consisted of a uric acid nucleus, with a thick coating of phosphates, which gave it a very irregular and granular surface. The patient's temperature rose to 100° in the afternoon, and 102° in the evening. The following day the temperature was 101° 4°; and after this, with the exception of a rise to 101° 4° on the 9th, due to some suppuration in the upper part of the incision, where three sutures had been placed to lessen the size of the wound, the temperature never rose above 99° 4°. He made an uninterrupted recovery. Urine passed per urethram on the 22nd, and he was able to leave the hospital

on Sept. 19th, the wound having been perfectly cicatrised for a week.

Remarks by Dr. CAREY.—This operation, as modified by Petersen, is now awaiting the verdict of the profession, and every case, however simple, merits publication. Its almost absolute freedom from complications, the entire absence of all risk of wounding important parts, and its wellnigh bloodlessness, make this operation one of the simplest in surgery, and bring it within the grasp of a general practitioner, who, after the lapse of years and the feeling that his anatomy is thereby somewhat at fault, might hesitate to encounter the risks which beset him in the perineal operation. The peritoneum, the only important structure which before Petersen's modification was liable to be injured, seldom if ever comes into view, and the after treatment, though somewhat laborious and tedious, has none of the anxieties attendant upon the possibilities of hæmorrhage, pyæmia, &c. Fewer assistants are required; the risks of chill are altogether removed, as only the abdominal surface need be laid bare; and (a material difference between the two operations) the fear of incontinence of urine and impotence does not exist. The after treatment, which necessitates close attendance on the part of the surgeon, is simple, and consists in free ablution with carbolic acid lotion (1 in 40) of those parts with which the urine is likely to come in contact, and a lavish inunction with vaseline to prevent excoriation.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Tubercle of Ovary.—*Aortic Aneurysm.*—*Hydatid Cyst of Brain.*—*Sarcoma of Mediastinum.*—*"Paget's Disease" of Scrotum.*

AN ordinary meeting of this Society was held on Nov. 6th, Sir James Paget, President, in the chair.

Dr. GRIFFITH showed sections of an Ovary the seat of Tubercular Disease. It was removed by Dr. Galabin from a nullipara aged nineteen, was as large as a small apple, dense on section, and containing numerous small cysts filled with viscid fluid. Examination revealed a rather dense well-developed connective-tissue stroma infiltrated with small round cells and containing scattered spherical nodules resembling well-formed non-caseating tubercles. Each of these was bounded by circularly arranged connective tissue, which was prolonged by branching processes into the centre, which latter was occupied by a giant cell often multinuclear. There was no appearance of caseation in any part. A few newly developed bloodvessels were seen traversing the section, but they did not appear to enter the nodules; there was little or no normal ovarian stroma left. The peritoneal surface was thickened, and consisted of fibrous tissue invaded by leucocytes. The fibro-muscular wall of the Fallopian tube was expanded, the mucous membrane being thick, consisting almost entirely of tissue similar to that of the ovary, and containing but few tubercles. No micro-organisms were found in the giant cells or the surrounding tissue. The tubercles all appeared to be of recent formation and rapid growth. Reference was made to the scanty literature on the subject, there being two chief forms of tubercular ovarian disease described: (1) minute miliary granulations, chiefly near and on the surface of the organ; and (2) larger caseous masses. It occurred usually as a part of a general tuberculosis. The most common seat of tubercle in the female generative organs was the Fallopian tube, then the uterus, and lastly the ovary.—Dr. MONEY showed a case a short time since of caseous disease of the uterus and appendages in a child of six.—Dr. EDMUNDS showed as a card specimen a large tubercular mass in the ovary, from a patient with general tuberculosis.—Dr. ORMEROD had recently examined a case in which general tuberculosis was associated with minute tubercles in both ovaries.

Dr. HERBERT HABERSHON showed a specimen of Aneurysm of the Aorta at the junction of the transverse and descending parts of the arch (and therefore extra-pericardial), which terminated by rupturing into the pericardium. The case was that of a man, aged thirty-four, who presented during life the signs of a small aneurysmal tumour pulsating in the second left intercostal space. He had previously

been treated at St. Bartholomew's Hospital under the care of Sir Dyce Duckworth, and had been greatly relieved. Six months later he applied to Dr. Herbert Habershon, at the General Marylebone Dispensary, and on May 8th was suddenly seized with faintness and symptoms of collapse. Seen on the same evening, he was apparently dying, being pulseless, and with cold extremities and clammy skin. No effusion into any of the cavities could be discovered at the time. On the following day (the 9th) the patient had rallied, and on this and the succeeding day effusion into the pericardium gradually developed, accompanied by a paroxysmal cough, with intense pain, presenting some of the characters of angina pectoris. He died on the morning of May 11th, having lived fifty-six hours after rupture had commenced. There was a fusiform aneurysm with two large sacculæ, one occupying the greater portion of the transverse part of the arch, involving the great vessels and partly obliterated by fibrinous clot, the second smaller sacculæ being deeply ulcerated, surrounded by thickened walls of the artery and by dense fibrous tissue, which separated it from the left bronchus below, and led by an ulcerated track through a perforation into the pericardium. The opening lay immediately anterior to the pulmonary artery. The pericardium showed no sign of recent pericarditis except in the vicinity of the rupture. The cavity was found to be distended with about a pint and a half of dark fluid blood. Dr. Habershon commented on the rarity of this termination of aneurysm of an extra-pericardial part of the aorta, and quoted cases and statistics of authors; he likewise dwelt upon the unusual clinical features of the case and the efforts at repair which the specimen illustrated.

Dr. HERMANN WEBER exhibited a case of Hydatid Cyst of the Left Cerebral Hemisphere, from a man aged twenty-two, who suffered from severe pain over the whole of the head, with nausea and vomiting, was rather apathetic, but without unconsciousness. He had some diminution of power in the whole of the left side, and especially of the external rectus muscle of the left eye (abductor); he had well-marked double neuritis (choked disc), and the sight was much impaired. The movements of the tongue and the sphincters were unaffected. The temperature was rather below than above the average; the pulse was normal. Sudden death occurred within six weeks from the beginning of the symptoms and on the twelfth day after admission into the German Hospital. The post-mortem examination exhibited a large hydatid cyst on the posterior part of the left hemisphere. Dr. Weber remarked that the course of the disease had been comparatively short for an hydatid affection, and that the slight hemiplegic symptoms had been on the side of the lesion, and not on the opposite side. Dr. Michel and Dr. Weber had recognised the presence of a tumour in or on the brain, but the absence of certain knowledge as to the exact locality had prevented them from attempting an operation which could have saved life. The wish to obtain the opinion of members as to the possibility of a more accurate diagnosis in similar cases was the principal cause for bringing the case before the Society.—Dr. MONEY thought that a left hemiplegia of the kind described by Dr. Weber indicated a lesion of the motor tract below the cortical area. He attached no importance to the paralysis of the external rectus. He would have recommended a speculative trephining.—Mr. SUTTON referred to the frequency of cerebral hydatids in animals, but surgery was difficult, and localisation almost impossible. The most successful cases were those where, the bone being thinned and bulged, "eggshell crackling" could be obtained, and the site thus accurately determined.—Dr. PENROSE said that in sheep with "staggers" it was the practice of Scotch farmers to wait for bulging of the cranium, and then evacuate the cyst by puncture with trocar and cannula. About 25 per cent. of the cases recovered.

Dr. MOTT brought forward two cases of Mediastinal Growth involving the Pericardium and Heart. The first was that of a female aged twenty-one, admitted into Charing-cross Hospital for left pleural effusion. There was no definite history, except of rheumatism, six months previously. The symptoms at first presented were difficulty of breathing and cyanosis, besides the ordinary symptoms of pleural effusion; but, instead of Skodæ resonance over the upper part of the left front, there were dulness and increased resistance, extending even above the clavicle. This, together with the normal temperature and some dulness on the upper part of the sternum, were the only indications of a mediastinal growth. She was tapped many times, the fluid removed being from

fifty to seventy ounces at each operation, clear, and straw-coloured. About a month later a new symptom developed—namely, oedema of the legs and of the left arm. This, however, disappeared when the arm was suspended in a sling. A fortnight later it returned and involved also the left side of the chest. The pupils were never affected. She died from pericardial effusion, causing, together with the growth on the heart's substance, cardiac failure. At the necropsy, a large lympho-sarcomatous growth was found occupying the superior mediastinum, infiltrating the whole pericardium, and growing through into the right ventricle. On opening the pericardium thirty ounces of dark-stained serous fluid were removed, and the heart presented the appearance of being covered with candle-wax. Microscopically, it was found to infiltrate the lymphatic spaces of the heart, but without completely destroying the fibres. The left innominate vein was surrounded by the growth, and its walls were infiltrated, the vessel being filled with an organised thrombus. The second case occurred in a carpenter's labourer aged forty-five, who was admitted into Charing-cross Hospital for pain in the precordial region, vomiting, and weakness. The symptoms and physical signs indicated a mediastinal growth involving the left lung. A few days after admission the temperature went up to 101° without accountable reason. As there were absolute dullness and loss of vocal fremitus over the whole of the left base, it was thought possible that there was a localised empyema. The house physician inserted a hypodermic needle and removed pus. An operation ensued for empyema, but no pus was obtained, except a daily discharge on the dressings. The wound healed, and the man died a month later. At the necropsy a mediastinal lympho-sarcoma was found, involving the pericardium, bronchial glands, and the left auricle of the heart. There were secondary deposits in many of the abdominal organs. The left lung was completely infiltrated by the growth, and airless. The lower lobe was broken down into irregular communicating cavities, discharging purulent fluid. This accounted for the pyrexia and the supposition of a local accumulation of pus. The paper was illustrated by photographs and micro-photographs.—Mr. BARWELL saw the second case five days before death, and operated because the temperature rose, though there was absence of many of the signs of empyema, the intercostal spaces not being bulged and egophony being absent.—Dr. MAGUIRE pointed out that it was a characteristic of lympho-sarcomata to leave the endothelium of bloodvessels intact, whilst the sarcomata commonly eroded vessels and gave rise to local bleeding. On the other hand, the induction of the hemorrhagic diathesis, causing general hemorrhages, was more common in lympho-sarcomata.—Mr. ROGER WILLIAMS questioned the origin of the growth from the thymus gland. Malignant disease was very rare in structures like the clitoris, male breast, prostate, and thymus, which were gradually undergoing suppression.—Mr. GODLEE discussed the question whether the fluid was more commonly serous or sanguineous. The temperature was often raised considerably in cases which were involving the pleura, and in many instances it was almost impossible to differentiate it from empyema.—Dr. MOTR replied that the growth in the first case did not penetrate the vascular endothelium. The presence of symmetrical adhesions to the sternum different in colour to the rest of the growth led him to conclude it might have originated from the thymus. When the pleural fluid was clear he thought it indicated non-involvement of the lungs. The pressure of the soft growth had produced no appreciable alteration in the fibres of the main nerve trunks, and the heart fibres in the area of infiltration, though they had undergone alteration in shape, had preserved their striation.

Dr. ANGEL MONEY showed a large rounded Tumour growing in the mediastinum of an infant aged fifteen months. It was the size of a man's fist, and projected chiefly into the right side of the thorax; it extended from the fifth dorsal vertebra to the diaphragm; it was one-fourth the size of the thoracic cavity, and caused extensive collapse of the lungs; it pushed the heart, aorta, and vena cava in front of it, and displaced the liver downwards; it did not grow from the vertebra, and the spinal column was not eroded. During life the symptoms resembled those found in extensive collapse of the lungs; there was no fever; the physical signs were extreme dullness over the right lower lobe, with absence of breath sounds; elsewhere bronchitic rales obtained. An exploring needle thrust into the dull area felt as if held in dense solid tissue; no fluid

could be withdrawn. Microscopic examination proved the tumour to be a small, round-celled sarcoma, without any striated muscular tissue.

Dr. RADCLIFFE CROCKER related the case and showed the drawings and microscopical specimens of Paget's Disease affecting the Scrotum and Penis. The patient was a whitesmith, aged sixty, in whom the disease began in the summer of 1886. Without apparent cause a superficial ulceration appeared on the anterior part of the scrotum and under surface of the penis, somewhat resembling eczema, but very sharply defined, and the excoriation was evidently deeper than an ordinary dermatitis. In spite of a great variety of treatment, both external and internal, the disease gradually extended, especially to the left, until November, 1887, when two nodules were noticed on the left side—one the size of a pea, the other of a large bean. They were firm to the touch and covered with a yellowish secretion. The malignant nature of the affection was then apparent and its similarity to the disease of the nipple recognised, an analogy in which Sir James Paget concurred. The whole diseased area was therefore excised by Mr. Godlee and sound cicatrization took place, and six months later there had been no recurrence. The microscope showed an alveolar structure, in some places with a scanty and in others with a more abundant stroma. The alveoli contained aggregations of small epithelioid cells, suggesting in many respects the structure of rodent ulcer. Specimens were shown demonstrating the malignant change, commencing in the sweat coils and ducts.—Mr. ROGER WILLIAMS considered the disease cancerous, and, originating in the skin, it differed from epithelioma in the absence of "nests." Only one case in 200 of breast cancer started in connexion with "Paget's disease" of the nipple.—Mr. GODLEE had seen small nodules develop on a rodent ulcer, and in them a moist surface was common.—Sir JAMES PAGET had never seen a rodent ulcer with such large nodules as in the present instance. He regarded the disease as cancer following on an affection not at present clearly understood, but which differed certainly from eczema.—Dr. CROCKER, in reply, thought the case had nothing to do with ordinary dermatitis. Possibly it might be a rodent ulcer, arising in an abnormal situation and taking on an abnormal form. It differed from epithelioma in arising from the cuticular appendages, and not from the epidermis.

The following card specimens were shown:—

- Dr. M. MURRAY: 1. Fatty Tumour in Wall of Stomach.
2. Fracture of Cricoid and Thyroid Cartilages.
- Dr. PERRY: Two specimens of Acute Intestinal Obstruction, produced by adhesion between appendices epiploicae.
- Mr. TARGETT: Internal Rupture of Liver.
- Dr. EDMUNDS: Tubercular Ovary.
- Mr. LEOPOLD HUDSON: Primary Spheroidal-celled Carcinoma of Liver.
- Dr. MAGUIRE: Lympho-sarcoma of Mediastinum, involving the large bloodvessels.

MEDICAL SOCIETY OF LONDON.

The Surgical Management of Typhlitis and Perityphlitis.

AN ordinary meeting of this Society took place on Nov. 5th, Sir William MacCormac, President, in the chair.

Dr. W. T. BULL, of New York, read a paper on the Surgical Management of Typhlitis and Perityphlitis, illustrated by seventeen cases. The following is an abstract: During the past two years a number of cases of perityphlitis had passed under his observation, presenting every phase of that complex affection, and with the object of making a brief summary of the results of treatment he separated them into three groups. The first consisted of ten cases in which the abscess was opened by incision through its walls, without opening the general peritoneal cavity, at periods varying from seven days to six weeks from the beginning of the attack; they all recovered. They represented the cases which surgeons had usually dealt with successfully since Parker, in 1867, demonstrated the advantage of the extra-peritoneal incision before fluctuation. The second group comprised six cases in which the peritoneal cavity was opened seven times for supposed perforation of the appendix with developing peritonitis. The earliest operation was done thirty-six hours after the first symptoms, the latest on the fifth day. Death ensued in two, one being due to an incomplete operation, the other to both a faulty operation and

an unusually extensive peritoneal suppuration. The third group was represented by but a single case, and he had rendered it conspicuous because it typified a class of cases which he believed would soon be more frequently reported. In the presence of threatening symptoms on the twelfth day of a perityphlitis, the abdomen was opened; no pus was found, nor were there evidences of recent peritonitis, but the appendix was buried in a mass of old peritoneal exudation. The universal comment on fatal cases was that the operation should have been done earlier, though it was difficult to choose the right moment for interference. He used the term "perityphlitis" in a general manner, to indicate an inflammation of the cæcum or appendix, together with their peritoneal investment, or the cellular tissue of the iliac fossa, rather than to limit it to its more correct application, the inflammation of the peritoneum investing the cæcum. We were not yet in a position clinically to distinguish between inflammation of the cæcum and of its appendix. Most observers agreed that ulceration leading to perforation was by far most frequent in the appendix, but they admitted the common occurrence of catarrhal inflammation in the cæcum, in which the appendix participated. The term "typhlitis" alone, or "appendicitis," did not express the entire pathological condition. Either might be the starting point, but the invasion of the peritoneum or the cellular tissue was the more significant lesion at the stage when we were capable of appreciating it. Perityphlitis, from whatever cause produced, was accompanied with inflammation of the neighbouring peritoneum. Resolution left behind adhesions which bound the cæcum and appendix, or both, to the parietal peritoneum, intestine, or omentum. Suppurative inflammation and gangrene were induced by perforation, the accumulating pus being situated primarily in the appendix, and later in the peritoneal cavity, limited by adhesions, and forming an intra-peritoneal abscess. This might remain shut off from the general cavity, or the process might speedily or gradually infect the whole peritoneum by rupture of adhesions, or infection by contiguity. Or the adhesions might be firm enough to protect the cavity, and the pus might, by destruction of the parietal peritoneum, burrow in the cellular tissue of the iliac fossa, the sheath of the psoas, behind the ascending colon, &c.; in this way a secondary extra-peritoneal abscess might be formed. These latter had no doubt formerly been over-estimated in importance and frequency; they were founded on the incorrect traditional anatomical relations of the peritoneum, and substantiated by necropsies made after the disease had been weeks in progress and traces of the earlier processes had been obliterated. The following considerations proved the correctness of the conclusion that the origin and situation of the abscess were intra-peritoneal in the early stage. 1. Anatomical investigation showed that both cæcum and appendix were almost always completely invested with peritoneum. 2. In operations for well-developed abscess, the iliac fossa was found free from infiltration, while the inner wall of the abscess cavity presented the soft irregular feel of agglutinated intestinal loops. 3. Necropsies and operations performed before the seventh day showed the collection to be intra-peritoneal. But there was one way of accounting for the extra-peritoneal abscess as a primary condition: the appendix, or even the cæcum, in recurring attacks of catarrhal inflammation became surrounded by a mass of fibrinous exudation, which glued it to the parietes and practically made it extra-peritoneal; the excision of the appendix, as recommended by Treves, might under these conditions become very difficult, necessitating much disturbance of tissue and leaving large raw areas behind. The general rule of treatment of all purulent collections, to evacuate the pus as early as it could be detected, met with three difficulties: one class of cases, commencing with severe symptoms, such as were suggestive of pus, sometimes ended in resolution; in others, the suppuration, being limited by strong peritoneal adhesions, might be led to a safe termination by simple incision for abscess; whilst in others, again, the process, having spread to the general cavity, could only be arrested by thorough laparotomy. In this dilemma a glance at the progress already made helped us to formulate rules for our guidance. The first advance was made by cutting for pus before fluctuation was detected; the second was the abandoning the idea that constitutional symptoms would always enable us to determine the presence of pus, and this led to the adoption of the practice of exploring doubtful cases with the hypodermic needle. In early perforation with general peritonitis, he advocated a third advance by

insisting on the performance of the operation before the generalised peritonitis was well established, and by adopting the axiom that the risk of operation or exploration was less than the risk of the continuance of the disease. As a means of fixing his attention on the danger point of this affection, he had disregarded the division into acute, sub-acute, and chronic cases, and had chosen rather to divide them into those associated with spreading or with limiting peritonitis. In practice it might be said one met with two classes of cases: 1. Catarrhal perityphlitis which tended to resolve; it occurred in a large number of cases, and might go on to suppuration. 2. Suppurative perityphlitis, when suppuration, perforation, or gangrene occurred with (a) spreading peritonitis, (b) limiting or circumscribed peritonitis or "intra-peritoneal abscess," and (c) cellulitis, iliac or lumbar, or both, or "extra-peritoneal abscess." This was secondary in most cases, but where the appendix was extra-peritoneal, or where it or the cæcum had been excluded from the peritoneal cavity by old adhesions, it might be primary; and (d) he would add portal phlebitis, with or without hepatic abscess. He then mentioned the diagnostic features of the different phases of perityphlitis, referring first to that group of symptoms which were attributed to a catarrhal inflammation of the cæcum or appendix without perforation; dull and fleeting abdominal pains, chiefly referred to the right iliac fossa, with tenderness, anorexia, constipation, or diarrhoea, persisting for from two to ten days, and sometimes followed by the more serious symptoms of suppuration or perforation. When the latter happened, the abdomen and rectum should be examined repeatedly for signs of inflammatory swelling in the iliac fossa, tenderness and induration over a limited area, with or without a sausage-shaped faecal mass. The urine and passages should be examined for pus. A return to the normal temperature, with lessening acuteness of the local signs, indicated resolution; whilst persistence of the fever and swelling caused apprehension of suppuration, especially if the induration became softer. Even the temperature might suffer but slight elevations when the suppuration was deep-seated or extended into the cellular tissue, but there was invariably debility, with progressive emaciation, sweating, and marked anæmia. In order to determine the presence of pus under these circumstances he believed the use of the exploring needle fully indicated; it should penetrate a tumour if such existed, and not only should the iliac fossa be examined, but the region behind the ascending colon. He then related three cases which were characterised by disappearance of fever and local pain after several days, but a vague swelling persisted in the right abdominal region for several weeks. Needle puncture revealed the presence of large quantities of pus, which was evacuated with a favourable result. In a fourth case, by means of the needle pus was detected at the end of a week; the abscess was opened and the patient was well in a month. He then gave a *résumé* of the more serious phenomena, which followed sometimes on a moderate course of symptoms, and which were generally considered indicative of perforation: the sudden seizure with severe abdominal pain, with or without vomiting, the general abdominal tenderness, the increased rapidity of pulse, and the rise of temperature from 100° to 103° F., followed in rapidly spreading cases by collapse for an hour or two, when the vomiting recurred and became feculent in character, leading to a lethal result in two or three days. The continuance of marked local or general symptoms during the first twenty-four or forty-eight hours after the onset of a perforative perityphlitis justified the conclusion that peritonitis was spreading and assuming proportions that were compromising to the safety of the patient. There was a decided difference in the features of the disease when the peritonitis was circumscribed. The onset of the symptoms might be equally severe and alarming, but the following day showed amelioration, and by the third day doubt should cease. The general plan of surgical treatment should be as follows. The more rapid development of the symptoms, the earlier should the surgeon interfere. In the presence of signs of spreading peritonitis, laparotomy should be performed at once, whether they were manifested immediately after the onset of the disease or in the course of milder symptoms. An exploration in cases of doubt would be preferable to waiting for further indications. When peritonitis remained strictly circumscribed, the abscess should be opened by the end of the first week, or as soon as pus could be detected with the needle. But, even if no pus could be found in this way, an incision

would be justifiable in the presence of such symptoms as were indicative of prolongation of the suppuration in the cellular tissue. Before operation was decided on, the treatment should be limited to rest, liquid diet, or, in cases of frequent vomiting, rectal feeding or stimulation, opium sufficient to quiet the pain, and the relief of constipation by enemata; the latter were useful in cases that simulated intestinal obstruction as a means of differential diagnosis. The operations should be done with antiseptic precautions, but for the peritoneal cavity he had found it wise to avoid solutions stronger than 1 to 10,000 of bichloride of mercury, or of 1 to 100 of carbolic acid. Mr. Bull then described his methods of operating, preferring for laparotomy a vertical or slightly oblique incision three or four inches in length, leading up from a point a finger's breadth or an inch above the middle of Poupart's ligament; and for incision of abscess a cut starting from the same point, but directed either parallel to the ligament or approaching nearer the vertical, according to the situation of the induration. He insisted on the necessity in both cases of determining the limit of the pus, and in the former of resecting infected omentum. He summarised his conclusions as follows: 1. Our present knowledge justified the statement that both cæcum and appendix might be the starting point of an inflammation which, spreading to the peritoneum investing them, or to the peritoneum and cellular tissue of the iliac fossa, constituted a complicated disease, and which, for sake of convenience, we called perityphlitis. This might be in its clinical course resolving or suppurative, each marked by definite symptoms in some cases, in others difficult to distinguish. 2. Needle exploration was a justifiable and desirable method of diagnosis, though attended with some risks. These might be reduced to a minimum if care were taken to reserve the practice for cases in which the symptoms had lasted several days, and in which a distinct induration "tumour" could be made out. 3. Suppurative perityphlitis might be a spreading or a limited (circumscribed) peritonitis. Both began with the same set of symptoms, and it was important to discriminate in the first twenty-four or forty-eight hours, or even on the third day, between them. The presence of any of the local or constitutional signs of general peritonitis justified the diagnosis of a spreading inflammation, and called for the performance of laparotomy. The absence of these symptoms or their strict localisation warranted a delay of varying length. Any time after a week the abscess might be opened by an incision which must reach the pus, whether it were extra- or intra-peritoneal. 4. In doubtful cases the risk of exploration was less than the risk of the disease. 5. The propriety of exploring or removing the appendix in recurring cases must still remain *sub judice*.

Sir WILLIAM MACCORMAC thought that many of Dr. Bull's valuable conclusions would help towards a correct diagnosis in cases of obscure abdominal inflammation.

Mr. TREVES thought that it was possible to go a step further than Dr. Bull had done. Clinically, one heard a good deal of inflammation in and around the cæcum, but it was certain that paratyphlitis could not exist, and there was no reason why the cæcum should be especially liable to catarrhal inflammation or for a normal appendix to be similarly attacked. When the history of typhlitis came to be written from the pathological side, the appendix would be found to play the chief part in it; lesion of it would certainly account for 70 per cent. of the cases. It was exceedingly rare to find pus anywhere in this region, except in the peritoneal cavity. Surgeons were now agreed as to the value of early operation; but, with regard to the needle, he thought it a little unsafe, because of the uncertain position of the cæcum. He himself would rather undertake a small carefully conducted operation by incision. Lembert's suture could not be applied to an aperture in the cæcum produced by ulceration; and in removing the appendix the greatest possible care should be taken to suture the mucous membrane by continuous stitch, and to apply Lembert's suture to the peritoneum. If this could not be done, the stump should be brought to the surface. Relapsing typhlitis depended upon trouble in the appendix, and the latter should be removed in a period of sound health between the attacks.

Dr. WEIR, of New York, said he had been much interested in these cases. The advantage of early operation was proved by statistics; of those operated on after the eighth day 17 per cent. died, whilst those operated on before the eighth day showed a mortality of only 8 per cent. He did not believe

in primary catarrhal inflammation, nor in the starting of the process from stercoral ulcers; but he thought nearly all cases were due to inflammation and perforation of the appendix. Of 3000 cases only three were found to have perforation of the cæcum. He was an advocate of early operation, the avoidance of purgatives, the administration of opium, and the maintenance of absolute rest throughout the treatment. The general practitioner would ask, Why operate early when certain evidence of abscess would be present later, and when the pus has got outside the peritoneal sac? But of 100 necropsies, twenty-two were found to be limited intra-peritoneal suppurations; thirteen had a limited suppuration, together with general peritonitis; fifty-seven had general peritonitis without abscess; and in four only the suppuration was also extra-peritoneal, but in these even there was a large necrotic opening between the intra- and extra-peritoneal sacs. When there was a "tumour" in this region, it was necessary at once to arrive at the conclusion whether pus was present; and this, he thought, should be determined rather by incision than by the needle. Where the symptoms were violent and no swelling existed, and the inference was that general peritonitis was developing, he thought that laparotomy should be done. Many of the severer cases presented symptoms only of obstruction, and in some instances the obstruction continued after operation, apparently because the gut was paralysed by the septic peritonitis.

Mr. KNOWSLEY THORNTON said that with regard to the cases that went on to peritonitis Mr. Bull seemed to be in favour of washing them out, but he had never found it necessary to do so; the odour alone certainly did not indicate that the pus was septic, and he thought better results would be obtained by simple drainage without washing out. He was sure that if patients were kept absolutely at rest on the back cases with persistent sinus would be avoided; the sinus once formed was usually quite incurable. As an illustration of the obscure pathology of some cases he quoted an instance where in laparotomy the appendix was found erect and full of pus; it had no twist and contained no concretion, nor were there any neighbouring adhesions. He related another case supporting the value of needle puncture in some instances, where a large dull mass in the right iliac fossa, associated with signs of perityphlitis, disappeared completely after being explored with a needle. In ovariectomies he had frequently seen Sir Spencer Wells ligature and cut off the vermiform appendix, and he had done it himself in many instances, but could not recollect a bad result from it. He thought it extremely probable that the cæcum might be the seat of catarrhal or stercoraceous mischief, because faeces might lodge and accumulate there, and cause irritation; at any rate, he thought we were not yet justified in altogether excluding them.

Mr. BARKER said his operative experience was limited to two cases, both of which were fatal; the first was operated on thirty-six hours after the onset of symptoms and general peritonitis was found; he regretted he did not perform a median laparotomy, as he found he could only incompletely wash out the peritoneum: the second case died from shock a few hours after the operation.

Dr. KINGSTON FOWLER referred to the observations of Fagge, who had related a number of cases of typhlitis treated medically by opium and absolute rest; not a single case terminated fatally. In cases where purgatives were given, or which were treated injudiciously in other ways, surgical interference might be needed.

Dr. BULL, in reply, said he was accustomed to insist on the importance of absolute rest and abstinence from purgation, but he thought a rectal injection at the onset was useful. He confessed he had not had much pathological experience of it, but he felt bound to believe that catarrh of the cæcum might be possible. He was not prepared in all cases to remove the appendix, as the patient might never have another attack. He himself had never had an accident from using the needle, but he had heard of cases in which peritonitis was supposed to have been caused by it. He had frequently ligatured the appendix without accident, though he allowed that Mr. Treves's method was more elaborate and scientific, and probably wiser. In reference to washing out, we should never hesitate to wash out faeces from the peritoneum, and he could not see why the same should not be done with fluid that smelt as bad. For an incision he preferred that starting from the middle of Poupart's ligament, because it not only enabled better examination of the cæcum and appendix, but permitted inspection of the pelvic contents as well.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THE first meeting for the present session was held on Oct. 11th.

The PRESIDENT (Dr. J. W. MARTIN) gave his opening address on "Our Work and some of its Difficulties." He alluded to the good that must always result from the friendly intercourse of medical men, and he strongly advocated the promoting of friendly relations between members of the profession as a means of averting misunderstanding. Young men too often, he thought, commenced practice with an imperfect knowledge of what was professionally allowable and what not. There was no authority in matters of ethics; if there were, it was possible that advantages might result. Passing to the non-medical matters, he instanced the difficulties experienced in diagnosing the exact nature of tumours, of deciding in cases of miscarriage and retained placenta &c., even where sepsis was present, and the safest and wisest course to pursue; and, referring to the different methods of treatment, he said each plan had its advocates in men of sound knowledge and ripe experience. A wide divergence of opinion was held as to the value of drugs; practitioners who give no medicine ought to have the courage of their convictions, and to explain to their patients how useless they were. Secondly, there were those who used doses and single drugs, which they hoped to be able to prescribe in such well-regulated quantities that the expected result must be obtained with clock-work precision. But he confessed he belonged to the third class, who believed in the efficacy of drugs, and appreciated them, singly or in combination, as their own experience or that of others dictated. Medicine was an art, and must always remain an art.

A vote of thanks was accorded the President on the motion of Dr. Law and Mr. Browning.

On Oct. 25th Mr. A. Jackson occupied the chair, when specimens were shown and the following papers read:—

Lupus of Larynx.—Dr. BURGESS showed this patient, in whom the interior of the larynx was involved, nearly the whole skin of the face being affected; perforation of nasal septum; patch on soft palate; ulceration of epiglottis; considerable swelling of posterior wall in inter-arytenoid space; mass of fleshy, warty excrescence over and near the base of the right arytenoid; movements of right vocal cord impaired. The disease began fifteen years ago on the side of the nose. The voice had been affected for about a year.

Mr. RHODES introduced a patient with Favus, with characteristic crust and odour.

Sarcoma of Femur; Amputation at Hip Joint.—Mr. ARTHUR JACKSON showed this specimen, from a girl aged thirteen. It appeared to arise from the lower and anterior surface of the femur, was of rapid growth, very vascular, and contained a quantity of bloody serum. The history of the case only extended over three months. She suffered little or no pain when she was at rest, but complained of tenderness on pressure. The leg was amputated at the hip joint according to Lister's method, and Esmarch's elastic band was ably held by Mr. Richardson, the house surgeon of the infirmary, and little or no blood was lost. On Oct. 4th the patient was operated on, and so far has done very well.

Endosteal Sarcoma of Tibia.—Mr. W. F. FAVELL related particulars of this case, occurring in a young woman aged nineteen. She was admitted into the infirmary on June 15th with a small vascular swelling in front of the head of tibia. The malignant character was recognised. Amputation was urged and declined. She left the infirmary. A bone-setter applied escharotics. The growth increased rapidly. The surface became ulcerated, and frequently bleedings occurred. In consequence of a smart attack of hæmorrhage she again came to the infirmary. Amputation above the knee was performed on Oct. 4th, and she is now convalescent. The disease proved to be sarcoma, commencing in the cancellous structure of the head of the tibia, causing rapid swelling and absorption, and quickly developing into a large malignant mass in front of the tibia head.

Ovarian Dermoid Cyst.—Dr. KEELING showed these specimens, recently removed from a female aged thirty-two. The cyst had contained about three pints of thick caseous matter, mixed with hair, and attached to its inner surface were portions of bone, two teeth, and skin with hair growing thereon. The upper portion of the cyst wall was gan-

greous. The cyst was continuous by a broad pedicle with the fundus of the uterus and the left broad ligament, and had been growing for about thirteen years. The patient was doing well.

Oertel's Method of Treating Chronic Heart Disease.—Dr. BURGESS read this paper. The main feature of the Oertel diet—viz., limiting the quantity of fluid—was shown to be founded on a fallacy. The "hill climbing" might afford excellent treatment for certain patients with cardiac trouble, caused or intensified by vicious habits and unhealthy surroundings, but was considered unsuitable for valvular and other heart lesions in which there were serious symptoms of a disordered circulation. The paper in the main agreed with the views of Bamberger and Lichtheim.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

THE first meeting of the fourth session of this Society was held in the Faculty Hall, St. Vincent-street, on Oct. 24th, Professor A. Wallace, President, in the chair.

After the Secretary and Treasurer had presented their reports, and the President had delivered his retiring address, the following were elected office-bearers for this session:—Hon. President: Professor W. Leishman, M.D. President: J. Stuart Nairne, F.F.P.S.G. Vice-Presidents: Drs. M. Cameron and R. Park. Treasurer: Dr. R. Pollok. Reporting Secretary: Dr. L. H. L. Oliphant. Secretary: Dr. G. A. Turner. Council: Drs. W. L. Reid, P. C. Smith, G. Halket, D. Tindal, T. F. Gilmour, and A. Scott.

A discussion then took place on "The Dorsal versus the Lateral Position in the use of the Forceps," which was introduced by Dr. M. Cameron, and in which Drs. S. Sloan, A. Wallace, Marshall, Tindal, Gilmour, Turner, Pollok, Stark, Knox, Halket, Miller, and Nairne took part.

Reviews and Notices of Books.

A System of Gynecology by American Authors. Edited by MATTHEW D. MANN, A.M., M.D. Vol. I. Edinburgh: Young J. Pentland. 1887.

THIS work is a collection of articles on various subjects concerning the diseases of women, by many contributors working under the direction of the editor. Among the essays some are excellent. In the second volume the subjects will, we suppose, be completed.

The first article, "Historical Sketch of American Gynecology," by Dr. Edward W. Jenks, is of purely national interest, as it deals almost exclusively with the development of gynecology in America, and is not a contemporaneous history of other countries.

The second article, "The Development of the Female Genitals," by Dr. Garrigue, occupying fifteen pages, and well illustrated, is a useful summary, though perhaps somewhat too condensed.

The third article, "The Anatomy of the Female Pelvic Organs," by Dr. Henry C. Coe, is one of the best in the volume, the subject being treated by a writer practically and personally familiar with it. We are glad to notice the caution with which the author speaks of engorgement of the appendages, bearing as it does on the question of their removal. On page 162 we read: "In every case in which a ligature is placed around the proximal end of the tube, the mucous membrane of the excised portion beyond the ligature is so congested that it appears of a dark-red or bluish colour; the same hue is observed in the tubes of women who have died suddenly during menstruation. On the other hand, in specimens removed from the cadaver, the membrane is certainly much paler than it is during life. This fact is of importance in connexion with the diagnosis of 'catarrhal salpingitis,' one which is frequently made at the present day by laparotomists." On page 163 the author says: "In spite of Bandl's assertion, that he had found

catarrh of the tubes in more than half of the specimens that he had examined, the writer believes that one is unwarranted in assuming the presence of a pathological condition of the tubes because of a slight congestion and increase in the amount of mucus, both of which occurrences are normal during menstruation. Certainly, no one is justified in making the diagnosis of catarrhal salpingitis from a gross inspection of the organs." (On page 168 the words "left" and "right" appear to have been transposed in describing the relations of the ovaries.) On page 169 we read: "On the other hand, ovaries that are apparently the seats of degenerative changes may discharge their functions so perfectly as to satisfy the demands of all except the ardent laparotomist." (On page 171, "g" in Fig. 65 should be "y.") On page 182 is the following: "From what has been said regarding the variations in shape, size, and external appearance, it may be inferred that there are many opportunities for error when we attempt to decide delicate shades of difference between the normal and pathological by a hasty inspection of the organ" (ovary). On page 102 we meet a statement which we are surprised to find in an article written by so accurate an anatomist as Dr. Coe, regarding the "fourchette." "This is a delicate fold of skin (or skin and mucous membrane?) which unites the posterior extremities of the nymphæ. It is situated in front of the posterior commissure." The posterior commissure is thus defined on page 99: "The posterior commissure is still less distinct (than the anterior), and only appears as a band when the labia (majora) are widely separated. It is a region rather than a well-defined bridge of skin; it is not possible to identify the exact point at which either labium ends and the perineum begins." Therefore it seems to follow that the "fourchette" is something situated anteriorly to the anterior margin of the skin of the perineum (frenulum), and posteriorly to the posterior margin of the hymen—in other words, in the fossa navicularis (which we do not find described). This region is the puzzle of students; and no wonder, for objects are described which cannot be found. The fact is that the fourchette, the frenulum, and the anterior margin of the skin of the perineum are one and the same; that nothing in the shape of a band can be found between this and the hymen; and that the space between the anterior margin of the perineum (i.e., fourchette or frenulum) and the posterior margin of the hymen is the fossa navicularis. In Fig. 37, page 97, from Luschka, this error is figured. The arrangement there described has never been seen by us in any adult woman. In very young female children, when well nourished, the labia majora may be seen continued as folds which meet posteriorly, and thus surround the vulva, but we have never seen this arrangement in the adult. The nymphæ end in free extremities posteriorly, and form no commissure. We think Dr. Coe has here failed to observe his own well-expressed principle (page 228). Here, speaking of the perineal body, he says: "It is common to represent it in mesial sections as a perfect triangle. It is highly desirable that these diagrammatical figures should cease to be reproduced in modern text-books, to mislead the inexperienced reader, and to give him false ideas of the aim of gynecological surgery." On page 234 the writer speaks of the "conjugate of the outlet." There is no such thing. A conjugate is not an antero-posterior diameter, but the lesser diameter of an ellipse; and it happens only that this runs antero-posteriorly at the brim. There are no conjugates except at the brim. The figures are well selected, but might have been multiplied with advantage, since description in anatomy is impossible without demonstration. By the way, a great desideratum at the present time is a figure of the uterus, broad ligaments, &c, seen from behind. There are plenty of figures of these parts from above and from

the front, but no good figure, that we know of, from behind.

The fourth article, "Malformations of the Female Genitals," is by Dr. Garrigues, and is a fair summary of the subject.

The fifth article, "Gynecological Diagnosis," is by Dr. Egbert H. Grandin. The subject is a somewhat difficult one, and the article contains much that does not accord with what we consider sound views. On page 285 a prominent position is given to questions to be directed to the ascertaining the details of the sexual relations; and this is surely a matter for questioning in exceptional instances only, and to insist upon it as a common cause of symptoms is to give a false and objectionable view to the practitioner. Figs. 111 and 112 are very unnecessary, and not in accordance with the delicacy which should be observed in such an article; so is a statement on page 298 with regard to digital examination—a statement in our opinion incorrect, and, if incorrect, objectionable. On page 301, the rectal examination is limited "to cases where congenital or acquired imperfections or obstructions of the genital canal forbid the methods of examination already detailed (the vaginal method), and to virgins." In our opinion, this examination should never be omitted when it is desired to explore any anomaly in the posterior half of the pelvis, which in these cases can be more accurately investigated by this method. On page 304 the Sims speculum is lauded in terms common in American works, and we find the statement "that skill in the diagnosis and treatment of uterine disease, properly so called, is most marked in those countries where the dorsal position is made to subserve the purposes of the digital examination, and the left-lateral the specular." The first of these statements is probably intended to exclude the British Isles, and is unfounded; we doubt much whether patients have cause to be grateful to the Sims speculum if it has rendered the vagina accessible to the innumerable minor gynecological operations which are so much in vogue in many parts of the world. Ferguson's speculum, on the other hand, which gives by far the best light, is mentioned in terms which show the writer to be either practically unacquainted with it or singularly unsuccessful in its use, for we read the astounding statement (page 305): "Often than not, however, the speculum must be withdrawn and reintroduced a number of times before this [engaging the external os in the field of vision] can be accomplished." The pages devoted to dilatation of the cervix, again, are not satisfactory. As regards tents, we are told that (page 321) "sponge tents have long been in favour on account of their great expansile power"; the fact being that of all tents their expansile power is least. The mode of rendering them aseptic is not apparently known to the author. The laminaria tent is said to have but little dilating power, the fact being that it expands to no great amount, but with far greater power than a sponge. Mechanical dilators with divaricating blades are given a prominent place, in spite of the objection that they cannot expand equally, and tend to tear the cervix; and Hegar's dilators are not mentioned.

The sixth article, "General Consideration of Gynecological Surgery," is by Dr. E. C. Dudley. It is said (page 328) that "permanganate of potash in solution decomposes so readily that it is unreliable for antiseptic purposes." We have had long experience of Condy's fluid, and cannot endorse this statement, which is contrary to our observations. Corrosive sublimate is said to destroy the plating of instruments. If by this nickel plating is meant, we can only say that we have used it for nickel-plated instruments for years without any apparent corrosion. The directions for the application of sutures are good, and illustrated copiously by figures. Here, again (page 354), we meet the subject of dilatation of

the uterus. We find the old and quite unproved statement that relative stenosis of the os externum causes accumulation of secretions in the uterus and dysmenorrhœa. On this subject we have so often expatiated that we shall not do more than mention it here. "Diverging instruments"—i.e., divaricating forceps of two or more blades—are here again recommended.

The seventh article, "General Therapeutics," is by Dr. Alexander J. C. Skene, deals with generalities, is only twenty pages long, and does not seem to us to elucidate the subject.

The eighth article, "Electricity in Gynæcology," by Dr. A. D. Rockwell, disappoints us much. It also deals with generalities, and can hardly guide the inquirer, the several sections being in most cases very brief and inadequate. We should have been glad of some tangible facts from a writer of the author's experience. The subject of the treatment of extra-uterine gestation leaves us with little more than vague statements which have been accepted in many quarters with unquestioning credulity, and have so far been recorded without the objective facts necessary to convince the honest sceptic.

The ninth article, "Menstruation and its Disorders," by Dr. W. Gill Wylie, concerns a subject of great interest and great difficulty, but does not contain a summary of the various views entertained by competent authorities or a discussion of their merits. The definition of dysmenorrhœa is (page 419) limited to "the difficulty caused by the flow from the time it begins in the uterus," an artificial and not a clinical limitation, and one which excludes many forms of suffering which should be included under the name "dysmenorrhœa," which, after all, is only the name of a symptom of which we cannot be said to know the cause in most cases with any certainty. Obstruction is unquestionably stated to be the common cause (page 421), a statement which is surrounded by so many well-known objections that these should have been plainly set forth and refuted before such an affirmation should have been allowed to stand. The treatment advocated by the author is illustrated by a typical case imagined by him, and setting forth what he considers the appropriate treatment. A young woman of seventeen years of age (p. 425), complaining of dysmenorrhœa, is thus treated: After ascertaining the condition of the uterus and the organs as far as practicable, the patient is treated twice a week with glycerine and boro-glyceride vaginal pledgets, which after two or three weeks usually render the uterus freely movable; then the vagina is disinfected and the sound passed. After sufficiently long preparatory treatment of this kind, the uterus is dilated with a divaricating dilator, and the uterine cavity swabbed with pure carbolic acid, and iodoform is blown against the cervix. The dilatation is repeated in a week, the glycerine pledgets being continued in the meanwhile. The dilatation is repeated twice or thrice in the intermenstrual periods. Had the author not expressly said so, we should have refused to believe that any physician, in America or elsewhere, could be found to advise this treatment, or that any mother could be found, in America or elsewhere, who would allow her young daughter of seventeen to be subjected to a procedure the grave objections to which are obvious. Far better that she should suffer from dysmenorrhœa all her life than that she should be "cured" of it by the treatment in question.

The tenth article, "Sterility," by Dr. A. Reeves Jackson, is a well-written essay; but the author does not seem to think that we know very little of the causes of sterility, and that in a large number of cases these are beyond our control. The generative functions are very delicate and obscure, and should be remembered in connexion with unfertility in plants and animals if our views are to be scientific. The

author might advantageously have made greater use of Dr. Matthews Duncan's Galstonian lectures.

The eleventh article, "Diseases of the Vulva," by Dr. Matthew D. Mann, is learned, and is one of the best in the volume. The author considers the disease called by Dr. Matthews Duncan "*lupus hypertrophicus*" to be really "*fibroma diffusum*." The great difference of opinion on the subject, when discussed at the Obstetrical Society, is recent enough to be remembered.

The twelfth article, "The Inflammatory Affections of the Uterus," by Dr. Chauncey D. Palmer, includes the cervix. It is a good essay, and authorities are freely quoted, which enhances its value.

The thirteenth article, "Subinvolution of the Uterus and Vagina," by Dr. Thaddeus A. Reamy, concerns an obscure and unsatisfactory subject, and confirms our doubt as to the reality of the disease apart from previous inflammation, a question which is here fairly discussed.

The fourteenth article, "Peri-uterine Inflammation," by Dr. Richard B. Maury, gives a valuable historical summary of the subject, in which much good work has been done. We need illustrations of actual preparations, which are much wanted in text-books.

The fifteenth article, "Pelvic Hæmatocele and Hæmatoma," by Dr. Ely Van de Warker, is an able discussion of a subject on which much more work requires to be done, and which cannot be said to be yet plain. Here, again, we should like illustrations of actual preparations. The differential diagnosis of the two conditions (page 758) fails, in our opinion, to elucidate the subject, but for this the author is not entirely to blame.

The volume contains essays of very unequal merit, the best being those on "major" and the worst those on "minor" gynæcology, the ailments concerning the latter being unfortunately the more frequent in occurrence, and also those in which there is more room for bad practice. We would call attention to a few errors in orthography: "*pubis*" (for *pubes*), "*hilus*" (for *hilum*), "*natis*" (singular for *nates*, which is always plural), "*Hager*" (for *Hegar*), "*Biegel*" (for *Beigel*, *passim*), and "*Fritz*" (for *Fritsch*, *passim*). Generally speaking, clerical errors are uncommon, and the work reflects credit on the printer and publisher.

New Inventions.

THE FITZWILLIAM AMBULANCE.

WE have had an opportunity of examining, at Mr. Stocken's carriage works in Halkin-street, the Fitzwilliam Ambulance, or at least that form adapted for road carriage. It consists of a stretcher on which the patient can travel either in a sitting or recumbent position, and which can easily be lifted off or secured on the carriage. The road carriage is drawn by hand like a Bath chair, or may be fitted for a pony; it is mounted on four wheels with indiarubber tyres, and has a wire trellis tray under it for a box of surgical appliances or anything else it may be desirable to carry, and is fitted with a hood and apron. There is also a folding stool on which to rest the stretcher when taken off the carriage. It seems very well adapted for the transport of sick or injured, and has the advantage of being devoid of loose nuts or screws which might be lost or mislaid. There is another form of carriage adapted for use in collieries which we have not seen, but from the description it appears very suitable for the purpose for which it is intended. There is only one objection to the stretcher when used by a patient in the sitting position. A cross-bar behind the legs just above the knee would probably be productive of discomfort; it would require to be well padded, or might possibly be bent or modified in some way to prevent the pressure. In all other respects the ambulance seems remarkably well designed.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 10, 1888.

THE meeting held on the 1st inst. at the Royal College of Surgeons gave expression once more to the general sentiment of Fellows and Members. The Association of Fellows, through the medium of their spokesman, Mr. JOHN TWEEDY, welcomed some of the changes as a small instalment of reform which had been extended to them in the Supplemental Charter, and in firm and dignified language he protested against the disregard shown by the Council of the College to the wishes of the Fellows and Members, expressed almost unanimously at repeated meetings. He maintained that the Fellows, Members, and the Council are the components of an integral corporation, and, consequently, that the rights and privileges of Fellows and Members of the Royal College of Surgeons of England should be really, and not nominally, exercised. This self-evident resolution (the text of which appeared in our last issue) was carried in a large assembly of Fellows and Members, with, we believe, only two dissentients. On behalf of the Members of the College Dr. DANFORD THOMAS pressed for the consideration of a further Supplemental Charter, and moved, in their first resolution, "that the Council of the College be invited to appoint a Committee to consider with representatives of the Associations of Members and Fellows of the College the matters to be included in the petition for such further Supplemental Charter." Sir GUYER HUNTER, M.P., moved the second resolution, which was modified as follows by Mr. RIVINGTON: "That this meeting of the Royal College of Surgeons of England resolves that the Members and Fellows of the College ought to be consulted as to all extraordinary expenditure." Mr. DICKINSON moved the following resolution: "That this meeting, having taken note of the privileges at present enjoyed by the Members of the College enumerated in the reply of the Council (pp. 26 and 27 of the Report), respectfully request the Council to add thereto the right of meeting at convenient times within the College walls for the purpose of discussing any question relating to their position as Members in which they may be interested; and with this view the Council is hereby requested to enact a bye-law instructing the secretary, upon the receipt of a requisition signed by twenty Members, or Fellows and Members, to arrange with the Members forwarding such requisition a convenient day and hour within one calendar month on which such meeting may be held upon the College premises." These three resolutions (on behalf of the Members) were carried by large majorities.

It will be interesting to follow hereafter the action taken by the Council of the College on the above resolutions, which embody the pith of the discussion; for, even at the risk of being considered tedious, we must point again to the anomalous position occupied by Fellows and Members of the College attending such annual meetings. These educated men may travel from all parts of Great Britain to their own College, may possibly speak at the meeting, but not

one of them can give an effective vote. If their votes coincide with the wishes, convenience, and policy of the Council, the latter make capital out of the gain; if their votes go against the policy of the Council, the latter maintain silence on the loss.

The annual meeting as at present regulated is a burlesque, and its title on the placards might be, "Heads, I win; tails, you lose." Beyond the statement made by Mr. HEATH, no councillor vouchsafed any explanation; the policy of the Council at this and on previous occasions is one of masterly inactivity. In conformity with what seems to have become a custom, the Council had one solitary champion; on this occasion it was Mr. SPENCER WATSON.

The Council of the College, in our opinion, would but act discreetly in recognising the fact that the storm is increasing, and in setting some value upon its repeated warnings. We are living in democratic days, but happily in collegiate circles the democracy is an educated democracy, and every Fellow and every Member should be as equally interested as every member of Council is in the well-doing of his own College. We contend, and shall continue to contend, that the present demands on the part of the Fellows are modest, and that the aspirations of the Members of the College are rational. Their verdict has been given since 1884 that ere long the College of Surgeons of England shall not be absolutely governed by a small handful of elected councillors, but by the sum-total of surgeons, Fellows, and Members—each in their respective spheres exercising their due rights and privileges as component parts of a great corporation. This consummation of reform cannot but add to the real stability of the College, as well as put an end to a contest which has been aggravated by the studied inattention of the Council.

In an article contributed to the current issue of the *Revue de Médecine* Dr. LANDOUZY draws attention to the excessive mortality of infants under two years of age, a mortality largely due to tuberculosis. He says that he has frequently drawn the attention of hygienists and pathologists to this fact, which seems to show the existence of relations between infantile tuberculosis and contagion, through artificial feeding on the one hand, and heredity on the other. (From returns made at the mairies of the several arrondissements in Paris, it appears that of the number of infants put out to nurse fully three-fifths are brought up by hand.) At the same time, he points out that, owing to the very early age of these subjects, tuberculosis in them does not present the striking symptoms and advanced lesions met with in older children, but destroys life like a general infective disease, often without any or with only slight characteristic appearances, such as granulations. If this view be adopted, the disproportionate mortality from tubercular infection in very early life will approximate generally to what Dr. LANDOUZY has himself observed during his five years' connexion with the Tenon Hospital, where he has been able to verify by post-mortem examination on such infants an average of one death from tuberculosis for 3.6 deaths from all causes. Hence he believes that tuberculosis will be found to figure amongst the principal causes of death among infants from one day to two years of age, instead of being amongst the least common. This belief is, he thinks, borne out by the statis-

tical returns of the city of Paris, wherein it will be found that tuberculosis, most rarely noted below the age of two years, becomes more and more notified as a cause of death in the second period of infancy. Thus, in the earliest years of life, the disease may be regarded as "bacillosis," disguised under the various inflammatory infections with which it may be associated (as bronchitis, pneumonia, pleurisy, &c.), and as the infant grows it will assume more definitely localised and therefore more readily diagnosed characters of tuberculosis. He reproduces the annual statistics of mortality during each of the five years 1881-85, and makes a calculation of the deaths from tuberculosis, by including under this head all those reported as deaths from scrofula, meningitis, convulsions, &c., within the period named. For example, in 1885, when in Paris there were 61,400 births registered and a general mortality of 54,616, the total mortality of infants under two years of age was 12,264. The number of such deaths officially returned as being due to tuberculosis was 442, or a proportion of 1 in 27 of the infantile mortality; but on Dr. LANDOUZY's calculation the tubercular mortality among such infants should be reckoned as 2162, or 1 in 5.6. In the whole quinquennial period, of a total mortality of 284,061 at all ages, 67,330 belong to infants below two years, or about one-fourth of the whole Parisian mortality. The amount of declared tuberculosis proportionate to the total annual mortality of infancy increases every year from the first to the fifth year of life; and even on these estimates it is surprising to learn that, of the 67,330 infants dying under two years of age, no fewer than 1531 were registered as deaths from tuberculosis, a figure which is probably far below the actual number referable to tubercular infection—from the fact that in so large a proportion the "cause of death" is returned from the local affection, rather than from the underlying and primary infective disease.

Having, then, in this somewhat rough method reinforced the tubercular series, Dr. LANDOUZY declares that the more correct return of deaths from tuberculosis would be: between the ages of one day and two years, 1 in 5.7; between one day and one year, 1 in 6; between one year and two years, 1 in 4; and for each year between three and five, 1 in 3; or, in other words, that the mortality from tuberculosis would increase year by year (by one-sixth in the first year, one-fourth in the second, and one-third from three to five years) up to three years of age, a period at which it would remain stationary to the end of the fifth year. At the conclusion of his article, Dr. LANDOUZY puts the results of his calculations in a striking form under the following heads:—1. The total Parisian infantile (under two years) mortality in a period of five years has reached an annual average of 13,466, equalling the population of Fontainebleau. 2. The mortality from tuberculosis in this period of life is quite different from what is imagined. 3. This calculated tubercular mortality would be 11,662 for a quinquennial period—equal to the population of Granville (Manche). 4. The annual calculated tubercular death-rate exceeds 2000—the population of Mentiers (Savoie). He goes on to point out that this frightful mortality is not irremediable, since, although inherited contagion of tuberculosis cannot be denied, in point of frequency it is not to be compared

with acquired contagion; that energetic prophylactic measures could largely control this destruction of infantile life; and that the subject of artificial feeding of infants, "too often given up to the grossest empiricism," should be made an object of the most active and urgent inquiry. Well may he remark that "in face of the 11,662 babies carried off by tuberculosis in five years, in face of the 67,330 babies under two years dying during this time in Paris from all diseases, many of which are assuredly avoidable—67,330 dead represent the population of Rennes!—the sanitarian should, with as much fear as remorse, hearken to this saying of the economist: 'Le gaspillage de la vie humaine est le plus ruineux de tous' (ROCHARD)."

In thus reproducing, as faithfully as space will permit, these conclusions of Dr. LANDOUZY, we commend them to the attention of physicians in this country. Infantile mortality is, as we all know, one of the great curses of civilisation. In a country like France its effects tell more severely than in an over-populated country like ours. Nevertheless, it is a reproach to medical and to sanitary science that it is not lower than it is. Malnutrition, resulting from deficient feeding and unwholesome air, is the main cause; and, whether this favour the development of tuberculosis or not, the remedy must be found in the first place in those directions. We dare say that Dr. LANDOUZY is right in correcting our impressions as to the comparative infrequency of tuberculosis in the very young. There is no reason why they, who are, above all, most likely to be subjected to the influences that favour its development, should not be liable to tubercular infection, and we quite admit that very many deaths are attributed to the local manifestations of a general disorder. But whether this be admitted or not makes little practical difference to the sanitary reformer, whose aim lies in the prevention of those conditions that favour the development of this as of so many other diseases which create such havoc in the early years of life. By grounding his argument upon the inferred amount of tuberculosis at this period, Dr. LANDOUZY has given an objective character to the subject, and pointed to a disease which, more than any other, is widely spread over all ages, and to the prevention of which attention was never more actively aroused than it is at the present day.

THE whole question of London water supply is raised by the decision of Mr. Justice FIELD and Mr. Justice WILLS on the powers of the Staines Local Board to prevent the discharge of sewage into the Thames. This decision has shown that no adequate law exists for the prevention of the pollution of the river, and that Londoners must be content to drink water from a polluted source until the Act of Parliament is amended or the source of supply changed. The Staines Local Board, it will be recollected, had been proceeded against by the Thames Conservancy Commissioners for permitting the drainage of certain houses to flow through a sewer into the Thames, and had been convicted of this offence on four separate occasions in 1881, 1882, 1883, and 1884. Finally, the Conservators indicted the Local Board for misdemeanour, the case was heard before Mr. Baron HUDDLESTON and a special jury, and it was upon the findings of this jury that the two judges have now given judgment. The Local Board, under Section 14 of

the Public Health Act, have power to purchase or otherwise acquire from any person any sewer or any right in respect of any sewer, but this section provides that any person who, previously to the purchase of a sewer by such authority, has acquired a right to use such sewer, shall be entitled to use the same or any sewer substituted in lieu thereof to the same extent as he would or might have done if the purchase had not been made. Their Lordships therefore decided that the Local Board could not be held to "suffer" the sewage of these houses to flow into the Thames, seeing that they had no power to interfere with the prescriptive right of these houses to drain into the sewer. The sewers, it is true, were vested in and were under the control of the Local Authority in accordance with the terms of Section 13 of the Public Health Act, but the case of *Glossop v. Heston and Isleworth* showed that they had only a qualified property vested in them.

It cannot be denied that the admission of this sewage into the Thames constitutes a real danger to London. Doubtless it is much diluted in its passage down the river, and the process of filtration to which the water is subjected by the Water Companies is a further safeguard, but Londoners pay a high price for the water supplied to their houses, and they ought to be able to use this for drinking purposes without risk. Even if the admission of sewage matter into the Thames through sewers could be prevented, it by no means follows that Thames water is a proper supply. Stained houses are largely provided with cesspools, and when the river is high, as our Commissioners have shown, these cesspools are flooded; Thames water, therefore, enters and flows from cesspools, and the danger is by no means limited to pollution in that locality. At different points along the river, and no great distance from the companies' intakes, houses are being built and cesspools provided, and as the population of this district increases the more polluted will the river become.

It is impossible to say how soon enteric fever, or even cholera, invading the Thames Valley, may demonstrate the danger to Londoners to which we refer, but it is lamentable that this should appear to be necessary before a change in the source of supply will be held to be necessary. At the present time no organisation exists for ascertaining with any degree of accuracy whether harm is not already accruing, nor will it be any statutory duty of the new County Council to determine this point; it can, indeed, only be investigated by a department of the State, and unfortunately the duties of the Local Government Board do not appear to cover a question of this kind. It may be hoped that the recent legal decision will create sufficient interest in the subject to lead to some provision being made for inquiring into the effect of Thames water upon the population, and for obtaining a safe supply for the metropolis.

THE words of Sir JAMES PAGET on the occasion of the Centenary of the Society for the Relief of Widows and Orphans of Medical Men will be found in another column. Seldom has his power of lofty speech been used with greater fitness or with more earnestness; certainly never in a better cause. Any society which has existed for

a hundred years and continues still in strength is to be respected. There are not many medical societies in London of such long standing; perhaps none, if we except the Medical Society itself, which was founded in 1773. Of the great benevolent societies of the profession that for the Relief of Widows and Orphans is the oldest, though even it was anticipated by one or two societies with a similar purpose in the provinces—notably by the Benevolent Medical Society of Norfolk and the City of Norwich (established by Mr. JAMES JONES, a surgeon of Fakenham, Norfolk), and the Benevolent Medical Society of Essex and Hertfordshire (founded by Mr. ROBERT RICHARDSON, NEWELL, of Colchester). Considering that such societies have existed for over a hundred years, and that the conditions of membership are comparatively easy, it is remarkable that there should still be so many instances of medical men leaving their widows and orphans almost unprovided for. If anyone doubts the existence of such instances, let him read the medical journals, or ask information of any leading member of the profession, or, better still, let him take the annual report of the British Medical Benevolent Fund, and read the abstract of cases of misery and destitution relieved by that kindly institution. It is scarcely too much to say that any legally qualified medical man residing within a radius of twenty miles from Charing-cross, and leaving a widow or orphans without provision against want, is without excuse. By the simple expedient of paying two guineas a year into this Society, they can secure—in case of need—for a widow £40 or £50 a year, and £8 or £10 for each orphan child besides. In addition to this there is a Copeland Fund for granting extraordinary relief to those already receiving the ordinary grants, in circumstances of exceptional misery or disease. The funds of this Society are administered with extreme economy. The brokers who invest the funds of the Society do so without commission, and we need not say that the directors act gratuitously, unless the quaint provision of a sum equal to the fare of a hackney coach to each director who attends from the beginning to the end of meetings can be considered a qualification of this statement. We must not omit another crowning virtue of administration in this Society. It not only gives, but it gives *quickly*—which widows and orphans appreciate more than men with their clubs and their comforts can well understand. We put the claims of this Society very seriously to our readers. Those who are in London have no excuse for not joining; those who are in the provinces might well initiate similar Societies in the different counties, and thus make an end of the dismal and discreditable cases of families unprovided for. Sir JAMES PAGET puts the case in a nutshell. By supporting this Society, he says, a man practises either thrift or charity. It is not easy to say which is the greater virtue. Not to make provision for one's own is to "deny the faith"; not to help the widows and orphans of our less fortunate brethren is to fail in that "charity" which is greater than "faith."

Yet the great majority of medical men within a radius of twenty miles of Charing-cross are not in this Society. There are 4852 names of practitioners in the London Directory. There are only 330 members of this Society. In other words, only one man in fourteen makes use of this admirable Society.

It is difficult to imagine the excuses which can be made for neglecting such a simple provision. For less than a shilling a week medical practitioners can make a kind of insurance of their own lives in favour of their wife and family; or, if their position is happily secured against want, they can have the pleasure of contributing to help the needy survivors of less fortunate brethren. Probably few men spend many minutes in contemplating the plight of their families in the event of their own removal. The existence of such a Society as this enables those in the humblest practices to do so with comparative equanimity. A little self-denial and the thing is done—provision is made. This is no difficult and costly life insurance. It has the virtue and dignity of that kind of provision. But it is far more easy and kindly in its conditions, and, as we have said, leaves almost without excuse any medical man within twenty miles of Charing-cross who leaves his family to chance after his death.

Annotations.

"Ne quid nimis."

PRELIMINARY MEDICAL EXAMINATIONS.

THE General Medical Council has bestowed much time and thought on the preliminary examinations of the medical student, and during the past three years has added Mechanics to the former list of compulsory subjects. There should be but little objection, considering the difficulties in properly teaching Mechanics in many schools, to this subject being passed separately, and we think that a student who has passed in the other subjects might be allowed to postpone this portion of his preliminary examination, and be registered even before he had satisfied his examiners as to his proficiency therein, provided that he was able to do so when passing his Chemistry and Physics. But considering the stringency of the existing regulations on this subject, which is one not regularly taught in the ordinary course of a school curriculum, it seems altogether out of proportion in modern education that a candidate can pass in his other subjects separately and present for registration as many certificates as there are subjects. Education in schools of the class from which students usually enter the medical profession is surely quite adequate for a boy to pass a by no means difficult examination in Latin, English, Arithmetic, Algebra, and Euclid, with option as to some one other language or elementary science. It would be most advantageous to the student and to the profession if passing in all these at the same examination were made obligatory, instead of permission being given for him to take them *seriatim*. A correspondent, who evidently is well acquainted with the details of our preliminary examinations, thinks that a comparison at preliminary examinations between boy clerks who enter our public offices and aspiring medical students would not redound to the credit of the latter in respect of some subjects, such as English, and our experience agrees with his. Composition and spelling are much neglected at some of these examinations, and the examiners are much too apt to fall into a groove and require stereotyped answers, and we are led to think that a more frequent revision of the standards and a change in the books set might be advantageously made. The entrance examinations should not be too low, for it is extremely cruel to allow an ill-educated boy to enter the profession and permit him to find out, only when it is too late for him to select another career, that the professional standard is too high for him to attain. It is mainly owing to this low

standard at preliminary examinations that rejections at the subsequent examinations are so numerous. The requirements at the professional examinations are now much more severe than they were formerly, and it is only right, for the sake of the student, his guardians, and the profession, that a corresponding advance should be made in the entrance examination. Education has made such strides in recent times that a minimum which did good service years ago is no longer sufficient as a preparation for entrance to a profession which must keep abreast of modern scientific knowledge, and which makes daily calls on the scientific training of its members.

SUDDEN DEATH FROM A MEDIASTINAL TUMOUR.

IN the annual report for 1887 of the Sabbatsberg Hospital, Stockholm, Dr. E. S. Pernan details an interesting case of "Hæmorrhage followed by sudden death, due to the bursting of a vascular mediastinal tumour." An unmarried woman, aged forty-three years, had been in delicate health for a few years. On the morning of July 3rd, 1887, she complained of pain in her back. In the afternoon of the same day, while seated at table, she experienced great pain along the left side of her neck, and almost immediately a large tumour formed there. Her respiration at once became difficult, and there was oppression of the chest. Four hours afterwards she came to the hospital, and was able to alight from the cab and walk into the receiving room. Her appearance was markedly cyanotic, and there was oppression of breathing, with sensation of choking. The respiration was very rapid—a condition which did not appear to be altogether due to compression of the trachea. On the left side of the neck there was a tumour extending as far as the middle line, and as large as two fists. On her way to the wards she fainted, the cyanosis increased, and breathing became very difficult. Tracheotomy was immediately performed, but after the introduction of the tube the patient only breathed two or three times, and ten minutes after her arrival at the hospital she was dead. At the necropsy it was found that the tumour of the neck consisted entirely of recently extravasated blood of a dark-red colour. This extravasation extended under the clavicle and the sternum into the thoracic cavity, as far as the transverse aorta. The blood measured 200 cubic centimetres, the greater part of which was outside the thorax. The trachea, œsophagus and great vessels of the neck were intact, with the exception of the tracheotomy wound. The extravasation under the sternum had so compressed the great veins of the neck that the jugulars, especially the left one, were distended with blood, but there was no injury to the coats of the vessels. There was no change in the great vessels of the thorax. In the anterior mediastinum, however, between the transverse aorta and the superior vena cava, there was a tumour, the upper part of which had burst, and had evidently given rise to the hæmorrhage. This tumour was as large as a medium-sized apple, slightly flattened in front and behind, and appeared to be of the nature of an encephaloid cancer, of a greyish-red colour in that part where there had been no hæmorrhage. No tumour or abnormality was found in any of the organs, and there was nothing to note about the heart or lungs. In the author's opinion, so much hæmorrhage from such a tumour must have been due to the negative pressure produced in the thorax by each inspiration sucking the blood from the tumour, each expiration causing this blood to be forced out of the chest into the neighbouring tissues. The sudden death was probably caused by pressure on the heart and great vessels, especially the superior vena cava, as evidenced by the excessive cyanosis, and not by compression of the trachea and lungs.

THE REGISTRAR-GENERAL'S QUARTERLY RETURNS.

THE Registrar-General reports that the exceptionally cold, wet, and sunless summer of 1888 was, judged by the recorded death-rate, unprecedentedly healthy. The annual death-rate in England and Wales during the three months ending with September last was so low as 15.0 per 1000 of the estimated population. This rate was 3.0 below the mean rate in the corresponding periods of the ten years 1878-87, and was "considerably lower than that recorded in the third quarter of any year since the commencement of civil registration in 1837." It is in some respects satisfactory to be able to note that the whole of the life-saving implied by the low death-rate cannot be directly referred to the low temperature and abundant rainfall, which reduced the usual and mainly infantile summer mortality from diarrhoea to exceptionally small proportions. It is true that infant mortality and the death-rate from diarrhoea were very far below the average; but while the death-rate from all causes was, it appears, far below any rate previously recorded, lower rates of infant mortality and lower rates from diarrhoea have been recorded in recent years. Infant mortality, measured by the proportion of deaths under one year of age to registered births, was last quarter 135 per 1000, and 26 below the mean rate in the corresponding periods of the last ten years; it was, however, 20 above the rate in the third quarter of 1879, which was but 115. So with the death-rate from diarrhoea. It was but 0.90 per 1000, instead of 1.90, the mean rate in the ten preceding summer quarters; but was higher than in the corresponding quarter of 1879, when it was so low as 0.75. Compared with the mean rates that prevailed in the summer quarters of the ten years 1878-87, the rate among infants was lower by 16.1 per cent., among children and adults aged between one and sixty years by 18.8 per cent., and among persons aged upwards of sixty years by 3.1 per cent. It is evident, therefore, that the largest proportional saving of life last quarter occurred among children above the age most susceptible to fatal diarrhoea, and among young and middle-aged adults. In connexion with this fact, it may be noted that the death-rate from zymotic causes, exclusive of diarrhoea, was lower than in any previous quarter on record. In face of this satisfactory evidence of sanitary well-being it is not easy to account for the greater mortality from diarrhoea, and for the higher rate of infant mortality recorded last quarter than in the corresponding quarter of 1879, when the mean temperature was higher than it was last quarter, and when the death-rate at all ages in England and Wales was 16.3 per 1000, while last quarter it was so low as 15.0.

THE METROPOLITAN POLICE SURGEONS' ASSOCIATION.

THIS Association, which was founded last year to promote the interests of the divisional surgeons of the Metropolitan Police, held its second annual dinner at the Criterion on Wednesday last. The chairman of the dinner was Mr. A. O. Mackellar, the popular chief surgeon. About seventy members of the Association were present, and amongst the guests were Sir Charles Warren, Sir Thomas Crawford, Mr. J. Gordon Brown, surgeon to the City Police, and others. After the usual loyal toast, Mr. Mackellar proposed "The United Services," to which Sir Thomas Crawford replied, making special reference to the services of members of the profession in the medical branch of the army during recent years. Mr. T. Bond, in proposing "The Association," coupled with the name of the President, acknowledged the debt which the divisional surgeons owe to him for his uniform kindness, courtesy, and

consideration. Mr. Mackellar, in reply, traced the origin of the Association, mentioned the difficulties with which it had had to contend, and congratulated the members on the progress made, a large majority of the divisional surgeons having joined it. Mr. Timothy Holmes proposed "The Guests," and referred in apt terms to the qualities which had rendered Sir Charles Warren so conspicuously fitted for the post which he occupied—qualities which, while they were justly admired by the good, made him intensely disliked by the bad in the large area over which he exercised authority. Sir Charles Warren, who was enthusiastically received, after thanking the members for their reception, referred to several changes which had been made, and which it was proposed to make in the facilities given for carrying on the duties of the divisional surgeons. He also referred to the statements which were made in certain papers a few weeks ago as to alleged differences between himself and the medical service of the police as represented by the President of the Association, assuring the members that such differences had never existed excepting in the mind of the anonymous writers. Mr. Nelson Hardy proposed "The Medical Press, as represented by THE LANCET and *British Medical Journal*." Mr. Battle, who drew attention to the immense material at the command of members of such an association for the advancement of medico-legal knowledge, replied for the former, and Mr. Hart for the latter. Mr. Buckell proposed "The Chairman," who ably responded. During the evening songs were given by Dr. Yarrow and Mr. Spurgin, Dr. Forsyth giving a humorous recitation.

NOVEMBER FOGS.

TRUE to its traditions, the month of November has commenced with fine samples of damp and fog, and all those valetudinarians whose means permit have taken, or will not be long in taking, the hint, and will follow the swallows to more genial and equable climates. There are certainly many persons to whom this change of climate is an essential for health, but it cannot be doubted that very many expatriate themselves voluntarily and gladly from other motives. The foremost of these is probably the desire to escape from the long period of mental depression which follows in the wake of our dreary London fogs. While some few suffer from respiratory and circulatory inconvenience, all are more or less subject to a certain lowering of nerve energy, the direct result of the hopeless gloom which from time to time envelops our city. Foreigners talk as though fogs were of daily occurrence in London, and regard the absence of sunlight as the immediate cause of the "splenetic temperament" with which they credit us. Sunlight is certainly an important factor in determining the mental state; but when its absence is fully anticipated, when each day is as dark as its predecessor and was not expected to be otherwise, when, in short, it is the fulfilment of a natural law, the obscurity scarcely seems to affect the temperament. Perhaps the bright light of the past is forgotten, perhaps it is remembered only as a type of what may be hoped for at some future date, but at any rate uncomplaining submission to the natural law is the rule when the darkness is inevitable. The attitude of cheerful resignation is equally the accompaniment of steady variations of temperature. A long succession of cold days and nights in certain seasons can be easily tolerated, because there is time for adaptation to the altered circumstances. Extra clothing is donned, exercise is taken with greater zest, and the cold season is often greeted as a pleasant alternation. Even the sudden change of temperature after sunset, which is practically the rule in many southern health resorts, rouses few complaints except among those who have not been forewarned and forearmed. The ground upon which com-

plaint against our own climate may be most justly urged, is not the mere existence of damp, cold, or fog, but the fact that there is so little certainty from day to day. A brief spell of warm weather intervenes between cold winds, bright sunshine comes to startle us just as we were getting accustomed to gloom, and thus we are constantly the prey of fallacious hopes, which are doomed to bitter disappointments. Bright days are hailed with delight, not so much for their own sake as in the hope that they may be typical of many, and then comes a denser fog than ever, and the result is depression and weatherwise cynicism, with grim resolutions to expect nothing but change. Our "splenetic temperament," if it has a real existence, is probably due to the angry conviction that fogs are unnatural, and therefore not inevitable.

ADDISON'S DISEASE.

ADDITIONAL support is given to the doctrine that the group of symptoms accompanying Addison's disease rests largely upon the involvement of the abdominal sympathetic, in the chronic inflammatory process, in an article by Dr. von Kahlden, of the Pathological Institute, University of Freiburg. (*Virchow's Archiv*, Bd. cxiv., Hft. 1). He describes two cases: one in which both capsules were characteristically degenerated, and the other in which the right capsule alone contained caseous masses. In both, it may be remarked, tubercle bacilli were found in the caseated material. In the first case the right semilunar ganglion exhibited "pigmented atrophy" of the ganglion cells, considerable hyaline degeneration and thickening of the walls of many of the bloodvessels, small-celled infiltration of the adventitia, and more or less circumscribed foci of round cells near the vessels; whilst the nerves entering the ganglion, as well as the splanchnic nerve, showed no change beyond slight thickening of the perineurium. In the right ganglion there was similar pigmented atrophy of cells, and marked thickening of vessel walls leading to narrowing and even occlusion; but the hyaline changes and the round-celled infiltration observed in the left ganglion were not present. In the second case he observed in the right ganglion (corresponding to the diseased capsule) thickening of the cell capsules, scattered peripheral hemorrhages and relics of previous hemorrhages, occlusion of vessels and thickening of their walls by connective tissue; and in the left ganglion a considerable number of recent hemorrhages in the periphery, and a certain amount of thickening around the ganglion cells. Although these anatomical changes suggest the implication of the ganglia as being an essential feature of Addison's disease, Dr. von Kahlden admits that they do not suffice to attribute to such lesions the cause of the affection. His paper contains a summary of a large number of cases in which some lesions of the ganglia have been noted, and also others where these structures were declared to be normal; but he thinks a much larger number of carefully recorded facts are necessary before the suggested conclusion is reached. He holds that the few cases yet recorded where the capsules were found to be intact, and where the ganglia were involved in other pathological processes, are too incomplete to be of service in determining the point; but he does not mention some of the more recent instances on record of Addison's disease apart from the characteristic change in the capsules. It is curious to note in how few cases the tubercle bacillus has been detected in the diseased capsules, but the positive discovery of it by Guttman, Rauschenbach, Goldenblum, and now by von Kahlden, must be weighed against the frequent negative results of the search for it, especially considering the sparseness of its distribution in these caseated organs. The association with tubercular disease

in other parts of the body is too frequent to permit us to ignore the probability of the suprarenal affection being tubercular. The paper also contains a study of the pigmentation of the skin characterising Addison's disease, in which the author shows that the pigment is deposited in the deeper layers of the rete and in the outer zone of epithelium of the hair follicles. He finds the pigment not formed in the cells themselves, but deposited in the cutis and transferred thence by leucocytes, one epithelial cell taking up pigment from several leucocytes. In all probability the pigment is derived directly from the blood; not because of any morbid condition of vessel wall, or on account of hemorrhages, for such are not constant, and when present are obviously secondary. Lastly, he thinks that a careful observation of the pigmentation of mucous membranes in future cases may throw further light on the relation of the pigment to the blood-colouring matter.

THE VALUE OF VACCINATION.

A LEICESTER GUARDIAN, writing to an evening contemporary, dwells with much satisfaction on the immunity from small-pox enjoyed by Leicester, which has escaped any special prevalence of this disease since 1872, when 346 persons lost their lives from this cause. During the last ten years, he says, more than 20,000 persons remained unvaccinated, and he argues that, if some eight or ten vaccinated hospital nurses or officials can save the 140,000 people in Leicester from the ravages of small-pox, double that number ought to have saved Sheffield. We have already pointed out that, for the purpose of estimating the protection afforded by vaccination, it is necessary to compare the incidence of small-pox upon vaccinated and unvaccinated persons respectively living under the same conditions, and that Sheffield differs from Leicester in one important particular—viz., that it had in its midst a small-pox hospital. The effects of small-pox hospitals have come to be well recognised since Mr. Power studied this subject in connexion with the Fulham Hospital, and Mr. Ritchie has shown in the House of Commons that the unvaccinated in Sheffield suffered out of all proportion to the vaccinated. Since that time the Sheffield outbreak has been the subject of detailed investigation by the Local Government Board, and it may be anticipated that the report on the inquiry will deal with this question. Before the Leicester guardians attempt to draw conclusions from the Sheffield epidemic, they should have all the facts before them, and these will not be obtainable until the official report is published.

CHILDREN IN THEATRES.

WHATEVER may be said in defence of the employment of children in theatres, it cannot be denied that the practice is open to grave objections. The danger of injury to health is considerable. Among other conditions of theatrical life, the late hours, the excitement, the over-heated and ill-ventilated atmosphere, and the journey home in weather which is rarely better than indifferent, are all more likely to hurt than to favour the growth of young constitutions. Some vigorous children may not for a time be visibly affected. Even these, however, and far more their fellows of delicate physique, must pay some tribute of health if they are made to live on a system so thoroughly artificial. It is true, that the pantomime season, for which these children are chiefly in request, is not a very long one, but it is arduous while it lasts, and it affords ample time and occasion for the sowing, and the growth of the seeds of disease. As with health, so is it with morality and education. From one cause, or other both have suffered, and do suffer, from contact with the methods of theatres, as they are now carried out. The tone of a play in itself may be moral enough, and yet

it may easily, under the present system, become a cause of mischief in the minds of its child actors. When, for example, we find a child of eight or nine, while the rudiments of character are in their most unstable condition, deprived of the training of school or of home life, in order that he or she may for weeks together spend his or her unformed energies upon the gay excitement of a theatrical season, we must feel that amusement is being overdone. Emotion is made to rule, and some impoverishment of the character must follow. The exposure of these children to the idle companionship of the loungers about places of amusement, or of street loiterers after the performance is over, is another evil which should not be forgotten. Whether, indeed, we view the matter from an ethical or a medical standpoint, it is evidently ripe for reform, and the recommendation of the Royal Commission on Elementary Education, that the Factory Act should be extended to include children employed in this way, is worthy of consideration. This extension would have the effect of excluding children under ten years of age entirely from theatrical work, and would provide for the education of those between ten and thirteen.

GLYCOSURIA FOLLOWING INTERMITTENT FEVER.

DR. P. M. GUBAREFF, of the Sebastopol Naval Hospital, reports an interesting case of diabetes following, and apparently due to, repeated attacks of malarial fever. When admitted to the hospital, the patient had had for some months successive attacks of fever on board ship, having been previously to the first attack perfectly well. He was found to be suffering from general oedema and a slight affection of the lungs, with great thirst and polyuria; the quantity of urine passed was 6000 cub. centim. per diem. On examination it was found to contain albumen, casts, and more than 6 per cent. of sugar; the temperature was normal, or nearly so. There was no rash or prurigo. The oedema soon passed away, and then the liver and spleen were found to be of normal dimensions. The patient subsequently complained of impairment of vision. Various drugs were given, with but little effect. The regulation diet, too, was ordered, but the quantity of urine and the sugar passed did not diminish in any great degree. Dr. Gubareff reports this case as an example of diabetes due to intermittent fever.

BROCKWELL AGAINST BULLOCK AND ANOTHER.

THE extremely unsatisfactory condition of the law relating to persons of unsound mind has received a fresh illustration in the result of proceedings brought by Mr. J. Brockwell for the recovery of professional fees against a defendant of unsound mind and his committee. To the claim itself upon its merits no objection was alleged; it does not even appear, from what transpired at the appeal from the decision of the County Court Judge of Brompton, which was recently heard in the Court of Queen's Bench, that there was any objection on the part of the defendants to make the payment in question; but it had been held in the Court below, and the decision was now affirmed in the Divisional Court, that an order of the Lord Chancellor under the provisions of the Lunacy Regulation Act of 1862 was necessary as a preliminary to the payment. Mr. Brockwell's legal advisers appear to have taken a different view of the law, and certainly they cannot be blamed for thinking otherwise, seeing that the two judges in the Divisional Court differed, and that judgment passed there only upon the withdrawal of his judgment by the junior judge. It was understood that the matter would be carried to a higher tribunal, and it may be hoped that in the end Mr. Brockwell will not only recover his fees, but also the costs incurred in the very troublesome proceedings which he has been compelled to

undertake. But, whatever the outcome of this particular appeal, it is impossible not to feel that in a simple state of facts, such as existed in this case, a serious difficulty of the kind that here arose ought to be out of the question. The protection of the persons and property of lunatics is a matter of the highest importance, and we should be exceedingly sorry to see anything done to relax the vigilance with which the law watches over their interests. But it is quite possible to overdo precaution, and with the best possible intentions to produce more harm than good. This is especially the case with troublesome and vexatious regulations tending to delay the enforcement of an admitted right rather than to bring efficient scrutiny to bear upon a disputable claim. Much of the existing lunacy procedure appears to us to be open to this reproach, and it is to be hoped that the long-promised legislation for its reform will soon be put in hand.

ALLEGED INJURY FROM VACCINATION.

THE *Portsmouth Times*, under the heading of "A Painful Story," gives an account of the prosecution of a man who refused to have his child vaccinated. The defendant pleaded that his eldest child had been attacked by syphilis shortly after vaccination, and that Dr. Ward Cousins who had continued to treat it as an out-patient of the Royal Portsmouth Hospital, was of the opinion that it was a sad case of impure vaccine having been put into the system. On this excuse he was dealt with leniently, and the story will doubtless serve the purpose of the anti-vaccinationists for influencing other persons against vaccination. The facts, however, deserve to be known. Mr. Kealy, who vaccinated the child, denies the defendant's statement, and Dr. Ward Cousins writes that he told the father that there was no evidence that the child had any specific injury by vaccination. We gather from the published accounts of the case that there is no doubt that the child has had syphilis, that the defendant was desirous of attributing this to vaccination, and that he did not hesitate to incorrectly state that this was Dr. Cousins' view. Mr. Kealy states, moreover, that he would not have used this child as a vaccinifer. It is doubtless one of those cases in which vaccination is accused without the least reason of being responsible for syphilitic infection.

WHAT IS A "MEDICAMENT"?

THEORETICALLY there ought to be no trouble in arriving at a satisfactory definition of a "medicament," but practically the question is found to bristle with difficulties. The matter lately formed the subject of an interesting prosecution under a charge of "selling patent medicines without the necessary Inland Revenue stamp." The conclusion arrived at appeared to indicate a belief that a medicine was a substance having relation to existing disease only; in fact, the magistrate remarked that preventing a disease was different from curing one. On this ruling, quinine, if it happened to be a patent medicine, would be liable to be branded with the Inland Revenue stamp, according to the mode of its employment. When used as a prophylactic by those about to travel in malarial districts it would be free from stigma, but if employed to cure the slightest attack of ague it would have to be sold under totally different conditions. Indeed, it would seem that numberless substances could claim exemption if judged by this standard. Thus all the nostrums employed for sea-sickness might be labelled for "prevention" instead of "cure" and so be free from the tax. It was definitely stated that a substance used to beautify the gums and prevent toothache was exempt, while a tincture for curing toothache came under the word "medicament." We have frequently drawn attention to the absurdities of the Inland Revenue stamp,

and to the misleading influence it exerts among uneducated classes in passing as a guarantee of excellence rather than as a paltry plea for increasing the revenue. It is well known that many substances sold under cover of the stamp contain large quantities of opium and other powerful drugs, and are responsible for many fatalities which call forth severe remarks from coroners. The sale of poisons should certainly be surrounded by restrictions which shall ensure the public safety, but the Act under which this prosecution was instituted practically permits the sale of anything as a drug so long as duty has been paid upon it. To prove liability definitions have to be agreed upon, and this necessity led to the grave contention that a corn solvent was not contemplated by the Act of George II., because a "corn was not an ailment of the body."

COLD AND DISEASE.

DR. H. B. BAKER, of Lansing, Michigan, continues to pursue his inquiries respecting the inter-relation of atmospheric conditions and disease. His previous writings discussed pneumonia; his more recent papers deal with diphtheria, small-pox, and scarlet fever, in which he gives "statistics" to show that these infectious diseases prevail most in the cold seasons of the year, and decrease as the atmosphere becomes warm and moist. His explanation of this is not so much that in cold weather there is more overcrowding, less ventilation, and a generally lowered vitality and inability to resist the inroad of infection, as that in these cold periods there is a great tendency to catarrhal inflammation of the respiratory tract—influenza, bronchitis, and tonsillitis prevailing. As the infectious diseases named are believed to be transmissible through the air, he thinks that such a condition of "greater susceptibility" of the respiratory tract lays the organism open to infection. As with pneumonia, so with the catarrhal affections, the retention of non-volatile salts in the mucous lining of the air passages, which occurs in proportion as the air is dry and cold, is, he believes, the *vera causa* of such forms of inflammation.

SMALL-POX IN ITALY.

THOSE of our compatriots who contemplate a winter sojourn in Southern Italy should be warned that small-pox—which, early in June last, we reported as prevailing epidemically in the Salernitan district—has continued to spread, till now Sicily is suffering severely from the visitation. The whole island is in alarm at the virulence and extent of the outbreak, and town councils and Government emissaries are working with zeal to repress its ravages. In Barcellona, a city of more than 20,000 inhabitants, not far from Messina, the cases exceed twenty per day, and these are generally of the confluent kind. From Catania and Messina itself a loud appeal has been addressed to the Home Office to take the steps which were adopted nine months ago after the cholera explosion, and despatch a commission to the infected districts provided with the means not only of tracing the outbreak to its source, but of relieving the wretched and panic-stricken inhabitants. It is necessary to live in Southern Italy to realise the poverty of resources betrayed even by the larger towns in face of a sudden visitation of disease; and the helplessness of the Neapolitan and Sicilian municipalities during the late cholera epidemics is hardly creditable to a Government which has so justly superseded the Bourbon régime. The ignorance and superstition of the population are still astonishing to our British minds, and vaccination, like the elementary truths of hygiene as to food and water supply, is resented by those whom it fain would reach as a device of the Evil One. In the province of Sassari, in the island of Sardinia, where small-pox has for weeks past

been exceptionally severe, the sanitary authorities have been menaced by an infuriated populace for proposing a general vaccination or revaccination of young and old. The medical men and the mayor were declared to be public enemies, and only the philanthropic spirit of a septuagenarian parish priest, who had himself revaccinated *coram populo*, restrained them from carrying vindictiveness to violence, and induced them to submit to the prophylactic operation. Making every allowance for the difficulties the Italian Government is confronted with, we should certainly feel more confidence in its capacity if the hygienic reforms which have been so long before Parliament received a little more of the attention which is their due. Meanwhile, as we have said more than once, Italy must not be surprised to see the current of tourist travel deflected to other shores, which make up for their inferior beauty by a stricter observance of the duties and the decencies of life.

FOOD ADULTERATION IN BELGIUM.

M. CHARLES PUTTEMANS has recently published an interesting account of the adulteration of food and the measures adopted to check it in the community of Schaerbeek (Brussels). The police, who specially watch those retail dealers who sell their merchandise at prices below those generally quoted for the article concerned, procure the samples of food, hand half over to the analyst, and retain the other half for the disposal of the court of justice, in case proceedings should follow. This method of procedure dates from 1872, but it needs to be elaborated, as has already been the case in Brussels and in Ixelles. In these communities every person who has bought any article of consumption of which the purity appears doubtful can submit it without expense to the official analyst. This advantage has now been afforded to the inhabitants of Brussels for about ten years, and M. Puttemans reports that the public makes a discreet use of the privilege, it frequently happening that suspicions of fraud are confirmed by analysis. The number of examinations made has varied considerably during the time which has elapsed since the first appointment of the analyst, and it is curious to observe that the number has always been in proportion to the salary allowed by the community. Thus in 1872, when the salary amounted to five hundred francs, 48 examinations were made, while when it was increased to twelve hundred francs per annum the average number rose to 130 per year. In all, 1929 samples have been examined, of which 232 proved to be adulterated, and 65 samples of water were condemned as unfit for drinking purposes.

TREATMENT OF RHEUMATIC TETANUS.

DR. ARNSTEIN of Ratibor mentions in the current number of the *Therapeutische Monatschrift* a case of rheumatic tetanus occurring in a boy seven years old, who three days after getting wet through suffered from fever and rigidity of several groups of muscles. During the first fortnight the temperature varied from 38.5° to 39.0° C., and tetanic contractions of the maxillary muscles and also of those of the abdomen and back occurred. Chloral and morphia were given frequently and in large doses, but in spite of this the patient's sleep was very restless and disturbed by numerous attacks of muscular spasm. During the second week an infusion of hyoscyamus, belladonna, and conium, as recommended by Dr. Meldon of Dublin, was given, and immediately produced a marked effect, the attacks becoming less frequent and less severe. At the beginning of the third week the child contracted scarlet fever from his sisters; but this did not interfere with the improvement in the tetanic condition. He was convalescent in about six weeks.

NEW OPERATING THEATRE AT THE DUNEDIN HOSPITAL.

AN operating theatre has recently been erected in connexion with the hospital at Dunedin, Otago, New Zealand, which is remarkable for its completeness. The estimated cost amounts to £1589. This building comprises the operating room, which is 30ft. long, 24ft. wide, and 24ft. in height; a room for the administration of anaesthetics; another for the medical staff; a students' room, with a separate entrance and staircase; the whole connected by means of a long corridor with the hospital. The floors are raised three feet above the ground level, and the surface beneath is asphalted. All the rooms, including the corridor, are plastered with cement and lighted with gas. The gallery of the operating room will accommodate about fifty students. The floor is laid with linoleum, and lead has been nailed on to the floors beneath the seats to ensure absence of noise from the boots of the students. There are special cases for the instruments, dressings, and antiseptics. Great attention has been paid to warming and ventilation. The space under the students' gallery has been utilised. The warming apparatus here placed is fed with fresh air from the air pipes, which are built up with the walls, and the temperature of the room can be regulated to any degree of warmth required. The windows can also be used for the admission of air. Further arrangements are made by the erection of an exhaust ventilator in the roof, and two air-tight flues built in the partition walls and carried up alongside the smoke flues. The disposition of light is excellent, and the arrangements for the supply of water &c. are all that can be desired. A full description of the theatre, and of the speeches delivered at the ceremony of opening it, may be read in the *Otago Daily Times* of August 22nd. The school attached to this hospital, which was commenced in 1875, amounts to forty students who are receiving instruction. With regard to the hospital, the lying-in ward has been abolished on account of several outbreaks of puerperal fever, and it has been considered safer for these patients to be treated at their own homes. A children's ward has been established. One of the speakers, who objected to this, said that "in all hospitals in the old country children were treated in the female wards," and apparently regarded the opening of the ward as the establishment of a specialty. This statement is inaccurate; St. Thomas's Hospital, for instance, has a ward for children containing thirty beds. These are attended by the general staff, and it has been found much better for the adults that the children should be treated in another ward; the frequent crying of sick children, or perhaps the sharp cry of a child suffering from joint disease, or the wails of one suffering from meningitis, although not sufficient to do more than awaken other children for a short time, will suffice to cause a sensitive patient a sleepless night.

THE ERADICATION OF BOVINE TUBERCULOSIS.

At a meeting of the Scottish Metropolitan Veterinary Medical Society at Edinburgh on Oct. 24th, a paper was read by Mr. Storrie, of East Linton, on the "Measures to be adopted for the Eradication of Tuberculosis." He said that the credit of taking the initiative in making inquiries and holding a congress of veterinarians and medical men upon the subject belongs to France, and it would be a good thing if a similar gathering could be held in this country. He gave an account of an outbreak which came under his notice some three years ago in a herd principally composed of pedigree shorthorns, showing how the disease was communicated; and he alluded to the transmission of the disease to man by ingestion of the flesh and milk from tubercular animals. The measures suggested by him were the inclusion of the disease in the Contagious Diseases

(Animals) Act, so as to provide for the slaughter of affected animals and the total destruction of the carcass, for the compensation of owners, and for thorough disinfection of the byres. He stated how these measures could be carried out, urging that for one year the amount of compensation should be full meat or dairy value, no exception being taken to pedigree stock. It might afterwards be reduced to three-fourths value. He advocated branding and registering of herds, so that "a primary" brand would indicate that the animal could not be removed or sold except for slaughter, and a "secondary" brand would signify that the animal was under restriction for a time, and that it had been in contact with a tubercular animal. A regular system of inspection of dairies would be necessary. In the discussion that followed, Principal Williams remarked that the disease was spreading in the most alarming degree; for one case thirty years ago they had a hundred now. Mr. Rutherford stated that all outbreaks in milk or prize stock could be traced back to tubercular sires or dams. The subject will be resumed at the annual meeting.

HOSPITAL APPOINTMENTS IN LYONS.

DR. VICTOR AUGAGNEUR complains, in *La Province Medicale*, of the careless manner in which the Administration des Hospices manage affairs at Lyons. Just lately there has been a *concours d'externat*, and, according to the law, only those students who have taken out four *inscriptions* with the intention of becoming M.D.'s are admissible to compete. The Administration, however, have admitted to the competition students of an inferior grade, who, being unable to pass the preliminary examination in arts for the doctorate, have had to content themselves with studying for the licence to practise as officers of health. The Administration announce that they have done this "in the exercise of their rights and for the greater good of the patients." The professorial staff of the hospitals were not consulted on the matter, and they naturally feel somewhat indignant at this exercise of official power, tending as it does to lower the standard of medical studies. Their aim has been to raise the standard of medical education, and on this account they are anxious to discourage students from taking the licence as officers of health by retaining all the hospital appointments for the better-educated students.

BUILDING LEASES AND PUBLIC HEALTH.

At the last meeting of the newly named Association of Public Sanitary Inspectors of Great Britain, an interesting paper was read by Mr. Hugh Alexander, the chairman of Council, which related mainly to the influence which the system of building leases had upon public health. He held that this system led to the use of land for the erection of dwelling accommodation in a way that was distinctly inimical to health and injurious to the occupier. Leases were renewed under grinding conditions which tended to the impoverishment of the people, to insanitary buildings, overcrowding, and excessive rents. Indeed, the main conditions often considered were, first, how many houses could be packed on a given site, and, next, how cheaply the dwellings could be erected. Mr. Alexander reminded his audience that the Commission on the Housing of the Working Classes had practically reported in a sense which should carry with it the entire abolition of the leasehold system as regards house property, and he urged that pressure should be brought to bear upon the Government in this sense. Amongst other points referred to was a strong condemnation of the system of building houses back to back, and reference was also made to the extremely insufficient supervision and control to which the erection of dwellings in the metropolis was subjected. A subsequent speaker, referring to the chairman's view

that the enfranchisement of leaseholds would lessen the existing evil, declined altogether to be tied to that view, and expressed a hope that the day was not far distant when there would be nothing like leaseholds. It is impossible for those who have made themselves acquainted with the influence of the leasehold system in some parts of the metropolis not to concur very largely with the views of the sanitary inspectors, who have so wide an opportunity of forming a sound judgment on the question; and it is certain that, unless those who possess the land learn that a definite responsibility attaches to the possession of this form of property, changes which some may deprecate may take place sooner than is generally expected.

THE BOLOGNA CONGRESS OF HYDROLOGY.

Of the five Congresses held this year in Bologna (writes a holiday contributor), that of Hydrology and Climatology just closed has been the most successful. To this result the hydrological exposition in connexion with the Congress contributed effectively, all the great mineral watering-places and bathing establishments throughout the peninsula, from Telesse to Andorno, being represented in it by their characteristic resources and appliances; while not less conducive to its success was the very large attendance of experts in hydrology and climatology, hardly a physician of note in either department having been absent. Professor Vinali presided, and also took an active part in the discussions, particularly in that on the "gradually cooled bath." In the programme of proceedings, few subjects were more thoroughly debated than that of "Legislazione Balnearia," with a view to invoking Government aid for the greater efficacy and the wider diffusion of hydro-therapeutics. To this end a series of resolutions was framed, approved, and forwarded in the name of the Congress to the Ministers of the Interior and of Public Instruction, with the result, it is hoped, of receiving legislative sanction and support on the reassembling of Parliament. The official report of the discussions will prove highly interesting to those of the profession who wish to extend their knowledge of the mineral water and bathing resources of Europe; while its perusal may tempt them to assist in person at the next Congress, which will be held in Naples in 1890, under the highly efficient presidency of Professor Vinali. The sittings just closed at Bologna were enlivened by the distribution of prizes to the best expositors, including honorary diplomas and certificates of merit to the chief hydro-therapeutic establishments—Telesse (in the Neapolitan territory), with its magnificent resources in sulphur waters, bearing the palm. Excursions, too, formed a most enjoyable feature in the programme—the noble establishments of Riolo (directed by the Cavaliere Magnani) and of Porretta (under Professor Rovaglia) hospitably entertaining the members of the Congress, after a visit to their mineral sources and an inspection of their wards and grounds.

A RURAL WATER SUPPLY.

The Penzance Rural Sanitary Authority have recently had under their consideration the propriety of using for drinking purposes the water of a public well situated some five or six feet from, and three or four feet below, the wall of a churchyard. Chemical analysis has not shown sufficient pollution to lead the local authority to interfere, but we have been taught on good authority that even dangerous pollution may occur without chemistry giving evidence of the unwholesomeness of the water. The well is believed to be supplied by a spring which always gives abundance of water, but the situation of the well must necessarily expose it to the risk of contamination from the surrounding neighbourhood. Under these circumstances it might have been

thought that the local authority would have sought some better supply to the district than the one in question, but the absence of evidence of injury has led them to conclude that there is no ground for their interference. The proposal to protect the well from surface pollution, by providing it with a cover, is surely a very inadequate safeguard against future risk.

THE NATURE OF "MELON SEED" OR "RIZIFORM" BODIES.

By availing himself of the selective stain (Gram's method, with substitution of aniline for alcohol) for fibrin and allied products, introduced last year by Weigert, Dr. Karl Schuchardt (*Virchow's Archiv*, Bd. cxiv., Hft. 1) has satisfied himself that the riziform bodies found in synovial sheaths, bursae, and joints are not composed of ordinary fibrin, and cannot be considered in any case to be produced by coagulation of the fluid contents of the sac or joint. They are rather products of coagulation necrosis of the internal wall of the sheath or sac, whilst the reagent above mentioned brings into view a meshwork of fibrinoid material in parts of the amorphous non-cellular mass that has been set free from the diseased sheath wall. He illustrates this in two cases: one of tubercular disease of a tendon sheath, and another of tubercular synovitis, in which such structureless "loose bodies" were met with. He does not think that the villous and warty growths found within some hygromas are the main cause of the free riziform bodies often associated with this condition; for even where such villous outgrowth is present, it may bear no relation to the free bodies, and the rapidity with which these bodies sometimes re-form after the sac has been evacuated tells against their passing through a stage of villous excrescence. Indeed, he has found the wall of a ganglion largely composed of agglutinated and flattened half-formed riziform bodies. The size and form of these bodies are doubtless mainly determined by the movements to which they are subjected, so that when mobility of the parts is slight they form less readily than when it is free and marked.

THE FACTORY ACTS AND CERTIFYING SURGEONS.

A POINT of much interest to factory surgeons has recently been raised by Mr. McLaren, M.P., who objects to a medical man holding the appointment of certifying surgeon because he is in the employment of, and receives remuneration from, the occupier of a factory. Mr. McLaren holds that a surgeon thus placed is disqualified for acting as certifying surgeon by Section 72 of the Act of 1873, which provides that "a surgeon who is the occupier of a factory or workshop, or is directly or indirectly interested therein, or in any process or business carried on therein, shall not be a certifying surgeon for that factory or workshop"; and he argues that the words "indirectly interested therein" cover the employment of a medical man in this manner. Mr. Redgrave, whose opinion is of the greatest value, has come to an opposite conclusion, and has further obtained a high legal opinion on this point, which is in accordance with his own. This decision is not disputed by Mr. McLaren, but he adheres to his view that it is contrary to the spirit of the Act to allow a medical man engaged in or about a factory or workshop to act as an inspector. If he were able to quote a single instance in which the interests of the workpeople were prejudiced by a medical man acting in this double capacity, there would be some reason for him to raise the question, but he has failed to adduce the least evidence that existing arrangements have not worked well, and, in reference to the particular case to which he has directed attention, he disclaims any reflection on the personal character or professional ability of the medical

man concerned. Mr. Redgrave says that if a medical practitioner thus employed, or who acts as private medical attendant of one or more of the occupiers of factories, is not permitted to be an inspector, he does not know where he should turn to find certifying surgeons, and in the whole course of his experience he has never known an instance of undue influence arising from a medical man acting in this double capacity.

DIPHTHERIA IN THE EAST OF LONDON.

AT an inquest held last Saturday, evidence was given before the coroner for the Eastern Division of Middlesex, both as to the existence of diphtheria under circumstances of a disgraceful character from a sanitary point of view and as to the epidemic nature of the disease. The district in question is within the area of Walthamstow, and, according to the evidence, the houses affected were drained into cesspools, one of which was common to several houses, and which were the source of intolerable nuisance and offensiveness. One of the house physicians to the London Hospital also informed the coroner that diphtheria was so much on the increase in the east of London, and especially about Hackney, that it had been found necessary to restrict admission to hospital to the worst cases. This evidence gives force to a caution which we have more than once called attention to recently—namely, that diphtheria, which heretofore has been a disease of country rather than town districts, appears to be finding a soil suitable for its development and spread in many of our large urban districts; and, whatever view may be held as to its causation, it certainly behoves urban sanitary authorities to take all steps in their power to stay the progress of this disease, which tends to cling so tenaciously and so fatally wherever it settles down. The removal of ordinary nuisances and the provision of wholesome means of living must be regarded as having some influence, and probably a very important one, on the prevention of diphtheria; and hence all authorities having within their jurisdiction conditions similar to those with which the disease has been associated in Walthamstow should see to their abatement and removal.

COPYRIGHT IN LECTURES.

WE learn from the *Medical News* (Philadelphia) for Oct. 27th that the question whether a lecturer has alone the rights of publication of his lectures again came before the Law Courts. It was the suit of Dr. T. G. Wormley, Professor of Chemistry and Toxicology in the medical department of the University of Pennsylvania, against W. B. Saunders, a publisher, to restrain the latter against publishing and selling books on general and medical chemistry, made up of condensations from lectures delivered by the complainant. It was admitted that a deliverer of oral lectures has legally the right of property in them; but it was argued that Dr. Wormley had abandoned this right by permitting the defendant to publish the lectures without protest. But there was no evidence that Dr. Wormley knew of the publication, and judgment was given in his favour, the preliminary injunction which was granted, restraining the publication and sale, being continued in force.

OPERATION FOR A NEW BLADDER.

PROFESSOR TIZZONI and Dr. POGGI of Bologna have devised and carried out an extremely ingenious operation for the purpose of "restoring" the bladder in cases where it is partially destroyed by disease. The object of the operative procedure is to replace the bladder by means of a substitute, that substitute being a portion of intestine. The operation (on an animal) was performed in two stages, an interval of about a month elapsing between them.

The first part of the operation consisted in the cutting out of a portion of the intestine, the two ends from which it was taken being immediately sutured; the mesentery was left attached to the excised portion. The ends of this portion were then closed so as to form a sac; one end was then brought down and fixed to the neck of the bladder. The second portion of the operation consisted in separating the ureters from the bladder, excising the latter organ, suturing the intestinal sac in the position of the bladder, and grafting the ureters on to its posterior wall. For a few days there was incontinence of urine, but after about a fortnight the sphincter regained its power and the animal recovered completely. In consequence, however, of the small size of the new bladder, micturition was necessarily very frequent. Professor Tizzoni and Dr. Poggi propose to repeat this operation on another animal, taking care to excise a larger portion of intestine, so as to imitate more nearly the normal capacity of the bladder.

AN IMMENSE DUODENAL ULCER.

DRS. IVAR SVENSSON and C. WALLIS report the following interesting case of "Duodenal ulcer, causing complete obliteration of the common bile duct, the hepatic duct, the cystic duct, and the canal of Wirsung." The patient was a man of forty-three, who had been taken ill ten months previously with symptoms which indicated a complete obstruction of the flow of bile into the duodenum. He had lost strength and flesh to such an extent that it was thought advisable to re-establish the flow by an operation. Accordingly a communication was made between the base of the distended gall bladder and the small intestine. The patient died a few days after the operation. At the necropsy an ulcer was found in the duodenum, exactly in the position of the common bile duct and the canal of Wirsung, the hard fibrous tissue which formed its base having obliterated these channels. The inflammatory material had extended so far that the cystic duct was altogether closed. The hepatic duct, the canal of Wirsung, and the gall bladder were all very much distended. The necropsy also showed that the end for which the operation had been performed had not been attained.

DISEASES OF CHILDREN.

THERE are two or three points of great practical moment in the able address of Dr. Dickinson which we published last week. One is that infants and young children, whose brain doubles itself in weight in the first two years of life, are more liable to non-tubercular meningitis than used to be thought. We all know, of course, the frequency of tubercular meningitis, but we are not so much on our guard against meningitis apart from tubercle. The second point we would notice is the greater liability of children suffering from acute rheumatism to have the heart affected, and the benefit of early and free use of alkalies in saving the heart. The third is the tolerance of belladonna in children, illustrated in a case mentioned by Dr. Dickinson, in which Dr. Fuller gave a girl ten years of age daily seventy grains of an extract of belladonna, a grain and a half of which acted unpleasantly on Dr. Dickinson himself.

PHYSIOLOGY OF URANIUM SALTS.

EXPERIMENTS recently made by Dr. R. H. Chittenden attest the harmfulness of uranium salts to healthy tissues. Uranium is an irritant poison tending to destroy the life of the intestinal and renal tissues; enteritis or acute catarrhal inflammation was easily induced by the administration of small doses of the salts of uranium. In toxic doses it causes absolute anuria; in smaller doses, merely acute parenchymatous nephritis; in minute doses it has a diuretic effect. Oxalate of lime crystals in the urine and glycosuria were constantly noted in cases of poisoning by uranium.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—A new additional Anatomical Institute is to be erected.

Giessen.—Professor Overbeck of Greifswald having declined the offer of the chair of Physics in succession to Professor Röntgen, Professor Himstedt of Darmstadt has been appointed.

Vienna.—A Dental Medical School is to be established here, and probably something in the same direction will be attempted in other Austrian universities.

FROM the report on the condition of the Metropolitan water supply during the month of September last, issued by the water examiner appointed under the Metropolis Water Act, 1841, it appears that the samples were of high quality, a manifest reduction in the organic matter being apparent. Of 175 samples examined during the month, 165 were found to be absolutely free from any trace of visible suspended matter.

THE General Council of the University of Edinburgh have petitioned the various medical charities in Edinburgh to alter their rules so that the degree of M.D. of Edinburgh University should be held to be a sufficient qualification for appointment as physician. The petitioners would strengthen their case by including the similar degrees of other universities. Those who wish to reform should not draw the line at their own door.

At the next meeting of the Pharmaceutical Society, which will be held on the 14th inst. at 8 P.M., a communication from the Research Laboratory on the "Chemistry of Tartar Emetic" and a paper on the "Ancient Materia Medica of the Egyptians" will be read.

THE Aberdeen University Club is to have its usual dinner on Wednesday, Nov. 21st, at half-past seven, and the chair is to be filled by the Right Hon. G. J. Goschen, M.A., M.P., the Rector of the University.

It is, we regret to learn, reported that Prof. Bamberger, of the University of Vienna, has been taken dangerously ill.

Pharmacology and Therapeutics.

GLYCERINE SUPPOSITORIES (WYLEYS AND CO.).

GLYCERINE SUPPOSITORIES are amongst the most useful and convenient of recent additions to the materia medica. They contain about 5 per cent. of glycerine in the gelatinous basis, and are made in two sizes, so as to be available for children and adults.

COLMAN'S SINAPISMS.

These are an improved form of mustard plasters manufactured from pure mustard. They are claimed to be prompt and efficacious in their action, and cleanly in use, soiling neither skin nor linen. They are said to retain their strength for any length of time, and do not adhere to the skin. The specimens sent for our use answered the above claims as far as we were able to test them.

"TABLOIDS" OF COMPRESSED WARBURG'S TINCTURE.

Trial specimens of tabloids containing the essential ingredients of Warburg's tincture have been submitted by Messrs. Burroughs, Wellcome, and Co. These tabloids may be carried about in any quantity, since, unlike the fluid preparation, their bulk is not large. It is believed that

missionaries and those living in malarial climates will find these tabloids of much service and convenience. Each tabloid is equivalent to half a drachm of the tincture. They are composed of genuine quinine and strong spices.

SALOL.

The compressed tabloids of salol manufactured by the same firm are also very convenient in size, each containing five grains. We have prescribed them in cases of acute febrile rheumatism, and with the customary effects of salicylates. The odour arising from the tabloids and from patients taking them is decidedly agreeable to the olfactory organs of most people.

ESERIDINE.

Eseridine is probably a new alkaloid obtained from physostigmine and Calabar bean. According to the *Pharmaceutical Journal*, it has an irritant effect on the spinal cord, but is not cumulative in its action. It is much less toxic than physostigmine.

PICROADONIDIN.

The true active principle of *adonis vernalis*, according to Professor Podwissotzky, is picroadonidin, which is an amorphous glucoside having an excessively bitter taste. It is easily soluble in water, alcohol, and ether, and acts as a powerful cardiac poison.

ASELLINE AND MORRHUINE.

MM. Gautier and Mourgives detected many leucomaines in certain specimens of cod-liver oil. Butylamine, amylamine, hexylamine, and hydrodimethyl-pyridine are volatile; aselline and morrhaine are fixed bases. Aselline forms crystalline salts, but is itself a nearly colourless amorphous substance which turns green if exposed to light; it has an aromatic odour like ptomaines; it is freely soluble in alcohol. It caused stupor and dyspnoea, with muscular weakness, when injected under the skin of birds. Morrhaine constitutes two-thirds of the total bases found in cod-liver oil, each tablespoonful of the oil yielding about two milligrammes. It excites appetite and causes diuresis and diaphoresis. Perhaps morrhaine is the most active therapeutic agent in cod-liver oil. We certainly should lose no time in ascertaining whether this substance cannot be used in a pure form.

THE ITALIAN MEDICAL ASSOCIATION.

(From our own Correspondent.)

Rome, Oct. 26th.

POSTPONED for a week on account of the Emperor William's visit to King Humbert, this Association has just concluded the sittings of its first meeting with a record of satisfactory performance and an indication of still more satisfactory promise. It was, indeed, a significant proof of what a united Italy implies to see those 350 clinicians and consultants from all parts of the peninsula assemble for the first time in solemn conclave to discuss questions of medical interest in the Great Hall of the University of Rome. Professor Guido Baccelli presided, and as the eye ranged over the successive files of benches one recognised among their occupants the men of light and leading in the Italian medicine and surgery of to-day. The attendance from the southern provinces was especially large—always a hopeful sign at such meetings, when one considers the comparative backwardness of those regions in the race in which their compere of Central and Northern Italy have so frequently borne away the palm.

Professor Baccelli's introductory discourse was eminently practical. Placing in bold relief the eclecticism which characterises modern Italian medicine, he proceeded to show that progress in the same is achieved through a wise discernment of what the three main sources of the science or art can yield. These are (1) bacteriology, which enlightens us as to the protogenesis of diseases; (2) therapeutics, which replaces the do-nothing system (*nihilismo*) of late years by the appreciation of the new remedies which are each day on the increase; and (3) neuropathy, which by its discoveries in

calisation favours the development of physio-pathology. "Laboremus," he said, must point the way which modern medicine has to traverse, and "Excelsior" must be its goal. He concluded by inviting his colleagues to join with him in a tribute of respect to the King, whose example during the cholera explosion at Naples proclaimed him the "first moral clinician" of Italy (*primo clinico morale d'Italia*).

Professor Tomaselli of Catania opened the discussions with a paper on Intossicazione Clinica, or the toxic effects of the continuous administration of drugs. Adding many curious cases in support of his thesis, the author kept the attention of the meeting alive to the end, on which a debate followed, the principal speakers being Bozzolo, of Turin, and Maragliano and Marchiafava, both of Rome. Professor Baccelli having briefly summed up, the sitting rose to meet again in the afternoon, when one great feature of the programme, the Treatment of Tuberculosis, was introduced in a paper by Dr. de Renzi of Naples. The discussion which the author's conclusions provoked was varied and lively. Having stated his experiences with iodine, iodoform dissolved in oil, with naphthaline and naphthol, mostly negative, Dr. de Renzi was followed by Pettoruti, who recommended the injection of sulphuretted hydrogen, particularly in the initial stages, and by Riva (the distinguished clinician of Parma), who described the surgical cure of tuberculosis. Pneumo-ectomy and pneumotomy, with parenchymatous injections, directed to prevent future mischief in the pulmonary cavities, and further injections practised with a view of killing the tubercular germ in those cases where the tuberculosis is comparatively limited—such were the chief *momenta* of his exposition. He had injected the lung with solutions of bichloride of mercury and of camphorated chloral, with undoubted improvement, but without positive cure; and he was still in quest of a micro-bicide powerful enough to destroy the bacillus without endangering the life of the patient. Drs. Ambugnani and Sciolla came next with a report of their special treatment. They had made a selected number of patients, for three hours each day, respire in a room the air of which was saturated with vapour of fluorhydric acid in very powerful doses, without inflicting any injury on the cutaneous or mucous surfaces. The results they attained were very favourable. Dr. Aradas followed on the treatment of incipient phthisis, and Dr. de Renzi replied on the whole line of criticisms, after which the meeting rose for the day.

The next sitting (that of Oct. 21st) was occupied first by Professor Bozzolo's paper on the Etiology of Pneumonitis. Dwelling on the recent publications of Fränkel on the diplococcus, and of Friedländer on the streptococcus, he showed that the diplococcus is the more important of the two, as capable of giving origin to the very varied gradations, from the most serious down to "pneumonitis without pneumonia." He admitted that other infective agents can determine pneumonic processes, and showed that the lung cells offer a variable resistance to the invasion of the diplococcus according to the conditions of the surrounding atmosphere. Maragliano followed by indicating the clinician's conduct in the treatment of pneumonitis in relation to its etiology and pathogenesis. Admitting that pneumonitis is an infective malady, he showed that the hypokinesia or the akinesia of the heart is to be ascribed not only to the grave mechanic-hydraulic disturbances of the circulation, but also to the presence in the blood of a toxic principle developed from pathogenic organisms. He was opposed to "nihilismo" and to parenchymatous injections. He had something to say for the opportuneness of general venesection; while to lower the fever he counselled the gradually cooled bath, and combated the objections made to the refrigerant treatment. To obviate the cardiac failure, he warned the practitioner against ipecacuanha in the active stage of the disease, and recommended alcohol in measured proportions, digitalis and strophanthus. The cardiac akinesia he would combat in its effects. Sometimes bloodletting is especially useful for hydraulic reasons. Dr. Lucatello, having studied bacterioscopically the blood of pneumonic patients, observed that the serum in feverish cases is sterile, which he attributed to the development of a toxic matter due to pathogenic micro-organisms, and poured into the torrent of the circulation by the pneumonic heat. The discussion was continued all the forenoon by Drs. Gardarelli, Palese, De Renzi, Tomaselli, Serafini, Amoroso, and De Giovanni, and was resumed in the afternoon sitting by Professor Cantani, who recalled the meeting to the fact that not every pneumonitis presents itself under the same

characters, but varies according to the condition of the patient and the nature of the pathogenic bacterium. Bloodletting, useful if called for by the hydraulic conditions of the heart, should be freely practised, if only it could be practised from the pulmonary veins. For the cure of pneumonitis running a normal course, it is enough that the patient be put in favourable hygienic conditions. In certain contingencies the pneumonic patient requires, not systematic medication, but a selection from among the various therapeutic indications. Dr. Hippa Felice had no excess of faith in modern bacteriology, but held that in Sardinia pneumonic cases were successfully treated with one or more blood-lettings and with the application of leeches. Dr. Bianchi maintained that in many such patients he had met with an enormous dilatation of the right auricle, and added that in children's cases he had found great advantage in bloodletting. Dr. Ponsino admitted the utility of bloodletting, and would not confine it to pneumonia; while Dr. Colonna contended that the practice was always injurious, and urged that in the treatment of pneumonia no medicine whatever was needed. Dr. Baccelli (the President) made a brilliant *résumé* of the discussion, and remarked with pleasure on the return to honour of ancient medical doctrine. Pointing to autochthonous thrombosis, he said that bloodletting should be reserved as a supreme resource in certain grave contingencies of pneumonitis. He further recommended the inhalation of oxygen, and gave evidence of its utility in the period of carbonic narcosis.

(To be concluded.)

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.

THE autumn general meeting of the above Association was held on Wednesday, the 31st ult., at 30, Sackville-street, Piccadilly, Professor Macalister, F.R.S., President, in the chair. A resolution, proposed by Dr. Macnaughton Jones and seconded by Dr. O'Brien Williams, R.N., was adopted, directing the Council to take steps to hold a conversazione in London during the current medical session. It was announced that the future meetings &c. of the Association in the metropolis would be held probably in the Medical Society's rooms, Chandos-street. The resignation of the hon. treasurer (Brigade Surgeon W. Alexander) was submitted, his present appointment being at a Scotch station, and thus preventing his attendance at the monthly meetings of Council in London. A resolution, however, was passed requesting Dr. Alexander to continue in office till the end of the current financial year.

The autumn dinner took place the same evening at the Hotel Victoria, Northumberland-avenue. Covers were laid for forty-eight. The chair was occupied by the President of the Association (Professor Macalister, F.R.S.) Among those present were Sir W. MacCormac (Vice-President); Dr. Macnaughton Jones (Chairman of Council); Dr. R. Fegan (President-elect); Sir T. Crawford, K.C.B. (ex-President); Director-General Dick, C.B.; Sir Andrew Clark, Bart., President of the Royal College of Physicians of London; the Master of Downing College, Cambridge (Dr. Hill); Professor Sir T. Wade, K.C.B. (Cambridge); and the two Hon. Secretaries (Drs. Stewart and Abraham).

The usual loyal toasts having been duly honoured, Sir T. Crawford proposed the toast of "The Medical Profession," remarking that metaphysical as well as physical, theological as well as biological, questions must necessarily engage the attention of anyone aspiring to high rank in the profession. As long as their recruits included such men of culture as the Royal personage who was now a medical student, there need be no misgivings as to the glorious traditions of their noble profession being worthily sustained.

Sir A. Clark, in responding, said he was glad he held his present official position in his college, if for no other reason, because it had afforded him an opportunity of again enjoying the hospitality of the Irish Graduates' Association. The alumni of Irish medical schools, when they assembled at the social board, had the power, which Englishmen and Scotchmen alike envied, of making those around them feel for the time as if living in a brighter world, illuminated by sparkling wit, where the ruling spirits were good-fellowship and the kindest feelings of the heart. The

toast to which he was speaking was one he liked better than any other to respond to, for he was very proud of his profession—one which in purpose, in scope, in scientific achievements, in the self-effacement, and, above all, the self-denial of its members, was absolutely unapproachable. As regards culture, too—the definition he would give of which was refinement with knowledge,—the votaries of the science of medicine had opportunities such as few others could possibly enjoy.

Sir W. MacCormac proposed the health of "The Guests," coupling with the toast the name of Sir Thomas Wade, K.C.B., whose distinguished career, he said, had been followed with much interest by his Irish fellow countrymen. He had not only served in Her Majesty's army, but had risen to the high position of envoy to China, of the language of which country he had attained such a knowledge that when the Cambridge University recently founded the professorship of Chinese it was admitted by all that no one could be found more competent to fill the chair.

Sir T. Wade, in reply, said he was always proud of his country, for in every part of the world he had found Irishmen, and especially Irish medical men, occupying positions of great responsibility with credit to the land of their birth. The toast was also responded to by Dr. Tonner, ex-surgeon, United States army, and Dr. Kenneth Mackenzie, the latter remarking that there was still in the United States abundant outlet for the surplus medical men entering the profession in this country. The toast of the evening—"Success to the Irish Medical Schools and Graduates' Association"—was proposed by the Master of Downing College, who said that the fact of the number of members having increased more than fourfold in four years, and that they had now nearly 550 names on the roll, was sufficient evidence of their prosperity. The success of such a society was beneficial to the whole profession, for the service they were doing to the Irish medical schools and licensing bodies would react beneficially on the other centres of medical education.

The President, in responding to the toast, said that not only did their social gatherings afford great pleasure to each of them individually, but the work accomplished by the Association gave to the world at large a good example of the heartiness with which they could labour harmoniously together for the common good and for the sustenance of the prestige of the Irish Schools of Medicine, notwithstanding marked differences among themselves in matters of religion and politics.

"The Health of the Officers of the Association" was proposed by Dr. Gilbert Smith in a humorous speech, and responded to by the Hon. Provincial Secretary (Dr. Stewart), who said they looked forward to a large accession of new members before the end of the year, when the invitations would be issued for the January *conversazione*.

The proceedings were enlivened by music and the singing of Irish melodies and other songs by Mr. Groome, Drs. Campbell Pope, Gilbert Smith, and others.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALIA.

In accordance with the circular issued by the provisional committee on April 5th, the second session of the Intercolonial Medical Congress will assemble in Melbourne on Jan. 7th of next year, and will rise on the 12th. The Government of Victoria, through the Premier, has undertaken to show every courtesy in its power to members of the Congress visiting Melbourne, and has promised material assistance in order to secure the success of the session. Arrangements have been made for members of the congress to travel cheaply over the colonial railways, and special rates for passages by sea have been granted by many companies. The scientific success of the congress is assured by the interest taken in its proceedings by the medical societies throughout Australasia, and by the adhesion of distinguished members of the profession, whose names appear in the roll of officers. The President of the Congress is T. N. Fitzgerald, Esq., F.R.C.S.I., and the following is a list of the sections and sectional officers:—

Section of Medicine.—President: The Hon. William

Frederick Taylor, M.D., Queen's College (Kingston, Canada), M.R.C.S. Eng., M.P. (Brisbane). Vice-Presidents: Daniel Colquhoun, M.D. Lond., M.R.C.P. Lond., M.R.C.S. Eng. (Dunedin); John Davies Thomas, M.D. Lond., F.R.C.S. Eng., L.R.C.P. Lond. (Adelaide). Secretary: James Jamieson, M.D., Ch.M. Glas. (Collins-street East, Melbourne).

Section of Surgery.—President: Edward Charles Stirling, M.A., M.D. Cantab., F.R.C.S. Eng. (Adelaide). Vice-Presidents: Charles Henry Haines, M.A., M.D., Queen's Univ. Irel., F.R.C.S.I. (Auckland); Henry Widenham Maunsell, M.B. Dub., L.K.Q.C.P.I., M.R.C.S. Eng. (Dunedin); Richard Rendle, F.R.C.S. Eng. (Brisbane). Secretary: Frederick Doogan Bird, M.B., M.S. Melb., M.R.C.S. Eng. (Collins-street East, Melbourne).

Section of Hygiene and Forensic and State Medicine.—President: Henry Norman MacLaurin, M.A., M.D. Edin., LL.D. St. And. (Sydney). Vice-Presidents: Alexander Johnston, M.D. St. And., M.R.C.S. Eng. (Wellington); Thomas Christie Smart, F.R.C.S. Ed. (Hobart); Alfred Robert Waylen, M.D. St. And., M.R.C.S. Eng. (Perth). Secretary: John William Springthorpe, M.A., M.D. Melb., M.R.C.P. Lond. (Collins-street East, Melbourne).

Section of Anatomy and Physiology.—President: Professor T. P. Anderson Stuart, M.D., C.M. Edin. (Sydney). Vice-President: Professor Archibald Watson, M.D. Paris and Göttingen, F.R.C.S. Eng. (Adelaide). Secretary: James William Barrett, M.D., M.S. Melb., F.R.C.S. Eng. (Collins-street East, Melbourne).

Section of Pathology.—President: Joseph Bancroft, M.D. St. And., M.R.C.S. Eng. (Brisbane). Vice-President: Wm. Camac Wilkinson, M.D. Lond., M.R.C.P. Lond., M.R.C.S. Eng. (Sydney). Secretary: Henry Maudsley, M.D. Lond., M.R.C.P. Lond., M.R.C.S. Eng. (Spring-street, Melbourne).

Section of Obstetrics and Gynaecology.—President: Ferdinand Champion Batchelor, M.D. Dur., F.R.C.P. Ed., M.R.C.S. Eng. (Dunedin). Vice-Presidents: Richard Stonehewer Bright, M.R.C.S. Eng. (Hobart); James Hill, M.D. Ed., F.R.C.S. Ed. (Brisbane); Edward Willis Way, M.D. Edin., L.R.C.P. Lond., M.R.C.S. Eng. (Adelaide). Secretary: Felix Meyer, M.B., B.S. Melb. (Lygon-street, Carlton).

Section of Diseases of the Eye, Ear, and Throat.—President: Mark Johnston Symons, M.D., C.M. Edin. (Adelaide). Vice-Presidents: Charles Morton Anderson, M.R.C.S. Eng. (Christchurch); Andrew John Brady, L.K.Q.C.P.I. et L.R.C.S.I. (Sydney); Thos. Evans, M.R.C.S. Eng. (Sydney). Secretary for Diseases of the Eye: Jas. Jackson, M.D. Lond., M.R.C.S. Eng. (Collins-street East, Melbourne). Secretary for Diseases of the Ear and Throat: Charles Lesingham Maynard Iredell, M.R.C.S. Eng., L.R.C.P. Ed. (Collins-street East, Melbourne).

Section of Psychological Medicine.—President: Frederick Norton Manning, M.D. St. And., M.R.C.S. Eng. (Sydney). Vice-Presidents: Walter Edward Hacon, L.R.C.P. Lond., M.R.C.S. Eng. (Christchurch); Alexander Stewart Paterson, M.D. Edin., L.R.C.S. Edin. (Adelaide); Richard Battersby Scholes, M.B., C.M. Edin. (Brisbane). Secretary: William Beattie Smith, F.R.C.S. Ed., L.R.C.P. Ed. (Hospital for the Insane, Ararat).

Section of Pharmacology.—President: Baron Sir Ferdinand von Mueller, M.D., Ph.D., K.C.M.G., F.R.S. Vice-President: Thomas Dixon, M.B., C.M. Edin. (Sydney). Secretary: David Grant, M.A., M.D., C.M. Edin. (Collins-street East, Melbourne).

Officers of Sub-sections.—*Sub-section for Diseases of the Skin.*—Secretary: James Patrick Ryan, M.K.Q.C.P.I., L.R.C.S.I. (Collins-street East, Melbourne). *Sub-section for Diseases of Children.*—Secretary: William Snowball, M.B., B.S. Melb., L.R.C.S. Ed. (Lygon-street, Carlton).

The following is a list of the *Local Secretaries*:—New South Wales: Philip Edward Muskett, L.R.C.P., L.R.C.S. Ed. (135, Elizabeth-street, Hyde-park, Sydney). Queensland: Francis Washington Everard Hare, M.B. Durh., M.R.C.S. Eng. (Brisbane Hospital). South Australia: Benjamin Poulton, M.D. Melb., M.R.C.S. Eng. (North-terrace, Adelaide). New Zealand: Joseph Osborne Closs, M.B., C.M. Edin. (Don-street, Invercargill). West Australia: John Rae Menzies Thomson, M.B., B.S. Melb. (York). Tasmania: James McImery Pardey, M.B., B.S. Melb. (Launceston Hospital).

Subscriptions, £1 ls., should be forwarded to the treasurer, Dr. Graham, Church-street, Richmond; all other communications should be addressed to the secretary, Professor Allen, University of Melbourne, or to the secretaries of sections.

SIR JAMES PAGET ON THE SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

OUR readers have been already informed that the directors of this Society lately resolved to make the Centenary memorable among the Society's widows and orphans by a present to them respectively of £5 and £3 each. In further celebration of the event, Sir James Paget, Bart., F.R.S., President of the Society, invited his colleagues and co-directors of the Society to dinner on the 29th ult. Only one toast was drunk—"Success to the Society." The eloquence with which Sir James pleaded the claims of this Society deserves to be made public. It is well calculated to stimulate medical men to their duty, either as a matter of thrift to their own survivors, or as a matter of highest charity to the survivors of their less fortunate brethren. Sir James spoke as follows:—The Society had prospered and done good for a hundred years, and he hoped it would do so for a hundred more. He fully believed it would if it were managed with the same generous and prudent benevolence which he had always seen exercised by his colleagues on the Board of Directors. It could not, indeed, make any stirring appeals for money, without which it seemed hard nowadays for any good society to be prosperous. It was not poor; and it was not a mere charity, though, in proportion to its permitted range of work, no society had relieved more deserving persons or alleviated heavier sorrow or more helpless distress. And it was not a mere insurance society, from which anyone might be certain that whatever money he paid in would be in money repaid, or more than repaid, to those to whom he might bequeath it, even though they might be rich. Thus it could not urge on all the profession those arguments for thrift which everyone was so ready and happy to urge upon his neighbours. But really the Society offered the best opportunities for both charity and thrift. Everyone who joined it could feel sure that the money he gave would, in the best sense, be well invested. It would either be far more than returned in the support of the widow and orphans whom he might leave in poverty, or else it would be given in one of the purest forms of charity to the widows and orphans of his poorer fellow members. The work which the Society had so long been doing, and in which we were now to wish that it might as long continue, had, in truth, been in obedience to that "pure religion and undefiled" which bids us "visit the fatherless and widows in their affliction." He felt that the wish for the Society's prosperity might rightly be a prayer and a deep resolve, rather than a mere toast.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Exmouth, by Dr. PARSONS.—Exmouth is spoken of in this report as a seaside resort frequented in summer by many excursionists as well as by visitors for longer periods; but, as such, it has some very serious drawbacks. Owing to former defective bye-laws, many of the houses have very little open space at the back, and in a district, part of which consists of low-lying, marshy ground bordering the coast and the river estuary, Dr. Parsons found a new street being laid out on a swampy piece of ground, upon which pools of dirty stagnant water were standing. Some of the sewers have been reconstructed, but, referring to the general system, it is shown that they are not self-cleaning or properly ventilated; and notwithstanding these conditions, which lead to an offensive character in the sewer air they contain, the houses are not disconnected from the sewers, and when the level of the sewage rises, owing to the outfall being tide-locked, the displaced air is driven up the house drains to escape in or near the houses. Waterclosets, too, are found there which have no provision for flushing except by hand—a

system which in Exmouth, as elsewhere, tends to occasional, if not frequent, nuisance. From January to June diphtheria was prevalent in the place, twenty-four cases and eleven deaths coming under notice; and, in considering the causes, Dr. Parsons refers to two points as especially deserving of notice. The first relates to infection conveyed by personal intercourse at school and elsewhere; the second to the inhalation of foul air from sewers and drains. Sewer and drain nuisances, especially in the matter of effluvia, seem, however, from the description of the town, to be possible of manifesting themselves very generally, and hence less importance than usually attaches to the circumstance that they were observed in certain specially recorded instances of diphtheria. But it must be regarded as proved that conditions with which diphtheria is often observed obtain somewhat widely in Exmouth, and that their removal is called for in the general sanitary interests of the place, quite apart from the special prevalence of disease reported on; and it is to be hoped that the sanitary authority will forthwith set themselves to deal with these matters, and to provide some means of isolation by which they may check future beginnings of infectious diseases.

Diphtheria in the Llandissilio District, by Mr. SPEAR.—This outbreak occurred in the Narbeth Union, in Pembrokeshire. It was a somewhat sudden one, towards the middle of March last, but it had been preceded by certain isolated invasions in the neighbourhood. The beginnings thus ascertained are carefully discussed by Mr. Spear, who, after considering the several circumstances, comes to the conclusion that, though a number of the attacks may have been linked together by one chain of personal infection, this could only have been so on the assumption that the infection was conveyed by healthy individuals, or by the occurrence of intermediate attacks of such slight severity that they were unheeded or forgotten. Besides which, such a hypothetical explanation does not appear to the reporter to account for the suddenness of an epidemic outburst which characterised the prevalence. A wide-reaching cause must, he thinks, have been suddenly potent for mischief. The actual cause was not discovered, and, although pains were taken to ascertain all the cases allied to diphtheria that were known of in surrounding localities, Mr. Spear comes to the conclusion that no evidence of a circumstantial character was forthcoming to justify suspicion of an external origin of the outbreak. One point named in the report is noteworthy. In April two children of a medical man attending cases of diphtheria suffered from the disease; he himself having sore throat, at the same date apparently. Two terriers who accompanied the doctor in his rounds, and whose attentions to the patients and to their food necessitated their expulsion from an infected house, were seized with feverishness, drowsiness, and an affection involving constant efforts to clear the throat. Two cats subsequently developed similar symptoms, and it was ten days after the first onset of the canine seizure that the two children fell ill, both on the same day, with attacks that turned out to be typical diphtheria. As regards the sanitary conditions of Llandissilio, the place may be stated to stand in a well-elevated position on rock; but the houses are mostly ill ventilated, small, and often damp; some of the common village nuisances and defects in connexion with drainage and excrement disposal are also somewhat general.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5300 births and 3531 deaths were registered during the week ending Nov. 3rd. The annual rate of mortality, which had increased in the preceding nine weeks from 17.5 to 21.8, declined again last week to 19.6. During the first five weeks of the current quarter the death-rate in these towns averaged 20.3 per 1000, and was identical with the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 10.0 in Brighton, 11.5 in Birkenhead, 13.6 in Derby, and 14.0 in Nottingham. The rates in the other towns ranged upwards to 23.7 in Preston, 24.0 in Manchester, 24.8 in Bolton, and 29.9 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases, which had been 465 and 472 in the preceding two weeks, declined again last week to 467; they included 160 from measles, 88 from diarrhoea, 62 from scarlet fever, 55 from whooping-cough, 54 from "fever"

(principally enteric), 47 from diphtheria, and only one from small-pox. The aggregate deaths from these zymotic diseases caused the lowest death-rates last week in Sunderland; and Birkenhead, and the highest rates in Cardiff, Newcastle-upon-Tyne, and Blackburn. Measles showed the greatest mortality in Huddersfield, Leicester, Wolverhampton, Leeds, Cardiff, and Blackburn; diarrhoea in Cardiff and Newcastle-upon-Tyne; scarlet fever in Norwich, Derby, and Blackburn; whooping-cough in Halifax and Newcastle-upon-Tyne; and "fever" in Nottingham and Preston. The 47 deaths from diphtheria in the twenty-eight towns corresponded with the number in the previous week, and included 4 in Newcastle-upon-Tyne, 3 in Salford, 2 in Birmingham, and 2 in Manchester. Small-pox caused 1 death in London, but not one in any of the twenty-seven other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained no small-pox patient during the week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 1007 at the end of the week, against 1003 and 1009 in the preceding two weeks; 71 cases were admitted during the week, against 119, 101, and 81 in the previous three weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding nine weeks from 130 to 522, declined last week to 441, but were 32 above the corrected average. The causes of 61, or 1.7 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Sunderland, Nottingham, and Leicester. The largest proportions of uncertified deaths were registered in Sheffield, Liverpool, Bolton, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20.4 and 19.8 per 1000 in the preceding two weeks, further declined to 18.7 in the week ending Nov. 3rd; this rate was 0.9 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 11.2 and 15.0 in Perth and Edinburgh to 22.9 and 28.7 in Greenock and Paisley. The 473 deaths in the eight towns showed a further decline of 27 from the numbers in recent weeks, and included 23 which were referred to measles, 20 to diarrhoea, 5 to whooping-cough, 4 to diphtheria, 3 to "fever" (principally enteric), 1 to scarlet fever, and not one to small-pox; in all, 56 deaths resulted from these principal zymotic diseases, against 82 and 69 in the preceding two weeks. These 56 deaths were equal to an annual rate of 2.2 per 1000, which was 0.4 below the mean rate from the same diseases in the twenty-eight English towns; the rate in the eight towns ranged from 0.7 and 0.9 in Leith and Aberdeen to 2.3 in Dundee and 13.5 in Paisley. The fatal cases of measles, which had increased in the preceding four weeks from 9 to 26, were last week 23, of which 14 occurred in Paisley, 7 in Glasgow, and 2 in Greenock. The deaths attributed to diarrhoea, which had declined in the two previous weeks from 27 to 15, rose again last week to 20, and included 8 in Glasgow, 7 in Dundee, and 2 in Edinburgh. The fatal cases of whooping-cough, diphtheria, and scarlet fever all showed a decline from recent weekly numbers; 4 of the 5 deaths from whooping-cough occurred in Glasgow, and 2 of the 4 from diphtheria in Edinburgh. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had increased in the previous five weeks from 74 to 114, declined again last week to 98, and were 33 below the number in the corresponding week of last year. The causes of 65, or nearly 14 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 24.2 and 21.9 per 1000 in the preceding two weeks, rose again to 24.4 in the week ending Nov. 3rd. During the first five weeks of the current quarter the death-rate in the city averaged 23.5 per 1000, the mean rate during the same period being 19.2 in London and 16.2 in Edinburgh. The 165 deaths in Dublin last week showed an increase of 17 upon the number in the previous week; they included 10 which were referred to "fever" (typhus, enteric, or ill defined), 6 to whooping-cough, 2 to measles, 1 to scarlet fever, 1 to

diphtheria, 1 to diarrhoea, and not one to small-pox. Thus 21 deaths resulted from these principal zymotic diseases, against 23 and 25 in the previous two weeks; these were equal to an annual rate of 3.1 per 1000, the rate from the same diseases being 2.7 in London and 1.0 in Edinburgh. The deaths referred to "fever" showed an increase upon recent weekly numbers, and exceeded the number returned in any previous week of this year; the fatal case of diarrhoea, on the other hand, showed a decline of 11 from the number in the previous week. The deaths from other zymotic diseases did not materially differ from the numbers in recent weeks. The deaths of infants showed an increase upon the numbers in recent weeks, while those of elderly persons had further declined. Six inquest cases and five deaths from violence were registered; and 57, or more than a third, of the deaths occurred in public institutions. The causes of 15, or 9 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

REFORM AT THE COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—As a Fellow of the Royal College of Surgeons who for thirty years has publicly advocated the legitimate aspirations of the Members in their capacity as part of the College corporate, allow me to make a few remarks upon the moot question of their claims.

In 1858, I advocated in the columns of THE LANCET (Nov. 20th) the legal right of the Members (and Fellows) to elect the representative of the College in the General Medical Council, then instituted—a right which has since been upheld by more than one reformer. The movement, at the time referred to, was promoted by the late Mr. John Brady, M.P., who threw into it his last energies. I am the anonymous Member of the College of Surgeons alluded to in THE LANCET leader of Nov. 27th (1858) as having made a legal form of application to the Medical Council with the view of testing the legality of their proceedings. At that time I was a much younger man, and a life of professional labour in another direction than professional politics makes me now wonder at my temerity in personally serving a notice upon a body of professional senators in conclave at the Royal College of Physicians, and who, if not conspicuous for their political wisdom and liberality, were certainly distinguished for their high character and dignified bearing, under the presidency of Mr. Joseph Henry Green, as being some of the best representatives of the profession; veterans, whose advancement of medicine and surgery, as well as their less admirable Toryism, are placed for ever on record in THE LANCET—the water of their life spilt upon the ground, and which cannot be gathered up again.

The political power of the Members, as bearing upon their interests with relation to the administration of the College, would be secured by their having a voice in the election of the College Council representative in the General Medical Council, and by their having a voice also in any political movements affecting the College. As touching the electoral claims of the Members with relation to the College Council, the duties of that Council are essentially educational, not political. It is quite open to Members to place themselves on an equal footing with Fellows as an electoral body simply by qualifying for the franchise; but the proposal of the Members to substitute mere seniority of ten years' and twenty years' membership as the qualifications respectively for the franchise and of eligibility to assume the representative duties of councillors could not strengthen the College in dealing with educational questions. At the recent meeting of the College to consider the report of the Council for the year, the first essay of Members as *quasi*-councillors was not auspicious of their special aptitude, as they alleged, for judgment in the financial administration of the College.

A museum of far beyond European fame, and the duties of conservator, &c., were obviously not familiar subjects to gentlemen who, as Sir Guyer Hunter acknowledged respecting himself, have "passed their lives in another direction." A resolution which was equivalent to a vote of want of confidence in the College Council administration of the funds was a painful experience in the history of the College; but,

if not an edifying spectacle, it was an honourable retreat on the part of the mover when, as champion of the Members' alleged grievances, he withdrew his resolution at the end of a two-hours' fight, and the benches of the theatre were then seen to be strewn with the dead bodies of Members and of one or two financial Fellows.

It is idle to talk of a corporate body; corporate rights are not necessarily equal.

I am, Sirs, yours faithfully,

Connaught-square, W., Nov. 5th, 1888. FREDERICK J. GANT.

To the Editors of THE LANCET.

SIRS,—I trust you will afford me a small portion of your valuable space to enable me to correct an error which appears in your report of the annual meeting of the College. I am reported to have said that "it was only the extraordinary expenditure of the College upon which they (the Fellows and Members) desired to be consulted." On the contrary, my contention was that, as a very large proportion of the funds of the College came out of the pockets of the Fellows and Members, they surely ought to be consulted on all matters of expenditure; but that Mr. Christopher Heath in the course of his argument went beyond the wording of the resolution under discussion, and which resolved "that the Fellows and Members of the College be consulted as to all extraordinary expenditure" only. This portion of the resolution was, however, accepted by the meeting, and carried by a large majority; but we all know that the Council of the College will treat it as a dead letter, just as it has all resolutions previously passed by large majorities of Fellows and Members at annual meetings.

With reference to the resolution entrusted to me, and which the President said could not be accepted by the Council because of "its being contradictory to the terms of the bye-laws," I must say I was treated rather unfairly. The President having refused me a hearing, immediately on my resuming my seat at his dictation, allowed a member of the College—Mr. Dickinson—to move a resolution which, although not embodied in the same terms as mine, included all I was about to ask for. This was at once accepted by friends around me, and carried by a very large majority. In your report of the proceedings I observe this resolution does not appear. It was as follows: "That this meeting, having taken note of the privileges at present enjoyed by the Members of the College enumerated in pages 26-7 of the report, respectfully request the Council to add thereto the right of meeting at convenient times within the College walls for the purpose of discussing any question relating to their position as members in which they may be interested; and with this view the Council is hereby requested to enact a bye-law instructing the secretary, upon receipt of a requisition signed by twenty Members, or Fellows and Members, to arrange with the Members forwarding such requisition a convenient day and hour within one calendar month on which such meeting may be held upon the College premises." It is difficult to conceive that twenty-four highly educated men could at any period in the history of our College have been brought to sanction and ordain this obnoxious and irritating Bye-law 17, involving as it does Fellows and Members in all kinds of pains and penalties. It must have been intended less to regulate meetings than to restrict the right of free speech, and stifle discussion upon any subject which may appear to be distasteful to those in authority. Anyhow—

"The clear their reason was distraught,
Their wits were lost in wild confusion,
Through morbid brooding o'er the thought
Of social revolution."

I am, Sirs, yours faithfully,

Bedford-square, Nov. 5th, 1888. JABEZ HOGG.

To the Editors of THE LANCET.

SIRS,—It is a noteworthy sign of the strength of the position of the Members of the College of Surgeons, in their contention for a voice in its management, that almost every speaker or writer on "the other side of the house" is forced to use a two-edged argument, the sharper edge of which is directed against the party whose cause he champions. The last instance of this self-mutilation is presented in the well-meant speech of Mr. Christopher Heath on the 1st inst.

at the College meeting. Admitting the justice of my claim that that meeting was a "meeting of the corporation" (witness the mace and the President's robes of office), he further adopted my view that as such it was entitled to the balance sheet now annually presented; but, strange to say, he coupled this admission with the claim that "the action of the directors" (pursuing my analogy of a company meeting) "had to be taken as it was; the money had been spent, and they could not help it." They might turn out the directors, just as the Council of the College might be turned out; but the members could not go back upon the money already spent." Mr. Heath has thus presented our case *in nuce*. We have not the alternative which Mr. Heath suggests, and his words but give added force to our argument that we must be enabled—I will not say to "turn out," as that would be an impolite act—to elect men who will respect our views as to the spending of money partly drawn from the pockets of the Members and partly bequeathed to a corporation of which they form the overwhelming majority. Mr. Heath, however, admitted later in his speech the *indirect* power we Members already enjoy, in his reference to the negating by the Council of a money grant: "Perhaps they had the present meeting in their eye," though in an earlier sentence he had deprecated the very meetings which have so wholesome an effect. As Mr. Heath, though avowing that he spoke *sua sponte*, was not corrected by any of his colleagues on the Council, I must take it that his views were not objectionable to that body. They certainly are a most important though unwitting addition to the accumulating testimony of eminent men in favour of our claim that the Members should take a direct part in the control of the College. It is a sorry thing to make a rejoinder in print and in cold blood to the warm words of debate, but I could not trespass upon the goodwill of the meeting on the 1st by twice over rising to support one motion. I therefore beg your kind insertion of these lines. One point, however, I must call further attention to, and that is that again the President has refused to put to the meeting a motion proposing that the Secretary of the College should forward to the Privy Council a copy of a resolution passed by the College in an officially summoned assembly. Such ruling is assuredly an abuse of authority.

I am, Sirs, your obedient servant,

WM. ASHTON ELLIS,

Grosvenor-road, S.W., Nov., 1888. Joint Hon. Sec. Assoc. M.R.C.S.

To the Editors of THE LANCET.

SIRS,—In your report of the recent meeting at the College you have inadvertently omitted to state that, after the President had refused to put the third resolution sent in on behalf of the Association of Members, the following resolution was proposed, seconded, and carried unanimously: "That this meeting, having taken note of the privileges of Members as enumerated by the Council in their Reply to the Privy Council (pages 26 and 27 of the Report), respectfully requests the Council to add thereto the right of meeting at convenient times within the College walls for the purpose of discussing any matters relating to their position as Members in which they may be interested; and with this object the Council is hereby requested to enact a bye-law instructing the secretary, on receipt of a requisition signed by twenty Members (or Fellows and Members), to arrange with the Member forwarding such requisition a suitable day and hour (within one month) at which such meeting may be held on the College premises."

It is hardly likely that the Council will refuse so moderate a demand for such an elementary right. If the Members wish to meet together (as many of them have done in recent years) it seems monstrous that they should have to hire premises for the purpose when there is ample accommodation within their own College. I think that the Council, instead of apparently resenting the interest at present taken by the Members in College politics, ought rather to encourage the same, since it must in reality tend to promote the true welfare of the College. This year's annual meeting is noteworthy on account of the fact that the Council, by means of Mr. Heath's able address, for the first time joined in the discussion, and also on account of the statement by the President that these meetings are held for the purpose of "affording information!"

I am, Sirs, yours truly,

Wandsworth, S.W., Nov. 3rd, 1888.

W. G. DICKINSON.

SACCHARIN.

To the Editors of THE LANCET.

SIRS,—In the last issue of your valuable journal has appeared a letter from Dr. Pavy, giving his experience and opinion of saccharin. As my name has been mentioned, I should like to make a few explanatory remarks as far as I am concerned.

In June last I was spending a few days with Sir Spencer Wells in London, when I called on Dr. Pavy, whom I already had the honour of knowing. Being interested in diabetes, I was glad to get the benefit of his most recent results and experiences. Dr. Pavy was kind enough to show me his recent and very interesting improvements in the chemical analyses of diabetic urine, as well as some alimentary articles for diabetic patients. Just as I was leaving I asked him what he thought of saccharin, having a short time previously sent him a pamphlet in which I had mentioned the ill effects observed by me in a few cases of administration of that product. As his answer was in English, I understood him to say that he recommended saccharin where it was well borne, and that he advised its discontinuance when it was not well tolerated, adding that many diabetic patients did not care much for sweet things after having left them aside for some time. Somehow or other, I took away the impression that the fact of being badly borne in some cases implied dyspeptic trouble, and that some of Dr. Pavy's patients had been obliged to discontinue the use of the substance for this reason, exactly as had occurred in some cases of mine.

On my return to Paris, at a sitting of the Académie de Médecine, of which I am a member, and in the course of a discussion on saccharin, I referred incidentally to these cases of dyspeptic trouble, and in so doing I was very much pleased to quote the authority and name of my learned confrère of London, mentioning the kind reception he had given me a few days before. That this feeling was quite evident is shown by the way I spoke of him in my communication on this occasion, and that my good faith was perfect is evinced by the fact that I myself sent Dr. Pavy a copy of the Transactions of the Academy as soon as it was published, accompanied by my visiting card. On receiving this copy Dr. Pavy wrote to correct my impression, and specified that he had only spoken of a persistent or unpleasant sweet taste in the mouth in some cases, but was otherwise quite satisfied with the use of the product. At the very next meeting of the Academy I made the correction desired by Dr. Pavy in the following terms: "Dans le cours de la séance du 3 juin, et à l'occasion de la communication si intéressante de notre collègue, M. Dujardin-Beaumetz, sur la saccharine, j'ai dit incidemment que le Dr. Pavy, que je venais de voir à Londres, avait observé, comme moi, des troubles dyspeptiques chez quelques personnes diabétiques qui faisaient usage de cette substance. J'avais eu soin d'envoyer à notre savant confrère le *Bulletin de l'Académie* qui reproduisait cette mention sous la forme où elle m'avait paru répondre à sa pensée, formulée rapidement dans une langue étrangère. M. le Dr. Pavy, en réponse à cette communication, m'exprime le désir de voir spécifier la nature des troubles qu'il a observés quelquefois: ils ont consisté en un goût désagréable laissé par la saccharine, ou une saveur sucrée persistante de la bouche. Il pense que le terme de *troubles dyspeptiques* est à peine applicable à ce genre de manifestations et reste favorable à l'emploi de la saccharine quand elle est bien tolérée. Je m'empresse de déferer au désir de M. le Dr. Pavy quant à la qualification à donner à ce genre phénomènes désagréables déterminés par l'usage de la saccharine."

Since then I have not once had occasion to speak of anything concerning saccharin either verbally or in writing. Need I say that I have nothing to do with the article in the press referred to by Dr. Pavy, which has in a most regrettable manner entirely misrepresented his opinion of saccharin, and which, up to the date of his letter in THE LANCET, was entirely unknown to me; and need I add that my interest in the subject is a purely scientific one?

In conclusion, I may just state that the results recorded in this country are not always favourable, and that the chief inconveniences of the employment of the substance have

been especially set forth in the report of the Special Commission of investigation appointed by the "Comité Consultatif d'Hygiène de France," the highest authority in hygiene in our country, and which was presided over by Professor Brouardel, dean of the Paris Faculty of Medicine.

I am, Sirs, yours very obediently,
Rue Pierre Charron, Paris, Nov. 6th, 1888. JULES W. PARRY.

THE CONTAGIOUS DISEASES ACTS.

To the Editors of THE LANCET.

SIRS,—I have resided and practised for some years in a small garrison town in one of our colonies, and have from time to time had medical charge of the troops in garrison. The Contagious Diseases Act was not in force during the time I lived in the colony, though now, after the evidence given by some medical men before a select committee appointed by the Government, the Act is to be put in force. Let me say, before I go any further, that I am wholly in favour of the Act being put in force, and in evidence which I gave to the aforesaid committee I recommended that it should be. I wish this to be plainly understood, so that what I say hereafter may not in any way be misconstrued as being antagonistic to the Act. What I wish to demonstrate is the influence of the male population in the spread of contagious disease. I am as well aware as anyone of the difficulties of legislating for males in this matter; but let us remember that we are not legislating for a class, nor are we legislating solely for a body of immoral persons who contract syphilis; but that we are trying by legislation to stamp out disease, which is a fruitful source of weakness to the empire at large, so that no endeavour to surmount difficulties—no matter of what nature—should be spared to check the spread of the disease from all its sources. Venereal disease is not spread by men alone or women alone, it is spread by both, and syphilis cannot exist unless both these factors act in the propagation of it. Clearly, then, it is a mistake to legislate for either of the sexes independently of each other. When there are two well-defined and acknowledged sources of evil, it is unscientific and not in accordance with common sense to attack one source only and disregard the other for no better reason than that the one is easy and the other difficult to deal with, or, as you term it, impracticable.

In your article of Sept. 15th, page 529, you say: "Mr. Benthal has fallen into two errors. One is that the Acts were directed against one sex—i.e., the female—which is untrue. They were directed against common prostitutes, a proportion of the female sex who make a trade of prostitution, and by whom the greater amount of venereal disease is created and propagated." I was always under the impression that the Acts were not directed against any sex or class of people, but against the spread of syphilis, and it is because the Acts have been directed against prostitutes, and not against every source of infection, they have not proved so effective as they might have done. You go on to say: "The second error is that men are equally guilty with prostitutes in spreading disease, which is a wholly untenable proposition. That women are, unfortunately, infected by men is too true; but, while any one man cannot, for obvious reasons, infect more than comparatively few women, there is no limit to the number of men whom one prostitute may infect." Now I hope to prove that men are equally guilty with women in spreading the disease. It is clear that men are the carriers of the poison from one woman to another. Women do not infect each other, and the women are the carriers of the poison to men. In the spread of the disease both male and female are links in the same chain. Men do not, as you say, infect as many women as women do men; but the number infected has nothing to do with the amount of guilt, for it is not the individual action of the one sex which spreads the disease, for the action of one sex without that of the other is impotent; it is the combined action which causes and propagates the disease. You might as well say that the driving-wheel of an engine is not so useful as one of the smaller ones because it does not make as many revolutions in a minute. But surely this is a fallacy.

To show to what an extent syphilis may be spread by men, allow me to relate my experience in the small garrison town in which I lived. The town was the headquarters of a regiment. At times nearly the whole of the

¹ Bulletin de l'Académie de Médecine, No. 29. Séance du 17 juillet, 1888.

regiment was out in small detachments at various outposts in the country, where the facilities for contracting venereal disease were limited. Occasionally, for regimental purposes, these detachments came into town, comparatively free from disease, but in a short time numbers of them contracted it from some of the prostitutes of the town, and before long it increased amongst these prostitutes and therefore amongst the male civilian population of the town. In another sense, men, I am sorry to say, are more guilty than women. In your leader of Oct. 20th you say "the experience of Lock Hospital and visiting surgeons is that these women may infect an almost unlimited number of men before they themselves are aware that they have anything the matter with them." (This is what I pointed out to the select committee before referred to.) But this can hardly be the case with males; anyone who has had even a little experience of ordinary practice knows how filthy and nervous nearly all men are about the slightest abrasion of the penis, and it must be rare indeed that a man has venereal disease and does not know it; yet they deliberately have connexion with women and infect them. In the passage I have already quoted from THE LANCET of Sept. 15th, you say that the Acts are directed "against a proportion of the female sex who make a trade of prostitution." Here the knife cuts both ways. Before there can be any trade, there must be buyers and sellers; both buyers and sellers are trading, and both are equally concerned in every transaction in which they participate. While the producer has no right to serve in injurious article, neither has the consumer any right to injure the producer in taking possession of his wares; therefore the man who infects a female is equally culpable with the female who infects a man.

It would take up too much of your valuable space at present for me to suggest amendments to the present Acts. My object in writing now is rather to show that there is no attempt made at present by these Acts to modify a most important factor in the causation and spread of venereal disease.

I am, Sirs, yours faithfully,
Cambridge, Oct. 25th, 1888.

JOHN ROSS, M.B.

MENSTRUATION AFTER ENTIRE REMOVAL OF BOTH OVARIES.

To the Editors of THE LANCET.

SIRS,—I was unfortunately not able to attend the last meeting of the Medical and Chirurgical Society (Oct. 23rd), at should much like to make some comment on a particular point raised. Mr. Knowsley Thornton is thus reported:—
It was interesting to him to find that Mr. Meredith held the view that when both ovaries were entirely removed no recurrence of menstruation could occur. That had always been his own experience, though he admitted that what seemed an extremely trifling remnant of ovary, if left behind, might lead to serious results." I have no doubt that in the vast majority of instances the above statement holds good; but there are exceptions, for in one of my ovariotomies I was obliged *entirely* to remove both organs, and will give a very brief account of the case and of the subsequent event.

An unmarried woman, aged twenty-four, was in the beginning of this year placed under my care by Dr. Pollock. In Feb. 3rd I performed ovariotomy, and, finding the other ovary also diseased, removed it likewise. The patient had either pain nor fever, indeed, she recovered with less difficulty than often follows a quite trivial injury, leaving my immediate care in three weeks, and going into the country. The interest of the case centres, however, on the events subsequent to the entire removal of both ovaries. At the operation I took away on the left side the whole of the cystic ovary, together with the greater part of the allopian tube and pampiniform plexus, which were spread it upon the cyst wall. On the right side the ovary was nearly double its normal size, very hard and fibrous; it was much altered in form, being almost kidney shaped, with the long axis directed obliquely upwards and inwards; the ligament being attached to what would represent the hilum. This ligament and the vessels were tied and severed quite three-quarters of an inch inside the gland. I am quite certain, as also is Mr. Sheild, who most kindly and ably assisted me, that not the minutest part of the ovary was left behind. Menstruation remained absent, though in April she complained of "flushings" and pain

in the back until the middle of June, when a very slight catamenial discharge appeared. A month later, and every month since, she has menstruated regularly, "just as she used to do before the operation."

I am, Sirs, your obedient servant,
Wimpole-street, Oct. 25th, 1888.

RICHARD BARWELL.

THE ILLNESS OF THE LATE GERMAN EMPEROR.

To the Editors of THE LANCET.

SIRS,—Sir Morell Mackenzie at the end of his pamphlet gives a list of twenty-two cases of cancer for which thyrotomy was performed. I operated upon one of these cases in 1872, when I was surgeon at the Golden-square Throat Hospital. Tracheotomy had been done seven months previously for difficulty of breathing by a Halifax surgeon. At the time I operated the larynx was filled with carcinomatous growths, the left ary-epiglottic fold was thickened, and the voice was completely lost. No comparison can be made between the case of the late German Emperor and mine, for the German surgeons proposed thyrotomy when there was only a very small growth on the left vocal cord, and the voice was slightly affected. I am aware that in other cases of Dr. Mackenzie's the disease was far advanced, and therefore the deductions he has had drawn from it as to the fatality attending the operation of thyrotomy are unreliable.

I am, Sirs, yours faithfully,
Canterbury, Nov. 5th, 1888.

PUGIN THORNTON.

ON THE TREATMENT OF PUERPERAL SEPTICÆMIA.

To the Editors of THE LANCET.

SIRS,—May I plead the importance of the subject as an excuse for asking to be allowed a few words of explanation, as I fear that in trying to be brief I have failed to be clear. In the first place, I am quite ready to admit the value of vaginal injections, and I constantly employ them myself. What I wanted to say was that I look upon them as useless in "such cases"—i.e., those in which the uterine cavity is the seat of the trouble; and especially to emphasise the importance of settling this question as early as possible, seeing how rapidly septic material increases. I think the treatment carried out by Dr. McBean admirably adapted to meet the conditions existing at that moment when, of course, more douching would have been useless; but I venture to believe it possible that if the syringe had been efficiently used some days earlier that treatment might not have been required.

I am, Sirs, your obedient servant,
Lewisham, Nov. 1st, 1888.

FRANCIS T. TAYLER.

BIRMINGHAM.

(From our own Correspondent.)

FUNERAL AND BURIAL REFORM.

THE Church of England Burial, Funeral, and Mourning Reform Association exhibits a comprehensive title for its aims. To all sensible people there is much to be done in this direction, and the fact of calling attention to many of the abuses in connexion with the subject will awaken inquiry and be likely to ensure some degree of reform. The chief object of a meeting lately held here under these auspices was to memorialise Government for the purpose of sanctioning a more rational and sanitary method of interment. It was pointed out that brick graves and durable coffins retard the process of decay, and promote the generation of noxious gases, which in crowded districts are most injurious to the living. Cremation was strongly advocated, as being the most scientific method of dealing with the dead; while the sentiment embodied in wreaths, and the traditions of feasting among the poor, were made the marks of adverse criticism by various speakers.

INFANT MORTALITY.

"It is the invariable practice to let illegitimate children die." Such were the startling words uttered by a high

legal functionary at an inquest held on the body of an infant four months old, whose death was recorded to be from malnutrition, the result of improper feeding. Cases of this kind are lamentably frequent in our midst, and it is beyond question that hundreds of children are lost annually in this large centre of population from the same causes. Until some legislation is directed to the subject of the insurance of infant lives, and the establishment of homes for the care and nurture of children, it will be impossible to effect any radical change. Surely this subject is a proper one for the authorities to take up with the aid of philanthropists and others interested in the value of infant life.

EIGHT HOURS' DEMONSTRATION.

Under the auspices of the Birmingham branch of the Social Democratic Federation the question of lessening the hours of labour to eight a day and forty-eight in the week was strongly advocated by various speakers. Supported in powerful terms by Mrs. Bevan, the meeting was enthusiastic in the demand for some Parliamentary interference. Whether it is wise to interfere with the individual liberty and various trades by regulations of this nature it is not expedient to discuss, and it is evident that there would be difficulties of an insuperable kind in making general the desired results by the passing of laws. One is reminded of the old song which embodied the aspiration of workmen in the Black Country in prosperous times, an ideal probably not to be realised in the present day. It ran thus:

"Eight hours' work, eight hours' play;
Eight hours' sleep, and eight shillings a day."

CHARGE OF INDECENT ASSAULT BY AN AMERICAN DOCTOR.

At the Birmingham Quarter Sessions held on Oct 31st, an important case in the interests of public and professional morality was heard. Charles McLean, aged forty-seven, describing himself as an American doctor and Baptist minister, was indicted for indecently assaulting on three occasions a girl aged thirteen. The case was clearly proved that under the pretence of a medical examination the assaults complained of were inflicted; and medical evidence was called which showed that there was nothing to justify it, or the slightest pretence for what the girl alleged had been done. The prisoner made a rambling defence and called for his diploma, which was shown to be issued from a medical college in Chicago. The recorder, in sentencing him to five years' penal servitude, said that he considered him to be a hypocrite of the most disgusting and repulsive type, and regretted that he had not power to order him to be flogged. The prosecution was undertaken by the Society for the Prevention of Cruelty to Women and Children, and inasmuch as property to the value of £200 was found in the prisoner's possession, he was ordered to pay the cost of the prosecution. The result of this case ought to exercise a salutary effect on offenders of this description.

Birmingham, Nov. 8rd.

MANCHESTER.

(From our own Correspondent.)

PRINCE ALBERT VICTOR AT ANCOATS HOSPITAL.

A WEEK last Saturday Manchester was *en fête* to welcome Prince Albert Victor, who had come to take part in various ceremonies, all having for their object the physical or moral advancement of the community at large, and especially that section of it represented by the poorer and artisan classes. At Birchfields he opened a new park, which will provide for the wants of this district of the city for many years to come. At Livesey-street he opened a new club, which has been provided by a few earnest philanthropists as a practical attempt to reach the boys and lads of the poorer classes, and provide for them some rational means of recreation which shall act as counter attractions to the temptations and perils of the streets or worse places, and to which boys from the age of ten to sixteen or eighteen years are peculiarly exposed. The committee of the Ancoats Hospital determined some time ago to extend their building. Situate as it is in the midst of one of the very poorest and most densely populated quarters of the city, the demands upon its resources have long since outrun its means of complying therewith, and the visit of the Prince will do

much good in calling public attention to the useful work it is doing in a quiet and unostentatious manner, and, it is hoped, help to increase the pecuniary support afforded it. The Prince laid the memorial stone, and after receiving an address from Mr. Alex. Forrest, the indefatigable honorary secretary, he went through several of the wards. A little controversy has lately arisen in the press with respect to the use of recommendations at this hospital. At the Royal Infirmary the "recommend" system is still nominally in force, but practically is not enforced, as anyone on applying for medical aid there, and being ostensibly a proper object of charity, is relieved, at all events for the time being; but it is asserted that at the Ancoats Hospital the old system is rigidly adhered to. Situate as this charity is in the very heart of the poorest part of the town, this "recommend" system might wisely be relaxed. As showing the zeal with which the work of the hospital is carried on, it may be mentioned that post-graduate classes have been successfully conducted here by members of the surgical staff.

VICTORIA UNIVERSITY.

Thursday (1st inst.) was degree day, the ceremony of degree giving being witnessed by a large number of the general public, and to obtain more accommodation than the College will afford the ceremonial took place in the large room of the Town Hall, amongst the visitors being the High Sheriff and several members of Parliament. The statement presented by the pro-Vice-Chancellor shows steady progress during the past year, 118 students having passed the matriculation examination, and the graduates, too, are yearly increasing in number. A special interest was attached to the proceedings this year from the fact that eight ladies graduated, seven taking the degree of Bachelor of Arts and one that of Bachelor of Science. Of these ladies, four were students of Owens College and four of University College, Liverpool. Of medical degrees, one M.D. and seven M.B.'s were conferred. During the year provision had been made for granting to medical graduates the degree of Bachelor of Surgery, in order that there shall be no question as to a double qualification being possessed by them. Arrangements are also in progress for granting diplomas in Sanitary Science.

ROYAL INFIRMARY.

The vacancy of pathologist to the infirmary, caused by the election of Dr. Harris to the post of assistant physician, has been filled by the appointment of Dr. R. Wild. Drs. Clegg and Blore have been appointed assistant medical officers to the infirmary. All these gentlemen are old Owens men, who did well as students, and are likely to redound to the credit of their *alma mater*.

SALFORD ROYAL HOSPITAL.

Since the additions made to the Salford Hospital and the increase in the number of beds, it has apparently been decided to increase the staff thereof, and recently an advertisement appeared for another honorary surgeon. Contrary to precedent, this advertisement was inserted only in the local press; and, farther, the time given for the sending in of applications was only a day or two—much too short, in fact, to permit of testimonials &c. being obtained by aspiring candidates. And when it was announced that the new post had been given to Mr. Hare, the recently appointed Professor of Surgery at Owens College, much dissatisfaction was expressed, and the legality of the whole business was called in question, the result being that those in authority have withdrawn from the false position they had placed themselves in; the appointment was not officially confirmed; an extension of time was made for receiving applications, and more than one of our younger aspirants to surgical fame are now amongst the applicants. However desirable it may be that the Professor of Surgery at the College should have at his disposal beds where theoretical instruction can be followed up by clinical demonstration, full opportunity should be given to all candidates who may wish to apply for the post.

November 8th.

FOOTBALL CASUALTIES.—On the 31st ult., during a football match at Reading, a young man named Devisee, sustained a bad fracture of the collar bone. While playing in a football match, under Association rules, near Monmouth, on Saturday last, a son of the Rev. Carré-Williams sustained a fractured leg.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE-ON-TYNE.

At a special meeting of the governors of the Royal Infirmary held last week, for the purpose of electing an assistant surgeon to supply the vacancy caused by the election of Mr. G. E. Williamson to the full surgeoncy, there was a good muster of governors, and no less than five candidates presented themselves. Mr. Rutherford Morison, of this city, was elected by an absolute majority over all. Mr. Morison has only lately come to practise in this city, and so must be considered fortunate in getting an infirmary appointment after such a contest. It is only right to say, however, that Mr. Morison has held important appointments in Hartlepool, and is well known in the north as an operator in abdominal and general surgery. I regret to hear that Dr. Wickham, the Medical Superintendent of the City Asylum at Coxlodge, Newcastle, has resigned his appointment, owing to ill health. Dr. Wickham was also a lecturer on mental diseases at the Medical College here.

DURHAM UNIVERSITY AND LADY STUDENTS.

A writer in the *Newcastle Chronicle* states that some 220 students, or a "best on record," have been entered for the ensuing term at Durham University. This, as the writer observes, is a favourable change, when it is recollected how few used to come up term after term a few years ago. At the same time, great disappointment has been expressed by the promoters of a scheme, which promised so much and was successfully carried at Convocation, to confer degrees on ladies. In the first flush of success, it was declared that ladies would flock to Durham for their degrees. The first lady matriculator, however, has yet to come.

SUNDERLAND.

Mr. A. H. Harris, the medical officer of health at Sunderland, reports that fifty-five cases of infectious disease had been reported to him during the past fortnight; the death-rate for the same period had been 26.7 per 1000. The birth-rate had increased, but since then I see a notable increase has taken place in the birth-rate by a quadruple birth in the Monkwearmouth district on Saturday, when a woman was delivered of four living children, three girls and a boy.

MILK AND ENTERIC FEVER.

At a special meeting of the Local Board of Spennymoor, co. Durham, Mr. O'Hanlon, medical officer of health, reported an outbreak of typhoid fever, which he attributed to the use of milk from an infected farm near the town. Mr. O'Hanlon said that the disease was rife in the town, and that nine out of ten cases afflicted with it had died. The inspector also stated that he had traced twelve cases of the disease to houses which had been supplied from the farm in question. He urged the board to use every precaution.

SUPPOSED DEATH FROM ELECTRICITY.

A man, aged forty-six, is supposed to have met his death on Saturday last from an electric shock when following his employment at the Consett Iron Company's works, county Durham. It appears that the supply of light was interfered with owing to the wind fraying the gutta-percha covering of the wires, and to get at the defect he had to cross along a slippery plank leading from the top of the boilers. The general impression is that by not wearing the gloves provided for such occasions he had received a shock from the uncovered wires; at all events, he was on the ground with a wound on the back of his head. Life was not then extinct. He was removed to the County Infirmary, and died in about two hours. Strange to say, in a case like this, where medical evidence might have been useful, if not essential, to determine the real cause of death, the coroner did not call any, notwithstanding the remark of one of the jury, that "there certainly ought to have been a doctor here."

Newcastle-on-Tyne, Nov. 6th.

THE RED CROSS SOCIETY.—On the 26th ult. was celebrated in Geneva the twenty-fifth anniversary of the foundation of the Society of the Red Cross.

EDINBURGH.

(From our own Correspondent.)

EDINBURGH AND ST. ANDREWS ELECTION.

If the Universities of Edinburgh and St. Andrews, in which such a large proportion of the graduates belong to the medical faculty, are to be represented by a member of the legal profession, it is perhaps as well, leaving politics out of the question, that such a representative should know something of the workings of the University machine. The representative chosen on Tuesday, Nov. 6th (Mr. M. Stormonth Darling, the new Solicitor-General for Scotland), has obtained such experience of a fairly extensive character. In his capacity as assessor to the Lord Rector in the Edinburgh University Court, Mr. Darling had great opportunities of studying many of the vexed questions of university management and reform; and now, in his new capacities of Solicitor-General and member for the two eastern Universities, his first task will be to take charge of the Universities (Scotland) Bill in the House of Commons. As Dr. John Duncan said, in proposing Mr. Darling, it is perhaps a matter of some importance that on the present occasion, in view of the pending university legislation, the representative of the Universities should be a member of Her Majesty's Government, one who will be both able and willing to promote, by every means in his power, the passage of the Bill which has been introduced by the Government, a Bill which is undoubtedly the best ever introduced by any Government.

UNIVERSITIES OF SCOTLAND: DR. HUNTER'S RETURN.

The return moved for by Dr. Hunter, M.P. in May last, and prepared by the Crown agent, Mr. Auldjo Jamieson, affords much valuable and interesting information on subjects which, to the majority of university men, must be looked upon as sealed books. The return, however, contains more information than is expressed verbally, or, to say the least, those who read between the lines may learn much that does not appear on the surface. It is instructive to learn, for instance, that some of the professor's assistants are paid by "scholarships," and that one acts as "non-resident clerk in the infirmary, and arranges for the clinical teaching there," whilst another "acts as house surgeon in another hospital, and also arranges for the clinical teaching," though these scholarships have nothing to do with either of these institutions, and the appointments as such are entirely non-paid. Then why should it be stated that certain assistants are at the same time assisting the professor in practice, "and in that capacity receive aid not tabulated here," if it is not also stated that certain professors act as medical referees to assurance companies, or receive extra salaries as deans, secretaries, &c., or make a large additional income by private practice? Then, again, what are the duties of the assistants? Some of them appear to be so frequently changed that it is necessary to give prominence in the report to the following features of their work: "To learn how to teach and illustrate the subject, and how to do research in it." And lastly, although many of the assistants have in cases of emergency to take the place of the professors and to deliver the systematic lectures, very little reference is made to this portion of their duties except by one or two of the professors. On the whole, however, the report is most admirably arranged, and Mr. Jamieson is to be congratulated on the manner in which he has performed his share of the work.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

The sixty-eighth session of the Edinburgh Medico-Chirurgical Society was opened on Wednesday, Nov. 7th, when, after public business, the following office-bearers were elected for the ensuing year:—President: Dr. John Smith (second year of office). Vice-Presidents: Professor Chiene, Dr. Clouston, and Mr. A. G. Miller. Council: Professor Grainger Stewart, Drs. J. Connell, George Leslie, Maxwell Ross, Ireland, Matthew, Barbour, and Mr. Cathcart. Treasurer: Dr. Francis Troup. Secretaries: Dr. James Ritchie and Mr. F. M. Caird. Editor of Transactions: Dr. William Craig. The Society meets on the first Wednesday of every month from November to July, except in January, when it meets on the third Wednesday. It is proposed that pathological meetings, and those for special

discussions when arranged for by the Council, will be held on the third Wednesdays of the months of the session. The public business consisted of an exhibition of patients: (1) An unusual form of laryngeal neurosis, and (2) osseous cysts of the middle turbinated bodies causing nasal obstruction, by Dr. McBride; (3) a case of alcoholic paralysis recovered after treatment by massage, by Dr. Affleck.

EDINBURGH DENTAL STUDENTS' SOCIETY.

At the opening meeting of the fourth session of the Society, the following office-bearers were elected:—Hon. Presidents: Mr. M. Finlayson, L.D.S., and Mr. G. W. Watson, L.D.S. President: Mr. David Munro, L.D.S. Vice-Presidents: Mr. J. Graham Munro, L.D.S., and Mr. J. Stewart, L.D.S. Treasurer: Mr. David Cormack, L.D.S. Secretary: Mr. A. E. Donagan, B.A. Cantab. The inaugural address was given by Mr. Watson, who gave an account of Dentistry as carried on by the Greeks and Egyptians about 200 years B.C., describing the mode of fixation of artificial dentures by means of gold wire, adopted by the latter people. He spoke of the comparative ignorance of the merest rudiments of dental surgery that prevailed amongst a large proportion of the profession forty years ago, and then contrasted the state of dental education at that period with what it is at present, when every facility exists for the acquirement of a thorough dental education.

Edinburgh, Nov. 7th.

DUBLIN.

(From our own Correspondent.)

DUBLIN HOSPITAL SUNDAY FUND.

ON Sunday, the 11th inst., the annual collections will take place in aid of the funds of fifteen of the Dublin hospitals. Last year £3957 9s. 3d. was obtained, being a decrease of some £200 as compared with the previous year, a result which was not unexpected in consequence of the depressed condition of the country. The hospitals aided by the fund receive annually within their walls upwards of 11,000 patients, attend 4500 lying-in women at their own homes, treat as out-patients upwards of 8000 accidents, and relieve many thousands at their dispensaries. They contain nearly 1200 beds, many of which cannot be properly utilised for want of funds. The facts here noted are taken from official sources, and, seeing the amount of work done and the necessity for larger funds, it is greatly to be hoped that the response to the appeal for support of these institutions on Sunday in the various churches may be satisfactory. On Saturday, the 10th inst., the eleventh annual football match in aid of the hospital fund will be played at Lansdowne-road. These annual contests have been well attended, and have been the means of adding upwards of £400 to the hospital fund.

NIGHT LECTURES.

It was understood that when the Dublin Medical Schools Amalgamation Scheme came into operation, the present night students would be permitted to continue their studies as heretofore until completed; but there exists a feeling among some members of the Council that after a few years this arrangement should terminate. Naturally, the night students are anxious about the matter, and, having proceeded so far in their professional studies, it would be a great hardship if they were not permitted to take out night lectures even when the Scheme of Amalgamation comes into force. A numerously attended meeting of students (some 150) was held last week at the Ledwich School of Medicine, and the following resolutions were adopted:—"That the Council of the Royal College of Surgeons should give an official assurance that all students who are already registered shall be allowed every facility for the continuation of their night lectures; that fees for lectures be taken by the payment of deposits until certificates be required as heretofore; and that the day students should afford them every help in the vindication of their rights." A meeting of students was also held in the Carmichael School, at which it was declared that no scheme could be regarded as satisfactory which did not provide for the interests of the night students.

ROYAL UNIVERSITY OF IRELAND.

A public meeting of the University was held last week for the purpose of conferring degrees. The Vice-Chancellor said that their progress this year had been satisfactory, and for the first time the number of candidates who passed the degree examination permitted the full number of exhibitions assigned to the Bachelor of Arts Examination to be awarded. Six hundred and three passed the Matriculation Examination this year, or an increase of twenty-three over last year. Next year five studentships of the value of £300 each will be offered for competition. The Senate are of opinion that the present system of Fellowships should be discontinued, and the Standing Committee are at present engaged in the preparation of a scheme which will open high rewards, whether by newly constituted fellowships or otherwise, to the most distinguished graduates of the University, so soon as it can be done without unduly interfering with the present provision for teaching colleges.

Dublin, Nov. 6th.

BELFAST.

(From our own Correspondent.)

THE BELFAST HOSPITAL FOR SICK CHILDREN.

AT a meeting of the friends of this charity, held on Oct. 27th, it was announced that the sum required for the building of the new convalescent hospital in connexion with the Children's Hospital had been subscribed, and it was decided to appoint a small sub-committee to seek a suitable site in the locality of Newtownbreda, a district which, owing to its dry soil and sheltered position, is looked upon as one of the most healthy in the neighbourhood of Belfast.

BEQUESTS TO THE BELFAST MEDICAL CHARITIES.

The late Mr. Hugh McCalmont, of London, who had a residence in county Antrim, left a sum to be divided amongst the Belfast charities, and his executors have allocated it as follows:—£2500 to the Royal Hospital, £1000 to the Nursing Society for the Sick Poor, and £500 to the Belfast Hospital for Sick Children. Lady Johnston has also given £250 to the Nursing Society.

THE ROYAL HOSPITAL.

The winter session began on Thursday, Nov. 1st, when the introductory address was delivered by Mr. Fagan, F.R.C.S., before a crowded theatre of students. The address was conceived in excellent taste, was written in an admirable literary style, and was very warmly applauded by those present. On concluding, a hearty vote of thanks was passed to Mr. Fagan. On Saturday last, Dr. J. W. T. Smith, who has been physician to the Royal Hospital for twenty-four years, resigned his appointment, owing to the pressing duties of consulting practice, and the board of management passed a warm vote of thanks to him for his long-continued services to the hospital. During the time Dr. Smith has been connected with the Royal Hospital a large number of students, now in practice in various parts of the United Kingdom, have attended his clinical lectures, and almost all the younger members of the present staff have received instruction from him. It is expected that Dr. J. A. Lindsay, who is at present assistant physician, will succeed Dr. Smith; and Dr. Strafford Smith (son of Dr. J. W. T. Smith), a former house physician of the hospital, will be likely to be appointed in Dr. Lindsay's place.

CASE OF HYDROPHOBIA.

In August last a poor boy, James McGeary, was bitten by a rabid dog in Aughanlig, county Armagh, and was sent to McGovern, of Glan, who after some time sent him home as cured. Recently he became ill, and Dr. Fergus, who attended him, reports that the disease was hydrophobia. He died on Nov. 2nd.

Belfast, Nov. 6th, 1888.

MEASLES IN STAFFORDSHIRE.—During the last month an epidemic of measles has caused a heavy mortality in North Staffordshire, and appears to increase in severity. All the Board schools and most of the voluntary and Sunday schools are closed.

PARIS.

(From our own Correspondent.)

THE GRANDS MULETS.

AT the meeting of the Academy of Sciences last week, M. Janssen read an interesting account of his ascent lately of the Grands Mulets. Generally, it takes five hours to arrive at them. On this occasion, the snow having fallen in abundance, it took thirteen hours. A batch of guides from Chamounix had to clear the route, and sank into the snow sometimes to the waist. M. Janssen was carried a great portion of the road on a sort of chair, which he had had constructed for himself, so that he could either lie or sit. He was thus conveyed to the refuge newly constructed in hard stone at the Grands Mulets. On Oct. 15th the sky was superb, and the temperature, at this altitude of 3000 metres, was 15° C. below zero. With the large spectroscope which was taken up he was able to examine from the morning to the evening characteristic bands of oxygen, and the more so as the air was dry. The bands of watery vapour which might have rendered the observation more delicate had completely disappeared. It resulted, from repeated observations in the same conditions during two days in succession, that the bands of oxygen viewed at this height were so weak that one might predicate that at the limit of the atmosphere they must entirely disappear. It is therefore concluded that these bands are produced by the oxygen of the atmosphere, and that they are of telluric origin. It must not, however, be concluded, added the author, that there does not exist free oxygen in the sun, only it does not manifest its existence at the temperature where it would be found by streaks which might still be discovered. In fine, those which we know are certainly due to the oxygen of the terrestrial atmosphere.

A NEW MICROBE.

At the same meeting Professor Vernuil presented, in the names of MM. Charles Richet and Héricourt, a note on a new microbe, which they found in a non-ulcerated epithelial tumour at the necropsy of a dog that had just died. In its form and dimensions, its coloured reactions, and in the ensemble of its biological characters, this microbe resembles the staphylococcus pyosepticus, analogous to the staphylococcus albus.

TREATMENT OF CHOLERA.

Professor Bouchard read a note from Dr. Yvert, surgeon-major at Fontainebleau, on the treatment of cholera by calomel. While at Tonquin, where he had been on service, the mortality from cholera was, as it always has been in France, 66 per cent. Dr. Yvert administered to forty-five patients the bichloride of mercury in doses of from two to four centigrammes per day; nine choleraic patients only succumbed, or at the rate of 20 per cent. A batch of convalescents from dysentery and other complaints having arrived, as a preventive measure Dr. Yvert administered the bichloride of mercury to them all; and although they remained in the midst of cholera patients, not one of them contracted the disease.

ACTION OF HYDROFLUORIC ACID ON THE BACILLUS OF TUBERCULOSIS.

At the Academy of Medicine, Professor Jaccoud read a note on his experience of the action of hydrofluoric acid on the bacillus of tuberculosis. Guinea-pigs inoculated with the sputa of phthisical subjects all succumbed to tuberculosis, but those that had been inoculated with sputa modified by the action of hydrofluoric acid had equally contracted generalised tuberculosis. M. Jaccoud selected this mode of procedure, as it is comparable to therapeutic inhalation, although much more powerful, on account of the immediate contact of the vapours with the bacilliferous matter. M. Jaccoud had caused other experiments to be performed by his *chef de clinique* and under his direction, assisted by two *chefs de laboratoire*, from which he felt himself justified in concluding that hydrofluoric acid does not in any way modify the virulence of the bacillus of Koch.

ANIMAL VACCINE.

Dr. Hervieux read a report on the vaccinations practised in France and in the colonies during the official year

1887-88. He demonstrated, among other things, the advantages of animal vaccination and the good results already obtained, and he thought that the necessary funds should be granted to the Academy, with the view of organising a service for vaccination with the vaccine of the heifer. The Administration of Public Assistance has, it may be stated, expressed its intention to substitute vaccination from the heifer for that from arm to arm in all the institutions under its control.

On Oct. 14th a man died at the Broussais Hospital, Paris, named Couzinier, of Courbevoie, aged sixty-five, he having been bitten by a rabid dog on Sept. 12th and undergone the complete antirabic treatment at the Pasteur Institute.

Paris, Nov. 6th.

INDIA.

(From a Correspondent.)

TYPHOID FEVER IN POONAH.

THE Poonah correspondent of the *Bombay Gazette* writes concerning the prevalence of typhoid fever there. The disease is raging badly. Fresh cases occur frequently. The sanitary condition of the place, I understand, is not *ans reproche*. But at present public attention is fixed solely towards the case of Mr. Crawford, against whom, as you will have read in the columns of your London contemporaries, certain apparently trumped-up charges are brought by native officials, aiming, it would seem, to curry favour with the powers that be by a sudden outburst of integrity. So the Municipal Commissioners of Poonah are far too occupied—some of whom are directly concerned in the legal proceedings now taking place in a collateral trial—to think of sanitation.

INDIAN MEDICAL SERVICE.

It is rumoured in medical circles here that in April next there will be a number of retirements and a general shuffling of cards as to civil appointments. It is rumoured that Drs. Carter and Sexton and Messrs. Hunter, Dymock, and Langley will retire from this service; the latter, it is said, will not leave Bombay, but will remain and continue in private practice.

MEDICAL QUALIFICATIONS.

A peculiar Government of India order has just come out, giving official recognition to certain surgical and medical qualifications besides those University degrees (Doctor of Medicine and Bachelor of Medicine) already recognised and affixed to names and official documents. The surgical qualifications now referred to are the Fellowships of the Royal Colleges of Surgeons of England, Edinburgh, and Dublin; and the Bachelor's and Master's degrees in Surgery; the medical ones being, in addition to the Doctor's and Bachelor's degrees, the Fellowship of the Royal College of Physicians, without explicitly saying whether of London only or of Edinburgh also. Curiously enough, those at whose instance these orders were promulgated must be ignorant of the value of the Membership of the Royal College of Physicians of London, which is only obtainable by examination of a high standard, and by those possessing degrees and wishing to restrict themselves to physicians' practice.

THE CONTAGIOUS DISEASES ACTS.

Since the repeal of these and the introduction of a system of voluntary examination and treatment, not one woman, I am given to understand, attends any of the Lock Hospitals. The so-called voluntary system bids fair to prove a *fiasco*. In Bombay the Lock Hospital has been abolished, and in up-country military stations, where it is still kept up, not a single case is treated. These native women would only seek hospital relief for the remoter manifestations of syphilitic disease. Many of them are to be seen in civil hospitals for these. It is to be hoped that Dr. Farquharson and other members of Parliament of our cloth will at once invite the attention of the House, and move in the direction of compulsory examination and treatment.

THE EDEN LYING-IN HOSPITAL AT CALCUTTA.

A rule is reported to have been recently introduced at this institution by the resident medical officer that students of the College who attend the native sick shall henceforth be permitted to attend European women in their confinements.

This has caused consternation and alarm, so much so that the nursing staff of the hospital struck work. The Sisters of Mercy attached to it, however, succeeded in persuading a few of the nurses to resume duty, pending the ultimate decision of the Surgeon-General. The public would appear to be by no means satisfied with even a modification of the order in question—that only three native students at a time be allowed to attend. Many European women who had been admitted left the hospital on this account, and in no case had sought readmission.

THE COUNTESS OF DUFFERIN'S FUND.

I understand that the Maharanee of Bulrampore has just presented a subscription of 2000 rupees to this fund, to be devoted towards the building of the Women's Hospital in Lucknow, and that from 35,000 to 40,000 rupees are required. But 26,000 rupees having been already subscribed, the committee would appear to be confident that the balance will be forthcoming.

THE SERVICES.

The new rule regarding the extension of the tour of foreign service from five to six years will come into force from April 1st next year. Those who leave the United Kingdom after that date will have to serve for six years, and the rule will not affect those now in India.—Dr. H. V. Carter, Brigade Surgeon, Indian Medical Service, has retired from the service on a pension of £700 per annum, with an extra pension of £100 per annum, subject to Her Majesty's approval. Mr. C. H. Giraud, Brigade Surgeon of the Army Medical Department, is appointed to officiate as administrative medical officer of Mhow Circle, with the temporary rank of Deputy Surgeon-General, vice Mr. R. A. Chapple, deceased; and Mr. R. M. Craig is posted to the station hospital in Kurachee, vice Mr. Giraud, transferred to Mhow. Dr. Kenneth McLeod, Surgeon-Major, Indian Medical Service, is promoted to Brigade Surgeon, vice Dr. Sutherland, retired. Dr. McLeod is the editor of the *Indian Medical Gazette*.—The undermentioned Surgeons are promoted Surgeons-Major subject to Her Majesty's approval: Mr. J. B. Eaton, M.B.; Mr. O. H. Channer, M.B.; Mr. E. W. Young; Dr. H. McCalman; and Dr. D. R. Ross.

THE RAINFALL IN INDIA.

The rainfall this year is reported to have been greatly below the average, and scarcity in most parts of the country is feared. Cries of distress and impending famine are already being heard from several places, in this Presidency from Ahmednugghar more especially. Prices have gone up, and there is scarcity.

DEATH FROM HYDROPHOBIA.

I regret to announce the death from hydrophobia of the Rev. Lambertus Hekhnis, M.D., which took place on the 16th of last month at Tindivanam in Rainpett. Dr. Hekhnis was a medical missionary, and was in charge of the hospital there. He had for six years rendered services alike spiritual and bodily to the heathen as well as to the Christian, and he was very much liked. About six months ago his dog bit him, and, though he suffered no inconvenience until a few days before his death, he considered himself a doomed man, having no faith in any cure or prevention of hydrophobia.

Bombay, Oct. 19th.

THE SERVICES.

ARMY MEDICAL STAFF.—Brigade Surgeon, John Warren, to be Deputy Surgeon-General, ranking as Colonel, vice Randolph Webb, retired (dated Oct. 24th, 1888); Surgeon-Major Joseph Fleming, M.D., F.R.C.S. Edin., to be Brigade Surgeon, ranking as Lieutenant-Colonel, vice John Warren (dated Oct. 24th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Robert Alexander Jackson, 20th Middlesex Rifle Volunteer Corps, to be Surgeon-Major ranking as Major (dated Nov. 7th, 1888); Acting Surgeon William Herbert Packer, M.D., 1st Worcestershire Artillery Volunteer Corps, to be Surgeon, ranking as Captain (dated Nov. 7th, 1888).

VOLUNTEER CORPS.—*Artillery:* 1st Caithness: Surgeon G. Burn, M.D., resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to con-

tinue to wear the uniform of the Corps on his retirement (dated Nov. 3rd, 1888).—*1st Volunteer (Norfolk) Brigade, Eastern Division Royal Artillery:* Sidney Winslow Woollett, Gent., to be Acting Surgeon (dated Nov. 3rd, 1888).—*Rifle:* 1st Volunteer Battalion, Princess Charlotte of Wales's (Royal Berkshire Regiment): Surgeon and Honorary Surgeon-Major J. Ellison, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated Nov. 3rd, 1888).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At an ordinary meeting of the Council held on Thursday, the 8th inst., the minutes of the quarterly Council of Sept. 11th were read and confirmed.

A report from the Committee of Management was read, embodying the following regulation concerning the second examination:—"A candidate is required to present himself for examination in Anatomy and Physiology together until he has reached the required standard to pass in one or other of those subjects; but no candidate will be allowed to pass in one of the subjects without obtaining at the same time at least half the number of marks required to pass in the other subject." This report was approved, adopted, and entered on the minutes, the resolution to have effect from May 1st next.

The thirteenth report of the Committee on the Extension of the College Premises was read, approved, and adopted. By this the estimate of £5217 18s. for the erection of a new museum at the back of 43, Lincoln's-inn-fields, was authorised; also the erection of a gas engine in connexion with the working of the lift.

A report was read, dated Nov. 6th, 1888, from the committee on the memorandum, by the President of the General Medical Council, on the disciplinary or penal powers of the qualifying medical authorities and of the Medical Council, and the following resolutions were adopted:—

"1. That the disciplinary or penal powers of the College under Section 16 of the bye-laws should, as heretofore, be exercised by the Council of the College. 2. That those powers should be increased so as not to confine misconduct, as defined in Clauses 1 and 2, Section 16, to publication and advertisement, but to extend it to cases of 'infamous conduct in any professional respect.' 3. That it is not expedient that power should be obtained to temporarily remove a Fellow or Member, the power of restoration already provided by the bye-laws being sufficient. 4. That the Council of the College cannot agree to the devolution of their duties to the General Medical Council, and to the payment to that Council of the expenses of the necessary investigation and adjudication of cases submitted to them. 5. That in the opinion of the Council of the College there is no necessity for the extension of any of the disciplinary or penal powers at present possessed by the General Medical Council, but that it would possibly be an improvement were those powers more clearly defined. 6. And that any further disciplinary or penal powers which the Council of the College might seek to obtain could be effected by bye-law."

It was also agreed that this report be referred to the Committee on Charters and Bye-Laws to give effect to the same, and that a copy of the report be transmitted to the Registrar of the General Medical Council.

In reference to the resolutions which were carried at the annual meeting of Fellows and Members of the College on the 1st inst., it seemed to the Council best, in the interests of the College, that the discussion on the subjects which have been in dispute should cease with the grant of the Supplemental Charter; that they cannot believe that any advantage is likely to arise from reopening questions which have been fully considered; and on behalf of the College they trust these questions will now be allowed to rest.

A letter was read from the Under Secretary of State for the Colonies with reference to the recognition of the Public Hospital, Kingston, Jamaica, as a teaching centre, and was referred to the Committee of Management.

The subject of the Bradshawe Lecture, which is to be

delivered on Dec. 6th, at 4 P.M., is "On Museums in Reference to Medical Education and the Advancement of Knowledge."

On the motion by Mr. Macnamara, it was agreed that it be referred to a committee to consider and report to the Council whether it be desirable, and, if so, practicable, that candidates for the membership of the College be examined in operative surgery on the dead body.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The following gentlemen having passed the necessary examinations were, at a meeting of the Council on the 8th inst., admitted Members of the College:—

Adamson, H. G., L.R.C.P.Lond., Grange-road, Ealing.
 Andrew, B. H., L.S.A., Tyrwhitt-road, St. John's.
 Andrew, F. C., L.R.C.P.Lond., Broad-street, Manchester.
 Barker, F., L.R.C.P.Lond., Morton-place, Belgrave-road.
 Blaxall, F. R., L.R.C.P.Lond., Stanhope-street.
 Boycott, A. N., L.R.C.P.Lond., Richmond-terrace, Clapham-rd.
 Bray, H. A., L.R.C.P.Lond., Great Russell-street.
 Briscoe, J. E., L.R.C.P.Lond., Welclose-terrace, Leeds.
 Broadway, S. A. W. E., L.R.C.P.Lond., Arlingford-rd., Tulse-hill.
 Burland, H., L.R.C.P.Lond., Poolstock House, Wigan, Lancs.
 Burns, B. J., L.R.C.P.Lond., Beaumont-terrace, Sunderland.
 Campbell, J., M.D. Q.U.I., Wellington-park-terrace, Belfast.
 Cant, F., L.R.C.P.Lond., Rumford-street, Manchester.
 Caswell, G. W., L.S.A., Queen-street, Cheshire.
 Cheate, A. H., L.R.C.P.Lond., King's College Hospital.
 Chetham, C. F., L.R.C.P.Lond., York-place, Manchester.
 Cholmeley, William F., L.R.C.P.Lond., Charlton-road Rectory, Attleborough.
 Clapham, J. T., L.R.C.P.Lond., Lingfield-road, Wimbledon.
 Clark, P. J., L.S.A., Margaret-street.
 Clarke, W., L.S.A., St. Paul's-sq., Burton-on-Trent.
 Collington, F. A., L.R.C.P.Lond., College-villa, St. Helier's, Jersey.
 Cooke, T. A. B., L.R.C.P.Lond., St. John's Vicarage, Brixton.
 Copeland, W. H. L., L.R.C.P.Lond., Phillibeach-gardens.
 Corner, Harry, L.R.C.P.Lond., Manor House, Poplar.
 Cressy, C. J., L.R.C.P.Lond., Haydon, Wallington, Surrey.
 Cross, E. J., L.R.C.P.Lond., St. Neots, Hunts.
 Date, W. H., L.S.A., Elmhyrst, Ikeston, Derbyshire.
 Douty, E. H., L.R.C.P.Lond., King's College, Cambridge.
 Dowling, K. A. G., L.R.C.P.Lond., Belvedere-rd., Up. Norwood.
 Dugon, F., L.R.C.P.Lond., Brookley-road, Brookley.
 Eaton, O., L.R.C.P.Lond., Arley Hall, Blackrod, Chorley, Lancs.
 Farmer, F. R., L.R.C.P.Lond., Courtfield, Bystall-park.
 Firth, J. L., L.R.C.P.Lond., Barton-crescent.
 Foster, M. G., L.R.C.P.Lond., 9, Wells, St. Sheffield, Cambs.
 Franklin, L., L.R.C.P.Lond., Clarence House, Thaxted.
 Fullard, John, L.S.A., Dudley Port, Tipton.
 Gomez, A. C., L.R.C.P.Lond., Stanhope-street.
 Gornall, J. P. J., L.R.C.P.Lond., Newton-heat, Manchester.
 Gott, H., L.R.C.P.Lond., Hanover-square, Leeds.
 Graves, C., L.R.C.P.Lond., Maryland-road, Paddington.
 Grosvenor, W. W., L.R.C.P.Lond., Greville-place, Malda-vale.
 Halley, W., L.R.C.P.Lond., Elgin-crescent.
 Hanson, A. S., L.R.C.P.Lond., Warwick-gardens.
 Hawthorne, H. J., L.R.C.P.Lond., Uttoxeter, Staffordshire.
 Hayes, H. P., M.B. Melb., Marlow, Bus-hill-park, Enfield.
 Hayward, C. W., L.R.C.P.Lond., Grove-street, Liverpool.
 Heasman, W. H., L.R.C.P.Lond., Court Wick, Littlehampton.
 Hewer, A. E., L.R.C.P.Lond., Highbury-new-road.
 Hewlett, C. W., L.R.C.P.Lond., Royal Naval Colleges, Penze.
 Hill, G. Leonard, L.R.C.P.Lond., The Grove, St. George's, near Wellington.
 Hudson, F. H., L.R.C.P.Lond., Royal York-crescent, Clifton.
 Humphreys, G. H., L.R.C.P.Lond., St. Bartholomew's Hospital.
 Hutt, C. E., L.R.C.P.Lond., Chetwynd-road, Highgate.
 Johns, J. F., L.R.C.P.Lond., High-street, Southampton.
 Joslin, H., L.R.C.P.Lond., Heathcroft, Buckland-hill, Maidstone.
 Kemp, G. L., L.R.C.P.Lond., Gipsy-hill.
 King, E. H., L.R.C.P.Lond., Granville-square.
 Le Feuvre, W. P., L.R.C.P.Lond., Northbrook-road, Lea.
 Lewer, E. S., L.R.C.P.L., Upper Leeson-street, Dublin.
 Lewis, B. M., L.R.C.P.Lond., Glanbaiden, Abergeenny.
 Liston, W. L., L.R.C.P.Lond., Aberdeen-place.
 Locke, C. A., L.R.C.P.Lond., Keppel-street.
 Lonsom, T., M.B. Ed., East-street, Taunton.
 Mackay, P. T., L.R.C.P.Lond., Langton Vicarage, Wragby.
 Macleod, D. B., M.D. Glasg., Kelvin Drive, Glasgow.
 McQueen, G. A. S., M.D. Phil., Harrington-square.
 Mead, T. W., L.S.A., Kingston-road, Portsmouth.
 Metcalfe, G., L.R.C.P.Lond., Harrison-place, Newcastle-on-Tyne.
 Miers, A., L.R.C.P.Lond., Seacroft, Leeds.
 Morland, C. H. D., L.R.C.P.Lond., Portsea-place, Connaught-sq.
 Nicholls, A. R., L.R.C.P.Lond., Phillip-road, Peckham.
 Nuttall, A. E., L.R.C.P.Lond., North Staffordshire Infirmary, Stoke-on-Trent.
 Ogle, C., L.R.C.P.Lond., Cavendish-square, W.
 Ormerod, C. E., L.R.C.P.Lond., Fell-road, Croydon.
 Owen, J. L., L.R.C.P.Lond., St. Patrick-square, Edinburgh.
 Padbury, G. J., L.R.C.P.Lond., City-road.
 Parsons, G. G., L.S.A., Barr's Hill-terrace, Coventry.
 Pearse, A., L.R.C.P.Lond., South Hill-park, Hampstead.
 Pedley, S. E., L.R.C.P.Lond., The Terrace, Camberwell.
 Phipps, H. H., L.R.C.P.Lond., Eastcote, near Towcester, North Hants.

Prosser, A. B., L.R.C.P.Lond., Broomley-street, Birmingham.
 Quirk, T. A. F., L.R.C.P.Lond., Melbourne, Australia.
 Read, J. S., L.R.C.P.Lond., Edgware-road, Hyde-park.
 Reynolds, E. J., L.R.C.P.Lond., Milton, Sittingbourne.
 Rilot, C. F., L.R.C.P.Lond., Grange-park, Ealing.
 Ring, J., L.R.C.P.Lond., Cambridge-gardens.
 Roberts, R. L., L.R.C.P.Lond., Rochester-square.
 Robertson, J., L.R.C.P.Lond., St. Anne's, Thurlow-park-road.
 Robinson, G. A., M.B. Durh., Inverness-terrace.
 Rolston, T. R., L.R.C.P.Lond., Clarendon Villa, Stoke.
 Scott, T. W., L.R.C.P.Lond., Henthfield, Bromley, Kent.
 Shaw, J. C., L.R.C.P.Lond., Walton House, Wakefield.
 Sheldin, R. G., L.S.A., Boundary-street, Liverpool.
 Smith, H. A., L.R.C.P.Lond., Winchcombe, Tisbury-green.
 Spencer, F. E., L.R.C.P.Lond., Wimpole-street.
 Stephens, E. J., L.S.A., King's College Hospital.
 Stevens, W. E., L.R.C.P.Lond., Old Market-street, Bristol.
 Thompson, G. H., L.R.C.P.Lond., Holly-place, Hampstead-heat.
 Thorp, C. C., L.R.C.P.Lond., Wickham-terrace.
 Tunnicliffe, F. W., L.R.C.P.Lond., Riveries, Woodside-park.
 Turner, E. O., L.R.C.P.Lond., Alexandra-road, South Hampstead.
 Walker, A. H., L.R.C.P.Lond., Penkhull, Stoke-on-Trent.
 Ward, W. F., L.R.C.P.Lond., Queen's-road, Peckham.
 Watkins, W., L.R.C.P.Lond., Tavistock-place.
 Wells, F. B., L.R.C.P.Lond., Nassington-road, Hampstead.
 Williams, R. E., L.R.C.P.Lond., Trinity-square.
 Winnett, F. M. D. Toronto, Simcoe-street, Toronto.
 Wright, T. N., L.R.C.P.Lond., Foulkath, Blackheath.
 Young, J., L.R.C.P.Lond., Oakwood, Worsley, Lancs.

The following gentlemen having passed the necessary examinations, at a meeting of the Board of Examiners on the 7th inst., were at the same meeting admitted Licentiates in Dental Surgery:—

Boyton, Ivan John Howard, Watlington, Oxford.
 Doanmore, William Henry, The Grove, Ealing.
 Grimdale, Frank Gannon, High-street, Uxbridge.
 Harwant, Frank Arnold, Parliament Hill-road.
 Hayman, Albert Stephen, Belle Vue, Clevedon, Somerset.
 Hope, Hubert Lindsay Carling, Rockholme, Hastings.
 Howard, Frederic Richd., Carlton House, Villa-rd., Handsworth.
 Madin, Wm. Thompson, Shustoke, Coleshill, Birmingham.
 Mantou, Edwd. Alfred, Frithville-gardens, Shepherd's-bush.
 Marten, Alfred Ernest, Tyson-road, Forest-hill.
 Mountford, James, Richmond-terrace, Clapham-road.
 Pritchard, Athol Cravnant, Delamere-terrace, Baywater.
 Smith, Leonard Charles, Grove House, Durham.
 Webster, Percy Lawrence, Redesdale-terrace, West Hampstead.
 Winterbottom, Charles, M.R.C.S., Sloane-street.

Eleven candidates were referred. The next examination will be held in May, 1889.

ROYAL UNIVERSITY OF IRELAND.—The following degrees were conferred last week by the Vice-Chancellor of the University:—

Bachelor of Medicine.—George W. Jenney, Denis J. Coffey (with second class honours), William T. Brand, James Buchanan, Patrick J. Cleary, Edward Cuffey, Thomas Gorman, William Kerr, William R. Morris, Marcus H. Quarry, Joseph V. Ryan, J. Blackburne Smith, Wm. J. Taylor, Robert Thomson, Robert Wilson.

Doctor of Medicine.—Thos. B. Costello, George F. Ewens, George R. Gordon, Pierce Jennings, William Kirk, Joseph McKnight, William Weatherup.

Master in Surgery.—James Buchanan, Edwd. Cuffey, Edward B. Hazleton, George W. Jenney, William Kerr, William Kirk, Joseph McKnight, James McMaster, James Taylor, Wm. Weatherup.

Bachelor in Surgery.—Samuel Alexander, William T. Brand, James Buchanan, Patrick Cleary, Denis Coffey, Thomas Costello, George Gordon, Thomas Gorman, Charles J. Humphries, Pierce Jennings, William Morris, Marcus Quarry, Joseph Ryan, J. Martin Savage, Blackburne Smith, Wm. J. Taylor, Robert Thomson, William A. Wadsworth, Robert Wilson.

Bachelor in Obstetrics.—Samuel Alexander, J. St. John Annesley, Arthur Atcock, William T. Brand, James Buchanan, Patrick Cleary, Denis Coffey, Charles J. Cooke, Thomas Costello, George Foot, Richard Foot, John Gordon, Thomas Gordon, Walter Hamilton, Charles J. Humphries, Pierce Jennings, Thomas D. Kirk, William Morris, Michael O'Brien, Marcus Quarry, Joseph Ryan, J. Martin Savage, John Shaw, Blackburne Smith, Stratford Smith, William Taylor, Robert Thomson, William Usher, Robert Wilson.

Master in Obstetrics.—John J. Brownlee, Edward Cuffey, George W. Jenney, Robert W. S. Lyons.

CONJOINT SCHEME OF THE COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND.—The undernamed have passed their Final Examination:—

T. M. Bentley, J. H. Bogan, W. W. Gourlay, J. E. Halpin, A. G. T. Hanks, F. W. Henderson, R. Hudson, F. Jubb, L. E. Keegan, E. J. Lee, J. Lumsden, J. A. Magee, T. A. Sheahan, E. W. Stoker, W. J. Thompson.

UNIVERSITY OF CAMBRIDGE: MICHAELMAS TERM, 1888.—The days of examinations for medical and surgical degrees are as follows:—First Examination: Dec. 4th, 5th, 7th, 10th, 11th, and 12th. Second Examination: Dec. 4th, 5th, 6th, 7th, 10th, 11th, 12th. Third Examination: Part 1—Dec. 11th, 14th, 15th, 17th; Part 2—Dec. 12th, 13th, 17th, 18th, 19th. For the M.Ch.: Dec. 14th, 15th, 17th.

ROYAL INSTITUTION OF GREAT BRITAIN.—Dr. Amand Routh has been elected a member of the Institution.

THE new Eye Infirmary at Wolverhampton was formally opened on the 23rd ult. by the Earl of Dartmouth, Lord-Lieutenant of the County of Stafford.

CARBOLIC ACID AS A POISON.—A resolution has just been adopted by the Liverpool Chemists' Association in favour of placing carbolic acid on the schedule of poisons.

ALDERMAN ENTWISTLE (Mayor of Accrington) opened on Monday the sewage precipitation works which have been constructed by the Accrington and Church Joint Out-fall Sewerage Board at Church, at a cost of £26,000.

PRESENTATION.—The nursing staff of the Lambeth Infirmary have, as a mark of their esteem, presented to Dr. George Lewis Rugg a handsome spirit stand, on his resignation of the office of senior assistant medical officer.

The annual meeting of the governors of the Doncaster Infirmary and Dispensary was held on the 29th ult., when satisfactory reports were presented and adopted.

UNIVERSITY OF GLASGOW.—The University Court has sanctioned the appointment of Mr. William MacLennan, M.B., C.M., as assistant to the Professor of Materia Medica.

GIFT OF A PUBLIC PARK TO BURNLEY.—Sir John Hardy Thursby, Bart., of Ormerod House, late High Sheriff of the county, has, through the Mayor of Burnley, offered land comprising twenty-eight acres on the Ridge estate for a public park.

THE DENTAL HOSPITAL.—The annual dinner of the staff and past and present students of the Dental Hospital of London will be held on Saturday, Dec. 1st, at the Holborn Restaurant, when the chair will be taken by James Smith Turner, Esq. Communications in reference to this festival should be made to the Dean at the Hospital.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Secretary of the Windsor and Eton Royal Infirmary has recently received bequests and donations amounting to £258 8s. 5d.—The Chairman of the Birmingham Musical Festival handed, last week, a cheque for £2500 to the Treasurer of the Birmingham General Hospital, being the proceeds of the last festival.

PROVINCIAL HOSPITAL SUNDAY AND SATURDAY COLLECTIONS.—The Hospital Saturday collections this year in Lincoln, Gainsborough, and Sleaford amounted to £343 11s. The Whitstable Hospital Sunday and Saturday collections recently made produced £62 3s. 8d. The Liverpool Hospital Sunday and Saturday funds for the current year are, respectively, £6456 14s. 11d., against £6029 16s. 8d. last year, and £2888 0s. 9d., against £2851 18s. 7d. for 1887.

POST-GRADUATE LECTURES.—The first appointment under the Richard Middlemore trust in connexion with the Birmingham Eye Hospital was made on Nov. 1st, when the committee of selection appointed Mr. Lloyd Owen, the senior honorary surgeon to the hospital, as lecturer for the year 1889. These lectures have been established by Mr. Richard Middlemore, the senior consulting surgeon to the hospital, with a view of extending the usefulness of the hospital as a teaching centre.

THE MANCHESTER SOUTHERN HOSPITAL.—The annual meeting of the subscribers to this institution, and of the Maternity Hospital in connexion therewith, was held in the Town Hall on the 31st ult. Archdeacon Anson in the chair. The report stated that the ordinary expenditure (including £125 3s. 3d. brought forward from the previous year) showed a deficit of £499 2s. 6d. There were now thirty-five beds in Clifford-street and eight in the Maternity Department, in Upper Brook-street.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the next quarterly meeting of the Association, to be held at Bethlem Hospital, on the 16th inst., at 4 P.M., after the exhibition of pathological specimens and the reading of a paper on a case of Pachymeningitis by J. W. Plaxton, M.R.C.S., a short account will, if time permit, be given by Dr. Hack Tuke of a recent visit to Kenneway. In the evening members will dine together at 7 o'clock at the Holborn Restaurant.—The winter examination for the certificate of efficiency in Psychological Medicine will be held at Bethlem Hospital on Dec. 20th and 21st.

ON the 3rd inst. a woman at Sunderland gave birth to four children, three boys and a girl, all born alive.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The following is the list of officers and Council elected for the year 1888:—President: Dr. G. M. Humphry, F.R.S. Vice-Presidents: Sir William Turner; Dr. Daniel John Cunningham; Mr. J. D. Thane. Treasurer: Mr. Chas. Stewart. Secretaries: Mr. C. B. Lockwood (England); Dr. David Hepburn (Scotland); Dr. H. St. John Brooks (Ireland). Council: Drs. Wm. Mitchell Banks, John Curnow, John Struthers, John Cleland, A. M. Paterson, Johnson Symington, J. J. Redfern, and Messrs. J. N. C. Davies-Colley, Frank Beddard, G. B. Hawes, John Langton, John Wood, F.R.S., Thomas Pickering Pick, R. W. Reid, Rickman J. Godlee, F. Treves, A. Macalister, F.R.S., Bertram Windle, Alfred H. Young, and Arthur Thomson.

CREMATION.—A public meeting was held in Leicester on Tuesday evening, under the auspices of the Leicester Branch of the Cremation Society of England. The Mayor (Mr. Alderman Wright) presided, and was supported by Sir Spencer Wells, Sir Henry Halford, and many influential residents of the town. Sir Spencer moved, "That this meeting, being of opinion that the present custom of burial, especially in the neighbourhood of large towns, is dangerous to the living, desires to encourage as an alternative the reverent and innocuous mode of disposing of the dead known as cremation." He went into considerable detail on the question, referring to the insanitary condition of too many of our burial grounds, and the objections raised from a medico-legal point of view; and exhibited a drawing of the chapel in course of erection at Woking, in connexion with the Crematory there, for the purpose of performing a religious service over the ashes of the bodies. The motion was adopted. Sir Henry Halford moved, "That steps be forthwith taken to raise funds to erect a Midland Crematory at Leicester," which was carried.

ST. BARTHOLOMEW'S HOSPITAL AND MEDICAL SCHOOL.—At a special meeting of the School Committee on the last Saturday in October, the following medals and prizes were presented by the senior physician, Dr. Andrew, on behalf of the school:—Preliminary Scientific Exhibition, Mr. R. E. Scholefield; Bentley Surgical Prize, Mr. E. A. Edelsten, B.A. Oxon.; Hichens Prize, Mr. F. Mangan; Foster Prize, Mr. M. L. Hepburn; Treasurer's Prize, Mr. N. O. Wilson; Harvey Prize, Mr. J. F. Niall; Skynner Prize, Mr. Bedford Pierce and Mr. W. G. Willoughby. The Open Scholarships in Science: Senior, Mr. W. N. Soden; Junior, Mr. J. W. Pickering. Shuter Scholarship: Mr. J. A. Edwards, M.A. Cantab. Junior Scholarships (in Anatomy, &c.): Messrs. A. S. Blackwell, H. W. Arnstead, and A. A. Weir. Senior Scholarship (in Anatomy, &c.): Mr. H. J. Waring. The Brackenbury Scholarships: Medical, Mr. Bedford Pierce; Surgical, Mr. J. G. E. Colby. Kirkes Medal and Scholarship, Mr. C. H. Roberts; and the Lawrence Medal and Scholarship, Mr. G. Heaton, B.A. Oxon. The total value of the prizes and scholarships, &c., amounted to between £700 and £800.

TESTIMONIAL TO DR. G. H. SAVAGE.—The past and present principal officers and resident students of Bethlem Royal Hospital connected with that institution during Dr. Savage's term of office as resident physician, entertained him at a dinner at the Café Royal on Friday, Nov. 2nd. The dinner was arranged to allow the presentation of an illuminated address and some pieces of plate on the occasion of his retirement, and was attended by the subscribers and a few guests, including Major Copeland, the treasurer of the hospital, Dr. Hack Tuke, Dr. F. Taylor, and Professor Stewart. Dr. Percy Smith, the present resident physician, occupied the chair. The address, which is signed by the whole number of principal officers, and, with few exceptions, by the resident students, referred to the exceptional ability and energy with which Dr. Savage had performed his duties, to the maintenance of steady progress in the rational and humane treatment of the patients, and to his efforts for the diffusion of knowledge of psychological medicine. The gift consisted of a massive silver bowl and pair of candelabra, manufactured by Messrs. Lambert of Coventry-street. The toast of the evening, proposed by the chairman and seconded by Dr. Mickley, was most enthusiastically received, as also was that of "Bethlem Royal Hospital," proposed by Dr. Fletcher Beach, and responded to by the treasurer.

MEDICAL NOTES IN PARLIAMENT.

Vaccination Grants.

In the House of Commons, in Committee of Supply on the Civil Service Estimates, on the 6th inst., on the vote of £448,908 for the Local Government Board, Dr. Clark hoped that the President of the Local Government Board would now prove that Scotland obtained more grants in aid per head of the population than England did. He found that, so far as the medical vote in England was concerned, the medical vaccination vote was £21,784, against £400 for Scotland. In regard to the whole medical vote, he complained that they were giving in England twice as much in proportion to population as they gave in Scotland, and that they made the Scotch taxpayer pay a portion of the English charge.—Mr. Bradlaugh begged to move the reduction of the vote by £1564, the figure for the national vaccine establishment.—Mr. Pictou asked the President of the Local Government Board seriously to consider the issue which had now been reached and the propriety of instituting some new inquiry into the new position which this question had assumed medically, so as to relieve parents whose feelings stood between their conscientious duty to their children on the one hand and their sense of loyalty to the law on the other.—Mr. Caldwell said that the value of vaccination was admitted in Scotland, and in cases in which it was neglected it was performed by the parochial boards at the cost of the ratepayers. Why, then, should the ratepayers in England be relieved to a certain extent out of the public revenue?—Mr. Ritchie said that if Scotland had a grievance, it would end with the present vote, as in future the whole duty would devolve upon the local ratepayers; but still, as matters now stood, he did not think that Scotland would be found to suffer any injustice when all the grants in aid given to Scotland were compared with those given to England.—Mr. Channing said that the vaccination returns moved for by himself and granted by the Government amply supported the contention which persons interested in this question had put forward again and again—viz., that there had been a very serious increase in the proportion of deaths of children under one year of age through causes and diseases which were alleged by certain scientific men to be associated with vaccination.—Sir W. G. Hunter said his experience in India led him to the conclusion that compulsory vaccination was absolutely necessary for the protection of the inhabitants from small-pox. Experience also showed the necessity for revaccination, in order to protect individuals from attacks of the disease. As to the supposed introduction of substances other than vaccine into the system, Dr. Buchanan, in his report, showed that the number of cases in which allegations of that nature were made might be reduced to nil on careful examination.—Dr. MacDonald remarked that from a very different point of view he must give his vote in favour of the proposal of the member for Northampton, because he considered this system of public vaccination to be altogether wrong. The trouble in reference to vaccination had come mainly from the office of public vaccinator. There was, he believed, a great deal of heartburning among members of the medical profession because one man in a district got all the vaccination grants year after year, while the claims of other practitioners were wholly overlooked.—Dr. Tanner said that all the objections which had been raised had been refuted again and again. It did not at all follow that vaccination was to blame for the outbreaks of erysipelas which had been described as occurring in waves. He sincerely hoped that the Government would take some steps to obtain an inquiry into the subject, to satisfy all reasonable doubts and objections thrown out by hon. members, and set the matter at rest once and for ever. It would be a very terrible thing if the anti-vaccination doctrines were to spread.—Colonel Nolan, Mr. Whitbread, and Dr. Fitzgerald having spoken, Mr. Ritchie said that he could not hold out any hope that the Government would take any step to put an end to the law as it now existed, because their opinion was very strong that anything in that way might result in consequences of the most disastrous character to the people of this country. The committee divided, and the numbers were:—For the reduction of the vote 45; against, 154; majority 109.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BUGGY, LOUIS, L.K.Q.C.P. Irel., I.M., has been appointed Resident Physician to the Mater Misericordie Hospital, Dublin.
BYRNE, JOHN, L.K.Q.C.P., L.R.C.S. Irel., has been appointed Junior Resident Surgeon to the Mater Misericordie Hospital, Dublin.
CALDERWOOD, GEORGE, M.D., M.B. & C.M. Glas., has been reappointed Medical Officer of Health, Egremont.
COTES, C. E. H., M.B., B.S., F.R.C.S., has been appointed Surgeon to Out-patients, Great Northern Central Hospital, Holloway-road, N., caused by the promotion to the In-patient Department of C. B. Lockwood, F.R.C.S.
MCWEENEY, EDMOND, M.B., M.Ch.R.U.I., has been appointed Pathologist to the Mater Misericordie Hospital, Dublin.
MORISON, RUTHERFORD, M.D., F.R.C.S. Ed., has been appointed Assistant Surgeon to the Royal Infirmary, Newcastle-on-Tyne.
MORRIS, Mr. WILLIAM B., has been appointed Senior Resident Surgeon to the Mater Misericordie Hospital, Dublin.
NAPIER, A. D., LEITH, M.D. Aber., F.R.S. Ed., M.R.C.P. Lond., has been appointed Physician Accoucheur to the St. Pancras and Northern Dispensary, vice R. Boxall, M.D., M.R.C.P. Lond., resigned.
NIELSEN, FREDK., Wm., M.A. Copenh., M.B.C.S., L.S.A., has been appointed Assistant Medical Officer to the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Lancaster, vice Theo. B. Hyslop, M.B., C.M., appointed Assistant Medical Officer to the Bethlem Royal Hospital.
OWEN, LLOYD, D.C., F.R.C.S.I., has been appointed First Richard Middlemore Post-graduate Lecturer in connexion with the Birmingham and Midland Eye Hospital.

SHEA, J. GOODWIN, L.R.C.S. Irel., L.K.Q.C.P. Irel., has been appointed Medical Officer to the parishes of Brampton and Walton, also to the Industrial Schools in the Chesterfield Union, in succession to Richd. Jeffreys, M.R.C.S., L.S.A., who has resigned.
SHELDON, R. GARNETT, M.R.C.S., L.S.A., has been appointed House Surgeon to the Liverpool Royal Infirmary, vice E. J. T. Steele, M.R.C.S., L.R.C.P., resigned.
SMITH, P. CALDWELL, M.A. Glas., M.D., M.B. and C.M., has been appointed Lecturer on Practical Hygiene in the Western Medical School, Glasgow.
SYERS, H. W., M.D., M.R.C.P., has been appointed to the vacant office of Physician to Out-patients, Great Northern Central Hospital, Holloway-road, N., caused by the promotion to the In-patient Department of E. Clifford Beale, M.B., M.R.C.P.
THOMSON, JOHN ANSTRUTHER, MULVILLE, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Certifying Factory Surgeon, Bradford-on-Avon and District, vice Lovel, retired.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BRADFORD INFIRMARY AND DISPENSARY.—House Physician. Salary £100 per annum, with board.
CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.
DOVER HOSPITAL AND DISPENSARY.—House Surgeon. Salary £100 a year, with furnished apartments, board, coals, lights, and attendance.
GRANTHAM FRIENDLY AND TRADES' SOCIETIES MEDICAL INSTITUTION.—Resident Medical Officer. Salary £150 per annum, and midwifery fees, with residence, coals, gas, and rates free.
HOME AND INFIRMARY FOR SICK CHILDREN, Hydenham.—Honorary Assistant Medical Officer to attend out-patients.
LANCASHIRE COUNTY ASYLUM, Rainhill, near Liverpool.—Resident Medical Superintendent. Salary £1000 per annum, with certain allowances.
LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Junior House Surgeon.
NEWCASTLE-UPON-TYNE BOROUGH LUNATIC ASYLUM.—Superintendent. Salary £450 per annum, with furnished quarters, coals, gas, washing, and vegetables.
PADDINGTON-GREEN CHILDREN'S HOSPITAL.—Honorary Physician.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners in Anatomy and Physiology for the Fellowship.
ROYAL SOUTH HAMPSHIRE INFIRMARY.—Surgeon. Also Assistant Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

COTTON.—On the 2nd inst., at Spencer-square, Bayswater, the wife of Charles Cotton, M.R.C.P., M.R.C.S., of a son.
GROSS.—On the 3rd inst., at East Dulwich-grove, S.E., the wife of Charles Gross, M.D. Lond., F.R.C.S. Eng. &c., of a son.
WALLACE.—On the 31st ult., at Howard Lodge, Cardiff, the wife of Thos. Wallace, M.D., of a daughter.

MARRIAGES.

COLE—SAWYER.—On the 4th ult., at St. George's Cathedral, Sierra Leone, by the Venerable Archdeacon Robbin, Sylvester John Cole, M.B., C.M., Assistant Colonial Surgeon, Gold Coast Colony, to Adeline Nancy, only daughter of the Honorable T. J. Sawyer, Merchant, and Member of the Legislative Council, Sierra Leone, West Africa.
SAWYER—MCLEOD.—On the 13th ult., at St. Andrew's Church, Darjeeling, by the Rev. A. M. Rolfe, Edmund Stratton, son of George Capellen Sawyer, Esq., of 40, Brompton-square, London, to Jane Alexandra (Jean), second daughter of Brigade-Surgeon K. McLeod, M.D., F.R.C.S.E., of H.M. Indian Medical Service.
WEBB—NICHOLSON.—On the 3rd inst., at All Saints', Kensington-park, Hugh Webb, M.R.C.S., L.R.C.P., of Wentworth House, Parsons-green, to Clarissa Constance, second daughter of John Nicholson, Esq., of the G.P.O., and Leamington-road-villas, Westbourne-park, W.

DEATHS.

BRUCE.—On Sept. 16th, at Murrumbarrab, N.S.W., Dr. Jas. Bruce, M.R.C.S. (St. Bartholomew's), late of Kidsgrove, aged 47.
LAVIES.—On the 3rd inst., at Pimlico, Joseph Samuel Lavies, M.D. Ed., F.R.C.S. Ed., M.R.C.S., senior medical officer of Millbank Prison, aged 65.
PECK.—On the 31st ult., at Addison-road, Kensington, Robert Holman Peck, M.A., M.B. Oxon., M.R.C.S., F.R.S., aged 83.
STOKOE.—On the 30th ult., at the residence of his son-in-law, Col. Baby, Richard Stokoe, M.D., late of Peckham-rye, in his 84th year.
WALTER.—On the 5th inst., at Tarrazona, Bournemouth, William Walter, M.D., formerly of Stephen's Green, Dublin, aged 70.
WINTERBOTTOM.—On the 22nd ult., on board the steamship *Circassian*, Edwin John Winterbottom, M.R.C.S., L.D.S., of St. George's Hospital, Calgary, Canada, and late of Sloane-street, London, S.W., aged 53. Buried at sea.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, November 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
 MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Gulliver: A case of Ascites presenting some Unusual Features.—Dr. E. Symes Thompson: The Climate of Cape Colony and the Voyage Thither.

Tuesday, November 13.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.
 ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. Edmund Owen: Arthroctomy, Brasion of Joints.—Dr. William Robert Smith: The Etiology of Puerperal Fever.

Wednesday, November 14.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 8 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT OSMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
 BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (Langham Hotel, Portland-place).—First Meeting. Afternoon Session, 3 P.M. Evening Session, 8.30 P.M.
 EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. The Session having been opened by the President, a paper on "The Epidemic of Cholera in Malta during 1887," by Surgeon D. Bruce, will be introduced by Director-General Sir Thomas Crawford.
 HUNTERIAN SOCIETY.—8 P.M. Clinical Evening. Dr. H. Fox: (1) Exaggerated Elbow and Wrist Jerks; (2) Syphilitic Disease of the Nervous System.—Mr. Tatham: Recovery from Traumatic Paraplegia.—Dr. Davies: Growth in the Tongue.—Mr. Poland: (1) Supernumerary Breast; (2) Pyemic Epiphysitis. And other cases.
 ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. W. West: List of Desmids from Massachusetts, U.S.A.
 BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens will be exhibited by Mr. Lawson Tait, Dr. Granville Bantock, Dr. Fenton, Dr. Bedford Fenwick, Dr. Mansell Moullin, and the President, Dr. Arthur W. Edis (President): On the Treatment of cases of Incomplete Abortion.

Thursday, November 15.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
 HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Mr. Mitchell Banks: The Permanence of the Radical Cure of Hernia. Messrs. Treves, Lawson Tait, and Kendal Franks will take part in the discussion.
 NEUROLOGICAL SOCIETY OF LONDON (National Hospital for the Paralysed and Epileptic, Queen-square).—8.30 P.M. Cases at 8 P.M. Dr. Ormerod: Peculiar Affection of Speech.—Dr. de Watterville: (1) Atrophic Paralysis of Arms and Neck; (2) Atrophic Paralysis with Increased Tendon Reflexes.—Dr. Hughlings Jackson: Case of Return of Knee-jerk in Tabes Dorsalis after Hemiplegia.—Dr. James Anderson: Case of Facial Hemiatrophy.—Dr. Beevor: (1) Case of Poliomyelitis from Injury; (2) Case of Traumatic Functional Contracture with Anæsthesia.—Dr. Hadden: Case of Neuro-muscular Irritability.

Friday, November 16.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, November 17.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 8th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Nov. 2	29.41	S.E.	49	48	..	51	47	.75	Overcast
" 3	29.57	S.E.	48	47	..	51	47	.87	Raining
" 4	29.81	S.E.	50	48	77	55	47	.03	Cloudy
" 5	29.96	S.E.	50	49	70	55	49	.09	Foggy
" 6	29.87	S.E.	42	41	..	42	40	.03	Overcast
" 7	29.78	E.	37	36	..	40	35	..	Overcast
" 8	29.89	S.E.	40	39	..	44	37	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

THE LATE DR. HOSKINS.

Mr. G. R. Jesse asks us to state that the late Dr. Hoskins "was an opponent of the practice of experimenting painfully on animals for scientific purposes. Dr. Hoskins subscribed to the Society for the Abolition of Vivisection, and petitioned Parliament on the subject."

M.R.C.S.—We have no means of answering the question with certainty. Probably Messrs. Sampson Low and Co., Fetter-lane, London, would be able to satisfy our correspondent.

HARD OPERATION OF CLAUSE XIV. OF THE MEDICAL ACT.

To the Editors of THE LANCET.

SIRS,—Quite accidentally I discovered at the beginning of the year that my name had been erased from the Medical Register. On demanding an explanation I was informed by the branch registrar that the reason was that I had not replied to a circular sent me in 1886. I see by Section XIV. of the Medical Act that a registrar may erase a name whenever he pleases, "provided always that the same be restored by the order of the Medical Council." As I never received this circular I consider that I have been most unjustifiably treated, especially as I have always notified any change of address, which can be easily proved by reference to the Medical Registers of the past thirteen years. Having been informed that my name cannot be replaced on the Register without the payment of five shillings, I should be glad to know if I am bound to pay this fee, or if there is any other course open to me [to force the said official to replace my name on the Register for 1889?

I am, Sirs, yours truly,

November, 1888.

ONE ERASED FROM THE REGISTER.

* * Our correspondent has no legal remedy. The registrar has only acted on the terms of the fourteenth clause of the Medical Act (1868). This is admittedly defective and inferior to a similar clause in the Dentists Act, which requires a second inquiry to be made and sent in a registered letter, before erasure can take place.—ED. L.

"COMBINATION."

To the Editors of THE LANCET.

SIRS,—It was with great pleasure that I read "Alpha's" letter, proposing that the first suggestion of "J. H. T." to canvass the profession as to the desirability of forming an association for its protection against quacks, &c. should be carried out. As this, of course, implies a certain amount of expense, would it not be advisable to start a fund; and perhaps "J. H. T." or someone interested in the movement would take the lead and act as treasurer? I think that the matter only wants starting in order to make it a success.—I am, Sirs, yours yours,
 Oct. 29th, 1888. OMEGA.

CONSULTATION FEES IN IRELAND.

To the Editors of THE LANCET.

SIRS,—I submitted the facts hereafter given to the consideration of the Council of the North of Ireland branch of the British Medical Association, the branch embracing 250 members—one-third of the medical practitioners in the north of Ireland. Professor Dill was president and Dr. Byers secretary. A moiety of those present wished to decide on the facts submitted. The others urged that as I was not a member of the Association the matter should not be considered, and so my communication was merely marked "read." The practitioner then and now referred to submitted an explanation, but did not dispute my accuracy. As this local organisation has not expressed an opinion, and as the matter must be of interest in many provincial towns, I request your opinion and that of the profession.

In July, 1887, a woman visited me at the extern department of a hospital for women of which I am surgeon. Getting too ill to leave her bed, she called in her family doctor. He attended for two weeks alone, and then requested the opinion of a consultant, and called in Dr. X—, a gentleman who combines a very considerable family practice with an extensive consulting practice as a physician. Dr. X— paid five visits as a consultant with the family doctor, and charged £1 in all. The patient was treated medically. She afterwards, in June, 1888, appeared at the extern department of the hospital, where she was informed that a surgical operation was necessary. She did not come to have the operation performed, but saw her family doctor, and by his recommendation visited the consulting-rooms of Dr. X—, who saw her there six times, and twice with her family doctor, and for these visits he charged 10s. After this she was admitted to the wards of the hospital, but the subsequent history of the case is of no importance.

In this case Dr. X— appeared as a consultant. In family practice no doubt the fees must be varied, within limits, according to the circumstances of the patient; but in consulting practice there is a recognised rule. If a professional brother requires the advice of a consultant and the patient is unable to pay a fee, the consultant gives his advice gratis. The point is of importance to the family practitioner. If a gentleman who is extensively and prominently called in as a consultant by a large class in a community charges such fees as 4s. and 1s. 3d. per visit, how is the young practitioner to obtain reasonable remuneration for his services? And if he insists on a reasonable remuneration, the chances are that on the next occasion the consultant or his assistant will be the family doctor. Is it legitimate for the consultant to charge 4s. per visit, or, when the circumstances of the patient are more reduced, to charge 1s. 3d.?—Yours faithfully,

Belfast.

W. K. McMORDIE, M.D.

"We are sorry to have to agree with Dr. McMordie in condemning such consultation fees as seem to have been taken by the consultant in the above case. There may be some correction forthcoming, or some contradiction of the statements. But, if not, we can only express regret that charges should have been made calculated to lower the estimate of medical service. It would be far better for a consultant, either in hospital or outside, to see a patient gratuitously who cannot afford to pay. Ireland has always had the character, in spite of an enormous system of Poor-law dispensary practice, of giving high fees for medical service. We do not look to consultants—and especially to thriving consultants in Belfast—for the apparent sanction of a violation of this rule.—ED. L.

Mr. George Foy (Dublin).—The length of our correspondent's letter necessitates the postponement of its insertion till next week.

Mr. R. G. Robson should consult his medical adviser.

Mr. F. R. Cross (Clifton).—Yes.

THE RESPONSIBILITY OF THE MEDICAL PROFESSION TO THE SANITARY CONDITION OF THE POOR.

To the Editors of THE LANCET.

SIRS, I should be impertinent if I did not at once express the diffidence I feel in writing on the above subject; but surely the time has arrived when medical men should suggest a line of treatment for the malady they have diagnosed. The evil effects of bad dwellings on the mind and body are admitted in limiting the powers of the former and in producing an impairment of the latter which enables disease to take root and grow. But are medical men right in leaving the remedy to be propounded by politicians—and we have no legislators who are not politicians—whose party bias would possibly lead them into error? Surely the profession should boldly propound a scheme or schemes for the consideration of the British public which should touch the *fons et origo mali*.

The essay of Dr. Barron in your issue of Oct. 20th is too powerful to be passed over, and the terrible importance of the subject must be realised. I would suggest, though the plan has defects which are glaring but not insuperable, that a central authority be constituted, including medical, legal, building, and landlord authorities, who should be empowered to force the local authority of certain-to-be-devised areas to acquire land compulsorily for the building of habitations of such a character as to pass the scrutinising inspection of officials of the central authority, and that an appointed set of commissioners should be able to close all houses unfit for human habitation as tenements are provided, and all houses not as satisfactory as those to be erected should be condemned. That satisfactory compensation should be awarded from

national sources to those whose property would be thus interfered with. Every new building should be erected in accordance with the most advanced sanitary knowledge. Every part of the country, urban and rural, should be periodically visited by Government inspectors, on whose reports local authorities should be made to act by the central authority. Existing sanitary officials would then be looked after.

The environment of the toiling masses is the problem, the humanity of England is the solution. We pay taxes to keep up a force to protect us from foreign foes, we ought to be, too, ready to pay for a standing army to overcome the spread of preventive disease and add to the mental and physical strength and to the happiness of "the masses."

We do not want to hear any nonsense about "tampering with the rights of property," but we want some fair, just scheme to be carried out which, by improving the habitations of men, will allow the development of the forces of education, and thus add to the wealth of men by improving the health of men. All I want to insist upon is that medical men should not shrink from suggesting remedies, never mind how feeble or ill-defined, in order to get the question of the solution of our greatest national difficulty—viz., the sanitary surroundings of the majority of our population—considered by the British public and by Parliament.

Anyone can find fault with a proposal, but it is not so easy to see the advantages of any plan which must necessarily involve enormous difficulties. It is time we gave up treating the symptoms of the malady, and began to attack the cause. Give human beings good sanitary arrangements, and at once you form a soil for all the elevating forces to take root; and surely whether we look at the environment of criminals or the Harveian oration of Dr. Latham, in which he points out the affection of bacilli for impaired tissues, we must see that we are face to face with the fact that the laws of physiology will no longer stand inert, as indeed they never have, before the so-called "necessities of civilisation."

I am, Sirs, yours faithfully,

GEORGE H. DE'ATH,

Medical Officer of Health for Buckingham.

Oct. 20th, 1888.

"THE METROPOLITAN HOSPITAL"

To the Editors of THE LANCET.

SIRS,—Permit me a few words in reply to the letter of Mr. Cockell in your last issue.

The quotation from your columns with which he heads his letter is scarcely apposite, unless he would deny that the patients obtain "good medicine and adequate attendance," and I fancy he would scarcely go as far as this. It seems to be generally acknowledged that there is a large class of deserving poor who, without being actual paupers, are unable to pay any considerable sum for medical attendance, and to whom a lengthy illness means therefore either financial ruin or an unpaid doctor; and the question is this, Does the Metropolitan Hospital attract these, or people of a superior class who can afford to pay a doctor? If Mr. Cockell will take the trouble to visit the hospital, where he will be cordially welcomed, I think he will be satisfied as to the answer. I sometimes wonder, without referring to any particular individual, whether those medical men who inveigh against such institutions take any clubs at considerably lower rates—say, 3s. or 4s. a year, when the doctor makes up the medicines in his own surgery and may even charge a penny for the bottle he provides, or whether such undertake the charge of maternity societies when the deserving poor connected with either church or chapel receive, and quite rightly, their services for a considerably smaller fee than 15s.

Contrary to what Mr. Cockell suggests, there is in the case at issue an entire absence of all parade and advertisement of the medical staff, and it is not known, except by experience or inquiry, what medical officer the patients will see when they visit the hospital, though necessarily their books inform them what doctor to call in when they require visiting at their own homes. Moreover, I have an idea that the medical staff is as jealous of their own reputation and the honour of the profession as at least the majority of your correspondents. New rules are not always perfect, and twelve months' experience shows the necessity of a few alterations, and a committee will, I am informed, shortly meet to consider what changes are advisable. The medical officers receive each the same substantial honorarium, quite independently of the number of patients they attend, and that the poor appreciate their services is proved by the fact that the attendance has so increased that a fourth medical officer has been attached to the hospital in the person of

Your obedient servant,

November, 1888.

J. W. HUNT, M.D. & B.S. Lond.

"SHIP SURGEONS."

To the Editors of THE LANCET.

SIRS,—Having seen a letter signed "Not a Ship Surgeon," exclaiming against the employment of surgeons by shipowners and giving them no, or next-to-no, salary, I beg to give the following account of my own experiences.

I was surgeon to a ship sailing to South America, and found, to my horror and disgust, that I was expected to do purser's work—viz., make out cargo books, crew lists, passenger lists, specie manifests, lists of ships spoken on the voyage, crew's accounts of wages, &c. I consider this an insult to a doctor, who has enough responsibility without having the worry and anxiety of purser's work, to which he has never been brought up, and for which no extra pay is given.

I am, Sirs, yours faithfully,

FORWARD.

November, 1888.

AN ISLINGTON CENTENARIAN.

THE Islington papers report the death of an old lady, Miss Frances Rebecca Simmonds, at the respectable age of 103. Miss Simmonds is said to have attributed her longevity to the avoidance of what she was pleased to call two evils—she never married, and she took little physic. This is rather hard upon physic, though we are not disposed to be hard upon Miss Simmonds, who probably made this remark rather in a facetious way than seriously. Nor are we without a fancy that a lady who can have attained to the age of 103 without physic might with the generous assistance of a physician attain to 105 or 110. Be this as it may, Miss Simmonds was a remarkable lady. She had an old look, was less than five feet in stature, and had a lateral spinal curvature. She was able to be up for most of the day till lately. She could see fairly well, but was rather deaf. She is reported to have met Lord Byron at masquerades, and even to have danced with him. She enjoyed her food. She liked fish, poultry, veal, pork, or pigeon for dinner, which she took easily, with a quarter of a pint of ale, warmed and sweetened, with it. She took also in the course of the day a little gin-and-water with bread-and-butter or a sponge cake. She had her tea at five o'clock. She had been very healthy all her life, with the exception of an attack of fever contracted at Pernambuco. Her father and mother died old.

A. G. P.—Our correspondent is the best judge, but a guinea per visit would, theoretically, not be too much.

Perplexed.—We think the extract answers the question. "The pleasure of the court" is express, though we do not look on the rule as very fair.

PROTECTION OF THE MEDICAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—I think one of the best reforms which could be introduced for the above purpose would be the ready-money system. As far as I can learn, from the experience of others as well as my own, the system of sending put accounts results in very heavy losses. Why should not the general practitioner take his fee at the time as well as the consultant? He would be saved an immense amount of time and trouble in book-keeping, and his receipts would be greater. The difficulty only exists in beginning the system; and, of course, it must be generally adopted, or it would not work fairly. I think the public would like it, with the exception of those (a minority, but still a very considerable minority) who never pay and never intend to pay. I remember one of this fraternity telling a practitioner who attended her in her seventh confinement, on his asking for his fee, "I have never paid anyone for the other six, and I do not intend to begin with you."

I am, Sirs, yours faithfully,
South Tottenham, November, 1888. GEO. B. BEALE, M.D.

To the Editors of THE LANCET.

SIRS,—The profession have long wished for some definite plan for the suppression of quacks and unqualified practice generally. Your correspondent "Graduate" has now made a valuable suggestion. If anyone attempts to sell spirits, beer, or tobacco without a licence the police soon pounce upon him, but if the same adventurer were bold enough to place "Surgery" on his window, he might sell the most deadly poisons with impunity, he might allure an unheeding public by specious devices into his den, and by his ignorant treatment hurry on his unfortunate dupes to speedy death, and yet no officer of the law will stop him. Certainly the police ought to have authority to inquire whether a vendor of drugs in any form has a licence to sell them. Of course they would exercise a wise discretion; but let it once be known that the blue-coated official may ask any practitioner for his registration certificate, and the unqualified man disappears for ever, and with him the child of his creation—the sixpenny dispensary.—Yours truly,
November, 1888. LAW AND ORDER.

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Accrington Times, Reading Mercury, Northern Weekly Leader, Hertfordshire Mercury, Birkenhead News, Herald and Weekly Free Press, Southern Times and Dorset County Herald, Port Elizabeth Telegraph (Cape of Good Hope), Portsmouth Times and Naval Gazette, Thames Valley Times, Masonic Star, Pictorial World, &c., have been received.

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ABSTRACT OF THE

Howman Lecture

ON

THE VALUE OF EYE SYMPTOMS IN THE LOCALISATION OF CEREBRAL DISEASE.

Delivered before the Ophthalmological Society, Nov. 9th, 1888,

By H. R. SWANZY, A.M., M.B., F.R.C.S.I.,

SURGEON TO THE NATIONAL EYE AND EAR INFIRMARY, DUBLIN; OPHTHALMIC SURGEON TO THE ADELAIDE HOSPITALS, DUBLIN.

MR. PRESIDENT AND GENTLEMEN,—Recent advances in cerebral surgery have brought with them, in some respects, increased responsibility and increased anxiety for the surgeon in cases of focal cerebral disease. In these cases perhaps the gravest responsibility and anxiety is encountered at the very outset, when the regional diagnosis has to be made. It is true that our present knowledge of the anatomy, physiology, and pathology of the brain frequently enables us to diagnose the position of focal lesions, but it must be confessed there remains much to be learned before we shall be able to say that in all of the cases met with localisation can be successfully effected. Yet we may confidently hope that the difficulties which still beset this subject will gradually disappear; and we are encouraged to think so by contemplation of the marvellous progress which has been made in cerebral physiology within the last eighteen years. I feel sure we shall see quicker and better progress in cerebral localisation when many physicians and surgeons recognise more fully than they yet have done that the interests of science, as well as their own reputation, are best served by entrusting the examination of the brain in all these cases to skilled pathologists and microscopists, rather than by undertaking the necropsies themselves; and in the meantime, while our knowledge of the physiology and pathology of the brain is gradually increasing, we must be careful in our daily practice to employ all the facts which have hitherto been acquired concerning this interesting organ. It is my intention to review the symptoms which are derivable from the eye in cases of focal cerebral disease, and to consider how far they may be utilised for the localisation of cerebral lesions, inviting attention to the facts provided for us by clinical pathology, rather than to those of experimental comparative physiology.

In estimating the localising value of the focal eye symptoms which may be afforded by a given case of recent brain disease, we are immediately confronted with a difficulty which is common to all focal symptoms—the difficulty, namely, of distinguishing between direct symptoms and the so-called indirect, or, as I would prefer to call them, “distant” symptoms: the former, as you are aware, being those which depend upon the loss of function of the part in which the lesion is situated, and which, consequently, are the symptoms it is desirable to point out; while the indirect symptoms are not the result of the local disorganisation caused by the lesion, but of its pressure, of disturbances of circulation to which it gives rise, and, it is also thought, of inhibition effects, all of these being liable to interfere with the function of parts of the brain more or less distant from the lesion.

Focal eye symptoms may be divided naturally into those which depend upon disturbances in the motor apparatus of the eyeball, including the intraocular muscles, and those which depend upon disturbances in the special visual apparatus. We have also to consider symptoms due to lesion of the nerve of ordinary sensation of the surface of the eyeball.

And first as regards the symptoms derivable from the motor apparatus. There is no centre in the cortex of one hemisphere (like those of the face, arm or leg), a lesion of which will produce ophthalmoplegia, partial or complete, of the opposite eyeball alone; because, the two eyes being associated in their motions, it is only those associated motions which are represented in the cortex. The commonest cortical lesion producing derangement of these

associated movements is the conjugate lateral deviation of the eyes to one side. In paralysis, the eyes look at the cerebral lesion, as Prevost has expressed it; and in spasm, away from the side of the lesion. It is very apt to be a distant symptom, especially in cerebral hæmorrhage; and when the centre happens to be actually involved in the lesion, its function, being largely bilateral, is rapidly taken up by the opposite hemisphere, and hence, though it may be a direct cortical symptom, it fails, owing to its evanescent character, to be recognised as such; and, again, similar deviation may proceed from a lesion of the internal capsule or of the pons, where it involves the special nucleus for the associated motion common to the sixth and third nerves, but in conjugate deviation from a pontine cause (which is almost always a direct symptom), the eyes in paralysis turn away from the side of the lesion and in spasm towards it. Conjugate lateral deviation of the eyes, then, may assist us in the diagnosis of a cortical or capsular lesion from one in the pons; it may aid us in deciding in which side of the brain a lesion is situated when other symptoms are not readily observed, as in coma; and the varieties of the symptom, when it is due to disease in the pons, may enable us to form a refined diagnosis as to the precise seat of the lesion there.

Gowers has recorded an interesting case in which loss of motion of the eyes upwards was caused by a small tumour situated in the middle line behind the posterior quadrigeminal bodies, damaging them slightly, as well as the velum and the adjacent part of the inferior vermiciform process of the cerebellum. In a case of tubercle of the corpora quadrigemina Henoch observed this same defect as the first focal symptom to make its appearance. Paralysis of the upward and downward motions of both eyeballs, sometimes with ptosis, while the lateral motions are unimpaired, may be the result of a focal lesion involving the third nerve nuclei in the floor of the Sylvian aqueduct; and, if attended by hemiplegia, the lesion involves the pyramidal tracts, probably at the level of the anterior quadrigeminal bodies, the posterior commissure, and the neighbouring part of the optic thalamus. Loss of power of convergence, accompanied sometimes by paralysis of accommodation, is a symptom, though occasionally a distant one, of lesion of the posterior quadrigeminal bodies. Deviation of one eye downwards and outwards, while its fellow is turned upwards and inwards, has only been seen with lesion of the middle cerebral peduncle. It is almost always a direct symptom, as is also loss of power of upward or of upward and downward motions of the eyeballs.

The fact that cerebral ptosis can exist alone suggests a separate cortical centre for this branch of the third nerve innervating the muscle of the opposite side; but, its position being uncertain, ptosis has no value as indicating the locality of a cortical lesion, though it may be of use in distinguishing the latter from one situated elsewhere, monolateral ptosis as the only focal symptom occurring with cortical lesions alone. Lesions causing bilateral paralysis of branches of the third nerve which are wont to be innervated together—loss of motion of the eye upwards, of motion of the eye downwards, of convergence, and double ptosis—are to be sought for in the quadrigeminal bodies. Basal lesions do not give rise to similar paralysis. Ptosis on the side of the lesion has occasionally formed a symptom in disease of the pons without paralysis of the other branches of the third nerve, except sometimes in so far as conjugate deviation is concerned, and without the third nerve being involved in the lesion. Again, by forming a factor of a crossed paralysis it may serve to localise a lesion in the crus cerebri. When the third nerve is paralysed by a lesion in this situation, it is the rule to find it paralysed as a whole; but paralysis of only some of the third nerve branches may be produced by a lesion of the cerebral peduncle, and the branch to the levator palpebræ seems to be the one most frequently implicated alone. Nothnagel has described a form of pseudoptosis in which there is (1) apparent ptosis on the paralysed side, owing to the contraction of the palpebral aperture, but the lid can be raised; (2) contraction of the pupil on the same side; (3) a shrinking back of the eyeball into the orbit, so that it seems to have become smaller; (4) an abnormal secretion of thin mucus from the corresponding nostril, of tears from the affected eye, and of saliva from the corresponding side of the mouth. He states he has found this train of symptoms in lesions of the corpus striatum. A common sign of disease of the crus cerebri is what is known as crossed hemiplegia, paralysis of the third nerve

on one side with hemiplegia of the opposite; its localising value, as Hughlings Jackson has shown, depends on their occurring simultaneously. Complete paralysis of every branch of the third nerve without any other paralysis is almost always basal; so also, as von Graefe pointed out, are those cases in which, where there is hemiplegia, it is slight as compared with the degree of the third nerve paralysis; and those cases, too, where there is an interval between the onset of the paralysis of the extremities and of the third nerve, are apt to be basal. Third nerve symptoms—in addition to those included under the headings conjugate deviation or paralysis, and ptosis—are sometimes distant symptoms. Tumours of the cerebral hemispheres, more particularly if accompanied by violent general head symptoms, indicating probably high intracranial pressure, are the lesions most apt to produce these distant third nerve symptoms. As a rule, the slightest general cerebral symptoms are, the most likely are the third nerve paralyses to be direct symptoms. This rule, indeed, applies to other, as well as to third nerve, focal symptoms.

Paralysis of the fourth nerve, when combined with paralysis of other motor eye nerves, is difficult to recognise; and consequently, in such cases, it supplies but little aid for localisation. Solitary paralysis of this nerve, as a symptom of cerebral focal lesion, is extremely rare, and is more apt to be produced by a basal lesion. In combination with paralysis of the third nerve it speaks for a lesion in the cerebral peduncle, extending back to the valve of Vieussens, and has, I believe, been utilised by Meynert in this sense.

When paralysis of the sixth nerve occurs as the only focal sign, it is probably due to disease at the base, or it is a distant symptom; especially, Wernicke states, when the lesion is a cerebellar tumour. Paralysis of this nerve, sometimes in combination with the facial, simultaneous in its onset with hemiplegia of the opposite side of the body, indicates a lesion in the pons, usually a hæmorrhage, on the side corresponding to the paralysed nerve. Hemiplegia due to a lesion of the cortical motor region, which might happen to be combined with paralysis of the sixth nerve as a distant symptom, offers no difficulty in its diagnosis from hemiplegia with sixth nerve paralysis in pontine disease; for while the latter is a crossed paralysis, the former is homonymous.

Lagophthalmos, we know, is the eye symptom to which paralysis of the facial nerve gives rise. It is useful for localisation, inasmuch as it assists in differentiating a lesion in the internal capsule or in the facial motor centre of the cortex from one implicating the portio dura in the pons, as it is absent or very slight in the former cases, but very often markedly present in the latter. With a lesion in the lower part of the pons we are apt to have lagophthalmos with crossed hemiplegia; but, if the lesion be in the upper part of the pons, the fibres from the opposite side having here joined the motor tract, the hemiplegia and lagophthalmos will be homonymous. Nystagmus as a focal symptom has little localising value, but as a distant symptom Gowers states that it is especially common in tumour of the cerebellum. Crossed paralysis of the fifth nerve points to a lesion in the pons. Moreover, when the nucleus or fibres of the nerve in the pons are diseased, neuro-paralytic ophthalmia rarely supervenes; while, if the lesion be basal, the corneal affection is the rule.

The condition of the pupils is rarely of much value in regional diagnosis. Although myosis is most commonly the result of pontine lesions, yet it may accompany disease in other parts—as, for instance, hæmorrhage in the corpus striatum, which bursts into the lateral ventricle, and in meningeal hæmorrhages. Bilateral mydriasis is frequently present in apoplectic coma, without reference to any particular locality. The same holds good as regards monolateral myosis and mydriasis, though the latter has assisted in localising a lesion in the cerebral peduncle. Loss of the pupillary reflex to light, apart from cases of paralysis of the third nerve, is a sign of lesion of the anterior quadrigenal bodies or of the optic tracts, and may be utilised to distinguish these lesions from others which may cause loss of sight by implicating both visual paths beyond the corpora quadrigemina or both visual centres; for in such cases, notwithstanding the amaurosis, the pupil reflex is maintained. In cases of hemianopsia, similarly, the pupil reflex serves to establish a diagnosis between a lesion in an optic tract and one further on in the visual path or in the visual centre of the same side; for, if the pupil contracts actively to light concentrated on the blind side of the field,

the lesion cannot be in the tract; but if it does not react, the lesion must be in the tract.

And now to the second part of any subject, the localising symptoms derivable from the visual apparatus. Of these hemianopsia is one of the most common, as it is one of the most valuable. Complete and absolute homonymous lateral hemianopsia is often of great diagnostic value. It may be caused by a lesion in the cerebral cortex, or by one situated anywhere in the course of the fibres between the cerebral cortex and the optic chiasma; and, by taking concomitant symptoms into account, we are frequently enabled to say in what part of this course the lesion lies. As regards hemianopsia due to a lesion in the cerebral cortex, a lesion of the visual centre, pathological anatomy leaves no doubt that in man the visual centre is situated in the occipital lobe, and the evidence goes to show that the absolute optical centre chiefly occupies the cortex of the cuneus and of the superior occipital convolution, and also, especially in respect of the colour sense, the posterior part of the superior and inferior occipito-temporal convolutions. We cannot expect to be able to distinguish clinically between an absolute hemianopsia due to a lesion confined to the absolute visual centre, with or without its efferent fibres, from one due to a lesion involving at the same time other parts of the occipital cortex. We may conclude that hemianopsia depends upon an occipital lesion if it be unaccompanied by hemiplegia, motor aphasia, or paralysis of cerebral nerves, as direct symptoms (as might occur with a lesion in the posterior limb of the internal capsule on the left side), but be it remembered that one and all of these are liable to accompany lesions of the occipital lobe as distant symptoms. Aphasia, too, occasionally accompanies right cortical hemianopsia as a direct symptom, and they both, with word blindness, may be found in varying combinations in different cases. Cortical hemianopsia may be a distant symptom. Gowers has observed that at the onset of many attacks of cerebral hæmorrhage hemianopsia is present as a distant symptom of very fleeting character—so fleeting, indeed, that it does not complicate attempts at localisation. It may be incomplete, yet, though we do not at present know that a lesion of the visual centre can be so situated as to produce loss of precisely the upper or lower half of the half field, we should bear in mind Schäfer's experiments on monkeys, which showed that removal of a certain part of each occipital lobe gave rise to loss of the lower part of the field only in each eye. So much for absolute hemianopsia. But the lesion may be such as to destroy only the colour centre without reaching those for form and light. Eight cases of hemiachromatopsia are on record, and one of them, by Dr. Verrey of Neuchâtel, is accompanied by an account of the necropsy. There are also some cases of loss of colour vision in the whole field of each eye with retention of the form and light senses, or the form sense may be lost in the half field along with the colour sense, while only the light sense is retained. Furthermore, cases of hemianopsia are on record in which, in part of the defect, both the colour and form senses were absent, but the light sense was present, while in the remainder of the defect all three visual perceptions were lost.

There can be no doubt that the centres for the colour, form, and light senses are all present in the occipital lobe and posterior end of the occipito-temporal convolutions; and it is probable that they are either, as Wilbrand suggests, arranged in layers one over the other in the cortex, or, as others think, they are placed side by side. Visual aura has sometimes been noted as a symptom of disease of the occipital lobe. Relative hemianopsia can only occur with lesions of the cortex; hemianopsia from lesions elsewhere must always include all the visual perceptions; also those cases of hemianopsia with some peripheral contraction of the other side of the field are due to cortical lesions. Hemianopsia from a lesion in the optic radiations will often be indistinguishable from the same symptom due to a cortical lesion. The defect may be incomplete, as the lesion may implicate only some of the radiating fibres; or it may be complete if they are all involved. Pronounced distant symptoms, such as hemiplegia, hemianæsthesia, ptosis, and so on, are more apt to be caused by a lesion here than in the cortex. A lesion in the posterior third of the posterior limb of the internal capsule—the sensory crossway—is likely to produce complete hemianopsia, because the nerve fibres are here collected in a small space. Hemianæsthesia will be present as an accompanying direct symptom; and

also, sometimes, loss of the other special senses on the opposite side from the lesion; and should the disease extend forwards to the anterior part of the posterior limb, hemiplegia will be added as a direct symptom. Moreover, if the lesion be on the left side motor aphasia may be present, by reason of the proximity of the path for speech on its way to the cerebral peduncle. In hemianopsia due to a lesion of the optic tract the defect in the field is usually complete, the characteristic differentiating sign being the hemiopic pupil. Lesions of the optic tract are, of course, apt to implicate the crus cerebri, but do not necessarily do so. Leber has pointed out that atrophy of the optic nerve is likely to make its appearance, and at an early stage of the case, in lesions of the tract. Total blindness of both eyes, when it appears as a focal symptom—apart from certain cases of double cortical hemianopsia, or of cortical hemianopsia combined with a lesion of the opposite optic tract,—can only be due to a lesion involving the whole of the chiasma or of both optic tracts. The great mass of clinical evidence is opposed to the idea that lesions of the corpora quadrigemina produce blindness.

A very remarkable visual defect is that known as mind-blindness, or loss of visual memory—blindness, we may say, of what has long been known as "the mind's eye." Sight in the ordinary sense of the word—the reception of the retinal images by the visual centre—is unimpaired, but the psychical realisation of the retinal images is not effected. The objects are seen, but the sight of them suggests no corresponding idea in the patient's mind. We are acquainted with several varieties or degrees of this symptom. In a well-marked case the patient may be unable to recognise the streets of the city in which he has been resident for many years, and will feel as if in a strange place; he may not know his own hall door. He may be unable to distinguish his wife from his mother, and his children may appear as strangers to him; he will be unable, when away from them, to recall to his mind's eye the appearance of the places and people that have been familiar to him all his life. Yet such a man will be perfectly capable, so far as his other intellectual faculties are concerned, of transacting business and of entering into the enjoyments of life. It is seen in cases of general paralysis, usually in the advanced stages. The position of the cortical centre for visual memory is still a subject of discussion. Hitherto all the necropsies have been made in cases of general paralysis, and for definite knowledge we must wait for the post-mortem examination of a case in which the symptom has been caused by cerebral hæmorrhage. Nothnagel, Wernicke, Wilbrand, and some other writers assign this function to all, or to most, of that part of the occipital cortex which does not form the centre of vision. Gowers thinks it is either in the anterior part of the occipital lobes or in the posterior part of the parietal lobes; but the latter, he believes, is the more probable. The curious and interesting fact that in Charcot's case, in a case recorded by Quaglino, in one by Landolt, and in my own case, a derangement of the colour-sense came on simultaneously with mind-blindness, seems strong evidence in favour of a localisation of visual memory very close to the visual centre. Cases, too, are on record in which absolute hemianopsia accompanied mind-blindness. I should therefore be inclined, in the absence of a conclusive necropsy, to localise this function very close to the centre for vision, probably in the occipito-temporal lobe. Mind-blindness may be a distant symptom. Word-blindness or alexia—loss of the power of understanding printed or written speech-symbols—is held by many to be nothing more than partial mind-blindness. A good many cases combined with right hemianopsia have been recorded, and a natural explanation of this combination of symptoms is supplied by the proximity of the centre for vision to the angular gyrus. Indeed, some authors go so far as to state that hemianopsia is present in all cases of word-blindness.

I may be permitted to briefly refer to a peculiar variety of alexia which has been seen in two cases, although we cannot at present utilise it for the purposes of localisation. One of these is reported by Brandenburg. The patient, who was also affected with right homonymous hemianopsia, was unable to read any printed or written letters or words, yet he could read off with ease long numbers reaching to tens of thousands in Arabic characters. In the second case (quoted by Brandenburg) Joly observed the same power of reading Arabic numbers, while the power of reading words and letters was lost. I do not know that alexia has been seen as a distant symptom. The remarkable symptom termed dyslexia was first described by Berlin. The patient

is unable to read more than a very few words consecutively, either aloud or to himself, owing to a feeling of dislike or disgust which suddenly invades him, and which he cannot overcome. After he has read a few words, which he can understand well, he pushes the book away or hands it to the surgeon, while he draws his head back and turns it aside. After a brief interval the attempt may be renewed, but with the same result when a few words have been read. There is no dimness of sight, defect of accommodation, or pain in the eyes or head to account for the symptom. It usually comes on suddenly, and is the first sign of serious cerebral disease, being soon followed by other symptoms, such as headache, giddiness, aphasia, hemianopsia, hemiplegia, and so on. All of these cases have ended fatally. In every instance the lesion was on the left side of the brain, the patients being all right-handed. The disease seems to have occupied chiefly the inferior parietal lobule, extending sometimes as far forwards as the inferior frontal convolution, and sometimes as far backwards as the angular gyrus. In crossed amblyopia—in which the eye on the side away from the cerebral lesion is almost blind, with very contracted field, while the field of the other eye is also contracted, but in a less degree—the lesion has been found in the lower and hinder part of the inferior parietal lobule.

In conclusion, with reference to optic neuritis, it is merely necessary to state that it has practically no localising value; nor should I think it necessary even to do this much, but that in some recent cases of brain surgery it seems to have been tried to utilise the optic neuritis for localisation. Optic neuritis occurs in most cases of intra-cerebral tumour, irrespective of the seat of the disease.

And now, gentlemen, I have come to the end of this lecture, and have not as yet made any reference to that distinguished man in whose honour I am addressing you. But I do not believe you could wish that we should separate this evening without your having heard from me some expression of the esteem in which we hold Sir William Bowman, nor will I be guilty of such an omission. And here I might dwell upon Bowman's scientific attainments; upon the good work he did in years gone by, not alone in ophthalmology, but also in physiology; upon all this Society owes to his prestige and to his generosity; upon his clinical knowledge and his operative skill; and upon many another topic which his name suggests. But I prefer to remind you of the high standard of professional life he has shown us—a standard which we of a younger generation must endeavour to maintain. Conscientious in his relations with his patients, honourable in his relations with his professional brethren, careful not to put himself forward in any unrecognised manner, not seeking notoriety, simple, kind, courteous, dignified, William Bowman is presented to our mind's eye as the personification of the best of those qualities which go to make an English gentleman. We are, indeed, privileged in being permitted during his lifetime to offer some tribute to his distinguished scientific merit; but, while recognising how much we owe to him scientifically, I think, and I believe you will admit, we should not forget how much his everyday professional life has tended to give to the noble specialty he adorns that high tone which belongs to it. Our sincere hope is that Sir William Bowman may long live to enjoy the honour conferred on him by his Queen, the love of those who are dearest to him, and the warm, heart-felt esteem of this Society.

ON THE CLASSIFICATION OF THE VARIOUS FORMS OF FUNCTIONAL ALBUMINURIA.¹

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ALTHOUGH the fact that albumen frequently makes its appearance in the urine independently of Bright's disease or other structural lesion of the kidneys or urinary passages was known to the earlier writers of urinary pathology, still so little impression did the observations then made on the subject create, that, though Parkes, Roberts, and other physicians remarked that albuminuria might occur in con-

¹ Read before the South-Eastern Branch of the British Medical Association at Reigate, Oct. 11th, 1888.

nexion with general disorder of the system without there being disease of the renal organs, no apparent attention was paid to the fact. Since, however, the practice of examining systematically the urines of all patients for sugar and albumen has become customary with the profession, the subject has been again forced upon our notice, and has in consequence received considerable attention, and very valuable additions have been made to our knowledge with respect to it. Nevertheless, confusion still exists with regard to the conditions and character of this, non-organic form of albuminuria; one author speaking of it as intermittent, another as cyclical, another as paroxysmal, another as latent, others as physiological, and so on, each applying a term which characterises the particular view he takes of the phenomenon and its causation. But a little reflection teaches us that it is difficult to apply a distinctive term universally. These forms of albuminuria are not all intermittent, though they usually are so; some, as long as they last, are as continuous and persistent as an organic albuminuria. A cyclical tendency to recur is not, again, a uniform phenomenon; whilst paroxysmal albuminuria is admittedly only of occasional recurrence. It is evident, therefore, that we want a common term which will include all varieties of non-organic albuminuria, without reference to any special clinical features, using those only for the purpose of further classification. It has therefore appeared to me that the term "functional" just supplies the want, and although but few writers as yet have followed the suggestion, and it is far from being generally applied, still it is gradually coming into use, and will, I believe, be finally adopted. It has the advantage of drawing the distinction between organic and non-organic albuminuria, and in this sense was originally applied by Prout; it is more correct than "physiological albuminuria," which implies that albumen is a normal constituent of the urine; whilst it is certainly less cumbersome than the phrase "albuminuria occurring in persons apparently healthy."

Applying, then, the term "functional" to distinguish generally that form of albuminuria which is not dependent upon structural disease of the kidneys, or proceeding from morbid conditions of the urinary passages, we can reserve the titles "cyclical," "paroxysmal," and "intermittent" for the purpose of designating those forms of albuminuria which are especially indicated by such characteristics. But before discussing the clinical aspects and the special and distinctive features of each of such subdivisions, it will be as well briefly to pass under consideration the theories which have been advanced to explain the presence of albumen in the urine under abnormal conditions. And here we are confronted by two opposite views, each of which has found favour among physicians of equal authority and repute. The first—the one to which I think English opinion most inclines—is that which maintains that albumen transudes, either through the glomeruli or renal epithelium, or both, whenever pressure is raised in the renal vessels. Those who hold this view, which derives its wide acceptance from the brilliant investigations of the late Dr. Mahomed, regard the kidney in great measure as a mere filter, and believe that the renal epithelium merely exercises a selective action in the removal from the blood of urea, uric acid, &c., and that whenever the pressure in the renal vessels rises albuminuria will proportionately ensue. Some who maintain that albumen thus transudes attribute to the flat epithelium which covers the glomerular tuft an albumen-restraining influence in health, which, whilst permitting the water and salts to transude freely, prevents the occurrence of albuminuria unless the pressure is raised sufficiently to overcome resistance or the epithelium is destroyed by disease. The other view is that the epithelium covering the glomeruli or lining the urinary tubules has the power of reabsorbing the albumen transuded by the vessels of the glomeruli or the tubules so long as it maintains its healthy function; but as soon as the epithelium is destroyed by disease, or its vitality impaired, it permits the passage of albumen with the other urinary constituents. Of these two theories, with the exception of some slight modification to which I shall presently refer, I certainly incline to the latter; for without denying the great influence increased pressure undoubtedly has in the causation and aggravation of albuminuria, I cannot regard it as the most important factor, or even a necessary one. Cases certainly do occur in which we have no palpable evidence

of increased pressure in the renal vessels, and in which from other circumstances we might infer the contrary, and albumen be nevertheless abundant in the urine; whilst in other instances, when we might reasonably suppose a high degree of renal tension to be present, no albumen will be found. On the other hand, many pathological circumstances seem to favour the view that the epithelium plays a considerable part in preventing or favouring the transudation of albumen. Still, I cannot accept the view that the epithelium exercises its restraining influence by the reabsorption of the albumen brought to it by the renal vessels; nor, on the other hand, that it mechanically prevents transudation. The objection to the reabsorption theory is, to my mind, its clumsiness, for Nature never goes out of her way to perform unnecessary operations; and why should the epithelium first attract the albumen from the renal vessels if it is not required for the urine? As regards the mechanical theory, we need only name it to reject it, since albuminuria so frequently occurs without the slightest evidence of either past or present desquamation of the epithelium. Then what explanation remains which will sufficiently account for the varied conditions under which albumen appears in the urine? I believe it to be briefly this: that the renal epithelium (glomerular and tubular) has two functions, a selective and metabolic. In health, this epithelium exercises its selective function by the withdrawal from the blood brought to it by the vessels of urea, water, salts, &c., to form the urine; and its metabolic function in the converting the albuminous elements concerned in its own nutrition, and perhaps also the conversion of any effete albumen, up to a reasonable amount that may have escaped conversion elsewhere, into urea and other nitrogenous excreta. We know the urinary function is liable to considerable variation; and we may reasonably suppose that the metabolic process is likewise also liable to disturbance from abnormal conditions. Thus, for instance, (a) under increased blood pressure the renal vessels may bring to the epithelium an excess of effete albumen, which is beyond its powers of conversion into urea; (b) or there has been a sudden destruction of some albuminous constituent in the body (such as I believe occurs under increased hæmolytic action of the liver, as pointed out by Noel Paton, Oliver, and myself), in which a considerable quantity of an albumen unfitted for nutrition is carried to the kidneys, and the epithelium, unable to deal with this sudden influx, passes it through into the urine; (c) or, again, the epithelium, destroyed by disease or its metabolic function, enfeebled by impaired vitality, or paralysed by some toxic agent, fails to convert the albumen brought to it by the renal vessels into urea &c.; (d) or it may happen that the form of albumen is not in a state to undergo metabolism, and yet must be disposed of; thus egg albumen, when injected into the veins of animals, seems to induce albuminuria more readily than serum-albumen. If this view of the function of the renal epithelium be established, we shall the more readily be able to understand the conditions which determine the various forms of functional albuminuria.

Cyclical albuminuria.—This may be either intermittent or continuous, but it always presents one marked feature, a periodic exacerbation with respect to the amount of albumen present in the urine during twenty hours. This exacerbation, as Dr. Pavy has pointed out, occurs usually during the morning hours, after rising, and declines as the day advances, so that towards night the albuminuric tendency has either completely passed off or only traces of albumen are to be found in the urine. A similar cyclical variation has also been noticed with regard to the reaction of the urine, for it was pointed out many years ago by Dr. Bence Jones that the acidity of the urine was greatly depressed during the forenoon—indeed, often becoming alkaline, and depositing in consequence phosphate of lime. Dr. Bence Jones considered this depression of the acidity of the urine was caused by the withdrawal of acid from the system to supply the requisite acidity for the gastric juice. Dr. Edward Smith, in his valuable contribution on Cyclical Changes in the Body in Health and Disease, has also noted that during the morning hours there is also an increased elimination of urea and carbonic acid. This cyclical tendency was first attributed to the influence of food, to its stimulating effect on the system after the fast of the night, and the rebound of the vital forces after a period of comparative dormancy. But it was found that the phenomena did not depend entirely on food, although the conditions were more marked when it was taken, and that the mere act of rising

was often sufficient to induce it. Similarly the tendency for albumen to appear in larger quantities in the urine on rising from bed in the morning has been attributed to the ingestion of food; but though it is most marked when food is taken, it does not depend upon it. Indeed, I have often experimentally interfered with the cycle by keeping the patient in bed, and, although he had his breakfast as usual, the albumen did not appear till he was permitted to rise late in the day, when it at once recurred. The explanation of this, I think, is as follows. The sudden change from the horizontal to the vertical position, especially in delicate persons, has a tendency to cause a temporary mechanical distension of the vessels of the lower part of the body. Now, as regards the kidneys, this brings more blood to the epithelium, and this, if the vitality is at all impaired, unable so suddenly to exercise its metabolic function in the conversion of the excess of albumen thus brought to it into urea, permits its escape into the urine. The exposure of the surface of the body to the colder atmosphere of the room as compared with the warmth of bed probably aids in bringing about this increase of pressure in the vessels of the abdominal viscera by driving the blood from the cutaneous surface; whilst when food is taken we have the increased hæmolytic action of the liver as an additional factor. Cyclical albuminuria is met with in persons of all ages, though most frequently in young adults, and most commonly in the form that has long been described under the term "albuminuria of adolescents." Beyond the albuminuric condition there is nothing specially to note with regard to the urine; it is often of rather higher specific gravity and deeper colour than usual, especially that collected after breakfast, probably from an increase in the amount of urea caused by the hæmolytic action of the liver before referred to; but the specific gravity may be comparatively low and the colour pale. The patients are for the most part fragile looking rather than anemic or sallow, but instances of this form of albuminuria are to be met with in apparently robust and healthy-looking individuals.

(To be concluded.)

ARTHRECTOMY V. EXCISION OF THE KNEE.¹

By HERBERT W. PAGE, M.C. CANTAB.,
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IT was about the year 1850 that Sir William Fergusson called anew the attention of the profession to the operation of excision of the knee. In his earlier years he had himself seen only one instance of it, and the result had not impressed him by its excellence, for the patient was obliged to use a crutch, the limb hung useless, it was shorter than its fellow by several inches, and so flexible at the cicatrix as to be totally unfit for support or progression. Nor did the few cases which had been recorded impress him more favourably, and he tells us that in selecting amputation in his own practice he had been influenced by the consideration whether the object to be gained by the patient would be worth the risk to be incurred; and that he had invariably—until a date which, when writing in 1857, he called recent—come to the conclusion that by removing the limb above the seat of disease he had done what was best for present safety and future comfort. But this persistent advocate of conservatism in surgery had ever felt a reluctance—which, indeed, is invariably shared by all surgeons—to sacrifice a limb; and we learn from his work on "Practical Surgery" that, notwithstanding early prejudices, he ventured in July, 1850, to perform the operation of excision of the knee joint on the living subject. The case seemed to be an exceedingly favourable one for operation, and it can hardly be doubted that in the present day it would have had a successful issue. Unfortunately the patient died on the ninth day of acute osteo-myelitis of the femur, which clearly was of septic origin. In spite, however, of this unfortunate result, the operation thus reintroduced by Sir William Fergusson—and no fact could better show how commanding was his then position—was soon repeated by many surgeons in various parts of the

country, and we find him writing in the fourth edition of his book in 1857 that "since the last edition of this work was published an eventful epoch has occurred in the history of this operation." By himself, by Jones of Jersey, by Mackenzie, Butcher, Price, Henry Smith, Page of Carlisle, Thomas, and others, the operation had been performed; so that whereas between 1781 and 1830 there had been only nineteen known instances of excision of the knee, we find Sir William writing that he "knew of no other operation, as it may yet be called, in the whole range of surgery which has been so frequently performed in such a brief period of seven years, and that he had confidence in stating that he knew of none so thoroughly worthy of the attention of the surgeon." Conservatism was at that time becoming a more dominant force in surgery than it had previously been, and Sir W. Fergusson believed that the pity, amazement, and horror which were then uppermost in the mind on hearing of amputation of the arm for disease of the elbow would in a few years hence be felt when statistics had shown how patients had fared after amputation of the thigh for disease of the knee. Time, however, was above all things needed to tell what were the ultimate results of excision of this joint, and one of the most important contributions in this country to the subject was that brought before the Royal Medical and Chirurgical Society in November, 1868, by Professor Humphry of Cambridge, who had enjoyed unusual opportunities for practising the operation in a large number of suitable cases. He had previously brought before the same Society in its session of 1858 the account of ten cases, and his remarks suggest that he was then pleased and satisfied with the operation. Excision, he then said, offered the prospect of a very useful limb in cases where from the extent of disease or deformity there was no longer a prospect of a useful joint or of the limb being preserved—a better prospect, in his experience, than did any other procedure, and with little risk. The chief danger to be feared was a continuance of suppuration, undermining the health and rendering amputation necessary because of the tendency of disease to linger long in the synovial membrane. This was the most frequent cause of failure; but nevertheless his success had been remarkable, for up to this date, of forty-five cases of excision of the knee, thirty-three recovered and two died. Nine underwent amputation; of these, five recovered and four died. One was still under treatment. The record of these cases, and of some brought forward at the same time by Mr. Henry Lee, served to show that even in the most successful cases there was one great disadvantage of the operation, when undertaken for extensive disease in early life, that the resultant limb was prone to have its growth arrested and to be considerably shorter than its fellow. Thus we read of shortening of two and a half, four, and two inches, and even these amounts must have been exceeded, for in two cases published the other day by Mr. Henry Lee² of excision after twenty years, one showed shortening of five inches and a half, the other of six inches. Results such as these, and the fact that recovery had sometimes been obtained only after prolonged suppuration and at great peril to life; that there was often much difficulty in keeping the ends of the femur and tibia in apposition, as witness the many suggestions which have been made for the attainment of this object; the fact, moreover, that many cases, after all, came to amputation, let alone the number who died,—served to lessen the enthusiasm there had been as to the value of the operation; and I suppose it would not be very wrong to say that from 1870 to 1880 excision had not advanced in general surgical favour, and was probably not performed as often as it had been in the previous ten years. While, however, the operation of excision was falling somewhat into disfavour, a vast change was coming over the practice of surgery. The great principles of Lister's teaching were being brought home to surgeons, and were bringing within the range of surgery many new operations on many and various parts of the body. To name one region only, the surgery of the joints has been thereby wholly changed, and in our hospital work one frequently has the opportunity of seeing recovery after injuries of joints and various forms of joint diseases which, it may be said without untruth, would have been hardly possible twenty-five (perhaps not more than five) years ago. The surgeon has learned that a joint—even the knee joint, with its intricate synovial pouches—may be opened without risk or harm, and

¹ Paper read at the Harveian Society on Nov. 1st, 1888.

² THE LANCET, April 21st, 1888, p. 769.

he has thus been led to explore the cavities of joints at a much earlier period of disease than used once to be the case. Every day, in fact, he sees what benefits accrue from early incision, washing out, drainage, and irrigation in cases of injury, for example; and in cases of disease from the removal of those structures in a joint which happen to have become affected, instead of waiting until the process of disease has run on to complete destruction of all the constituent parts of the joint, when alone it used formerly to be thought justifiable to interfere, and then by removal of the limb. The principles of Lister's teaching have done this for joint surgery, and have provided another and stronger reason than the mere defects in the operation itself for total excision of the knee becoming rarer and rarer, and for its being supplanted by that other operation of which I wish to speak to-night, and which is known by the name of arthrectomy or erosion.

I have given this short historical *résumé* because it is not in itself uninteresting, and because it serves well, I think, to show how the operation of arthrectomy has come into vogue. It is curious to see how it has grown from small beginnings—how, as it were, it has felt its way until it has attained its present importance and range. Thus one of the earliest notices which I can find upon the subject is in a discussion which followed a paper on excision of the knee in early life by Professor Stokes, read at the meeting of the British Medical Association at Ryde in 1881, and in which Mr. Cross of Bristol, in the course of his remarks, advised “early incision with antiseptic precautions, so as to examine the joint and remove the diseased part. He referred to a case in which he had taken away nearly the whole of a carious condyle, and thought that such an operation, which left a synovial membrane and a movable joint, was infinitely preferable to a resection of the whole joint. In his opinion resection of the knee was almost a thing of the past.” Between that time and this there have been numerous papers on the subject, by Wright of Manchester, one of the earliest pioneers, by Barker, Clutton, Bilton Pollard, Sheild, Owen, Keetley, and many others, and the time has come, I think, for forming some opinion upon the operation.

What, then, is arthrectomy, and what do we seek to obtain by it? Which are the cases suitable for it? What are its advantages? What are its results?

First of all let me say that, in considering the question of the best method of treating diseases of joints, we cannot ignore, for very much depends upon, the social position of the patient. The child of the well-to-do householder, for example, is in a very different, is in a very much better, position than the child of the poor labourer or artisan. The beginnings of the disease are more surely recognised, treatment is begun earlier and is more rigorously carried out, and his surroundings are such that all that fresh air and good food can do for him is brought to bear upon his general condition of health. The synovitis which is the result of some trifling injury—a sprain it may be—has thus the opportunity of complete subsidence, the tissues of the joint are less prone to pass into that morbid condition in which the tubercle bacillus finds a suitable breeding-ground and home, and none of those later results arise with which we are familiar, and which, in the main, result from neglected and unresolved inflammatory processes. All of us must have seen cases in which, under these conditions, complete recovery has ensued from absolute rest, local pressure, good feeding, and fresh air; and no one will, I think, deny that in this mode of treating joint diseases a great stride forwards has been made since Thomas introduced the splints which always will be known by his name. Not so with the poor; and thus it happens that our hospitals contain cases which are but rarely seen amongst the wealthier classes; and too often the patient comes to us when there is no whole part in the joint; when the synovial membrane is so structurally changed that resolution or recovery of its natural condition is no longer possible; when the cartilages have been eroded, and the bone has been seriously invaded by the disease; when possibly there is much deformity; and last, but by no means of least importance in the clinical picture now presented, when the general health has been seriously undermined. In cases of this kind no surgeon would hesitate for a moment to use the knife, even though it were necessary to amputate the limb. But there are conditions less pronounced than those which have been named, when treatment by prolonged rest is either unavailable or has been already tried and found wanting, and in which, by a

much less formidable operation than the old classical excision, he may succeed in removing and arresting the processes of disease, and in preventing the future onset of such widespread changes. He seeks to do this by the operation of arthrectomy or erosion, and we may answer the question what it is by saying that it differs from excision in this, that it is content with removing diseased structures alone, with removing no more, but at the same time no less, than is absolutely necessary to clear away morbid tissues, and falls very short of (though at the same time it may be said to compass more than) the older operation, which, in the main, consisted in slicing off pieces of femur and tibia, in order that new and presumably healthy surfaces of these bones might be brought into apposition, and ankylosis in the end result. Admitting altogether the disadvantages under which that operation laboured in the pre-aseptic days, it is no wonder that when portions, it might be, of diseased synovial membrane were left behind there arose suppuration, interference with healing, the subsequent necessity of amputation, and grave risks of septicæmia and pyæmia when the open cancellous tissue of the bones was subjected to the malign influence of neighbouring and unhealthy discharges. In arthrectomy, however, there is no such risk, for the diseased tissue, whatever it may be, is all taken away, and in no case is there any occasion for encroaching upon or removing, as the old excision removed, the growing line of the bones. And, in acting thus, let us consider for a moment what it is that we wish to obtain. We wish by a removal of disease, no matter in what structure it may lie, to place the parts of, about, and around the knee in a condition of health, so that reparative processes may begin, that the joint may either be preserved or that sound ankylosis may take place, that the growth of the limb shall not be arrested, and that, rid of a grave source of constitutional disturbance and of future danger, the general health may be established and improved.

I do not intend to enter into the large and interesting question of the tubercular nature of these joint diseases, nor the part which they play in tubercular generalisation, for the subject has been dealt with at length in the lectures which were given in the summer by my friend Mr. Barker at the Royal College of Surgeons. Therein will be found the strongest arguments, I will not say for a belief that the tubercle bacillus is the actual cause of the mischief which we seek to lessen and remove, but for early operative interference in the class of cases which we are here considering. For it comes to much the same thing whether the tubercle bacillus be already there or whether it be not, the diseased structures of the joint are the very places where it likes to make a lodgment. If it is already there, the sooner we evict it the better; if it is not already there, the sooner the better that we get rid of a tissue whose condition forms a standing enticement for this noxious organism to come and occupy that tissue as its own. Do not let it be thought that I advocate the indiscriminate arthrectomy of every diseased knee joint that comes before us. There are cases, of course, chiefly those of recent origin and with a clear history of injury, where no one would think of an operation until perfect rest had been enjoined and carried out for a reasonable time; but given a case where we have a history of prolonged swelling and pain in the joint, with increasing deformity and a history that rest has been of no service, where, moreover, the synovial membrane is obviously thickened, and it may be here and there pulpy and soft, presenting that peculiar feel which tells at once that the joint enlargement is due to something other than a collection of fluid within, and that, as so often is the case, the inside is probably in a worse condition than the outside aspect would seem to indicate, then I believe that the time for operation has arrived. The same also must be said with no less force of those cases where persistent local pain and tenderness lead to something more than a suspicion that there is a focus of disease in the epiphysis of either tibia or femur. The fear of operating need never deter us from examining the inside of the joint. All the better if the disease to be removed is but limited in extent. The operation itself can do no harm.

I do not propose here to give an account of each and every step of the operation; nor, indeed, does it seem to me possible to lay down any precise laws as to this or that line of incision which ought to be followed, or this or that method of dealing with the bleeding vessels or of obtaining union by the first intention. Much must depend on the case itself; much also on the choice, will, and experience of

the surgeon; more perhaps on the result which it is hoped to obtain—ankylosis or a movable joint. The great thing is to expose the joint thoroughly so that we may actually see how with scissors, scalpel, gouge, or raspatory to extirpate every particle of disease, whether in synovial membrane, semi-lunar cartilage, inter-articular ligament, or the bone itself. Personally I believe that this can be done by the old horseshoe incision, which curves below the patella; but some surgeons have found a difficulty thereby in reaching the pouch of synovial membrane beneath the quadriceps. To meet this, the joint has been opened by a transverse incision and division of the patella; by a longitudinal incision, passing through the centre of the patella, which can be sutured together afterwards (Riedinger); and Mr. Clutton has operated by a "long curved incision through the extensor tendon just above the patella, and prolonged downwards on each side to the line of articulation." Of one thing I feel at present convinced—that in cases where there has been extensive disease, and much tissue therefore has been removed, we shall do wisely not to hope for, or attempt by any after treatment to obtain, a movable articulation. Ankylosis in the straight position is the thing to be aimed at, and it is therefore unnecessary, in my judgment, to be particular about saving bits of the crucial ligaments which may chance to be left, or to trouble about resuture of the ligamentum patellæ. These structures are not, I think, of much practical use afterwards, and the effort to save them and reunite them must add to the time which the operation takes. At best the operation is a long one, and the saving of time is of some moment to the patient. Moreover, we are not going to slice away portions of the bones; diseased parts only will be gouged out; and the tibia and femur lying thereafter in close apposition, there is less of that tendency to displacement which was so troublesome after excisions when a large gap was made in the place of the resected joint. The ends of the bones ought to fit closely and accurately together, and the only exception to the statement that diseased bone is alone to be removed is the necessity that may be found, in those cases where there has been much displacement, of taking away some small piece of one or both condyles, in order that the tibia and femur may come together in a straight line. There ought, at any rate, to be no occasion for pinning the bones together with ivory or steel. I should like to hear what surgeons have to say concerning this, but I am more anxious to know what has been their experience in those cases where the disease has been but small in extent, and where the attempt has been made to obtain a movable joint. English surgeons have not hitherto said much on this point, and the best information to be obtained on the subject is in a recent paper by Sender.³ He records fifteen operations on thirteen patients, and in the last three of them he seems to have obtained five more or less movable limbs. He opened the joint by long lateral incisions, as recommended by Volkmann and König, without completion of the horseshoe incision or division of the ligamentum patellæ. One, a child of two years and a half, had the synovial membrane dissected away, and the joint thoroughly washed out. Recovery took place with "perfectly normal movement." The second case was that of a patient aged twenty-two, from whose left knee the synovial membrane was dissected out, and subsequently in three weeks a portion of the head of the tibia was gouged away, and from whose right knee the synovial membrane also was dissected at a later date. Ultimately there was some movement in both joints, and the man was able to walk well. The last case is a child of eight, who was discharged from the hospital with a movable joint—extension normal, and flexion nearly so—after dissection of the synovial membrane from the left knee, and from whose right knee four months afterwards the synovial membrane and a piece of the internal condyle were removed. In this case the ultimate movement is spoken of as having been nearly normal. The gait, moreover, was natural. Sender says that in all these cases movement was begun before healing was sound. I would ask, What risk is there in this? By this method of lateral incision the structures of the extension apparatus are of course left intact, but the difficulty of examining the whole cavity of the joint by these incisions must be great, and there must be risk of leaving disease behind. This is probably what happened in the case where a second operation had to be undertaken on the tibia in three weeks.

To meet this objection, and with the deliberate intention of trying to obtain movement afterwards, Tilling opens the joint by the horseshoe incision; but instead of dividing the ligamentum patellæ he chisels off that part of the tibia to which it is attached, so that when the disease has been erased this portion of the bone may be again united by pins to the tibia, and the extension apparatus may be preserved intact. Has anyone had personal experience of this method? It does not seem to me to have been very satisfactory in the five cases which Tilling himself records this year; for of the first, a boy of twelve, we read that five months after the arthrectomy no more movement could be made because of pain; of the second, a man aged thirty-four, that all hope of movement had to be given up because of the great extent of the arthrectomy; of the third case, a girl of eighteen, that slight movement in the direction of flexion was possible; of the fourth, a girl of eight, that after a second erosion she was going on crutches, nothing being said as to movement; and of his last case, a boy of seven, that at the time of a second scraping, and when under an anæsthetic, the knee could be bent to a right angle. This is clearly not a very promising record as to movement after an operation specially designed, be it remembered, that movement may be secured. Nor do I gather that in the nine cases recently recorded by Mr. Bilton Pollard⁴ there is much that is promising in this matter, although of one of them, a child of three, from whose knee the synovial membrane alone was removed, the cartilages being left intact, we read that "the joint was sound, and movement could be made without pain." We need further information upon this point, and although I feel that with my present knowledge I may perhaps be altogether wrong, yet I am inclined to think that good firm ankylosis is the thing for which we ought to strive. There surely must be some risk in commencing passive movement before the parts are soundly healed, and there is this further risk, it seems to me, that when the operation is undertaken with the hope and design of obtaining a movable knee afterwards, the joint may not be as thoroughly inspected as it ought to be, and some diseased foci may be left behind. The real purpose of the operation has not then been attained. Moreover, the movement to be gained can at the best be only slight, and it is very questionable whether a knee that is soundly ankylosed in a straight position does not provide a limb more practically useful than one in which at the middle of it there is a possibility of bending the limb a few degrees. Much of course depends upon the extent of the operation in each case. It is clear that we are more likely to obtain a movable joint if the disease be limited, and therefore that if this be our aim the operation must be undertaken early. I know the hesitation there will be to operate as early as we ought, and it will come to pass that in the great majority of our cases the thing at which we shall have to aim, as the best of all possible results, will be sound ankylosis in the straight position. And in the after treatment we have to take special care to keep the limb fixed in this straight position, and we must not relax the use of splints or plaster of Paris until the ankylosis is secure. By so doing we may effectively prevent flexion. One of the cases here to-night will show how carelessness as to the splint when the child was at home led to an accidental flexion of a limb which would otherwise have been perfectly straight; and in another, I am sorry to say, the limb is not now as straight as it ought to be because the splint was given up too early. The operation, however, has in it yet other advantages; it has in it something which is not less important than the securing of a useful limb, and that is the removal of all traces of disease, and of lessening the chances of generalisation of the tubercle poison. No one who has had experience of arthrectomy of the knee can have failed to notice how great has very often been the improvement in the general health when the diseased structures have been removed—not solely, I think, because there is an end of the pain and lameness and incapacity. And if these results can be brought about by an operation which in itself appears to be tolerably free from danger, and which at the same time restores to the patient a useful limb which shall grow with the growth of the body and keep pace with its fellow, then we may claim that that operation has, or ought to have, a secure position in surgery, and that it is one which may be advised with

³ *Dtsch. Zeitschrift f. Chirurgie*, 1888, Heft III. and IV., p. 207.

⁴ *Centralblatt f. Chirurgie*, 1888, No. 4.
⁵ *THE LANCET*, vol. I. 1888, June 16th and 23rd.

safety, and at an early period, in a large number of cases.

I must not, however, forget that the title of this paper is Arthrectomy *v.* Excision, and if I have spoken much in favour of the plaintiff in this action, I would not have it thought that the defendant has no case. Excision of the knee shares with arthrectomy precisely the same advantages that are to be derived from our modern improvements in wound treatment, and the risks of septicæmia and pyæmia, or of the necessity of later amputation because of supuration, are greatly lessened. I know of no recent statistics on this point, but no one will question, I think, that the immediate results of excision have, with all other operations immensely improved in the last ten years. But no antiseptics, nor any healing by first intention, can lessen the chances of arrested growth in the limb when excision is performed in young people; and that operation, in my opinion, must be reserved for cases in which the knee has become ankylosed in a flexed position, or in which, on proceeding to the operation of arthrectomy, it is found that the disease of the bone is so extensive that mere scraping and gouging are insufficient for its removal. This was what happened in a case which I saw last week under the care of my colleague Mr. Pepper; and I operated myself on the same day on the knee of a man aged twenty-seven, with a history of disease of five years' standing, where the operation performed was neither an arthrectomy nor an excision, but a combination of the two. The surgeon must be prepared for this sort of thing, and it may even be that he will find conditions which contra-indicate the possibility of success from arthrectomy or from an arthrectomy excision, and amputation had better be done at once. Thus in one case—a lad of fourteen—there was found such a rarefying osteitis of the lower end of the femur that the femur broke three inches above the condyles during the manipulation entailed by the operation; and in another the bursa under the popliteus was found extensively diseased, and practically forming a large abscess cavity in the calf. Conditions such as these not only call for amputation, for which therefore the patient ought to be prepared: they show how much better it would be to prevent such things arising by early operative interference, when a mere arthrectomy may suffice. Surely everything points to the advisability of early operation, unless there be the most distinct evidence of improvement from rest. We do not want to have to do an operation at all like that of the old excision. Let us operate at a time when we shall have to sacrifice no more than is absolutely necessary for the removal of disease, when by such removal we shall place the tissues of the joint in a condition in which repair, once started, is sure to go on, when we can preserve the growing limb in its natural length, and, by improving the general health, shall fortify the patient against the possible inroads of future disease. These are inestimable benefits, and the more they are known the better will it be.

SACCCHARIN.

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IN view of the enormous increase in the use of saccharin for the purpose of sweetening foods, beverages, and medicines, we have been led to institute experiments, with the view of determining whether this substance is poisonous or not when given even in excessive quantities; and, if not poisonous under these or other conditions, whether its use in moderation interferes with the digestive processes, so as to render it advisable to forbid its use as a substitute for sugar. That saccharin is not a food is manifest; but there are so many circumstances under which the use of a sweetening agent in place of sugar is desirable, as to render it advisable to determine, if possible, whether the dietetic use of saccharin is safe.

1. As to the question of the toxicity of saccharin we have no

doubt. Reliable continental experimenters have admitted this, and we have confirmed their observations. To an underfed dog we gave daily for five days two grammes of saccharin (equal in sweetening power to more than a pound of sugar), in addition to food *ad libitum*. The animal increased in weight, and no inconvenient results were observed. We mixed large quantities of saccharin with the food of mice; they ate of the mixture *ad libitum*, freely, and for a considerable period, and in no single case was there any manifest action on the health of the animal.

2. As saccharin has decided antiseptic properties, and is capable, in sufficient quantities, of stopping the action of organised ferments, we ascertained its extra-corporeal action on the soluble ferments, and found that in respect of the peptic digestion of fibrin 0.1 per cent. of saccharin has no retarding influence, whilst 0.25 per cent. slows the process decidedly, and 1 per cent. greatly retards it: 0.1 per cent. of saccharin is the equivalent of 30 per cent. of sugar—an impossible dietetic quantity. The diastatic solution of starch was not hindered by 2 per cent. of saccharin. The ammoniacal fermentation of urine is retarded when saccharin is added to it, or when saccharin is taken—an important fact in clinical medicine. The putrefactive decomposition of a pancreatic digestive mixture we found was not prevented by the admixture of saccharin to the extent of 1 per cent.

Experiments on the extra-corporeal action of saccharin on the digestive ferments are, however, of no significance in determining the effects which saccharin would have when taken with food, since they involve the maintenance of a constant fairly strong solution of saccharin in the digestive medium—a condition which does not obtain when saccharin is taken, since this substance is quickly absorbed, and is excreted in the urine.

The following experiment was made for the purpose of exactly determining whether saccharin influences gastric digestion. Two similar dogs, after having fasted for thirty hours, were each fed with 300 grammes (about 11 oz.) of lean beefsteak, equally cut up and divided. The 300 grammes of steak contained 69 grammes (i.e., 23 per cent.) of dry solids. No. 1 dog weighed 21 lb., and had no saccharin; No. 2 dog weighed 15½ lb., and had one gramme of saccharin (equal in sweetening power to more than 8 oz. of sugar) with his meat. Five hours and a half after the meal the dogs were killed with chloroform, and the contents of the stomach and intestines carefully removed from each animal. The small intestine in each case was empty, except the duodenum which contained a small quantity of digestive mixture that had passed from the stomach; and at the lower end, just above the large intestine, there was material obviously of older duration. In each dog the stomach contained some undigested meat. The dry weight of the contents of the stomach and duodenum of No. 1 dog was 23 grammes, or 33 per cent. of the dry meat taken; whilst the similar dry weight in No. 2 dog (which had taken saccharin) was 21 grammes, or 30 per cent. of the dry meat taken. Obviously, the ingestion of a gramme of saccharin, equal in sweetening power to over 8 oz. of sugar, had not in the least interfered with the gastric digestion of the dog. One of us has, moreover, taken considerable quantities of saccharin daily without experiencing any ill effect. The saccharin used by us was "soluble saccharin," which is equal in power to about nine-tenths of its weight of commercial "pure saccharin." "Soluble saccharin" is as soluble in water as table salt, and when appropriately diluted is perhaps indistinguishable in taste from cane sugar, and is free from all the bitterness of flavour met with in the soluble saccharin first brought into the market.

Summary.—We conclude that (1) saccharin is quite innocuous when taken in quantities largely exceeding what would be taken in any ordinary dietary; (2) saccharin does not interfere with or impede the digestive processes when taken in any practicable quantity; and (3) our personal experience is that saccharin may be taken for an extended period without interfering with the digestive and other bodily functions. Hence there is no reason to think that its continued use is in any way harmful.

Guy's Hospital.

LADY DUFFERIN'S FUND.—It is stated that Lady Lansdowne, on her arrival in India, will take over the presidentship of this fund; and it is expected that, besides the capital, the balance in hand will amount to 30,000 rupees.

A REMARKABLE CASE OF PROBABLY CANCEROUS DISEASE.

BY CHARLES WILLIAMS, L.R.C.P., L.R.C.S., L.S.A.

IN October, 1885, G. T—, a sailor, aged thirty-two years, came to ask my opinion about a wart on his lower lip, in size equal to a small Barcelona nut. He told me that two or three years before he had had a wart in exactly the same place, but that this had been tied, burnt with caustic, and apparently quite got rid of. This new wart, he said, occupied exactly the same situation as the old one, and had been gradually getting larger for some two or three months. I told him that it looked very suspicious, and that I should like to see it again in a week or two's time. As, however, he was leaving for sea the next day this could not be; so, after warning him of its being likely to prove of a cancerous nature, I extracted from him a promise that if it increased in size at all during the next few weeks he would show it to a doctor at the first port his vessel stopped at.

I saw nothing more of the man from this time till March, 1886, when he returned from sea, and again came to my surgery. I was now quite alarmed at the size the wart had attained, as well as the unmistakable character of epithelioma it had put on; therefore, within a few days of his return, I prevailed upon him to allow me to thoroughly excise it. At this operation I was assisted by a neighbouring medical man, and he quite agreed with me as to its indubitably malignant character. This being the case, I was careful to cut quite free of the disease, and, as the ulcerated and indurated mass occupied fully half the surface of the lip, I really excised nearly all of the lower lip. The operation was done with the help of cocaine by the ordinary V-shaped incision, and strong hare-lip pins inserted. He made a very rapid recovery, the lip joined nicely, and nine days afterwards he left for sea again. All went on well, and the reports from him were most encouraging, till January 1887, when, on feeling his throat, he found that a swelling, the shape of an egg, was beginning to make its appearance underneath the chin, and this continued to enlarge and spread to such an extent that when he stood upright the bottom of it touched the top of the sternum. He said that in appearance it still retained the oval shape, and looked exactly like a large egg-shaped bladder. He did nothing to it at all, and, although he suffered very great pain, it was six weeks before he saw a doctor. At the end of this time his vessel touched at Liverpool, and there he went to a doctor's surgery, and had the advantage of seeing two medical men together. After examining the swelling they lanced it, and the man stated that directly they had done so a pint of dark-brown matter escaped. They saw the cicatrix on his lip, and strongly advised him to go into a Liverpool hospital; they also said they were going to test the matter which came out; but as he was determined to return home he left without either going to the hospital or seeing these surgeons again. It was some weeks, however, before he reached home, as his vessel was going from place to place, loading and discharging cargoes on the way. During all this time he was poulticing with linseed meal as directed by the Liverpool surgeons, and the wound was discharging constantly and copiously.

This was its condition, then, on May 5th 1888, when he arrived home and came to show himself to me at my surgery: a large gaping wound, with well-marked induration around, and offensive matter coming in large quantities from the opening. As I had not seen the patient since the removal of the lip, which was more than twelve months previously, I feared that I read in this the failure of the operation; that, through having been left too long, the glands of the neck had become infected, and that this was the explanation of his trouble. The history of the onset of this swelling, however, being rather unlike cancer, I told him, in answer to his anxious inquiry, that I was in doubt about its true nature, and that in order to settle it he had better adopt the advice of the Liverpool surgeons and go to a large hospital. He fell in with my suggestion, and on May 14th last presented himself for admission at the South Devon and East Cornwall Hospital at Plymouth. On the Thursday the visiting surgeons saw it together, and, although they probed it and examined it carefully, he was not able to glean from them what they thought of it. The

following Friday he was brought down to the operating theatre, laid on his back on the table, the surgical staff were there ready to operate, and the inhaler was just about to be put to his mouth, when one of the surgeons called attention to the cicatrix on his lip. They asked him about it, a short consultation followed, and the next moment they said "Take him out." They afterwards came into the ward and told him that he must either have the whole of his lower jaw taken away or else nothing at all, and that, as this operation was such a formidable and dangerous one, and would more than probably prove fatal, their advice to him was to let it alone. He decided to take their advice, and came home prepared to die. This, then, was the story of what happened at the hospital as related by him to me on his return, and, seeing that I have often questioned him about it and he has always adhered to his original statements, the facts are probably just as he represented. At all events, on May 24th, he came again to my surgery, having only been discharged that day from the hospital; and as the place looked much worse now even than it did when he went there, and although the poulticing had been discontinued at the hospital and the wound filled with cotton-wool saturated with carbolic acid lotion, the discharge was as offensive in smell and as large in quantity as it was before he left to go there. I now told him for the first time that the balance of probability was in favour of cancer, for, although it did not commence in the usual way, it had latterly come to look very much like it. I cheered him up, however, by telling him there was still a slight doubt, and that I had a genuine doubt is evident from the fact that the following week an effort was made to get him into the Cancer Hospital in London; and, on filling up the form giving particulars of the case, I stated there, I believe, that the diagnosis was not certain. However, as there was no vacancy, he was told that he could not be admitted, and from that day to this he has been under my personal supervision and care; and it is, indeed, the progress of the case from this point onwards that makes it more peculiar than ever.

On May 24th last, then, the man came home, and the wound was dusted with iodotorm and carbolic lotion applied. It gradually, however, became worse, and, although on this day and in the following week he came to the surgery to have it dressed, at the end of this time the wound had got so large, and the copious discharge which was incessantly coming from it had so weakened him, that from this time onwards I went to his own home to dress it. At the end of another fortnight his condition was alarming. His face was red, hot, and swollen; the difficulty in swallowing (which up to this point had not been very marked) became worse, and for the first time his breathing was embarrassed. His breathing, indeed, became so bad after a day or two that it could be heard all over the house; and on the night of June 4th, not only was it quick and laboured, but every now and then he would have a spasm of the glottis, which made him turn black in the face and struggle for breath. I visited him two or three times during the evening, and suggested the performance of tracheotomy, saying that it might be the means of prolonging life, which would otherwise be every instant in the greatest peril. On learning that the relief would only be temporary, although I had my instruments ready, and during a paroxysm which seemed as if it would almost certainly suffocate him I strongly advised them not to let him die, they refused to forego their objection, and so I left for the night, never expecting to see him alive again. His father, mother, brothers, and sisters were all round him watching, as they thought, his life ebbing away; whilst, as I went out, his mother thanked me for all my kindness to him, and said, with tears in her eyes, that there was nothing now for her to do but to follow him to his grave.

The next morning I was called out of bed early to another case, and went to the house expecting to hear how he died. Judge of my surprise, therefore, to find that he was not only living but that a distinct improvement had set in. The breathing, which had been so loud and hurried, was now quiet and natural, whilst the alarming spasms of the glottis, which had nearly destroyed him the previous night, no longer harassed him. I learned that, soon after I left the house the previous evening, more than once they had thought he had "gone," and all concerned agreed in the opinion that the change which had taken place in his condition was nothing less than a miracle. To be brief, he gradually improved; the breathing became quite

natural, the swallowing easier, and his speech plainer; whilst his tongue, which had been glued down to the floor of his mouth, once more became free. His strength, too, returned, and at the end of a couple of weeks he was able to get downstairs, and shortly afterwards was well enough to go out of doors.

This was his condition in the beginning of July, when, one day, when he was out for a walk, copious bleeding came on, which was repeated every two or three days during the whole of the month. This so weakened him that he took to his bed. He was watched carefully day and night, and it appeared quite certain that if he had another attack he would not survive it. Indeed, we feared every day would be his last. Just as he appeared, however, to be in *extremis* from the loss of blood, and the pain was so severe that he had at last to take as much as two grains of morphia (sometimes twice or thrice repeated in a night before he could get ease), or else have hypodermic injections of a grain at a time, this became subdued, and the discharge lessened in quantity as well as became less offensive in smell (at last, indeed, it ceased altogether, and there was no smell from the wound at all). Moreover, the granulations assumed a healthy appearance, and what had been a large gaping wound capable of admitting all the fingers together, gradually became at the outlet smaller and smaller, till eventually the opening became so closed that there was no possibility of blowing in the iodoform, and so we were obliged to be content with dusting it over the outside. At the same time there was a corresponding improvement in his general condition, and he again surprised the people by once more appearing out of doors.

When his recovery thus seemed really within reach, swelling again took place on each side of his cheek, the pain once more came on, excessive and fetid discharge also made its appearance, and ultimately the wound opened and gaped as much as ever. A medical colleague of age and experience who saw him with me, and has continued to have the charge with myself for the last three months, took it to be malignant from the first day he saw it, and, indeed, had only just before he saw this case attended a patient who had died from apparently the very same thing. I myself, however, still cherished a doubt as to its being cancerous; but two months ago, on the occasion of his third relapse, it put on such a strikingly characteristic cancerous appearance that I was almost forced to agree with him. I doubt very much, if any number of medical men had seen it then, that there would have been a single opposite opinion amongst them. His face was greatly swollen, there was hardness on both sides of the lower jaw, all the teeth of this jaw were loose, and his tongue was very red and so swollen as to fill almost the whole of the cavity of the mouth. But this was not all, for on lifting back his head there was seen a large ghastly-looking cavity, discharging offensive matter and shreds of black slough, hanging down from the roof like icicles in a cavern. Then the discharge was so offensive for some time that, despite the free use of disinfectants, one could hardly stay in the room. Moreover, when we cut off the hanging sloughs on one day, on the next we found fresh ones hanging in the same places.

We now expected a recurrence of the bleeding, and, if there had been, he certainly would not have stood it. Even as it was, the discharge so weakened him that for days he was in a sinking condition, and one night I was sent for, to find him insensible and apparently passing away. His breathing and pulse would both stop for many seconds, and once more I never expected him to last till the morning. He did so, however, and, although his revival only seemed a temporary one, he has gradually got better, and so much so, indeed, the last few days, that at the end of another week I should not be at all surprised if he is not downstairs again.

But what is the appearance of the diseased part now? Well, this is difficult to describe, and I have never lamented my lack of artistic skill in any case as I have done over this. Unfortunately, too, not only am I myself unable to draw, but I can get no one here who can. The consequence is that only an imperfect description can be supplied, but this I will attempt to give as well as I can. The man's condition now, then, is as follows: His face is almost natural, but, on removing the cloth which encircles his head and chin, there is exposed a large, clean-looking wound (for the discharge the last few days has become much less in quantity and less offensive in smell), with what appears to be healthy-looking granulations all around. But what is the mischief that has been wrought? Well, nothing

more or less than this: The whole of the submaxillary space is as clearly exposed as if it had been dissected by a skilled pathologist. There in the centre is the *os hyoid*, thyroid cartilage, and hyoid bone, easily felt, and covered only by red granulations; whilst on either side are the submaxillary and sublingual glands, seen as plainly and dissected out as neatly as if it had been done for "Gray's Anatomy." Several medical men have now seen this case, several more have heard of it, but what to call it is an enigma. We want to know the meaning of it. Can any of my readers tell us? I may say that to any specialist interested in it and desirous of inspecting this strange case for themselves, I shall be glad if they will put themselves in communication with me to direct them how to get here, and to afford them my hospitality. The case, I believe, is well worth seeing; for every medical man who has seen or heard of it seems to agree in the opinion that it is unique. I will only add that there is no history of scrofula or of syphilis; that the patient has been a sailor, I believe, all his life; and seeing that he has not during all the time he has been under treatment taken anything in the way of medicine but a few bottles of iodide of potash mixture, and five grains of calomel on two occasions, the case is very remarkable, and certainly deserves publishing.

Port Isaac, Cornwall.

ON THE SURGICAL TREATMENT FOR LACERATIONS OF THE PERINEUM AND THE PELVIC FLOOR.¹

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PROFESSOR OF GYNÆCOLOGY IN THE KENTUCKY SCHOOL OF MEDICINE,
CHAIRMAN OF THE SECTION IN OBSTETRICS AND GYNÆCOLOGY IN
THE AMERICAN MEDICAL ASSOCIATION, ETC.

DR. WATHEN spoke especially of the surgical treatment of lacerations or injuries of the muscular and aponeurotic structures that form the floor or diaphragm of the pelvis. He said that there was probably no other subject in gynecology about which so much had been written that was of no real value, and that a relatively simple operation had been made to appear so complicated that it was seldom correctly performed. He stated that the muscles and the fascia in the perineum gave it strength, and when they were lacerated no operation that did not primarily tend to reunite them was logical, or would be followed by permanent good results. We might have prolapse of the uterus, with rectocele and cystocele, resulting from subcutaneous rupture of these structures, with no laceration or injury of the mucous membrane or other parts of the perineum. This condition was not usually diagnosed by the attending physician, and the woman was subjected to various plans of treatment to hold the parts in position and relieve the annoyance from pressure, weight, &c., all of which give but little relief; nor could we cure her except by an operation to bring together and reunite the torn ends of the muscles and fascia. For if any of the perineal muscles or the fascia be lacerated, unless at once united and held together, the muscular contractions continued to widen the distance between the torn ends, so that the vulva gradually became enlarged laterally. The extent of this lateral separation was governed by the degree of laceration and the length of time since it occurred. If the above was correct, then no operation would succeed that failed to bring these torn ends together so as to reunite them. This was a simple question that held good in all operations to restore the perineum in complete or incomplete ruptures; and if we were controlled by it, and were familiar with the technique of the operation, success would nearly always crown our efforts. The author did not know of any operation that was not faulty in this particular, but the operations that accomplished this purpose best were those performed by Tait, Duncan, Simpson, Langenbeck, Saenger, Hart, and Barbour; yet, if he understood their methods correctly, they did not fully appreciate the importance of dissecting up and uniting the muscles and fascia.

¹ An abstract of a paper read to the Association of Obstetricians and Gynecologists at the Congress of Physicians and Surgeons, Washington, D.C., Sept. 18th, 1888.

This could not be done by the usual method of denudation, but was accomplished by a splitting process. The incisions should go deep near the anus on the lateral borders of the vulva, and the recto-vaginal septum should be split through the connective tissue between the vaginal and rectal layers, so that the vaginal flap might be thick enough to prevent sloughing.

Dr. Wathen did not think it necessary to give the reasons why the primary operation should be performed, as there were but few men of recognised ability in obstetrics or gynaecology who were opposed to it, and it was not a little surprising to find in this list the name of the distinguished professor, A. Charpentier, of Paris. His objections were illogical, and were not sustained in actual practice where the operation was correctly done. He (Dr. Wathen) had performed the primary operation often without a failure; in fact, he thought the success was usually more perfect than in the secondary operation. The torn ends of the muscles and fascia were now easily held in apposition, and they united within a few days. He reported a typical case upon whom he operated a few weeks ago for his friend Dr. —. The woman, when sixteen years old, was delivered of a large child, and the perineum was torn through into the rectum for over an inch; the vaginal wall and the connective tissues were also torn two inches further up. The operation was done about an hour and a half after delivery. He used about fifteen sutures in the vagina and the perineum. The vaginal tear was united by silk sutures, and the perineal by a silver wire and silkworm gut, using only one silver wire as a base suture to hold together the ends of the sphincter muscle. The sanitary and hygienic surroundings were not good, and she had but little after-attention. She passed her urine, the vagina was washed out but a few times, and her bowels moved daily after the second day. At no time was there any pus, and the entire laceration healed by first intention. If the operation was well done, he doubted the necessity of drawing off the urine or tying the legs. Nor was it necessary to wash out the vagina often. The urine and lochia were not poisonous, especially after the second day, if strict asepsis had been observed in the operation. Where any form of an aseptic animal suture was used, the needle should be introduced and brought out just within the lower or external edges of the raw surfaces, so that when they were united the sutures would be concealed or buried in the tissues. Sometimes a few superficial sutures would be required. The sutures should be so introduced as to be entirely covered by the tissues, and to bring the surfaces into even and exact apposition. If the sphincter ani was ruptured, he always used the base suture after the fashion of Emmet. He did not destroy any tissue except jagged edges in some complete ruptures; the dissected part assisted in protecting the wounded surface against the dangers of infection from uterine or vaginal secretions, and also increased the thickness of the perineum. He had never had a recto-vaginal fistula after an operation for complete ruptures, nor did he believe it would often occur if the operation was correctly done after his method.

Louisville, U.S.A.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF INSANITY FROM OPIUM POISONING.

By HENRY SUTHERLAND, M.D.

My objects in publishing the following case are to illustrate, first, the inefficiency of the present laws with respect to the sale of poisonous drugs; secondly, to demonstrate the consequences not only to the patient but to the relatives which may be produced by an abuse of these drugs; and, thirdly, to show how, even in a desperate case, by cutting off the abuse of opium, complete recovery may ensue.

Mrs. E—, aged fifty, was admitted to Otto House on Aug. 16th, 1888. First attack; duration five days. Twenty years ago the patient had acute albuminuria, which gave her much pain, and first induced her to take opiates as sedatives. This habit continued, and in-

creased gradually till the whole moral character appeared to be undermined. The patient, who had been previously most accurate about money matters, became not only careless, but reckless and dishonourable. She ultimately on several occasions forged the name of her daughter, who had funds invested in safe railway companies, for transfer of the stock into various risky investments, which have since turned out complete failures. She has gambled inordinately on the Stock Exchange, her liabilities at one time amounting to not less than a million of money. The relatives, after having endured all the inconveniences of a borderland case for six years, were at length able, five days only before admission, to place her under certificates and proper control. First, with regard to the sale of poisonous drugs, the chemists' bills were produced. From one of them (name carefully noted) it was ascertained that intermittently for six years past the patient had bought and taken three drachms of laudanum and two morphia pills, each pill containing one grain of morphia, equal to two grains of opium, a day. Say, forty minims of laudanum contain one grain of opium, then three drachms would contain six grains, which added to the morphia pills would amount to eight grains a day. But, in addition, another chemist supplied a similar quantity, which the relatives had every reason to believe was also taken during the day. The patient consequently had consumed habitually not less than sixteen grains of opium during the day intermittently for six years. After losing flesh gradually from the anorexia produced by the opium habit, and having bored her relatives by her eccentricities for some months, she became suddenly acutely delirious, dashing her limbs about in an aimless manner, and behaving with violence to all who approached her. She had the delusions that she was going to be poisoned, that red-hot irons were placed in her bed, and that she had been bitten by a dog, with many others. She had lain in bed for six weeks previously to the attack for no reason whatever. During the first ten days—from Aug. 16th to the 26th—the pulse was so feeble that although the patient slept only from half an hour to three hours every night, it was not deemed advisable to administer any sedative. On the 26th a marked improvement took place, owing entirely to the fact that the patient had taken food well as soon as the opium had been cut off. The pulse became stronger and more normal, and chloral, morphia, bromide, and ultimately paraldehyde, were given in succession with great caution, until on Sept. 10th six hours' sleep were registered. From that time till Oct. 8th she gradually improved, and was discharged on that day, on leave of absence, "relieved."

The moral of the story is that the present system of allowing patients day after day to buy at a chemist's shop extraordinary quantities of sedatives for their own use, or for any other purpose, is a disgrace to our Legislature, and that stringent measures ought to be at once taken to rectify or enforce any law which may exist on the subject.

Richmond-terrace, S.W.

ANTIPYRIN IN LARYNGISMUS STRIDULUS.

By MONTAGU PERCEVAL,

MEDICAL OFFICER, MOUNT BISCHOFF HOSPITAL, WARATAH, TASMANIA.

I HAVE had a series of cases (twenty-four in number) of laryngismus stridulus during April and May of the present year, of reflex origin, due to the sudden changes of temperature to which we are liable, with cold damp winds. I would wish to record the success I have had in treating these cases with antipyrin.

On the evening of April 4th I was called to see a child, A. N—, aged eighteen months, with the usual symptoms of dyspnoea, with crowing inspirations, accompanied with convulsions. The treatment I then adopted was an emetic of ipecacuanha, to be followed by sedatives and hot flannels applied to the neck and upper part of the chest. The following morning I received a message saying the child was no better, and that the difficulty of breathing had continued through the night. In a case of pertussis, with more than usual irritable cough, which came under my care a few months previously, antipyrin answered extremely well, and it was the benefits which accrued in this case that suggested to me the same treatment. I gave two-grain doses of antipyrin every hour, with the satisfactory result that the difficulty of breathing ceased and the child fell asleep. The same dose was then given every two hours, and the next day the child

was running about well. With all the other cases I had the same result, with the exception of one, a child of four years and a half, in which I had to increase the dose to five grains before the paroxysms ceased. I cannot say whether the same result might be expected in cases due to direct or centric irritation, but I should undoubtedly give it a trial.

Tasmania.

CASE OF FŒTAL MALFORMATION.

By WM. HARDWICKE, M.D., M.R.C.P.,
MEDICAL OFFICER OF HEALTH, BOROUGH OF HARWICH.

THIS is one of those cases, met with occasionally in midwifery practice, the diagnosis of which in the early stage is most difficult.

Mrs. C——, the wife of a publican, had been in labour about four hours with her second child. Being sent for at this period, I made the usual digital examination, and found the os dilating slowly; my finger, however, seemed to pass through the os into space. Thinking it prudent to leave matters to take their natural course for a time, I left her, and on my return in about an hour the os had dilated fairly well, but I could feel in the left sacro-iliac region the sharp serrated edge of a bony prominence, and could pass my finger round as one would if a basin were inverted. In course of time, as this descended, as it now did, I could distinctly trace the nose and the hollows of the eyes, but could find nothing to correspond with the usual convexity of the orbital bones above. I was very much puzzled. The face continued to descend by the natural expulsive efforts of the uterus, the mass occupying the left oblique diameter of the pelvis, and now the bony ridge could be traced more distinctly. It became evident to me that this was a case of monstrosity, which was proved almost immediately by the appearance at the vulva of the face, minus the cerebrum with its skull-cap; the body soon followed, and was well formed. On examining the head after birth, the parietal and frontal bones were found to be entirely absent, as also was the cerebrum; the occipital bone was apparently complete. In the basin of the calvaria was found the smooth surface of what appeared to be the dura mater, covering the inner surface of the bones, cerebellum, pons Varolii, and orbits, the eyes being beneath in their normal positions. Owing to the objection of the friends, I was unable to obtain any detailed investigation of the parts by dissection. It may be worthy of notice that Mrs. C—— had been married six years, and had had only one child four years previously; no miscarriages, and no history of syphilis on either side. The mother made a good recovery, apparently none the worse for the passage of the rough and jagged cranial bones along the vaginal passage.

Dovercourt.

FAILURE OF LOCAL ACTION OF CANTHARIDES IN URTICARIA.

By TOM ROBINSON, M.D.

Mrs. Y——, aged sixty-three, gives the following history: "I have been subject to nettle-rash for twenty years. The rash comes out at all times of the day and at all periods of the year. I am not able to say what kind of food produces it. Last night I had eaten tomatoes and a chop, and about two hours afterwards I came out in a copious crop of the rash. It was a hot night, and the irritation was most intense. Having some vinegar of cantharides in the house, I sponged it freely over my belly, where the eruption was the most obvious, and I think it did good. But the hand which I used is blistered."

On examination I found her to be a healthy woman who had lost all her teeth and had a fern-leaved tongue. The abdomen was in a normal condition, but the right hand had several blebs running chiefly on the inner surfaces of the fingers.

Remarks.—This case is interesting, as showing that a portion of the cutaneous surface which is in an urticarous state is not influenced by cantharides; it also shows that another and an unaffected part of the surface of the body is irritated and blistered by the same application. In other words, it is an example of Hunter's law, that two morbid conditions cannot be in action in the same spot at the same time. It is also a good example of chronic relapsing

urticaria, one of the most rebellious of our cutaneous affections. I may add that this patient derived the greatest comfort from using a spray composed of spirit of wine, chloroform, and carbolic acid.

Princes-street, Cavendish-square, W.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF INJURY TO THE CERVICAL REGION,
FOLLOWED BY BRACHIAL PARAPLEGIA;
RECOVERY; REMARKS.

(Under the care of Mr. CLUTTON and Mr. MAKINS.)

EXAMPLES of paralysis of the nerves of the arms *only*, after an injury to the cervical spine, without any paralysis of the nerves below those entering into the formation of the brachial plexus, are rarely met with. Such a condition, in the absence of any evidence of injury to the bones, may depend upon hæmorrhage into the vertebral canal,¹ or upon a localised inflammation of the membranes of the cord,² the diagnosis depending upon the time which intervenes between the injury and the onset of the paralysis. Mr. Erichsen³ says: "When the lower part of the cervical spine has been struck so as to concuss the cord, I have known paralysis of one or both arms induced, without any paralytic symptoms of the trunk or legs"; it is not quite clear, however, that intra-spinal hæmorrhage is not included by this statement. The symptoms which followed the injuries and the after progress of the two cases were so similar that Mr. Clutton's explanation of hæmorrhage with regard to position and extent may be applied to both of them. For the account of the following cases we are indebted to Mr. E. Solley, surgical registrar.

CASE 1. (Under the care of Mr. Clutton.)—J. W——, aged forty-one, a labourer, was admitted into the Edward ward on Aug. 15th, 1888. Family and previous history unimportant. On the day of admission, while employed as a builder's labourer, he was struck on the left side of the head, the left side of the neck, and the left thigh by a falling scaffold-pole. He was rendered unconscious for seven or eight minutes.

When brought to the hospital about half an hour after the accident he was quite conscious, but somewhat drowsy. There was no bleeding from the nose or ears, and no subconjunctival ecchymosis. There was very slight bleeding from the mouth, apparently from a small laceration of the tongue. There was no apparent injury to the scalp. No irregularity or tenderness was discovered in any part of the spine, the cervical vertebrae being freely movable and normal in every respect. Just in front of the transverse processes on the left side of the neck there was deep-seated tenderness, but no obvious swelling. There was no sign of any bruise. Pupils were equal, and acted to light, though sluggishly; size about 4 mm. Pulse 61, small. There was loss of power in both arms, so that he could not raise them from the bed; but he could move the fingers of both hands, especially the right. There were tingling sensations in both arms from the fingers to the shoulders, with distinct though not absolute anaesthesia. No loss of power was detected in the trunk or lower extremities, but a tingling sensation was complained of in the left leg.

Aug. 16th.—Still somewhat drowsy, but quite intelligent; complaining of tenderness and pain in the left shoulder and arm, hyperæsthesia being especially marked over the brachial plexus and the shoulder joint, though present down the whole length of the limb. There is slight hyperæsthesia and tingling in the right arm, less pronounced than in the left. Marked weakness of both arms, but especially of the left,

¹ Holmes' System of Surgery, vol. i., p. 690.

² Ibid., vol. i., p. 702.

³ Science and Art of Surgery, vol. i., p. 793.

the loss of power being absolute in all the muscles of the left shoulder and arm, the fingers alone showing any power of movement, and that very feebly. No loss of power in the lower extremities, but some weakness of the back complained of, and pain on moving the neck. No affection of sphincters. Pupils normal. Temperature 100°. Pulse 61, fairly full. Urine acid; no albumen.

21st.—Tingling and hyperæsthesia less marked. Some improvement in motor power of the right arm, especially in the flexors of the forearm, wrist, and fingers. No improvement in the left arm. Grasp of hands, as measured by dynamometer: right hand, 15 lb.; left, 8 lb. Temperature normal.

23rd.—Slight improvement in motor power. Grasp of right hand, 18½ lb.; left, 10 lb. No wasting of muscles detected. Still some tingling in both arms, especially the left; and hyperæsthesia over the left shoulder joint and supraclavicular region.

24th.—A blister was applied to the left side of the neck and shoulder over the region of the brachial plexus.

27th.—Distinct increase of motor power, especially in the right arm, with which he can now feed himself. Grasp of right hand, 25 lb.; left, 15 lb. Can now raise the left hand and forearm slightly from the bed. Less pain in the shoulder. No hyperæsthesia.

31st.—Grasp of right hand, 30 lb.; left, 18 lb. Still has some tingling in both arms on attempting to move them, most marked in the left. Still some weakness of back, so that he cannot sit up in bed unsupported.

Sept. 3rd.—Grasp of right hand, 32 lb.; left, 15 lb. Right arm stronger, but left apparently weaker than when last noted. No hyperæsthesia. Slight pain in the left shoulder when it is moved. Is able to sit up in bed. The muscles of both arms are flaccid and appear to be wasted, as the skin is loose and wrinkled. Circumferential measurement of arms 8 in. above the styloid process of radius: right, 10½ in.; left, 9½ in.

10th.—Circumferential measurements the same as on Sept. 3rd. Grasp of right hand, 40 lb.; left, 20 lb. No hyperæsthesia. No tingling sensations, but occasional pains of neuralgic character down both arms, more marked in the left, and never simultaneously in both arms.

11th.—The constant current from twenty cells was applied for ten minutes—the positive pole at the nape of the neck and the negative pole in the left hand; and the interrupted current for ten minutes to the muscles of the arm and forearm, which were very flaccid and certainly wasted.

13th.—General improvement. Battery applied as above-noted daily. Can now lift the left hand to the head. Grasp of right hand, 48 lb.; left, 18 lb. Able to dress himself, and got up for the first time. Subjective sensations as noted above, especially in the left arm; but no tenderness over the shoulder. Some tenderness on pressure over the muscles of both upper extremities, but especially the left. The muscles of the left arm feel very flaccid and wasted, but the circumferential measurements are practically the same as when last noted.

From this date till his discharge on Sept. 16th, the improvement continued steadily. He was ordered to attend as an out-patient.

Remarks by Mr. CLUTTON.—This patient was seen in the out-patient room on Nov. 9th, and was found to have steadily improved. He could raise both arms and perform all the natural movements of which the upper extremities are capable, but on the left side these movements were all distinctly feeble and wanting in power and precision, whilst on the right they appeared to have regained their former condition. The case would appear to be one of hæmorrhage within the vertebral canal, and most probably between the theca and cervical vertebra. The cord itself must have been uninjured, as conduction was perfect to all parts below the brachial plexus. The absence of any external lesion and the bilateral nature of the paralysis render it extremely probable that the hæmorrhage was within the canal. The diaphragm was unaffected, whilst the shoulder muscles were paralyzed, a condition which suggests that the upper limit of the extravasation was between the fourth and fifth cervical vertebra, and the fingers being movable would, I imagine, place the lower limit at or about the junction of the last cervical with the first dorsal vertebra. It is, I think, unlikely that the hæmorrhage was within the membranes, as such a condition is rare, and would have probably caused compression of the cord itself as well of the nerves given off in that position. The blood would also

be more likely to diffuse itself over a larger area. The only symptom of any irritation was the presence of hyperæsthesia over the neck and shoulder and down the left arm. The absence of any post-mortem examination renders the case inconclusive, but the symmetrical character of the paralysis and the patient's recovery make it one of considerable interest.

CASE 2. (Under the care of Mr. Makins.)—J. G. C—, aged forty-seven, a sawdustman, was admitted on Aug. 31st, 1888, into the Clayton ward. Previous history unimportant. While driving with a cartload of sawdust he slipped off the cart, and fell, according to his own account, on to his left shoulder (a man who was with him says he fell on to the top of his head). He was unconscious for a few minutes only, and when brought to the hospital about an hour after the accident was found to be quite conscious; had not vomited, and had no symptoms of cerebral injury, or sign of injury to the cranium or cervical spine. The right pupil was slightly larger than the left, but both acted to light and accommodation. Both arms were paralyzed from the shoulder muscles downwards (excepting the pectorals and trapezius), but there was no affection of sensation in either arm. Some tenderness was complained of over the left side of the neck and in the shoulder joint, and pain (subjective) down the arm, but there was no swelling or other sign of local injury, and no affection of legs, trunk muscles, or sphincters.

On Sept. 1st the right arm appeared to have recovered power, being as strong as ever according to the statement of the patient. The left arm could be moved to some extent at the shoulder by action of the pectorals and trapezius muscles, but was completely paralyzed below the shoulder joint, no particular groups of muscles being singled out. No anæsthesia or hyperæsthesia, but subjective pain from shoulder downward into fingers, most marked when the limb is passively moved. No improvement in motor power took place during the first ten days, and slight wasting of the muscles (estimated by circumferential measurements) occurred, flaccidity being very marked. The wasting appeared not to single out any groups of muscles, but to affect all equally. Subjective sensations of pain were occasionally complained of, especially during the first two or three days. No affection of any other part of the body; temperature normal; general health good. On the tenth day (Sept. 9th) a blister was applied to the left side of the neck, over the region of the brachial plexus. No obvious change was observed till about the eighteenth or nineteenth day, when slight return of power was noticed, first in the flexors of the fingers, then in those of the forearm, and then in the extensors, so that by the twentieth day he could hold the hands out extended at the wrist for a few minutes. On the twentieth day he was discharged to attend as an out-patient, to have the constant current for ten minutes from the nape of the neck to the fingers applied daily, with faradism of the affected muscles. Since leaving the hospital slow improvement has taken place, so that he has now (Nov. 10th) recovered power to a considerable extent in all the muscles except the deltoid, which is still very flaccid and almost powerless. The patient has attended very irregularly, usually only about twice a week, so the regular application of the battery has been impossible.

Remarks.—The above case scarcely requires separate comment, being almost identical with No. 1. The patient in Case 2, as compared with the other man, was markedly inferior, both in mental and bodily activity; this, on the one hand, rendered an investigation of subjective symptoms difficult and unsatisfactory, and, on the other, may have accounted for the slower rate of improvement.

BOLTON INFIRMARY AND DISPENSARY.

CARCINOMA OF GALL BLADDER; NECROPSY; REMARKS.

(Under the care of Mr. GARSTANG.)

THE following case was reported by Dr. Peter Yates.

Thomas N—, aged forty-five years, was admitted on Sept. 18th, 1888, suffering from well-marked icterus and swelling of the abdomen. The following history was adduced. The patient was quite well up to May 1st, when it was noticed by his friends that his skin was becoming yellowish in colour. A local medical man was consulted, and medicine was prescribed. The discolouration, however, gradually got deeper, and two months before admission it

was noticed that his abdomen was gradually swelling. During the whole of this period there was no pain attending either the jaundice or the swelling. Three weeks before admission he first felt pain in the epigastrium, and this had a distinct relation to the ingestion of food, following and remaining for about three hours after eating. The bowels have always been constive. No history of hepatic colic. Previously to the onset of the present illness he had always been a healthy man, except occasionally suffering from "bile in the stomach." Has always been temperate, only taking an occasional glass of beer to meals. No history of syphilis. Family history good.

On admission, the skin and ocular conjunctivæ were intensely yellow, and there was great discomfort from itchy skin. Pulse regular and fairly strong, 64 per minute. Temperature normal. Abdomen ascitic, measuring at the level of the umbilicus thirty-two inches. Liver dullness in right mammary line five inches and a quarter. Palpation of the abdomen was impossible on account of the ascites. No pain or tenderness on pressing over the region of the liver. Heart sounds normal. No abnormal physical signs in chest. The stools clayey, almost white. Urine of a dark reddish-brown colour; sp. gr. 1020; of an acid reaction; no albumen, but giving a well-marked reaction with nitric acid for bile pigments. Calomel and colocynth were ordered as pills to be taken twice a day, and to have a low diet of milk and beef-ten.

Sept. 25th. Feels better. Pain in epigastrium after food not nearly so frequent or well marked. Abdomen still tense, and the patient complains of considerable amount of flatus after food. Ascites increasing.

Oct. 3rd.—On account of the great increase of the ascitic fluid, which had begun to impede respiration, paracentesis abdominis was performed, about seven pints and a half of deeply stained fluid being withdrawn. On palpating the abdomen almost immediately after the withdrawal of the fluid, the thinned-out border of the left lobe of the liver could be easily felt, but the edge of the right lobe could not be detected beneath the costal margin. On deeply palpating the abdomen in the umbilical and lumbar regions a few indistinct nodular masses could be felt.

Oct. 4th.—Has been much relieved and feels much more comfortable since the tapping. Slept soundly during the night.

5th.—Vomited freely during the night, the vomit being of a darkish-brown colour, with a characteristic "coffee-grounds" appearance. Has also suffered greatly from hiccough, which comes on about ten minutes before the vomiting, after which it disappears. Does not complain of any pain or tenderness. Turpentine capsules were ordered by the mouth, and nutrient enemata every four hours.

6th. The vomiting still continues, preceded by the hiccough, which has become very distressing. Ergotine, hypodermically and as pills, had no effect. Ice was ordered to be constantly sucked, and ice-bags applied to the epigastrium, but without diminution in the vomiting. The vomit examined microscopically was found to be composed of mucus and broken-down and partially digested blood corpuscles, but no sarcine.

The patient gradually got weaker from the constant loss of blood and exhaustion from hiccough and vomiting. He died at 7 o'clock next morning.

At the necropsy, made twenty-eight hours after death, a considerable quantity of bile-stained fluid was found in the peritoneal cavity, and scattered freely over the surface of the parietal peritoneum and mesentery were a number of nodular growths about the size of horse-beans. The ascending colon was firmly adherent to the parietes, and underneath the upper part of the duodenum, pylorus, liver, right kidney, and head of the pancreas were all firmly matted together. The gall bladder, owing to this matted condition, could not be made out at all, but, on section of the whole mass, a cavity, which represented the gall bladder, was found, filled with twenty-six small irregular gall stones, varying in size from a lentil to a split pea. There was also contained in this cavity a considerable quantity of thick pale mucus. In the duct beyond was found a much larger gall stone, tightly impacted, and surrounding this a mass of new growth, binding down all the surrounding organs. The liver tissue was apparently healthy, but deeply discoloured, all the bile ducts being much dilated. Scattered throughout the substance of the liver were a number of small nodular growths, especially on its upper surface, and the diaphragmatic peritoneum was also freely studded

with similar growths. The kidneys were considerably disorganised, the cortex being much thickened, and the Malpighian pyramids contracted. The new growth had involved the fat at the back of the right kidney, which was adherent to the capsule. The body of the pancreas was healthy, but the head was involved in the growth. The stomach and duodenum were congested, but no ulceration or ruptured vessel could be discovered. The pylorus was very little, if at all, constricted although surrounded by the growth. Other organs healthy. Portions of the above growths were sectioned, and found, under the microscope, to be carcinoma of a scirrhous nature. The liver in the neighbourhood of the gall bladder was gradually becoming invaded, as also the capsule of the right kidney.

Remarks.—Primary carcinoma of the gall ducts and gall bladder is sometimes met with, but the point of interest in this case is the probable determining cause of the growth. The impaction of the large gall stone in the commencement of the common bile duct most likely in the first place set up a simple inflammatory process, which afterwards took on a cancerous action, rapidly growing and involving the neighbouring organs. Other points of interest are the absence during life of any symptoms of impaction, there being no hepatic colic, and the rapidity of the case to a fatal termination from the onset of the symptoms.

KASHMIR MISSION HOSPITAL.

ABDOMINAL CASES.

(Under the care of Mr. A. NEVE and Dr. E. F. NEVE.)

CASE 1. *Ovarian cyst; ovariectomy; recovery.*—R—, aged about thirty-five, with typical ovarian tumour physiognomy. The swelling was first observed ten months previously to admission. The abdomen was very large, measuring thirty-eight inches in circumference, and was entirely filled by a regular, fluctuating tumour, not movable. Diagnosis: a cyst, chiefly unilocular, of left ovary.

Operation.—Chloroform having been administered, a four-inch incision was made, the omental adhesions were separated and ligatured, and the cyst was tapped. No more adhesions being found, the tumour was drawn out. The pedicle, which was long and not thick, was ligatured after transfixion, and each half tied, with one encircling knot added. The abdomen was then irrigated with warm water which had been previously boiled. A little oozing took place apparently from the omentum. The pelvis was sponged till dry, a glass drainage tube inserted, and stitched with silk in the usual manner. Examination of the tumour showed it to be a multilocular cyst with very varied contents. The evening temperature was 101.3°; after this convalescence was afebrile.

The discharge was for two days blood stained; on the third day it was clear, and only a teaspoonful in amount. On the fourth evening the tube was removed. The first dressing was on the seventh day, when the wound was found healed and the stitches were removed. For several days there were a few drops of discharge from the sinus left after the removal of the drainage tube. At the end of the third week she sat up, and was out. She went home on the twenty-sixth day, looking years younger than before the operation.

Remarks by Mr. A. NEVE.—The preparations for the operation were those of strict Listerism, the operation itself being aseptic rather than antiseptic. The drainage tube did no harm, and may have been useful. I was much indebted to Miss L. Butler, who superintended the nursing, and assisted in the operation.

CASE 2. *Suppurating ovarian cyst; tapping; injection; cure.*—The patient, a well-to-do woman, had a tumour filling the left side of the pelvis, projecting to the level of the umbilicus. It was noticed three months previously; latterly it had been painful, and she was getting weak. Diagnosis: probably an ovarian cyst.

Treatment.—An exploratory incision or any attempt to excise was refused by the friends. On aspirating, some very fetid pus was withdrawn, but the tumour was only reduced by one-half. At intervals of a fortnight four aspirations were performed; after each it rapidly refilled. A small incision was made, and the peritoneal surface at the seat of the punctures exposed and allowed to granulate for a week; the cyst was again aspirated and one drachm of pure carbolic iodine injected. There was pain for a few days. The tumour then began to diminish, and the patient six months later was quite well.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Arthrectomy.

AN ordinary meeting of this society was held on November 13th, the President, Sir Edward Sieveking, being in the chair.

A paper was read by Mr. EDMUND OWEN on Arthrectomy, or Erasion of Joints, of which the following is an abstract. Though the operation of scraping a diseased tissue was not a new procedure, yet its adoption in the treatment of pulpy or of chronic suppurative disease of a joint was of comparatively recent date. The first account of it and the success which attended it was by Mr. Wright, surgeon to the Children's Hospital, Manchester. It appeared in THE LANCET of 1881. This he supplemented by a review of sixteen cases of arthrectomy in the *Medical Chronicle* of July, 1885. The construction of the hip joint rendered it unsuited for treatment by arthrectomy in chronic disease, but as a supplementary measure to resection of the head of the femur it was likely to prove of great value. The epiphyses might often escape mutilation whilst the whole of the pulpy synovial membrane and all other diseased tissue were cleared out of the articulation. The cartilage joining the epiphysis with the shaft was neither disturbed nor trenced upon, and thus the risk of the patient recovering with a greatly shortened limb was obviated. Indeed, it was even possible that the patient might recover not only with a limb of normal length, but with a joint in which the movements were but little if at all interfered with. Such a result, however, was neither to be expected nor aimed at. After the operation the limb was to be kept absolutely stiff and fixed in splints for many months, and if at the end of that time a certain range of movement were discovered the joint might be left to shake itself free, no manipulations being resorted to. In all probability the knee would be synostosed and straight. In the case of pulpy or chronic suppurative disease of the knee joint the operation was admirably adapted, provided that the disease was not too far advanced so that the bones were extensively implicated, and that the patient was the subject neither of general tuberculosis nor of albuminoid degeneration. In short, arthrectomy was the proper operation in most of those cases in which resection had hitherto been performed. Over resection it held this great advantage, that it took away from the articular surfaces only such tissues as were actually diseased. On several occasions it had been noticed that after the joint had been thus thoroughly cleared of elements which were of a diseased or suspicious nature the health of the patient had shown an immediate and marked improvement, appetite and general health altering for the better, and permanent convalescence being at once established. Speculations were made upon the possible influence of the bacilli tuberculosis. The improvement which followed upon the clearing out of all the diseased tissues was as notable as that which often followed the amputation of a sarcomatous limb or a scirrhus mamma.

Mr. BRYANT said that the paper suggested, if it did not demonstrate, that there was a procedure which was less severe and gave results as good as excision. The operation was based upon a principle not altogether unknown to surgeons: that the operator should simply remove diseased structures. He had applied this principle when adopting surgical measures during the last twenty-five years, and the method much as now used was discussed and set aside in the early days of operations on joints. The early resectors said the whole joint should be taken away, and they, for this reason, looked doubtfully on the operation when applied to the hip and humerus, but praised it for the elbow and knee. In 1866 he had several knee cases—chronic suppurative disease,—and he laid the joint open, removed diseased tissues, and fixed the limb on splints; he could not remember having had a failure. In one instance he took away the diseased head and neck of a radius, in another the head only of a tibia, his rule being to remove only the morbid tissue, leaving the healthy parts alone. Fergusson used to state that resection for pulpy disease was not advisable; the joint was left till completely disorganised, and then amputation was performed. He did not regard the bacilli as the active cause; he looked upon them merely as a result or com-

plication of the process. With regard to the stage in which this operation was advisable, in early cases he thought natural processes alone could bring about a cure, whilst with extensive disorganisation amputation would be necessary; he would recommend it in those cases where the disease was moderately advanced, but he was not sure whether he would deal with the joint in the heroic manner Mr. Owen had described.

Mr. MACNAMARA believed the majority of cases of strumous arthritis commenced in the articular ends of the bone, and he therefore advocated an early incision over the end of the bone and the removal of a crown of trephine over the seat of the epiphysal cartilage. He had done this many times in connexion with disease of the knee, elbow, and ankle, and was convinced of the value and importance of the procedure. It being inapplicable to the hip joint, he advocated Croft's plan of early excision, after rest in all cases being secured by a plaster-of-Paris bandage.

Mr. BARWELL defended the operation of excision as at present practised, the diseased synovial tissue being trimmed away. All the degenerated tissue could not be removed in many cases, despite most careful erasion; many sinuses extending into intermuscular planes and lined with pulpy tissue being unapproachable. It would be rash to suppose that one particular mode of operation would suit every form of disease.

Mr. R. W. PARKER regarded the measure as much preferable to excision in young children; he thought those cases best suited which had neither bone disease nor sinuses. He objected to removing the crucial ligaments in knee cases, as they could be easily pared of their lining membrane, and their absence removed much support to the bones. He believed the inflamed synovial tissue contained the real elements of the disease, and it therefore should be thoroughly removed.

Mr. WARRINGTON HAWARD exhibited for Mr. Page a patient on whom two years previously arthrectomy had been successfully performed. Erasion was thoroughly carried out, and a portion of one of the femoral condyles required removal in order to obtain a straight limb.

Mr. OWEN, in reply, said he had found the operation especially applicable to joint disease with bone complication; the cases selected should be those in an intermediate stage of the disease. Mr. Keetley had stated that the bacilli would die if the parts were kept at rest, and this would explain the recovery of the early cases without operation and by fixation alone. He was beginning to think that in a considerable number of cases the disease began in the bone. He found it impossible to thoroughly clear the back of the knee joint unless the crucial ligaments were divided, and, as a fixed joint was to be hoped for rather than imperfect movement, their destruction was not of much moment.

CLINICAL SOCIETY OF LONDON.

Encysted Calculi.—Paralytic Rabies.

AN ordinary meeting of this Society was held on the 10th inst., Dr. W. H. Broadbent, F.R.C.P., President, in the chair.

A very large audience listened attentively to the reading of the papers and to the discussions which followed them.

Mr. E. H. FENWICK contributed a case of Encysted Stone, in which supra-pubic cystotomy was performed, and the stone removed by means of chisel and mallet. The patient had been under the care of Dr. Hine of Leytonstone, and the symptoms had lasted eight years. The calculus could be felt bimanually, and was subsequently discovered to be hour-glass in shape. The smaller piece (1½ oz.) was found projecting into the bladder at the level of the left ureteral orifice, and the larger portion (4½ oz., the size and shape of a large hen's egg) lying in a diverticulum outside the back and base of the bladder. These two portions were connected by a very slender neck. The vesical piece was easily snapped off, leaving the neck protruding from the threepenny-piece-sized orifice of the diverticulum. The position of the opening rendered much dilatation of it dangerous. It was impossible, therefore, to extract the encysted portion entire. Attempts to crush it by means of lithotrite or forceps failed. A chisel was guided through the orifice of the diverticulum and laid upon the stone, elastic counter-pressure being afforded by Petersen's rectal balloon. The calculus was then cut

through by repeated blows with a mallet. After many shiftings of the pieces and sections in every direction, the stone was chiselled into sufficiently small fragments to allow of their being extracted through the orifice. The wound rapidly healed, and the patient left for the country in six weeks without an untoward symptom.

Mr. G. BUCKSTON BROWNE read an account of a case of an Encysted Calculus successfully removed by supra-pubic lithotomy. The patient was a gentleman, aged sixty-eight, seen for the first time last June, with the following history. Lithotripsy had been performed five times in less than two years; the first operation was in August, 1886, the last in April, 1888. The earlier operations had given only temporary relief from very distressing symptoms, and the last one had not been followed by any improvement. All the urine was passed by catheter hourly night and day, and there was constantly recurring intense vesical spasm. On sounding the bladder, a stone was detected lying apparently in the floor of the neck of the bladder; it was found very easy to pass over this stone, or rather stony surface, into the vesical cavity which lay beyond, without noticing any calculous matter. The cavity of the bladder was entirely free from stone. Nothing could be felt by rectum, except a moderately enlarged prostate. The history of the case, the feebleness of the patient, and the need for free drainage of the bladder determined the choice of operation, and on July 3rd Mr. Buckston Browne opened the bladder above the pubes. Directly the finger entered the bladder it encountered immediately underneath the opening a stony surface lying level with the surrounding tissues. It was evidently a stone firmly embedded in the floor of the bladder, immediately behind the prostate. The calculus was lifted out by a long and narrow scoop. The finger then passed into a pocket, which went downwards and forwards towards the rectum, and the right forefinger introduced into the rectum was only separated by a thin septum from the left forefinger passed into the vesical pocket. The stone was apparently phosphatic throughout, and weighed a little over a quarter of an ounce. The wound healed in twenty-one days, and the patient went home perfectly well, and able to hold his urine five hours. He continued entirely free from pain for two months, when a slight return of vesical spasm was complained of. This was found to be due to a small phosphatic concretion, which was removed by lithotripsy. During the operation the patient coughed violently, and the concretion was entirely lost, and was not recovered until the bladder behind the prostate had been firmly pressed upon by the finger in the rectum. At the present moment the patient is perfectly well. The interest of the case lay in the fact that it illustrated a condition of vesical calculus where lithotripsy was powerless, and perineal lithotomy fraught with mechanical difficulties which might easily prove insurmountable, while all difficulties vanish if the bladder is opened above the pubes.—Mr. CLUTTON mentioned the case of a man, aged forty-one, who for fifteen or sixteen years had been the subject of stone. The stone could be felt on one side and anteriorly, and was two inches in diameter. He determined to attempt lithotripsy, and to perform lithotomy should that not prove successful. He managed to seize the calculus with the lithotrite, but could not move it. He therefore performed the suprapubic operation, and came right upon the stone. It was very hard, with a large centre composed of oxalates. He called particular attention to the fact that this man experienced no symptoms so long as he kept quiet.—Mr. CHRISTOPHER HEATH remarked on the circumstance that stones were rather more frequently encysted than appeared to be recognised, and doubtless this fact explained the differences of opinion often existing between two or more surgeons; the truth being that at one examination the stone may be in the bladder and at another in a separate pouch.—Mr. BUCKSTON BROWNE, in reply, endorsed Mr. Heath's views, and he related cases to show how careful we ought to be in asserting that a stone was or was not present after an assertion had been made by another to the contrary effect.

Dr. BRISTOWE and Mr. HORSLEY communicated a case of Paralytic Rabies, in which a patient had been bitten by a rabid cat, and who died of rabies of an extremely paralytic form. The patient was taken ill six weeks after the bite. He was treated locally at the time of the accident, and sent to Paris for treatment by M. Pasteur, but on his return developed symptoms of an obscure kind, suggesting perityphlitis &c. The following day he had pain in the back,

and the day after commenced acute ascending paralysis, from which he died within three days. Inoculation from his spinal cord proved that the disease was rabies. Further researches and experiments were described in the paper, from which it appeared that the virus of the rabid cat was especially virulent, the incubation period showing that its latency (under these circumstances) was as short as that of a pure virus isolated by M. Pasteur. The probability that Landry's paralysis was in some instances paralytic rabies, and that idiopathic myelitis was also an acute specific disease was strongly suggested.—Dr. BROADBENT said that the great question was whether this form of paralytic rabies was due to the bite or to the inoculations, or whether the acute ascending paralysis was to be looked upon as a form of Landry's paralysis.

—Dr. ANGEL MONEY thought that the development of the disease in the case read may have deviated from the usual type found in man as the result of alterations in the state of the nervous system due to alcohol and cold. He said no one had yet explained the reason why the virus selected certain parts of the nervous system on which it threw its chief stress.—A MEMBER asked why, in the case read, notwithstanding treatment by Pasteur's method, the patient died.—Dr. HALE WHITE remarked that the microscopic sections exhibited changes exactly like those found in ordinary rabies. The rash of rabies came out in the nervous system just as did that of scarlet fever in the skin.—Mr. T. SMITH asked what further evidence had been accumulated as to the value of Pasteur's method.—Dr. BROADBENT related a case of hydrophobia in a boy which recovered under the use of chloral. He also mentioned the case of a young lady in whom no history of a bite by a rabid animal could be obtained. In the cases of Landry's paralysis the symptoms were usually very different from those noted in ordinary hydrophobia.—Mr. VICTOR HORSLEY, in reply, said that it was agreed that no harm resulted from the so-called "non-virulent" inoculations of M. Pasteur. He believed also that in man and dog the evidence went to show that inoculations with virulent material of rabbits' cords led to no result if the man and dog had been previously subjected to the less intense forms of inoculations. The average mortality from street rabies in the "home of rabies" (Lancashire) was 16 per cent., whereas Pasteur's percentage was a little over 2 per cent. in those cases where it had been proved by inoculation experiments that the animal which had inflicted the wound was really rabid. Pasteur distinguished three classes of cases. The first consisted of those in which experimental proof was obtained of the animal having been rabid; the second, of those cases in which the bite was certified by a veterinary surgeon to have been made by a rabid animal, but no experimental proof existed; the third comprised cases in which it is doubtful whether the animal was rabid, or whether the patients were anxious and terrified. Mention was made of the case of a boy who had been bitten by a rabid dog. The boy took scarlet fever, and whilst recovering from it the symptoms of well-marked and fatal hydrophobia developed. This example of the concurrence in the same system of scarlet fever and the poison of rabies was almost unique. He was inclined to accept the view that the nervous system was selected as the seat of the rash of rabies just as scarlet fever selected the skin. Caution should be exercised in accepting the statement of patients that they had never been bitten by a rabid animal. In the recent Salisbury case, alleged to be one of spontaneous hydrophobia, it was found that the man had been bitten two years before whilst he was in a state of unconsciousness from drink. In reply to the question why Pasteur's treatment failed to prevent hydrophobia in the case read, Mr. Horsley said that some individuals could not be protected by any number of inoculations, just as some animals could not. At the same time, it must be remarked that in the case in point the man had not been fully treated on the most approved methods, partly because of his own neglect, partly because it had only recently been discovered that the bite of a rabid cat required larger quantities of protective material than the bite of a rabid dog. References were made to recent work published in the *Parisian Annales*.

The following living specimens were shown:—

Dr. PRINGLE: Xeroderma Pigmentosum in a girl aged seven.

Mr. GODLEE: A case of Deformity of the Leg.

Mr. B. ROTH: Scrofulous Disease of Ankle Joint Treated by Thomas's Method.

OPHTHALMOLOGICAL SOCIETY.

Congenital Lateral Deviation of the Eyes.—The Ciliary Processes and Suspensory Ligament.—A Point in connexion with Retinal Hemorrhage.—Prince's Operation.

AN ordinary meeting of this Society was held on Nov. 8th, Mr. J. W. Hulke, F.R.S., President, in the chair.

Mr. SWANZY of Dublin narrated a case of Conjugate Lateral Deviation of the Eyes, probably due to a congenital lesion. The patient was a healthy child one year old. Both eyes were turned to the right, but could be turned to the left with an effort, yet not as far as the canthi, and when they passed the middle line the effort was attended with nystagmic motions. The associated action of the interni for the purpose of convergence was unimpaired. The vision was good and the ophthalmoscopic appearances normal. After birth, the labour being natural, the child had not opened its eyes for four days, and from that time until it was two months old there was marked nystagmus in all positions of the eyes. From that age the other relatives, including the father, noticed the condition described, but the mother did not do so until the child was six months old, and after it had had a fall on the right side of its head, which produced a bruise. This fall was not followed by any head symptoms. Mr. Swanzy regarded the case as due to an intra-uterine lesion situated in the pons and implicating the nucleus common to the sixth and third nerves on the left side. The symptoms might have been caused by the fall producing a cortical lesion in the right cerebral hemisphere, but experience caused doubt whether a conjugate deviation due to a cortical lesion would be so permanent a symptom, while its permanence as the result of nuclear disease was in consonance with our knowledge of nuclear paralysis in general. The evidence of all the relatives except the mother was in favour of the deviation having been present before the fall. Probably the lesion was at first an irritative one and caused the nystagmus for the first two months, and then it passed on to be destructive, but destructive only in such a degree as to lame without absolutely paralysing the left nuclear centre for the third and sixth nerves. This seemed to be the only recorded case of congenital conjugate lateral deviation.—Mr. DODGE had seen an almost precisely similar case last year in a boy aged nine. He examined him by test types, and found that he at first looked straight at them, and then gradually turned his head to one side. On close inspection it was seen that nystagmus commenced shortly after the gaze was fixed on the types, and then the head turned to the left, the eyes remaining fixed. He could not obtain any history of injury, and thought the condition was congenital. For the past two years it had been observed that when walking one leg lagged behind, and the two lesions might have some association.—Mr. LAWFORD referred to a case on record which had some bearing on that related by Mr. Swanzy; it was that of a man who all his life had conjugate deviation of the eyes to the right. At the post-mortem it was found that the left internal rectus was absent, the right being exceedingly ill developed. Perhaps a similar condition was present in the case under discussion.

Mr. LANG read a paper on the Ciliary Processes and the Suspensory Ligament, in which he said that with one exception, so far as he had been able to ascertain, all the drawings and descriptions of the zonule of Zinn had been made from prepared specimens. The exception was that of a case recorded in the *Klinische Monatsblätter* (1887, p. 203), by Professor Hjort of Christiania. In that case the iris was completely torn away by an accident, which left an otherwise normal eye, in which the action of myoties on the ciliary processes could be readily observed. Hjort's drawing did not, however, give a representation of the insertion of the suspensory ligament in the capsule, because of the presence of the lens. In the case which he had brought before the Society the lens and iris of the left eye had been completely removed by an accident which the patient sustained eight months previously. The injured eye had become quiet, and presented the following appearance: the lower part of the cornea was quite opaque, and adherent to it posteriorly was a thin membrane, the lens capsule, which contained between its layers some debris of the lens, as well as some proliferating lens fibres, similar to those shown to the Society last session by Mr. Gunn. Behind the periphery of the cornea were seen the ciliary processes, between each

of which lay a bundle of fibres. About 1 mm. or 1.25 mm. from the tips of the ciliary processes was seen the margin of the lens capsule. Before reaching the capsule the suspensory ligament was grouped in separate bundles; between each pair of these there was a clear space which gave room for the ciliary muscle. In his patient some of the processes filled these spaces more than others. On reaching the capsule the fibres spread out in a radiating manner for a distance of 2 mm. or 3 mm. from the margin before they were lost to sight. The appearance just described was only seen on looking directly at the eye. On looking obliquely, each bundle of fibres forming the suspensory ligament was seen to consist of many fibres placed behind one another, some being inserted at the back and some in the front of the lens capsule. On applying eserine, and then homatropine, no change could be observed, either in the size or position of the ciliary processes, although the eserine produced its characteristic pain in the eye. This absence of change in the ciliary processes was not to be wondered at, since in all probability it was brought about partially by the lens changing its shape when the ciliary muscles relaxed the ligament, and not entirely by the contraction of the muscles.—Dr. HILL GRIFFITHS considered that Mr. Lang's specimen showed that the suspensory ligament appeared to consist of a set of fibres with spaces between them, and not, as usually described, of a membrane formed of plications of the suspensory ligament. Last year he read before the Society an account of some cases of choroiditis associated with descemetitis, illustrating the permeability of the suspensory ligament. If Mr. Lang's view were correct, that the ligament was a fenestrated structure, the explanation of such cases was easy, as was also the occurrence of nodules in the anterior chamber in cases of glioma.—Mr. BRAILEY referred to a paper that he wrote some time ago, maintaining that the ligament was a series of fibres running from the ciliary processes and from the spaces between them to the lens margin. Behind this there was undoubtedly a continuation forwards of the hyaloid membrane to the posterior aspect of the lens capsule. He had not been able to discover whether the anterior surface of the space was closed by a membrane; if no such membrane existed, there would be no obstruction other than the hyaloid to the passage of fluid from the vitreous to the posterior chamber.—Mr. J. W. HULKE observed that Sir W. Bowman had many years ago described the fibres which formed part of the suspensory ligament. The general belief was that there was an extremely delicate membrane occupying the interstices between the bundles of fibres. If such a membrane did not exist, how was it that the space between the fibres could be injected without the injection fluid escaping?

Mr. LANG then read a communication on a point in connexion with Retinal Hemorrhage. He remarked that the circular appearance seen in cases of hemorrhage at the yellow spot was probably due to the hemorrhage separating the hyaloid from the retina in a centrifugal manner, in the same way as a stone thrown into a pond produced a circular wave. He considered this to be the case, rather than that it should be due to any particular anatomical arrangement of the hyaloid at the yellow spot, since he had seen a similar circular hemorrhage far forward at the equator of the eye at the temporal side.—Mr. GUNN remarked that if the hemorrhage were between the vitreous and the retina, it must have detached the hyaloid membrane.

Mr. G. A. BERRY communicated a paper on Prince's Operation for Advancement of the Recti Muscles, in which he advocated certain departures in minor points from the operation as originally described. He used the so-called pulley suture, which was run two or three times out and in over a large extent of the circumcorneal tissue; this suture was thus able to bear a considerable strain, and there was no danger of its cutting its way out. The other suture he used single, and not double, and before introducing the suture he freed the muscle for some distance back, and the muscle was then perforated by the suture further back than the conjunctiva; before the ends of the suture were tied the patient was directed to look at a distant object, so as to produce a slight degree of over-correction. He thought that the advantages of Prince's method over the other operations were: 1. That, as there was only one knot to tie in bringing the muscle forward, it was much easier to regulate at the time the effect required. 2. That it secured an advancement, not only of the direct, but also of the indirect, attachments of the muscle. 3. That it obviated any vertical displacement of the tendon, and that there was

less tendency for the thread to slip through the muscle.—Mr. ADAMS FROST said the object of the double suture was to regulate the amount of correction afterwards; the first, if necessary, being cut through, and the second adjusted as required. It was not inserted double merely in order to be stronger.—Mr. EDGAR BROWNE thought Prince's operation had a tendency to ruck up the muscle, whereas he liked to spread it out as much as possible, and therefore preferred the old double suture, which could be fastened with a bow to facilitate untying; in operating, he took up in the suture not only the tendon, but the other structures thereabout, especially the capsule of Tenon. If the tendon rucked, it gave rise to oblique displacement of the eye, whereas the old suture kept the eye in the horizontal plane, while it could be fastened with a bow to facilitate untying.—Mr. HULKE said the agglutination which took place in the first two or three days would render any loosening or tightening of the suture impossible.—Mr. LANG pointed out that Dr. Prince altered the bow in a few hours, not days, his object being to wait till the muscle had recovered its tone. To avoid rucking, he himself picked up the muscle only and avoided the conjunctiva, transfixing only the subconjunctival tissue; this obviated scarring to a great extent, the conjunctiva being sutured separately. He had found Dr. Prince's form of forceps of great use in keeping the muscle flat during the operation.—Mr. MACKINLAY was satisfied with Prince's operation, though a fault was undoubtedly the rucking. He advocated regulating the suture at the time of the operation.—Mr. SWANZY had done his advancements by Schweigger's method, and was much satisfied with it, but it sometimes produced a swelling close to the cornea, resulting in a red unsightly lump, which did not always disappear.

The following card specimens were shown:—

Mr. FROST: (1) Case of Double Ptosis; (2) Peculiar Changes at Yellow Spot. Mr. LANG: (1) Case of Excision of Corneal Staphyloma; (2) Case of Anophthalmos. Mr. W. J. COLLINS: Section of Melanotic Conjunctiva.

MEDICAL SOCIETY OF LONDON.

Peculiar Case of Ascites.—The Cape Voyage and Climate of South Africa.

AN ordinary meeting of this Society was held on Nov. 12th, Sir William Mac Cormac, President, in the chair.

Dr. GULLIVER communicated a case of Ascites closely simulating Ovarian Tumour, which had been under his care in St. Thomas's Hospital. The patient was a woman aged sixty-three, who was admitted on Aug. 24th, and died on Oct. 4th. There was an obscure previous history of pain in the back and a difficulty in holding urine, but nothing pointing to a true "renal" attack. One month before coming under observation swelling of the abdomen and legs had supervened, together with troublesome vomiting. She was much emaciated when admitted; the abdomen was prominent; there was dulness over the whole front, and slight asymmetrical bulging towards the right side; there was marked resonance on percussion in the left flank, and, though to a less degree, in the right also; there was a fluid thrill, and the thoracic viscera appeared normal. A diagnosis was made of right ovarian cyst. Ten days after admission the abdomen was tapped and eight pints of fluid removed; the latter was in composition consistent with ascites, and had none of the characters of ovarian fluid. After tapping the signs became more unilateral; resonance had reappeared above and on the left side, leaving a dull area over the lower two-thirds of the abdomen on the right side. Later the fluid re-collected and the dulness resumed its original position. She had no signs of obstruction of the bowels, but vomiting persisted and she sank exhausted, her age and the presence of albuminuria preventing operation. At the necropsy, on opening the abdomen, a considerable quantity of ordinary ascitic fluid escaped. The omentum was found very much thickened from chronic inflammation, and was blended with a very thick false membrane, which extended as a continuous sheet across the front of the abdomen from the under surface of the diaphragm to the pubes. On the right side it was continuous with the parietal peritoneum, the latter being also much thickened; on the left it formed a free border, not extending to the parietes, there being in this region many coils of small intestine fastened down by adhesions. The stomach, right

kidney, pancreas, and the greater part of the colon and small intestine were covered over by the membrane. The organs were practically normal. What was found at the post-mortem explained many of the symptoms and signs observed during life; the colon on the right side giving relative resonance through the thick omentum, the adherent small intestines gave resonance on the left, whilst the thickened dull mass in the centre had given rise to the idea of ovarian cyst.—The PRESIDENT said the case might have led to a considerable error in treatment if it had been dealt with surgically.—Dr. GULLIVER replied that the patient was considered to be too weak for operation.

Dr. SYMES THOMPSON then read a paper on the Voyage to the Cape and the Climate of South Africa. The first part of the paper showed the facility with which the voyage to the Cape and back could be accomplished in two months during the customary summer holiday; that little discomfort need be anticipated from sea-sickness, and none from excessive heat in the tropics or from the dangers of the deep. Whilst the voyage to Madeira or New York was sufficient for discomfort, it was hardly long enough to do good as a voyage in cases requiring rest or the renovating influences of the sea; whereas the voyage to Australia or New Zealand was apt to prove tedious, and in the last part of the voyage, from Africa to Australia, the winds and low temperature were often found trying or injurious. The advantages of Madeira and of Teneriffe were discussed. St. Helena received a few words of description. The characteristics of the N.E. and S.E. trade winds, of the equatorial currents, and the heat of the tropical zone were given in detail. The cases for which the voyage was recommended were, first, those patients suffering from chest affections, for whom the soothing effect of the warm, moist, tonic air of the ocean was needed, who required rest and quiescence, as contrasted with the class of case specially suited for Alpine winter treatment, in which the great point was to encourage active exertion in a dry, stimulating and very exhilarating atmosphere. In each case much of the benefit was due to the number of hours spent in the open air, in which respect the ocean bore the palm. The author also pointed out details of cases of degenerative disease, dyspepsia, hypochondriasis, and asthma watched by him during his recent voyages. The second part of the paper dealt with the climate of South Africa, which was shown to vary with the elevation above the sea, the coast regions being rather too hot and relaxing, but fairly equable; the middle terrace (elevation from 1500 ft. to 3000 ft.) being dry, bright, clear, and of striking benefit in ordinary cases of phthisis, and the high central plateau (from 3000 ft. to 6000 ft.) still more bracing and invigorating, and of service in cases of pulmonary collapse when dilatation of contracted lung was needed. The great district of the Karoo, comprising the central and northern part of the colony, which has been traversed by the author, was declared to be, so far as climate is concerned, nearly all that could be desired, but until better hotels and boarding houses were provided in suitable localities, until the interests and conveniences of life had increased, and until occupation was provided, it was not possible to commend this region to health-seekers, who had other interests than riding and shooting, or who needed the luxuries of modern civilisation. Details were given of the best health resorts in the Karoo, Tarkastadt, Cradock, and Beaufort West. The high levels of Bechuanaland, now a Crown colony, were regarded as likely in the future to prove invaluable to English colonists and health-seekers. Graham's Town (the Winchester of South Africa) was praised for the excellency of its climate, schools, churches, and society. Natal was spoken of as being specially useful in cases of laryngeal or bronchial irritation, though somewhat too hot and relaxing in ordinary cases of early phthisis. Ceres and the suburbs of Cape Town, in which every comfort, as well as excellent medical and surgical skill are available, were strongly recommended for a few weeks in summer.—Dr. J. A. ROSS, of Cape Colony, said it was recognised that inland altitude, with its accompanying conditions of climate, had a marked effect in restoring vigour, improving sanguinification, &c.; but altitude near the sea coast did not give dryness, for which it was necessary that one or two ranges of mountains should intervene between the sea coast and the inland highlands. The inland plateau selected as a health resort should have mountains in its neighbourhood, not closely or continuously surrounding it. Phthisis was not a rare disease amongst the dwellers on the sea coast, but was so

amongst those dwelling on the inland plateaux. Pulmonary complications after measles &c. were rare up country, where there was considerable but dry cold; not so rare along damp coast lands. Cases of recurring catarrhal pneumonia did best. Phthisis, with laryngeal mischief, was not so favourably affected; persons developing phthisis at the coast were often restored to health by going up country. The characteristics of the climate of Cape inland plateaux were: diathermanous and diaphanous condition of air, great dryness, high electrical condition, heat not continuously great in summer, and cool nights. At Aliwal North (4330 feet above sea level), the mean maximum temperature for the three summer months was 86° F., and the mean minimum temperature for the same three months was 58° F. On no occasion was the air saturated with moisture. Although most rain fell in summer, the air during this time was drier than in winter; the rain fell as thunder showers, cooling and refreshing everything, but not producing continued dampness. Judiciously selected patients might be sent out with advantage to test the climate.—Mr. LENNOX BROWNE showed a series of beautiful water-colour sketches taken whilst on a voyage to the Cape, and remarked on the great intemperance of the lower orders. He dwelt on the advantages of the Natal climate in certain laryngeal affections.—Dr. RUTHERFORD, having lived in the Cape for some years, testified to the value of the eastern provinces for phthisical cases; but he could not recommend the western districts, where sandstorms occurred, living was poor, and sanitary arrangements usually bad.—Dr. THOMPSON, in reply, said that in choosing a locality attention should be paid to the presence of sufficient rain rather than the delights of a small rainfall; the thunderstorms cooled the air and cleared the atmosphere of dust.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, Nov. 7th, Dr. John Williams, President, in the chair.

Myoma and Fibro-myoma of the Uterus and Allied Tumours of the Ovary.—This communication was read by Mr. ALBAN DORAN. He said myoma of the uterus was very common, fibroma of the ovary rare. The study and comparison of these tumours involved the distinction between true muscle cells and certain cells found in fibrous tissue and in sarcomata. Certain recognised types, such as the plain muscle cells of the walls of bloodvessels, and the muscle cells of the pregnant, non-pregnant, and foetal uterus, were compared with the cells of tumours evidently made up of fibrous tissue, or evidently sarcomatous, or otherwise malignant. Plain muscle cells, mixed with more or less connective tissue and arranged in bundles, are the chief constituents of the uterine wall, and extend not only to the tube but also to the round ligament and the ovarian ligament—true processes of the uterus. A non-malignant tumour made up of muscle cells very commonly develops in the uterine walls, or may form in one of the uterine processes. This is myoma of the uterus. From the uterine connective tissue white fibre may be developed; hence the origin of fibro-myoma of the uterus. Klebs' and Kleinwächter's theories were discussed. The muscle cells of a myoma are usually larger than those of the uterus in which it grows. Hence in a myoma removed during pregnancy they appear very large. The comparison of the muscle cells with the smaller cells of similar appearance found in the white fibrous tissue in a fibro-myoma is important, especially in relation to suspected cases of myoma of the ovary. The histology of the ovarian stroma in woman, on the other hand, remains very unsettled. Ideas on the subject are too often gleaned from the study of animals' ovaries. Harz's researches show how this study may lead to grave fallacies. The tissue of the hilum and parenchyma was described, and allowance made for changes in the follicles (corpora fibrosa of Patenko, &c.). True fibrous tissue is naturally abundant in the tissue of the hilum (paroöphoron); this fact is enough to account for fibroma of the ovary. Muscular tissue is found amidst the parenchyma of the ovary in the coats of its vessels, and also in free bundles derived from the ovarian ligament—a process of the uterus. The connective tissue of the ovary around the follicles (stroma of the parenchyma, as distinguished from the tissue of the hilum) is variable in character, but, as a rule of a young type. Common

changes due to inflammation must be borne in mind. Fibroma of the ovary is a well-known but rather rare disease. Sarcoma of the ovary is not so rare, owing probably to the frequent abundance of "young" connective tissue. Specific spindle cells of a sarcoma were compared with the connective-tissue cells in fibroma. The existence of fibro-myoma of the ovary has been disputed. As muscular tissue naturally exists in the ovary, the development of myoma can be accounted for. The difficulty of distinguishing muscle cells from certain cells in the other tumours described in this paper was admitted, yet by comparing a fibro-myoma of the uterus with a tumour of similar characters growing in the ovary, it appears that this distinction can be made, and hence there is little doubt that a fibro-myoma may develop in the ovary. At least, plain muscle cells, the fusiform cells of fibrous tissue, and the specific spindle cells of a sarcoma may in many cases be distinguished from each other.—Dr. HERMAN observed that Mr. Doran had looked upon Gusserow's aphorism as philosophical rather than scientific. Gusserow had insisted that the more a uterine tumour was a simple hypertrophy of uterine tissue, as in pregnancy, but localised, the more would plain muscle cells predominate. The more fibrous induration of the interstitial connective tissue took a share in the process, the more nearly would the tumour resemble a pure fibroma. Was this aphorism true?—Dr. HORROCKS doubted that the cells could be distinguished from each other in all cases of solid fibroid tumours of the ovary and uterus. Puzzling microscopical appearances were occasioned by the intricate arrangement of the fibres and groups of cells in these tumours.—Dr. W. S. A. GRIFFITH noted how the mixed connective tissue of the normal ovary strongly resembled spindle-celled sarcoma when inspected under the microscope. He asked if what has been described as sarcoma of the ovary was sarcoma at all. It appeared to be rather a general enlargement of the stroma. On account of the doubtful nature of the question, the clinical history of every case of solid ovarian tumour should be carefully noted by pathologists.—Mr. ALBAN DORAN held that Gusserow's aphorism was a self-evident proposition. The smallest interstitial fibroids were the purest fibromata. He agreed with Dr. Horrocks, but he had appealed from the known to the unknown throughout his memoir. He had compared sections of different tumours where the fibres ran in the same direction. In reply to Dr. Griffith, he recognised the resemblance of ovarian connective tissue to spindle-celled sarcoma. He was diffident about the theory that some ovarian tumours were composed of normal but embryonic connective tissue. These tumours were hardly malignant; but a specimen which he exhibited at the Pathological Society in October tended to prove that arrest of development of the connective tissue caused the development of a very malignant growth. Mr. Doran had carefully noted the clinical history of the cases which he described. It was hard to distinguish normal ovarian tissue in adults, owing to the cicatrices of corpora lutea and other sources of confusion.

On Locking, Retroversion, and Strangulation of Uterine Fibroids in the Pelvic Excavation.—Dr. J. MATTHEWS DUNCAN, the author of this paper, stated that locking in the pelvic excavation implied impaction not the result of adhesions. Its effects might be produced by pressure into the pelvic brim of a tumour too large to pass into the excavation. Retroversion of a fibroid closely resembled the retroversion of the gravid uterus in its characteristic form. The symptoms and treatment of the two conditions were nearly alike. Strangulation, with locking, of a fibroid, with or without retroversion, was a rare accident. A case was described. Dr. Duncan had not seen a similar case of strangulation of or by a gravid uterus.

A Case of Locked Fibroid treated by Supra-vaginal Hysterectomy.—Mr. MEREDITH read this case. A single woman, aged thirty-six, was admitted into hospital under Dr. Percy Boulton last May. A uterine tumour was firmly impacted in the pelvic cavity. For nine months the pressure of the growth on the neck of the bladder had led to frequent attacks of complete retention. The recurrence of these attacks had latterly been avoided only by relieving the bladder at regular intervals of not less than two hours, both by night and by day. After unsuccessful attempts to dislodge the tumour from the pelvis by vaginal taxis, the case was transferred to Mr. Meredith's care, with a view to abdominal section. At the operation, performed by him on June 2nd, considerable difficulty was ex-

periened in extracting the impacted mass, which, together with the uterine body and its appendages, was subsequently removed by a supra-vaginal hysterectomy. The tumour weighed 2 lb., and was the size of a large cocoon, and consisted of a densely packed mass of fibromyomatous growths developed in the posterior wall of the uterus. The after-progress of the case was uninterrupted, and the patient made an excellent recovery, leaving the hospital exactly six weeks from the date of operation, with the abdominal incision soundly healed throughout.

In the discussion on the above papers, Dr. GERVIS drew attention to the usefulness of a suitable pessary in preventing a recurrence of the downward displacement of a fibroid after it had been pushed up out of the pelvic cavity. He felt satisfied with hydrostatic pressure in cases where the taxis had failed, noting a case in his own practice resembling Mr. Meredith's.—Dr. GRAILY HEWITT found that upward pressure and properly adapted vaginal support often proved sufficient to relieve impaction. In some cases impaction of a large fibroid was slow to cause difficulty in micturition; in others that trouble rapidly set in when the impacted tumour was small. In a very marked case a fibroid growth at the back of the uterus occasioned sudden impaction, with retroversion and enormous distension of the bladder. Dr. Hewitt thought that cases of anteversion with hypertrophy of the uterus were sometimes mistaken for fibroids. In one instance proper diagnosis and appropriate treatment cured a case of this kind after several years of suffering. In another case, where an egg-shaped tumour grew anteriorly, a little to the right side, a well-adjusted pessary was very successfully used and the tumour raised out of the brim, where its pressure had rendered the patient a complete invalid.—Dr. LEWERS referred to a case where a uterus retroverted by fibroids caused retention of urine, in a woman aged forty-nine. The urine was drawn off, and the uterus replaced bimanually; then a large ring pessary was introduced. This was done two months ago. Dr. Lewers had seen the case recently, and found the uterus in good position; the patient had no trouble with her urine. He mentioned this case because he gathered from Dr. Duncan's paper that, in similar instances, replacement, even when possible, was usually followed by recurrence of the malposition.—Dr. AUST LAWRENCE (Clifton) found that in one case of retroflexed gravid uterus, and in two of "locked fibroids," he was enabled to effect reduction by keeping the patient in bed in the semi-prone posture for twenty-four hours. Without this kind of treatment repeated attempts at replacement should never be made.—Dr. CHAMPNEYS advocated hydrostatic pressure exerted by gravitation. He had found it succeed where taxis had failed, and he always used it after the failure of taxis before proceeding further. The mode of using it had been described in THE LANCET some years back. It was conveniently employed by means of a child's air-ball connected with an irrigator. Any desired amount of even and continuous pressure could be applied and removed at will. A fibroid might be impacted for many reasons—such as bulk, oedema, adhesions, and expansion of the broad ligament. An air-tight adaptation was an obstacle to replacement; in raising a tumour in abdominal section a loud sucking noise was often heard. Hydrostatic pressure got rid of some of the oedema; adhesions could not be rudely torn, as by taxis; and the broad ligaments would be unaffected. Thus the method furnished a valuable differential prognosis as to the possibility of replacement. He did not say that the tumour was replaceable in Mr. Meredith's case, but he should himself have tried hydrostatic pressure before resorting to abdominal section.—Dr. PRIESTLEY remarked that Dr. Duncan's experience proved that, whether the pressure were made with the fingers or with hydrostatic bags, as Dr. Champneys had suggested, and aided by the genupectoral position, difficult cases of impacted fibroid might be overcome provided that the pressure was made in the right direction for a sufficient period. Dr. Priestley thought that the alleged frequency of absolute impaction was overrated. The symptoms produced by pressure, almost amounting to impaction, were more frequent; these were retention of urine in certain cases and incontinence of urine in others. He had recently seen a patient who had a bulky fibroid, and was constantly losing large quantities of limpid fluid, supposed at first to be from the uterus, but ultimately proved to come from the bladder. Not only retroversion of a uterus bearing a fibroid could cause impac-

tion, but also some forms of fibroid without backward displacement, particularly those ovoid forms in which the lower segment fitted closely into the brim and cavity of the pelvis. He had sometimes been surprised how small a degree of force exercised in pushing up the tumour from below would bring at least temporary relief. Prolonged and persistent efforts, used with every precaution, should always be made to reduce the tumour, as Dr. Duncan advocated, before so grave a step as abdominal section was undertaken, although Mr. Meredith's case had proved so signally successful.—After some observations in reply by Dr. Matthews Duncan, Mr. MEREDITH stated that the absolute fixation of the pelvic tumour in his case, resisting all the repeated attempts to displace it, afforded ample justification for abdominal section as the only means of relieving the patient. In his case atmospheric pressure had not much to do with the difficulties which he encountered. After partial dislodgment of the firm, incompressible tumour from the pelvic cavity, extraction was found to be impossible until some amount of enucleation had been practised on the left side. This fact alone proved conclusively that nothing short of operation could have proved successful in affording even temporary relief to the patient's sufferings.

The following specimens were exhibited:—

Dr. CULLINGWORTH: Localised Sloughing of Fundus Uteri, due to Acute Septicæmia after Abdominal Section.

Dr. H. SPENCER: (1) Sloughing Fibroid of Uterus; (2) an Anencephalous Monster with Hernia of the Intestines in the Left Loin, and Hernia of the Liver (which presented at birth) in front of the Abdomen.

Dr. WILLIAM DUNCAN: (1) Placenta from a case of Porro's Operation; (2) Ruptured Extra-uterine Fœtation.

HARVEIAN SOCIETY.

Arthrectomy v. Excision of the Knee.

A MEETING of this Society was held on Nov. 1st, Mr. L. W. Sedgwick, President, in the chair.

A paper was read by Mr. Page on *Arthrectomy versus Excision of the Knee*, which is printed in *extenso* in another part of our present number.—Mr. EDMUND OWEN remarked that in operating it was necessary to make such an opening into the joint that every synovial crevice could be inspected and thoroughly dealt with; and for this purpose nothing, in his opinion, served better than the horseshoe incision traversing the patellar ligament. In the knees on which he had operated, and which were nearly all in an advanced stage of the disease, he had taken away the crucial ligaments, for only by doing this could one reach that part of the capsule which covered the upper and back part of the condyles. He agreed with Mr. Page that in the present state of knowledge it was better not to think of securing future movement for the joint; that if the surgeon's mind were occupied with such thoughts, he was apt to deal less thoroughly with the articular cavity than he would do if his object were to secure a straight and rigid limb. Certainly to advise that movements be imparted to the joint before healing was complete, as some seemed tempted to do, looked like courting disaster. And not only should the limb be kept rigidly extended for months, or even years if necessary, but the patient should also be under prolonged and careful supervision. The cases which Mr. Page showed were indeed a promising group, and some had borne the test of time extremely well. One must not flatter oneself that because a child goes out of hospital with a straight limb after arthrectomy the case must be written down in the notebook as "cured." Unfortunately this was not so, and his (Mr. Owen's) experience had been that in certain unhappy cases amputation had, after hesitation and regret, to be resorted to at last. The practical surgeon was anxious to know precisely which were the cases best suited for arthrectomy; children with chronic abscess and displacement at the joint, though generally deserving of trial, were those least suited for the procedure. But, on the other hand, if one operated only in the early stages of the disease, there was a risk of resorting to active interference where no such measure was needed. To admit that the slight cases gave the best results was not to pay the highest tribute to the operation; and if arthrectomy were too lavishly resorted to, it would be expedient, or even necessary, to invite the attendance of Mr. H. O. Thomas at

the Society to call attention to the fact that absolute and continuous rest for a joint, together with the adoption of constitutional measures, is a well-tried means of successfully dealing with chronic disease of the knee in children.—**Mr. SHEILD** agreed with most of the opinions expressed by **Mr. PAGE**. Absolute immobility after operation was the main factor in success after either excision or arthrectomy. He had found the actual cautery useful in the treatment of oozing from cavities.—**Mr. BARKER** hoped that ultimately by means of arthrectomy movable joints might be obtained. However, at present it seemed advisable to keep the limb at rest for a long time. The question of movement seemed to depend upon the choice of cases; in those which now presented themselves movement could not be hoped for. Contrary to the opinion of **Mr. PAGE**, suture of the patellar ligament ought to be practised. He has found that shock, due to prolonged operations, was diminished by the use of hot water instead of the ordinary cool carbolic douche, which had also other disadvantages. He himself had been in the habit of performing a modern arthrectomy for fifteen years. He removed a thin layer of bone and cartilage and all the synovial membrane. His actual arthrectomy had given him trouble because of flexion. The whole cartilage and crucial ligaments had not been removed in these cases. It was important to preserve the crucial ligaments unless they were diseased. The tendency to flexion lasted for years. **Mr. PAGE** had got the best result in the case in which he had removed cartilages. The other cases still required supports, and he wished to know how this must be continued.—**Mr. PAGE** replied.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

Rare Abnormality of Aortic Arch.—Angle of Neck with Shaft of Thigh Bone at various Ages.—Nature of Vocal Cords and Hyo-epiglottic Muscle.—Origin of Spinal Nerves in relation to Spines of Vertebrae.

THE annual general meeting of this Society was held in the Library of St. Thomas's Hospital on Nov. 7th, Professor G. M. Humphry, F.R.S., in the chair.

Mr. GORDON BRODIE related a case of Rare Abnormality of the Aortic Arch which had been under his observation. The innominate arteries were absent, being replaced by a short thick trunk, which gave off two branches ascending on either side of the trachea to the place of the common carotids, that on the right giving off one corresponding to the vertebral. Next in order from the arch was the left vertebral, which entered the foramen in the transverse process of the fifth cervical, and gave a branch to the thyroid. Another branch arose from the first part of the subclavian on the left side. The right subclavian arose from the arch as a fourth branch, and passed behind the oesophagus and trachea.

Professor HUMPHRY read a paper on the Angle of the Neck of the Thigh Bone with the Shaft at various Ages and under various circumstances. He gave numerous measurements, from which he deduced the following conclusions:—1. That the angle formed by the neck of the thigh bone with the shaft varies considerably in different persons at the same age. 2. That it is smaller in short bones than in long bones, and that it is usually small when the pelvis is wide, the combination of these two conditions rendering it usually smaller in men than in women. 3. That the angle decreases during the period of growth, before and after birth; but that after growth has been completed it does not usually undergo any change, even if life be prolonged to extreme old age, the commonly received opinion on this point being erroneous. Some change may take place in exceptionally rare cases; but, as a rule, the angle remains the same from the adult period till death, at whatever age that event may occur. 4. That if during growth the limb be relieved of the weight of the body, as in the bedridden state, in paralysis, or after amputation in the thigh, the angle of the neck with the shaft usually retains the open form of early life, or may, and not unfrequently does, become wider.

A paper was read by **Mr. BLAND SUTTON** on the Nature of the Vocal Cords and the Hyo-epiglottic Muscle, in which facts were adduced in support of the contention (1) that the true vocal cords are the result of the tendinous metamorphosis of a portion of the thyro-arytenoid muscle;

(2) the false vocal cords, with the cuneiform cartilages of **Wrisberg**, are the degenerate representatives of a piece of cartilage which originally connected the epiglottis with the cornicula laryngis (**Santorini's** cartilage); (3) that the hyo-epiglottic ligament is the degenerate representative of the hyo-epiglottic muscle so largely developed in whales, horses, ant-eaters, many monkeys, and other mammals, sometimes even reappearing in man. The demonstration was aided by actual dissections, prepared by **Mr. William Pearson** for preservation in the museum, at the suggestion of **Professor Stewart**. The paper concerned itself with actual questions of facts, and speculation was studiously avoided.

Mr. R. W. REID then read a paper on the Relations between the Superficial Origins of the Spinal Nerves from the Spinal Cord and the Spinous Processes of the Vertebrae. Owing to the present somewhat insufficient data afforded concerning the exact position in the adult of the superficial origin of the spinal nerves from the cord in relation to the surface of the body, he made a series of six dissections to try to localise their position more positively. He said that although the length and obliquity of the spinous processes varied a good deal, yet their posterior extremities might fairly be made use of for the purpose. From examination of a number of cords, he found that for all practical purposes the posterior roots and the anterior roots of nerves belonging to the same segment left the cord at the same level. He then described the method in which the investigations were conducted—firstly when the body was placed in the horizontal, and secondly in the upright position. These investigations were conducted with mathematical accuracy, and the result arrived at was that the superficial origin of any individual spinal nerve has no fixed and definite relation to the apex of one or the apices of two spinous processes or the space intervening between two, as might be supposed from the tables of **Nuhn** and **Jadlot**, but that its position varies considerably. The following is a summary of the limits within which he found that the posterior and anterior nerve roots took their superficial origins from the cord in relation to the posterior ends of the spinous processes. (a signifies the highest point of origin; b the lowest point of origin.) Second cervical: (a) a little above the posterior arch of atlas; (b) midway between the posterior arch of atlas and the spine of axis. Third cervical: (a) a little below posterior arch of atlas; (b) junction of upper two-thirds with lower third of spine of axis. Fourth cervical: (a) just below upper border of spine of axis; (b) middle of spine of third cervical. Fifth cervical: (a) just below lower border of spine of axis; (b) just below lower border of spine of fourth cervical. Sixth cervical: (a) lower border of spine of third cervical; (b) lower border of spine of fifth cervical. Seventh cervical: (a) just below upper border of spine of fourth cervical; (b) just above lower border of spine of sixth cervical. Eighth cervical: (a) upper border of spine of fifth cervical; (b) upper border of spine of seventh cervical. First dorsal: (a) middle of interval between spines of fifth and sixth cervical; (b) just above spine of first dorsal. Second dorsal: (a) lower border of sixth cervical; (b) just above lower border of spine of first dorsal. Third dorsal: (a) middle of spine of seventh cervical; (b) lower border of spine of second dorsal. Fourth dorsal: (a) just below upper border of spine of first dorsal; (b) junction of upper third and lower two-thirds of spine of third dorsal. Fifth dorsal: (a) upper border of spine of second dorsal; (b) junction of upper fourth and lower three-fourths of spine of fourth dorsal. Sixth dorsal: (a) lower border of spine of second dorsal; (b) just below upper border of spine of fifth dorsal. Seventh dorsal: (a) junction of upper third and lower two-thirds of spine of fourth dorsal; (b) just above lower border of spine of fifth dorsal. Eighth dorsal: (a) junction of upper two-thirds and lower third of interval between spines of fourth and fifth dorsal; (b) junction of upper fourth and lower three-fourths of spine of sixth dorsal. Ninth dorsal: (a) middle of interval between spines of fifth and sixth dorsal; (b) upper border of spine of seventh dorsal. Tenth dorsal: (a) middle of interval between spines of sixth and seventh dorsal; (b) middle of spine of eighth dorsal. Eleventh dorsal: (a) junction of upper three-fourths and lower fourth of spine of seventh dorsal; (b) just above spine of ninth dorsal. Twelfth dorsal: (a) junction of upper fourth and lower three-fourths of spine of eighth dorsal; (b) just below spine of ninth dorsal. First lumbar: (a) middle of interval between spines of eighth and ninth dorsal; (b) lower border of spine

of tenth dorsal. Second lumbar: (a) middle of spine of ninth dorsal; (b) junction of upper third and lower two-thirds of spine of eleventh dorsal. Third lumbar: (a) middle of spine of tenth dorsal; (b) just below spine of eleventh dorsal. Fourth lumbar: (a) just below spine of tenth dorsal; (b) junction of upper third and lower two-thirds of spine of twelfth dorsal. Fifth lumbar: (a) junction of upper third and lower two-thirds of spine of eleventh dorsal; (b) opposite middle of spine of twelfth dorsal. Sacral nerves—First sacral: (a) lower border of spine of eleventh dorsal; (b) lowest point of origin of fifth sacral, the lower border of spine of first lumbar. Coccygeal: (a) lowest border of first lumbar; (b) just below the upper border of second lumbar.

Mr. W. ANDERSON and Mr. G. H. MAKINS read a paper on Cranio-cerebral Topography.

Dr. SHERRINGTON read a note on the Topography of the Pyramidal Tract in the Spinal Cord.

ULSTER MEDICAL SOCIETY.

THE opening meeting of the session 1888-89 was held in the rooms of the Society, the Museum, College-square North, on Wednesday evening, the 7th inst., at 8 o'clock.

The retiring PRESIDENT (Dr. Esler), having delivered a short address, called upon Dr. Henry Burden to take the chair as president for the coming session, which he did amidst applause.

Dr. BURDEN then proceeded to deliver his opening address on the Progress of Bacteriology in recent years, and he treated his subject in an interesting and masterly manner. At its conclusion a hearty vote of thanks was accorded him, on the motion of Professor Dill, seconded by Dr. Harkin.

A number of gentlemen were nominated as members.

The following is a list of the office-bearers for the session:—President: Henry Burden, M.A., M.D. Ex-President: Robert Esler, M.D. Vice-Presidents: Dr. Byers and Dr. J. A. Lindsay. Council: Dr. O'Connell, Professor Dill, Dr. Dempsey, Dr. Bigger, Dr. Mackenzie, and Dr. Calwell. Hon. Librarian: Dr. Strafford Smith. Pathological Secretary: Professor Sinclair, M.D. Hon. Treasurer: Dr. Hy. O'Neill. Hon. Secretary: John M'Caw, M.D.

Reviews and Notices of Books.

A Text-book of Physiology. By M. FOSTER, Professor of Physiology in the University of Cambridge. Fifth Edit. Part I. Pp. 352. London: Macmillan and Co. 1888.

DR. FOSTER, having in the first instance produced a standard work on physiology, is determined, by the care which he bestows on each successive edition, to maintain it in the high position it has gained. It is a thoroughly English book, and differs from the foreign works on the same subject in many particulars, the one which most resembles it being, perhaps, the important treatise of Wagner, which was materially modified and improved by Otto Funke, and has recently been edited by Gruenhagen. Both are characterised by the judicial manner in which all new matter is discussed, which was to be expected from the scientific attainments of the authors and from the circumstance that both are engaged in teaching. Both introduce a little, but comparatively little, histology and accounts of methods of research; but whilst the German treatise is extraordinarily full and complete in its treatment of the special senses, we think the palm may be given to the work before us as presenting the most intelligent and thorough discussion of such difficult subjects as the statics and dynamics of the circulation, and of the phenomena presented by nerve and muscle.

Professor Foster's Text-book is now divided into three parts, of which the first is before us, and, speaking generally, is devoted to the consideration of the blood, the circulation, nerve, and muscle. In its preparation the author acknowledges that he has received much assist-

ance from Dr. Gaskell, Mr. Langley, and Dr. Lea, and from Mr. Shore and Mr. Wingfield, all well-known and able men, who materially aid Professor Foster in his work at Cambridge, and who in great part owe their education to him. In the present edition, owing to pressure having been exercised upon him, and clearly in great measure in opposition to his own judgment, some histology has been introduced. Thus several pages are devoted to an account of the structure of nerve and muscle; but histology has now such an able exponent in Professor Klein and the handy little volume he has published that it hardly seems requisite to encumber the pages of such a treatise as that before us with details which every man must have learned before he could read it with the slightest profit. The same may be said in regard to descriptions of methods and apparatus. If the latter subject is to be discussed at all, it should be done in the fashion adopted by Professor McKendrick in his excellent text-book. The title of Professor Foster's book should be "An Advanced Text-book." It is really a luminous digest of the whole of physiology, with little or no reference to authorities, and may well be read not only by the student preparing for his examination, but by the practitioner who, already familiar with the practical application of physiological knowledge, is desirous of learning what value is to be placed upon the numerous essays and memoirs he has no time to master. He will find, for, example in this part a condensed summary of Gaskell's interesting observations on the relations of the spinal nerves to the ganglia of the sympathetic. The physiology of inhibition, the causes and phenomena of the coagulation of the blood, and many other points are fully and interestingly given, and some writers may also be taught how such subjects should be handled. The volume should be in the hands of every second year's student.

Lunacy in Many Lands. By G. A. TUCKER. Pp. 1564. London: Baillière, Tindall, and Cox. 1887.

THIS is a work of closely printed matter extending to 1561 pages. The area traversed is very wide, embracing the United States of America, Canada, Australasia, Africa, the Sandwich Islands, and Europe. Four hundred asylums were visited by Mr. Tucker, and on his return from New South Wales he had travelled about 140,000 miles. Failing health induced the author in 1881 to take a rest. Adopting the Dutch proverb, he determined that rest should not be rust, and he therefore concluded to visit the leading institutions for the insane throughout the world, and to report upon them to the Government of the Colony. It must not be supposed, however, that his mission was an official one. It was altogether self-imposed, and was carried out at his own expense. The Colonial Secretary, Sir John Robertson, complied with his request to be supplied with an introduction, in which Mr. Tucker is described as "a gentleman of some standing in this city (Sydney), who is visiting Europe and America in the interests of his business, for the purpose of inspecting institutions for the care of the insane, and collecting information regarding them." Mr. Tucker drew up a form of questions, to which he endeavoured to obtain answers from superintendents of asylums, and in a large number of instances succeeded. These replies form a considerable portion of this bulky volume, and constitute reliable statements, the value of which cannot be denied. A difference of opinion will exist as to the value of Mr. Tucker's own observations and conclusions. Their accuracy has been called in question, but it would require a very extended investigation to decide the proportion which mistakes or oversights bear to the collection of correctly recorded facts. If this proportion should be small, it would be only candid to admit that some misstatements must necessarily occur in the reports of 400 asylums. If, on the other hand, the errors are grave and frequent, the work

must possess a very doubtful value, seeing that it would be unsafe to rely upon any unverified statement.

In the summary which Mr. Tucker gives at the conclusion of his work, we are asked to believe that "at the present time there is no certain, fixed, or clear knowledge as to the causes of insanity, and that there is no sound practical information regarding the inception of the disease, such as would lead to regular scientific medical treatment." We do not agree with the author that this pessimistic conclusion is justified, as he alleges, by the numerous assigned causes differing widely from each other, or by the many opinions expressed as to the best form of medical treatment. It is true that one superintendent replies to the question asked in regard to the causation of insanity, "Cannot say," and that another replies "Uncertain," but a broad view of the alleged causes of mental disease would have led to the determination of at least some of the leading maleficent influences at work. Even out of the thirty-four replies selected by Mr. Tucker as examples of the conflicting causes adduced, "intemperance" is given in twenty-six instances. But Mr. Tucker is not likely to gain much systematic and detailed knowledge from the course he pursued in a matter requiring much more time and thought than his correspondents or informers could be expected to give. Much more definite conclusions could have been reached by him in regard to at least one country by studying the etiological tables of the English Commissioners in Lunacy, as published in their annual reports. With regard to the medical treatment there is no doubt some ground for Mr. Tucker's pessimism, for he has probably met with superintendents of asylums depressingly sceptical as to the use of medicinal remedies, and who thus play into the hands of those who are unwilling to admit that insanity is a symptom of a physical disease. But Mr. Tucker might have attached some importance to the opinions of the leading mental physicians, as deliberately expressed in their works. Had he done so he would have been able to place more satisfactory statements on record. An observation made by the author in regard to mechanical restraint cannot be allowed to pass unnoticed. After observing that "the great criminal asylums of England and America use no mechanical restraint of any kind," he observes that "the patient on admission, no matter how violent, should be treated as a sick person, and be placed in bed, unrestrained in any way, the prone position allaying the excitement." The reader is left with the impression that the patient will of his own accord remain horizontal, and no hint is given as to the employment of manutention. The absolutely misleading character of such a statement must be obvious to those familiar with the practical treatment of the insane. The only effect can be to mislead the public, and to cast blame upon those who, if it is thought necessary to keep the patient in the "prone position," employ some form of mechanical restraint including the hands of attendants, which by a singular oversight or conscious inconsistency the Commissioners do not recognise as "restraint." We would seriously draw the attention of the authorities in Whitehall-place to this omission, as also to that of the covered prolonged bath.

We have freely criticised Mr. Tucker's book, but we give him credit for remarkable industry in the visitation of asylums and in the collecting of information. It is probable that some portion of this record will prove of lasting interest.

OUR LIBRARY TABLE.

Notes on Surgery for Nurses. By JOSEPH BELL, F.R.C.S. Ed. Edinburgh: Oliver and Boyd. London: Simpkin, Marshall and Co.—A second edition of this little book has soon been called for, the first having been brought out during the past year. This of itself is a strong proof

of the favour with which the book has been received. As some of our readers will remember, in our previous review of the work, we pointed out its proposed scope, as expressed in the preface, "to aid nurses who take an interest in their duties to understand their cases, and to follow intelligently the clinical work in the wards." The directions are clear, and the description of special subjects is simple and easily to be understood. The author touches in a general manner on inflammation, suppuration, ulceration, gangrene, pyæmia, septicæmia, the healing of wounds, burns, and scalds, fractures and dislocations, tumours, special operations, and the surgical nursing of children. The book would have a wider usefulness by the addition of a chapter on the arrest of hæmorrhage, also by fuller instructions as to the prevention and treatment of bedsores, the insertion of displaced tracheotomy tubes, and other matters.

The Extra Pharmacopœia. By WILLIAM MARTINDALE, F.C.S. *With Medical References and a Therapeutic Index of Diseases and Symptoms,* by W. WYNN WESTCOTT, M.B. Lond. Fifth Edition. Pp. 462. London: H. K. Lewis. 1888.—This well-known little book has now such an established position that a fifth edition calls for scant criticism. In spite of rigorous revision, the size of the book is gradually increasing, new remedies calling for notice, and new formulæ being requisite. The present edition worthily maintains the standard aimed at in the past, so that this little book is indispensable to all who wish to keep well abreast of therapeutic progress. The secondary list of drugs, to which medical attention has been "more or less directed," almost indicates by its brevity that all new or rather extra-pharmacopœial remedies are largely employed.

The Art of Dispensing: a Treatise on the Methods and Processes involved in Compounding Medical Prescriptions. Published at the Offices of the Chemist and Druggist. London. Pp. 280. 1888.—The explanation of the absence of the name of the author upon the title-page is to be found in the preface, which shows that this book is an adaptation of the *Chemists and Druggists' Diary* for 1885, to which many eminent English pharmacists contributed. The work is essentially practical, and is likely to prove useful to those engaged in dispensing. It contains many valuable hints and directions, but occasionally it indulges in suggestions calculated to raise a smile, as when the dispenser is gravely warned against "scolding the apprentice and joking with his fellow-assistants." When dealing with disputed points, such as the propriety of giving copies of prescriptions, the views of various chemists are given. A very valuable section gives instruction in dispensing German and French prescriptions, numerous examples of facsimile prescriptions in various stages of illegibility being presented and explained. In the appendix, terms likely to occur in French and German prescriptions are arranged alphabetically, and are followed by a surprisingly long list of abbreviations used in prescriptions. An excellent index renders this a handy book for reference.

A Descriptive Catalogue of the Pathological Museum of Charing-cross Hospital. By JOHN H. MORGAN, M.A., F.R.C.S. London: Harrison and Sons. 1888.—The publication of catalogues of the valuable museums attached to our metropolitan hospitals cannot be too highly commended. It brings to notice many interesting specimens, and greatly facilitates the work of pathological research. Mr. Morgan, who is curator of the Charing-cross Hospital Museum, has held the office since the transfer of the collection to the new buildings, and has devoted himself to the arrangement of the specimens and the compilation of this catalogue. In adopting the plan of classification pursued by the compilers of the catalogues of the museums of the Royal

College of Surgeons, St. Bartholomew's, and the Middlesex Hospitals, Mr. Morgan has consulted the interest of students and others, to whom the task of reference and comparison is thereby lightened. This museum seems to be particularly rich in specimens of rheumatoid arthritis, which were collected by the late Mr. Canton; and there is also a large series of fractures, especially of the long bones. Amongst other interesting specimens, we note No. 506, congenital constriction of the aorta; No. 624, basilic vein affected by inflammation due to bleeding from the median basilic vein; No. 653, interstitial pneumonia; No. 754, duodenitis from a case of burn; No. 819, Littré's hernia; Nos. 875 & 8, specimens of disease of the thyroid; No. 954, hydatid cysts of brain; Nos. 961 and 962, tumours of spinal cord; and No. 988, retained testis.

The Quarterly Journal of Microscopical Science. Edited by Professors RAY LANKESTER, E. KLEIN, H. N. MOSELEY, and ADAM SEDGWICK. No. 114, Vol. XXIX., Part 2. London: J. & A. Churchill. — This part contains:—1. The Structure of three new Species of Earthworm, with remarks on certain points in the morphology of the Oligochaeta, by Frank E. Beddard. This paper chiefly deals with the structure of *Acanthodrilus Annecteus*, *Deinodrilus Benhami*, and *Typhaeus Gammii*. 2. Development of the Fat Bodies in *Rana Temporaria*, a contribution to the history of the Pronephros, by Arthur E. Giles. In this contribution Mr. Giles shows that the part of the kidney which undergoes conversion into fat body is the pronephros or head kidney. 3. Two new types of Actiniaria, by G. Herbert Fowler. Lastly, Dr. Beard gives the second part of his Morphological Studies on the Development of the Peripheral Nervous System of Vertebrates, which includes the Elasmobranchii and Aves.

The Journal of Anatomy and Physiology. Conducted by G. M. HUMPHRY, Sir WM. TURNER, and J. MCKENDRICK. Vol. XXXIII. New Series, Vol. III., Part 1. October, 1888. — This part contains:—1. A memoir by Dr. R. W. Schufeldt on the Comparative Osteology of Arctic and Sub-Arctic Water Birds, with five plates. 2. Professor Hamilton: Effect of Chronic Disease of the Valves of the Heart upon the Sound Orifices, the Cavities, and the Walls. 3. Robert Kirk on a New Acid found in Human Urine which darkens with alkalis (alcaptonuria). 4. Professor Windle on the Limb Myology of *Procyon Cancrivorus* and of the *Ursidae*. 5. Alfred Young and Arthur Robinson on the Anatomy of *Hyæna Striata*. 6. J. Symington: The Rectum and Anus. 7. Walter Pye: Growth-rate of the Bones of the Lower Extremities, with especial reference to rickety curvatures. 8. Professor Struthers: Some Points in the Anatomy of a *Megaptera Longimana*. And lastly, the Proceedings of the Anatomical Society of Great Britain and Ireland. The paper by Dr. Symington on the Rectum and Anus is particularly deserving the attention of gynaecologists and surgeons.

The Royal London Ophthalmic Hospital Reports. Vol. XII. Part 2. July, 1888. — This part contains ten articles, of which the chief are one by Mr. E. Nettleship on the Prognosis in Chronic Glaucoma; a second very good one, by Mr. Marcus Gunn, on the Nature of Light-percipient Organs and of Light and Colour Perception; and a third, by Mr. J. B. Lawford, on the Pathological Anatomy of Lamellar or Zonular Cataract. The minor articles are: a case of Intra-orbital Hæmorrhage and other Eye complications in connexion with Hæmophilia, by Priestley Smith; Syphilitic Disease of the Eyelids, by Jonathan Hutchinson, jun.; Atropine Irritation, by E. Treacher Collins; and by the same author a paper on the Treatment of Suppuration after extraction of Cataract. Lastly, Mr. W. J. Collins gives an account of the Capsulo-pupillary Membrane and its varieties.

Dictionary of National Biography. Edited by LESLIE STEPHEN. Vol. XVI. London: Smith, Elder, and Co. 1888. — This, the most recently issued volume of this valuable work, runs from "Draut" to "Edridge." The details in its contents are, as far as may be judged, full and accurate, and the volume is in every respect equal to those which have preceded it, and on which we have on many occasions commented.

Cassell's New Popular Educator. Part I. Cassell and Co., London, Paris, New York, and Melbourne. — This is the first part of an entirely new and revised edition of the "Popular Educator"—a work which has for upwards of a quarter of a century been the leading educational manual of the people.

New Inventions.

IMPROVEMENT IN CATHETERS.

WE have received from Messrs. Hockin, Wilson, and Co. specimens of their new catheters, with "patent unbreakable eye." By this patent a metal eye is introduced into the catheter, and the end gains in firmness and strength. The metal is invisible, but renders that part in which it is placed, usually the weakest of any in the instrument, by far the strongest; the catheter is thus rendered very durable. Another important improvement is the termination of the channel of the catheter at the eye, thus rendering the process of cleansing easy and more certain. These catheters are perfectly soft and pliable, and will stand any heat. Their framework is said to be carefully woven Belfast linen thread, covered by a new method with extremely elastic gum. These instruments are likely to be much in demand for certain cases of retention, and for those in which it is necessary for the patient to pass a catheter for himself.

MAGNETO-ELECTRIC BELLS.

THESE bells, a specimen of which has been submitted to us by Messrs. Cox-Walker and Campbell Swinton, of 75, Queen Victoria-street, E.C., the patentees, are designed to substitute the electric bells in ordinary use, the battery connected with which requires periodic attention, and is sometimes troublesome to maintain in effective order. The apparatus now under notice, on the other hand, being worked without a battery, is free from the disadvantage referred to. Then, again, no fitting is required, all that is needed being the establishment of connexion of the terminals on bell and generator respectively by means of a suitable length of insulated double wire. The bells are always ready for use, and appear capable of working for years without attention. These are distinct advantages, which cannot fail to recommend them to public favour.

DONCASTER INFIRMARY.—The annual meeting of the governors and subscribers to this institution was held on the 29th ult., when it was reported that the number of in-patients during the year had been 200, and the dispensary patients 2361, being an increase of 7 and 267 respectively over the numbers for the previous year. The financial report was also satisfactory, the receipts from annual subscriptions and the collections on Infirmary Saturday having been considerably in advance of the sums realized in the preceding twelve months.

WEST OF ENGLAND EYE INFIRMARY.—The 80th annual meeting of the governors of this institution was held at Exeter on the 26th ult. The medical report showed that there had been 1852 patients under care during the year, of whom 1595 had been discharged. The total number of patients since the opening of the infirmary in 1808 had been 73,656. The income during the year amounted to £1778, and the expenditure to £1663.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 17, 1888.

THE Government of Bengal has gradually had forced upon it the necessity of taking some steps with regard to recovered criminal lunatics. The existing accommodation of ordinary asylums has proved insufficient for the steady accumulation in them of this class of lunatics, and the urgent need for economy forbids the indefinite expansion of the accommodation for the custody of lunatics who might perhaps be safely made over to the care of their friends. In addition to this, it appears that difficulties have arisen in consequence of the absence of any rules for the guidance of the judicial authorities and the Government in dealing with individual cases which came up for consideration from time to time. A Governmental committee was appointed last year to investigate the whole subject of the release of criminal lunatics, and we print elsewhere an epitome of the report which they have drawn up, and which was published in the *Calcutta Gazette*. In reviewing the work of this committee it is necessary to bear in mind that the manifestations of insanity in India are modified by various conditions. Of these the chief are the natural inoffensiveness and docility of the people, who in their excitement are more loquacious and abusive than actually violent. This affects to a great extent the character of their insanity, and makes them very amenable to mild treatment. Again, in Bengal, among the predisposing and exciting causes of insanity, ganja takes the place of alcohol. Its effects, though equally violent, in many instances are much more evanescent, and its habitual use does not lead to the same organic tissue changes. A very large proportion of the graver crimes are committed under its acute influence, but under confinement and deprivation of the drug the mania which it causes rapidly subsides, and leaves the man a quiet and trustworthy inmate, with little tendency to relapse, in the absence of the drug, for the remainder of his life. It may be on this ground that the committee are able to say of criminal lunatics in India what certainly cannot be said of them in this country, that "experience shows that a very large proportion of recovered criminal lunatics can be released with almost absolute safety." Nevertheless, the committee show that the public safety is insufficiently guarded by the provisions of the Acts now in force. The report deals in a concise and practical manner with the legal, medical, and administrative aspects under which the subject of criminal lunacy has to be discussed. The non-existence of rules of procedure is the stumbling-block which stands in the way of the selection of the cases which are fit and proper for release or for continued detention; and the committee point out that when cases come up for consideration, "the main difficulty arises from the fact that in most the data necessary for the decision are not contained in the papers before Government." They go on to say that "the essential materials for forming a decision are the medical history of the case while under observation, the probable cause of insanity, the age and physical condition

of the prisoner, and the social and physical state of the person offering security."

With the view of meeting these various wants, the committee have elaborated a code of rules for the guidance of executive officers, in which all the needful information as to the medical history and personal mental characteristics in individual cases is given, together with the procedure to be adopted under different groups of circumstances. These rules are evidently the result of much care and thought, and their great merit is that they fix a responsible and official standard as the basis upon which a judicial opinion will have to be formed in each case upon its own merits. When the question of release arises, every consideration being given to the past and present mental condition of the individual on the one hand, and to the safety of the community on the other.

With reference to the periods of probation and the ultimate disposal in the case of recovered criminal lunatics, the committee lay down instructions which we certainly regard as sufficiently definite under the circumstances. After insisting upon a minimum period of probation in the asylum of three years from date of recovery from last attack, they pass on to recommend, before final release, further periods of probation in unpaid and ultimately in paid positions of trust either as overseers in asylums or as warders in gaols. "We do not think," they say, "that promotion to the post of paid keeper in the asylums can be utilised so easily, and with so good a guarantee of testing permanent recovery, as that to the post of paid warder in a gaol. The warders in a gaol are provided with quarters outside, and the recovered lunatic would live with them and be under the observation of a head warder, to whom his habits both by day and night would no doubt be known." The proposed scheme is accompanied, it is but fair to say, by certain limitations as to the number of recovered criminal lunatics to be thus utilised, and also as to the kinds of cases to which it should be made applicable.

We take it on the authority of the committee that such a scheme in India would be not only practicable but desirable; and, indeed, they inform us that the tentative experiments in this direction have produced satisfactory results. In England, we think that such a mode of disposal of our recovered criminal lunatics would neither be feasible nor workable, even if it could be shown to be beneficial, which we very much doubt. We wonder what the Civil Service Commissioners or Sir EDMUND DU CANE would say if it were proposed to them that even a limited proportion of our prison warders should be selected from recovered criminal lunatics. The impracticability of such a proposal as regards this country by no means, however, establishes its inutility in India; and the results of further experience will be awaited with interest.

The report of this committee is a boiling down or concentration of a wide range of experience and observation; it covers much ground, and presents in small compass a great store of valuable and useful information. There is only one expression of opinion in the report that we feel called upon to challenge seriously here, lest silence might be taken to imply acquiescence. Dealing with what we may call the *rationale* of the criminal acts of the insane, the committee express themselves in the following terms:

"We wish clearly to submit that in the case of an insane person the crime which he may happen to commit is always more or less fortuitous.....When a lunatic commits a crime, he does so suddenly, blindly, and without reflection.....The whole circumstances surrounding a lunatic's crime are accidental." Whatever may be the fact amongst the population of India, we contend that the criminal acts of the insane can in the great majority of instances be shown to be neither accidental nor fortuitous, but intentional—the intention being the outcome of pre-existing insane or delusional ideas or processes of thought. If it were not so, and if the opinion of our Bengal committee on this point were right; if, in fact, we were not able for the most part to trace back the criminal act of a lunatic to an intention, and then the intention to a diseased and irresponsible condition of the processes of mentalisation—to insanity, in short,—we would never be able to say to ourselves that the insanity which gave birth to the intention which expended itself in the criminal act was recovered from; we would never be justified or safe in speaking of any criminal lunatic as *recovered*, and still less in recommending him for the responsible post of prison warder.

Few facts in the history of civilisation are more significant or more startling than the rapid diffusion throughout Europe during the present century of the doctrines of Pessimism. Under the influence of LEOPARDI in Italy, of SCHOPENHAUER and HARTMANN in Germany, and of the great Russian novelists in the dominions of the CZAR, the gospel of despair has spread and prevailed to an extent that may well seem surprising when we consider how little of comfort, help, or guidance that gospel contains. Briefly summed up, pessimism teaches that the pains of life outweigh its pleasures, that the fate of man is to struggle laboriously by paths that are distressing towards ends that are unsatisfying, and that it is the unhappy constitution of humanity to be unconscious of its happiness, but keenly alive to its misery. The pessimist philosopher does not only deny the possibility of attaining individual happiness now and here; he disdainfully rejects the doctrine of a future existence, and even refuses to the Positivist the consolation of looking forward to a regenerated humanity upon earth when life shall be purged of its dross and illuminated by the instreaming of universal knowledge. From such a gloomy metaphysic it would seem hard to educe any comforting or inspiring ethic. Pessimism can find no better stimulus to effort than the desire to lessen the appalling weight of human woe, which, according to its exponents, must ever remain overwhelming and ever resist every effort for its successful mitigation. It points to no Land of Promise, the prospect of whose milk and honey may inspirit the weary travellers through the wilderness; it sings no pæans over a coming era of freedom, plenty, enlightenment, and peace; it bluntly informs humanity that its lot is evil, that its best efforts will never achieve aught but some trifling mitigation of its sufferings, and that there is hope neither in the future of the race nor beyond the grave.

These doctrines, although proclaimed and accepted throughout a considerable portion of the Continent as a new Evangel, are really an echo of Buddhism, and are in

every essential respect identical with the teaching of Prince GAUTAMA, whose influence in the entire Eastern world has been so potent. Berlin has answered Benares in the cry that life is evil, that hope is vain, that only in self-renunciation will the cravings of man find solace and rest.

When we come to consider pessimism from the impartial point of view of scientific scrutiny, we become impressed with the conviction that it indicates less a normal development of human thought than a moral and intellectual disease—the outcome, in all probability, of the unhappy surroundings of the individual or the untoward tendencies of the epoch. The child in the nursery, the youth in his academic or mercantile career, the average man or woman, to whom health and a reasonable proportion of the goods of life have accrued, never stop to ask the question whether life be worth living, but they indicate their unconscious conviction of its inestimable worth by acting as if its preservation were an end compared with which all others are insignificant. If life be stigmatised as worthless, the general sense of humanity will conclude that the speaker has probably made shipwreck of its worth. So sensible are the German pessimists of the risk to their philosophy from the influence of "the individual factor," that they deal with this difficulty at great length, and protest with all the scorn at their command that no hardship or misfortune in the life of the philosopher has availed to add any darker tinge to his teaching. For "constitutional pessimism," or, in other words, for pessimism springing from obvious physical or moral causes in the individual, they have an unmeasured contempt. Yet who shall confidently exclude the influence of health, temperance, and a favourable environment from exercising weight in the arbitrament of so complex and far-reaching a problem as that of the value of life? Will the dyspeptic, the hypochondriac, or the sensualist be likely to appraise the pleasure and satisfaction of living at the same value as the man who to the *mens sana in corpore sano* has added purity and self-control? Life may be evil, not because its satisfactions are beyond reach, but because they have been enjoyed and abused. Who shall say whether the latter class may not bear a very considerable proportion to the former? The fundamental postulate of pessimism, that man is ever striving after the unattainable, and that the striving is in itself painful, is not the verdict of the unbiased human consciousness. There is joyousness in labour, in the free play of physical and mental activity, even although its end should be either incapable of realisation, or unsatisfying if realised. Nor can it be granted that a contented satisfaction with life is towards its close an altogether rare phenomenon. HORACE depicts man as departing from life like the satisfied guest who has fared abundantly, and leaves the feast without regret. Surely this picture is not wholly imaginary.

There can be little doubt that the pessimism of modern Europe has its root to a large extent in social hardships and wrongs. The burdensome military system of Germany, the poverty of the Italian peasantry, the lack of individual freedom in Russia—these make life hard and unlovely, and naturally enough suggest doubts regarding its worth. The remedy is to be sought, not in philosophy, but in practical reform. When men are free, engaged in not distasteful

labour, and moderately prosperous, pessimism has little hold upon them. SCHOPENHAUER and his followers would no doubt deny that freedom, congenial occupation, and material prosperity are ever likely to be attained by the majority of the race, but there seems no adequate ground for despairing of such a consummation.

While pessimism is in the main a harsh and paralysing doctrine, it has its better side. It indicates a quickened recognition of the sufferings of humanity, which the cheap philosophy that "all is for the best in the best of all possible worlds" so calmly ignores or depreciates. To this element of truth in its teaching must its influence be in the main attributed, and if its rapid diffusion and increasing popularity serve to startle our arm-chair philosophers and theologians, and to rouse them to meet the ills of men with some better medicament than comfortless platitudes, pessimism will not have been promulgated in vain.

UP to the present time snow-blindness has been looked upon by competent observers as a disease of the interior parts of the eye, an irritation of the retina and the optic nerve due to the intense reflection of the light by the snow. Thus LEBER considers snow-blindness a superior degree of dazzling. Others think that there is some relation between it, hemeralopia, and nyctalopia. Medical men who have had an opportunity of investigating this disease have described in connexion with it very great conjunctival irritation. They have either explained this, with REICH, as a reflex symptom of the dazzling due to the intense brightness of the snow, or they have held with SCHIESS-GEMUSEUS that the conjunctivitis is independent of the blindness and is due to the desiccating influence of the rarefied air. Dr. BERLIN, a Swedish observer, who made a special study of this disease during NORDENSKIÖLD'S expedition to Greenland in 1883, holds views both as to the nature and cause of the affection diametrically opposed to those at present taught. After a careful study of Arctic literature and the ophthalmological records of the disease, Dr. BERLIN has been able to determine that this affection is met with as far north as any expedition has penetrated, but is unknown south of certain degrees of latitude. He has constructed a chart of the Arctic distribution of snow-blindness, which shows that it follows very closely the isotherms of the isothermal lines. South of this region snow-blindness is only met with sporadically in high mountains. In the Arctic regions it breaks out usually in the spring-time, but it is also met with in summer wherever snow remains, as on the glaciers. The disease is rife not only when the sun appears but also during snowstorms and fogs. The following are the symptoms observed: intense burning pain in the eyes, commencing with a pricking sensation as if produced by a foreign body, increased secretion of tears, photophobia, and blepharospasm. At first there is hyperæmia of the conjunctiva of the globe, then of that covering the eyelids. Soon a chemosis of the globe appears, corresponding to the opening of the lids. In grave cases the cornea becomes dull and opaque. The pupils are contracted and the fundus oculi is slightly hyperæmic. The visual power is not diminished, but the field is narrowed by the above changes. The large majority of cases get well at the end of two or three days

if the patient guards himself against the exciting causes. In some cases corneal ulcers make their appearance, and sometimes more destructive processes, causing diminution and loss of vision. Except in these cases, snow-blindness does not produce loss of vision. Occasionally the affection attacks one eye only, and that the one usually turned towards the sun. Animals may also suffer from the disease. In Dr. BERLIN'S opinion, the symptoms, as well as the manner in which they are produced, invalidate the supposition that the blindness is a dazzling caused by the snow. In reality, the dimness which is caused by a strong light thrown on the eyes—the sun, for instance—is not accompanied by any pain or the least symptom of any irritation of the anterior parts of the eyes. In these cases, however, there is a constant lessening of the visual field, accompanied by scotomata, which are altogether wanting in snow-blindness. Moreover, if the current teaching were correct, snow-blindness ought to be prevalent everywhere where there is snow and sunlight, but it is not. Neither will the fact of the rarefaction of the air explain this disease, so common in the Arctic regions. Places where snow-blindness is so rife are also remarkable for their low temperature and the want of humidity of the air. As it is the humidity of the air which principally absorbs the radiant heat, the caloric rays of the sun must, in these localities, manifest an intensity of action far above the common. Observation has shown that this is the case, for on high mountains and in the Arctic regions exposure to the sun's rays produces on the bare skin an excessively painful dermatitis, which the radiant heat reflected by the snow very much aggravates. As a result of several observations, it is found that the effects of exposure to the sun are most severe in springtime. The eyes are affected simultaneously with the skin or somewhat previously. The process is the same: hyperæmia of the skin and the conjunctiva, then serous exudation, both followed by the intense burning sensations so characteristic of snow-blindness. Dr. BERLIN rejects the hypothesis that the retinal hyperæmia might be produced primarily by exposure to the sun; he depends, amongst others, on the experiments of JANSSEN, which showed that an excessively small amount of radiant heat penetrated to the retina. The ordinary treatment adopted is the use of spectacles of dark-coloured glass, and opiates to relieve the great pain experienced. Instead of the latter, Dr. BERLIN suggests the application of cocaine.

THE ordinary meeting of the Council of the Royal College of Surgeons of England held on the 8th inst. presents some points of interest to the Fellows and Members of the College. We notice that a report on the conduct of examination was presented from the Committee of Management of the two Colleges. The regulation affecting candidates for examination in anatomy and physiology (*vide* THE LANCET of the 10th inst., p. 944) appears to be a fair one. The Committee of Management, we may note in passing, is one controlled by the Fellows of the College of Physicians on the one part, and by the Council, and not by the Fellows, of the College of Surgeons on the other part. This is yet another instance of the inequality of the status occupied by Fellows in the Conjoint Scheme.

An expenditure of over £5000 on the new museum was

authorised, without any consultation with the corporate body. The disciplinary powers of the Council of the College were to be left untouched by the General Medical Council, as the Council of the College deemed itself to be fully competent to carry out Section 16 of the bye-laws or even to improve upon it.

The Council of the College has at last spoken on the subject of reform, which was again pressed on its consideration at the general meeting on November 1st, 1888. The reply is so weak that we will quote it again as illustrating the views of the Council of the College in opposition to that of the College: "It seemed to the Council best, in the interests of the College, that the discussion on the subjects which have been in dispute should cease with the grant of the Supplemental Charter; that they cannot believe that any advantage is likely to arise from reopening questions which have been fully considered; and on behalf of the College they trust these questions will now be allowed to rest."

Doubtless, some of the members of Council would hail the Supplemental Charter as an earnest of truce; but what peace can there be so long as the rightful power of the many is absolutely surrendered to the unsympathetic hands of the few? For our part, we assert that these disputed questions have not yet been closed, nor are they at all likely to be shelved again, for as education advances and greater power is entrusted to the keeping of the many, so the argument of self-rule at the College becomes irresistible, and the present rule of an oligarchy less defensible. Until such moderate reforms as have been prospected are carried, surgeons must apply more precision in their use of *collegiate* terms: e.g., not to confuse the words "Council of the College" with the more expressive and comprehensive word "College"; to recognise that, up to the present, the Presidentship of the College exists nominally, but not in reality; that a Fellow of the College exercises only the rights of a Member, and that a Member is but a *Licentiate*. The College expresses itself now only at the annual meeting, and that expression may be translated into "*Vox, et præterea nihil.*"

Annotations.

"*Ne quid nimis.*"

THE PENAL POWERS OF THE MEDICAL AUTHORITIES.

THE disciplinary powers of the medical authorities are in a very chaotic state. Some have no such power. Those which seem to have them are not quite sure about them or their validity, and there is great variety as to the nature and extent of the powers of this sort possessed by bodies which are credited with them. Under these circumstances the bodies are rather slow to exercise their penal functions, and show a disposition to throw all such duties on to the Medical Council. This state of matters is felt to be unsatisfactory. It is also costly. The Medical Council is a large body, and not well fitted for, in the first instance, investigating elaborate charges against medical men. It is, however, right that no man should be erased from the Register without its sanction, as required by the present Act. The President of the Medical Council, Mr. John Marshall, has drawn up

a memorandum setting forth the actual state of the case, and making various suggestions for a short legislative measure that will give the necessary powers to each body to deal with its own graduates or diplomates, and to give similar powers to all bodies. The legal advisers of the Council, Mr. Muir Mackenzie and Mr. Frederick Willis Farrer, think there are good grounds for applying to the Legislature for extensions and modifications in the existing powers of the qualifying bodies and of the General Medical Council. Their suggestions also include provisions for defining and simplifying powers of restoration to the Register, and for giving the Medical Council power of erasure from the Foreign and Colonial Registers. Both the President and the lawyers suggest that the judicial powers of the Council might be delegated to the Executive Committee, or rather that this committee should have a power of inquiry in the case of charges of infamous conduct in any professional respect, and that their report should be conclusive as to facts reported. It is certain that the disciplinary powers of the bodies and of the Medical Council need definition, and even extension, and we trust that no time will be lost on the part of the Council in asking its legal advisers to formulate proposals to this effect that may be ready for introduction to Parliament at the opening of the session of 1889.

THE TRUE NATURE OF TYPHLITIS.

THE recent discussion at the Medical Society upon Dr. Bull's paper, as well as that which followed the paper of Mr. Treves read before the Royal Medical and Chirurgical Society last session, go to confirm the opinion as to the rarity of a true typhlitis apart from inflammation of the appendix cæci. In the clinical lecture contributed to these columns a few weeks ago, Sir Dyce Duckworth affirmed that "without doubt the most common cause of typhlitis is ulceration of the appendix," although he does not wholly discard the time-honoured explanation of typhlitis stercoralis. As pointed out at the Medical Society by Dr. Weir, the evidence of the post-mortem room gives no countenance to the old doctrine, for in every recorded fatal case the appendix was found to be the starting-point of the mischief. The same view was forcibly expressed by Mr. Treves, and although the opinion may be said to be founded only on cases which have required surgical intervention, or which have proved fatal from perforation of the appendix either directly or indirectly, yet it would be difficult to establish a clinical distinction between such cases and the more common class of case in which the symptoms resolve and recovery takes place. For our own part, we frankly admit that in the majority, perhaps in all, the cases of so-called typhlitis it is the appendix which is inflamed, perhaps ulcerated, with a localised peritonitis (i.e. peri-typhlitis) as the consequence. That this should be frequently associated with faecal accumulation in the cæcum itself is not surprising; but that the cæcum is generally inflamed apart from the rest of the bowel, except in the unusual circumstance of long-standing impaction of its contents, as in cases of stricture of the colon or rectum, is most questionable. Granting, then, that the symptoms ascribed to typhlitis are due really to inflammation of the appendix (we strenuously object to the barbarism "appendicitis") and peri-typhlitis, there is nothing surprising in the frequency of the occurrence, or in its common termination in recovery, or in its liability to relapse; although as to relapse we lack definite statistical evidence upon its frequency. It is rather surprising to hear of so many cases passing on to supuration, as in Dr. Bull's experience; and his recommendation to use the exploring needle to detect the presence of pus is one to be followed with caution. In these days of abdo-

minimal surgery it would not be surprising to find advocates for surgical interference in every case of perityphlitis. At present the discovery of suppuration is held to justify such intervention; but the physician may reasonably urge that even the existence of pus in a localised peritoneal exudation does not of necessity exclude spontaneous recovery. The appendix caeci will, we foresee, prove the battle-ground of a struggle between the advocates of a medical or surgical line of treatment in typhlitis.

THE HEIDELBERG SEWAGE TANK SYSTEM.

WE have been favoured by Mr. Charles Hancock, F.S.S., with a translation from the *Gesundheit* of a paper by Dr. Carl Mittermaier on the method of sewage disposal by tanks or pails as adopted in Heidelberg. The system is described as having had its origin principally in the difficulty found in procuring a suitable site for a sewage farm and filter-beds, and in the uncertainty that existed at the time as to the proper methods by which chemical treatment could be applied to sewage. The waterworks were also unable to supply a sufficiency of water to adequately flush sewers which were made to receive sewage largely composed of faecal matter. The tank system was hence adopted, butts or petroleum casks answering quite as well as iron tanks; and, as regards the soil pipe passing from the interior of the house to the tank, either a syphon apparatus or a direct acting valve trap was inserted in it. The system, it is asserted, has become thoroughly popular, and this notwithstanding initial difficulties in introducing a new system; and with the extension of the city's main drainage system privies or closets communicating with the drains were ordered to be disconnected, and no night soil was to be allowed to find its way into the new sewers. And not only so, but some 550 other localities—German and foreign—are stated to have followed the lead set by Heidelberg in this matter, the results attained being held to be perfectly satisfactory in point of freedom from nuisance and wholesomeness. In so far as this system has got rid of the old latrine or privy and of the underground cesspool, it must be admitted to have effected a distinct change for the better; but it is quite evident from some parts of Dr. Mittermaier's paper that he compares it with sewer and drain systems such as should not exist rather than with efficient ones. Thus, he writes: "Not less dangerous may sewage become, if bearing disease germs it is allowed to go into the public sewers. On the walls of these sewers the morbid germs find a highly suitable soil of development, favouring reproduction. Owing to the strong current of air, more particularly characterising well-constructed sewers, with variations of temperature as between the interior thereof and the outer air, and with sudden changes of barometric pressure, sewer gas mingled with disease germs gets driven back into dwelling-houses; and this will take place, in defiance of the most cleverly contrived water-sealed traps." Here we have reference to trust in traps to keep sewer air out of drains and houses, a reference which shows clearly that the principles which for the last ten years have been making such rapid and general progress in this country—namely, that of aerial disconnexion of house drain from sewer, and of waste pipes from drain—are not apprehended. No modern bye-laws as to house drains and their connexion with the sewers would in this country tolerate trust in the best water-sealed trap, the true method of such connexions being indicated in the annotated edition of the model bye-laws issued by the Local Government Board. Then, again, we should deprecate anything like a general introduction of this system even into places where some difficulties as to ultimate disposal of sewage did exist, because it is well known that the elimination of mere solid excreta from

town sewage does not materially get rid of the difficulty. Domestic liquid refuse, washings of roads covered with horse-droppings, &c., are of themselves sufficient to constitute real sewage, in so far as the question of disposal is concerned; and, as a matter of fact, our towns having a pail-closet system do not, in consequence of this, find that they are freed from the common difficulties attaching to sewage outfalls. So also, since Heidelberg commenced its operations, great advance has been made in the chemical treatment of sewage, and before anyone contemplated the adoption of the Heidelberg system we would at least urge him to pay a visit to the Acton sewage works, where the magnetic carbon system is now in vogue, under circumstances of efficiency in point of effluent and economy of space and material that were never contemplated when the Heidelberg system was first introduced. We do not for a moment contend that no district will have difficulties to contend with by adopting one of the modern alternatives to the suggested tank system, but we believe that these difficulties may now be more easily overcome than ever; and that, once faced, the result will be more satisfactory than the adoption of the Heidelberg system advocated by Dr. Mittermaier. And, further, any possible advantages to the land that may follow on the use of the Heidelberg tank contents as a manure are, we believe, more than counterbalanced by the drawbacks to the system.

POPULAR ELECTION OF MEDICAL OFFICERS.

THE method of election to professional office by popular vote has many drawbacks, of which by no means the least arises out of the fact that the electors do not usually take any very lively interest in their work. Unless this were pretty generally understood to be the case, it would surely have been impossible for such an extraordinary claim to be put forward as was, in fact, advanced by the plaintiffs in the action of Howard against Hill, which has just been tried by Mr. Justice Kekewich. The question was as to the election of an ophthalmic surgeon to the Glamorganshire and Monmouthshire Infirmary, the appointment being claimed by Mr. H. Collen Ensor, in opposition to Dr. Tatham Thompson, who had been declared elected by the officer, whoever he might be, in charge of the poll. As to the facts, there was no dispute between the parties. In November, 1886, the governors of the infirmary passed a resolution to the effect that an addition should be made to the staff of the institution in the person of an honorary ophthalmic surgeon. For the vacancy thus created there were two candidates—Mr. Ensor and Mr. Cant. Mr. Ensor secured a considerable number of proxies for the purpose of this election, and Mr. Cant, perceiving that he would fail in the end, retired from the contest. Thereupon the secretary to the hospital wrote, informing Mr. Ensor that as no competitor was in the field the matter could not proceed, and so it rested until the annual meeting in January of last year. Then a fresh resolution was taken, as the result of which an election was held in the following April. The candidates on this occasion were Mr. Ensor and Dr. Tatham Thompson, of whom the latter, as we have already said, was declared elected. Mr. Ensor, however, tendered 140 proxies which had been given to him for the purposes of the previous competition between himself and Mr. Cant. Had these been counted they would have turned the scale in his favour, but, being disallowed, they gave occasion to the present proceedings. The action, however, was dismissed, the judge adopting what certainly appears to us the only possible view—namely, that "the proxy was not intended to be held for an immeasurable time. The whole idea was that it was to be a delegation of authority for a particular purpose, in this case for the election then in contemplation, and no other." With the outcome of the proceedings we find

no fault; but at every prior stage we find food for reflection. In the first place, it is much to be regretted, and a requirement against which we shall never cease to protest, that medical men should be called upon to canvass for appointments to which professional standing ought to give a well-recognised claim. Then, again, we feel a little uneasy at the keenness of the rivalry here manifested between brother practitioners. Of course we clearly recognise the difficulty of the position in which each was placed. But although we do not suggest the smallest blame on either side, so far as Mr. Ensor and Dr. Tatham Thompson are personally concerned, we do very much regret that they have been in connexion with this infirmity appointment the victims of most untoward circumstances.

SLÖJD.

THE Swedish system of *Slöjd* education is beginning to receive some well-merited attention in this country and America. The discussion which among ourselves is known as the technical education controversy is in Scandinavia recognised under the term (of somewhat uncouth aspect to the English reader) *Slöjd*. Having regard to its pronunciation, some writers among ourselves have Englished it as *Sloyd*, but we doubt whether it is worth while to attempt to naturalise so strange-looking and strange-sounding a word. Be that as it may, there can be no doubt that the experience and the discussions of our Scandinavian neighbours in the matter of *Slöjd* teaching are well worthy of our attention. From a monograph by Dr. Otto Salomon, director of the Normal School for *Slöjd* instruction at Nääs, which reaches us in the form of a translation from New York, we gather that in Sweden, as among ourselves, the advocates of this particular form of technical education are divided into two schools. The one school would teach it for the sake of giving a distinctly practical turn to education and with the object of making the school into something like an educational workshop. The other school values *Slöjd* instruction not for the sake of the products turned out by the pupils or of the industrial skill which they acquire, but for the development which education in manual labour promotes, and for the healthful exercise which is involved in the use of tools. These latter are the purposes for which it seems to us that technical education in schools is best adapted. *Slöjd* is, perhaps, not quite so comprehensive a term as "technical instruction" among ourselves, since it is applied only to the teaching and practice of such industries as can be prosecuted in the cottage home. Hence, working in wood, as wood-carving, joinery, and turnery are the *Slöjds par excellence*; but if the object in view be to educate the faculties of observation and manual dexterity, the choice of methods will naturally be in practice limited to a very few, which demand only inexpensive plant and moderate space for their practice. Hence the distinction is probably a matter rather of terms and definitions than of a serious difference in point of substance; and, in any case, the important point is that the education of these faculties should be recognised as an integral part of any complete scheme of education. A very elaborate classical or mathematical education may leave a boy or girl sadly deficient on that side which comes into contact with the living world. To how many highly educated men and women, for instance, would it be possible to apply with only too much force and point the old description of heathen idols: "Eyes have they, but they see not; they have ears, but they hear not." The habit of interposing a book between themselves and the world around them has become so inveterate that they have grown to be helplessly conventional. They never doubt, for instance, that lightning moves in jagged and acutely angular paths, since poets and painters have commonly so depicted it; and

they are not gifted with the curiosity or keenness of vision to discover that its course is, in fact, a very complex but perfectly sinuous curve. This is only an illustration, and instances might be multiplied a thousandfold. There is no question that, to many a man of finished culture, the training of his eyes to see things at first hand would be as great an enlargement of his mental horizon as the acquisition of a new language and the command of an unread literature. It is for these reasons that we are anxious to see the training of the faculties more systematically undertaken than is the case under our present educational system. The teaching of drawing does something to educate the eye and to develop the coördination of eye and hand. The teaching of music does perhaps even more by way of contribution to the coördination of various organs, and the corresponding development of the individual. Gymnastics and drill, again, have their own value for the selfsame purposes. But all these together are very far from exhausting the possibilities of training in this direction; and we strongly recommend to English schoolmasters the careful consideration from this point of view of the Scandinavian *Slöjd*.

THE PRISON POPULATION.

THE prison reports have in recent years afforded some very pleasant reading, and happily the present year is no exception to this rule. The commissioners who administer the local prisons, and the directors who have the eleven large convict prisons in charge, are both able to speak of a continued diminution in the numbers of prisoners coming under their care, and an almost equal improvement in their conduct while under restraint. The amelioration in the condition of these, the outcasts of society, is gratifying in every way. It speaks, as we hope and believe, to an elevation of the whole mass of the population, which has been sufficiently comprehensive to include even the criminal class in its operation, and it indicates also, in a manner still more unmistakable, that a large measure of success has attended the efforts which have been made in recent years to improve and perfect our prison discipline. From a sanitarian's point of view the results now shown by our prison management afford legitimate ground of satisfaction. On this point the commissioners are able to write as follows: "The yearly average death-rate for the sixteen years and a half ended the 31st March, 1878, was 11·6 per 1000, while for the ten years ended 31st March, 1888, it was 8·1. During the five years ended 31st March, 1888, there were only 11 deaths from enteric fever in the whole of the prisons, 9 from erysipelas, and 1 from small-pox;" and the directors, for their part, summarise their experience for last year in the language of the medical inspector's report to the effect "that there was not a single death from any eruptive fever or from diarrhoea or any disease which could be ascribed to defective sanitation." This result may be accepted so far as it goes, but there are serious defects to which we have on more than one occasion called attention in the accommodation provided in the neighbourhood of various court houses for prisoners awaiting trial. We are glad to gather from the present report that steps are being taken to bring about a much-needed improvement in this respect, and in some parts the matter is being attended to with commendable spirit and energy. But it is clear that public vigilance in this respect cannot yet be safely relaxed. Thus, for example, it is admitted that at such a place as Clerkenwell the accommodation is "bad," and no intimation is afforded that the authorities intend to improve it. On the contrary, it would appear that the official plan of meeting the difficulty is to bring the prisoners up a few at a time. We venture to say that this will not do. It is, no doubt, neces-

sary to keep untried prisoners in confinement; but it is not necessary, and it is not permissible, to confine them in insanitary cells without proper light, warmth, and other requisites of health and decency. We trust that the local authorities that are still in default under this particular will lay to heart the good example which has been so well set and so widely followed within the last few years.

WARM FOOD v. DRINK.

INDULGENCE in intoxicating drinks, though a consequence of diverse causes, is admitted to be in many cases closely connected with the want of suitable food. Among work-people this want is particularly felt. It is a common thing to find that in establishments where a number of persons are employed during the whole day no adequate provision, if any at all, is made for meals. Time only is allowed. We cannot, indeed, expect that all employers will cater for their workpeople, though many firms do so. Such an arrangement, though sometimes convenient, is not indispensable. In large manufactories or warehouses it would probably be impracticable. The employed must, in this case, provide for himself. In order to do this, unless his work be near home, two courses alone are open to him: either he must carry food for the day to the warehouse or factory, or he must rely upon some neighbouring restaurant for the supply of his needs. Given a conveniently situated eating-house, his difficulties are considerably lessened, and in large towns he may in this way obtain all that he requires. Still, it may be doubted if, even in the metropolis, his opportunities of refreshment, apart from the ever-open public-house, are all that could be desired. There is also the question of cost, and a very cheap meal may, with the addition of train or tram fares, become too dear for a short and burdened purse. If the day's provision is carried from home, the cost will probably be less, but meals must often be taken cold. Some change of plan seems here very desirable. It has often occurred to us that if an arrangement could be brought about by which the food and drink thus carried by the worker could be heated at his place of occupation, the effect on his health, comfort, contentment, and labour would justify its adoption. The cup that so often inebriates those it cheers would not then be, as it now too commonly is, the one article of diet possessing any apparent pretensions to warmth.

TRAUMATIC AORTIC ANEURYSM FOLLOWING RAILWAY ACCIDENT.

A CASE of some medico-legal interest is recorded by Dr. D. Grant of Melbourne (*Australian Medical Journal*, Sept. 1888), in which a gentleman suffering from aortic aneurysm, attributed to a railway accident, recovered £2300 damages. The medical evidence was unanimous on the plaintiff's side, and no medical witnesses were called to refute the contention. The facts of the case are briefly these. The plaintiff, who had led an active life and shown no evidence of arterial disease, was in an express train on May 11th, 1887, when a collision occurred. He was at the time sitting with his face towards the engine, leaning slightly forwards, with his chest and hands resting upon his umbrella. At the moment of collision he received a blow on the chest and head, and was violently shaken, but did not lose consciousness. From that time he felt pain in the chest, and began to suffer from shortness of breath. Three and a half months later Dr. Turner diagnosed aortic dilatation, a diagnosis confirmed six weeks afterwards by Dr. Gardner of Adelaide. Dr. Grant saw him in consultation with Dr. Turner on Dec. 8th, when there was some dyspnoea, especially on exertion, and slight visible and palpable pulsa-

tion to the right of the sternum over the third and fourth costal cartilages, with a semicircular arch of dulness. The symptoms and signs became more marked, and iodide of potassium was prescribed. Death occurred suddenly on June 12th. The trial took place on April 16th and 17th, the damages being laid at £10,000. It was contended by the medical witnesses that the history of the case tallied precisely with the effect of a sudden blow on the chest, causing an excessive strain upon the walls of the aorta. This excessive tension was held to be due to the violent concussion of the whole body, the compression of the arterioles by the involuntary contraction of all the muscles, and "the direct compression of the ventricle during systole by the impact of the chest wall and consequent violent expulsion of its contents into the already over-distended aorta." The defence suggested: (1) The reasonable presumption of pre-existing arterial degeneration in a man of sixty-four, who had had dyspepsia and lumbago; (2) the existence of the aneurysm in a latent form before the accident; and (3) the inadequacy of the alleged cause to produce rupture of the aorta. These points were, as Dr. Grant states, easily refuted, so that the judge's remark that "not one jot or tittle of evidence" had been produced in opposition to the opinions of the medical witnesses, was fully justified. Although the medico-legal interest of the case may be said to have ceased with the jury's verdict, yet from a pathological point of view it would have been extremely interesting to have had a post-mortem examination, so as to have determined the precise seat and nature of the aneurysm and the condition of the arterial system generally. The duration of the case was thirteen months, and it is possible that proof of the traumatic origin of the aneurysm might have been obtained. Unfortunately no such examination was made.

PAUPERISM IN ENGLAND AND WALES.

It would be very easy to draw mistaken inferences from the facts collected in the latest of the pauperism returns, which in many respects appear to indicate a falling back from the standard attained in recent years. In the first place, the number of paupers relieved has within the past three years shown a marked increase upon the numbers of the triennium immediately preceding, and the very hopeful symptom of an actual diminution in the number of paupers, occurring in spite of the continued growth of population, has now disappeared. But although this is so, the fact remains that the actual proportion of paupers to population is now less than ever heretofore. The rate of comparative decrease is not so rapid as it was in the more fortunate period between 1882 and 1886, but the movement is still in the right direction, and indicates a continued if slow growth of the population in the habits and conditions of independence. Another consideration which needs to be carefully borne in mind in any discussion of the statistics of pauperism is this, that the statistical result is very largely brought about by moral causes. In putting this proposition forward, we are far from suggesting that moral causes are less worthy of attention than material causes. On the contrary, we would for our own part rather choose, if choice were to be made, that pauperism should increase, if needs must, through the impoverishment of our people by material losses, than through their demoralisation. But it is well to get as nearly as possible to the actual facts, and if an increase in pauperism be in truth attributable to an increased readiness on the part of the very poor to accept public charity, or to a relaxation of the tests which the Poor-law authorities are accustomed to apply, it would in that case be a mischievous error to attribute such an increase to the aggravation of the pinch of poverty. To some considerable extent we believe that

the increased ratio of pauperism in the metropolis as compared with the whole country is to be attributed to these moral causes. The influence of the agitation of last autumn on both the poor and their guardians has not yet worn away. We are not at all sure that it is desirable that it should altogether pass away—at least so far as the guardians are concerned,—for the administration of poor relief very easily slips into a mere routine, from which nothing is more alien than the sentiment of charity, and than which nothing can well be more productive of class jealousy and reciprocal ill-will. In spite, then, of some appearances to the contrary, we draw a happy augury from these latest returns, and find these quite consistent with belief in the general well-being, both moral and material, of our people.

HÆMOGLOBIN IN HEALTH AND DISEASE.

DR. G. D. WILKENS, of Stockholm, has recently published a somewhat elaborate paper on the estimation of hæmoglobin and the number of the red corpuscles in the blood of both healthy and diseased persons. He seems to have made himself acquainted with the various instruments which have been devised by different observers, including those of Hayem, Malassez, Quincke, Gowers, Mantegazza, Bizzozero, Hénocque, and others. The one used by him, however, was Fleischl's hæmometer. Amongst other precautions he was careful to get his own sense of colour accurately tested. He takes as a standard for hæmoglobin Fleischl's standard as 100, which he thinks, however, is lower than the normal standard of Stockholm people. Of 642 individuals in good health, infants under two months old had 100 per cent. and more; from two months to twelve years the hæmoglobin decreased, but it increased to 100 per cent. and above between twelve and sixty-two years, after which time it again diminished. Dr. Wilkens divided the diseases in which he examined the blood into two classes—viz., primary and secondary anæmia. The primary anæmias were: chlorosis, simple anæmia, progressive pernicious anæmia, hæmorrhagic purpura, leucæmia, and pseudo-leucæmia. The secondary anæmias followed hæmorrhages, typhoid fever, acute croupous pneumonia, tuberculous, acute articular rheumatism, pulmonary tuberculosis, carcinoma and sarcoma, organic disease of the heart, and diseases of the digestive organs. Generally he obtained the same results as those furnished by the excellent researches of Laache, Engelsen, and Leichtenstern. He classed as simple primary anæmia four cases that could not be placed in the same category either with chlorosis or progressive pernicious anæmia. The lowest percentage of hæmoglobin—viz., 8 per cent.—was found in a case of the latter disease nine hours before death. Dr. Wilkens was also able to show that there was an increase in the quantity of hæmoglobin in proportion to the number of corpuscles, as also an increase in the size of these corpuscles in progressive pernicious anæmia. In typhoid fever, from the commencement and during its whole course, there was an increase in the anæmia, which attained its maximum after the cessation of the fever, and then diminished rapidly. A fact worthy of notice is that, of fourteen cases of hysteria and neurasthenia, twelve showed an excess of hæmoglobin. He sums up his researches as follows:—In disease there is no constant relation between the intensity of the hæmoglobin and the number of the corpuscles present. Excepting in progressive pernicious anæmia, a large quantity of hæmoglobin corresponds to a large number of corpuscles; but a small quantity of hæmoglobin may be found with a large or small number of corpuscles. Primary anæmia (chlorosis excepted) is caused both by a diminution in the amount of hæmoglobin and in the number of corpuscles. Secondary anæmia and chlorosis

are produced most frequently, if not always, by a decrease in the quantity of hæmoglobin, the number of corpuscles usually remaining normal. In fine, the estimation of the intensity of the hæmoglobin is a very essential point in the examination of the blood.

MANCHESTER AND SALFORD.

MANCHESTER and SALFORD are, we gather, further thinking of the advantages each would derive from the union of the one with the other. Probably there are many difficulties which have to be surmounted before this amalgamation can be effected, but there is no doubt that sanitary administration could be better carried out if one authority dealt with the whole area. London is a striking instance of the difficulties which accrue to effective administration from division into numerous sanitary districts. So Manchester and Salford, although to a less degree, labour under the same disadvantage. Disease, indeed, takes no cognisance of municipal boundaries, and small-pox or fever in Manchester is hardly less dangerous to the inhabitants of Salford than it is to the residents of the other side of the Irwell. The lamented death of Mr. Leigh, the medical officer of health for Manchester, gives an excellent opportunity for the two boroughs to unite for the purposes of sanitary administration. The high position which Dr. Tatham of Salford holds among English medical officers of health, and his knowledge of local requirements, peculiarly fit him for acting as adviser to both corporations. Doubtless he would need proper assistance, but Manchester would gain materially if his services were secured for their city, and Salford would not be a loser by this arrangement. Whether the thoughts of the Manchester and Salford inhabitants have progressed so far as to make this possible, we are not aware; but it is a point well worthy of their consideration before the appointment of the late Mr. Leigh's successor is finally determined.

EVOLUTION IN BONE-SETTING.

HAPPILY for mankind, the general advance of surgery has long ago absorbed whatever was useful in the methods of the bone-setter. His art no longer stands as an irregular outpost of treatment—if, indeed, it ever truly did. The ablest exponents of what is valuable in it are not to be found practising under cover of its own very faulty qualification; but the surgeon, though he may still be excelled in rashness, has nothing to fear in point of skilful manipulation from the rivalry of ignorant handicraftsmen in this field. The bone-setter, popularly so called, is, we may say, an expert in surgical simples. Notwithstanding a record of successes attained in cases where no great anatomical skill was needful, or where a lucky turn just saved the patient from disaster, he too often rushes in where wiser men will not tread. The credit, if successful, is his own; while his failures are apt to be leniently regarded on account of his unprofessional character. His knowledge of the world, far greater than his surgical insight, enables him to strengthen his reputation in the eyes of a credulous *clientèle*, notwithstanding that he exhibits plainly enough to those who will note them the features of the bogus practitioner. It says little for the public intelligence that he still prospers at its expense. Many persons are ever ready in illness to seek the aid of novel expedients. Among this class he still flourishes. Of late, moreover, his position has somewhat altered, and, professing to possess a virtual qualification in medicine and surgery, he even comes forward as an advertised adept in the manual method of treatment. It has, in fact, been attempted to convert bone-setting into a speciality. It is probable that the public will, for a time at least, continue to favour this pretentious attitude. It is extremely improbable that

medical men, who have also been solicited in the interest of the new departure (see copy of circular in this connexion on another page), will countenance in any degree this trick of a waning trade.

THE LATE PROF. H. BAMBERGER.

THE Medical Faculty of the University of Vienna has sustained a great loss in the death of Professor Heinrich von Bamberger, at the age of sixty-six, after a long and painful illness. Von Bamberger was a native of Prague, where he mainly received his medical education, graduating in 1847. He also studied at Vienna (then at the zenith of its fame) with such masters as Skoda, Rokitsansky, and Hebra. His first medical appointment was that of medical assistant in the Allgemeine Krankenhaus at Prague, where he soon became assistant in the clinic. From 1851-4 he was clinical assistant to Professor Oppolzer, who had come to Vienna from Berlin. In 1854 he was appointed Professor of Special Pathology and Therapeutics at Wurzburg, whence he was transferred to Vienna in 1872 to succeed Oppolzer. He had a great reputation as a clinical teacher, and was highly esteemed. His chief contributions to literature are his "Text-book on Diseases of the Heart" (1857) and a monograph on "Diseases of the Chylipoietic System" (1864), which formed one of the volumes of Virchow's Handbook. In addition to these systematic works, he made many contributions to current literature in all departments of clinical medicine.

SOLUBLE VACCINE MATTER.

It had been previously established that a rabbit may be protected against the pyocyanic disease by injecting under its skin the soluble products of cultures deprived of all microbes by means of heat and filtration. M. Bouchard demonstrated that it was possible to obtain the same immunity by the use of urine collected from rabbits dead of pyocyanic infection, the urine being likewise free from microbes. These experiments prove the great part played by chemical substances manufactured by microbes in the body and eliminated by the kidney. MM. Charrin and Ruffer have sought to determine whether soluble "vaccine" matter which develops in artificial cultures could pass through the body of the rabbit and be eliminated by the kidneys without losing its power of conferring immunity. The experiments are reported in the *France Médicale*, No. 128. The answer to the question is given in the affirmative.

DANGEROUS TOYS.

THE manufacture of toys is not usually a dangerous process, but the circumstances attending the recent explosion in a factory at Wandsworth show that it is not always free from risk. In this case two girls employed in making amorces, or caps for use in toy pistols, were accidentally killed by the detonation of a number of these caps, due to the fact that one or more had been overfilled with its explosive contents. Major Cundhill, who conducted an inquiry into the matter, suggests that this branch of industry, which exists only for the amusement of young children, might be discontinued with advantage. In view of the recent unfortunate occurrence, his view deserves consideration. It is also necessary, at the same time, to remember that his argument is based upon a case in which faulty management is alleged, and he does not show that the use of these caps in small quantities by children has been attended by any hurtful consequences. It must be allowed, however, that they are not the safest form of plaything, even though sold in small quantities. Children probably would not much mind the loss of their present liberty to crack off these tiny explosives, but the

case of the makers also demands a share of attention. Whether it is feasible at once to stop the manufacture we cannot say; but, if this is impossible, the facts of the accident, if they show anything, teach the importance of regulating very carefully the preparation in quantity of such unstable materials.

THE MORTALITY OF PNEUMONIA.

DR. WILLIAM OSLER (*University Medical Magazine*, Philadelphia, No. 2) points out that hospital statistics do not warrant the assertion that there has been any marked increase in the mortality from pneumonia of late years, as asserted by some, although the census returns of the United States favour the latter statement. But, as Dr. Billings points out, the comparison with preceding years is inaccurate, since the data were very imperfect and unreliable. At the Pennsylvania Hospital, with a total of 704 cases since 1845, the mortality has been 29.1, a rate sometimes much exceeded, as in 1875 to 1877, when it was 39.2, and sometimes quite as much lessened, as in 1845-47, when it was only 16 per cent. In the Boston City Hospital for thirteen years the mortality was also 29.1 per cent. Dr. Osler shows that in private practice the rate is lower than in hospitals, and points out that the increase of pauper populations in large cities is doubtless responsible in some measure for this diversity. Dr. Hartshorne's statement that the "mortality of pneumonia to-day is, under similar circumstances, more than twice as great as it was forty years ago," is not thus borne out; and Dr. Osler shows that in many cases pneumonia is absolutely uninfluenced by treatment. Yet those cases which do call for treatment are precisely those in which our methods are most futile. Post-mortem records show how seldom a simple pneumonia, apart from chronic disease of other organs, is a cause of death, but Dr. Osler thinks that it may be useful to divide the fatal cases into three groups: "1. Those in which the death has resulted from such complications as gangrene, meningitis, and ulcerative endocarditis—conditions at present beyond our art to remedy. 2. Cases in which death has resulted from mechanical causes—over-distension and paralysis of the right heart. 3. The large group in which death has been due to failure of the general powers under the influence of the high fever, or of the specific poison, or of both combined." He has often asked himself why death occurred in some cases, and had been struck with the distended right heart and systemic veins in the young vigorous subjects that sometimes succumb. This seemed to indicate that the heart had failed in over-distension, and he was determined "not to let such cases die without a copious venesection." For ten years he has practised free bleeding (twenty to twenty-five ounces) in adults, and has seen but one case recover out of twelve or fifteen. The cases of bleeding in the late stage were uniformly fatal, as if the conditions present in pneumonia are something more than mechanical.

DISORDERLY MEDICAL STUDENTS.

THE medical student no longer stands in the public eye as the model black sheep of society. Byronism, which he once affected, does not now give the cue to his manners, and it has been proved to general satisfaction that his growth in healthy manhood does not imply a childish contempt for decent and gentlemanly behaviour, and that he is fully conscious of the fact. There are, however, exceptions to every general rule, and we are therefore not surprised to find that worse as well as better elements of character appear among those from whose ranks the profession is recruited. Lest we should forget this fact, an unpalatable reminder is forced upon us by the

conduct of one or two medical students at the Lord Mayor's Show last week. Disorder on this occasion took the form of apparently unprovoked, and in one instance rather cowardly, assault upon the police. We readily admit that the guardians of public order have not infrequently clashed with the exuberant energy of medical students, and in these conflicts the latter have not, as a rule, secured any greater glory than that of compulsory martyrdom. Yet, whatever may be said against their discretion on such occasions, dishonourable conduct could not usually be laid to their charge. In the instances above quoted a rougher type of student seems to have represented his fraternity, and we must be content to console ourselves with the reflection that his behaviour was as exceptional as it was discreditable.

COLECTOMY FOR MALIGNANT DISEASE, WITH SUTURE OF THE INTESTINE.

MR. KENDAL FRANKS operated on Oct. 30th, at the Adelaide Hospital, on a man aged fifty-eight, from whom he excised a large epithelioma, together with about six inches of the colon. The growth was the size of a large orange, and involved the hepatic flexure of the colon. It was remarkable previously to operation for its great mobility, generally being found to lie between the umbilicus and pubes as the patient lay on his back. The colon was divided on each side of the tumour and the intermediate portion removed, along with some small but hard glands which lay between the layers of the meso-colon. The divided ends of the colon were approximated, and sutured carefully with fine silk. The patient is at present in a convalescent condition. There was a large faecal evacuation on the fifth day per anum, and the bowels have been acting normally since. The structure of the growth was that of a columnar-celled epithelioma.

MEDICAL BULLETINS.

THE *Journal of the American Medical Association* (Oct. 27th) makes the recent allusion by Sir Dyce Duckworth (see THE LANCET, Oct. 6th) to the evil of publishing details of the illnesses of eminent persons the text of some remarks in the same sense. It refers the practice, which has grown so much of late, to the "so-called enterprise of the newspapers, which first persuaded themselves, and then the physicians, that the public must have all the details possible. In the case of distinguished persons there can be but little objection to the physicians letting the public know how they are in general terms; but it certainly is no business of the public to know all the minutiae of symptoms and treatment, how often a laryngeal mirror is used, a catheter passed, or a nutrient enema given. The newspaper writers and the public do not understand more than a small fraction of the medical terms used in minute bulletins, and can get but an erroneous impression from them"; and the moral is pointed by an allusion to the case of the late Emperor Frederick.

REGISTRATION OF MIDWIVES.

AN interesting meeting was held at 33, Holywell, Oxford, on Oct. 25th, to discuss the question of the legal registration of midwives. Papers were read containing a short sketch of the past history of midwifery, stating the need for legislation in the future, and dwelling on the difficulties of country practice. Portions of the draft Bill of 1882 were explained, and an interesting discussion followed. Amongst those present were two members of the Midwives' Institute (London)—Mrs. E. Child and Mrs. J. H. Green—and others. A petition was largely signed at the conclusion of the meeting.

THE MILK-CURDLING FERMENT OF THE STOMACH.

DR. E. G. JOHNSON has studied the action of the milk-curdling ferment of the stomach in the clinic of Professor Riegel of Giessen, and subsequently in the Sabbatsberg Hospital, Stockholm. Researches were made in twenty-four cases on the presence of the ferment and the pathological conditions relative to it. Fourteen of these patients suffered from hyperacidity, accompanied in four of them by moderate dilatation of the stomach. In one of these latter there was also hypersecretion of the gastric juice. One case had considerable dilatation of the stomach with hyperacidity and marked hypersecretion. In three cases the dilatation was insignificant, but there was hyperacidity, complicated in one case by slight, and in another by very great, hypersecretion; in the third case the hyperacidity was accompanied by chlorosis. Three other patients suffering from hyperacidity were also the subjects of gastric ulcer. Dr. Johnson also examined four cases of hyperacidity with neither dilatation nor hypersecretion, of whom three were chlorotic; a case of catarrhal jaundice, four cases of severe chronic dyspepsia, and five cases of carcinoma of the stomach. The contents of the stomach were removed while the patient was fasting, and also four or five hours after food had been given for the purpose of the observations. Dr. Johnson sums up his researches as follows: 1. The milk-curdling ferment is a constant product of the glandular secretion of the stomach, and it is met with at all periods of digestion except in cases of cancer of the stomach, in which it is never found. 2. The ferment was also found in the hypersecretions of the gastric juice of a fasting patient after his stomach had been washed out the previous evening. 3. Gastric juice which contains hydrochloric acid, and which when neutralised causes coagulation of milk, does not appear to be affected in its action by the greater or less amount of acid contained in it at first. 4. The milk-curdling ferment does not pass into the urine. 5. The ferment is easily destroyed by an excess of alkali, and it is probably on this account that it does not pass into the faeces under normal conditions. 6. During fever the ferment appears to be absent from the stomach. 7. The ferment causes coagulation more slowly in boiled than in fresh milk. 8. During the coagulation of milk by the ferment the reaction remains neutral, and lactic acid is not met with after coagulation.

THE COMMA BACILLUS.

DRS. A. E. SALAZAR and C. NEWMAN of Valparaiso have published an interesting *brochure* upon the Cholera Bacillus ("Notas sobre el Espirillo del Cólera Asiático"), containing a succinct description of the methods of cultivation and preparation of specimens. The essay is illustrated by seven plates, very successful examples of microphotography, showing the microscopical characters of the bacillus.

LONDON AS A PLACE FOR CLINICAL STUDY.

IN the *University Medical Magazine* (Philadelphia) Dr. H. A. Hare writes concerning some of his experiences in the London hospitals. After speaking of the prevailing fashion among American medical students of proceeding to Germany for further study, and expressing his opinion that this is a mistake, since so many come over before having had any practical training in America, he says: "If a single specialty is to be studied, then Germany may be the proper place for the graduate of some years' experience and linguistic training; but for the training which is requisite to become a good doctor England is to be preferred." He then gives a highly appreciative account of the Brompton Hospital for Consump-

tion, the Great Ormond-street Hospital for Children, the National Hospital for the Paralytic and Epileptic, and briefly alludes to St. Bartholomew's and University College Hospitals.

YELLOW FEVER.

DR. STERNBERG, in a letter to the *Medical Record* (New York, Nov. 3rd), declares that Dr. Freire's alleged discovery of the specific germ of yellow fever—the *cryptococcus xantherogenicus*—is without foundation; that the micro-organism given to him by Dr. Freire as his yellow fever microbe did not correspond to his published description, and was a simple non-chromogenic micrococcus; also that he (Dr. Sternberg) never succeeded in isolating such a microbe from the blood and tissues of yellow fever subjects, nor did Dr. Freire attempt to show him any preparations of it during his stay in Rio de Janeiro. In fine, Dr. Sternberg concludes that "there is no scientific basis for Dr. Freire's claim that he has discovered the specific cause of yellow fever."

TUBERCLE IN THE AORTA.

P. DITTRICH relates (*Zeitsh. f. Heilk.*, abstr. by Weichselbaum, *Centrbl. f. Bacteriol.*, iv., 20) a case of acute miliary tuberculosis in a boy, twelve years of age, in which the source of general infection appeared to be the rare (hitherto undescribed) condition of tuberculosis of the aorta; for to the posterior wall of the ascending aorta adhered some tuberculous lymphatic glands, from which the tubercle had spread into the coats of the vessel. Bacilli were found both in the glands and in the aortic wall, and it is assumed that they were disseminated through the blood stream by direct detachment from the intima of the vessel.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Regarding the erection of a pharmaceutical institute, it has been decided by the commissary of the Finance Minister that the necessary expense cannot be incurred just at present. Professor Sauer has resigned his position as instructor in Dentistry in the University Dental Institute; his place has been supplied by the appointment of Herr Ludwig Warnekros, who will combine with the lectureship the charge of the laboratory of dental technology. Professor Ehrlich having resigned his position as extern assistant in Professor Gerhardt's medical clinic in the Charité, his place has been supplied by the appointment of Dr. Krönich, formerly assistant under Professor Frerichs. Drs. Karl Fraenkel and Dühessen have qualified as *privat-docenten* in Obstetrics and Gynæcology.

Liège.—Dr. F. Fripont has been appointed *agrégé spécial* to deliver the course of lectures on Gynæcology in place of Professor Wasseige. Dr. Ernest Malvoz has been appointed assistant in the department of Pathological Anatomy.

Naples.—It has been decided to erect a new University building, at a cost of 16,160,000 francs, with lecture-rooms, museums, laboratories, libraries, and clinics all complete. It is expected that the building will take about four years. The old buildings are quite unsuitable for modern requirements, and are, besides, in a very bad state of repair.

Würzburg.—The new Physiological Institute is now in use, having been formally opened on the 3rd inst.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. F. Linzbauer, formerly Professor of Medicine in the University of Buda-Pesth, in his eighty-first year.—Dr. Salvioli, Professor of General Pathology in the University of Genoa, in his thirty-sixth year, of typhoid fever.

THE therapeutic uses of hypnotism were recently discussed in the Neurological Section of the New York Academy of Medicine, papers on the subject being read by Drs. Herter (who has lately studied the subject in Europe), Birdsall, Osgood Mason, and Mr. Cary of Boston. As might be expected, hysteria in its various forms was said to be the most amenable to the influence of this "agent"; but Dr. Herter declared that it was valuable in delirium tremens, and that there was great hope of its effects in alcoholism, morphomania, &c., although, he added, "surveillance in any asylum is also indispensable." He also described a number of affections, neuralgic and other, in which hypnotism was useful. At the same time, however "scientifically" the subject be treated, it is so open to abuse that its introduction into general therapeutics might be disastrous. Moreover, we have yet to learn how far the hypnotised subjects themselves may be permanently affected by the treatment.

DR. FRANK S. BILLINGS has prepared a Bill for presentation to the United States Congress to establish a national "Patho-biological Laboratory" for study and investigation into the nature and causes of contagious and infectious diseases affecting man and animals. The Bill provides for the proposed laboratory being under the control and management of the Surgeon-General of the Marine Hospital Services; the laboratory being divided into two institutes, the one for the investigation of human, the other of animal disease. The Surgeon-General is to select a director for each institute, each of which will also be furnished with a chemist. It is provided that a certain amount of accommodation be assigned to graduates of veterinary or medical colleges desirous of pursuing original research. The Bill proposes that the sum of \$550,000 be appropriated from funds in the Treasury of the United States for the purchase of land in Washington and the erection of a suitable building.

MUCH indignation has arisen in medical circles in Vienna at the wholesale charges of corruption and immorality which were brought against the nurses and attendants of the General Hospital by Père Eichhorn, speaking in Parliament on the question of replacing the lay nurses by religious sisters (*L'Union Méd.*). A protest, signed by all the medical staff, has been forwarded to the President of the Chamber. Père Eichhorn's speech was made in the course of the debate on the Budget, when the question of improvements in the management of the General Hospital came up.

THE Brixton Liberal Association has forwarded to Dr. B. W. Richardson a request to address their committee with a view of standing as a candidate for the Brixton Division of the London County Council at the forthcoming election. To the proposition Dr. Richardson has replied that he would have been glad to accept the invitation, but feels he could not conscientiously perform the duties, if elected, whilst he is still actively engaged in professional work.

THE annual course of five lectures in connexion with the Brown Institution will be delivered at the University of London on the 28th and 30th of November, and the 3rd, 5th, and 7th of December, at 5 P.M. The subject of the five lectures will be "Epilepsy."

It is reported that Professor D. Hayes Agnew will shortly resign the Professorship of Surgery in the University of Pennsylvania, and that Dr. Nicholas Senn of Chicago will be invited to succeed him. Dr. J. Wm. White of Philadelphia has also been mentioned in connexion with the post.

THE members of the Glasgow University Club, London, dine together this (Saturday) evening, at 7 P.M., at the Holborn Restaurant, under the presidency of Lord Watson. The honorary secretaries of the club are Dr. Heron, 57, Harley-street, W., and Mr. J. R. McIlraith, Barrister at-law, 2, Essex-court, Temple, E.C.

WE regret to record the death on the 5th inst. of Dr. William Wallace, F.R.S.E., F.C.S., public analyst for the city of Glasgow. Dr. Wallace, who was in his fifty-sixth year, was the author of several works on hygienic and scientific subjects, and had held the office of public analyst since 1874.

THE *Journal of Ophthalmology, Otology, and Laryngology*, to be edited by Drs. G. S. Norton and C. Deady, is the title of a new quarterly periodical to be issued in New York, commencing in January, 1889.

SEVENTEENTH ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD.

THE general report issued by the Local Government Board contains, as usual, information relating to each of the large number of subjects with which that Board now has concern, and by no means a few of these have interest for the medical profession. Compared with the previous year, Jan. 1st, 1888, exhibited an increase of 1.1 per cent. in our pauperism, that increase being almost equally divided between in-door and out-door paupers; and, whilst our south-eastern counties contributed 42.2 paupers per 1000 population, the corresponding rate in the northern divisions of the kingdom ranged from 20.8 to 24.6; Dorset, at one extreme, having the unenviable position of providing 47.4 per 1000, whilst the county of Lancaster, at the other extreme, contributes only a rate of 20.2. The actual cost per head on the mean number of out-door paupers is much the same in the metropolis and in England and Wales generally—namely, about £4 12s.; but, whilst the corresponding cost for in-door paupers is somewhat over £10 for England and Wales, it is no less than over £20 for the metropolis, the difference being attributed, amongst other causes, to the improved accommodation provided for paupers in the metropolis and to the contributions paid by London parishes to the managers of the Metropolitan Asylum District. Dealing with the question of local government and public health, it is reported that, since the constitution of the Board, in August, 1871, a sum of £38,825,093 has been sanctioned in the way of loans to urban and rural sanitary authorities, by far the greater portion of which has been devoted to sanitary improvements. During 1887 the loans amounted to £2,103,026, of which £1,822,449 was borrowed by urban and £180,577 by rural authorities. In addition to these sums, £100,000 was borrowed during the year under the Artisans and Labourers' Dwellings Improvement Act (1875), and £171,235 by joint boards. Another item relating to finances deals with sanitary officers, and it appears that a moiety of the salaries of medical officers of health was paid from the Parliamentary grant in the case of 1205 districts, and as regards inspectors of nuisances in the case of 1094 districts, the total amount thus paid being £73,910, a payment which will for the future be made by the newly constituted county boards. Dealing next with defaulting authorities, concerning whose affairs inquiry had been held under the compulsory provisions of Section 299 of the Public Health Act (1875), the following cases are named: Cheshunt local board are making progress with their system of sewers, and it is advancing completion. Sandbach local board have adopted a scheme of water supply. Hinderwell local board have submitted a scheme of water supply, but there will be occasion to modify it. The Yeovil rural authority have applied for sanction to the formation of a special drainage district at Martock, and to the borrowing of money for the execution of a scheme of water supply. In the case of the rural district of the Bridge Union, concerning which the Canterbury Water Company made complaint, the Board have issued an order requiring them to do their duty as regards the

provision of sewers. Fresh inquiries have been held during the year under the same section as regards Newport (Isle of Wight), Brigg, Clayton, New Shoreham, Oakworth, Seaford, Stone, and Sutton urban authorities, and Horsham, Leigh, Liskeard, Rochford, and Ware rural authorities. In many of these cases preliminary arrangements have been made to comply with the needed requirements. Compulsory orders requiring the sanitary authorities themselves to carry out the work of refuse removal, under Section 42 of the Public Health Act, have been issued in the cases of Chatham, Rochester, and Worksop; and, as the result mainly of a comprehensive inquiry made by the medical department of the Board during the recent European cholera prevalence, a large number of our port sanitary authorities have now been constituted permanently.

Passing over a large number of subjects relating to engineering inquiries, London water supply, audit, bye-laws, rivers pollution, &c., we come to a part of the report which always contains interesting matter—namely, that dealing with the Sale of Food and Drugs Act, 1875. During the year 24,440 analyses were made by approved analysts, that number being 850 more than in 1886, the proportion of analyses to population being 1 for every 596 persons in the metropolis, as against 1 to every 1228 persons in the provinces. In St. Giles' district one analysis was made for every 131 persons; whilst not a single sample was taken in the populous district of St. Mary, Newington, or in St. Martin-in-the-Fields; and in Islington, the largest of London districts, with a population of over a quarter of a million, one sample was analysed for every 2525 persons. Again, within the jurisdiction of the magistrates of Berkshire, Oxfordshire, and Pembroke-shire not a single sample was taken, and the municipal authorities of no less than seventy-two boroughs allowed the provisions of the Acts to be inoperative. In this way an aggregate population of over five millions in the provinces derived no protection from the Acts, and, though unfortunately this number includes some large boroughs which will constitute counties under the new Local Government Act, we cannot but rejoice that the power to give that protection which the public need against the practices of the tradesman will in a vast number of small boroughs be now transferred from the tradesman, in his capacity of either town councillor, alderman, or mayor, to the county boards. In over 80 per cent. of the cases taken into court the average fine was only about £1, and with such regrettable leniency no surprise is expressed that adulteration continues to a large extent unchecked. A table relating to the percentage of cases in which adulteration was reported includes the following: Spirits 18.1, butter 17.5, milk 14.9, coffee 13.3, pepper 11.0, and drugs 10.9; the proportion of all articles lumped together being about 13 per cent. Milk continues to be largely adulterated, and the contention of the retail trader that the addition of water is largely effected by the farmer is in at least one part of the country borne out, for in Manchester, where a rather elaborate system has been devised for taking samples at the various stages of the delivery, no less than fourteen out of thirty-five farmers' cans from which samples were taken at the railway stations were found to be adulterated. As to drugs, it is stated that of forty-eight adulterated samples twenty-three were of sweet spirits of nitre, and it is added that it is probable that in many of these cases there was no wilful adulteration, but that the spirit had been reduced below standard strength by evaporation. Of twenty-nine cases in which medicines professing to be prepared according to prescriptions were examined, there was only one in which there was an adverse report.

It is interesting to note that the system of compulsory notification of infectious diseases is steadily being extended. Last year it was reported that forty-three provincial towns had adopted the system, and in 1887 local Acts dealing with the same subject were also passed for Darwen, Wakefield, Weymouth, and Willesden. Bills are also pending to deal with the same matter as regards West Ham, Kingston-upon-Thames, Llanelly, and Nelson. The report adds that a large number of memorials have been received by the Board in favour of a general extension of the scheme, and that an inquiry, the results of which we have from time to time noted, has been made as to the effects of its working in the towns and cities where it is already in force. The resulting evidence has been, it is stated, almost entirely favourable to the system. A separate report will, as usual, be issued by the Medical Officer of the Board.

RELEASE OF CRIMINAL LUNATICS IN INDIA.

REPORT OF THE COMMITTEE APPOINTED BY THE
BENGAL GOVERNMENT.

In October, 1887, the Government of Bengal appointed a committee to investigate and discuss the issues involved in the important question of the disposal of the large and increasing class of criminal lunatics confined in the asylums and gaols of Lower Bengal. The committee consisted of Surgeons-Major Birch and Crombie, officers of practical experience in the management of lunatic asylums, and Mr. Larymore, superintendent of the Alipore Gaol. In their report, which was issued in January last, they discuss the question in three aspects—the legal, the medical, and the administrative.

1. *The legal aspect.*—The great bulk of the criminal population of asylums is confined under the provisions of Act X. of 1882. With regard to the accused persons found to be of unsound mind and incapable of making their defence, the procedure varies according to the nature of the offence. The committee are clearly of opinion that the division of such accused persons into two classes receiving different treatment, in accordance with the accident whether the offence of which they are accused is bailable or not bailable, is neither commendable nor reasonable. For instance, voluntarily causing grievous hurt is bailable, and voluntarily causing grievous hurt by dangerous weapons or means is not bailable. The committee not unnaturally object to a distinction of this sort whereby one class of criminal lunatic is let loose on society on the very unsafe security of a relative or friend, and the other confined for an indefinite period within the walls of an asylum. Moreover, it is stated that, from not being in possession of the facts necessary to the formation of a trustworthy opinion, the magistrate, even if he calls to his aid the civil surgeon, may not be able to come to a right judgment on the question of the safety of releasing a criminal lunatic on security; and the committee think that public safety requires that rules should be laid down for the guidance of executive officers in dealing with criminal lunatics under such circumstances. With regard to criminal lunatics who, after a period of detention in asylums, are declared to be sane and capable of making their defence, the committee think that the further procedure in such cases is open to grave objections, inasmuch as neither the court before which the case is to be tried nor the local government is in a position to judge whether any individual so situated ought to be remanded to an asylum or to a gaol, or be delivered over to the care and custody of a relative or friend. It is not known, either to the court or to the Government, what may have been the type of his insanity while under observation in the asylum. At the trial the person is no doubt usually acquitted on the ground of insanity, and sent back to the asylum under the provisions of the Act, but this is by no means always the case. From one asylum alone, in ten years as many as twenty-six recovered criminal lunatics were sent up for trial and not again heard of by the asylum authorities. The risks involved in such a mode of procedure are illustrated in the following instances given by the committee. A man aged twenty-two, suffering from melancholia, committed murder in 1874. He remained insane for six years, and had a short lucid interval in 1880, after which he again continued insane for three years. In March, 1883, after a period of nearly nine years' almost continuous insanity, this murderer was declared capable of making his defence. He was discharged for trial in the following month, and not again heard of. Another case of melancholia and murder was admitted in 1875, recovered, but relapsed in 1876 and 1877; was declared fit for trial in October, and was discharged for that purpose in December, 1878, and was lost sight of. Similar cases are numerous. Neither the magistrate nor the local government, in dealing with these two cases, were in a position to know what they had to do—in the first instance with a confirmed lunatic brought before them in a lucid interval, or in the second with a man subject to annual relapses. Had they been aware of the medical histories thus shortly detailed, both men would unquestionably have been returned to the asylum for a further and lengthened period of observation before final action was taken.

2. *The medical aspect.*—In Indian asylums, the com-

mittee tell us, the most dangerous are those suffering from (1) acute mania and (2) melancholia, the former being the most dangerous while the mania lasts, but the latter being the most untrustworthy. Chronic dementa, unless they exhibit mischievous or filthy propensities, might often, or more readily, be released to the care of their friends on security were it not for the ordinary fate of this class of lunatic at home: it is the life of a dog; they are starved, beaten, and bound in chains. Those suffering from chronic mania accompanied by hilarity and delusions of well-being are not easily aroused to violence, and may have more freedom; but, on the other hand, when chronic mania shows itself in irritability and destructiveness, it is very untrustworthy, and leads to long detention in asylums, and thereby becomes the chief cause of the steady increase in the number of the criminal population in these institutions. Epileptic insanity causes the sufferer to exhibit violent and dangerous symptoms, especially immediately after a fit, and it is obvious that a man who has committed an offence against the person and shows irritability or violence after his epileptic fits, cannot safely be released from an asylum until there is reasonable hope that his epileptic habit has been permanently overcome. Insanity due to the pregnant or puerperal states is not liable to recur except under the same conditions of health. General paralysis of the insane is practically unknown among the natives of India. Hereditary and emotional insanity are likely to be more lasting and more liable to recur, without apparent reason, than when the result of other conditions. Such cases should therefore be detained for relatively longer periods in an asylum than others. On the other hand, intoxicants, such as ganja, alcohol, and opium, have more transient effects unless their use has been very long continued. Such cases recover speedily, and long detention in an asylum for observation and treatment is unnecessary. Chronic mania with relapses is generally due to ganja, but ganja never appears as a cause of melancholia. The detention or release of a criminal lunatic depends mostly upon the liability to relapse, and the committee enlarge upon the subject in this relation, giving much valuable information as the result of their investigations.

3. *The administrative aspect.*—The early periods of probation after apparent recovery from insanity ought to be passed in a lunatic asylum. The period for detention will vary according to the nature of the case. When ganja or other intoxicants enter as a cause, a period of three years of freedom from excitement is sufficient to remove the likelihood of relapses in the absence of the exciting drug to one of remote probability, and at the end of this period the propriety of transferring him to gaol may be brought up for consideration. If the case were one due to other causes, a longer test period would be necessary before removal to gaol. The committee favour the idea of promoting recovered criminal lunatics to the position of asylum overseers; but they do not think that promotion to the post of paid keeper in an asylum can be utilised so easily, and with so good a guarantee of testing permanent recovery, as that to the post of paid warder in a gaol. The recovered lunatic would live in outside quarters with the gaol warders, and be under the observation of a head warder. Subject to a variety of considerations, restrictions, and alternatives, the committee think that the transfer to gaol for employment in various capacities should be the regular procedure in the case of recovered criminal lunatics.

An immense mass of useful information of a practical sort is condensed within the limits of the business-like report of which we have given only a brief outline. While, on the one hand, the committee state that experience shows that a very large proportion of recovered criminal lunatics can be released with almost absolute safety, they insist throughout their report on the great necessity for caution in the disposal of them. Appended to the report are "rules for the guidance of executive and judicial officers in dealing with criminal lunatics," which are likely to prove of great utility. We give *in extenso* a summary of the practical conclusions at which the committee have arrived, and which are added to the report, after having met with the approval and authority of the Lieutenant-Governor of Bengal.

Principles on which the Local Government will act in disposing of the cases of Criminal Lunatics sent up for orders under Sections 466, 471, 474, and 475 of Act X. of 1882.

1. Final orders should not be issued unless the lunatic's papers are accompanied by the medical history sheet as suggested in Appendix I.

A.—Recovered Criminal Lunatic.

2. If the crime be against the person, the cause ganja or other intoxi-

cant, and the type of insanity acute or chronic mania, a period of three years should be spent in an asylum free from all signs of insanity before any action is taken. (a) At the end of that time, if under forty years of age and in good physical health, he should be transferred to the nearest central or other gaol, there to undergo a period of probation of six years, of which three had better be in the grade of paid warder. (b) If over forty years of age, or in poor physical health, the period of probation in gaol may be shortened according to circumstances of crime and nature of security offered. In any case security should, if possible, be taken on the expiry of his period of probation in gaol.

3. If the crime be an offence against the person, the type of insanity acute or chronic mania, and the alleged cause not ganja or other intoxicant, a period of at least four years of complete freedom from insanity should be spent in an asylum before action is taken. (a) At the end of that time, if under forty years of age and in good physical health, he may be transferred to a gaol, there to undergo a probation of four years, of which two should be in the grade of paid warder. (b) If over forty years of age, the period of probation in gaol might be shortened, according to circumstances of health and surety. Security should, if possible, be taken before his final release from gaol supervision.

4. If the crime be not an offence against the person, but the lunatic have at any time exhibited dangerous or violent tendencies, and the type of insanity is acute or chronic mania, he should be treated exactly as above, except that the period of probation in gaol may be shortened in accordance with the kind and degree of violence exhibited; always provided that in ganja cases the period spent as paid warder should be three years, and in non-ganja cases two years. In all, security should, if possible, be taken on final release.

5. If the crime be not an offence against the person, and there be no history that the lunatic was at any time aggressive, he may generally be treated much as if he were a non-criminal lunatic. As has been stated in Rule 7 for the guidance of executive officers, the local government will generally be guided in such cases by the recommendations of the visitors and of the superintendent of the asylum in which the lunatic has been confined.

6. If the type of insanity be melancholia, a period of at least six years' complete freedom from insanity should be passed in an asylum before action is taken. During the last year of this period the recovered criminal may be allowed access to the bazar under certain regulations. (a) If at the end of that period he is still under forty years of age, he should not be released except on excellent security. (b) If over forty years of age, security should, if possible, be obtained.

7. If the crime be attempt to commit suicide, and not murder, the type melancholia, and if he has not exhibited any violent tendencies while under observation, some relaxations of the rules may be permitted according to circumstances of age, period of detention, &c. Cases of melancholia should not be sent to pass a period of probation in gaol.

B.—Unrecovered Criminal Lunatics.

8. If the crime be an offence against the person, the type chronic mania of the irritable aggressive kind, it will seldom be possible to release the lunatic during the continuance of insanity, except in advanced age and on exceptional security. If the crime be an offence against the person, the type of insanity chronic mania of the amiable kind, a lunatic may be released after passing from six to ten years in that condition, but only on security. If below forty years of age, detention should generally be ten years; if over forty years of age, six years may suffice.

9. If the crime be not an offence against the person, or if an offence against the person of a trivial nature, and the lunatic has never exhibited aggressive symptoms, he may generally be treated much as if he were a non-criminal lunatic, and the local government, when dealing with his case under Section 474, will be guided chiefly by the recorded opinion of the superintendent of the asylum as to the propriety of releasing him, and by the recommendations of the visitors. (a) If his mental attitude be chronic mania, characterised by good humour, cheerfulness, and amiability, and he is able to earn a livelihood, he may generally be released with or without security. (b) If it be chronic dementia or imbecility of slight degree, he may be released on similar conditions. (c) If he be suffering from chronic mania of the irritable mischievous type, or chronic dementia of a more pronounced character, he may still be released, but only on satisfactory security that he will be properly cared for and prevented from doing injury to himself or others. (d) If the chronic mania be of inveterate type, or the dementia or imbecility of the last degree, the lunatic can only be safely and humanely treated in an asylum.

THE ITALIAN MEDICAL ASSOCIATION.

(From our own Correspondent.)

(Concluded from p. 933.)

Rome, Oct. 27th.

MONDAY'S (Oct. 22nd) forenoon sitting was chiefly important for the paper of Professor Cardarelli of Naples on the Treatment of the Functional and Nervous Disturbances of the Heart in its Organic Diseases. Starting from the thesis that all cardiac mischiefs commence with augmentation of the pressure in the chambers of the heart, with slackening of its beats and more vigorous contractions (hypersystolia), he pointed out that if the muscular fibre is unsound, if the nervous apparatus is abnormal, the heart does not resist the initial shocks, and that to the augmentation of pressure must succeed hypertrophy and dilatation. At this stage the physician must try to make the nutrition of the organ proportionate to its consumption. He contended that if cardiac therapeutics has not made equal progress with cardiac diagnosis, the fact is due to the practitioner not having given sufficient attention to the functional perturbations of

the organ. He further maintained that the heart, labouring and becoming hypertrophied, consumes itself, and that the organic mischief gradually exhausts that reserve of energy which was capable of overcoming the physiological resistance (*le resistenze fisiologiche*). To measure the latent strength of cardiac muscle, he recommended the application of the tourniquet to the two crural arteries and the watching of the modifications produced in the sphygmographic tracings. When the heart is no longer capable of overcoming the blood pressure, it is the practitioner's duty to lower that pressure by graduated venesection. Nor should he be deterred by the depression which may follow. With the so-called "cardio-kinetics" the weary muscle can be aroused to fresh activity. Dr. Cardarelli concluded his elaborate paper by referring to the neural disturbances due as well to the paralysis as to the excitation of the vagus and the sympathetic—disturbances which occur accidentally in an impaired heart, and other disturbances which have a reflex origin. He was followed by Professor de Giovanni, who made a detailed criticism of the discussions lately held at the Wiesbaden Congress on Cardiac Gymnastic (*ginnastica cardiaca*), and maintained the necessity of treating certain sufferers from heart disease on the dietetic and mechanico-gymnastic method. To investigate the resistance of the heart he approved of two procedures: by hypodermic injections of strychnine in progressive doses, which excite the contractions of the whole circulatory system; and by expulsive bandaging (*fasciatura espulsiva*) of the extremities, which the patient feels irksome when the myo-cardiac tissue is unsound. He referred to sanguineous plethora and to serous plethora, which he used solely in an anatomical or somatic sense, and maintained that bloodletting was indicated in certain cases. Professor Rummo followed on the Pharmaceutical Treatment of Organic Heart Disease, demonstrating that the mechanism of the said treatment consists in proportioning the activity of the cardiac motor system to the power of the circulatory resistance (*resistenza circolatorie*) with the least possible expenditure of force.

The afternoon sitting was mainly occupied by Professor Murri's paper on Fever and Antipyresis, in which he raised the question whether the febrile process should be combated or not. He said that if there are elevations of temperature which depend on the action of the nervous system, there are also others with which the nervous system has nothing to do. This thesis he defended by the results of experiments on dogs and pigeons. He has even observed that after death the generation of heat receives notable augmentation from the injections of disease-producing or infective matter. He concluded by maintaining that fever is nothing else than a symptom in infective maladies, and that it ought not to be combated as a distinct disease. The discussion that followed was especially animated, Maragliano opposing and Cantani supporting Murri's doctrine. The President, Dr. Baccelli, summed up in the sense of treating the pyretic symptom *per se*, and in certain cases of hyperthermia he recommended the graduated use of cold compresses.

Tuesday's proceedings were confined in the main to Diabetes, on which a most instructive debate was started by Professor Cantani, of Naples. He defined the disease as a general malady, with localisation in the chylipoietic viscera. Discussing Ebstein's theory, he maintained that the reduced quantity of carbonic acid in the organism of the diabetic is the effect and not the cause of the morbid process—derived, that is to say, from the loosened combustion of carbo-hydrates. He traced the origin of diabetes to the abuse of farinaceous and saccharine alimentary matters, and held that glycosurias of nervous origin are rare and transient. This induction he sought to confirm by statistics of more than a thousand cases. A diabetic patient he considered as cured when he is capable of drawing nourishment from any diet without eliminating sugar. He recommended the alkaline lactates, a fatty and albuminous diet rigorously practised, and the use of alkaline drinking waters. Interesting comments were made on Cantani's paper by Cardarelli, De Renzi, Pettrini, and others, till Professor Baccelli's summing up, which favoured the neural cause of the disease. In the gravid and puerperal states glycosuria of undoubted nervous origin has occurred. The desideratum, he said, is the demonstration of a nerve centre which regulates the course of alimentary metamorphosis. When such a centre is found, the pathogenesis of diabetes will be cleared up.

On Wednesday, the 24th, Professor Arnaldo Cantani presided, and read a paper by Baccelli on the results of experiments instituted with Hypodermic Injections of Phenic Acid in certain Neuralgias, like sciatica and hemiplegia. In traumatic tetanus (with one centigramme every hour, followed by two centigrammes every hour) the patient improved in eight days and was cured. Professor Marchiafava came next with a series of notes on the Alterations which occur in the Red Globules by the penetration of Parasitic Microbes, which absorb their colouring matter and convert it into melanine. He was sustained by Mosso of Turin, and criticised by Maragliano of Rome, and, having replied, he was succeeded by the authors of other papers, of distinct, but of comparatively minor, interest. The afternoon sitting was occupied with a discussion on Hypnotism, which for the last year has prevailed with something like epidemic *furor* in Italy; and then followed the valedictory address of the President. The assembled Congress, through its authorised spokesman, congratulated the organising committee on its success, and augured still greater results from the congresses yet to come. In the meantime it is arranged that these shall continue to meet in *Alma Roma*, fortunate in possessing so able and accomplished a votary of medicine as Guido Baccelli.

I may add that a full and official report of the *atti* of proceedings, of which I have given a rapid sketch, will be published early in the coming year by the well-known house of Vallardi in Milan.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

OWING to want of space we were unable to publish in our issue of last week the full list of resolutions which were passed at the meeting of the Fellows and Members held on the 1st of November last. We now print them in full, together with the reply of the Council, which appeared on p. 944 of THE LANCET of Nov. 10th. They were as follows:

1. That, while welcoming some of the changes introduced by the Supplemental Charter, such as the extended eligibility of Fellows to sit in the Council and the increased facilities for voting at the election of members of Council, this meeting hereby expresses its regret that no provision has been made for giving effect to the recommendations contained in certain resolutions passed at a general meeting of Fellows and Members convened by the President for the purpose of receiving suggestions or recommendations respecting alterations to be made in the Charters, and held in the College on March 24th, 1884; namely, that Fellows and Members should be invested with a larger share in the management of the College; that no alteration should be effected in the constitution or in the relations of the College without the consent of Fellows and Members specially convened to discuss such alteration; and that the President of the College should be elected annually by the Fellows.

2. That this meeting of the Royal College of Surgeons of England is of opinion that it is necessary for the interests of the College that immediate steps be taken to proceed with the consideration of all the matters relating to the constitution and Charters of the College, and to the rights and claims of the Members thereof which have been under discussion in the course of the recent proceedings before the Privy Council referred to in the report, and to submit to the Privy Council, for embodiment in a further Supplemental Charter, proposals for the settlement of the said matters according to the general sense of the College; and that the Council of the College be invited to appoint a committee to consider, with representatives of the Associations of Fellows and Members of the College, the matters to be included in the petition for such further Supplemental Charter.

3. That the Council be respectfully requested to forward a copy of the foregoing resolution No. 2 to the Lord President.

4. That this meeting of the Royal College of Surgeons of England resolves that the Members and Fellows of the College ought to be consulted as to all extraordinary expenditure.

5. That this meeting having taken note of the privileges at present enjoyed by Members of the College, as enumerated in the reply of the Council to the Privy Council (pages 26 and 27 of the report), respectfully requests the Council to add thereto the right of meeting at convenient times within the College walls, for the purpose of discussing any questions relating to their position as Members in which they may be interested; and with this object the Council is hereby requested to enact a bye-law, instructing the Secretary, upon the receipt of a requisition signed by twenty Members (or Fellows and Members), to arrange with the Members forwarding such requisition a convenient day and hour (within one calendar month) at which such meeting may be held upon the College premises.

The following was the reply given by the Council at their ordinary meeting on the 8th:—"The Council regret that they cannot accede to the requests contained in the resolutions Nos. 2, 3, and 5. That it seems to the Council best in the interests of the College that the discussion on the subjects which have been in dispute should cease with the grant of the Supplemental Charter. That the Council cannot believe that any advantage is likely to arise from

reopening questions which have been fully considered; and on behalf of the College they trust these questions will now be allowed to rest." The Council considered that resolutions Nos. 1 and 4 did not require any comment.

It was resolved that copies of these replies be forwarded to the movers of resolutions Nos. 2, 3, and 5 at the meeting of Fellows and Members.

A letter was read from Miss Johnstone, of Leamington, offering to the acceptance of the College an interesting letter from John Hunter, addressed to the late Dr. James Johnstone, of Kidderminster. The Council agreed to accept the letter.

The Council gave permission to the Library Association to hold one meeting in the library of the College.

The committee appointed to consider the desirability of Mr. Macnamara's motion concerning the inclusion of operative surgery in the final examination for the membership, which was seconded by Mr. Pemberton, is constituted as follows:—Sir W. MacCormac, Messrs. Bryant, Macnamara, and Hill, together with the President and Vice-Presidents.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Walthamstow, by Dr. AIRY.—In view of the excessive amount of diphtheria which is discussed in this report the information supplied must be regarded as somewhat meagre. In the last quarter of 1887 no less than 35 diphtheria deaths were registered, and there seems to have been an excess of death from this cause in the West Ham Union generally. It is also noteworthy that the large epidemic at Enfield reported on by Dr. Bruce Low occurred at the same time, but no connexion was traced between the two epidemics. The Shern Hall-street school, and also its neighbourhood, as to which there was complaint of bad drainage, seem to have been early identified with the disease; and then other streets, notably Hazlewood-road, were attacked, but the details given as to these streets do not enable a critical reader to judge whether or not there was any real cause for such localisation as is suggested. An account is given of the system of sewage disposal adopted, although it is not implied that this was connected with the disease; but some indication of the reporter's views as to a relation between diphtheria and drain air is conveyed by the prominence he gives to the existence in certain affected streets of the inefficient arrangement which is implied by the use of bell-traps. Where communication with the outside public was maintained, as in the case of the North London Truant School, not a case occurred; an event which points to the influence of personal contact as a cause of the infection. It is stated that in all probability some four hundred attacks occurred in Walthamstow in twelve months, and especial attention is drawn to the fact of an alarming increase of the death-rate from diphtheria in other sub-districts of the West Ham Union, as well as in adjacent neighbourhoods. The cause must be regarded as undetected, and the recommendations annexed to the report do not clear up the point, since they only indicate the need for repairs and flushing of sewers, and the desirability of having means of isolation and of disinfection.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Luke's.—Dr. Yarrow finds difficulty in giving a correct estimate of the present population of St. Luke's on account of the great changes that have taken place since 1881 in the dwelling accommodation of the poorer classes, owing to the construction of artisans' dwellings on sites then unoccupied, to the destruction of other blocks, and to the altered use to which a number of buildings are now put. But, adding the excess of births over deaths to the then population, he gives that for 1887 as 51,943, and on this estimate the birth-rate was 32.4 and the death-rate 21.3 per 1000. He refers to certain considerations which lead to the conclusion that there is in progress a steady improve-

ment in the condition of the parish, and he points to the efforts made to control the spread of infectious diseases. Adverting to this latter point, he refers to the state of opinion as to the compulsory notification of infectious diseases, a system which has in principle received the support of St. Luke's vestry. A new mortuary and disinfecting chamber are all but completed in connexion with the coroner's court; but there is still need for a destructor, in which to deal with such bedding, clothing, &c., as cannot be properly disinfected or returned to their owners.

St. Matthew, Bethnal-green.—The death-rate for this parish during 1887 was 22.45 per 1000, which, though 1 per 1000 below that of the preceding year, was considerably above the rate of 19.6 for the metropolis generally, and also in excess of the rate of 21.9 for the eastern districts of London. The infantile death-rate amounted to 163 per 1000 registered births; and the zymotic rate to 3.20 per 1000 living. Scarlet fever, although somewhat widely prevalent, led only to 61 deaths, as opposed to a decennial average of 93. After dealing with the question of the infectious fevers, Dr. Bate draws attention to the fact that a special committee of the vestry decided to enter into joint action with other vestries who, at the instance of Kensington, were anxious to press the matter of the compulsory notification of infectious diseases on the Government; but when the matter came before the vestry as a whole, they declined to take any action in the matter. Dr. Bate regrets this action as tending to hinder the work of checking epidemic diseases. As to the dwellings of the poor and the labouring classes, Dr. Bate takes occasion to point out the methods of procedure under the Nuisances Removal Acts and the Artisans and Labourers' Dwellings Acts, and he gives his reasons for preferring action under the latter, although their provisions tend to make the matter tedious and cumbersome. One point is specially adverted to, and that is the absence of a surveyor's specification as to the needed amendments under the Nuisances Acts, as to which Dr. Bate explains that, though a medical officer of health should always be capable of pointing out the evil conditions which tend to nuisance and to injury to health, it is not properly his vocation to enter into the constructive aspect of the remedy called for.

Brighton and Hove.—Quarterly reports dealing with comparatively small populations are not, as a rule, of great value in so far as their statistics are concerned; but it is noteworthy that the death-rates for Brighton and Hove were exceptionally low during the quarter ending September 30th last. The rate at Brighton amounted to an annual rate of 13.86 per 1000 living, which is lower than any for some years past. Dr. Newsholme admits that this was doubtless largely due to the low temperature and the excessive rainfall, but he claims that vigilant and unceasing sanitary work also had its share in producing the result. The zymotic rate was 2.20 per 1000, which is by no means so exceptional, and the deaths producing it were largely due to summer diarrhoea, some of which was found to be associated with that "putrefying dirt" to which it is so properly ascribed in the report; and we are glad to see that such conditions as cesspool nuisance, choked and foul closets, and closets without water are prominently referred to as connected with the disease, since such publicity is the best guarantee that they will be got rid of; indeed, much of the work needed to this end is stated to be in progress. At Hove the rates, calculated on a population of 27,000, were still more satisfactory, the death-rate from all causes being 9.4, and the zymotic rate 0.4 per 1000. Three deaths make up the latter rate—namely, two from whooping-cough and one from enteric fever; the latter being due to other causes than local sanitary defects. Dr. Kebbell adds that, so far as his information goes, Hove is at present especially free from all forms of infectious disorders.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6025 births and 3430 deaths were registered during the week ending Nov. 10th. The annual rate of mortality, which had been 21.8 and 19.6 per 1000 in the preceding two weeks, further declined last week to 19.0. During the first six weeks of the current quarter the death-rate in these towns averaged

20.1 per 1000, and was 0.4 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12.2 in Nottingham, 12.9 in Hull, 14.0 in Wolverhampton, and 14.6 in Leicester. The rates in the other towns ranged upwards to 24.8 in Bolton and in Preston, 25.0 in Blackburn, 25.5 in Manchester, and 25.6 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases, which had been 472 and 467 in the preceding two weeks, further declined last week to 432; they included 188 from measles, 57 from diarrhoea, 56 from scarlet fever, 45 from diphtheria, 44 from "fever" (principally enteric), 40 from whooping-cough, and only two from small-pox. No death from any of these zymotic diseases was registered last week in Plymouth, whereas they caused the highest death-rates in Blackburn, Cardiff, and Salford. Measles showed the greatest mortality in Blackburn, Portsmouth, Leeds, and Cardiff; scarlet fever in Manchester, Salford, and Blackburn; "fever" in Oldham, Newcastle-upon-Tyne, and Salford; diarrhoea in Bolton, Cardiff, and Derby; and whooping-cough in Birkenhead. The 45 deaths from diphtheria in the twenty-eight towns included 34 in London, 6 in Salford, and 2 in Liverpool. Small-pox caused one death in Preston and one in Hull, but not one in London or in any of the twenty-five other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained no small-pox patient during the week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 969, against 1009 and 1007 in the preceding two weeks; 85 cases were admitted during the week, against numbers declining from 119 to 71 in the previous four weeks. The deaths referred to diseases of the respiratory organs in London, which had been 522 and 441 in the preceding two weeks, further declined last week to 373, and were 60 below the corrected average. The causes of 62, or 1.8 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Bradford, Sunderland, Nottingham, and in nine other smaller towns. The largest proportions of uncertified deaths were registered in Liverpool, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20.4, 19.8, and 18.7 per 1000 in the preceding three weeks, rose again to 19.1 in the week ending Nov. 10th; this rate exceeded by 0.1 the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 11.2 and 12.3 in Perth and Edinburgh to 23.0 in Greenock and 36.3 in Paisley. The 484 deaths in the eight towns showed an increase of 11 upon the number in the previous week, and included 27 which were referred to measles, 9 to scarlet fever, 9 to whooping-cough, 9 to diarrhoea, 8 to "fever" (principally enteric), 8 to diphtheria, and not one to small-pox; in all, 70 deaths resulted from these principal zymotic diseases, against 82, 69, and 56 in the preceding three weeks. These 70 deaths were equal to an annual rate of 2.8 per 1000, which exceeded by 0.4 the mean rate from the same diseases in the twenty-eight English towns; the rate in the eight towns ranged from 0.0 and 0.2 in Perth and Edinburgh to 6.1 in Greenock and 18.5 in Paisley. The fatal cases of measles, which had been 26 and 23 in the preceding two weeks, rose last week to 27; of these, 20 occurred in Paisley, 4 in Glasgow, and 3 in Greenock. The 9 deaths from scarlet fever (an increase of 8 upon the number in the previous week) were all returned in Glasgow. The 9 fatal cases of whooping-cough also showed an increase, and included 7 in Glasgow. The deaths attributed to diarrhoea, however, which had been 27, 15, and 20 in the preceding three weeks, declined last week to 9, of which 5 occurred in Glasgow and 3 in Aberdeen. The 8 deaths from "fever" exceeded the number in any recent week, and included 3 in Glasgow and 3 in Greenock; and of the 8 fatal cases of diphtheria, 3 also occurred in Glasgow and 3 in Greenock. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 114 and 98 in the preceding two weeks, further declined last week to 84, and were 23 below the number in the corresponding week of last year. The causes of 51, or rather more than 10 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 21·9 and 24·4 in the preceding two weeks, further rose to 27·5 in the week ending Nov. 10th. During the first six weeks of the current quarter the death-rate in the city averaged 24·2 per 1000, the mean rate during the same period being 19·1 in London and 15·6 in Edinburgh. The 186 deaths in Dublin last week showed a further increase of 21 upon the numbers in the previous two weeks; they included 10 which were referred to "fever" (typhus, enteric, or ill defined), 4 to whooping-cough, 3 to diarrhoea, 3 to measles, 1 to diphtheria, and not one either to small-pox or scarlet fever. Thus 21 deaths resulted from these principal zymotic diseases, against 25 and 21 in the previous two weeks; these were equal to an annual rate of 8·1 per 1000, the rate from the same diseases being 2·5 in London and 0·2 in Edinburgh. The deaths referred to "fever" corresponded with the number in the previous week, and the fatal cases of the other zymotic diseases did not materially differ from those returned in recent weeks. The deaths of infants showed a decline, while those of elderly persons exceeded the number recorded in any week since the end of March last. Four inquest cases and three deaths from violence were registered; and 55, or nearly a third, of the deaths occurred in public institutions. The causes of 16, or nearly 9 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major William Henry Garde is granted retired pay.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon and Honorary Surgeon-Major Cornelius Scamp Hall, 1st Volunteer Battalion, the Border Regiment, to be Surgeon-Major, ranking as Lieutenant-Colonel.

ADMIRALTY.—The following appointments have been made:—Maxwell Rodgers, M.D., Deputy Inspector-General of Hospitals, to Haslar Hospital (dated Nov. 12th, 1888); Surgeon R. W. Anderson, to Plymouth Hospital, and Surgeon William G. C. Smith, to the *Asia* (both dated Nov. 11th, 1888).

Correspondence.

"Audi alteram partem."

TUBERCULOSIS A CAUSE OF INFANTILE MORTALITY.

To the Editors of THE LANCET.

SIRS,—In the paper of Dr. Landouzy in the *Revue de Médecine*, on which you comment, tuberculosis is reckoned as one of the chief causes of death among the infants of Paris. This high mortality, it is maintained, is due not so much to inheritance as infection, and, in the view of the author, "tuberculosis in the earliest years of life may be regarded as 'bacillosis,' disguised under some inflammatory affection, such as pneumonia or bronchitis, with which it may be associated." Before reading your remarks I was not aware that there existed either in this country or in France "an impression as to the comparative rarity of tuberculosis in the very young." That such an impression is erroneous is abundantly shown by the statistics of our own Hospital for Sick Children, which corroborate those of Dr. Landouzy, both as regards rate of mortality and parental inheritance.

Some time ago I consulted the post-mortem records of the Children's Hospital upon two points: one, the mortality of acute tuberculosis in reference to age; the other, the proportion of tubercular parents amongst children dying of tubercle. The results may be here summarised: Of 1420 deaths from all causes, at ages varying from infancy to twelve years, 434 were deaths from tubercle; while of 133 children dead of acute tuberculosis, taken consecutively, only 24 were over five years old. It appeared further that children dying of general tuberculosis under five years were to those dying from five to twelve years in a proportion of 9 to 2. Considering the very small percentage of infants

that come under inspection post mortem in this country, as well as the common practice to which you allude of attributing death in infants who are not so examined to "the local affection rather than the underlying primary disease," it seems probable that our statistics in reference to the frequency of tuberculosis in infancy, grievous as they are, fall far short of the reality. It is otherwise with inheritance. We have here, according to common belief, a main factor in the production of tuberculosis. Yet, to my surprise, it dwindles into insignificance when closely scrutinised. Thus, according to the careful records from which I am quoting, 204 children dead of tuberculosis, all verified by post-mortem examination, had both parents healthy in 107 (more than half). In 44 cases one parent was reported phthisical, and in but one instance of the whole series were both parents consumptive. Tubercular disease is so common amongst us that it would be bold to say that a record like this exhibits inherited tubercle in excess of the normal proportion.

And, while the investigations of Dr. Landouzy in Paris are fully borne out by the experience of London, both as to the commonness of infantile tuberculosis and as to its being acquired rather than inherited, we may hold with him yet further in his remarks upon insanitary dwelling and improper food as common causes of the disease. All that is of practical moment may thus be conceded, and this without admitting the implied origin of the disease in question, or agreeing in the author's opinion that "tuberculosis in the earliest years of life may be regarded as 'bacillosis.'" It is true that whatever applies to tubercle, as regards its nature and origin, might seem to apply in a special degree to the general tuberculosis of early life, where the granulations from which the name is derived are widely diffused throughout the body, with no preference for any particular organ. In the rapidity of its course, in its likeness to an infective fever, in the absence of phthisis and sometimes even of pulmonary inflammation or change of any kind, we recognise a general disease which may or may not involve the lung. But, however it may seem that infantile tuberculosis in this its pure form affords the best material for such research, the actual fact is that investigation in regard to bacilli is mainly directed elsewhere and to a narrower field. It is directed, that is to say, to pulmonary phthisis, to softening lung, whether tubercular or not, to the sputum of persons suspected of consumption. To adopt, therefore, the term "bacillosis" as an equivalent for acute tuberculosis would not merely involve a gratuitous assumption; it would imply, besides, that the disease in question is necessarily associated with lung changes, and confuse this general affection of infancy with tubercular phthisis, which as life goes on tends more and more to the respiratory organs.

I am, Sirs, yours truly,

Wimpole-street, Nov. 12th, 1888.

OCTAVIUS STURGES.

* Dr. Sturges' letter is a valuable corroboration of Dr. Landouzy's inferences. Certainly infantile tuberculosis is a far commoner affection than it is generally believed to be. Without any wish to adopt the term "bacillosis," we may point out that Landouzy's contention is based on the theory that tuberculosis is invariably caused by the bacillus; and the existence of a stage between infection and the formation of the typical tubercle granulation is theoretically conceivable.—ED. L.

"REFORM AT THE ROYAL COLLEGE OF SURGEONS."

To the Editors of THE LANCET.

SIRS,—I am instructed by the Central Committee of the Association of Members of the Royal College of Surgeons of England to inform you that they have directed me to forward to the Lord President of the Privy Council copies of the resolutions passed at the meeting of the College on the 1st inst., as also of the resolutions which the President of the College refused to put to that meeting. I would take this occasion also to express our disapproval of the high-handed manner in which the College Council has, while the ink in which the resolutions were written was scarcely dry, set them aside. This act on their part has come as no surprise, for we are by this time accustomed to the autocratic action of the Council; yet

it seems scarcely decent that motions carried almost unanimously at a full meeting of the corporation should be overruled after what can at the best have been but a hurried discussion on the part of the Council, seeing the amount of business crowded by it into the work of the afternoon of the 8th inst. The College Council "trust that these questions will now be allowed to rest," for "they deem it best, in the interests of the College, that the discussion on the subjects which have been in dispute should close with the grant of the Supplemental Charter." Truly an impotent conclusion; the subjects are still in dispute, unless the Council agree that the Members have convinced them of the justice of their claims, for the Members have not been silenced by any of the frothy occasional utterances of the Council; the "dispute" cannot close with the grant of the Charter, seeing that it has already been extended beyond that ideal landmark of the Council, and the Council have not yet proved that they have the remotest idea of the best interests of the College, or they would not so lightly have sent up to the Privy Council a draft Charter from which the latter body insisted upon some most important excisions. The Council may think that it has now before it a long period of undisturbed repose, but as yet the storm has but been brewing. We have not only Lord Randolph Churchill and Sir Guyer Hunter on our side in Parliament, but an exceedingly strong body of members belonging to both political parties in the House, and action will immediately be taken to gain at the hands of the representatives of the people that representation which must find its justification and precedent in the very constitution of the House of Commons itself.

I am, Sirs, your obedient servant,

WM. ASHTON ELLIS,
Grosvenor-road, S.W., Nov. 1888. Joint Hon. Sec. Assoc. M.R.C.S.

MENSTRUATION AFTER REMOVAL OF BOTH OVARIES.

To the Editors of THE LANCET.

SIRS,—The point raised by Mr. Thornton, Mr. Meredith, and Mr. Barwell as to the arrest of the menstrual function as a sequence of the removal of both ovaries is open to different interpretations. Mr. Thornton and Mr. Meredith agree that "when both ovaries are entirely removed no recurrence of menstruation could occur." Mr. Barwell relates a case in which he and Mr. Sheild are certain that both ovaries were removed, "not the minutest part being left behind"; yet in this case the subject "has menstruated regularly just as she used to do before the operation."

Mr. Barwell's case does not stand alone. I have seen similar instances; but they do not invalidate the hitherto accepted law that the determining cause of menstruation resides in the ovaries. The occasional recurrence of menstruation after the loss of both ovaries may be explained in various ways. First, after the menstrual function has been fairly started during health, and the influence of periodicity upon the constitution has been established, it is quite in harmony with physiological law that a flow of blood representing menstruation should sometimes return after the removal of the ovaries. Every month we note an exaltation of nervous and vascular tension, which culminates in the menstrual flow and then subsides. Habit tends to keep up this order of events. The dominion of periodicity is one of the most interesting and instructive problems in biology. It must be considered in this connexion. Secondly, it is certain that a periodical discharge, assumed to be menstrual, more or less regular as to time and quantity, is frequent after the ordinary climacteric, when the ovaries have become atrophied and inert. The flushes and nervous phenomena attending it indicate the periodical exaltation developed in the age of ovarian integrity. Thirdly, in some cases a morbid stimulus persists in diseased ovaries for some time after the abrogation of their normal physiological function. Fourthly, in some cases there is a complication with uterine disease, as myoma or hyperplasia, which keeps up a determination of blood to the pelvic vascular system, and so discharges more or less strictly periodical recur for a time even after the removal of both ovaries. But in the majority of cases in which the ovaries are removed with the tubes, the haemorrhagic discharges, menstrual or pathological, cease. On the other hand, I know of no case in which

menstruation has been established where the ovaries have been congenitally wanting.

We must not then, without more abundant proof than the evidence of an occasional apparent exception, abandon the old law, which declares that the ovaries rule over the function of menstruation. I will not now discuss what share the tubes may claim.

I am, Sirs, yours obediently.

Harley-street, November, 1888.

ROBERT BARNES.

To the Editors of THE LANCET.

SIRS,—I assisted Dr. Aveling in removing both ovaries more than two years ago, and the patient has menstruated regularly since.—I am, Sirs, your obedient servant,
West Cowes, Nov. 13th, 1888.

STEPHEN NOCKOLDS.

MEDICAL APPRENTICESHIP AND PRACTICAL TRAINING.

To the Editors of THE LANCET.

SIRS,—It is now some twelve months since a committee of the Medical Council recommended such a change in medical training as would ensure on the part of the young idea a greater acquaintance with the details of practice as well as more complete clinical knowledge. The committee appears to have been led to this recommendation by the repeated statements made as to the incompetence of at least many of the young practitioners educated under the present system to take sole charge of the sick. These allegations have been made over and over again by practitioners who have had to deal with assistants, and whose words are as reliable as those of any members of the profession. The committee must have felt that the charge rested upon very good evidence when, notwithstanding their personal interest in the present system, they gave to it such practical attention. Then there was the further question of utilising the immense amount of clinical *matériel* now running to waste in the union and other hospitals, and that at a time when even interested visitors were obliged to admit that the recognised *matériel* was in many places too scant. On this point something of the nature of an undertaking was given to the Privy Council that this unused *matériel* would no longer be allowed to run to waste. Most distinctly an expectation, at all events, was held out to that effect by the General Medical Council. Well, the outcome of all this was the following resolution, which was carried by the Council at its meeting of May 26th, 1888:—"That in addition to the requirements at present in force with respect to hospital attendance and duties, all candidates for the final examination be required to produce evidence that they have, under proper supervision, taken part as pupils for six months in the practice of a recognised public dispensary, including the visitation of patients at their own homes, or in the out-patient practice of a recognised hospital, or have acted for six months as pupil to a registered practitioner either holding such a public appointment or having such opportunities of imparting practical knowledge as shall be satisfactory to the examining bodies." This was the outcome of much labour on the part of that august and most expensive body, and I repeat here what I publicly stated before, that it is a perfectly illusory arrangement. It is illusory because by placing the out-patient department athwart the new apprenticeship system it so handicapped the latter as to practically prevent students adopting it. Why should a student become an apprentice when he need only present a certificate of attendance on that out-patient department which he always has been attending? How will the mere presentation of such a certificate supply that practical training which the attendance itself has heretofore failed to supply? Moreover, it is notorious that the conceit of the belestured student is such, and he is so utterly unconscious of his own ignorance, that nothing short of compulsion will make him serve an apprenticeship at the end of his course. I have myself had some experience in teaching having been for six years a private teacher in a medical school, and, with every respect for the opinions on the other side, I venture to express the matured conviction that it is at the commencement and not at the end of the course this apprenticeship should be served. I would make it twelve months; would recognise only those masters who

would furnish proof of the possession of the necessary capacity and means for teaching; and to prevent fraud I would require that each apprenticeship should be entered in the Students' Register from the very date of its commencement.

Here I may be allowed to quote Carlyle: "Properly thou hast no other knowledge but what thou hast got by working; the rest is yet all a hypothesis of knowledge; a thing to be argued of in schools, a thing floating in the clouds, in endless logic-vortices till we try and fix it." The Chelsea philosopher had clearly in his mind's eye the difference between the apprentice and the poor bedazed and bewildered youth whose head is stuffed in the lecture room with that garbage which Carlyle so heartily despised. It is very suggestive that the opponents of early apprenticeship are almost in every instance persons who have a personal interest in opposing it. On the other hand, it is cheering to find a man like Sir James Paget urging home the lesson of early apprenticeship whenever an opportunity is afforded to him. It is well known that the late Dublin scheme offered special inducements, or at least offered a clear stage, for the reintroduction of early apprenticeship; but the moment it was found likely to take, the Dublin grinding interest strangled it. The other day I urged Dr. Kidd to restore it, and, in reply, he informed me that there was not the least chance of doing so, adding the significant words, which every parent and every intending student ought to be made aware of: "*I wish students and their friends could be induced to establish it for themselves.*" I am sadly afraid that there is a percentage of the professional masses to whom the term "professional rabble" would not be inapplicable, for in no other way can I account for the blindness and the apathy which they display in matters vitally affecting themselves. Just look at the treatment the Privy Council the other day extended to the Members of the College of Surgeons. Would they for a moment treat the licensed victuallers, or the trade unionists, or the association of chimney sweeps with like contumely? The fact is, that medical men do not take that part in civic and political work which mere duty of itself requires of them, and hence one great reason why we are so helpless in Parliament. The privileged schools, hospitals, and licensing authorities, I hope, will be made to feel the power of the professional masses, expressed through their Parliamentary representatives, the first time that a general election shall place a democratic Government in office.

I am, Sirs, yours faithfully,

Cashel, Nov. 10th, 1888.

THOMAS LAFFAN.

SHAKSPEARE AND HARVEY.

To the Editors of THE LANCET.

SIRS,—I have read with much interest a few of the communications in your columns relative to the immortal Bard antedating Harvey in the discovery of the circulation of the blood, and also the possibility of Shakspeare being possessed of the knowledge of Harvey's theory, either by gaining information direct from Harvey or from the rumours that were abroad concerning it from the time that Harvey made the discovery to the publication thereof.

"What damned error, but some sober brow
Will bless it, and approve it with a text."

Of all claims of Shakspeare's priority, that of his knowledge of the circulation of the blood previously to its discoverer's, while attracting the widest attention, is yet the most assailable. Mr. Hackett, who in 1859 first called attention to and upheld it, shows not only his ignorance of the most important part of Harvey's theory, but his utter lack of knowledge concerning the many other theories that had been presented years before and were accepted at the time Shakspeare wrote by different physicians.

Shakspeare died in 1616. Harvey first published his theory in 1619. Among the older theories were those of Hippocrates, Praxagoras, and Erasistratus, who held that the arteries contained air, and that therefore the veins were the only blood-holding vessels, and that they had their origin in the liver. Galen, the most celebrated of ancient medical writers, who lived as early as 150 A.D., taught that the left ventricle of the heart was the common origin of all arteries, and that the arteries of living animals contained

blood, not air; but he did not advance with his studies as to learn in what direction the blood flowed, or whether it was movable or stationary. The distinguished Michael Servetus, who was burned with his books by order of Calvin in 1553, taught that the blood flowed from the right ventricle through the pulmonary artery to the lungs, and thence through the pulmonary vein and left auricle into the corresponding ventricle, from which it was conveyed by the porta to all parts of the body. Sylvius had already pointed out the valves in the veins, and with this fact, together with the discoveries of Galen and Servetus, Harvey had his way well paved for the setting forth of the theory which rendered his name immortal. There is not one thought to be found in Shakspeare in any way relating to the circulation of the blood that is not applicable to the teachings of either Hippocrates, Galen, Servetus, or Sylvius, and it is very evident that he did not tie himself down to any one of these theories, but that sometimes he had in mind the theory of Michael Servetus (to which all the heart allusions will apply), and at other times that of Hippocrates, which accounts for all the thoughts regarding the liver as the propeller of the blood through the veins. Harvey was the first to show the true idea of the circulation, his chief points being that the left ventricle of the heart, acting as a muscular sac, forced the blood into the arteries; that it went to the extreme parts of the body and returned by way of the veins to the right auricle; thence to the right ventricle, from which it was squeezed into the lungs, and thence to the left auricle and corresponding ventricle, the same blood making a complete circuit, and ready again to be sent out on its life-sustaining journey; that the pulse is produced by the arteries being filled with blood and so enlarging, and that it coincides with the contraction, not the dilatation, of the heart. It is easy to see that many of Shakspeare's thoughts on the circulation might be made to apply to Harvey's theory, and he who is ignorant of the discoveries of the physiologists preceding Harvey might be led into the "damned error" which (to him) would rob the discoverer of his deserved honour.

I am, Sirs, yours faithfully,

Easton, Pa., U.S.A., Oct. 30th, 1888. B. RUSH FIELD, M.D.

THE CHEMICAL INCOMPATIBILITY OF ANTISEPTIC AGENTS.

To the Editors of THE LANCET.

SIRS,—In a communication under the above heading to a contemporary, I pointed out that, granted the advisability of employing antiseptic agents in solutions of definite strength, the possibility of reducing the strength of the solution, or of altering its nature through the chemical incompatibility of the materials employed, is one of considerable moment. Taking corrosive sublimate, carbolic acid, iodine, salicylic acid, and Condy as examples, I showed that many instances occurred in which, when brought into contact one with another or with certain lubricants, chemical action took place. Carbolic acid and iodine afford one of these instances.

Dr. Percy Boulton, in THE LANCET of Nov. 3rd, speaks from clinical experience in defence of this combination. I do not pretend to say that the substance formed, whatever it may be, is antiseptically inert. It may be, as Dr. Boulton suggests, a colourless salt, which possesses antiseptic properties even more powerful than the iodine and phenol from which it is produced. But if so, let the substance be isolated, and let us know something of its chemical and physical as well as of its antiseptic properties. I cannot, however, accept Dr. Boulton's clinical experience, extensive though it is, as conclusive evidence in favour of its antiseptic power; and for this reason: the substance, as employed by him, is not in an isolated condition. In my paper I pointed out that an exceedingly small admixture with phenol is sufficient to fix the whole of the free iodine. Dr. Boulton's prepared solution, though it contains no free iodine, possesses undoubted antiseptic properties, for it does contain uncombined carbolic acid, a very small proportion of which is altered. Upon these two points direct evidence may be obtained. The disappearance of the iodine colour is in itself a proof that no free iodine remains. Inability to produce the blue tinkle of starch by the addition of starch paste, and failure to impart a violet

colouration to a drop of bisulphide of carbon shaken up with the solution, confirm this. The presence of carbolic acid can be detected both by its odour (no smell of iodine remains) and by the purple colouration produced on the addition of perchloride of iron solution.

The question arises—What has become of the iodine? In Dr. Boulton's procedure it is the addition of *hot* water, not of carbolic acid, that vaporises the iodine. The addition of carbolic acid fixes what free iodine has not been already vapourised. That such is the case can readily be proved by comparative experiment. Take two vessels of the same size and shape, and pour into them equal quantities of the iodine solution. To one add a solution of carbolic acid in the proportion given by Dr. Boulton, to the other a similar quantity of water, and without loss of time loosely cover each for fifteen seconds at a time with paper moistened with starch solution. In the one very little blue colouration is produced, even at first; this becomes less and less, and finally ceases after a minute or so, when the solution becomes quite decolourised. Whereas, in the other, successive coverings continue to acquire a deep-blue colouration. This proves that *by the addition of carbolic acid the iodine is not vapourised*. Meanwhile the solution, to borrow Dr. Boulton's apt expression, has become as clear as drinking water, and now gives no reaction either with starch paste or with carbon disulphide. This shows the absence of free iodine. Moreover, the solution may now be boiled without vapourising the iodine. Therefore I maintain that *the iodine has entered into some combination and become fixed*. What that combination is I am not prepared to say, but it seems to me probable that iodine in presence of carbolic acid may be capable of taking away the hydrogen from water and liberating the oxygen, which in some way combines with the latter. That the carbolic acid undergoes some change is rendered evident by another comparative experiment. If equal quantities of carbolic solution be placed in two test tubes, and to one be added iodine solution in such quantity that all the colour disappears, and to the other a corresponding volume of water, and subsequently perchloride of iron drop by drop to each till no further purple colouration is produced, the colour will be found to be deeper in the tube to which no iodine has been added. But I am led especially to suggest this view of the reaction by the fact that, where spirit instead of water, or even concentrated solutions in water, are employed, carbolic acid fails to decolourise iodine, and also from the circumstance, which was indicated in my original communication, that one part by volume of carbolic solution (1 in 20) is just sufficient to remove the whole of the free iodine from 2000 parts by volume of iodine solution (tincture of iodine, B.P., one drachm to the pint), equal to 1000 parts by volume of the iodine solution employed by Dr. Boulton. In other words, 1 part by weight of pure phenol will decolourise 1000 parts by weight of solid iodine—a disproportion so great as to render direct union or other simple reaction improbable. I put this view forward, however, merely as a suggestion. I do not, I repeat, claim any precise knowledge of the bodies produced, some of which may, for all I know, possess powerful antiseptic properties. But should one of them prove to be hydriodic acid, let us use a solution of hydriodic acid pure and simple, and of definite strength, in order to test its efficacy, and proceed in the same way with the other bodies. On one point I can speak with absolute certainty: Dr. Boulton's solution, chemically considered, is not one of "decolourised iodine." The italics are mine.

In conclusion, I would remark that Dr. Boulton's procedure comprises two stages: first, the addition of iodine to hot water, whereby a portion of the iodine is vapourised—of decided value, no doubt, as far as disinfection of the atmosphere and of clothes is concerned, but by no means calculated to increase the potency of the solution, and therefore beside the main issue; second, the addition of carbolic solution to the deteriorated iodine solution, whereby the whole of the remaining free iodine is fixed, and a small quantity of carbolic acid destroyed, with the production of one or more bodies of which the nature is unknown and the antiseptic powers undetermined. Had Dr. Boulton employed a solution in which the addition of carbolic acid was just sufficient to decolourise the iodine and no more, he would have been in a better position to speak from clinical experience of the hypothetical "carbolate of iodine" produced; but I would remark that it has taken many years of clinical experience to reveal the fact (which is scarcely yet fully appreciated) that carbolised oil in the

proportion of 1 in 20 is little, if at all, superior, from an antiseptic point of view, to olive oil alone—i.e., *minus* carbolic acid; whereas a little chemical (which I have in part supplied) and bacteriological research (which Koch of Berlin has supplied) would at once have afforded a key to the matter; and, further, that if the antiseptic properties of a solution are destroyed or deteriorated by chemical action outside the body, it is highly improbable that they will be restored to it when brought into contact with the tissues of the body.—I am, Sirs, your obedient servant,

ROBERT BOXALL, M.D., M.R.C.P. Lond.

Cambridge, Nov. 3rd, 1888.

SACCHARIN.

To the Editors of THE LANCET.

SIRS,—As the discoverer of saccharin, I should lay myself open to the charge of ingratitude if I did not tender to you the expression of my sincere appreciation of the spirit of fair play and judicial impartiality which has prompted you to open the columns of your esteemed journal to a discussion of its properties.

If saccharin could be proved injurious to man, I would ask your readers to accept my assurance that I would not be responsible for the manufacture of another ounce. It will be conceded that its production has involved a long and arduous study of the more complicated problems in chemistry, and I shall therefore not be assuming a position that will be denied to me if I claim to discuss the question from the point of view of a man of science, rather than of a manufacturer seeking to increase the scope of his output.

Let me then state that from the outset the exploitation of saccharin has been approached in this spirit. Before it was placed upon the market, specimens representing the average products of manufacture were submitted to some of the most eminent of physiologists with a view to determining whether or not it was toxic. After due investigation, certificates asserting it to be absolutely non-toxic were received from Drs. Stutzer, Salkowsky, Stadelmann, Aducco, Mosso, and others. The reports of these eminent physiologists encouraged and warranted an extended trial of the substance in some of the principal hospitals of this and other countries. They fully confirmed the anticipations of the authorities above mentioned, and enabled Dr. Leyden, the consulting physician to the Charité Hospital in Berlin, to give an official certificate based upon six months' personal experience in the administration of saccharin in varying doses, affirming its harmlessness by stating that "*no anxiety as to its effect upon health need attend its use*," and that saccharin "*may be consumed over prolonged periods*."

The views thus expressed by the most distinguished of our physicians has been confirmed by eminent medical men in all countries—among others, I rejoice to find, by Dr. Pavy, to whom I cannot sufficiently express my indebtedness for his manly and outspoken utterances. I hesitate to impute motive, but it is certainly a curious fact that saccharin should have been freely administered to the afflicted in all parts of the world for more than a year without one word being uttered as to its harmful effects upon the system; and it is still more curious that the first attacks upon it should have been coincident with its exploitation in France as a competing product with sugar in the flavouring of wines, spirits, and liqueurs. This fact has been severely commented on by a leading French journal (*Courrier de Lyons*, Aug. 28th, 1888), the article upon the subject being headed by the suggestive title "Hygiene and Sugar Refining." I should be the last to desire to implicate the medical men of France who have written and spoken about saccharin in the unworthy manœuvres of the French sugar refiners, but as a man of science, I must take exception to the action of Dr. Dujardin-Beaumetz in the matter. I do not for one moment question his *bona fides*, but I do with confidence submit that his statements as to the value of saccharin are so conflicting as to deprive them of any value whatever in the eyes of impartial scientific men. This gentleman was the reporter of the Commission appointed by the Conseil d'Hygiène et de Salubrité de la Seine to ascertain whether saccharin was injurious to the public health, and in that capacity, after consultation with his colleagues, he declared it to be dangerous to the public health. Yet only a short time previously he had employed the following words at a meeting of the Therapeutical Society held on March 20th

last: "As I am speaking of diabetics, I do not know how too forcibly to recommend to you the employment of saccharin, which permits of the use of dishes of a most agreeable taste, quite equal to those in which sugar has been employed." Indeed, Sirs, your own Paris correspondent, in your issue of June 16th, further reports him as saying that "he could confirm the marked advantages of saccharin as a substitute for sugar in the alimentation of diabetics. It is much appreciated by patients, who find that it has a savour identical with that of sugar without any of the inconveniences. *Although it does not appear to have any noxious action*, it cannot be employed like sugar as an aliment, because it passes through the economy, and is eliminated by the urine without being assimilated or transformed."

Does it not, Sirs, also occur to your readers that we ought to have some definite assurance as to the composition of the saccharin upon which the Commission and Dr. Worms have based their report? Is not this the more necessary in view of the fact that the saccharin tablets sold by M. Garnier, the well-known chemist of Paris, under the name of "Sucre Edulcor," and officially certified by the above-mentioned Conseil d'Hygiène et de Salubrité de la Seine as being harmless for diabetics, actually contain a considerable quantity of beetroot sugar in addition to saccharin? What is the inference to be drawn from such facts and such experiments? It is better that I should leave the expression of opinion to your readers, and this I do with every confidence in their impartiality and sense of fair play.

The attacks upon saccharin have sorely disquieted the public mind. If they are merited, the anxiety is justified. If not, it will unfairly prejudice my discovery, which, after all, will confer as much benefit upon humanity as upon myself. In this spirit I ask your readers no longer to observe that silence which in most cases, but not in this, is both dignified and necessary. It is no question of advertisement. I have been grievously attacked, and I plead for justice.—I am, Sirs, your obedient servant,

DR. CONST. FAHLBERG.

Salbke-Westerhüsen a. E., Nov. 12th, 1888.

THE CAUSE OF CRAMP.

To the Editors of THE LANCET.

SIRS,—I have read with interest, in your issue of Nov. 10th, the article on "Common Cramp and Allied Affections," by Mr. Samuel D. Hine. I am somewhat surprised that in enumerating or suggesting the causes of this affection (the chief of which is stated to be pressure) Mr. Hine overlooks that which his paper affords teeming evidence of—viz., the action of toxic alkaloids or ptomaines. The demonstrations by Selmi and Gautier that certain cadaveric alkaloids caused the condition called "botulism" by the Germans, opened up a new and highly important field in pathology. Several ptomaines have been found by Mosso to act on muscle in a manner similar to lead, causing unequal contractions, and consequently cramp. Many of the ptomaines have muscarine-like properties, such as that discovered by Brieger in putrefying fish. Muscarine is antagonistic to atropine or belladonna, which is an ingredient of Mr. Hine's prescription. It is probable that those who are the habitual subjects of cramp have a certain deficiency of the liver, one of whose functions it is to destroy these toxic alkaloids.

I am, Sirs, yours truly,

Glasgow, Nov. 12th, 1888.

A. G. AULD.

LIVERPOOL.

(From our own Correspondent.)

HOSPITAL SUNDAY AND SATURDAY.

THE annual meeting of the supporters of the Hospital Sunday and Saturday movement was held on the 6th inst., under the presidency of Mr. Oakshott, the retiring mayor. The returns both of the Sunday church and chapel collections and of the Saturday boxes showed an increase over those of last year, the former to the extent of £426, the latter of £36. Since the first Hospital Sunday here in 1871 the sum realised both for the Sunday and Saturday funds has reached a grand total of £169,423. That the decrease of late years has been due rather to depression of trade and

other causes than to any loss of sympathy with the medical charities is shown by the circumstance that the decrease has been checked and that an increase has begun. The expenses amount to less than 3 per cent., thus enabling the treasurer to hand over the balance, upwards of 97 per cent., to the hospitals and dispensaries. These facts and figures are matters of congratulation to those who inaugurated the movement here eighteen years ago, and ought to encourage those who are trying to establish Hospital Sunday where it is still unknown.

WORKING MEN AND THE HOSPITALS.

One of the speakers at the meeting observed that Hospital Saturday revealed a mine of wealth which had only been tapped, and the truth of this is shown by a very simple calculation. If 50,000 working men contributed each one penny a week, this would amount to £10,833 6s. 8d. annually, a sum which admits of considerable expansion; whereas the boxes for the whole year have only realised £2048, and the Hospital Saturday Fund has never exceeded £3000 in Liverpool. In Birmingham and Glasgow as much as £5000 have been raised by the working men for the hospitals in one given year, and yet this large sum only represents a proportion of what might be done by the working men in those localities, in Liverpool, and in London.

MUNIFICENT DONATION TO UNIVERSITY COLLEGE.

Mr. Henry Tate has given £16,000 for the completion of the College buildings. This gentleman was a donor of £5000 when the University was originally founded, the result of a dream of the future described by the present Bishop of Durham, when on a visit here some years ago. Dr. Lightfoot was educated at the Royal Institution, and knew well what princely sums the citizens of Liverpool can and will give when the spirit moves them. This last gift of Mr. Tate is a great encouragement to the Council of the College, and an example to other citizens who have acquired wealth.

RETIREMENT OF DR. ROGERS OF RAINHILL.

Dr. Thomas Lawes Rogers, the well-known and highly esteemed resident medical superintendent of the County Asylum, Rainhill, has recently announced his intention of retiring from the office he has held for a period of thirty years. Dr. Rogers' connexion with this asylum (which receives all the pauper lunatics from Liverpool) commenced in 1853, when he went there as assistant to Mr. Cleaton, now commissioner in lunacy. After a year and a half he left to join the Coldstream Guards as assistant surgeon, serving three years and a half with that corps (including one year in the Crimea), and returned to Rainhill Asylum as medical superintendent in April, 1858. At that time the asylum held 400 patients; there is now accommodation for 1800. As may be judged, with such a number the work has of late been exceptionally heavy, and Dr. Rogers has had two illnesses, one in 1879 which compelled him to go abroad for four months, and another in 1881 which involved absence from duty for a similar period. To enumerate the improvements which have been made in the structure of the asylum and in the treatment of the patients during these thirty years would be equivalent to giving a history of the institution during the same period. One noteworthy fact may, however, be mentioned. During this extended period there has been no epidemic, and zymotic disease has been almost unknown, with the exception of four or five cases of scarlatina among the female attendants last year. This is due, no doubt, in great measure to the attention which has been given to the sewers. This has been entirely changed, nearly all the sewers being now taken directly out of the building, instead of being carried through the interior, as was originally the case. More than all these is the high tone which has prevailed all these years, throughout the vast establishment, owing to Dr. Rogers' good influence; and those who have the management of similar institutions will fully appreciate the meaning of this.

THE POLICE COURTS AND FOUL AIR.

For many years past complaints have been made of the foul air in the police and coroner's courts, especially the first police court, in which Mr. Raffles, the stipendiary magistrate, presides. Dr. Conmims, a local barrister, has promised to bring the matter before the Health Committee, of which he is a member, and it is to be hoped that an improvement will be effected. There is no lack of fresh air, but what is required is greater facility for the escape of foul air, a defect of most public buildings. Architects and builders have yet

to learn, apparently, that foul air can only escape from above—that it will ascend, not descend.

TWO FATAL CASES FROM PISTOLS LEFT LOADED.

The many warnings which have been held out to persons not to leave firearms loaded have again proved futile. Within the last few days a girl has been shot dead by her brother pointing playfully at her a pistol which was believed to be unloaded. In the second case, a gentleman who had for years been of unsound mind, but had not shown any suicidal tendency, was left alone by his attendant. He managed to possess himself of a loaded pistol, which his son had placed at the bottom of a box full of cricket materials, had concealed it, and shot himself when left alone.

Liverpool, Nov. 13th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

DURHAM.

I regret to notice the death of Mr. R. N. Robson, of the city of Durham, which took place at the North Bailey, his residence, on Thursday last. Mr. Robson was an M.R.C.S. and L.S.A., and studied at Guy's and St. Thomas's nearly fifty years ago. He was surgeon for some time to the Durham County Hospital, and was much respected by the public and the profession.

DEATHS FROM BURNS IN THE NORTH OF ENGLAND.

There is a terrible catalogue of deaths from fire in the north last week. First we had four young children of one family burnt to death in a cottage at Helmsley, near Malton, on Wednesday. The children were left alone, and the cottage took fire with fatal result. It is stated that a paraffin lamp was left burning, to which it is more than probable the fire is to be attributed. Then on Friday a poor little Italian boy, aged four years and a half, was admitted into the Newcastle Infirmary and died from the effects of burns the same night. The child had been left with other children by the parents, who were organ people, when by some means its clothes took fire, by which it sustained fatal injuries. Again, on Thursday, at Sunderland, an inquest was held on a little girl, aged three years and a half, whose clothes took fire when playing in a washhouse, causing her death from nervous shock and convulsions.

NORTH SHIELDS AND TYNEMOUTH.

The annual meeting of the Tynemouth Infirmary, which is for the borough, including North Shields, shows that the institution is in a satisfactory financial condition. The amount of the contract for the new building was £3000, and the committee require less than £400 to make up this sum.

Newcastle-on-Tyne, Nov. 14th.

EDINBURGH.

(From our own Correspondent.)

CADELLS v. BALFOUR AND OTHERS.

NOT to be outdone by male students in matters either medical or legal, a pretty little quarrel with the executive committee of the Edinburgh School of Medicine for Women has been picked by two of the girl undergraduates who formally studied in that school. It seems that, after studying for two years, Miss Grace Ross Cadell and Miss Martha Georgina Cadell received a letter from the lady secretary informing them that the executive committee were unable to readmit them to the school in October. No reasons for this high-handed action were given, even after repeated application. It appears that the sole offence was staying in the wards of the Leith Hospital after the regulation hour of attendance, and then not submitting to the authorities sufficiently in the matter of apologies, the lady superintendent not deeming the explanation of one of the ladies concerned sufficiently comprehensive. Notwithstanding a probation period and frequent warnings, it is stated that the Misses Cadell showed a spirit of discontent, and that the defenders were reluctantly compelled to come to the conclusion, that if the good discipline and order of the

school were to be maintained, the pursuers must cease attendance at the school. It is rumoured that one of the pursuers appeared at one of the opening lectures in one of the class rooms this session, but that the vigilant eye and authoritative manner of one of the ladies of the executive committee soon set that matter straight. It is a pity that lady superintendents should not be able to conduct ward work as amicably with the gentler as they can with the sterner sex. The pursuers claim \$500 each as damages, or re-admission to the school.

THE EDINBURGH HEALTH LECTURES.

In opening the ninth series of lectures for the people in connexion with the Edinburgh Health Society, Dr. R. W. Felkin took as his subject "Popular Errors in regard to Medicine." Dealing with the question historically, he made use of much of his vast store of knowledge of African superstition and witchcraft. He then referred to quacks and patent medicines in terms none of the mildest, and treated amongst other subjects on dipsomania, demoniacal possession, and infirmaries and their slanderers. It was a mistake, he said, on the part of well-to-do people to suppose that infirmaries were established for their benefit, though they were the people who most appreciated the benefits of hospital treatment. Some poor people were most averse to letting their children enter the infirmary; but he was convinced that the happiest days of many a child's life were spent within the walls of a hospital. Speaking of women's work, he said that he objected to the notion that all barriers were to be broken down between the sexes, and, with regard to the modern education of girls, he thought it was almost time to advocate the formation of a "Prevention of Cruelty to Girls Association."

Edinburgh, Nov. 14th.

DUBLIN.

(From our own Correspondent.)

AMALGAMATION OF THE MEDICAL SCHOOLS.

A MEETING of medical students was held on Monday evening in the Concert Room, Rotunda, to protest against the proposed scheme of amalgamation. The Chairman, after some introductory remarks, said that if the necessity arose they would not memorialise the College of Surgeons—it would be waste of time,—but they would approach his Excellency the Lord-Lieutenant, in whom was vested the power of sanctioning or quashing the scheme. The following resolutions were adopted:—"That this meeting protests against the proposed amalgamation scheme as not conducive to the interests of medical students in general. That this meeting is of opinion that the future prospects of night students are in imminent danger of being abolished at no distant date under the proposed new scheme, and that for that reason alone they have met to demand the recognition of those rights through the continuance of the present system of medical education. That a memorial be signed by all medical students and forwarded to his Excellency the Lord-Lieutenant, requesting him to give due consideration to the claims of the students before granting his acquiescence to the said scheme. That a Students' Defence Association be formed, the object of which shall be to watch over and protect the interests of medical students."

It is believed that an injunction will be sought for this week to restrain the Carmichael School from joining the proposed scheme of amalgamation between the Carmichael, Ledwich, and School of the Royal College of Surgeons.

TYPHOID FEVER.

Statements have been made that an outbreak of typhoid fever has recently prevailed among the *employés* at the head office of the Bank of Ireland in College-green, and that numerous deaths had occurred. I have made inquiries, and learn that during the past three months only one person, connected with the bank has had typhoid, and that no death has occurred during that period. If we go back to the past three years, about ten cases of typhoid fever among the clerks and servants of the bank took place, but whether these were due to the insufficient sewerage is a debatable question. Probably the greater number may have been due to bad sewerage, but I have been informed that the objectionable sewers have been rectified, and that at present no complaint can be made in this respect.

The cases of typhoid fever in hospital on the 3rd inst. numbered fifty-four, but, although the number of cases of this disease has of late been more numerous in Dublin than usual, there has been nothing like an epidemic. Sir Charles Cameron, medical officer of health, states that it is remarkable that, while other zymotic diseases have declined in Dublin, typhoid fever has not decreased; but he also points out that there is still much to be accomplished in reference to the proper disposal of the sewage of the houses of Dublin, and that many cases of typhoid fever may easily be traced to defective house drains.

UNIVERSITY OF DUBLIN BIOLOGICAL ASSOCIATION.

The annual opening meeting of this society was held last week in the Museum Buildings, Trinity College. The presidential address was delivered by Mr. Bewley, who chose for his subject, "The Struggle between Cells and Bacteria."

The salary of Dr. Donovan, medical officer of health for the city of Cork, has been increased from £160 to £200.

Dublin, Nov. 13th.

PARIS.

(From our own Correspondent.)

A NEW MICROBE.

PROFESSOR VERNEUIL has communicated a second note from Dr. Charles Richet on the new microbe which he found in an epithelial tumour of a dog, which was reported in THE LANCET of last week. A culture of the "staphylococcus septicus" inoculated in a dog rendered it only slightly ill, but injected in the peritoneum of a rabbit it caused a grave malady, and frequently death. If into a rabbit be injected the blood of a dog rendered ill by the inoculation of the microbe, the rabbit escapes death by a subsequent inoculation. This blood seems to play the rôle of a vaccine. If the blood of a dog in health be injected into a rabbit, the symptoms induced in the latter, when afterwards inoculated, are not fatal. Professor Verneuil sees in these experiments intimations of a new influence of the blood of one animal on another, as regards the effect of cultures in preventive vaccination, and he remarks that they give rise to a new idea.

ACTION OF HYDROFLUORIC ACID ON THE BACILLUS OF TUBERCULOSIS.

Dr. Hérard has undertaken to respond to Professor Jaccoud's note on the action of hydrofluoric acid on the bacillus of tuberculosis, also reported in THE LANCET of last week. Dr. Hérard says he does not accept as demonstrated that hydrofluoric acid is without action on the bacillus of Koch. On the contrary, he believes in this action in certain determined conditions, and supports his opinion by reference to the researches of Dr. Trudeau of New York. This physician has shown that tuberculous cultures, submitted to the action of solutions of hydrofluoric acid sufficiently concentrated, may be inoculated without producing tuberculosis. Moreover, from a practical point of view, the hydrofluoric inhalations may have their utility, even if they do not destroy the pathogenic bacillus in the parenchyma of the lungs. It is possible that they act on the phenomena of putrefaction; they may also modify nutrition in an advantageous manner, and thus put phthisical subjects in a position favourable for ultimate cure. Numerous observations prove that patients have found great benefit from hydrofluoric inhalations. Their use may, therefore, be preserved in practice, as cod-liver oil is in the same affection, as well as arsenic, creasote, or tannic acid, which, though often very useful, are not invariably attended with success.

EFFECTS OF THE INJECTION OF SOLUTIONS OF SALT.

MM. Dastre and Loye, in a note in the *Archives de Physiologie*, state that a considerable quantity of a physiological solution of salt may be injected successively into the veins of an animal without causing any apparent trouble, immediate or consecutive. This quantity has been raised by the experimenters beyond two-thirds of the weight of the animal. The expression "toxic dose," the authors remark, has no meaning so far as the salt solution is concerned. There is no such thing as a toxic dose, but there is a toxic rapidity. This rapidity is superior to 3°; that is to say,

the quantity of the solution introduced does not exceed three cubic centimetres per minute and per kilogramme of the animal. In order for the injection to be innocuous certain conditions are necessary—as moderate rapidity of the injection and the amount introduced, and a healthy state of the organs, especially of the kidney. When these conditions are not fulfilled the animal succumbs sooner or later. There is then observed a constant exudation which is produced in the serous cavities; also sanguineous suffusions and exudations by the mucous membranes. When the course of the urinary elimination is observed, one notices, as a general rule, a perfect parallelism between this excretion, on the one hand, and the injection on the other. After a certain time, the quantity injected is balanced by the quantity which is eliminated. This normal regimen reveals the existence of a mechanism which regulates the quantity of water of the organism. This mechanism begins to act when the quantity of salt water injected is equal to the quantity of the blood of the animal before the experiment. The surplus is immediately rejected. This quantity, equal to the weight of the blood of the animal, seems to separate in two portions: one portion (about 25 per cent. of the weight of the blood) remains in the circulatory apparatus during the whole time of the experiment, and is only eliminated definitely later on; a second portion (about 75 per cent.) is retained momentarily in the serous membranes and the tissues, to escape equally later on. These facts show a physiological connexion between the circulatory and serous systems connected with the preservation of the balance of the watery portion of the blood and of the tissues. Analyses have shown that, when the animal returns to the normal condition, the injection of physiological salt water produced nothing but a "lavage," properly speaking, or a washing of the blood and of the tissues.

Paris, Nov. 13th.

VIENNA.

(From our own Correspondent.)

AMERICAN AND ENGLISH STUDENTS IN VIENNA.

THE number of American and English students attending the lectures and courses in Vienna is increasing year by year. Now, in the first days of the winter session, more than seventy students have entered, the most of them being Americans; England is represented by only a few Glasgow, Edinburgh, and Aberdeen men. The courses delivered by the *privat-docenten*, especially those on skin diseases, syphilis, laryngology, gynaecology, and operative surgery, attract most, on account of the abundance of interesting cases and dissections. Since the beginning of this session, useful information concerning academical matters is given to the foreign students by a special Medical Students' column, contained in the only English Vienna paper—the *Vienna Weekly News*,—wherein the new courses, the fees, &c., are announced every week. Some of the courses are given in English.

THE LATE PROFESSOR VON BAMBERGER.

The disease from which Professor Bamberger had been suffering for some months and to which he finally succumbed on Nov. 9th, at 9.30 A.M., is believed to have been cancer of the bronchial glands, and hæmoptysis occurred by corrosion of the bronchial vessels by cancerous ulcerations. No post-mortem examination was made.

Vienna.

MEDICAL MAYORS.—The following is a list of the members of the medical profession who have been selected to serve as mayors for the current year in the various towns of England and Wales:—W. Nettle, M.R.C.S., L.S.A. (re-elected), Liskeard; James Blake Maurice, M.D., F.R.C.S. Eng., J.P., Marlborough; H. W. Freeman, F.R.C.S.I., Bath; John Dommett Bishop, M.R.C.S. (fourth time), Calne; Hugh Moss, M.D., M.R.C.S., Congleton; John Sherburn, M.B., C.M. Ed., Hull; F. E. Manby, F.R.C.S. Eng., Wolverhampton; W. Clarkson, L.R.C.P. Ed., L.F.P.S. Glas., Morpeth; C. A. Colmer, L.F.P.S. Glas. (re-elected), Yeovil; Alderman J. B. Stedman, F.R.C.S. Eng. (re-elected), Godalming; and Alderman R. R. Daglish, M.R.C.S., L.S.A. (re-elected), New Romney.

Obituary.

JOSEPH EARLE, M.R.C.S., L.S.A., L.M.

THE funeral of the late Mr. Earle, who died at The Priory, Brentwood, Essex, on Oct. 4th, was the occasion of one of the most remarkable demonstrations of respect and grief that have been witnessed in the whole county of Essex for many years, literally thousands of mourners, of a most representative character, from nobleman to peasant, attending to prove how the deceased gentleman had won his way to the hearts of all classes.

Mr. Earle came of an old north country family, and was the third son of the late Rev. John Earle, of Walton Abbey, Yorkshire. He was born at Great Driffield in that county, and was sixty-nine years of age at the time of his death. He was educated at St. George's Hospital, and became a distinguished student there, holding most of the resident appointments and being leading prizeman and medalist of his year. Thirty-six years ago he settled in Brentwood, taking over in succession the practices of Drs. Marsh, Branfoot, and Growse, and for the last twenty years he had been in partnership with Mr. J. C. Quennell. Mr. Earle died "in harness," so to speak. In his usual robust health till the commencement of his fatal illness, on the Friday previously to his death he conducted a post-mortem examination on the body of a young woman who had died of pyæmia, and the following Monday he was attacked with symptoms of blood poisoning. All his great strength seemed to leave him at once. Dr. Goodhart of London and Dr. Branfoot of Brighton saw him; but, in spite of their attentions and those of his partner and many medical brethren, he succumbed to the disease early on Thursday morning.

A strikingly handsome man, peculiarly generous hearted, with the most genial of manners, his address carrying much old-fashioned courtesy with it, the honest kindness of his nature was evident in all he said or did; whenever Mr. Earle made a patient he made a friend. He worked up a very large and high-class practice, and throughout Essex was respected and admired by his medical confrères and his patients for his practical ability and his ever-ready sympathy for those in distress. He never spared his own labours when he could be of the slightest comfort to those afflicted. In his younger days a bold and fearless rider, "in the first flight across country," as a judge of a horse he had few equals, a first-rate shot, a well-known prizewinner at the poultry shows and elsewhere, he was ever an ardent and enthusiastic sportsman, and never spared his purse to encourage local cricket, football, or athletics.

Mr. Earle was indeed the very type of the English gentleman, and of the highest class country practitioner, and his loss is a severe personal grief to high and low. His earnest, unselfish work, his urbanity, his kindness of heart, and his wide-spreading benevolence will ever reflect the highest esteem and affectionate regard on his memory and on the noble profession he esteemed it high honour to belong to.

Something attempted, something done,
Has earned a night's repose

JOHN LEIGH, M.R.C.S.

THE death is announced, after a long illness, of Mr. John Leigh, on Sunday last, at his residence near Bowden. He was for twenty years the medical officer of health for Manchester. His medical studies were pursued first at Ashbourne, where he received some training from a local practitioner, afterwards at Manchester, and were completed at Guy's Hospital, London. Before attaining twenty-one years of age he filled two chairs (Chemistry and Forensic Medicine) in the then Manchester Schools of Anatomy and of Medicine, and upon obtaining his diploma began practice in that city, which he successfully conducted until his appointment in 1868 as medical officer of health. As medical adviser to the corporation, he leaves an enduring memorial in a record of the improvements effected (several of which were due to his initiation) in the sanitary condition of the city during his tenure of office, particularly in regard to the wonderful system of sewage disposal, the success of which has been specially due to Mr. Leigh's efforts.

REGINALD HARE COMBES, M.R.C.S., L.R.C.P.

WE regret to have to announce the death, on the 7th inst., from sarcoma, of Mr. R. H. Combes, of Sydney Infirmary and St. Bartholomew's Hospital. Born, in 1860, in the wilds of Australia, he was sent over at fourteen to England to be educated at Bedford Grammar School, and, after a visit of from two to three years' duration to his colonial home, returned to this country to study medicine at St. Bartholomew's. There he earned considerable reputation for his marvellous versatility, and especially for his great mechanical skill, the lecturer on anatomy gladly availing himself of his services as prosector. After taking his degrees he was appointed registrar, and subsequently house surgeon, at the North-west London Hospital. In January, 1887, he entered into partnership with Mr. W. H. Holman, of Adelaide-road, Hampstead. His contributions to medical literature consisted of a description, published in THE LANCET, of "A New Stethoscope," an invention of his which met with the profession's very substantial approval, and of a paper on the Transposition of the Aortic Arch, which appeared in the St. Bartholomew's Hospital annual reports. A few days before his death he had been elected for the second year honorary secretary to St. Luke's Guild, of which excellent institution he had for some years been an enthusiastic supporter.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The following candidates passed the First Professional Examination for the diploma of Fellow at a meeting of the Board of Examiners on the 12th inst. :—

J. M. Harding Martin, of Edinburgh and Liverpool; W. T. Freeman, of St. Bartholomew's Hospital; Robert Caldwell, of Westminster Hospital; Wilfred Martin Barclay, of Bristol; and J. Edwards, of Leeds and Dublin. (Eleven candidates were referred.)

Passed on the 13th inst. :—

C. S. Spong and Edk. François Burghard, of Guy's Hospital; M. L. Jones, W. M. Adam Eccles, W. A. Clark, and J. H. Edwards, of St. Bartholomew's Hospital; D. Stillwell Gunn and C. D. Marshall, of University College Hospital; Allan J. McNab, of King's College Hospital; J. R. Earle, of Oxford and St. Bartholomew's Hospital. (Six candidates were referred.)

Passed on the 14th inst. :—

W. W. Kennedy, of Glasgow and St. Bartholomew's Hospital; Ed. P. S. Gane, of Leeds and St. Bartholomew's Hospital; H. Stephen Sandifer, of King's College Hospital; M. E. Paul, of London Hospital; J. H. Nicol, of Glasgow and London; George C. Rennie, of Melbourne University; C. Gibbs, of Charing-cross Hospital; H. E. Tracey, of St. Bartholomew's Hospital; Horace George Turney, of St. Thomas's Hospital. (Eleven candidates were referred.)

The following are the arrangements for the Final Examination for the diploma of Fellow, for which thirty-seven candidates have entered their names—viz.: Tuesday, 20th inst., Written Examination, 1.30 to 5.30 P.M.; Wednesday, 21st inst., Clinical Examination, 2.15 to about 5.45 P.M.; Thursday, 22nd inst., Operations and Surgical Anatomy, 1.30 to about 7.45 P.M., at the Examination Hall; Friday, 23rd inst., *Viva-voce* Examination (Pathology), 5 to 9 P.M., at the Royal College of Surgeons. Candidates will be required to attend on each of the above-mentioned days.

VICTORIA UNIVERSITY.—On the 1st inst. the following degrees were conferred on the undermentioned candidates :—

Doctor of Medicine.—John Hilton Thompson, M.B., Owens College. *Bachelor of Medicine and of Surgery*.—First Division: John Hampden Barker (Owens College), and Robert James M'Leau Buchanan (University College), specially distinguished in Systematic and Clinical Medicine; Arthur E. Giles and J. Mountfort Johnson, of Owens College. Second Division: John Brown, Ernest Courtney Lomas, H. Waytes Pomfret, of Owens College.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—

At meetings of the Court of Examiners held on the 8th and 9th inst. the following were admitted Fellows :—

William Michael Courtney and William Owen, of the Indian Medical Department.

ROYAL UNIVERSITY OF IRELAND.—The following

Exhibitions have been awarded :—

First Examination in Medicine.—First Class (£20): Alex. Blaney. Second Class (£10): Patrick O'Brien. *Second Examination in Medicine*.—Second Class (£15): Andrew Fullerton.

Third Examination in Medicine.—Second Class (£20 each): John Hennessy and J. Macnamara.
Degree Examination (M.B., B.Ch., B.A.O.).—Second Class (£25 each): G. W. Jenney and Denis J. Coffey.

CAMBRIDGE UNIVERSITY.—The Syndicate for the management of the examination in State Medicine in their fourteenth annual report state that thirty-six candidates presented themselves for examination in October last, including four in Part I. only. Twenty-four passed in both parts, three in Part I. only, and two in Part II. only. The number of candidates was larger than at any previous examination, and the proportion of failures not nearly so great as it was last year. Mr. Francis Darwin, M.A., M.B., of Trinity College, has been appointed Reader in Botany, in succession to Dr. Vines. Mr. Edward Henry Douty, M.A., M.R.C.S., L.R.C.P., of King's College, has been appointed Senior Demonstrator in Anatomy. Mr. William Stanley Melsome, B.A., Fellow of Queen's College, and Mr. Robert William Michell, B.A., of Gonville and Caius College, have been appointed Junior Demonstrators of Anatomy.

The thirteenth annual meeting of the committee of the Tynemouth Infirmary was held on the 6th inst., when satisfactory, financial, medical, and general reports were presented and adopted.

The seventy-fourth anniversary sermon on behalf of the Derby and Derbyshire General Infirmary, was preached on the 8th inst. at All Saints' Church, Derby, by the Very Rev. the Dean of Lichfield (Dr. Bickersteth). The collection realised £131.

FOOTBALL ACCIDENT.—Whilst playing, last week, in an Association football match, at Maidenhead, between Norfolk Park School and Tollington House School, a boy named Eddie Brown accidentally fell over one of his opponents' legs and sustained a broken arm.

OPENING OF THE SEWAGE DISPOSAL WORKS AT KINGSTON.—Last week the Sewage Disposal Works at Kingston were publicly opened by the mayor of the borough in the presence of a large and influential company. The A B C process has been adopted.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. George William Petter, late of Bournemouth, has bequeathed £20 each to the North Devon Infirmary and the North Devon Dispensary at Barnstaple, and the Home for Incurables at Putney. A donation of £1000 has just been given by Mr. John Sharp of Balmuir for the endowment fund of the Dundee Convalescent Home, Barnhill.

PRESENTATIONS.—Dr. Valentine, of Earlestown, has just been presented by the members of the Earlestown Ambulance Corps, for his valuable instructions to them in ambulance work, with a splendid binocular microscope, with lenses and other appurtenances complete, enclosed in a handsome box, upon which an appropriate inscription is engraved.—The staff of the Borough Hospital, Sheffield, have just presented Dr. C. H. Willey, on the occasion of his leaving that institution, with a handsome case of cutlery.

THE PASTEUR INSTITUTE.—The opening on the 14th inst. of the institute, built by public subscription for M. Pasteur, just off the Boulevard de Vaugirard, was attended with considerable ceremony. The President of the Republic presided, and the proceedings opened with a brief speech from M. Bertrand, the Secretary of the Academy of Sciences, eulogistic of M. Pasteur and his manifold researches in the domain of science. Dr. Grancher, who has been M. Pasteur's chief lieutenant for the last three or four years, then reviewed the work done in inoculation since 1885, and informed his hearers that there were about twenty laboratories for inoculation, of which seven were in Russia, five in Italy, and one each in Roumania, Austria, Brazil, Cuba, and the Argentine Republic, while two more will shortly be opened at Chicago and Malta, the last-named, it may be observed, being the only one on British soil. M. Christophle, Governor of the Crédit Foncier and treasurer of the fund, then stated that the subscriptions amounted to over £100,000, of which £40,000 remained as capital for an endowment fund. The son of M. Pasteur, who is attached to the French Embassy at Rome, then read a brief review of the work done by his illustrious father, and at the conclusion of the ceremony the visitors were conducted through the building.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—A quarterly meeting of this Association was held in the hall of the Royal College of Physicians, Edinburgh, on the 8th inst. The President (Dr. Clouston) occupied the chair, and there was a good attendance of members. Four new members were elected, and the secretary for Scotland was instructed to express the sympathy of the meeting with Dr. Rayner, the general secretary, in his retirement from the post he had so long occupied. Arrangements were made for the next examinations for the certificate in Psychological Medicine in Edinburgh, Glasgow, and Aberdeen on Dec. 17th, 19th, and 21st respectively. Dr. Robertson read for Dr. McPherson a paper on a case of Raynaud's Disease with Acute Mania. Dr. Yellowlees introduced a discussion on Restraint in the Treatment of the Insane, which was joined in by most of those present.

ST. THOMAS'S HOSPITAL: PRESENTATION OF A TESTIMONIAL TO DR. ORD.—On Saturday, Nov. 10th, Dr. Ord was entertained at dinner by the members of the staff of St. Thomas's Hospital, and presented with a testimonial in recognition of his services as Dean of the Medical School for a period of twelve years. Dr. Bristowe, who occupied the chair, made the presentation on behalf of his colleagues, and expressed the indebtedness which they felt to Dr. Ord for his services during the time that he had been Dean; he referred to his own long friendship with Dr. Ord, and to the success attained by the school during the last twelve years—a success mainly due to Dr. Ord's untiring devotion to the duties of the deanship, and to his great business capacity and tact. At the close of the speech the testimonial—which consisted of a silver candelabrum, silver salver, and a fan for Mrs. Ord—was presented. Dr. Ord, in reply, thanked his colleagues for their gift, and ascribed the success of the school not to his own efforts only, but to the excellent teaching done in the various departments both of school and hospital. During this second period of tenure of the office (for he had been Dean in 1855 and 1856) the number of students had increased from about 40 to nearly 130, and the capacity of the medical school as a teaching centre had greatly increased. Important questions would present themselves for consideration by his colleagues in the future as to the establishment of a residential college and the formation of a course of post-graduate lectures.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FIRST EXAMINATION.

PART 1.—CHEMISTRY, INCLUDING CHEMICAL PHYSICS.
 Tuesday, October 2nd, 1888, from 2 to 5 P.M.

Candidates must answer at least four questions and not more than six. At least one question in each section must be answered. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

Section 1.—1. Describe a hydrometer. Explain its use, and the principles of its action. 2. What is meant by heat of combustion? How is it determined, and how expressed?

Section 2.—3. Strong sulphuric acid is heated with the following bodies: copper, nitrate of sodium, oxalic acid, chloride of sodium, charcoal. Explain and give the formulae for the changes, if any, which occur. 4. How would you prepare the carbonate and oxide of magnesium from the sulphate? Describe the properties of these bodies and state in what respects they differ from the corresponding calcium compounds. 5. How is pure iodide of potassium prepared? What are its properties? Calculate the weight of iodine contained in ten pounds of this salt. (K=39; I=127.)

Section 3.—6. Give the formula of urea and the percentage amount of nitrogen which it contains. What takes place when an alkaline solution of hypobromite of sodium is added to a solution of urea, and how may the method be employed in estimating the amount of urea in the urine? 7. In what respects do the vegetable alkaloids bear a resemblance to ammonia? How can quinine be extracted from cinchona bark, and morphia from opium? 8. How can you obtain (a) ethylene (olefiant gas) and (b) ether by the action of sulphuric acid on alcohol? Give the formula and properties of each of these bodies.

Note.—This paper also applies to candidates for the licence of the Royal College of Physicians of London.

PART 2.—MATERIA MEDICA AND PHARMACY.

Wednesday, October 3rd, 1888, from 2 to 5 P.M.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. What is an anæsthetic? Distinguish between local and general anæsthetics, and give examples of each. By what methods and in what forms are these agents employed? 2. Describe the physical properties

of permanganate of potassium. State the strength of its official solution, and give an account of its actions. 3. Enumerate and classify the purgatives with which you are acquainted, and state in what form and dose you would administer calomel, sulphur, colocynth, senna, and jalap. 4. In what forms and in what doses is sulphate of iron employed medicinally? Describe its action when administered internally. 5. What is an emulsion, and how does it differ from a solution? Give examples of drugs which may be administered in the form of an emulsion, with the method of preparation required in each case. 6. Give an account of the origin of opium, and enumerate its more important active principles. Give the composition and strength of the official compound powders containing opium.

Note.—This paper also applies to candidates for the licence of the Royal College of Physicians of London.

PART 3.—ELEMENTARY PHYSIOLOGY.

Tuesday, October 2nd, 1888, from 10 to 12 noon.

Candidates must answer at least four of the six questions. Candidates unable to answer four questions must report the fact to the presiding examiner.

1. *Feed rove* on microscopical sections. 2. What do you understand by the terms (1) crassamentum, (2) buffy coat, (3) liquor sanguinis, (4) serum of blood? 3. Describe the mechanism of quiet and forced inspiration. 4. Contrast the phenomena of contraction in voluntary and in involuntary muscle fibres. 5. Mention the chief constituents of bread, and describe how each of them is acted upon by the various digestive juices. 6. Explain the effects of stimulating (a) a motor nerve, (b) a sensory nerve, (c) a nerve of special sense.

SECOND EXAMINATION.

PHYSIOLOGY.

Thursday, October 4th, 1888, from 2 to 5 P.M.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. What is understood by the expression "blood pressure"? Explain the conditions which lead to variations in the normal blood pressure in arteries and veins. 2. Describe the changes which the proteid constituents of food undergo in the various parts of the alimentary canal. 3. How do the lymphatics commence? Whence is the lymph derived? Mention the circumstances which influence its flow. 4. Describe a lobule of the liver, and an individual liver cell. 5. Describe the functions of the vagus as a cardiac nerve. 6. State the evidence in favour of the localisation of motor centres in the cerebral cortex. Where are the centres connected with the movements of the right arm supposed to be situated?

Note.—This paper also applies to candidates under the old regulations for the licence of the Royal College of Physicians of London and for the membership of the Royal College of Surgeons of England.

ANATOMY.

Friday, October 5th, 1888, from 2 to 5 P.M.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. Describe the upper end of the femur (head, neck, and trochanters), giving muscular and ligamentous attachments. 2. Give the nerve supply and actions of the following muscles: (a) Biceps, (b) teres major, (c) first dorsal interosseous of hand, (d) tensor fasciae femoris, (e) adductor longus, (f) gastrocnemius. 3. Describe the fornx. 4. Give the course and relations of the brachial artery, and enumerate its branches. 5. Describe the position and relations of the right kidney. 6. Give the relations of the internal and external popliteal nerves, and enumerate their branches.

Note.—This paper also applies to candidates under the old regulations for the licence of the Royal College of Physicians of London and for the membership of the Royal College of Surgeons of England.

MEDICAL NOTES IN PARLIAMENT.

Victoria University Bill.

In the House of Lords, on the 13th inst., on the motion of Earl Granville, this Bill was read the third time and passed.

Public Health Act Amendment (Buildings in Streets) Bill.

In the House of Commons, on the 12th inst., this Bill passed through committee with an amendment; and the Bill as amended was considered and then read a third time.

Criminal Literature.

Mr. Channing, for Mr. S. Smith, asked the Secretary of State for the Home Department whether his attention had been drawn to the report that the two boys who were now waiting their trial for murder in Maidstone Gaol had been addicted by their own confession to the reading of such books as "Dick Turpin," "Varney the Vampire," or "The Feast of Blood," and "Sweeney Todd," and that one of them told a correspondent of the *Times* and *Wells Advertiser* that he was prepared for his fate now he had made his name known; whether he was aware that there was an enormous circulation of criminal literature among the young, and that about twenty-five English newspapers had recently been publishing the lives of Charles Peace, William Palmer, the Rugeley poisoner, and the murders of Burke and Hare; whether he was aware that those stories, attractively written, were widely circulated and read by enormous numbers of children, and instigated many of them to the commission of crime; whether any check could be put upon the circulation of those pernicious works; and whether a record could be kept of the class of books or papers found on the persons of youthful criminals when arrested, as a guide to future legislation on the subject.—Mr. Matthews, in reply, said that he had seen the statement referred to, and had instructed the Prison Commissioners to ascertain whether the statement emanated through the prison officials, as reported. The hon. member might be quite justified in supposing that there is a large circulation of demoralising literature; and, as he had previously stated, the Government have taken, and are prepared to take, such steps as prudence dictates and the law enables them to take in order to check this circulation. He would undertake to give careful consideration to the last portion of the hon. member's question.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 8 o'clock on the Thursday morning of each week for publication in the next number.

BARKER, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the Vale District, Wantage Union.
BUCKLEY, T. W., M.R.C.S., L.S.A., has been appointed Medical Officer of the "A" District and the Workhouse, Thrapston Union.
HANSON, ALFRED, M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator of the Mablethorpe District of the Louth Union, vice Dr. Anderson, deceased.
HARRIS, J. RUSSELL, M.D. Brux., M.R.C.S., has been appointed Public Vaccinator to the Strand Union and Medical Officer of the Western District of the Strand Union, vice E. W. Dunn, deceased.
HAYCOCK, H. E., L.R.C.P. Ed. and L.M., M.R.C.S., has been appointed Medical Officer of the Third District, Hitchin Union.
JOT, F. W., L.R.C.P., L.M. Ed., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Thetford Borough and Rural District.
POOLMAN, ARTHUR E., B.A., M.R.C.S., L.R.C.P., late House Surgeon, Guy's Hospital, has been appointed Resident Medical Officer to the Private Home, Guy's Hospital.
SMITH, JOHN W., M.B. Edin., M.R.C.S., has been appointed Junior Demonstrator in Anatomy in Owens College, Manchester.
SUTTON, ALFRED, M.R.C.S., L.S.A. Lond., has been appointed Government Medical Officer at Bunleigh, Queensland.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £30 per annum, with board, washing, and lodging.
BRADFORD INFIRMARY AND DISPENSARY.—House Physician. Salary £100 per annum, with board.
COUNTY ASYLUM, Whittingham, Preston, Lancashire.—Qualified Dispenser. Salary £50 a year, with board, lodging, and washing.
GLOUCESTER FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer.
HOSPITAL FOR EPILEPSY AND PARALYSIS, 32, Portland-terrace, Regent's-park, N.W.—Physician to Out-patients.
HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Surgeon. Also an Assistant Surgeon.
KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon and Dispenser (one office). Salary £50 per annum, with board, lodging, and washing.
LONDON LOCK HOSPITAL AND ASYLUM, Harrow-road, W.—Surgeon to the Out-patient department.
LONDON MEDICAL MISSION, 47, Endell-street, W.C.—Fully qualified Evangelical Gentleman to assist in the work of a London medical mission. Salary £150.
NATIONAL DENTAL HOSPITAL, 149, Great Portland-street, W.—Lecturer on Dental Anatomy and Physiology. Also an Assistant Dental Surgeon.
POOLER FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Medical Officer. Salary £200 per annum and extras, with house &c.
ROYAL HANTS COUNTY HOSPITAL, Winchester.—House Surgeon. Salary £100 per annum, with board and lodging.
ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, Lambeth, S.E.—Surgeon to the Walworth District. Honorarium £20 per annum.
ROYAL UNIVERSITY OF IRELAND, Dublin.—Examiners: Two in Midwifery, two in Medical Jurisprudence, and two in Materia Medica.
STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and lodging.

Births, Marriages, and Deaths.

BIRTHS.

BREACH.—On the 1st inst., at Yattendon, near Newbury, Berkshire, the wife of J. H. Breach, M.R.C.S., of a daughter.
MASTERS.—On the 7th inst., at Westall House, Brook-green, W., the wife of J. Alfred Masters, L.R.C.P. Lond., M.R.C.S., of a son.

MARRIAGES.

COCKEY—GILLOTT.—On the 12th inst., at the Parish Church of St. Mary and Eonswythe, Folkestone, Edmund Percival Cockey, M.D. Lond., eldest son of Edmund Cockey, surgeon, of Frome, Somerset, to Ellen Hortense, youngest daughter of the late George Gilloft, of Boulogne-sur-Mer.
HUXTABLE—WALSH.—On Aug. 15th, at St. Mary's Church, Brisbane, Louis Ralston Huxtable, M.B., son of Chas. Henry Huxtable, Esq., of Hobart, to Lillie, eldest daughter of the late Hon. William Henry Walsh, Brisbane.
WILKINSON—LAWLESS.—On the 6th inst., at Calry Church, Sligo, Clement John Wilkinson, M.R.C.S., &c., Windsor, eldest son of the Rev. T. H. Wilkinson, to Katherine Elizabeth, eldest daughter of the late Edmund Lawless, Staff Surgeon, R.N.

DEATHS.

- AITKENS.**—On the 12th inst., at Coventry, John Alexander Aitkens, M.R.C.S., elder son of John Aitkens, Esq., of Twickenham, aged 35.
- CHALMERS.**—On the 9th inst., at Keppel-street, Russell-square, John Chalmers, M.D. Glas., C.M. Univ. Glas. and St. Barthol., Vice-Pres., Brit. Gynec. Soc., of above address, and Calverley-road, N., aged 49.
- CHILDS.**—On the 8th inst., at Aldridge-road-villas, Westbourne-park, Surgeon-Major George Borlase Childs, late of the 4th Battalion Royal Fusiliers, and late Surgeon-in-Chief for over forty years to the City Police Force.
- COMBES.**—On the 11th inst., at Galeston, Eton-avenue, South Hampstead, Reginald Hare Combes, M.R.C.S., second son of the Hon. Edward Combes, C.M.G., of Glamdr, New South Wales, in his 29th year.
- COTTON.**—On the 8th inst., at Abington-street, Northampton, George Cotton, M.R.C.S., in his 67th year.
- GORDON.**—On the 8th inst., at Arundel-gardens, W., Huntly George Gordon, M.D., Surgeon-General (late 95th and 69th Regiments), aged 67.
- MACFARLANE.**—On the 8th inst., T. B. Macfarlane, L.R.C.P. and S. Ed., son of the Rev. T. and Eleanor Macfarlane, Cyro Vicarage, aged 37.
- OLIVER.**—On the 11th inst., at Consett Hall, Co. Durham, Edith Rosina, wife of Thomas Oliver, M.D., Newcastle-upon-Tyne, and eldest daughter of William Jenkins, J.P., aged 20.
- ROBSON.**—On the 9th inst., at his residence, 3, North Bailey, Durham, Robert Naebit Robson, F.R.C.S., L.S.A., in his 71st year.
- SHAW.**—On the 10th inst., at New-street, Leicester, M.D. Cantab., F.R.C.P.L., Justice of the Peace for the County and Borough of Leicester, in his 88th year.
- TAYLOR.**—On the 7th inst., at Rock House, Cintra-park, Upper Norwood, S.E., George Taylor, M.D., F.R.C.S., J.P., in his 70th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

- BAILLIÈRE, J. B., ET FILS, Paris.**
Hygiène de la Vue. Par K. Galezowski and A. Kopff. Avec 44 figures intercalées dans le texte. 1888. pp. 323.
- BUREAUX DU PROGRÈS MÉDICAL, Paris.**
La Mort par la Décapitation. Par le Dr. Paul Loyer. Préface de M. le Dr. P. Brouardel. 1888. pp. 235.
- GOVERNMENT PRINTING OFFICE, Washington.**
Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. IX. Medicine (Popular).—Nywell. 1888. pp. 1064.
- The Medical and Surgical History of the War of the Rebellion. Part 3. Vol. I. Medical History. Being the Third Medical Volume. By Chas. Smart, Major and Surgeon, United States Army. 1888. pp. 989.
- HIRSCHWALD, AUGUST, Berlin.**
Grundzüge der Arzneimittellehre. Ein Klinisches Lehrbuch. Von Dr. C. Binz, Zehnte neu bearbeitete Auflage. 1889. pp. 312.
- LEWIS, H. K., Gower-street, London.**
A Handbook of Therapeutics. By Sydney Ringer, M.D., F.R.S. Twelfth Edition. 1888. pp. 632.
- A Handbook of Surface Anatomy and Landmarks. By Bertram C. A. Windle, M.A., M.D. Dub. 1888. pp. 134.
- Section Cutting and Staining. A Practical Guide to the Preparation of Normal and Morbid Histological Specimens. By Walter S. Colman, M.B. Lond. 1888. pp. 107.
- Epitome of Diseases and Injuries of the Ear. With a chapter on Naso-pharyngeal Diseases causing Deafness. By W. R. H. Stewart, F.R.C.S., L.R.C.P. Ed. 1888. pp. 126.
- Illustrated Lectures on Ambulance Work. By R. Lawton Roberts, M.D. Third Edition. pp. 206.
- LONGMANS, GREEN, & Co., London.**
Animal Physiology. By W. S. Furneaux. With 218 Illustrations. 1888. pp. 243, price 2s. 6d.
- Masks or Faces? A Study in the Psychology of Acting. By William Archer. 1888. pp. 232, price 6s. 6d.
- Physical Realism, being an Analytical Philosophy from the Physical Objects of Science to the Physical Data of Sense. By Thomas Case, M.A. 1888. pp. 357, price 15s.
- OLIVER & BOYD, Edinburgh.**
The Transactions of the Edinburgh Obstetrical Society. Vol. 13. Session 1887—88.
- POLK, R. L., & Co., Detroit, Mich.**
Medical and Surgical Directory of the United States. 1886. pp. 1451, price 7 dollars.
- SMITH, ELDER, & Co., Waterloo-place, London.**
A Treatise on Surgery: its Principles and Practice. By T. Holmes, M.A. Cantab. With 428 Illustrations. Fifth Edition. Edited by T. Pickering Pick. 1888. pp. 1004.
- The British Journal of Dermatology, published monthly, No. 1, Vol. I. November, 1888. Edited by Malcolm Morris, London, and G. H. Brooke, Manchester (H. K. Lewis, Gower-street, London), price 1s.—Syphilis of the Larynx, Trachea, and Bronchi; by J. Solis Cohen, M.D., Philadelphia (Wm. J. Dorman, Philadelphia, 1888).—The Antiseptic Vaults of St. Michan's Church, Dublin; by Arthur Vicars, F.R.S.A. (E. Ponsonby, 116, Grafton-street, Dublin, and Simpkin, Marshall, and Co., London, 1888.)

Medical Diary for the ensuing Week.

Monday, November 19.

- ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.**—Operations daily at 10 A.M.
- ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.**—Operations, 1.30 P.M., and each day at the same hour.
- CHELSEA HOSPITAL FOR WOMEN.**—Operations, 2.30 P.M.; Thursday, 2.30.
- ST. MARK'S HOSPITAL.**—Operations, 2 P.M.; Tuesday, 2.30 P.M.
- HOSPITAL FOR WOMEN, SOHO-SQUARE.**—Operations, 2 P.M., and on Thursday at the same hour.
- METROPOLITAN FREE HOSPITAL.**—Operations, 2 P.M.
- ROYAL ORTHOPÆDIC HOSPITAL.**—Operations, 2 P.M.
- CENTRAL LONDON OPHTHALMIC HOSPITAL.**—Operations, 2 P.M., and each day in the week at the same hour.
- MEDICAL SOCIETY OF LONDON.**—8.30 P.M. Adjourned Discussion on Dr. Howard's paper on a New Method of Raising the Epiglottis. Mr. Knowsley Thornton: Some additional cases illustrating Hepatic Surgery.

Tuesday, November 20.

- GUY'S HOSPITAL.**—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
- ST. THOMAS'S HOSPITAL.**—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
- CANCER HOSPITAL, BROMPTON.**—Operations, 2 P.M.; Saturday, 2 P.M.
- WESTMINSTER HOSPITAL.**—Operations, 2 P.M.
- WEST LONDON HOSPITAL.**—Operations, 2.30 P.M.
- ST. MARY'S HOSPITAL.**—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.
- ROYAL STATISTICAL SOCIETY (Royal School of Mines, 23, Jermyn-street, S.W.)**—8 P.M. First Ordinary Meeting of Session. The President's Inaugural Address will be delivered by Dr. T. Graham Balfour.
- PATHOLOGICAL SOCIETY OF LONDON.**—8.30 P.M. Mr. Lockwood: Hernial Sacs and their Contents.—Mr. D'Arcy Power and Mr. C. Evill: Dislocation of Shoulder without Rupture of Capsule.—Dr. Ralfe: Aortic Aneurysm after Galvano-puncture.—Mr. W. H. Kesteven: Primary Cancer of Pancreas.—Dr. F. H. Hawkins: Aortic Valvular Disease.—Dr. Perry: Acute Intestinal Obstruction. Card Specimens.—Mr. Bland Sutton: (1) Spina Bifida (2) Supernumerary Legs in Frogs; (3) Supernumerary Mammary in Monkeys.—Mr. Targett: Dermoid Cyst near Knee.—Dr. A. H. Robinson: Phosphatic Concretion from a Recto-vaginal Fistula.

Wednesday, November 21.

- NATIONAL ORTHOPÆDIC HOSPITAL.**—Operations, 10 A.M.
- MIDDLESEX HOSPITAL.**—Operations, 1 P.M.
- ST. BARTHOLOMEW'S HOSPITAL.**—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
- ST. THOMAS'S HOSPITAL.**—Operations, 1.30 P.M.; Saturday, same hour.
- LONDON HOSPITAL.**—Operations, 2 P.M.; Thursday & Saturday, same hour.
- GREAT NORTHERN CENTRAL HOSPITAL.**—Operations, 2 P.M.
- SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.**—Operations, 2.30 P.M.
- UNIVERSITY COLLEGE HOSPITAL.**—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
- ROYAL FREE HOSPITAL.**—Operations, 2 P.M., and on Saturday.
- KING'S COLLEGE HOSPITAL.**—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
- CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.**—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
- SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.**—8 P.M. First Ordinary Meeting of Session. Opening Address by the Duke of Abercorn (Chairman of the Council).

Thursday, November 22.

- ST. GEORGE'S HOSPITAL.**—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
- CHARGING-CROSS HOSPITAL.**—Operations, 2 P.M.

Friday, November 23.

- ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.**—Operations, 2 P.M.
- CLINICAL SOCIETY OF LONDON.**—8.30 P.M. Dr. Thomas Oliver: On a Cause of Speedy Death in Heart Disease (with case).—Dr. W. H. Dickinson: Case of Purulent Pericarditis successfully treated by Aspiration and Free Incision.—Mr. R. W. Parker: Case of Extensive Pro-pericardium associated with Osteo-myelitis, free incision, irrigation, death.—Dr. Arkle and Dr. Bradford: Case of Aortic Aneurysm Rupturing into Descending Vena Cava. Living Specimens.—Mr. H. H. Tutton: Complete Compound Dislocation of Elbow, perfect recovery of joint.—Dr. Payne: Case of Molluscum Fibrosum.—Mr. H. T. Baker: Case of Genu Recurvatum.

Saturday, November 24.

- MIDDLESEX HOSPITAL.**—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 15th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Nov. 9	29.86	S.E.	45	44	..	47	39	.17	Raining
" 10	29.89	S.E.	41	39	74	48	37	..	Cloudy
" 11	29.85	S.E.	50	49	..	51	39	.23	Overcast
" 12	29.77	S.E.	48	47	..	54	46	..	Overcast
" 13	29.39	S.E.	52	51	81	55	49	.19	Overcast
" 14	29.91	S.W.	50	49	80	57	47	..	Cloudy
" 15	30.15	S.W.	52	51	..	54	49	..	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

WHAT NEXT!

THE wide distribution of the following circular amongst members of the medical profession can only be looked upon as a piece of impertinence, and is not likely to further the ends of the author. The cool assumption of superiority to regular medical practitioners, and the innuendo as to their inability to treat "cases of dislocation, sprains, stiff joints, &c.," are curious evidences of that kind of "confidence" which is synonymous with the schoolboy word "cheek."

"Mr. —, pupil of the late Mr. —, the well-known bone-setter, has now arranged, at the urgent request of numerous friends, to see cases of dislocations, sprains, stiff joints, &c., at —, where he may be consulted between the hours of — and —, on — and —, or by appointment on other days. Mr. — having gone through the full curriculum of medical and surgical study at — Hospital, and having had subsequent varied surgical practice in command of a Red Cross Ambulance in the Russo-Turkish War, in addition to the exceptional advantage of working with the late Mr. —, at the class of cases which he now undertakes, has every confidence in sending this notice to the members of the Medical profession, trusting that they will assist him in his attempt to fill the universally acknowledged void left in this class of practice by the late Mr. —'s death."

Alpha.—It would be courteous to make such a call. The card is better avoided. A brass plate and a little time and patience are usually sufficient.

If J. G. will consult our advertisement columns, he will probably obtain information of an institution or home suitable for the case.

FEVER AT SPENNYMOOR.

To the Editors of THE LANCET.

SIRS,—An outbreak of scarlatina and typhoid fever has occurred in my district under the following circumstances. Milk has been delivered in the town for which I am medical officer of health from an outside dairy. I have traced the cause of the outbreak to the milk, as those connected with the said dairy have had both scarlatina and typhoid among them since July last. I would be glad to communicate with any medical gentleman who has had a similar case in his district as to how he acted under the circumstances.

I am, Sirs, yours faithfully,

Spennymoor, Nov. 13th, 1888. MEDICAL OFFICER OF HEALTH.

Gordon Devane, M.D. U.S.A.—We cannot approve of medical publications addressed to the public.

THE DOLL SHOW AT THE HOSPITAL FOR SICK CHILDREN.

THE following address (written by J. Ashby-Sterry) was spoken by Mrs. Keeley at the concert preceding the Doll Show for the benefit of the Hospital for Sick Children, Great Ormond-street, on Nov. 9th, 1888.

You asked me here to come and see your Show—
I thought I'd done with Dolls some years ago!
I've given up the dolls of childhood's age,
And said good-bye to puppets of the stage!

I've done with skipping-ropes, and hoops, and toys,
With all the simple sport of girls and boys;
And as for hoops? I scarcely one have seen
Since those extensive days of crinoline!
Some toys remain! But disillusion comes
With sawdust stuffing and with broken drums!

And yet I count my warmest friends among
The bright, the merry, and the laughing young.
The children's laughter does me good; and I
Have made their grannies laugh in days gone by!
Their grandchildren repay me with their glee,
And make me feel Eighteen at Eighty-three.
So here I stand, the Children's Advocate,
To plead their cause in Eighteen Eighty-eight!

We talk of children's happiness; but who
Can picture half the sorrow they go through?
Pain's hard for us to bear—'tis doubly so
For those poor tiny mites, who do not know
Why they should suffer, as they listless lie,
To dream and ponder of the reason why?
And so I thought just now. I chanced to stray
Within a Ward not very far away:
A well-warmed, homish room—so clean and light,
So cheerful, quiet, flower-decked, and bright.

In one snug corner, in a cot, I note,
Propped up by pillows—in a scarlet coat—
A little girl, who ne'er for many a day
Has had a hope, or thought, or strength for play.
Though pain now slumbers, she is ill and weak—
Too feeble e'en to move, or laugh, or speak:
A pair of little wasted hands still keep
In close embrace a well-worn woolly sheep.
A sweet, sad smile half flickers o'er her face,
And in those big grey eyes you'll clearly trace
The sorrow that this little one has seen—
The weariness her little life has been!
Those eyes could better plead, in silent grief,
Than I, who for our Children hold a brief!

I plead for them. I beg you each to bring
A tiny feather for our big New Wing:
Let each one use his thought, his means, his might,
To aid us in our new successful flight!

I crave for them your sympathy untold,
Your love, your help, your pity—and your gold!
The last I'm bound to have; for, you must know,
I played *Jack Sheppard* many years ago!

I've not forgot his impudence, his dash—
His rare persuasive power when seeking cash!
Stand and deliver—sovereigns, fifties, fives—
We want your money, for we want their lives!

Perplexed.—The question is difficult to answer; so much depends on the exact terms of the understanding and the precise character of the correspondence.

Mr. C. B. Spence.—Certainly.

FEES FOR PROFESSIONAL ATTENDANCE ON STREET ACCIDENTS.

To the Editors of THE LANCET.

SIRS,—I shall feel obliged if you will kindly advise me what proceedings I should take to recover my fee for professional attendance in the following case.

In May last I was summoned by the policeman on duty to attend a poor woman who had met with an accident in the street. I attended and dressed her head (she had sustained a small scalp wound), and sent her home, and I heard nothing further of her. Soon afterwards I sent my account for attendance to the superintendent of police (who was present when the accident occurred, and who sent the policeman to my house). He sent the bill back to the sergeant of the district, who came to tell me that I had no claim against the police, and was to apply for payment from the patient. I do not know the patient's name or address.

I am, Sirs, yours faithfully,
Leicester, Nov. 13th, 1888. J. T. H. DAVIES, M.D.

* * We fear our correspondent has a legal claim only against the patient, though we think it is a hard case, and the police authorities ought to see him paid.—ED. L.

THE GERMAN MEDICAL FACULTIES.

ACCORDING to Dr. Ascherson's "Deutscher Universitäts-Kalender," cited in the *Deutsche Medizinisch-Zeitung*, and reproduced in the *New York Medical Journal*, the strength of the medical faculties of the various universities in the German Empire is as follows:—

	Ordinary professors.	Extraordinary professors.	Privat-Dozenten.
Berlin	17	28	50
Bonn	9	10	8
Breslau	9	17	13
Erlangen	8	4	4
Freiburg	12	5	9
Gießen	8	3	3
Göttingen	12	7	4
Greifswald	9	7	5
Halle	10	9	8
Heidelberg	12	8	8
Jena	9	8	5
Kiel	8	4	12
Königsberg	8	10	9
Leipzig	15	8	22
Marburg	13	3	4
Munich	13	9	25
Rostock	8	2	2
Strassburg	15	7	12
Tübingen	8	6	2
Würzburg	9	8	9
Total	212	163	223

Vigilant.—The Medical Council has never removed a name on such grounds, and it is very doubtful if it has the power to do so. Our correspondents should study Clause XXIX. of the Act of 1858—the basis of the disciplinary powers of the Council. For offences of the kind named the offender should be dealt with by the medical body or bodies from which he holds his diploma. In many instances a firm remonstrance would be sufficient to correct the evil.

Dr. Sheahan.—The distinction was certainly unintentional, but was not of our making.

RENEWAL OF LEASES.

To the Editors of THE LANCET.

SIRS,—This is not exactly a medical subject, but as it is one that concerns the profession I trust you will allow the matter to be canvassed in your columns. Here briefly is my case.

Several years ago, I bought a practice and had the lease of the house transferred to me. That lease expired at Christmas last. The landlord refused then to renew the lease, but said I might remain if I paid an increased rental of more than 15 per cent., giving reasons of his own for the non-renewal. After thus remaining for about twelve months a quarterly tenant, the landlord called the other day and said I might now have a lease for ten years provided I paid the increased rental and a premium of £70, which adds fully 12½ per cent. more to my rent. "The law allows it, and the court awards it," as Portia says, and what could I do but submit to these extortionate terms, for to remove an old established practice under the most favourable circumstances is never advantageous, and to be compelled to do so at a quarter's notice might be disastrous. Well, I reluctantly agreed to the terms, thinking in my innocence that I knew the worst. Judge then of my astonishment when a few days afterwards I received from the landlord's solicitor a draft of the lease, consisting of eleven foolscap pages of the usual unmeaning verbiage, and accompanied with a note to say that I must bear all the expenses—£8 17s. 6d.—of the drawing up of the lease, together with the counterpart to be held by the landlord. Even a worm will turn, and it is this latter condition which has made me rebel. I fear, however, I am powerless and must submit, and can only pray that soon an alteration of this execrable law, of the landlord pocketing the unearned increment, may be brought about. There is a block of seven buildings in the terrace all alike in size and accommodation, and I know that I am paying from 25 to 30 per cent. more rent than any of the other tenants, and yet the landlord is not satisfied, but must needs give another turn of the screw in the shape of lawyer's expenses. What can I do in the matter? Is it not the custom that in deeds of this kind the law expenses are divided between landlord and tenant?

Let me apologise for trespassing on your valuable pages with this subject, but as it is one of vital importance to many struggling general practitioners, I trust you may find room for its discussion.

I am, Sirs, yours truly,

Nov. 10th, 1888.

JACOBUS.

*. We are advised that the custom is for the lessee always to pay for the lease.—ED. L.

FEES FROM MEDICAL BRETHREN.

In such cases as those mentioned our correspondent would be quite justified in taking fees. The spirit of the rule to the contrary is not violated by deferring to the feeling of a neighbour or a brother practitioner who for special reasons strongly desires to give an *honorarium* to his medical brother.

Dr. Smith (Lewisham-road) would be glad to receive information respecting Dr. Elliott's legacy for nurses, &c.

EYESIGHT OF SCHOOL CHILDREN AT ANTWERP.

DR. DE METS of Antwerp has just made known the results of his examination of the eyes of the children attending the primary schools of that city. He examined 7040 scholars, and directed his attention chiefly to the state of their refraction and their chromatic sense. Their ages ranged between seven and fourteen years, so that it is not to be wondered at that he found a very small percentage of myopes amongst them. Only 2.13 per cent. were myopic, and of these nearly one-half had but one dioptré of myopia. Cohn, on the other hand, found 6.7 per cent. of the children in German elementary schools to be suffering from more than one dioptré of myopia. Dr. De Mets thinks that this great difference between the two countries is due to a hereditary predisposition peculiar to the race; but he also admits that the construction, furnishing, and lighting of the schools have a great influence on the development of myopia. Thus in nine girls' schools which were well lighted there was 1.74 per cent. of myopes, as against 4.38 per cent. in three schools badly lighted. And as regards boys, the figures are equally striking—viz., in nine well-lighted schools the percentage was 1.63, as against 2.67 in badly lighted buildings. Dr. Deneffe recently pointed out the superiority of the chromatic sense in woman, and Dr. De Mets' observations confirm this statement as regards female children. He thinks it is due to the fact that girls are so much more in contact with colours in their needlework, and that thus their colour sense is educated, and he thinks with Dr. Deneffe that the appreciation of colours should form part of the regular school course.

Fair Play.—Our comments as to the attitude of a medical officer of health in his relation to infectious diseases under the care of other medical practitioners were intentionally worded so as to be of general application, and did not affect to deal specially with a case as to which no detailed information was before us. If the matter should unfortunately come to be publicly discussed, then will be the time to deal with the merits of the case, if, indeed, the circumstances should call for further comment.

Mr. Thorp.—The list is printed as we receive it.

"THE METROPOLITAN HOSPITAL."

To the Editors of THE LANCET.

SIRS,—May I trespass upon your space for the insertion of a reply to Dr. Hunt's letter in your last issue.

In his letter Dr. Hunt omits all reference to the advertised rates of payment, a factor which cannot be ignored in determining this matter. Dr. Hunt writes, p. 949: "It seems to be generally acknowledged that there is a large class of deserving poor &c.," and asks, "Does the Metropolitan Hospital attract these or a superior class of people?" I admit the existence of this class, but contend:—1. That the Metropolitan Provident Medical Association had previously made provision for this class. 2. That no attempt was made to affiliate the work of the hospital with that association, and that (not content to compete on equal terms of payment) the hospital did outbid that association, and secured the support of the public by underselling it in every item of payment. 3. That the wage limit fixed, 25s. for a single person and 40s. for a man with wife and family, does permit the admission of a superior class of persons, to whom an illness means neither financial ruin nor an unpaid doctor. 4. That this departure will seriously affect every practitioner whose work lies within the area of the hospital's operations, and eventually create a demand on the part of the public for lower medical charges. The necessity of paying one's way will force the adoption of such charges, and when the question is asked, Are we to blame the public or ourselves? the only answer possible will be, Ourselves. 5. I yield to none of the medical officers in my desire to see the hospital in efficient working order. I admit that a paying out-patient department may become a proved necessity. I deny, however, that a large scheme for out-door visiting, and midwifery attendance for 15s. by practitioners long established in the neighbourhood, can ever be regarded as a justifiable complement of the operations of any London hospital. Lastly, I submit without comment the rates of payment. Adults, 1d. a week, or 4d. a month; children (not allowed to join without one of their parents), 2d. a month each, but 6d. a month will include all children in a family under the age of sixteen. An entrance fee of 6d. for a single person or whole family joining at the same time, but members of benefit societies will be admitted free; 1d. for each prescription and 1d. for each bottle. Home visits, when necessary, if notice is received before 10 A.M., free; if notice is not given until after 10 A.M. and before 6 P.M., the charge will be 6d.; after 6 P.M. and before 10 P.M., 1s.; between 10 P.M. and 7 A.M., 2s. Midwifery cases are attended by one of the medical men of this department for 15s.

I am, Sirs, yours faithfully,

Dalton, E., Nov. 13th, 1888. FREDK. E. COCKRELL, jun., M.R.C.S.

De Lunatio Inquirendo.—The fee is one guinea, together with mileage allowance, which is generally reckoned at the rate of sixpence per mile; but there is no fixed tariff. The guardians are the proper persons to pay.

Mr. W. H. Bull's paper will appear next week.

CARBOLIC ACID POISONING AT SMALLTHORNE.

THIS case was treated by Mr. Middlebrooke, the unqualified assistant of Dr. Lindsay, with glycerine. This treatment was criticised adversely by Mr. Wilkinson, a neighbouring practitioner. It is to be regretted that Mr. Middlebrooke did not call in Mr. Wilkinson. We gather from the newspaper that Mr. Middlebrooke resides at a distance from his principal, Dr. Lindsay. We would remind Dr. Lindsay of the severe condemnation of this arrangement by the Medical Council. The facts of this case supply a striking illustration of the objections to it. The coroner said that the legal profession would be "down upon" such cases of illegal practice in "two minutes."

THE TELEPHONE AND BRANCH PRACTICES.

To the Editors of THE LANCET.

SIRS,—For some years my partner and I contemplated connecting our houses, distant about five miles in a rural district, with the telephonic system. But on applying at the General Post Office, we found their terms so excessive that we felt compelled to abandon the undertaking. We have since been advised to put ourselves into communication with the Western Counties and South Wales Telephone Co., and have done so, with the most satisfactory results. For a very moderate rental this company has run a private wire between our houses, and it has answered admirably in every way. Though five miles apart, we are able so to arrange our work each morning as to obviate the necessity of both going over the same ground—a distinct saving, not only in horse-flesh, but in time and personal fatigue. Moreover, it is available for prolonged social or professional conference by day or night, supplying in that way a want quite beyond the reach of ordinary postal or telegraph communication. In fact, the advantages are at once obvious, especially to those country practitioners who have partners living at a distance, or who may be working a branch practice.

I am led to write this letter, hoping that our experience may be beneficial to those who are placed in circumstances similar to our own, or who may have hesitated in undertaking the expense of a telephone in consequence of the very high charges required by the Post Office authorities.

I am, Sirs, yours truly,

Salcombe, Nov. 6th, 1888.

ALFRED H. TWINING.

ADVERTISING VACCINATORS.

THE following is a remarkable advertisement, and seems to suggest to the public that the advertiser is the only source of calf lymph. The requirement of forty-eight hours, however, would seem to show that, like the rest of the profession, he has to apply to the National Vaccine Institution. If this is so, it is a great injustice to others to advertise as special what is not meant by the institution to be a personal matter. We hope the authorities will take steps to prevent a trade-like use of their supplies.

"Parents can have their Children Vaccinated with Fresh Calf Lymph by giving forty-eight hours' notice to Dr. W—, —, —."

PROLONGED SLEEP.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you will insert this note in your next issue.

Mons. Chauffat, a French gentleman, who last year fell in a trance for, I believe, some thirteen or fourteen days, is again in a like condition, and is now "sleeping" at the Alexandra Palace, where I shall be happy to meet any medical gentleman any afternoon between 3 and 4 P.M. as long as the "sleep" continues. I may add that the attack has already lasted over five days.—I am, Sirs, yours faithfully,

City-road, E.C., Nov. 15th.

H. A. SPEED, M.R.C.S., &c.

ERRATUM.—In our report on Nov. 3rd of the meeting of the Fellows and Members of the Royal College of Surgeons, the name of Surgeon-Major Ince was inadvertently misspelled; "Innes."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Grally Hewitt, London; Sir Morell Mackenzie, London; Dr. Fahlberg, Saltlake-Westerhüsen; Dr. O. Sturges, London; Dr. Heron, London; Mr. Mark Judge, London; Mr. Pepper, London; Mr. Neves, Chatham; Dr. Jules Worms, Paris; Dr. Wharry, Surbiton; Mr. Lockwood; Mr. Ashton Ellis, London; Dr. Whitwick, St. John's; Mr. J. C. Balfour, Kilton Lindsey; Mr. Collette, Wolstanton; Dr. H. F. Winslow, London; Mr. Kingzett, London; Mr. C. A. Cook, Salisbury; Dr. Hardwicke, Dovercourt; Dr. McCaw, Belfast; Mr. Laffan, Cashel; Dr. Rush Field, Easton, Pa.; Mr. de Montbrun, Trinidad; Dr. L. E. Shaw, London; Dr. Perceval, Waratah; Mr. Foulerton, Chatham; Mr. A. Harvey; Mr. Padley, Swansea; Mr. Mackenzie, Kingston; Mr. Victor Horsley, London; Mr. Clutton, London; Messrs. Wilson, Salaman, and Co., London; Dr. T. Stevenson, London; Mr. D. Hartley, Cape Colony; Mr. Limont, Newcastle-on-Tyne; Mr. C. Williams, Port Isaac; Surgeon Damania, Pishin; Mr. Makins, London; Dr. Casey, Guernsey; Miss Bathurst, Jersey; Mr. Kelson, London; Dr. Auld, Glasgow; Mr. Snell, Sheffield; Mr. Vogan, Ipswich; Mr. Osborne-Walker, Crick; Dr. Sheahan, London; Dr. Rafle, London; Dr. R. Barnes, London; Mr. Waywell, Earlestown; Dr. Devahe, Bristol; Mr. Garstang, Knutsford; Mr. Tizard, London; Dr. Humphrey, Cambs; Mr. Thatcher, Bristol; Mr. Hine, Stockland; Mr. Dilworth, Preston; Mr. F. E. Cockell, junr., London; Mr. W. H. Bull, Stony Stratford; Mr. Noakes, London; Dr. Davies, Leicester; Sir Sydney Waterlow, London; Mr. O'Hanlon, Spennymoor; Mr. Vincent Harris, London; Mr. Constantines, London; Major Terry, Winchester; Surgeon-Major Ince; Mr. Frankish, London; Dr. H. Page, Birmingham; Mr. Woodward, Lostwithiel; Mr. Eastwood, Blackburn; Madame Micque, Paris; Mr. Wright, Manchester; Mr. Earle, Brentwood; Mr. Kimpton, London; Mr. Keetley, London; Mr. De Fraine, Aylesbury; Dr. H. Love, Mitcham; Mr. Hussey, Oxford; D. H. G.; Jacobus; Rerplexed, Jamaica; D. London; Dr. Lunatico Inquiendo; Fred.; B. Chippenharn; Lady Superintendent, West-end Hospital; C. F., London; Matron, Kent; J. P. S., Lowestoft; W. B., London; A. B., London.

LETTERS, each with enclosure, are also acknowledged from—Dr. Wood, Pontypool; Mr. Ackland; Dr. McMordie, Belfast; Messrs. Gale and Co., London; Mr. Kneebone, Bedford; Mr. Hardy; Messrs. Roche and Co., London; Mr. Galt, St. Leonards; Messrs. Isaacs and Co., London; Mr. Pimm, London; Mr. Lloyd, London; Messrs. Stent and Sons, Guildford; Mr. Norris, Weston-super-Mare; Messrs. Slinger and Son, York; Mr. Traill, Ireland; Mr. Lane, London; Dr. Evans, Festinog; Mr. Ferens, Durham; Mr. Whiteley, London; Mr. Oliver, Newcastle; Mr. Hendry, Eastbourne; Mr. Frazer; Miss Thompson, Wakefield; Mr. Butcher, London; Dr. Taylor, Derby; Messrs. Read and Co., Bristol; Dr. MacLennan, Harpenden; Mr. Martin, Isle of Wight; Mr. Gidley, Morpeth; Miss Bramley, Lincoln; Mr. Mason, London; Mr. Hawkins, London; Rev. K. E. Cleal, Wimborne; Homer, London; Medicus, London; Matron, Truro; Sec. Edinburgh School of Medicine; Matron, Wakefield; M. K., London; Victoria Carriage Works, London; Catlin, London; St. John Ambulance Association, London; L. M., London; M.D., London; Royal United Hospital, Bath; Lanes, London; C. P. S., London; Hon. Sec. Leeds Dist. Nurses' Home; Chirurgery, London; S. T., London; The Treasurer, Leeds; R. E., London; A., Southport; M.D., Crew; A. I., Leeds; F. R., London; C. H., London; M.B., Lewisham; A., London; Lady Principal, Hackney; Ubique, London; B., Chippenharn; M. C. U., London; M.; Confidence, London; Miss L., London; J. F. B., London.

Manchester Guardian, Surrey Advertiser, Keble's Margate and Ramsgate Gazette, Herald and Weekly Free Press, Westmoreland Gazette, Herefordshire Mercury, Night and Day, &c., have been received.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an additional advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

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Introductory Address

ON THE

STUDY AND PRACTICE OF SURGERY.

Delivered to the Class of Systematic Surgery, Owens College, Manchester, October 3rd, 1888.

By ARTHUR W. HARE, M.B., F.R.C.S.E., &c.,

PROFESSOR OF SURGERY IN THE COLLEGE.

MR. PRINCIPAL AND GENTLEMEN.—An introductory lecture is, in the nature of things, an embarrassing occasion; it involves a division of interest and attention that precludes any great possibility of deriving organic satisfaction from it. It may, I think, be accurately likened to "grace before meat," where, as you may be aware, human nature is apt to be racked by conflicting emotions: the earnest wish to enter on the feast with hallowed feelings; the no less keen desire to obtain a surreptitious glance at the menu card. This is but an illustration of the two-sided character of our nature, which labours so cheerfully under that paradoxical strabismus that directs "one eye on earth, the other fixed on heaven." But I can assure you, gentlemen, we are not here assembled to lament over the foibles of our common nature, but rather to accept the position, and, it may be, even to turn it to profit. For on the analogy already referred to I think we can base the order of what is to follow—namely, that in discussing the "Study and Practice of Surgery" we may naturally direct our thoughts to two points: firstly, in what frame of mind can we fitly engage in this study? and, secondly, what is really useful and valuable for us to acquire by it? I cannot attempt to emulate the intellectual precision of the proverbial Scottish divine in formulating the headings of my address, but I have acquired some slight tinge of his method during a ten years' residence in his delightful and hospitable land, and I hope, therefore, to be able to keep the two parts of my subject carefully distinct from one another, and to present each to you in turn in a not inappropriate manner.

THE STUDY OF SURGERY.

I suppose, if the opinions of all present in this room were taken on the point, we might find an extraordinary difference of belief as to what *study* means; and even more, if we took a similar census of opinion among all the teachers and students of surgery throughout the kingdom, I believe we should find strange vagaries, if not in theory, at least in the practical interpretation of the question. It is all very well for me to come down here to-day, and to say to you, "Gentlemen, we are met to study surgery together"; but it is quite open for you to ask me, "What do you mean by study?" and "What do you mean by surgery?" and it is my duty, as it is my present purpose, to try to answer both questions.

Study.—Now the process of study implies brain activity: that is, the presence of brain tissue, and an active will behind it to make it work. So far we are all right. I see before me the evidences of both in large measure. But a far more important question at once confronts us in regard to how these mental faculties are to be employed in this room. What is to be the relation of teacher and student in carrying on the process of study together? The process of study is in many aspects wonderfully like that of nutrition; and you will forgive me if I try to illustrate my meaning by describing a lecture as an intellectual feast. Of course, I am not now referring to individual instances; I am attempting to illustrate a general principle. At a feast, usually one person, the *chef*, is responsible for the appearance of the viands, the others for their disappearance. So, in a lecture, the lecturer must produce the material for discussion. Now, I want to bring out the fact that a well-ordered lecture corresponds precisely to a well-ordered feast in certain very essential particulars. A well-appointed feast is not one in which all the courses are served simultaneously, where the guests must pounce pell-mell on all sorts of incompatibles in their desperate efforts to initiate the process of nutrition. Such a *mélée* could only delight a savage. Just such a

disaster, intellectually speaking, attends a lecture composed of disarranged facts. On the other hand, a feast might be composed of simples circumspectly chosen; and even, thanks to the genius of Sir William Roberts, carefully peptonised, pancreatised, or already half-digested. The guests, probably somewhat languid and delicate, would each take his due proportion with meekness, and would depart peacefully, relieved even of the fatigue of conducting his own digestion. Some lectures and a good deal of "coaching" are, I fear, very much like that, and are only fit for intellectual dyspeptics. But there is a very happy middle course between such extremes in the matter of feasts, where gustatory and peptic instincts, awakened by preliminary stimulation, nobly acquit themselves upon the *pièce de résistance*, and maintain a cheerful activity to the very end. Precisely analogous to this calculated effort of the *chef* should be the labours of the lecturer. The origination of conceptions based on well-ascertained facts, their arrangement in proper sequence under the searching scrutiny of a logical analysis, the clothing of such conceptions in a suitable guise of illustrative detail, and their expression in lucid and appropriate language—such are the objects which the lecturer must have in view in carrying out his share in what I conceive to be *study*.

And what is the part the student must play in the process of study in the lecture room? Is it to "read, mark, learn, and inwardly digest" the sayings of the said teacher? In a sense it is; but in no spirit of too ready acquiescence. I maintain that unless a teacher gives his students grounds on which they may reason as to the results propounded he is at most but half what a teacher should be. And it is this process of employing the reasoning faculty in following the lecturer in his statements, or in disagreeing with him, that constitutes the chief duty of the student in the study of the lecture room. The teacher's facts are, for the most part, common property in the text-books. His function in a teaching institution is surely not that of pouring forth a text-book of not very interesting information to aching ears and feverishly hurrying pens. For him is reserved, if he comprehend his mission aright, the higher function of stimulating his fellow men to think for themselves, to prove all things, and to hold fast that which is good. That, I take it, is the true spirit of the lecture room. No bare statement of facts, with implicit, unwavering acceptance; no desultory titillation of a wayward fancy or a transient interest; but an earnest, a painstaking, and, above all, an unbiased discussion of facts, and the laws they support and illustrate. What honour and integrity of purpose are in the sphere of morals, such are independence and spontaneity in that of intellect. Beware, gentlemen, above all things, that you do not suffer the scholastic influences of this institution to deprive you of your individuality or to rob you of your natural faculty to originate. You may depend upon it that a calm thinker like Cicero appreciated the importance of this danger in the educational system of his own day, when he said, speaking of theology, that "the very authority of those who teach often stands in the way of those who are learning." I cannot help thinking that Goethe entertained a similar view, and that it was with a cynical desire to expose the true nature of such teaching that he places in the mouth of Mephistopheles sentiments the reverse of Cicero's opinion. Whether Goethe had any such intention I must leave it for others to decide, but certain it is there is something of a familiar and modern feeling about this part of "Faust," so faithfully does it portray institutions still extant. The Evil One, dressed in the professorial gown of Dr. Faustus, thus addresses to an ingenuous undergraduate a sublimely interwoven tissue of good and evil counsel:—

"But first be sure, the next half year
At every lecture to appear.
Five hours each day for lecturing:
Be there the moment the bells ring.
Be sure beforehand to prepare,
Have read the syllabus with care,
Have every paragraph well conned:
Watch lest the teacher go beyond
The matter written in his book.
Then, as you write his dictates, look
That you take down verbatim all
And every sentence he lets fall,
As though each sentence Scripture were
That comes from a professor's chair!"

Gentlemen, did you ever hear advice resembling that? It may have been a unique experience of my own, or it may have been a dream; but I cannot help thinking that

in some modern university, British or foreign, I have had such an experience, and have been told to trust to nothing but the verbatim notes of the lectures I was about to attend; yes, and, if I mistake not, my adviser was dressed in a professor's gown. But at that time I had not read Goethe's "Faust," and could not be expected to know then what I afterwards came to recognise. While we are speaking of note-taking, you may wish to know my view of the matter. To become a verbatim reporter is, to my mind, somewhat beneath the dignity of an aspirant to scientific and professional honours. Nor is this my only objection to it as a matter of principle. Verbatim note-taking implies a vast expenditure of energy in recording a teacher's thoughts in his own words; and the results at the end of the session are, perchance, an attack of writer's palsy, and almost certainly a sad and oppressed heart, that can hardly be cheered up by the possession of a manuscript text-book, more or less legible, and nearly as valuable, though not so easy to read, as a well-bound and well-printed thirty-shilling volume on the same subject. I possess such manuscript literature myself, but the pride one might feel in such a possession is tinged with a certain pathos, just as one may look back wonderingly on some generous but unpractical impulse of early life, which led to great but misdirected effort. But was it a generous impulse, after all, that led one to verbatim note-taking? Was it, indeed, the intense anxiety to lose no grain of the golden wisdom of the teacher? Or was it not the thought of coming trial in which the information thus gained would be our only available support? If the last is in any sense true, our hurried pens were driven by Black Care and Craven Fear, and not by the enthusiasm of a healthy emulation. Each added line of our manuscript was but additional inscription on the tombstone of our originality. For this mass of ink and paper is the expression of no individual thought of our own. We have merely acted the part of Mr. Maskelyne's wonderful automata; we have performed an intricate process, and we have performed it well; and, so long as the teacher and examiner guide us, we may be able to do wonderful works; but when they cease to pull our wires, and we are left to ourselves, we are found to be a singularly perfect and exquisitely finished piece of mechanism, as indeed their parting testimonials assure us, but for all that we are motionless and dumb. It is years in many cases, after the man has left off coming on his daily round to wind us up, before we can regain the power he stole from us of doing it for ourselves. But, gentlemen, do not rush rashly to the opposite extreme, and say that, if note-taking has this effect, we will none of it! I should be very sorry to think that any course of lectures exists anywhere at which it is not highly advisable to take notes. But do so wisely, not too well. As I urged you to think your own thoughts in the lecture room, so I now beseech you to take your own notes. You must strive to be true observers, and, as Sir James Paget has eloquently urged, note-taking observers. "But how can we observe in the lecture-room?" you may ask. The lecturer, with the aid of verbal and pictorial scenery, rehearses before you scenes from the drama of Disease, and, as development follows development towards the happy dénouement or the final catastrophe, you will do well, while not omitting to enjoy the interest of the piece, to note its leading features shortly, in your own words, employing your own brain cells in so doing, and in such a way that future reference to your note-book will recall to mind the thoughts that were awakened in it by what you saw and heard. Compare this method with the other, and I think you will perceive its deeper wisdom and its truer safety. As a note-taking observer, you are on the outlook for the true proportion between events; you detect the hitch at once if omissions are made, and will supply the missing factors. The verbatim note-taker, on the other hand, has no time to think of this. He commits all facts alike laboriously to paper, regardless of their relative values, oblivious of possible omissions. If he is taking notes on "Hamlet," he only experiences a sense of relief if the long apostrophes of the Prince of Denmark are omitted; while you, scandalised and horrified at the enormity, procure a "Shakespeare" and detect the truth. The object of teaching is not to produce a mental replication, but rather to stimulate the intellectual appetite and educate the intellectual palate in the selection of those things that are useful and meet to be digested. Montaigne complains quaintly, if not very elegantly, 300 years ago, that "teachers are wont to be continually drumping into our ears, as if they were pouring

into a funnel; while our part is to repeat what they have told us. It is a proof that we have not digested food if we throw it up just as we swallowed it; the stomach has not done its work, unless it has changed the form of the state of what we gave it to deal with." If that were a gentlemen, that was to be accomplished in the lecture room—if it were merely for the hearer to hear and be able to repeat what the lecturer tells him, there were no object bringing with you your intellectual activities and power of individual judgment; it were better could each of you be represented by the vocalising sensitive strip of the perfect phonograph, which would in that case complete the process to the satisfaction of the examiner and of all concerned. Not only is such a system in itself useless, it is positively deleterious; for, as my distinguished predecessor in the chair has said—summing up, in fact, the whole of my argument, as it were, in a nutshell,—“by trying to take in so much, to tax the memory rather than exercise the judgment, the effort so exhausts the mental powers that, although temporary success may be achieved and the prize be won, all taste for the subject is destroyed, and the man no longer cultivates the early aptitude he may have displayed.” The knowledge acquired in that unreasoning way is not worthy of the name. The only knowledge that is real is that which our reason has accepted, which has become a part of our instinctive perceptions, and therefore forms a sound basis for our individual actions. The true spirit in which to proceed, is that of the old philosopher, who wrote—

“Myself, when young, did eagerly frequent
Doctor and saint, and heard great argument.

With them the seed of wisdom did I sow,
And with my own hand wrought to make it grow.”

The last line is specially to the point. Go to the lecture room to learn, not to be taught. By all means make use of the doctor's and saint's experience as regards the method, but take your own share in sowing the seeds of wisdom, for in your own hands only must rest the subsequent cultivation. A man would look with contemptuous astonishment on the tutor who disinterestedly offered to sow all his wild oats for him; but he does not always see that it is even more important for him to sow for himself the “seed by which a man may live.” Such, I take it, is the spirit in which all study should be conducted.

We must now inquire what is really worth our attention in the study of surgery. All knowledge is not of equal value to men whose sphere in life is one of action, not of contemplative theorising. In our own case this is pre-eminently true; and it is therefore specially important for us to settle what is really worth knowing, and what worth “knowing about,” as Mr. Teale puts it. Herbert Spencer, in his valuable essay on education, describes three qualities of knowledge: that which is intrinsically valuable, that which has a quasi-intrinsic value, and that of which the value is merely conventional. In studying surgery we shall be wise if we can eliminate knowledge of the last kind, or reduce it till it is actually an irreducible minimum; while to knowledge of quasi-intrinsic value we should attempt to give adequate limitation, reserving the bulk of our time and energy for the cultivation of that which is intrinsically valuable. Now surgery is, of all others, the most practical of the medical sciences, and the knowledge of it which is really intrinsically valuable is that which bears directly upon its practice among the community. What is wanted is an exact and scientific knowledge of the facts that underlie the diseased processes with which we have to deal from day to day, and a clear understanding of the principles on which our treatment must be based. We must not be content to recognise a disease, to call it by some conventional name, and treat it in the fashionable way; we must strive to know in what the essence of the disease consists, and in what manner the remedies employed are effective in neutralising diseased action. Unless we have such knowledge, our professional position is an empty shadow that is not the thing it appears to be; and our treatment of disease degenerates into simple and unenlightened rule of thumb. Shall we be content to allow our life work to become mere mechanical guinea-grinding, when it may be an enthralling and perennial interest? Assuredly not! And no more shall we think of permitting our study of surgery to be a dreary grind of uninteresting facts, when it offers us all the inducements of an intellectual pastime, if fully pursued. Such knowledge is intrinsically valuable in the highest degree; it is the very light

which we can walk safely and in comfort along the path of professional activity. Without it we should go blindly and miserably in a darkness that can be felt, and painfully felt; for can you imagine any more painful sensation than to fumble and stumble and do harm through lack of knowledge that might have been ours had we not intimately neglected the opportunities of acquiring it? To a conscientious man, one moment's experience of such a conviction of remorse may mar a year's happiness; its constant presence that of a lifetime. In studying surgery, therefore, we must give the first and largest place to this knowledge of intrinsic value, directly based on facts; and we must make it once for all our own by real study. We cannot acquire it by any rapid process. It cannot, from its nature, be condensed and summarised, and finally put into mnemonics to help us at examination times. It must be honestly and squarely looked in the face, and resolutely and systematically conquered. We must find some place also for knowledge of quasi-intrinsic value. What I understand by that is—all the by-ways and footpaths that intersect the high road of surgical study, many of them leading to pleasant and interesting resting places, from which one gets a new view of the route the main road is taking. Only, one must not venture too far into them; for fear of losing sight of what is really more important to our progress. These diversions are the many side-issues and problems of a theoretical nature which encounter us at every step of a course of surgical teaching. They will add much to the interest of the study if we are warned in time not to follow them too far. Such speculations, based on facts insufficient to warrant definite conclusions, are often very seductive, but we must beware of giving them an unquestioning acceptance, however well devised and in however delightful a garb they may be presented. But of facts themselves we need have no fear. We cannot safely mould them to fit our theories; we must make our theories coincide with them, at whatever cost. They are stubborn, immovable stones in the highway of truth, and we must carefully adapt our vehicles of thought to run evenly over their irregular surfaces, or they will hurl us, along with other hobby-riding heroes, into the ditch of error. You may be inclined to smile at my vision of what might be if we forsook the *régime* of free and unrestricted inquiry; but I may, in turn, remind you that our art lay crippled for a thousand years, making no advance on Galen's position, if not indeed retrograding, through this very fault of implicit intellectual obedience to doctrinal formulas instead of to fact, this mental slavery, this strangling of man's rational conscience that would ever arise and ask the question "Why?" Well, we have changed all that; we have escaped at last from the tyranny of scholastic dogma and entered on a new *régime* of individual freedom of thought. And here I am in a little difficulty. I should like to call our present era that of universal suffrage in constructive thought, as it undoubtedly is in criticism. But I cannot escape the uncomfortable conviction that, having forsaken the bondage of a blind adherence to dogma, we have substituted for it a sweet reasonableness that by comparison certainly seems perfect freedom, yet renders us for the most part the facile followers of fashion. And fashion changes. The mode to-day is the most newly-exploded fallacy of to-morrow. The surgical teacher of the present day, who follows—as he is in duty bound to follow—the strict canon of current orthodoxy in his teaching, is therefore in a painful position. He must daily take his bearings afresh ("sich orientiren," as the Germans aptly put it). He retires to bed each night under a darker cloud than even the condemned criminal, for on the morrow he may require not a substitute for his head as a whole, but, *horribile dictu!* an entirely new suite of internal furnishings for the same. Now fashion is by no means to be condemned; it is the channel through which flows the ever-advancing current of progress. Yet the knowledge of the special fashion of the moment is knowledge of quasi-intrinsic value, and will not compare in importance with that of the broad principles that underlie the relations of health and disease, nor of the broad practical systems by which we combat the one and conserve the other. But at times we are in danger of losing sight of these distinctions in our course of study; at times particularly when our better judgment is apt to be warped by some apparently impending catastrophe. Then it is that study, properly so called, tends to give place to "cram"; and then that the cramming system is itself seen in its least desirable and least discriminative form.

In regard to this matter, I wish for a moment to take a simile from political history. It is ancient political history, therefore no gentleman need feel present anxiety on the subject. There was once a party in this country which many irreverent newspapers of the day called the "Jingo" party. It was said by the "anti-Jingoes" that the "Jingoes" suffered from a type of quotidian political ague, the cold trembling stage and the hot stage recurring and alternating with frightful rapidity. I cannot say whether there was any more truth in this than in very many other political statements; but what I wish to point out to you is that there are a number of examination "Jingoes" constantly in existence, who do a great deal of harm by seeing, and making others see, systems of examination through the distorting medium of a fevered imagination. However calmly we may have schooled ourselves to a reasonable view of the matter, we are all apt to be somewhat affected with the complaint just before an examination. The cold stage is horrible; one can only shiver and do little else. Then the hot stage is upon one, and drives one to do all sorts of unnecessary things on the advice of other sufferers worse than oneself. The judgment becomes temporarily warped as to what is important and what is absolutely unimportant, and one comes to resemble closely those patients described by Wendell Holmes, who

".....dilated, much to their friends' surprise,
On pickles and pencils, and chalk and coals."

In our own case, the "friends" in question are the examiners, who must often be much more surprised at the queer things (such for instance as "examination tips") that they do find in our heads when they make the *sectio*, than at the many things, expected and hoped for, which they do not find. Well, gentlemen, that is a little malady we are apt to suffer from ourselves, and it is quite appropriate that our charitable sympathy should begin at home with ourselves. But it is a question, I think, whether a grain or two of sympathy may not be needed elsewhere. Do examination boards never suffer in any way, similar or dissimilar? Do they really never ask us to acquire rather out-of-the-way information, that we do wisely to forget as soon as its temporary use is over, and that may perhaps have somewhat largely occupied our minds at the expense of knowledge of greater practical moment? Into this question as a whole I need not enter further here; for I have reason to know that able representatives of our own and of other learned professions in high places are now giving this matter very serious consideration, and I think we may hope that the outcome of their discussions will be a diminution of the evil, and a further development of what is good in present educational systems. But to one point I shall venture to refer. In the study of the world around, one becomes aware of many strange things going on in it, and one of the most phenomenal in our own time is undoubtedly what you may have heard described as the "sweating system." I should feel obliged to apologise for the word, and to call it "social dysidrosis," were it not that the unamended name has passed muster as polite in that mirror of all that is polished and delicate, the Upper House. The system itself is a dreadful social malady, and, as you will readily understand, its symptoms are painful and distressing. It has been found to affect almost every class of the community; and Lord Dunraven is preparing a forensic mixture of anti-sudorific principles which we all hope will remove the cause of the disease. Now, gentlemen, it appears to me that in some respects we ourselves are needing the friendly aid of Lord Dunraven. If the system of tuition and examination in our profession were laid absolutely bare, his lordship's eagle eye might mark some evidences of the destroyer in our very midst. It is needless for me to tell students of medicine what these evidences are, but, as some others are here present, I shall do well to mention one at least. Perhaps the most harrowing account of the sweating system was that which described a long string of pallid and haggard workers approaching the task master at a week's end, each bearing on the head the burden so painfully accomplished. I have myself seen a similar string of pallid and haggard workers, two hundred in number, approach in like manner the examination room. The pallor was identical, the careworn look identical; I thought I even noticed the same faint suggestion of the midnight oil. These, too, were each bowed down with a toilsome burden—not on, but in, their heads; and from their expression one could judge how heavy and wearisome these

hardens were. They were dead loads, in which the bearers had no living interest; they were finished tasks that had given little satisfaction even when accomplished. I do not wish in the least to accuse the examination boards of such atrocities as "sweating," or even of "drilling"—the latter a fatiguing process of delay described by Mr. Walter Besant. But may we not ask with some reason—and it is a question that has often been asked me by relatives and friends of the victims—whether it is good that a profession in which a man requires the full measure of physical strength should be entered by a portal that in many cases casts a shadow with so ghastly a resemblance to the shadow of death? The fault does not lie with the boards or with the students. The error creeps in somehow somewhere between, and it persists because the road between the two camps is not more freely traversed in both directions. If students knew what examiners really are, they would not make them the objects of a sort of fetish worship which obtains the sacrifice of a variety of unheard-of things at the sacred shrine. If the examiners knew what the students really do to appease their supposed malignity, their kindness and gentleness of disposition would cause them to take strenuous steps to emancipate the students from these burdensome works of supererogation. So that it is not so much a radical change of system that is required, however desirable some slight alterations may be, as that a fuller understanding should be come to as to what the present system really is. And, as in some measure furthering this object, I shall conclude what I have to say on the study of surgery by assuring you, gentlemen, that in acquiring that sound and practical knowledge of surgery which is of *intrinsic* value you are most wisely preparing not only for its actual employment in future practice, but for an easy passage through the portal that leads thereto.

THE PRACTICE OF SURGERY.

This is divided naturally into the two branches of private practice and hospital practice. With the latter you have to deal practically in your clinical studies now; with the former not just yet; so that I shall speak of hospital practice alone in the meantime, and attempt to indicate to you in what ways it is related to the studies we shall carry on here—how it is, in fact, in large measure their consummation, the realisation of theory, and I hope its justification, by actual and patent facts. Till now we have spoken of study simply; we must now revert to the same subject, but with added elements for our consideration. For the practice of surgery is still the study of surgery, and that in its most important and most interesting form—viz., the experimental. But it is something more. The facts are of the same kind, but far more interesting than those studied in the lecture room; for Nature is a much more eloquent and vivid demonstrator than any human teacher. To become her earnest disciple and to follow minutely every evidence of her meaning is the direct road to wisdom; and, it is a road that, once followed, never becomes uninteresting or wearisome, though it may be long in leading to full enlightenment. Yet that is not all; for in the practice of surgery you are dealing with scientific facts in a new relation. They are none the less interesting as scientific facts, but they are tinged for you with a new meaning—a new mystery it may be,—since they are at the same time a part of the burden of pain or anxiety that life has brought to your fellow mortal. In hospital practice you have therefore to be something more than a student of medicine; you must be a student of human nature. There you will see it at its highest and its lowest levels of development. No less will you discover something of its reserves and of its points of approachableness, and you will do wisely to cultivate this knowledge, which will be a great if not an essential aid in carrying on present study, and of invaluable future service to you when you have to tread the wider fields of your own practice. I am here commending this study to you as a matter of utility; I might more strongly recommend it for its great intrinsic interest; but I know, none the less, that you will be drawn to it by a yet stronger force, that of sympathy and of the desire to give something of your abundant vitality and cheerfulness in a quarter where they may be sadly and conspicuously absent. Whether, then, as a matter of interest, of utility, or of sympathy, it is the first essential of clinical study to be thus *en rapport* with your patients. For the most part your studies will be carried on with the aid of a clinical teacher, whose kindly manner will guide you greatly in this matter, just as his

experienced method of examination or actual treatment will indicate to you what it is important to know and necessary to do. In the Autobiography of Sir Robert Christison, I find a passage which appears to me to illustrate the ideal at which the clinical teacher should aim. The order of his solicitudes is, firstly, the patient and his benefit; secondly, the students and their instruction; and, thirdly, himself. In describing the late Baron Dupuytren, the eminent French surgeon, Christison has given us the practical realisation of this ideal. He thus describes one of his operations: "Nothing could surpass the humanity and kindness of this reputedly rough and ill-natured-looking man. He did not take a single step in the operation without asking and obtaining the child's consent. While he was making his incisions, he was also constantly engaged in patting and coaxing the little fellow, and with such success that he only whined occasionally, but never cried. At the same time, every step was accompanied by some words of explanation to the students, for which purpose he moved his head from side to side that all might see what he was doing. Of the threefold duty of operating, soothing, and demonstrating, no part seemed to interfere at all with another. The whole operation was over in a very short time, and the child was carried out in his nurse's arms, all the while calling out 'Adieu, monsieur!' Dupuytren smiling and replying, 'Adieu, mon cher petit.'" Such, in his hands, was the formidable operation of lithotomy at a time when anaesthesia was still unknown, and when the difficulties and embarrassments of operating were only to be overcome by the courage and tact of which he was the consummate master. And of these he has left this record—the fair counterpart of that fame as an originator and discoverer by which the surgery of to-day recognises one to whom it is eternally indebted.

Gentlemen, in speaking of the practice of surgery I have entered on a topic that is all but limitless, and I have already trespassed too far on your kind indulgence; but I must rest satisfied with having attempted to show you in what spirit this study may well be prosecuted. It is a study that will make you not only wiser but better men, for those efforts which will give you skill and deftness in dealing with the delicate and all too sensitive tissues of your fellow men will carry with them a tact and delicacy of feeling that will secure you the respect of others, and make you able and ready to perform a noble function in the work of the world.

ON THE CLASSIFICATION OF THE VARIOUS FORMS OF FUNCTIONAL ALBUMINURIA.

BY C. H. RALFE, M.D. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO THE LONDON HOSPITAL, ETC.

(Concluded from p. 955.)

Paroxysmal albuminuria.—In this form we have also frequent exacerbations, but they are not periodic, or, to speak more correctly, do not recur with the same regularity. In this form there is usually more disturbance than in the preceding. An apparently healthy person suddenly experiences a feeling of malaise, often ushered in with a distinct rigor, and accompanied with more or less disturbance of the digestive organs, from an increase of flatulence to queasy sensations or actual nausea. His skin becomes sallow, the conjunctivae being even sometimes decidedly yellow. The next sample of urine passed after the onset of these symptoms is usually of deep orange colour, of high specific gravity (1020 to 1028), containing bile pigment as well as uro-bilin; an excess of urea is always present, and the albumen is abundant.¹ In some severe cases, when the rigor has been very noticeable, there have been blood corpuscles in the urine. In four cases out of sixteen well-marked instances of this condition, I have found that at one time or other the patient had experienced an attack of haemoglobinuria. The paroxysms, as before stated, are not periodic, occurring

¹ In some of the cases, when I have specially examined the character of the transuded albumen I have found paraglobulin as well as serum-albumen.

irregularly at different periods of the day, and generally attributable to exposure to cold or to fatigue or mental worry. In only one case have I noticed anything like periodicity, and in that the paroxysms occurred every afternoon, a little later each day, till after a fortnight they ceased. In this case, however, the paroxysms were accompanied by a rise of temperature (101° to 102°), and followed by profuse sweating, and was evidently of malarial origin. This is the only case in which I have noticed a rise of temperature. The duration of the attack varies very considerably, the next succeeding sample being sometimes almost free from albumen; whilst in other instances it remains persistent and tolerably abundant for days and weeks together. In this class of case no fresh paroxysms may be remarked, but more usually there are from time to time slight fresh exacerbations, though never approaching in severity the original seizure. These are the characters of a well-marked instance, but the disorder may be present in a much less characteristic form, and, beyond a feeling of slight malaise, the patient may not be aware that anything is amiss. In some rare instances I have noticed the urine to be of a lower specific gravity than usual; but in these cases the urine was increased in quantity. With regard to the causation of paroxysmal albuminuria, in a paper read before the British Medical Association at Brighton, 1888, I expressed my belief that the albuminuria depended upon increased hemolytic action of the liver, causing an over-destruction of blood corpuscles, and thereby an increase of urinary pigment, often of bile pigment as well, and an excess of urea; whilst the albumen which escapes conversion was got rid of by the kidneys. This view has received support from the experiments of Noel Paton and the clinical observations of Dr. Oliver of Newcastle, of which I was ignorant at the time I drew my own deductions. The hypothesis, moreover, helps to explain the occasional relationship between paroxysmal albuminuria and hæmoglobinuria, for as I then pointed out, if increased hemolysis caused an increase of urea, bile, urinary pigment, and albumen; excessive hemolysis, may cause hæmoglobinuria, the destruction being so great that the hæmoglobin is not all converted into bile and urinary pigment and urea before it is reabsorbed and carried into the circulation. The functional albuminuria sometimes found associated with glycosuria is, I believe, also paroxysmal in its character, and is probably caused in the same manner, some disturbance of the metabolic process going on in the liver. In four cases I have had recently under my observation, I have noticed very distinct fluctuations, with marked exacerbations and remissions quite independent of the amount of sugar present, that are very characteristic. This peculiar association of functional albuminuria with glycosuria is worthy of more attention than has yet been paid to it. One point has particularly struck me with regard to it, and that is how slightly either the sugar or the albumen is affected by diet, which makes me suspect that both are derived from some other source than directly from the malassimilation of albuminous and saccharin ingesta. The transient albuminuria occasionally met with, especially in middle-aged women, about the time of the menstrual period, also seems to me a paroxysmal form. Certainly, when observed, the patient is always decidedly sallow, if not actually yellow, and this, again, seems to associate it with the condition described by Senator as *icterus menstrualis*. Unlike the generality of cases met with in the cyclical form, the patients who suffer from paroxysmal albuminuria are usually about middle age, the average of my cases being thirty-seven years; only one case was observed under twenty years, and none above fifty. As regards sex, seven-eighths were males. Of cases of albuminuria associated with glycosuria, three were males, the youngest fifty-four years and the eldest seventy-two years, and one female of forty-five years of age.

Intermittent albuminuria is a term that should be used when we wish to speak of an albuminuria that is neither cyclical nor paroxysmal. It comprises a considerable number of cases that differ considerably from each other, both as regards the character of the intermittences and with respect to the causes that apparently induce them. It may be as well, then, provisionally to further subdivide this group according as the cases seem to depend upon (a) digestive, (b) neurotic, and (c) toxic agencies for the production of the

albuminuria. (a) In this form the albumen is found in the urine shortly after the ingestion of food; in some cases it has been induced purposely by partaking largely of raw eggs; in this case probably the foreign albumen thus taken in excess is partially eliminated by the renal epithelium. Cheese is said sometimes to cause albuminuria, but the instances do not seem to be well authenticated. The peculiar albumen (*alkali*) of milk I have recognised in the urine of patients taking it in large quantities, but in these cases the urine was previously albuminous. Apart from these instances, the albuminuria of digestion is probably due to too active metabolism in the liver, and an albumen unit for assimilation passes too hurriedly into the circulation and is thrown out by the kidneys. This form of albuminuria is most commonly met with at the extremes of life—in children and elderly people. Among the latter I have often found it associated with gout. (b) Albuminuria the result of disturbed innervation is frequently met with. A shock or fright may cause the urine to become albuminous for hours after. More commonly the albuminuria arises from reflex disturbances. Irritation of a nerve plexus on the peritoneum has experimentally been found to cause albuminuria. Dr. Matthews Duncan has stated that in parametritis a temporary albuminuria is not infrequent. Many cases probably of the intermittent albuminuria of young persons are due to reflex causes, especially of the generative organs, since it is at the age of puberty that the albuminuria of adolescents is generally first observed. Albuminuria in a child with an elongated prepuce was cured by circumcision. But the most direct influence of the nervous system in the production of albuminuria is shown by the evil effects of over-study combined with anxiety, which is fostered by the present competitive system. Sir Andrew Clark, in some comments he made at Dublin, when speaking on Professor Grainger Stewart's paper on Albuminuria in the Apparently Healthy at the Association meeting last year, remarked upon the frequency of the rejection of candidates at the medical examination for the Indian Civil Service owing to the presence of albumen in the urine. The same observation will be confirmed by the physicians of our medical schools. Hardly a session passes but I am consulted by some student who has discovered albumen in his urine whilst reading for his examination, and of whom I hear no further when his troubles are over. Life insurance examinations sometimes induce the condition. I remember some few years ago rejecting a candidate whose urine was loaded with albumen at the time of the examination. The same night I received a letter from the proposer's brother, who was a medical man, saying he was sure I was mistaken, as he had examined his brother's urine after his return from the life office, and found it perfectly free from albumen. He also wrote to the secretary, requesting that his brother should be examined for the office by another physician. This was agreed to, and I felt rather anxious lest the albuminuria should not recur on the day appointed. But the second examination never came off. On the morning of the day fixed for it we received a telegram saying that the brother had that morning found the urine albuminous—for the first time for fourteen days since its detection by me. (c) The albuminuria caused by toxic agents has not been sufficiently studied to speak of it with much positiveness. A dock labourer, who had become "dead drunk," was found to have the urine in his bladder albuminous; this rapidly passed off. Dr. McGregor Robertson has induced albuminuria experimentally by injecting atropine. Constipation of the bowels may be considered one of the causes of this form of intermittent albuminuria. Dr. Mahomed, however, considered that constipation induced albuminuria by raising the pressure in the renal vessels; but I am inclined to the view that it is caused by the toxic action of the reabsorbed fecal products, the urines of such patients often containing an excess of indican and oxalate of lime. At all events, it is an albuminuria usually easily remedied. A medical man in the West of England, who consulted me with reference to the presence of albumen in his urine some three or four years since, writes to me to say he is "in excellent health, hunts twice a week, and never sees albumen unless he has forgot to take his Friedrichshall water for some days." Albuminuria the result of muscular exercise is a subject of dispute, some writers insisting upon its frequency, others maintaining that it is comparatively rare. Thus, one author puts it at 16 per cent., another at as low as 3 per cent. I incline to the lower quotation, as I believe that the effects of muscular

2 Dr. Oliver, of Newcastle, has found bile acids in the urine in some cases of functional albuminuria.

exercise in the production of albuminuria have been much exaggerated. Intermittent albuminuria differs, as already stated, in not exhibiting a cyclical or paroxysmal tendency, but occurs sometimes continuously for days, and then intermits, whilst in other cases the intermission is diurnal. The absence of any periodicity or paroxysmal tendency thus distinguishes cyclical and paroxysmal albuminuria from simple intermittent albuminuria; but it is more important to distinguish the latter from the intermittent discharge of albumen, which is frequently observed in chronic interstitial nephritis at that period of the disease when it is passing from the pre-albuminuric stage into that in which the albumen becomes persistent in the urine. Our difficulties are, moreover, increased in this case by the fact that, as the renal epithelium and tubules are but yet little affected at this period of the disease, we do not find casts or desquamated epithelium to help us to form a diagnosis. The only clue afforded likely to be of assistance is to be found in the polyuria and high tension of the pulse, and even these are sometimes not sufficiently well marked to give confidence to an immediate opinion. I need hardly say it is of the utmost consequence for the medical attendant to be aware of this difficulty, and to withhold a too early expression of opinion. He should constantly examine the urine at different periods of the day, and under varying conditions, with regard to food, exercise, regulation of the bowels, and especially compare the amount of urine passed with the quantity of fluid ingested. This latter is a very important point, for I have found that *the polyuria of chronic interstitial nephritis does not depend proportionately on variations in the amount of fluid ingested, but on the degree of arterial tension; whilst in functional albuminuria the correspondence between the fluid ingested and that passed out of the body follows the ordinary physiological law.* The scope of the present paper, however, does not admit of my dealing with the very important subject of the diagnosis between the various forms of functional and organic albuminuria, and I can only insist here upon the utmost care being taken before an opinion is definitely arrived at, more especially as the form of organic albuminuria, which is most likely to be regarded as functional, is that in which the disease has not yet gravely involved the epithelial structure, and in which appropriate treatment can be most advantageously employed. A mistaken view of the case at this period is therefore most disastrous, as time is lost whilst the renal degeneration is advancing. I hope on some future occasion to enter more fully on this subject, and also to deal at length with the questions of prognosis, etiology, pathology, and treatment so far as they affect functional albuminuria.

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STONE IN THE BLADDER IN CONNEXION WITH ENLARGEMENT OF THE SPLEEN.¹

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THOMAS P—, aged thirty-two, a farm labourer, was admitted into the Norfolk and Norwich Hospital under my care on March 24th, 1888, suffering from a stone in the bladder. He was a short, thick-set man, with a profusion of black hair, and was fairly well nourished. When he presented himself for admission, it was noticed that his conjunctive and eyelids were suffused with blood, caused, as he said, by the efforts he was compelled to make in straining to pass his urine. He had been an inmate in the above institution two years previously under my colleague, Sir Peter Rade. He was at that time the subject of inflammatory dropsy, and had a semi-myxœdematous condition of the tissues. The urine contained a large amount of albumen. The face, hands, and abdomen were œdematous. The spleen was found to be much enlarged and very hard; the liver was also enlarged. The account he gave of this condition was that two months prior to this attack he had suffered from acute bronchitis, and that the dropsical symptoms had appeared about a week previous to his admission. He remained under treatment in the hospital several weeks,

and when he left his health had greatly improved. The general swelling had disappeared, but the spleen still remained large and hard, and the liver slightly so.

On readmission in March of this year, he informed me that the symptoms of stone showed themselves about a year previously. They began by a frequency of micturition, which became more urgent as time went on; this was succeeded by an inability to retain the smallest quantity of urine, which was, indeed, constantly dribbling away, and he noticed how severely it scalded him. He had passed sand and gravel in the urine for six or seven months occasionally there was blood in it. About one month before admission hæmorrhage took place into the conjunctivæ and eyelids of both eyes, caused no doubt, as he said, by straining in conjunction with the efforts made by the bladder to expel the stone rather than to expel an urine, which was evidently not permitted to accumulate. He had always been a most temperate man, taking occasionally mild beer, but no spirits. He had never suffered from ague, or syphilis, or fever of any kind. He had a good deal of colour in his cheeks and lips. One could hardly imagine him to be very ill; he certainly had not the appearance of being so, although his skin generally was of a yellowish colour, and looked like wax. The sight was good; appetite bad; tongue pale and lightly furred. The heart sounds were feeble, but normal; the lungs resonant on percussion; but the breath sounds coarse at the right base. The spleen was greatly enlarged; it extended inwards an inch to the right of a line drawn from the ensiform cartilage to the umbilicus, and downwards two inches below the level of it; its surface was smooth and particularly hard. The liver was plainly felt a little below its normal line. The urine was intensely acid; it contained a small quantity of albumen, and the specific gravity was 1015. Œdema of the legs and feet usually made its appearance towards evening. On sounding the bladder, a hard calculus of large size was readily detected. An attempt was made to measure it; this could not be accomplished, inasmuch as the bladder was felt to be firmly grasping the stone, and, as this viscus had not retained any quantity of urine for several months, it was not considered prudent to dilate suddenly with water an organ that had been so long in a contracted condition. The general aspect of the patient, and the peculiar symptoms he was labouring under, made it evident enough that he was not only affected by this irritant in his vesical organ, but that he was the subject of splenic leucæmia. Examination of his blood showed that the leucocytes were greatly in excess of the red corpuscles. This unfortunate state of his system precluded the idea of an operation for the relief of the stone until the general condition of his health should be in a more improved state, and for the next seven weeks he underwent several kinds of medical treatment, but without any beneficial result. He now became impatient and clamorous to be relieved of the calculus, which was causing a large amount of distress and discomfort. In the end I yielded reluctantly to his wish; I still considered him to be in every respect a most unfavourable subject on which to perform any operation, but that under the circumstances litholapaxy would be perhaps the best and safest procedure to adopt. This was accordingly performed on May 11th, after he had been placed fully under the influence of ether. The stone was hard and tough; the debris, when dry, weighed 256 grains, and was composed almost wholly of uric acid. The next day he complained of much pain over the region of the bladder and along the urethra. He passed a good deal of blood as well as several pieces of stone, and he perspired freely for several days. On the fifth day the patient was well enough to undergo completion of the operation, again under the influence of ether, which he inhaled badly, and recovered from with difficulty. The debris weighed 433 grains, and with the former amounted to 691 grains. Shortly afterwards he had a severe rigor, which lasted several hours. Three days later he complained of a violent pain in the hypogastric region; a colliquative diarrhœa set in, consisting of thin yellow motions. His temperature was 102°; pulse 120; tongue dry; no sickness; features pinched; and great prostration ensued. These symptoms became daily more marked, and were not alleviated by any form of treatment; to them he succumbed on the eighth day, the diarrhœa persisting to the end.

An examination of the abdomen was made after death. A good deal of pus was seen over the bladder, which was

¹Read before the Congress of Physicians and Surgeons, Washington, U.S.A., September, 1888.

matted posteriorly to the pelvic fascia. The bladder was contracted to a size just large enough to contain the stone; its walls were extremely thick; several small fragments of stone and some turbid urine were found in it. The mucous membrane was congested, and presented a few white patches; the rugæ were very prominent; the prostate not enlarged. The kidneys together weighed 14 oz.; they were pale. On section the cortex seemed to be somewhat diminished; the papillæ were enlarged and well marked; the pelvis of the right one was dilated. On the whole they looked remarkably well and healthy. The liver weighed 8 lb., and was firm on section. The spleen weighed 4½ lb., and had contracted firm fibrous adhesions to the diaphragm. The surface was mottled, and on making a section its structure was seen to be dense and firm. The application of tincture of iodine gave a well-marked reddish-brown reaction; it presented, indeed, a good example of amyloid degeneration.

My reason for bringing this case before the notice of the profession is that it presents several features of considerable interest, and especially one which I may venture to say is, so far as I can learn, new to surgery.

The number of diseases the patient had in a short space of time is singular. He first of all suffered from an attack of acute bronchitis; after his recovery from this, acute albuminuria supervened; from which he appears to have recovered, or nearly so. He was then found to have enlargement of the spleen. This was followed by a condition of leucæmia and the formation of a stone in the bladder.

It was a difficult matter to ascertain for how long a time he had been the subject of splenic disease. He was known to have had the enlargement certainly for two years, inasmuch as this condition was noticed when the man was in hospital in 1886, but for how long a period before that is uncertain. The connexion, therefore, in point of time, between the commencement of the enlargement and the formation of the calculus cannot be accurately made out. When under treatment in 1886, he made no complaint whatever of bladder trouble; in all probability he had no stone in his bladder at that time, or else a very small one. Anyhow, the calculus was of not more, or very much more, than two years' growth, during which time it attained the weight of not less than twelve drachms, and it consisted almost entirely of uric acid with a small amount of urate of ammonia. I need not say that this is an unusually rapid formation of a vesical calculus, but it is to be explained by a singular fact—namely, that in cases of enlarged spleen, especially in those who suffer from anæmia, a large amount of uric acid is usually found in the urine. On this point, Senator, in Ziemssen's *Encyclopædia of Medicine*, vol. xvi., observes: "There is much reason to believe that the spleen is, if not the only, yet a very important source of uric acid, and when the spleen is enlarged uric acid is produced in larger quantity than usual; we see this in splenic anæmia." Ranke found that in such cases uric acid was increased by one-half—from 0.648 to 0.915 part in 1000; Pectenkofer and Voit found the average of five normal men to be 0.872, while that of a leucocythæmic patient was 1.424, an increase of 64 per cent. Ossikoosky also found an increase, the excretion being on an average about twenty-two grains in the twenty-four hours. A similar increase was noticed by Schmuziger and by Berrell. In the case of the latter, a boy aged seventeen excreted 18.28 grains daily—1.50 parts in 1000,—the average for a boy of the same size and weight, on scanty diet, being, according to Parkes, only six grains. Bartels found an enormous increase in one case, the daily excretion being 4.2 grammes, or about sixty grains. The formation of so large a stone consisting of uric acid in so short a space of time in my patient may thus be reasonably accounted for, the usual rate of growth in ordinary cases being about two drachms in the year. In Bartels' case, if only one grain of uric acid daily out of the sixty had gone towards the formation of a calculus, two years would have sufficed to produce one twelve drachms in weight.

The next point presents a circumstance of great interest and significance, especially to the operating surgeon. In splenic leucæmia the blood is found to be deprived to a great extent of its red corpuscles, and the number of leucocytes is very much increased; in such cases there is a tendency to hæmorrhage, and the consequence is that these unfortunate persons who are afflicted with this affection are bad subjects

on which to perform any kind of operation, major or minor. The low vitality of the blood and a tendency to disintegration of tissue scarcely render recovery possible. No operation therefore, unless of urgent necessity, ought to be attempted. Even the operation adopted in my patient does not seem to be a particularly safe one. This singular fact, that leucæmic subjects usually succumb to fatal hæmorrhage after operations, has not been recognised by the profession, certainly not by authors on practical surgery. A large number of surgical works and periodicals have been searched, and no information bearing on the particular question could be found. The only allusion to the subject occurs in a paper by Sir Joseph Fayrer in the *Medical Times* for 1874, in which he refers to the anæmic inhabitants of malarious climates, and observes that "in such cases the slightest wounds have been followed either by gangrene or by hæmorrhage." Again, he says, "Surgical operations, excepting such as are immediately necessary to save life, should be avoided in this state, the tendency to hæmorrhage, gangrene, or embolism being very great." These remarks are exceedingly valuable, although they apply more especially to the natives of India. The unfortunate result of my patient fully bears out the truth of Sir Joseph Fayrer's remarks. There was, indeed, a great disposition to hæmorrhage, as shown by the effusion of blood into the conjunctivæ and eyelids, as well as from the bladder. It was only as a matter of urgent necessity that the attempt was made to relieve him, and it ended fatally.

With the hope of obtaining further information on this deeply interesting subject I appealed to my professional brethren in the pages of THE LANCET in May of this year. The only response was on the part of my colleague, Mr. Cadge, who kindly forwarded notes of two very instructive cases that had fallen under his observation. Mr. Cadge says: "In 1861 I assisted a medical friend with a troublesome case of stone. The man, aged fifty-four, was corpulent and asthmatic. Three years previously an ineffectual attempt had been made to do lithotomy. The stone was broken, but not removed. The man continued to suffer, and had constant and great bladder irritation and cystitis. Two large stones were removed. The operation was tedious from repeated slippings of the forceps. There was free but not serious hæmorrhage. No plug was used. The patient died two days after the operation. The prostate was freely divided. The bladder was contracted; the mucous membrane thickened and congested; the muscular coat thickened. The ureters, pelvis, and tubes of the kidneys were much dilated. The spleen was of an enormous size—nearly as large as the liver. The next case, which occurred in 1866, was that of a gentleman aged sixty-four, a florid, almost purple-faced gouty man. The stone was removed by median lithotomy; the operation was easy and quick, and no bleeding occurred at the time. In a few hours hæmorrhage came on, apparently from the prostatic veins; it did not escape externally, but filled the bladder, and clots were frequently extruded. It ceased in twenty hours; the urine then became clear, and he seemed in every way doing well for four days. On the fifth day he ate an indigestible meal; this was followed by oppression, and in a few hours by a sharp rigor and perspiration; rigors followed every day or two. He became delirious, and died a fortnight after the operation. At the post-mortem examination the bladder was seen to be healthy; the mucous membrane pale; the parts about the prostate rather congested. No pus was found anywhere. The kidneys were large and congested. There were two or three small stones in one, and some pyelitis. The liver was large and very congested; the spleen four or five times its normal size, tinged with blood, soft, and easily lacerable." Mr. Cadge remarks: "I have always felt uncertain as to the exact cause of death in this case. The symptoms were those of pyæmia, but the pathology was certainly not consistent with that view."

These two cases go far to establish the fact that those persons who may happen to be subjects simply of enlargement of the spleen are as liable to serious risks, should any operation be performed on them, as are those who suffer from splenic leucæmia, in which condition the tendency to hæmorrhage is so great as to render an operation of any kind scarcely justifiable. In corroboration of this view, Sir Joseph Fayrer, in a private communication to me, says: "In cases of splenic enlargement I would avoid all operations not absolutely necessary to save life and relieve suffering, even although there be no leucocythæmia or apparent anæmia."

ADONIDINE IN THE TREATMENT OF HEART DISEASE.

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IN the recent additions that have been made to our medicinal armamentarium the heart with its diseases has not been overlooked. An ever-widening physiology and an appreciation of the results obtained by experimentation have increased, amongst other things, our knowledge of the action of drugs, and particularly is this the case as regards those employed in the treatment of diseases of the heart and circulation. Each new drug introduced to the profession and recommended for heart disease has to run the gauntlet of physiological no less than of clinical criticism, and must fulfil certain requirements to be considered worthy of our employment, or for its name to be retained on our list of valuable therapeutical agents. There are many things required of a heart tonic. It must so act upon the heart as to improve the contractions of that organ, and in this way relieve any precordial pain or sense of difficulty of breathing that may be present; it must raise arterial tension. If this is too low, and in this way promote the removal of water from the system through the kidneys. And there are two methods by which this arterial tension may be raised. One method is by the drug acting upon the heart itself; its muscular wall, contracting with greater power, sends out blood in larger quantity and with greater force; emptying itself thus more perfectly, the coronary arteries are flushed with larger quantities of blood; the nutrition of the heart is thus better secured, and the nutrition of the tissues is maintained. The other method is for the drug to raise arterial tension indirectly—so acting, in short, upon the peripheral arteries that they contract, and in this way not only is the blood retained within them, but it tends to be thrown back upon the heart, and we rely upon that organ having still a sufficient amount of energy latent in its walls to respond favourably to the somewhat increased pressure within its ventricles. An effective circulation means functional activity of heart, arteries, and veins. We cannot overlook the claims of the arteries in any therapeutical consideration, for it is they that carry on the work when the heart is in a state of diastole.

The chief danger in heart disease arises from reduced arterial tension, for the heart itself, no less than the systemic capillaries, then suffers in consequence. If, therefore, this is a danger, our duty is clearly to maintain the blood pressure; but to do this effectively we must improve as far as we can the movements of the heart as the emitting organ, the arteries as the carriers, and certain nerve centres as regulating the distribution of the blood. When I am called to treat a case of heart disease, and I have made out to my own satisfaction the nature of the cardiac lesion, then it becomes with me less a question of murmur than what is the condition of the wall of the left ventricle. Is there compensation? and, if so, is it sufficient or has it given way? Is arterial tension low? and, if so, can it be raised? Now for all practical purposes digitalis answers very well. Digitalis, although an old drug, is difficult to replace, and this simply because its therapeutics are modern and are now better understood. True, it fails every now and then, and satisfactory results can be obtained by strophanthus or convallaria. It is in mitral regurgitation that the action of digitalis is seen to advantage, although in many cases of aortic regurgitation digitalis in my hands has answered remarkably well. Once the actual condition of the left side of the heart is appreciated, and with it that of the right ventricle, the careful administration of any cardiac tonic will seldom be disappointing. For the last few months, however, I have been watching the effects of drugs in cases of heart disease viewed in the light of their causation, and from what I have seen of adonidine I have come to regard it as a drug capable of giving great relief to many of the unpleasant symptoms of heart disease.

Adonidine is a glucoside of *Adonis vernalis*, and was written up, if I may use the term, by Dr. Coste, who used it as a pure cardiac tonic. Under its administration

he noticed a rise of temperature where it had previously been subnormal, and an increase in the strength and action of the heart. It had no diuretic action, however. He thinks it will never supersede digitalis, and that it answers best in cases of dilated heart. The cases in which I have tried it have been chiefly those of aortic and mitral regurgitation; in all of them great relief was given to precordial pain, to the pain which ran down the left arm, and to palpitation and dyspnoea. I give it, combined with such things as sal volatile for chloroform water, in doses of one-sixth of a grain four times a day. It is a powerful drug, and is not borne well, particularly at first, in doses larger than this. Frequently, in fact, I begin with one-eighth of a grain, and I find this quite enough. Here is an epitome of some of my cases:—

J. G., aged thirty-four. Rheumatism twelve years ago. Has aortic and mitral regurgitation. Urine not albuminous; it averaged 24 oz. before treatment, after treatment 27 oz., daily. Pulse 76. Made a satisfactory recovery.

John T., aged forty-five. No rheumatic history. Is a labourer. Much exposed to wet and cold. Pulse 70, water-hammer. Aortic and mitral regurgitation. Urine not albuminous; it amounted to 34 oz. before treatment, and 30 oz. after it.

Joseph L., aged thirty-one; watchmaker. Rheumatic history. Pulse markedly water-hammer. Extensive aortic and mitral regurgitation. Adonidine in doses of one-sixth of a grain, thrice daily, relieved all his unpleasant symptoms, such as throbbing in the head and neck, noises in the ear, precordial and brachial pain, and profuse perspirations, and he could walk better, without having such severe attacks of palpitation; but severe headache came on when he was taking the drug, which was quite unusual to him. The medicine was discontinued for two days, when his headache disappeared, but under its use, in doses of one-tenth of a grain, he again remained for months remarkably well. Digitalis, strophanthus, belladonna, and also cyanide of zinc had been tried, but nothing gave relief until he took adonidine.

Luke B., aged fifty-six; mariner. No rheumatic history. Urine not albuminous. Aortic and mitral regurgitation. Before treatment his urine averaged 23½ oz. daily, and 36½ oz. after it.

W. H. H., aged forty-four; sailor. No rheumatic history. Pulse 64. Aortic and mitral regurgitation. Before treatment his urine amounted to 30½ oz. daily, and 38½ oz. after it.

John B., aged forty-six; a miner. No rheumatic history. Aortic and mitral regurgitation. Urine not albuminous; before treatment it averaged 32 oz. daily, and 40½ oz. after it.

Luke B., aged thirty-four; a sailor. No rheumatic history. Aortic and mitral regurgitation. Pulse 86. Urine not albuminous; before treatment it averaged 49½ oz. daily, and 40½ oz. after it.

Adonidine has, in every case that I have given it, relieved all unpleasant symptoms. Every patient who has taken it has expressed himself, after a few days' trial of it, as feeling very much better, and that not in one direction only. The painful throbbing of blood-vessels, headache, and profuse perspirations have, in addition to dyspnoea and precordial pain, disappeared; and whilst in most of the cases there has been a slight increase in the amount of urine thrown out after treatment, I am inclined to think that adonidine has little diuretic action. It is a cardiac tonic. It acts chiefly upon the heart, gently raising arterial tension; it has something of the sedative action upon the heart that belladonna has. It relieves the sense of increased intra-cardiac pressure; and the cases of aortic regurgitation in which, I think, it answers best are those where the lesion is due either to traumatic rupture of the valve or to chronic aortitis, and where it has not arisen from rheumatic endocarditis.

Newcastle-upon-Tyne.

RAILWAY SERVANTS AND AMBULANCE WORK, BIRKENHEAD.—The Mayor, Mr. F. Thornely, the chairman of the Birkenhead centre, distributed, on the 8th inst., the certificates of the St. John Ambulance Association gained by the class of the staff of the joint lines at Woodside station. The class is composed of twenty-six members, all of whom had passed the examination. Dr. Cornwall of Hamilton-square was the instructor. In the Birkenhead centre there are now sixteen large ambulance classes.

CASE OF TETANUS TREATED BY CHLORAL HYDRATE; RECOVERY.

SECTION OF MEDIAN NERVE FOLLOWED BY TROPHIC LESIONS OF MUSCLE AND SKIN.¹BY THOMAS D. SAVILL, M.D., M.R.C.P. LOND.,
MEDICAL SUPERINTENDENT OF THE PADDINGTON INFIRMARY.

D. F., aged twenty, a bargeman by occupation, was admitted into the Paddington Infirmary on Sept. 20th, 1887. He could tell us nothing about his family antecedents, though he thought that his mother had died of consumption. Nine years previously he had suffered from abscess of the neck for about two years, and these had left the present puckered cicatrices. Beyond this there was nothing to note in his previous history, and he had led a very abstemious life. Two weeks before admission he tripped and fell on to a heap of rubbish, and cut his wrist with a broken piece of china. It bled a little, but did not cause him much concern. However, it seems to have been a bad cut, and it did not unite by first intention, for it left a white scar just external to the middle of the anterior surface of the right wrist joint. He was a good deal exposed to cold and wet after this; and four days before admission gave up work on account of feeling ill and "a difficulty in chewing and swallowing anything," as well as a stiffness of the muscles of his neck.

On admission he still complained of these symptoms. There was, moreover, some obvious rigidity of the muscles about the neck, and we could not examine his throat on account of his inability to open his mouth. The thoracic and abdominal viscera were natural. The temperature was normal, and it may be noted at once that it only once reached 100°. The rigidity of the muscles of the neck soon spread to those of the back and the other parts of the body. It consisted of a tonic spasm, liable to severe and painful exacerbations. During these attacks of intermittent spasm, which became more and more frequent, he would arch his back, hold his breath, and then groan with the agony. The skin would become bathed in profuse perspiration and the face assume that rigid grin known as the *risus sardonius*. He had from four to seventeen of these attacks in twenty-four hours during the first six days he was under treatment. But the spasm, especially that of the muscles of the neck and jaw, never completely relaxed, and it was with difficulty that fluid nourishment could be poured into his mouth and swallowed. All the muscles of the body were affected, but those of the arms less so than other parts. He suffered from retention of urine on the day of admission and for some time afterwards, probably from spasm of the sphincter of the bladder, for there was no other obstruction. And it is curious to note that the bladder itself seemed to be affected, for after passing a catheter the urine did not flow in a uniform stream, but in a wavy, intermittent manner. He was treated from the commencement with chloral hydrate (twenty grains every four hours), occasionally combined with bromide of potash; and a further dose of forty grains of the first-named drug at bedtime if necessary.

And now I come to the chief point of interest in the case—the relief by chloral hydrate. We have seen that he was taking 100 and 160 grains of this drug in the twenty-four hours, and it seemed to be doing him good, for we noted that the spasms were markedly diminishing in severity and frequency. But these large quantities had produced a most troublesome complication—that of vomiting; and so on the twelfth day of the disease (seventh day of treatment) the chloral hydrate was stopped. That same evening the spasms returned with tenfold strength, and if it had not been for the very prompt administration of chloroform the patient would have died of asphyxia. It was on one of these occasions (Sept. 28th) that the median nerve was divided. Next day (thirteenth of the disease) the chloral was resumed, but this time partly by rectum and partly, combined with bismuth, by mouth. The sickness returned to some extent, but the severity and frequency of the spasmodic attacks gradually diminished. On the seventeenth day of the disease the patient took the law into his own hands, and positively refused all day to have his medicine. The same evening he was again seized with most violent

spasms and impending asphyxia, which was only averted by the prompt administration of chloroform. On resuming the chloral hydrate, partly by mouth and partly by rectum, the spasms became gradually less severe. The gastric derangement continued to be troublesome, and on the twentieth and twenty-first days of the disease he had some synopal attacks, probably also due to the drug; but from this time he gradually recovered. The spasms ceased after Oct. 11th (twenty-five days from the commencement of the affection), and he got up about the end of October.

Bearing in mind the history of a wound two weeks before admission, and the scar on the front of the right half of the wrist, which, however, showed no signs of irritation at the time of his being seen, it was thought advisable to divide the median nerve in the arm. This was done, and half an inch of the nerve trunk was removed under antiseptic precautions on Sept. 28th (twelfth day of the disease and eight days after admission). The two ends were loosely connected by a piece of catgut. A small piece of catgut was placed in the lower angle of the wound, and the skin brought together. The catgut drainage was removed on the second day, and the wound had healed by first intention. There is nothing surprising in this operation being followed by weakness of the muscles and anæsthesia of the skin supplied by the median nerve. This, it was hoped, would pass off after the nerve had reunited. But it was not so; the weakness of the muscles increased; they became atrophied, presented a marked reaction of degeneration, and at the end of three months I was surprised to find a blister had formed on the knuckle of the index and second finger without obvious cause. This blister soon became open sores, which have never healed for any great length of time during the past nine months. About this time also we noticed that the skin over the right half of the palm of the hand was rougher and redder than that over the left; and that this half of the hand perspired a great deal more than the other, pointing to a vaso-motor lesion. These conditions have also persisted up to the present time. He was treated by galvanism, massage, and faradism without result. Eight months after the original section it was apparent that the continuity of the median had been restored, to some extent at least, for the affected muscles still retained some power in them, and direct pressure on the nerve trunk below the seat of operation produced pain. Dr. de Watteville kindly saw the case about this time (June, 1888) for me, and, as he concurred in the opinion that the median was the seat of some irritation, it was decided to cut down and explore the nerve at the seat of the original operation. This was done on June 8th, and a fusiform enlargement on the course of the nerve, an inch long, was removed, and the cut ends brought close together. His arm was put up in a perfectly fixed position for ten weeks, and since this he has used the hand moderately. At the present time, thirteen months after the operation, he still has sores on the knuckles, and the condition of his arm is very much as it was five months ago. The muscles are atrophied, the right middle finger is one-eighth of an inch shorter, and this and the index fingers are narrower and more pointed than the left. However, he undoubtedly has more use in the hand than he had.

Remarks.—This is a typical case of tetanus, except from the fact that the patient recovered. The percentage of mortality is very high. According to Mr. Poland, quoted by Dr. Bristowe,² 88 per cent. of the cases end fatally. It might be said that the favourable results in the present case is attributable to three means. Firstly, chloroform. Undoubtedly this agent averted death on two occasions, but it was not employed with sufficient continuity to make us attribute the whole of the result to its use. Secondly, division of the median nerve. It is not likely that this produced any beneficial effect, for the most dangerous spasms, those on the night of the seventeenth day of the disease, occurred subsequently to the division of the nerve. Thirdly, chloral hydrate. When we attribute a controlling influence to any drug which has been continuously administered during the course of a disease, we are always confronted with this fallacy: that, after all, the disease might have taken that turn without the drug being administered. But in the case of the man F., on two occasions when the drug was stopped the symptoms took on an alarming severity, and when the drug was resumed there was a very marked amelioration. In a valuable paper by Mr. Wallace,³ based

¹ Paper read at the Medical Society of London, Oct. 25th, 1888.² Theory and Practice of Medicine, fourth edition, page 1091.³ THE LANCET, vol. II. 18 2, p. 218.

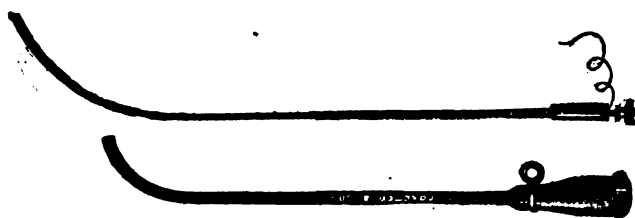
on his experience at the Calcutta College Hospital, it is stated: "If any drugs are to be relied on, favour is decidedly on the side of chloral, opium in the form of morphia, and opium smoking." My case tends to show that the chloral hydrate should be given in large doses and continuously. The unusual condition of the skin and vaso-motor lesion have been alluded to. It would seem probable that they depend upon the irritative nature of the changes in the nerve trunk. As to the prognosis for complete recovery from his arm troubles, I was inclined at one time to take a very gloomy view, and thought of suggesting a transplantation of nerve from an animal, as in Gersung's case.⁴ But since reading in Hilton's "Rest and Pain" of two or three cases of injury to nerve which completely recovered after several years of rest, I am inclined to take a more hopeful view, and to make my patient wear a sling and keep his arm at rest. One lesson I have learnt from this case. I think that another time, if the operation is called for, it would be better simply to divide the nerve, or, at any rate, not remove so much as half an inch; for the distance between the ends has doubtless by the difficulty of union produced the irritative lesion. If the nerve be simply divided, the ends are not likely to completely unite before death or recovery results.

ON A NEW OPERATION FOR DEAFNESS, CAUSED BY OBSTRUCTION OF THE EUSTACHIAN TUBE.

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AND

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THE great success which has followed the treatment of stricture of the urethra and other mucous passages by electrolysis suggested the idea that an obstructed Eustachian tube might be opened up by the same means. At the latter part of last year several bougie electrodes were made, with the object of carrying this form of treatment into practice. The one shown in this paper, for which Dr. Steavenson is indebted to Mr. Badcock for some suggestions as to its construction, was adopted as the most suitable. (See engraving.) The instrument is made by Mr. Coxeter of



Grafton-street, and consists of a vulcanite Eustachian catheter and an electrical bougie. The bougie is made of a number of fine copper wires about seven or eight inches long, insulated by vulcanite to within an eighth of an inch of their ends. The ends of the wires are soldered into a nickel-plated metal cap. The bougie is small enough to pass along the catheter, and exceeds it in length by about one inch. The handle end of the bougie is provided with a binding screw, to which the insulated copper wires are also attached, for the purpose of connecting a rheophore from the battery. On this end of the bougie an inch is marked off divided into eighths. Each eighth of the inch passes into the catheter as one eighth protrudes at the other end. It is therefore possible to tell, when the catheter is in the orifice of the Eustachian tube, how much of the bougie is in the canal. On the catheter there is a metal ring, or some other mark, as in all catheters, to indicate the position of its end when it is being inserted.

Electrolysis of the Eustachian tube is performed in much the same way as the electrolysis of the other mucous passages which has recently been described. A pad con-

nected with the positive pole of a battery is moistened and placed at the back of the patient's neck. The Eustachian catheter is then passed along the nostril into the tube, and the bougie, already attached to the negative pole of the battery, is passed along it as far as it will go, until it meets an obstruction. The circuit is then closed. A galvanometer should be included in some part of the circuit, and the strength of the current increased until a strength of four milliamperes is obtained. A frizzling noise will be heard by the patient in his head, usually likened to the frying of fish; and the operator, by approaching his ear to the catheter, can hear the crackling produced by the frequent breaking of minute bubbles of gas. The electrolysis is kept up for four minutes, and usually before the expiration of that time, if it is possible that the obstruction can be removed, the bougie can be pushed on for a small distance, sometimes for its full length. Generally on the first occasion the Eustachian tube is rather sensitive, but it seems to acquire toleration for the process, and at no time is so much discomfort experienced as might be expected from setting up chemical decomposition in the middle of the head. We have now performed the operation a large number of times, and have not met with any unpleasant experiences, nor has the treatment caused anything more than very temporary discomfort to our patients. We have tried the treatment in a large number of cases and for different affections of the auditory apparatus, and in those cases in which the deafness has been due to a simple obstruction of the Eustachian tube the results we have obtained have been most encouraging. We are indebted for many of the notes of the following cases to Mr. Badcock, and to Dr. Morrice, Messrs. P. A. Houghton, Fox, and Moberley, assistants in the electrical department.

CASE 1.—J. D—, aged twenty-four, was sent to the electrical department by Mr. Cumberbatch as a case of Eustachian obstruction on December 1st, 1887. He complained of deafness and tinnitus, and stated that he had been deaf in the right ear for five years, and in the left for fourteen months. He was getting worse. A watch could not be heard close to the right ear; no note was made of the distance at which a watch could be heard from the left ear. Electrolysis was performed in the right Eustachian tube as follows: The Eustachian catheter was passed, and the electro-bougie introduced through it down to the obstruction in the tube. The negative pole of a Stöhrer's battery was connected with the electro-bougie and the positive with a pad on the patient's neck. The current was then gradually applied till four cells were in the circuit, and was maintained for five minutes. The bougie electrode was passed three-sixteenths of an inch beyond the distal orifice of the catheter; this was then withdrawn, and a fine stylet introduced in its place, which was passed three-eighths of an inch beyond the orifice of the catheter. After the electrolysis the patient heard the watch at six inches' distance from his right ear. He did not experience much discomfort during the sitting; he described a sensation as of something frying in his head—a crackling and frizzling sound. On Dec. 8th the patient again presented himself for treatment. The watch was now heard at five inches from the right ear. He stated that the noises in his head were less, and that his hearing was better. Electrolysis was performed as before for five minutes. The current strength was maintained at about five milliamperes. The electro-bougie entered the right Eustachian tube three-sixteenths of an inch beyond the end of the catheter. The same "frizzling noise" was again heard. The patient heard the watch at nine inches after electrolysis. On Dec. 13th electrolysis was performed in the right Eustachian tube, four cells being employed for half a minute. The current strength was seven milliamperes. The bougie was passed its full distance along the tube. At the end of half a minute the bougie was withdrawn, as no further obstruction existed. The watch was heard at thirteen inches from the right ear after the sitting. Electrolysis was now performed in the left Eustachian tube, four cells giving a current strength of from five to seven milliamperes. The electro-bougie traversed seven-sixteenths of an inch; time, five minutes. After the electrolysis the watch was heard two feet distant from his left ear. This patient is a resident in Holland; we have therefore not been able to ascertain his present condition. He promised that if his deafness returned he would come again to this country for treatment.

CASE 2.—Wm. J—, aged sixty, was sent to the electrical department on Jan. 5th, 1888, by Mr. Cumberbatch,

⁴ British Medical Journal, May 10th, 1888.

as a case suitable for electrolysis of the Eustachian tube. The patient could hear a watch at a distance of five inches from the right ear. He states that he could hear quite well three weeks ago. A Eustachian catheter was passed along the floor of the left nostril into the orifice of the right Eustachian tube. The electro-bougie was passed along the catheter and attached to the negative pole of a battery. Two cells were used for five minutes. After the operation the watch could be heard at seven inches' distance. On Jan. 9th the patient again attended at the hospital. He stated that he had had no pain or giddiness, but some singing in the right ear. He was again electrolysed, but has not since been to the hospital.

CASE 3.—Emily F., charwoman, aged twenty-two, was sent to the electrical department by Mr. Cumberbatch. She stated that a fortnight previously she had had a cold, and that after a fit of coughing she found herself deaf in both ears. On passing the Eustachian catheter through the right nostril, the posterior part was found greatly obstructed. On the left side the catheter was passed more easily. The watch was heard at twenty inches' distance from the right ear and twenty-four inches from the left. A catheter was passed into the right Eustachian orifice, and an electro-bougie three-quarters of an inch beyond the end of the catheter. Electrolysis was performed, four cells being employed for four minutes. The watch was heard at a distance of thirty-six inches from the right ear after the electrolysis. The patient only presented herself for treatment upon this one occasion.

CASE 4.—Mr. R. C., a private patient of Mr. Cumberbatch, suffering from deafness with obstruction of both Eustachian tubes, was first electrolysed on April 5th, 1888. On May 4th electrolysis of the left Eustachian tube was performed, and occupied four or five minutes, the current strength being six milliamperes. The bougie entered the tube for seven-eighths of an inch. On May 14th it was stated that he had been rather more deaf for three days after the last operation; but had since then gradually improved. He had had a bad cold. Before electrolysis was again commenced he could hear a watch at five inches' distance from the left ear. The catheter was passed into the left Eustachian tube, and a current of four milliamperes used for five minutes. After electrolysis, the same watch could be heard at twelve inches' distance. A catheter could not be introduced into the right tube. Since the last date the patient was electrolysed six times, with gradual improvement in hearing.

CASE 5.—Mary Anne R., aged forty-one, domestic servant, was sent to the electrical department by Mr. Cumberbatch on June 12th, 1888. The patient complained of deafness and tinnitus. The left ear was much the worse of the two. She had pain in the left ear. The noises and pain sometimes kept her awake at night. The noises resembled the singing of a boiling kettle, and were constant in the left ear. The watch was heard only when almost touching the left ear; it was heard against the skull much better on the right than on the left side. On the occasion of her first visit the patient was galvanised through the left external auditory meatus, the positive pole being placed in the meatus, and the negative in the form of a moistened pad to the right side of the head. On June 29th the patient had not improved. Electrolysis of the Eustachian tube was performed, four cells of a Stöhrer's battery being employed for four minutes. The Eustachian catheter was introduced into the left tube, and then the electro-bougie passed three-quarters of an inch. On July 6th it was reported that there had been no improvement in the hearing of the left ear. Electrolysis of the left tube was performed. During the sitting the bougie was passed one inch into the tube. The patient heard the watch at a distance of six inches from the left ear after the electrolysis; she had heard it on contact only before. On July 13th she was again electrolysed in the left Eustachian tube. The improvement in hearing was maintained.

CASE 6.—Thos. H., aged fifty-five, a butcher, suffering from auditory vertigo, was sent to the electrical department by Mr. Cumberbatch on July 16th, 1888, for treatment by electrolysis. The patient complained of great noises and of deafness, chiefly in the left ear. He complained also of attacks of giddiness. He had suffered from deafness and tinnitus for twelve months, and from giddiness for the last six months. The watch was heard at seven inches' distance from the right ear, at barely one inch from the left. Electrolysis of the left Eustachian tube was performed,

four cells being employed for four minutes; the bougie was passed five-eighths of an inch. The patient was ordered a mixture containing bromide of potassium and dilute hydrobromic acid. On July 23rd the patient reported that he had suffered from less noise in his left ear and in his head than hitherto, and he had had two attacks of giddiness. The left Eustachian tube was again electrolysed, the electro-bougie passing fifteen-sixteenths of an inch beyond the orifice of the catheter. On July 30th the patient reported that he had been better during the last week, had had no giddiness, but a good deal of noise in his head. He was electrolysed as before. On Aug. 13th the tinnitus had been very much better, and the improvement in hearing had been maintained; but he had had some giddiness. Electrolysis was performed as before. He has not since attended at the hospital.

CASE 7.—Geo. B., aged fifty-two, was sent to the electrical department by Mr. Cumberbatch on July 23rd, as a case suited for electrolysis of the left Eustachian tube. The patient stated that he had heard perfectly well up to six weeks previously. He then found suddenly that he was deaf in the left ear. He had lately had noises in the left ear, but not very loud. He could hear a watch at five inches' distance from the left ear. He had suffered from chronic pharyngitis, and does so still. The left Eustachian tube had been inflated by Politzer's bag in the aural department, when he heard better for a short time. Electrolysis of the left Eustachian tube was performed; the catheter passed easily. Four cells were used for four minutes; the electro-bougie passed seven-eighths of an inch. The patient was subsequently electrolysed in the same manner on July 30th and Aug. 13th; on each occasion he stated that the hearing was improved, and the noises in his head were less. On Aug. 27th he again presented himself for treatment. The watch was heard at one foot from the left ear. Electrolysis was performed, four cells of a Stöhrer's battery, giving a current strength of five milliamperes at the maximum, being employed during four minutes.

Notes by Mr. CUMBERBATCH.—Our experience is at present too limited to be able to say what cases of chronic catarrh of the middle ear are most likely to be benefited by this new method of treatment. That strictures of the Eustachian tube, which do not yield to the ordinary methods, can be cured by the use of the electric bougie we have proved. In many cases of chronic catarrh, with obstruction of the Eustachian tube, there is no actual ankylosis of the ossicular joints; and in such case restoring the patency of the tube, and thus relieving the pressure on the membrana tympani and the chain of ossicles, must act beneficially on the hearing. In cases also where the catarrh has spread to the labyrinth, the distressing tinnitus, when due to circulatory disturbance rather than to any lesions of the nervous elements, is likely to be removed. When auditory vertigo is caused by undue pressure on the labyrinth owing to strong retraction of the membrana tympani, it is possible to relieve it (of course by restoring the patency of the Eustachian tube) by means of the continuous current, as has been proved by several cases which have been thus treated. In conclusion, I may add that, if after three or four trials a patient experiences no benefit, the probability is that further treatment by this method will be useless.

THE DANGER OF SEPTIC INFECTION ARISING FROM NASAL AND AURAL DISCHARGES IN MIDWIFERY AND SURGICAL PRACTICE.¹

By H. BENDELACK HEWETSON,

SURGEON TO THE OPHTHALMIC AND AURAL DEPARTMENTS OF THE GENERAL INFIRMARY, LEEDS.

SOME little time ago attention was drawn by Sir Spencer Wells, I believe, to the case of a now celebrated ovariotomist, who, despite all his constant care and watchfulness, continually found his operations followed quickly by a fatal result. I think it was suggested to him that this fatality might arise from some personal condition, and at length, on application

¹ Read before a meeting of the Leeds and West Riding Medical-Chirurgical Society, Oct. 12th, 1888. A contribution to the series of papers on "Antiseptic Midwifery."

to a skilful dentist, a suppurating molar tooth, which was removed, revealed the cause of the fatality, and with the removal his success began. Dr. Matthews Duncan has also quoted one or two cases of medical men suffering from some form of rhinorrhœa, whose attendance in the lying-in chamber was particularly disastrous to their patients. But I do not think that sufficient stress has yet been laid on this very broad question, as a whole, in regard to septic infection generally. Every one in Leeds remembers the case often quoted, in which three leading members of the profession several years ago attended the post-mortem examination of a case of peritonitis, and each afterwards within the next twenty-four hours attended a labour, with a fatal puerperal fever in each instance. My attention has recently been very seriously drawn to the great danger which attends the parturient patients of those who are the subjects of even a slight otorrhœa, or in whom there is some nasal discharge of an offensive nature. The opportunity of bringing the facts before the Leeds and West Riding Medico-Chirurgical Society has been gladly accorded to me by the practitioners whose ailments I have treated, and will form the subjects of this paper.

Some time since I was consulted by a medical man for an affection of the left ear. He heard badly on that side, and suffered from great depression of spirits; he was pale and anxious-looking (though naturally he was bright, cheerful, and energetic), and spoke despondingly of his future and his position. I found that there was a small perforation of the membrana tympani, and a thick semi-solid discharge lay on the floor of the meatus, but never appeared externally; but it was, when disturbed, horribly offensive. He told me that, in order to find out the cause of his unexplained ill health, he had had all his drains overhauled, and also had had the drinking water looked to, with negative results. I at once explained to him that the cesspool in his case was in his ear, and that probably in a short time a course of antiseptic treatment would neutralise the chronic absorption of the septic material, which was so exceedingly depressing to him, and cure his symptoms. I asked him if he was aware of the otorrhœa, and he assured me that the deafness was the only thing which troubled him. I was exceedingly anxious to learn from him the results of his large midwifery practice, and with carefully weighed words I approached the subject. This ended in an exceedingly painful expression of feeling, which I need not dwell upon. Suffice it to say that his misfortunes in this department from puerperal septicæmia were very constant, and also that many who recovered only did so after passing evidently through an attack of septicæmia. It was at once evident to him that his ear trouble, which constantly caused irritation and consequent—often unconscious—scratching for relief, was the obvious cause of much of the puerperal trouble which he related to me. The treatment which we adopted very quickly set matters to rights, and I am glad to say that, though he was obliged to change his practice, he has done exceedingly well in midwifery practice ever since. His health also quickly returned. I may add that it is his expressed wish that these notes should appear in this form before the Society.

The second case which I have to report in support of this subject occurred in the practice of a medical friend of mine, and it was the quoting of the above case in conversation to him which suddenly threw light on a case of puerperal fever which ended fatally in his practice the week before. The facts are these: My friend had engaged a qualified assistant, and, being called away, the assistant was sent to an important midwifery engagement some distance off, and all went well until the end of the third day after delivery. Puerperal fever set in, with a rapidly fatal termination. I was asked to examine the assistant, and I found that he suffered from tertiary syphilis, disease of the nasal septum, with a most offensive discharge, and foul breath. He was obviously a danger to any lying-in woman, and I advised that he should be completely rid of his trouble before he again played his part in general practice.

These cases point strongly also to the possibility of nurses suffering from aural or nasal discharges being the media of infection. I have seen three instances of hospital nurses working constantly amongst the most important surgical cases, quite innocent of the fact, until told them, that they were a danger to the cases under their charge. In each instance they were removed from active work until the discharges had ceased. I am exceedingly glad to have been able, as it were, to dovetail this paper into the list of

papers before us to-night on antiseptic midwifery, for, however dangerous such conditions may be when occurring in association with general surgery, the increase of danger must be much enhanced when in relation to the actively absorbent conditions of the puerperal state.

Leeds.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo nocendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

THREE CASES IN WHICH GASTROSTOMY WAS PERFORMED; REMARKS.

(Under the care of Mr. PEPPER.)

IT will be seen from Mr. Pepper's remarks on these cases that he is an advocate for the performance of gastrostomy at a comparatively early stage, when dysphagia is dependent on malignant stricture of the œsophagus, and there is a feeling amongst surgeons in favour of this. A fuller comprehension of the principles on which the operation should be conducted, improved methods of carrying them into practice, the postponement of the incision into the stomach itself until a few days have elapsed, and the employment of antiseptics, have rendered the results of the operation far more satisfactory than was considered possible at the time of its introduction. Provided the patient be in a fair condition of health, a good prognosis may now be given both as regards recovery from the operation and the future relief afforded by it; but if, as in the second case, the health be much deteriorated, a fatal result may be frequently expected. Another argument in favour of its early employment is to be found in the following sentence: "In some the patients [speaking of recorded cases] sank from inanition, apparently from lack of power to digest and assimilate the food introduced into the stomach." It will be noted that Mr. Pepper made a change in the usual method of suturing the stomach to the wound, the result aimed at being, however, the same as that attained by the method of double suturing employed by Howse,¹ or the use of acupuncture needles² or harelip pins by others.

CASE 1.—*Malignant stricture of the œsophagus; gastrostomy; recovery.*—William W—, aged sixty-eight, a plasterer by trade, was admitted under Dr. Broadbent on March 23rd, 1888, complaining of pain across the lower part of the chest and constant vomiting. About Christmas, 1887, he began to suffer from pain in the lower part of the chest. In February he first had pain during deglutition, and soon afterwards he became unable to swallow solid food, which regurgitated from the œsophagus half an hour after being taken, and since then he has lived only on fluids. On examination the abdominal walls were found to be retracted and flaccid. Liver dulness from seventh rib to two inches below margins of ribs, and extending on left side nearly to nipple line. Heart and lungs normal. No tumour could be detected. The vomit was not mixed with gastric juice. On April 11th he was transferred to the surgical wards, it having been decided to perform gastrostomy, as he was then unable to take even fluid nourishment. Attempts to pass an œsophageal bougie had been made, but without success, an obstruction existing at the crossing of the left bronchus. Temperature normal. No family history of cancer, and no assignable cause for the incidence.

On April 13th, chloroform having been administered, an incision three inches long was made parallel to and a finger's breadth from the cartilages of the eighth, ninth, and tenth ribs on the left side. The abdominal

¹ Holmes's System of Surgery, vol. i. p. 801.

² Heath's Dictionary of Practical Surgery, art. Gastrostomy. * Vernaull.

muscles were then divided and the peritoneum exposed. After all bleeding had ceased, this was opened and the edges stitched to the skin with silk sutures. The stomach having been found, its anterior surface was united to the edges of the wound by means of about sixteen silk sutures passed through the superficial coats of the stomach, the parietal peritoneum, and the abdominal wall. The sutures were left long and the ends clamped. In addition, two long silk threads were passed through the peritoneal and muscular coats of the stomach, and the ends knotted together. The wound was dressed with iodoform, perchloride of mercury gauze, and wood-wool pads. After the operation the patient was quiet, and did not complain of pain. His temperature fell to 96°. Two enemata were ordered to be given alternately every six hours: the first composed of two ounces of peptonised jelly and half an ounce of brandy; the other of one ounce and a half of strong beef-tea, the yolk of one egg, and half an ounce of brandy.

April 14th.—The patient has slept a little during the night, and does not complain of pain. Temperature last night 98°; this morning, 101°. At 11 A.M., he not having slept during the morning, an eighth of a grain of morphia was given hypodermically.

16th.—Patient progressing well; no pain. Temperature normal.

17th.—Dressing removed; wound healthy. A small opening made into the stomach between the two silk threads before mentioned. Care was necessary to avoid wounding the posterior wall of the stomach, as the viscus was collapsed. A very soft No. 10 catheter was then introduced, and five ounces and a half of a mixture containing milk, peptonised beef-tea, brandy, and three drops of hydrochloric acid introduced. The catheter was secured by a piece of strapping, and the wound dressed with a pad of wool. No anæsthetic was given, and the patient felt no pain. He was ordered to be fed with two ounces of peptonised beef jelly, two ounces of pancreatised milk, one ounce of brandy, and the yolk of one egg, to be injected into the stomach every four hours, alternating with nutrient suppositories by the rectum.

From this time the patient made an uninterrupted recovery, the temperature not rising above normal and there being no vomiting. On April 25th all the sutures were removed, and on the 27th the food was increased to two ounces of peptonised beef jelly, six ounces of pancreatised milk, and one egg. He was discharged on June 5th, from which time to the date of his death on July 28th he came to the hospital almost daily. There was complete relief from the distress caused by ineffectual attempts at swallowing, and he regained strength and increased in weight. On the last-mentioned date he was "taken in a fit," and died in about twenty minutes. At the necropsy on July 28th it was found that the growth (epithelioma) had ulcerated into the left bronchus, and that a quantity of blood had passed thereby into the air passages, death having been evidently caused by suffocation.

CASE 2. Malignant stricture of the œsophagus; gastrostomy; death.—William P., aged sixty-nine, a labourer, was admitted on June 5th, 1888. He stated that in October, 1887, he had a bad cold, and his throat became sore and painful, and that it hurt him when he swallowed. Under treatment the pain was for a time relieved, but the difficulty in swallowing increased, and he had pain shooting up to both his ears. Two months before admission he could only swallow minced beef, and even then had to wash down the bolus of food with fluid. Later on solid food regurgitated, and he was reduced to fluid diet. Two or three weeks before he came in he noticed some hard lumps beneath his jaw, and, as he expressed it, "something used to burst in his throat, and in trying to spit some stuff up a lot of phlegm used to come, and some black blood." This happened three times. He never suffered much pain. No history of syphilis, impaction of a foreign body in œsophagus, or swallowing of corrosive fluid could be obtained. No family history of cancer.

Condition on admission.—The patient is unable to swallow, and he localises the obstruction at a spot immediately above the sternal notch. There is no tumour of the tonsils, pharyngeal polypus, or post-nasal growth. There are a few enlarged glands in the upper part of the neck, but none lower down. Breath very fetid. Urine normal. A bougie could not be passed much beyond the cricoid cartilage, and on withdrawal was covered with blood.

June 8th.—Weight 10 st. 2 lb. Fed on nutrient enemata every four hours, and two hours after each enema a nutrient suppository.

The first stage of the operation of gastrostomy was performed on June 8th. After the operation the temperature fell to 97°, but soon rose to normal and remained so until the 12th. His general condition was good. The enemata were retained. Once a day he had a gruel enema to clear out the lower bowel.

On the 12th the operation was completed without an anæsthetic. A No. 12 soft catheter was introduced, and four ounces of a mixture of milk, egg, and brandy injected. It was noticed that there was a good deal of redness around the wound and tension on the sutures, so the latter were removed and the wound supported with strapping and again dressed antiseptically. Four hours later, on removing the dressing to feed him, a small piece of omentum was found protruding through the wound. Feeding by the stomach was discontinued, and nutritive enemata given every three hours, each alternate enema containing twenty minims of tincture of opium. The patient passed a restless night and had pain in the right iliac region. On the morning of June 13th the dressings were removed, and it was found that the adhesions had all broken down and a large piece of omentum was protruding, which was covered with the partly digested contents of the stomach. As it was found impossible to reduce the omentum, it was ligatured close to the abdominal wound and removed. No further operative procedure was deemed advisable in the then hopeless condition of the patient. The patient gradually sank, and on the following day was in a semi-comatose condition; the enemata were not retained and he died in the evening.

Necropsy.—Body of a well developed and muscular man. Gastrostomy wound in the left hypochondriac region; edges gaping except at upper and lower angle, where they are drawn together with silk sutures; on dividing the sutures the edges gaped. Wound suppurating. No gut attached to peritoneal edges of wound, the stomach having sunk backwards and upwards beneath the left ribs. The colon lay immediately beneath the wound, though not in contact with the edges thereof. On opening the abdomen the coils of intestine were seen to be greasy, flecked with lymph, and injected. An opening into the stomach had been made on the anterior or upper surface four inches above the pylorus (measurement taken after opening). Stomach contracted; mucous membrane injected. (Esophagus: A malignant epitheliomatous growth, completely encircled the tube, commencing above at the lower border of the cricoid cartilage and extending downwards for a distance of three inches in one continuous mass, and below this point were numerous discrete nodules of growth in the submucous tissue as low as the cardiac orifice. The walls of the pharynx were infiltrated by growth, which was ulcerating and continuous with that in the œsophagus as high as the upper border of the thyroid cartilage. A slightly elevated nodule of growth appeared in the posterior wall of the trachea on a level with the first and second rings, which was continuous with the œsophageal growth; lower down the trachea several other nodules appeared in the submucous tissue. The lymphatic glands on the left side of the œsophagus were infiltrated, and those in close proximity to the main mass of the growth breaking down; these formed a mass lying mainly beneath the sterno-clavicular articulation. The right lung was cedematous and congested, the left collapsed and emphysematous at the edges. There was slight atheroma of the mitral valves; otherwise the heart was normal. The kidneys were slightly granular.

CASE 3. Stricture of œsophagus; gastrostomy.—Joseph H., aged sixty-five, was admitted to the medical wards on October 11th, on account of pain in the epigastric region and difficulty in swallowing. Two months ago he first noticed a slight difficulty in swallowing, and he also had pain in the epigastric region, which was increased on swallowing. Shortly afterward he commenced to vomit all food, both liquid and solid. The pain, difficulty in swallowing, and vomiting have gone on increasing, and he has become emaciated and weak. A blacksmith by trade, he has always been strong and healthy, and there is no history of syphilis, hereditary cancer, or injury to the œsophagus. After admission he was kept in bed and put on a liquid diet, and the vomiting, although still continuing, was not so frequent. The circulatory system was normal. On Oct. 16th Mr. Pepper first saw the patient in consultation with Dr. Maguire, when it

was decided that, as only a very small bougie could be passed through the stricture, which was situated at the cardiac orifice of the stomach, it was advisable to perform gastrostomy.

The operation was performed in two stages, as in the cases recorded above—the first on Oct. 24th, and the second on Oct. 30th. Between these two dates he was fed every four hours by nutrient enemata as in the other cases, ice only being allowed by the mouth. There was no rise of temperature, and, with the exception of slight pain in the neighbourhood of the wound, he did not seem to be affected by the operation. After the completion of the operation he was fed partly through the fistula and partly by enemata until Nov. 2nd, when the latter were discontinued, and he was fed entirely by the stomach. On Nov. 10th he was able to sit up in bed, the wound being in a perfectly healthy state and the patient's general condition improving. On the 21st he was up and about the ward.

Remarks by Mr. PEPPER.—When once the diagnosis of malignant disease of the œsophagus is established and swallowing seriously interfered with, it is better to perform gastrostomy without delay, and not wait until the chances of recovery from the operation are minimised by the patient's exhaustion, the alternative course of passing bougies for the purpose of feeding being irksome to the surgeon and painful and dangerous to the patient. The statistics of gastrostomy are not to be relied upon as affording an argument for or against the advisability of performing the operation in any particular case, inasmuch as many of the reported cases have only been operated upon when there was little or no hope of real and protracted gain being obtained. In any case gastrostomy is to be preferred to œsophagostomy, whilst it is the only practicable operation when the disease is situated below the commencement of the gullet. The stitching of the parietal peritoneum to the skin is advocated, as it serves the double purpose of restraining bleeding from the divided structures, and gives a broader surface for the attachment of the stomach, and so more extensive adhesions. On the day before the first stage of the operation the lower bowel should be emptied by a gruel or olive-oil enema, irritant injections containing soap, turpentine, &c., rendering the rectum unable to afterwards retain nutrient enemata. A sharp, narrow, long-bladed knife should be used for opening the stomach, as a considerable depth has to be traversed, and no tension should be put on the adhesions as the knife is carried through the walls of the stomach; no force should be employed in passing the feeding tube, the size of a No. 12 catheter. The guiding threads previously mentioned are useful in directing the passage of the knife, as by the time when the stomach is opened the exposed portion has lost its glistening appearance, and may in some measure have altered its relation to the edges of the wound. For the preparation of the above reports and for many valuable suggestions I am indebted to Mr. T. H. R. Crowle, surgical registrar to the hospital.

CIVIL DISPENSARY, PISHIN.

A CASE OF LATERAL LITHOTOMY IN AN AFGHAN BOY.
(Under the care of Surgeon P. J. DAMANIA, Indian Medical Service.)

WHEN a prominent place is now accorded in surgery to suprapubic lithotomy to show its superiority over the operation of lateral lithotomy, it is fair that even a solitary case that can be adduced in favour of the latter operation should be published.

An Afghan boy, aged thirteen, was brought to the Civil Dispensary at Pishin, with symptoms of stone in the bladder. About four years ago he complained of pain on micturition, which gradually increased to such an extent that he was unable to sit up without having pain in the urethra. The face and feet were tœdematous. It was difficult to get at the history of the swelling. The specific gravity of the urine was 1013; a large quantity of albumen was present. It was very nearly the colour of chylous urine from the admixture of pus and mucus. On passing a sound into the bladder a stone was detected. As dysentery supervened during his stay in hospital, he was operated on a little later, when he had recovered from that complaint.

Chloroform was administered and lateral lithotomy per-

formed in the usual way on Oct. 2nd, and a uric acid calculus, weighing 263 grains, extracted. The patient was placed on his back with stretched legs. Urine flowed from the wound on the first day of the operation, but from the second day it passed entirely through the urethra. On the third and fourth days the urine continued to pass through the urethra, and not a drop of it from the wound. Taking advantage of this entire flow of urine through the urethra, iodoform was sprinkled freely on the wound, which began to heal rapidly under it, and was entirely closed on the fifth or sixth day after the operation, when the patient was able to sit up in bed. After the operation the swelling of the face and feet began to lessen, but the quantity of albumen in the urine remained the same. Throughout, the temperature was normal after the operation. The bowels were moved on the fourth day. About a fortnight after the operation the urine commenced to get clearer and the quantity of albumen was very small. After the operation morphia and quinine were given internally, and for a few days bicarbonate of potash with hyoseyamus. On Oct. 17th he left the Dispensary quite cheerful, with total disappearance of the swelling of the face and feet.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Peculiarities in Hernial Sacs and their Contents.—*Dislocation of Shoulder without Rupture of Capsule.*—*Galvanopuncture in Aortic Aneurysm.*—*Cancer of Pancreas.*—*Acute Intestinal Obstruction.*

AN ordinary meeting of this Society was held on Nov. 20th, Sir James Paget, President, in the chair.

Mr. LOCKWOOD exhibited a number of Specimens to illustrate Peculiarities in the Construction and Contents of Hernial Sacs. Two of the specimens showed conditions which predisposed to the formation of infantile hernia. In one, which was obtained from an adult, whilst the tunica vaginalis had formed in the usual way, the rest of the processus vaginalis had remained patent as far as the internal ring, where it was occluded. Immediately behind its upper part, however, there was a small peritoneal pouch, similar to, but smaller than, the true sac of an infantile hernia. The second specimen was of the same nature, except that the true hernial sac was longer than in the preceding case, and inextricably confounded with the fibres of the internal cremaster. An interesting point in the history of this specimen was that the infant from which it had been obtained had been operated upon by Mr. Cripps, and the front sac, that formed from the upper part of the processus vaginalis, opened. No hernia was discovered, although some fluid was evacuated, and the patient died, as it subsequently appeared, of an intussusception of the small intestine. In neither of these cases was any gut found in the hernial sac. The third specimen demonstrated a number of rare and interesting facts. After the abdomen had been opened great difficulty was experienced in finding the vermiform appendix, and it was thought to be absent. However, it was discovered hidden away in a serous pouch which lay behind the cæcum, thus forming a retro-peritoneal hernia of the vermiform appendix, clearly a very rare and unusual condition. In addition, there was an ordinary hernial sac of considerable dimensions whose mouth was external to the deep epigastric artery, whilst its fundus lay upon the tunica vaginalis, which was quite normal. Towards the inner side of the hernial sac there was a second serous sac, larger than the tunica vaginalis itself, and quite isolated and cut off from the rest of the peritoneum. It seemed comparable to the sac of a hydrocele of the cord, but, of course, contained no fluid. The hernial sac had, when found, nothing within its mouth. A very large plica vascularis ran upwards from it to unite with the end of the mesentery, close to the cæcum. The plica was joined by another fold which ran transversely across the fundus of the bladder. The isolated pouch found in this instance seemed similar to one recently described by Professors Bennett and Cunningham, and which they considered to have been drawn down by the gubernaculum at the time of the formation of the processus vaginalis. The persistence of the plica vascularis and the relations of the vessels to the hernial sac

indicated that the anomalies were due to a developmental defect. Ventral hernia formed by an appendix epiploica: This hernia was situated in the left linea semilunaris, a little below the level of the umbilicus. At first it seemed merely a subperitoneal lipoma, but it was in reality one of the appendices which protruded through an opening in the peritoneum into an excessively thin hernial sac, to which it was adherent. Where this sac pierced the linea semilunaris there was a distinct ring, like the umbilical ring. The mode of formation of this protrusion seemed quite inexplicable. There was no sign of any previous wound, and the appendices appear so late that it could hardly have been due to a developmental defect. Calcareous body in the sac of a femoral hernia: This specimen was found in a very old woman. The sac was excessively thin, and contained a laminated calcareous mass more than half an inch long and more than a quarter of an inch thick and very hard. It consisted of calcareous matter, with some fibrous material, and had probably originated in the peritoneal cavity in a fibrinous concretion, which had afterwards calcified. Appendix vermiformis, incorporated with the back of a hernial sac: In this specimen a very long vermiform appendix ran down the centre of the hinder wall of the sac of the hernia. The mouth of this sac was capacious and contained the cæcum. Upon the outside of the back of the sac the spermatic vessels ran exactly parallel and opposite to the vermiform process. The latter had no mesentery except at its lower end. The hernial sac and tunica vaginalis were separate and distinct. The vermiform process had been dragged down in the formation of the sac, probably by the small intestine, and the cæcum had followed. Mr. Lockwood said that he showed these specimens because of their rarity, and in the hope that light might be thrown upon their peculiarities.—Mr. JONATHAN HUTCHINSON, jun., had found a concretion as large as a walnut in the sac of a femoral hernia, and its origin from a calcified epiploic appendage was proved by a second cretified appendage being discovered still attached by a peduncle to the large intestine. He regarded the formation of secondary isolated sacs, in some herniæ at least, as due to a process of very chronic local peritonitis.—Mr. TREVES said that in every instance in which a cæcum or appendix was found in a hernia there was a true sac. The appendix vermiformis represented the long, twisted cæcum of marsupials, and where the appendix was long the cæcum was small. In some cases where the small intestine had a very large sac, the posterior wall of that sac was sometimes formed of peritoneum stripped from the cæcum. If a hernia contained an epiploic appendix, the latter was always adherent, the adhesion being often explained by the fact that the appendix contained a false diverticulum, in which fecal material lodged and set up inflammation. In two or three cases of non-malignant communication between colon and bladder it appeared to have resulted in this manner. The retro-cæcal fossa was formed by a further movement downwards of the colon, after what should have been its arrest in the iliac fossa.—Mr. GODLEE, referring to the development of secondary sacs, described two cases illustrating their formation. A little boy had an undescended testis, followed by a hernia, and a truss was adapted to keep the hernia up and the testis down; a hydrocele of the funicular process developed, which required treatment by injection. The second case was in an adult, with irreducible omental hernia associated with hydrocele, a valvular opening existing between the two sacs. In both cases the septa were probably formed by very chronic inflammation.—Dr. MOTT showed a very small cæcum with an appendix 6½ in. long taken from a man aged fifty-one, who died of chronic Bright's disease; the appendix ended in a pouch in the anterior part of the iliac fossa, which had been described as infra-cæcal.—Mr. PITTS thought the undue length of the vermiform appendix predisposed to cæcal hernia, and he referred to three cases (children) on which he had operated and found this condition present; in all, the cæcum was free, and there was a complete sac.—Mr. TREVES, referring to the fossa in Dr. Mott's case, said it had been described as the "fossa iliaca subfacialis." The retro-cæcal fossa was certainly unconnected with a bloodvessel, but in Dr. Mott's case one appeared to be present. In children the appendix, like the sigmoid flexure, was relatively much longer than in the adult.—Mr. LOCKWOOD was glad to hear direct evidence of the origin of calcareous masses from epiploic appendages. He looked with scepticism upon chronic inflammation as a cause of separate sacs, whereas the pointed shape of some

of the diverticula suggested traction by muscular fibre. The long vermiform appendix could rarely predispose to hernia, though it might get entangled in the closing processus vaginalis.

Mr. D'ARCY POWER showed for Mr. Claude Evill an interesting case of Dislocation of the Shoulder without Rupture of the Capsule. A man aged sixty-nine fell a distance of eighteen feet on to his right elbow and side, sustaining thereby a compound T-shaped fracture into his elbow and a dislocation of his shoulder. The dislocation was easily reduced, but the patient died twelve days after admission to hospital. At the necropsy the head of the bone was found to be in position, but the capsule of the joint was intact. It was lax, and its attachment to the anterior border of the glenoid cavity was slightly raised, but was still quite continuous with the periosteum. On opening the capsule there was a well-marked groove on the posterior surface of the head of the humerus. Mr. Power drew attention to the fact that Mr. Eve had shown an almost identical case before the Royal Medical and Chirurgical Society in 1880, and he agreed with him in believing that the groove was produced by the forcible impact of the humerus against the anterior margin of the glenoid cavity. He had no doubt that the dislocation had been complete, and that the case could not be looked upon as an instance of subluxation.—Mr. W. ADAMS thought that a traumatic dislocation of the shoulder without laceration of capsule could only occur forwards; he did not think such a lesion could happen at the hip at all. In congenital hip cases the condition of parts was very different, the acetabulum never having been formed, and there being instead a flattened surface more comparable with the glenoid cavity. In one case of dislocation of the hip from effusion into the joint during fever he had found a lacerated capsule.—Mr. BOWLEY said that clinically both cases referred to by Mr. Power presented the signs of ordinary subcoracoid displacement.—Mr. POWER replied that the only four recorded cases were either subcoracoid or subclavicular.

Dr. RALFE exhibited the Sac of an Aortic Aneurysm after Galvano-puncture. The patient came under observation in Sept. 1887, when the aneurysm had already made its way through the costal cartilages to the right of the sternum. The skin was of a livid hue, and the pulsation was extreme. Death from perforation was expected shortly to ensue, but after the first operation the progress of the disease was decidedly arrested, and he lived on for nearly eleven months, and did not die till August of the present year. The first operation, which was performed by Mr. Mansell-Moullin, as were the subsequent ones, was followed by subsidence of the swelling, whilst the tumour became harder and the skin lost its livid hue. The improvement lasted some time, but shortly the pulsation returned and the patient was troubled with a violent paroxysmal cough. Galvano-puncture was again resorted to, and again the pulsation diminished and the tumour became harder, whilst the cough disappeared. In all, galvano-puncture was performed thirteen times, and always had the effect of giving the patient relief. Finally, after nine months of treatment, a pustule appeared over the seat of a puncture, and from that time adhesion took place between the tumour and the skin, and perforation slowly ensued. But, instead of a sudden rupture with profuse hæmorrhage, comparatively slow oozing took place, and the patient gradually sank from weakness, without experiencing shock or pain. Dr. Ralfe claimed for galvano-puncture, where suitable, (a) prolongation of life in rapidly progressive cases; (b) relief of pain, of undue pulsation, and of paroxysmal cough; (c) the probability of an almost painless death, owing to slow oozing from the thickened sac, instead of sudden rupture, which, if it occurred internally, must be intensely agonising for the short interval the patient survived.

Mr. W. H. KESTIVEN related a case of Primary Cancer of the Pancreas causing Biliary Obstruction, and showed a specimen taken from the body of his patient. There were several recurrences of abdominal pain with clay-coloured motions, the urine was stained with bile, and later contained quantities of sugar, which disappeared under dietetic treatment. There was albuminuria during the last few weeks of life. The chief interest in the case lay in its obscure nature, the actual cause of the jaundice and the other symptoms indicating biliary obstruction not being rendered clear till after death. The head of the pancreas was then found to be the seat of cancerous disease, which had led to compression of the common bile duct; the latter on the hepatic side was largely distended, as was also the gall bladder. No other

organ was found diseased. Primary cancer of the pancreas was rare, and had only lately been conclusively proved to exist. Some of the symptoms in the case related might have some bearing on the question of the connexion between the pancreas and diabetes which had lately been mooted.—Dr. COUPLAND thought that primary cancer of the pancreas was not rare; it was certainly more common than secondary cancer. Thus the pancreas resembled the breast and uterus, and differed from the liver.—Mr. ROGER WILLIAMS had found the proportion of primary cancer of the pancreas to be 1 to 500 of all kinds of cancer.

Dr. PERRY brought forward two cases of Acute Intestinal Obstruction. In one specimen a loop of small intestine, a few inches above the ileo-cæcal valve, had passed through a ring formed by an adhesion between the tips of two adjacent appendices epiploicæ arising from the sigmoid flexure of the colon. In the other case the evidence was circumstantial. The patient had signs of intestinal obstruction; laparotomy was done, but at the operation the surgeon tore through a band low down on the left side of the pelvis, which he was unable to bring into view. At the post-mortem examination, a piece of ileum, thirty inches in length, was found blackened and with marks of constriction upon it at either end, and two adjacent appendices from the sigmoid flexure were seen to have their contiguous margins much congested, while their tips showed signs of laceration. Dr. Perry remarked that it was rare for intestinal obstruction to be occasioned by appendices epiploicæ, and still more rare for it to be produced by appendices adherent to each other. The only case exactly resembling the present one, which Mr. Treves had mentioned in his monograph on Intestinal Obstruction, was a case reported to the Society in 1861 by Mr. Holmes. In discussing the pathology of such obstructions, Dr. Perry said that it might possibly be a normal condition for appendices epiploicæ to be united along their adjacent edges. They might also become adherent by inflammation, and whether naturally coherent or cohering as the effect of inflammation, the thin membrane which united them might become perforated and a piece of intestine find its way through the opening so made. On the other hand, the tips only of the appendices might have become attached to each other as the result of a slight degree of adhesive peritonitis. As bearing upon this point, Dr. Perry observed that the adherent appendices sprang in each case from the sigmoid flexure of the colon, and were therefore in the immediate neighbourhood of the pelvis; that the specimens shown were from women, in one of whom the adhesion of the omentum to the abdominal wall was good evidence of old peritonitis; and that in Mr. Holmes's case, where the patient was a man, he had suffered from double inguinal hernia. It had been suggested that small, false diverticula might project into appendices epiploicæ, and were apt to lodge irritating matter of various kinds. Inflammation might thus be set up in the pouch and spread to the appendix, causing a limited peritonitis and an isolated adhesion; but this explanation would not apply to the present cases, in which no "distension" diverticula were found.

The following card specimens were shown:—

Dr. MOTT: Anomalous Appendix Cæci.

Mr. BLAND SUTTON: (1) Spina Bifida; (2) Supernumerary Legs in Frogs; and (3) Supernumerary Mammary in Monkeys.

Mr. TARGETT: Dermoid Cyst near Knee.

Dr. ROBINSON: Phosphatic Concretion from a Recto-vaginal Fistula.

Sir JAMES PAGET announced that the debate on Chronic Alcoholism will take place on Dec. 4th and 18th. Members are invited to show specimens of morbid changes attributable to alcohol in organs of (1) digestive, (2) circulatory, (3) genito-urinary systems on Dec. 4th, and of (4) nervous, (5) respiratory, and (6) cutaneous systems on Dec. 18th. Intimation of intention to exhibit specimens and of microscopes required should be given to Dr. Coupland before Dec. 1st. The discussion on both evenings will be general, the division of the exhibition of specimens being merely for convenience.

MEDICAL SOCIETY OF LONDON.

Adjourned discussion on Dr. Howard's paper on "A New Method of Raising the Epiglottis."

AN ordinary meeting of this Society was held on November 19th; Sir William Mac Cormac, President, in the chair.

Dr. BENJAMIN HOWARD introduced the subject by giving

a brief epitome of his communication, an abstract of which we published on page 819.

Mr. BRYANT said that a considerable time ago, when Dr. Howard was pursuing his investigations on this subject, he was struck with the thoroughness and conscientiousness of his work, and was therefore quite prepared for the valuable nature of the information contained in his paper. The facts he had brought forward were supported by demonstrations upon the dead body, and the impossibility of raising the epiglottis by means of traction on the tongue was clearly proved. He felt quite prepared to endorse Dr. Howard's remarks, or most of them. Mr. Clover had demonstrated that tilting up the chin facilitated respiration; but it must not be forgotten that traction on the tongue was also often of use, and this was explained by Dr. Howard's own experiments, which showed that pulling on the tongue displaced it from the posterior pharyngeal wall. It could not be thought that in every case of embarrassed respiration the epiglottis was at fault, for as often as not it was due to the simple falling backwards of the tongue. The practice of tilting the head backwards was often resorted to, and he thought that this heretofore empirical proceeding was explained by Dr. Howard's paper. Though the position of the head suggested was very suitable for a certain class of operative cases, he himself preferred the usual position—in such an operation, for example, as the removal of an upper jaw—chiefly because he was more used to it; but younger surgeons who had not yet got into bad habits would doubtless profit by the suggestion.

Mr. KNOWSLEY THORNTON, who occupied the chair in the absence of the President when the paper was read, said that two letters had been written to him bearing on the subject, complaining that the work of the authors in this direction had been overlooked. One was from Dr. Foulis of Edinburgh, a passage from whose communication he read, to the effect that so long as ten years ago he had himself used a special form of instrument, a "glossotilt," by means of which he pressed forwards the base of the tongue and the hyoid bone in apnoea, and he had sent a diagram to illustrate the mode of employing the instrument. Mr. Thornton thought it a misfortune that Dr. Howard should have made no allusion to Dr. Foulis's paper in the *Edinburgh Medical Journal*; that paper, however, did not embrace all the ground covered by Dr. Howard, so that the latter had a perfect right to speak of his way as a "new method." Two great points in Dr. Howard's paper were the creation of a free post-oral air-way, which Dr. Foulis did not seem to have recognised, and the fact that his method could be applied in the absence of all instruments, which was a great improvement.

Dr. E. A. SANSON said the procedure now described had recommended itself to him many years ago as by far the best position in which to place the subject when about to perform artificial respiration. He thought Dr. Howard's way gave the best and most direct entrance for air into the lungs in cases of chloroform narcosis. He had early satisfied himself that mere pulling on the tip of the tongue was not by any means the best method; it was certainly inferior to pushing down the base of the tongue with the finger or spatula. One particular point he felt required emphasis: the question was less how to get air into the lungs than how to get the air saturated with chloroform out, and, as Dr. Howard's method afforded the best inlet for air, it would, of course, also allow the best outlet. He did not desire to be understood as endorsing Dr. Howard's whole system of treatment for the drowned, for he thought it involved risk of serious violence to the thorax and its contents.

Mr. T. PICKERING PICK said there was no explanation in Dr. Howard's paper of the combined action of the sterno-hyoid and sterno-thyroid muscles; their action appeared to him to be antagonistic and opposite to the muscles of the supra-epiglottic region.

Dr. F. W. HEWITT doubted if the conclusions arrived at by Dr. Howard from the examination of dead bodies were correctly applicable to the living subject, in whom the conditions were necessarily very different. Under an anæsthetic, and especially under ether, a condition of spasm of the muscles of the mouth and tongue was present which often rendered it almost impossible to get the mouth open. Under these circumstances it was impossible to adopt the method without danger, for neither by extension of the head nor by tilting forward the jaw was one able to admit air to the lungs. With a patient under nitrous oxide there was often a considerable amount of respiratory embarrassment towards

the conclusion of the administration, dependent upon a sudden elevation of the larynx to the epiglottis, in common with other elonic movements over the body. In this case Dr. Howard's method would be quite inadequate to restore respiration. He asked whether this method was considered applicable to all cases of apnoea.

Mr. LENNOX BROWNE said that it was important to bear in mind some of the physiological and clinical facts connected with this matter. He was surprised to find that Dr. Howard closed the mouth when the head was extended. He quoted the case of a patient under the care of Dr. Wolfenden who could only swallow when placed on a couch, sucking his food through a tube from a basin placed on the ground. Dr. Buxton, in his paper on Intubation, had remarked that in feeding children the head should be held back. When the head was much extended, elevation of the epiglottis would often occur to such an extent that a good view of the larynx could be obtained, and this supported Dr. Howard's contention.

Mr. MARMADUKE SHEILD asked whether, in carrying out the experiments on drawing out the tongue, the traction was exercised only on the tip. He showed that if the tip were drawn upon the anterior fibres of the genio-hyoglossi were put on the stretch, which prevented further movement; whereas if the tongue were seized further back and rotated the epiglottis could certainly be raised. He mentioned that in cases in which the anterior part of the tongue was removed there was a great tendency on the part of the remainder to fall back with the epiglottis over the larynx, a contingency which had led many surgeons to pass a ligature through the stump beforehand.

Dr. STOKER observed that the remarks of the last speaker would only apply when patients were in the ordinary reclining position, but not when placed in the position advocated by Dr. Howard.

Mr. SHEILD replied that he had observed the same tendency even when the head was extended.

Sir WILLIAM MAC CORMAC thought that if the base of the tongue were pressed forward the epiglottis was got out of the way; but the question was, which was the best way of effecting this. He referred to a case in which, after considerable difficulty, respiration had been restored by placing the head in extreme extension, but as soon as the head was allowed to resume the usual position, respiration ceased, to recur only on being once more extended.

Dr. HOWARD, in reply, stated that Mr. Clover was about the second person to whom he communicated his views on the subject, and Mr. Clover had expressed himself as very much surprised that for years he had been in the habit of propping up the chin without knowing how or why relief was afforded. He confessed that he had totally overlooked the paper of Dr. Foulis, and nothing was further from his idea than to rob anyone of the credit which was due to them. He objected, however, to the employment of any instrument, and said that Dr. Foulis's plan necessitated the mouth being forced open before the "glosso-tilt" could be applied, a proceeding which was often difficult and brutal. Dr. Foulis began by lowering the jaw, but this facilitated the descent of the epiglottis; besides, the object of his instrument could as well be attained by the finger of the surgeon. He had purposely avoided the subject of artificial respiration, confining his attention strictly to the subject of the paper. The antagonism of the sterno-hyoid and sterno-thyroid muscles was indispensable to the effect which it was desired to obtain. He claimed that the condition of impending apnoea was very comparable to that found in the cadaver, and he complained that medical men heretofore, in speaking of and writing on apnoea, had shown an utter want of nice discrimination as regarded the exact stage alluded to, which was a point of very great importance.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Presidential Address.—Suppurative Peritonitis.

THE first ordinary meeting of the present session was held on Oct. 5th, Dr. Travers, President, in the chair.

In his presidential address, Dr. TRAVERS reviewed the condition of the profession on his entering it as a pupil in 1853, contrasting it with the present. He spoke of the advantages which the student and practitioner of to-day possessed over their predecessors both from a professional and

social point of view. He showed that the qualified aspirant now started not only better equipped to carry out fairly efficiently his daily work, but, beyond this, was endowed with an amount of knowledge of scientific medicine that urged him to pursue his student life throughout his entire career. Hence the necessity of such societies as the one he was now presiding over, the proof of such necessity being their increasing number, fulness of attendance, and enhanced vitality. He instanced how valuable the branch meetings of the British Medical Association had been to its provincial Fellows in breaking down the old ideas of exclusiveness and petty jealousy, and replacing them by free interchanges of professional opinions and social courtesies, thus absolutely raising the status of the profession not only in the eyes of its own members, but in that of the world at large. He felt confident that, when thirty years hence a future president should repeat his task, he would have to acknowledge that this Society had contributed its quota in producing the marked progress he must at such a time have to rejoice over.

Dr. THUDICHUM then read a paper on Uræmia and its connexion with the alkaloïds and extractive acids of the Urine.

Dr. ABRAHAM showed microscopical specimens of morbid conditions of the skin.

Mr. PERCY DUNN showed some interesting pathological specimens.

At the meeting held on Nov. 2nd, Dr. Travers, President, in the chair,

Mr. KEETLEY described two cases of Suppurative Peritonitis treated by laparotomy, iodoform gauze, and capillary syphon drainage, the patients being both school girls, aged eleven, treated in the West London Hospital in May, 1887, and August, 1888, respectively. Case 1: Lilian S.—Sudden attack of vomiting, severe abdominal pain, &c. Always in good health before. The vomiting and pain continued, and on the third day became much worse. There was no constipation. Both defecation and micturition were painful, and there was a tendency to diarrhoea. On the seventh day the lower half of the abdomen was swollen, hard, and evidently contained fluid. Evening temperature 100°. On the ninth day the case came under Mr. Keetley's care, and he opened the abdomen. The intestines were not distended, and were matted together. By separating them several collections of pus were exposed and evacuated, and the hot boracic douche was used copiously, with drainage and daily syphon douche. The day after the operation she was decidedly better; no pain; no vomiting. That night the pain returned suddenly; at 5 A.M. diarrhoea commenced, and at 9 A.M. she died. *Post-mortem*: Intestines extensively adherent, especially in and near the right side of the pelvis, where a small mass of adherent intestine enclosed both the vermiform appendix and the right uterine appendages. A concretion in the appendix was so easily squeezed through its wall that probably a perforation existed, and had given rise to the peritonitis.—Case 2: Jessie K—, also aged eleven, was exhibited to the members present. She had had scarlatina nine months before illness. Says she has had a "big belly" ever since. No albumen in urine now. A fortnight before admission she was kicked in the right loin and in front of the abdomen. The same evening vomiting, severe pain, and delirium set in. On admission there was abdominal pain, the epigastric and hypochondriac regions were swollen, tender, and fluctuating, and there was slight subcutaneous oedema. Laparotomy was performed, pus evacuated, and a warm douche given (1 in 5000 sublimate solution). A large rubber drainage tube was passed into Douglas's pouch. Two large pieces of iodoform gauze were introduced, one into Douglas's pouch, the other into the right iliac region; and when brought out of the wound were carried round the right flank, so as to hang outside sufficiently as to act as syphon drains. Moist iodoform gauze under-dressing was used, and a wool-wool pad placed over all. The temperature fell from 102° to 99°, and recovery was steady, except that a curious kind of delirium resembling mania came on and persisted for some days. The patient did better when boiled water was substituted for medicated douches. She was discharged quite well, with the wound perfectly healed, two months after admission. Three other cases of laparotomy for suppurative peritonitis were briefly mentioned.—Dr. DREWITT asked Mr. Keetley whether in any of his cases there was complete constipation as well as vomiting, as he had seen two children in whom

purulent peritonitis simulated intestinal obstruction.—Dr. ALDERSON had aspirated a case, drawing off a pint and a half and later half a pint of pus. Afterwards he opened with a Syme's knife. The patient got well, but now has a hernia in the situation of the wound.—Dr. LEWERS said that disease of the uterine appendages should be borne in mind among the probable causes of acute general peritonitis in women. He had examined the pelvic organs in 100 bodies at the London Hospital, taken at random from all parts of the hospital, and found the Fallopian tubes dilated in seventeen cases; of these, five were cases of pyosalpinx. In one of them death was certainly due to rupture of the tubes, causing general peritonitis, and in another also the pyosalpinx was very probably the cause of death. In cases of acute general peritonitis in women, therefore, Dr. Lewers thought that a careful pelvic examination should be made, and, if evidence pointing to disease of the uterine appendages was found, the proper treatment would certainly be abdominal section, washing out and draining the peritoneal cavity.—Mr. BALLANCE mentioned a boy who had a blow on the abdomen, followed by pain in the right iliac fossa, treated with opium &c., followed by general peritonitis and death on the sixth day. The post-mortem revealed general suppurative peritonitis. In cases of repeated pain in the right iliac region, perhaps during twelve months, he advocated operation during an interval to avoid general peritonitis at some time occurring during an attack.—Mr. KETLEY briefly replied. He thought that the surgeon should be called in to such cases from the first, not necessarily with a view to operation, but with a view to early consultation and decision as to under what contingencies or at what time operation should be done.

Clinical cases were shown by Dr. Drewitt, Mr. Ketley, and Mr. Ballance; microscopical specimens by Dr. Abraham; and pathological specimens by Dr. Crombie, Mr. Dunn, and Mr. Lloyd.

Mr. LAKE showed a typhoid chart of the case recently related by him in THE LANCET.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

A MEETING of this Society was held on Friday, Nov. 16th, Dr. W. H. Corfield, President.

A paper was read by Dr. FRANCIS BOND, entitled "The Government Act in its Sanitary Aspects," of which the following is an abstract:—The author observed that, paradoxical as it might appear to say so, the Local Government Act, although it does not contain a single clause which embodies any new provision of a sanitary character, and very little, indeed, that touches on sanitary administration at all, will probably prove—so far, at any rate, as rural and small urban districts are concerned—one of the most important contributions to sanitary legislation which have been made by Parliament since the Public Health Bill of 1872. The justification of this assertion is to be found in the possibilities that lie hidden in the very modest provisions of the 17th, 18th, and 19th sections of the Act, which, when their importance is recognised, as it cannot fail to be, contain the germ of a whole gospel of sanitary improvement. These clauses empower a county council to appoint one or more medical officers of health, and contain provisions by which the council will be enabled, if this power is wisely used, to lay the foundation in each county for a sanitary organisation of a far more satisfactory character than that which exists at present. It was just forty-one years since the officership of health was first created by Parliament in a very tentative manner as a provision of the Towns Improvement Clauses Act, and the history of sanitary progress since that date conclusively showed that every step which had been taken by local authorities in the way of action to protect the public health had been taken by the advice, and in most cases as a result, of the pressure exerted upon them by medical officers of health. If, therefore, the influence of these officials had been so beneficial in the case of the smaller local authorities, who will shortly be transformed into district councils, what reason was there to suppose that it would not be equally useful when brought to bear upon the more important county authorities whom the Act had created? In dealing with the question what are the functions of a county council in the discharge of which the advice and assistance of a medical officer of health

are likely to be of any use, Dr. Bond pointed out that, though the sanitary duties of county councils as indicated in the Act are very vague, there are three which are distinctly contemplated in it, for the satisfactory discharge of which the exercise of the power conferred on these bodies to appoint one or more medical officers of health was essential. The first is the promotion of efficient and economical administration by the combination of all the local areas of a county under the smallest number of officers of health who may be required to properly watch over the health of the whole district. This could only be done gradually by taking advantage of opportunities of combination as they occurred. The second duty of county councils is one in which the advice of a medical officer of health is essential in the exercise of those powers of supervision over the sanitary action of district councils which the Act had imposed on them. The third is the utilisation, for local as well as for imperial purposes, of the large mass of statistical and other information which county councils will have at their disposal in the reports on the sanitary state of their district which will be sent to them. If to these duties which the Act has already imposed on county councils be added those which have been foreshadowed by the Bill of last session as about shortly to be added to them, as well as those which public opinion is prepared in addition to entrust to them in connexion with the protection of public health, there will be ample justification for their availing themselves without any unreasonable delay of the powers in regard to the appointment of medical officers of health which the Act has put into their hands. Dr. Bond had no hesitation in saying that if the sum expended in this department of public administration in every county were expended more judiciously than it is, far more efficient results could be obtained at little or no additional cost to the ratepayers. In conclusion, he pointed out that the Act failed to provide any remedy for the grievance of which medical officers of health had so long and so bitterly complained, in the want of security of their tenure of office, which placed them at the mercy of any cabal which personal malignity might raise against them, and which had led in numerous cases, some of which were cited, to the infliction of the gravest injustice on these officials, for which they had not the least redress. Until the medical officer of health had the same protection in the honest discharge of his duties which Poor-law medical officers have, the interests of the public must infallibly suffer. It was earnestly to be hoped that this defect might be remedied in the Bill to be introduced next session as a supplement to the Local Government Act.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Aneurysms.—Ectopia Ventriculi.—Cystitis.

At a meeting of the Pathological Section on Nov. 2nd, Dr. WALTER SMITH exhibited the viscera of a man, aged fifty-four years, admitted into Sir P. Dun's Hospital on May 18th, 1888. He was a porter by occupation, and enjoyed good health, although not temperate. Thirty-four years ago he had a venereal sore on the penis, and a suppurating bubo. About eight years ago he was in Jervis-street Hospital for a tumour in the left popliteal space, which was treated by "pressure" and cured. On April 10th, 1888, he suddenly became faint and greatly distressed in his breathing, and after five months' suffering died. The prominent symptoms were pain across the upper part of the chest, over the left side, and down the arm; also over the upper dorsal spines, which were tender. He was much troubled with dyspnoea, but the laryngeal symptoms were never marked, and he could swallow without difficulty. A considerable bulging of the three upper ribs on the left side existed, dull on percussion, and exhibiting pulsation synchronous with that of the heart. There was neither cardiac nor aneurysmal murmur. The pulse in the left arm could scarcely be felt, and was delayed. A few days before his death he was seized with rigors, retching, and intense pain in the back and left side. The temperature rose to 103°4'. He gradually became cyanotic, and died on Sept. 25th. At the necropsy the left pleura was found to be adherent; right pleura almost completely free. There were numerous subpleural hæmorrhages over the base of the right lung. Occupying the upper part of the thorax was a large ovoid tumour, measuring five by four inches; this proved to be an

aneurysmal sac, arising about one inch above the semi-lunar valves of the aorta, and almost completely filled with a firm laminated clot. The bodies of the second, third, fourth, and fifth dorsal vertebrae were eroded, and, the posterior wall of the sac of the aneurysm being deficient, the blood clot lay in contact with the vertebrae. The innominate and left carotid arteries were not involved; the left subclavian artery was flattened by the tumour. The œsophagus was incorporated with the wall of the aneurysm, and the left vagus nerve was flattened into a tape-like band. The aorta was slightly atheromatous above and below the aneurysm. An old infarction was found in the right lung. The left popliteal artery and vein were fused together into a firm mass, and the lumen of the artery was completely occluded by a dense organised thrombus.—Dr. M'KEE remarked that no very advanced degree of atheromatous or sclerotic change was necessarily associated with aneurysm; and this was supported by the fact that aneurysm was not a disease of late, but rather of middle life. A point in this case which struck him as rather anomalous was the smallness of the heart. An interesting question was whether aneurysms occurring in persons with a syphilitic history were attributable to immediate syphilitic change or to the effects of the syphilis on the constitution generally. The latter hypothesis was, he thought, sufficient to explain the occurrence of the aneurysm.—Dr. FOOT said this case bore out three important points laid down by the late Dr. Stokes. One was the non-increase of the tumour, by which it was distinguished from other tumours which were of a rapidly growing nature. The second point, to which Dr. Smith had drawn attention, was the absence of murmur. The third point, to which Dr. M'Kee had called attention, was that in thoracic aneurysm the heart was not necessarily hypertrophied unless the aneurysm was sufficiently near to the region of the aorta to make the valves incompetent. The case reminded him (Dr. Foot) of one which he had at the Meath Hospital many years ago.—Dr. SMITH said an important clinical point was the variability of the signs and symptoms of aneurysm, and another feature was the curious relief that was sometimes temporarily given by a local abstraction of blood in the case of aneurysmal tumours, and which would not have the same effect at all in an organic tumour. The infrequency of murmur was one of the points of difference between thoracic and abdominal aneurysms.

Dr. C. B. BALL communicated a case of Ectopia Ventriculi. A tumour of the size of a pea was removed from the umbilicus of a child aged two months. The surface was red and moist, and microscopical examination showed that it consisted of glands identical with the pyloric glands of the stomach. The centre of the tumour was composed of bloodvessels and muscular tissue. Only six of the recorded cases exhibited gastric glands, most of the others having a mucous membrane similar to that of the intestines.

Sir WILLIAM STOKES communicated a case of Cystitis after the removal of papillomatous tumours from the female bladder. The tumours had been removed some three years before the death of the patient by Mr. Greig Smith, and the post-mortem appearances were those of cancer of the bladder.—Dr. M'KEE had examined a portion of the bladder in this case, and found clusters of epithelial cells in the muscular layers, which could not have existed there if the tumour had been simply a benign one.—Mr. WHEELER said he had had four cases of papillomatous growths under his care from time to time.—Professor BENNETT said the question here was the same as that raised in the case of the late Emperor of Germany—namely, whether it was possible that a papillomatous tumour, which was proved by microscopic examination to be benign, could pass into an epithelioma. They did not usually find cases of papilloma of the anus and other localities turning into carcinoma.—Dr. FOOT observed that the kidneys of the patient, which had been sent round, appeared to him to be quite sufficient to account for her death, when taken together with the prolonged irritation, pain, and loss of rest that accompanied the cystitis.—Mr. STORY said he had no difficulty in believing in the development of a benign tumour into a malignant one.—Sir WILLIAM STOKES, in reply, said that Professor Bennett would find it to be laid down by several authorities that papillomatous disease of the bladder had a special tendency to run into carcinoma, and he thought, from what had been laid down by Mr. Hutchinson and Sir James Paget, that there was a pre-cancerous stage in a vast number of cases of cancer.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE quarterly meeting of the above Association was held at Bethlem Royal Hospital on Nov. 16th, Dr. Clouston, of Edinburgh, President, in the chair.

The Council reported that, owing to the resignation of Dr. Rayner through ill health, it had been arranged that Dr. Savage should act as temporary secretary till the annual meeting.

Dr. R. PERCY SMITH exhibited a specimen of Pachymeningitis of the Spinal Cord, in which the effusion was on the outer surface of the dura mater. A good discussion followed on the nature and pathology of pachymeningitis, which was followed by a paper from Dr. PLAXTON, of Jamaica, on a case of Pachymeningitis (Cranial) in a Negro. Dr. Plaxton is convinced that the so-called pachymeningitis is due to shrinkage of brain, followed by a compensatory hæmorrhage, and is not in any way inflammatory.

Dr. HACK TUKE read a paper on a Recent Visit to Kennoway, a village in Fifeshire, where he was able to see the working of the boarding-out system for chronic lunatics, by which the Scotch manage to care for a very large number of their weak-minded and harmless lunatics without forming large collections of such cases as is seen in England. A discussion followed in which the Scotch members took an active part.

The members dined together in the evening.

Reviews and Notices of Books.

Therapeutics; its Principles and Practice. By H. C. WOOD, M.D., LL.D., Professor of Materia Medica and Therapeutics and Clinical Professor of Diseases of the Nervous System in the University of Pennsylvania. Seventh Edition. Pp. 908. London: Smith, Elder and Co. 1888.

It would be incorrect to describe this as a new book, and yet the title, scope, and arrangement have been so largely altered that it possesses much of the interest belonging to a new publication. In the previous edition the book was called "A Treatise on Therapeutics, comprising Materia Medica and Toxicology." The present issue bears on its title-page the following descriptive paragraph: "A work on medical agencies, drugs, and poisons, with especial reference to the relations between physiology and clinical medicine." The introduction of the term "medical agencies" means a good deal. It is the keynote of the tone of mind in which the author has approached his task, and its position on the title-page before "drugs and poisons" is maintained in the body of the book. This the author justifies by referring to the increasing interest taken by the medical profession in the various remedial measures which are distinct from the administration of drugs. Although some of these remedial measures were dealt with in preceding editions, they occupied a very subordinate position, and were treated rather cursorily. Space has now been devoted to somewhat detailed consideration of massage, metallo-therapy, the feeding of the sick, and the dietetic and general treatment of various constitutional diatheses. Hitherto these subjects have been deemed worthy of special manuals; by incorporating them in his book upon Therapeutics Dr. Wood endeavours to bring them under the notice of a wider section of the profession. The remarks upon Feeding in Sickness are based upon the assumption that pecuniary considerations are of secondary importance; the costliness of many of the dietaries would prevent their common employment among the poorer classes. In the treatment of fevers the author recommends the habitual use of foods which have been partially digested artificially, and he regards pancreatin as the most efficient digestive agent. This section contains a number of valuable directions for the preparation of food,

for the sick, details being so fully described that there should be no difficulty in following them. Rectal alimentation, which is mostly rather glossed over in text-books, is also explained with commendable precision, the importance of the employment of opium in aiding the retention being duly insisted upon. Metallo-therapy is dealt with extremely cautiously. The impression derived is that the author has felt the necessity of mentioning its reputed results, while not pledging himself too fully to any criticism. He blandly remarks that "it is certain that, at least in this country," the phenomena "are exceptional." Perhaps the difficulty he experiences in explaining the phenomena may account for this caution; one theory he denounces as amounting to "nothing more than words." With regard to the treatment of corpulence, due prominence is given to the so-called *Banting* system, upon which so much criticism has been expended; but the Ebstein method is preferred by the author, and he also quotes approvingly Oertel's recommendations for diminishing cardiac strain by systematic violent muscular exercise in mountain climbing. This section is, of necessity perhaps, rather disappointing; its chief novelty, apart from an occasional quaintness of diction, lies in the incorporation of these subjects in this volume.

Turning now to the second part of the book, which deals with drugs, the author claims some credit for his arrangement of material. The order in which to deal with the endless array of drugs has always proved rather a stumbling-block; many authors in despair have followed the alphabetical lead of the *Pharmacopœia*, and thus reduced their work to the level of a dictionary. Professor Wood has attempted a semi-physiological method, and has commenced with a broad division of systemic remedies from extraneous remedies, the latter including antacids, anthelmintics, digestants (*sic*), absorbents, and disinfectants. Systemic remedies are considered as general and local. The general remedies, which are more important, he further divides into orders, which are termed "nervines," "cardiants," and "nutrients." Of these, the first two are well arranged and form part of a natural classification; the inelegant term "somniafacient" is here employed to unite narcotics and hypnotics. The nutrients form an extremely artificial order, including astringents, tonics, alteratives, antiperiodics and antipyretics. The drugs grouped under local remedies also rest upon a very uncertain physiological basis, ranging from stomachics and emetics to diluents and protectives. To criticise this arrangement is rather a thankless task, since it amounts to criticism of the lack of uniformity of view concerning the most important action of the various medicinal agents. The physiological order is clearly that by which details will be most readily grasped by the student, and, although it does not appear to be perfect, the present arrangement is certainly preferable to that of the last edition.

Of the newer remedies Professor Wood speaks provisionally. As a rule, he is content to offer a summary of the experience of others, but occasionally he gives his own results. Lanolin is discussed upon physiological grounds, and thus practically disposed of. Ichthyol, in spite of the extravagant praises of Unna, Klesner, and many German dermatologists and surgeons, is dealt with in somewhat sceptical terms. The author has used it in sprains with "apparently some relief," but he feels, after a review of the evidence, "if one-half that has been said of it be true, it is a remedy of extraordinary power and value," which is a sufficiently qualified statement. The efficacy of strophanthus he considers proved by clinical observations, but he draws attention to the difference in the strengths of the preparations in the market. Of adonidine and sparteine he offers nothing beyond the reports of others. The Bergeon treatment of phthisis

he regards as "barbarous." He speaks highly of the value of sulphuretted hydrogen, when given by the mouth, in cases of phthisis, chronic bronchitis, and other chronic pulmonary affections, but his remarks in this connexion form a statement of belief in the natural sulphur waters rather than a criticism of the Bergeon treatment. Among other innovations will be found notices of the hypnotics, paraldehyde, urethan, and hypnone, of kawa, of salol, bethol, and antifebrin. The remarks on many of the articles mentioned in previous editions have been brought up to date.

Professor Wood has done his work thoroughly and conscientiously. He evidently distrusts many of the statements which he has felt it his duty to quote, but he has been careful not to mislead by the personal adoption of every unverified novelty. In fact, he seems frequently to have laboured under the idea that "the only safe conclusion on the evidence is that the evidence does not warrant any conclusion" (p. 414).

Diseases of the Skin; their Description, Pathology, Diagnosis, and Treatment. By H. RADCLIFFE CROCKER, M.D. Lond., F.R.C.P., Physician to the Department for Diseases of the Skin in University College Hospital, Physician to the East London Hospital for Children, Examiner in Medicine at the Apothecaries' Hall of London. With 76 Illustrations. Pp. 746. London: H. K. Lewis, 1888.

THE multiplication of special services for diseases of the skin in many great centres of industry and university towns, the increase in the number of those who give particular attention to these affections, and the keen investigations that have been carried out in recent years, have resulted in the publication of an ever-increasing mass of literature, and in the issue of many special treatises of more or less value. Drs. McCall Anderson and Jamieson in Scotland have recently issued works, but in England it is some time since any work of the first importance has made its appearance, and this latter circumstance has led many, especially those resident abroad, to conclude that the study of dermatology is somewhat sluggish in this country. As a matter of fact, it has never been so spirited, and the number of thoroughly qualified workers has never been so great. Dr. Crocker's book, gracefully dedicated to the memory of his former teacher the late Dr. Tilbury Fox, will be good evidence of the first-rate work that is going on here and of the excellent calibre of the workers. The author has set himself to produce a book which should within a reasonable and convenient compass give a succinct account of our present knowledge of dermatology, and which would serve alike as a work of ready reference to the general practitioner and a suitable text-book for the student. He has succeeded admirably, and his efforts cannot fail to be most favourably received. Dr. Crocker shows himself to be thoroughly *au courant* with dermatological literature, and the results of all important modern research are carefully digested and embodied in the volume, which is also valuable as a record of the author's own extensive experience acquired in twelve years' practice in University College Hospital and elsewhere. The matter is well proportioned, very accurate, and concise, and we cordially congratulate the author on a work which will worthily represent the present school of British dermatology. There is a useful appendix of formulæ supplementary to remedies suggested in the text.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY. — At the annual meeting of this Society, held on Nov. 15th, the following office-bearers were elected:—President: Dr. James W. F. Smith-Shand. Vice-President: Dr. Robert John Garden. Secretary: Dr. George M. Edmonds. Recording Secretary: Dr. Alexander Macgregor. Treasurer: Dr. John Gordon. Librarian: Dr. Thomas Best Gibson. Council: Drs. James Rodger, James M'Kenzie Booth, Henry Jackson, Angus Fraser, and T. Best Gibson.

Abstracts
OF
INTRODUCTORY ADDRESSES
DELIVERED AT THE
DUBLIN HOSPITALS
AT THE
Opening of the Session 1888-89.

ADELAIDE HOSPITAL.

MR. BARTON, in the course of his address, said the proper aim and object which everyone who was entering the profession of medicine should keep steadily before him, and the true spirit which should animate every member of the profession as long as he lived, were to endeavour to obtain wide, accurate, and practical knowledge of the profession, and to try to keep up with the advancing tide of knowledge and abreast of the improvements and discoveries which were almost daily being made. A real and difficult course of study lay before the student of medicine before he could be styled "Dr."; and at present the profession maintained in Dublin a standard of general culture, as well as of professional training, which he believed he could truly say was second to none in any part of the world. The student could never safely confine his work to any one branch of the profession. He might think of becoming a specialist in one single branch hereafter, but he must be no specialist before he passed his final examination. He would never, indeed, be a proper specialist unless he had laid the foundation in a broad and really sound knowledge of all the various sciences which bore upon medicine as a whole. The range of subjects in which the student was required to pass was increasing every year, and what sufficed very well twenty years ago would be at present quite insufficient, and an intimate acquaintance with subjects not even named then was now required merely to pass. The lecturer then referred to the various examinations medical students would be required to pass, and pointed out the best means of preparing for each examination, advising them to be persevering and to pay a great deal of attention to the practical portion of their studies. When they thought it very hard that a man had been stopped at his examination, he begged them to remember the responsibility that rested upon those who were charged with the duty of giving them a qualification to practise. If they pursued their profession in the spirit of serving one another as God had served them, they would gain independence and an honourable name, which they all highly prized and jealously guarded. Even, if being called upon to attend Queen or Emperor, they should be assailed by a combination of all the German professors in the world, there was no necessity for outcry, no need to seek the protection of the law of libel, or to write the events of the sick room to be read by the whole world; they might, with perfect calmness, leave their deeds, not their words, to speak for them, confident of the justice of their brethren.

CHILDREN'S HOSPITAL, UPPER TEMPLE-STREET.

MR. BAXTER, in the inaugural address, gave a *résumé* of the literature of children's diseases, and entered into an extended description of the peculiarities they presented as differing from diseases in the adult. He described the proper methods of arriving at a diagnosis in the special ailments peculiar to children, and explained some of the systems of treatment which long experience at the hospital had shown him to prove most successful in combating the most formidable diseases of childhood in their early and advanced stages. The lecturer dwelt largely on the advantages of a children's hospital as a school for clinical study, and pointed out how necessary an accurate knowledge of these diseases was to the young practitioner, the special facilities for acquiring which knowledge were available in that hospital.

MEATH HOSPITAL.

Dr. MOORE said that on that day they inaugurated the 138th session of the Meath Hospital as a school of clinical teaching in medicine and surgery. He had purposely laid stress upon the date of the opening of the present session because it told them that effect had at last been given to a long talked of and desirable reform. From time immemorial in the history of the hospital the first Monday in November in each year had been set apart for the formal opening by an inaugural address of the winter session, which in name always commenced on the first day of October. The wisdom of such an arrangement, common to the Meath Hospital with all the kindred institutions and medical schools in Dublin, was certainly questionable; and he was gratified to think that to this far-famed hospital, around which so many cherished memories clung, belonged the credit of beginning a new order of things, in accordance with which the full teaching machinery of the institution was put in motion at the very commencement of the session, and not, as had hitherto happened, a month or five weeks later. Since their last "opening day" several events had occurred which were destined to find a place in the annals of the Meath Hospital. Of these, the first was the resignation of one of the most esteemed and respected members of the medical staff, James Henry Wharton, the second in seniority of the surgeons of the hospital, a man whom they could ill afford to lose. The vacancy on the surgical staff caused by the resignation of Mr. Wharton had been filled by the appointment of Sir William Stokes, who, after an absence of twenty years, had returned to the hospital where he first won his spurs as a skilful operator and able surgeon, and where to all time the honoured name of Stokes would be a name to conjure by. A third notable event of the past year was the payment to the hospital authorities of the Bury bequest, about which they had all heard so much during the last nine or ten years. Unfortunately, in consequence of the depreciation in value of land in Ireland within recent times, this munificent bequest was seriously diminished in amount. Nevertheless, it was most acceptable, and would permanently endow several additional beds in the hospital wards. During the official year 1886-87 a munificent bequest of £4500 was paid over to the Standing Committee by the Crown, acting as representative of the late Mr. John Barber. In the summer of 1887 the building of a memorial wing to perpetuate Mr. Barber's name in connexion with the hospital was completed within a year, and many of his audience were present a few days since at the formal opening of the new wing by his Excellency the Marquis of Londonderry.

ST. VINCENT'S HOSPITAL.

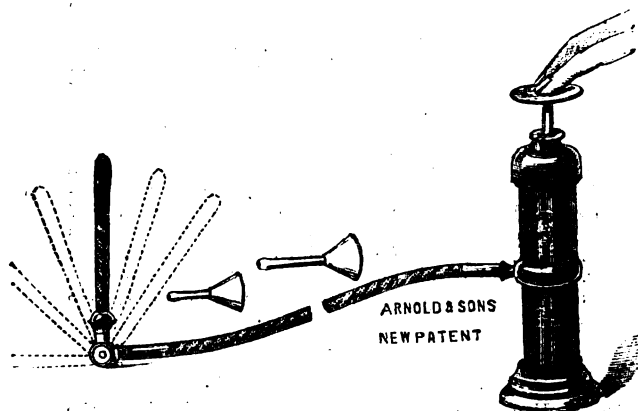
Dr. MCHUGH, in his address, referred principally to the question of the amalgamation scheme between the three Dublin medical schools. It had, he remarked, the almost unanimous support of members of the profession not directly interested. As regarded the night students who were affected by the measure, and who had his sympathies in their struggle for existence, he would ask them to remember that Trinity College and the Royal University had already decided against them. The danger which they had to fear was that the College of Surgeons would fall into line with the universities and refuse to admit them to their diplomas. This would be a death-blow to them, as the alternative of going to Edinburgh would not then exist, the colleges there accepting such certificates only as were recognised by the Irish College. The Carmichael and Ledwich directors had expressly stipulated that the night men who had begun their studies should be enabled to complete them. The existing night students would therefore establish themselves in the School of the College of Surgeons, and would have thus obtained practical recognition instead of tolerance simply as heretofore. He had no doubt that by legitimate agitation they would retain permanently the hold which they would thus as a consequence of amalgamation have acquired upon the College. There was no foundation, in his opinion, for the charge of sectarianism made against the promoters

of the measure. He stated this emphatically as one who had been conversant with the negotiations and steps which had led to its attainment. Having referred to other matters closely affecting the Dublin School of Medicine, the lecturer concluded an interesting address.

New Inventions.

THE IMPROVED SIMPLEX ENEMA APPARATUS.

SOME years ago¹ I described a new form of enema apparatus, which Messrs. Arnold and Sons, of West Smithfield, made at my suggestion. It was called "The Simplex," and I ventured to claim for it that it possessed many advantages over those in ordinary use, and this assertion has been amply justified by the test of experience. The essential differences between it and any other enema apparatus were: 1st, there was no packing on the piston; 2ndly, there was no indiarubber, being made of metal; and 3rdly, it could be used with one hand without fatigue. It consisted of two cylinders, sliding without friction one within the other. The inner one, which acted as a piston, was raised by a spiral spring and depressed by the hand. Around the top of the outer cylinder was a circular chamber, into which a little water was forced at each downward stroke. This water acted the part of the packing in an ordinary piston, none other being required. This was, of course, a great gain, as the packing of a piston which is not constantly used and oiled is sure to become dry, loose, and useless, especially in hot climates, and it is no easy matter to pack



a piston well and smoothly, especially on an emergency. Dispensing with indiarubber was another gain, as this is sure to spoil by the mere lapse of time, and, besides, compressing an indiarubber ball, even when in good order, is very fatiguing to the hand. Now, "The Simplex" was always ready for use, no matter how long it had been put aside. The only fault I ever heard found with it is that the parts being all loosely connected, and not in any way fitted together, they are apt to be lost or mislaid. This drawback having been pointed out to Messrs. Arnold, they have remedied it in a very ingenious manner in "The Improved Simplex" enema apparatus they have just produced. The inner cylinder, which was long enough to act both as piston and piston rod, has been very much shortened. The piston rod is now separate, and is of much smaller diameter. It is made to pass through an opening in the upper part of a dome-shaped cover, which is screwed on the top of the outer cylinder. This dome-shaped cover forms the water chamber, which, as already described, enables us to dispense with any packing round the piston.

On the lower end of the piston rod is a projecting collar, which prevents it either falling out or being shot out by the action of the spring. It is only by unscrewing the dome cover that the apparatus can be taken to pieces, and until that is done none of the parts can be disconnected from the others, thus obviating any chance of losing them. An exterior cylinder is added to form an air chamber, in order to render the jet continuous. Wishing to make the apparatus as nearly perfect as possible, Messrs. Arnold have fitted the cannula with a simple but efficient water joint, so that it can be placed at any required angle with the outlet pipe without impeding the flow of the fluid. Two small flat cylinders of equal diameter, closed at one end, have their open ends fitted together by means of a water-tight collar, thus forming a closed cylindrical box, the two parts of which can be turned round on each other, having a common axis. The cannula is fixed to an opening in the periphery of one part and the outlet pipe to an opening in the periphery of the other, so that these two openings, being in different planes, are never obstructed, no matter how they may be turned as regards each other, and the flow of the liquid is consequently unimpeded.

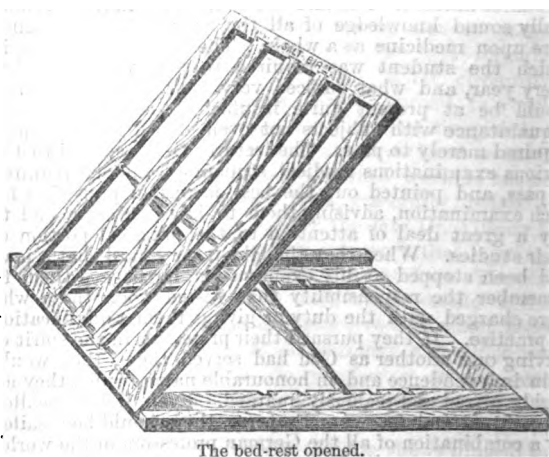
W. L. SHEPARD, M.R.C.S.

Willis-road, N.W., Sept. 11th, 1888.

A NEW BED-REST.

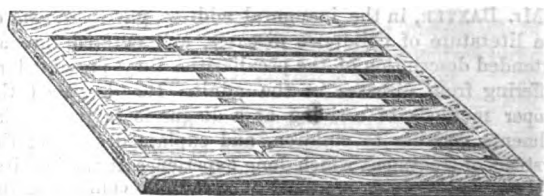
THE bed-rest of which illustrations are annexed appears to possess the desiderata of extreme portability when not in use, and great capacity of expansion (Fig. 1) when in

FIG. 1.



service. The wands which form the back support are sufficiently thin to yield to a moderate extent to the weight of the body, offering, however, sufficient resistance to avoid an uneasy posture. When folded (Fig. 2) it occupies so

FIG. 2.



The bed-rest closed.

small a space as almost to escape observation, and the notches on the back frame allow of its being arranged at any convenient angle. The bed-rest is made by Mr. Salt, Corporation-street, Birmingham.

¹ See THE LANCET, Aug. 17th, 1872.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 24, 1888.

THE concluding volume of the *Encyclopædia Britannica*, which has just been issued, contains one article which will be certain to attract attention in the medical world; yet, unlike the rest of the contents of this great literary achievement, it neither reflects the prevailing knowledge of the day nor treats of the matter in hand with impartiality. We say this advisedly, although we know well that the author of this remarkable essay lays claim to having viewed his subject without any bias, and doubtless prides himself on having shaken off the trammels of orthodox belief and pursued a perfectly independent and original course. We refer to the article on "Vaccination," the novelty of which is somewhat discounted by the publication by its author last year of his brochure on "Vaccinal Syphilis." Those who read that contribution of a distinguished pathologist to the history of cow-pox will not be startled at the line of argument adopted in the *Encyclopædia*, although they may well be amazed at the inclusion of such teaching in a work which should be authoritative and should serve as a standard of reference for a generation. Dr. CREIGHTON is well known as a most painstaking student of pathological literature, but, with all deference, we submit that he has no claim to be considered an authority upon practical medicine. We give him every credit for the labour and skill that he has devoted to the preparation of his article, but we cannot allow that his theoretical views, based upon the study of the history of vaccination, can have any weight in opposition to the experience of the profession during the greater part of a century. In order, however, to justify our preceding remarks, we will briefly survey the chief points of the article referred to, which the author frankly admits runs counter to the prevailing views.

In the first place, Dr. CREIGHTON sets aside, as "arbitrary and untenable," the doctrine of *variola vaccina* propounded by JENNER and adopted by nearly all his followers. Vaccinia, he says, has no relation whatever with variola. It is only in the vesicular stage that any similarity obtains between the two exanthems. The natural course of cow-pox is to proceed to ulceration, the ulcer having indurated edges and resembling far more the primary syphilitic sore than the variolous pustule. He points out that it was owing to the disastrous results of vaccinating with primary lymph that JENNER abandoned his own supply; and that, had it not been for WOODVILLE's more favourable and less severe results, the practice of vaccination might have been nipped in the bud. But, as experience showed, the farther removed from the cow the slighter were the local and constitutional effects; although, by failing to adhere to the rule of taking the lymph early from the vesicle, there would be a risk of inducing in the vaccinated the graver results of primary vaccination. Calf lymph is analogous to humanised in that the calf is only employed as the vaccinifer, and the results of vaccination from it are not to be compared with

those which occur when the transfer is made direct from the cow. As to the attempts to replenish the stock of lymph by "equine virus" or by "varioliating the cow," he sarcastically condemns both practices as equally irrational, and theoretical, and declares that in the latter instance it is small-pox that is transmitted by vaccination. Of course, having determinedly rejected the doctrine of relationship between cow-pox and small-pox, it is easy to maintain the inutility, or rather the error, of attempting to obtain vaccine by varioliating the cow; but Dr. CREIGHTON fails to mention the fact that the results of protective inoculation in other diseases by means of "attenuated virus" may well be urged in support of the practice introduced by Mr. BADCOCK.

Having rejected any relationship between vaccinia and variola, it is interesting to note that the author considers cow-pox to be an infectious disease, arising out of a "common physiological or constitutional eruption" on the teat of milch cows, and acquiring its special characters by the persistent irritation to which it is subjected at the hands of the milker! We fear that the explanation given of the nature of cow-pox will hardly satisfy the reason of most pathologists. Dr. CREIGHTON seems unable to sever himself from a train of thought regarding the origin of specific disease which is, to say the least, fanciful; and hence it is that, by detaching cow-pox from small-pox, he has had to invent a hypothesis for the pathogeny of the former which, to our thinking, is as "arbitrary and untenable" as in his opinion is the Jennerian doctrine. Hence we are less surprised at his further development of the subject, when, in speaking of the risks of vaccination, he includes erysipelas, jaundice, skin eruptions, vaccinal ulcers, and vaccinal syphilis—not, as the unsophisticated might regard them, as evidence of foreign contamination of the vaccinal lymph, but as incidents which are part and parcel of cow-pox itself, a reversion to the type of manifestations produced by primary inoculation from the cow. Nothing in all the history of pathology can be more grotesque and, in the light of present knowledge of the nature of syphilis, more absurd than his contention that infantile syphilis is largely due to the vaccine virus; not that syphilis is transmitted with the vaccine, but that what we call "vaccinal syphilis" is simply vaccinia of a severe type!

It is needless to add that, in the subsequent paragraphs upon the practice of vaccination as a prophylactic for small-pox, the writer minimises the teachings of experience on this head. He has a theory about small-pox, too, which he must harmonise with facts, and he thinks he sees in the epidemic outbreaks and the periods of freedom from epidemics that occur evidence in support of his view that small-pox is a foreign contagious skin disease, imported into Europe from Africa, and destined, like the plague and typhus, to ultimately disappear from Europe, uninfluenced by vaccination. We maintain that he has given no satisfactory proof of the correctness of the views which he puts forward so dogmatically. We believe, too, that JENNER's fame and the value of his discovery will not be affected one iota by the arguments which are advanced in this article, and which, appearing in the pages of a standard work, may be thought to be the last words of modern science on the subject; whereas they may be more fittingly described

as pathological transcendentalism. In his memorable report on the "History and Practice of Vaccination" (1857), Sir (then Mr.) JOHN SIMON alludes to the fact that, with few exceptions, the medical profession soon became unanimous on the subject; and his remarks on one class of objectors seem to have some application in this instance. He says: "Also, to a very small extent, allowance must be made for personal eccentricities, which (in respect of vaccination as of every other subject) have ever caused solitary voices to be raised against the common convictions of mankind. This influence can scarcely cease to operate. Occasionally, no doubt, till the end of time there will be found some lover of paradox ready, in mere wantonness of authorship, to choose his text from SQUIRRELL or ROWLEY and to write dispraise of JENNER, as CARDAN wrote his encomium on NERO."

IN 1881-82 the Visitors appointed by the General Medical Council issued a report on the Final Examinations of the numerous licensing bodies in Great Britain and Ireland, and one of the most important suggestions therein was that the English and Scotch corporations should follow the lead of the Royal College of Surgeons in Ireland, and institute an examination in Operative Surgery. Such a recommendation, made by such authorities in medical education as Mr. TEALE and Professors GAIRDNER and STOKES, was bound to attract notice, and although no official action was at once taken it could not be altogether ignored. In their reference to the pass examination of the Royal College of Surgeons of England, they state that "it would be desirable that steps should be taken to test the candidates by actual operation on the dead body, as it is only by this method that their knowledge can be satisfactorily tested in that important branch of surgery." With regard to the Irish College of Surgeons, they consider that the final examination affords valuable experience on the method of testing candidates in operative surgery, and they were "most favourably impressed by the excellent and efficient way in which every candidate was tested in operative surgery, and that without any undue expenditure of time or trouble." At the meeting of the Council of the Royal College of Surgeons of England on the 8th inst., a committee was appointed, on the motion of Mr. MACNAMARA, seconded by Mr. PEMBERTON, to consider and report whether it be desirable, and, if so, practicable, that candidates be examined in operative surgery on the dead body. There can be no question that, if practicable, such a proceeding is most desirable, for every practitioner has to perform minor operations on his patients, and may be called on at any moment to perform major operations. Amputations or ligation of large vessels after accidents, tracheotomy, or operations for acute strangulated hernia may be imperatively required when there is no opportunity for calling in an experienced operating surgeon, and even in so-called minor operations grave risks may be incurred if the surgeon has not an efficient knowledge of, and skill in, practical surgery. The question of the general adoption of operative surgery as a test subject in our final surgical examinations therefore resolves itself into one of the feasibility of such an examination being carried out by the licensing bodies granting surgical diplomas. If it be adopted in

England as well as in Ireland, before a candidate be allowed to receive a diploma which qualifies him to practise surgery, we presume that a similar course will be speedily followed in Scotland, or we shall have a further perpetuation of unequal examination tests in the three divisions of the kingdom, and this would be most deplorable on every ground. So far as practicability is concerned, we are at once met by an enormous difficulty—viz., the expenditure of time and trouble and in the adequate supply of subjects which this new departure would involve. At the Irish examination "thirty-three candidates were examined in an hour and a half, and three subjects sufficed; but probably double the number might have been efficiently examined without an additional subject." This statement by the Visitors gives the only official data with which we are acquainted on which a judgment as to the practicability of such an examination can be formed. At the Conjoint Examining Board in England last year more than 850 candidates presented themselves in surgery at the final examination; so that, adopting the same ratio, forty additional hours, or ten additional examination days, would be required if the number of candidates and examiners were in the same proportion in England and in Ireland. The enormous amount of time now consumed in England by examinations deters many of our best and highest surgeons and physicians from acting on the Conjoint Board; and additional labour, such as this change would necessarily involve, would inevitably lower the personal character of the Examining Board. The most active teachers and the most hard-worked consultants in such a centre as London could not spare the time or take the trouble which such a duty must involve. If operative surgery be introduced, some other part of the examination must be given up or abridged, the present style of examination altered, or an increase in the examining staff must be made. To such an increase the serious objection of a further inequality in the judicial powers of the examiners, now frequently and often justly urged, at once arises. In Ireland, candidates are taken in turn on the written, oral, clinical, or operative parts of the surgical examination, and may be rejected in any of these divisions, allowing an examinee to reckon all that he has passed, but such a subdivision would hardly find favour in England. Operations themselves must vary as tests, but the personal equation of the examiners should be reduced to as nearly a constant quantity as possible. The supply of subjects for examinations in operative surgery is a still further difficulty. Even allowing that sixty-six men can be examined efficiently on three subjects, which, despite the above-quoted dictum of the Visitors of the General Medical Council, we shall venture to question, nearly forty additional subjects must be forthcoming for the examinations of the Conjoint Board in England alone. It is only in recent years, in consequence of Professor HUMPHRY'S action, by which licensed teachers are able to begin the winter session with subjects remaining over from the summer, that a sufficient supply has been obtained for students to perform their dissections, and in the case of advanced students only is it possible to go through a systematic course of operations on the dead body. It is very questionable if this supply can be increased, and if forty subjects are required by the Conjoint Board,

to say nothing of the other licensing bodies in London; in addition to the forty now used annually for examinations, it will be impossible for the teachers of anatomy to adequately instruct their students, and give them due opportunities for the practice of the ordinary dissections. A very large number of additional subjects, too, would be imperatively demanded for teaching systematic operative surgery, if this subject were made compulsory on everyone before practising as a surgeon. In Scotland the number of candidates presenting themselves annually at the universities and the licensing corporations is even greater than in England, and the difficulties as to examiners and to subjects—already much less numerous in proportion to students than in England—will be proportionally more serious, and almost, if not absolutely, impossible to overcome. The existing examinations in operative surgery for the Fellowship of the Royal College of Surgeons and for the B.S. and M.S. degrees are on a different footing, for here presumably each candidate expects to become a hospital surgeon, and facility for dexterity in operating is an essential for such an appointment; and yet, although there is only a limited number of candidates, the tests are sometimes unequal and unsatisfactory, and fairly grounded complaints in this branch of the examination are not infrequent.

The scheme works pretty well in Ireland, because candidates are proportionally few and subjects numerous. In England it seems to us almost impracticable; its introduction would altogether alter the character of the present examination. In Scotland we think that it could not possibly be efficiently carried out; and general practitioners should be licensed on similar examinations, so far as practicable, in the three divisions of the kingdom.

We venture to put forward these objections because they must be met by the Committee before any report in favour of the proposal is presented to the Council; and we shall await with much curiosity the decision of a board of practical surgeons and examiners, composed of the President and Vice-Presidents of the Royal College of Surgeons, Sir W. MAC CORMAC, Messrs. BRYANT, MACNAMARA, and BERKELEY HILL, who will be able to point out how, if it be possible, these difficulties can be overcome.

THE papers recently contributed to two of the Medical Societies of London by Mr. HERBERT PAGE and Mr. EDMUND OWEN will no doubt direct the attention of surgeons to the claims and value of the operation now called arthrectomy. The substitution of excision of joints for amputation in cases of articular disease was in obedience to the great principle of conservative surgery that healthy parts should not be sacrificed while removing diseased parts. It marked a great advance in surgical practice, but its beneficial results have only been fully obtained since the introduction of aseptic surgery. In the newer operation of arthrectomy this principle is still more fully carried out. In the old excision a joint was sacrificed and a limb was saved; in the new arthrectomy the diseased parts only of a joint are removed, and all the healthy parts are preserved. It is an advance upon excision as originally and usually performed in two ways: healthy parts are not interfered with, and diseased parts are most carefully searched for and removed. In excision attention was often

fixed on a neat removal of the joint ends of bones, and the obtaining of proper apposition of the sawn surfaces, and the result was that outlying portions of disease in the soft parts were not unfrequently left behind, while by the unnecessary removal of healthy portions of bone much greater deformity than necessary was produced. These facts were too apparent not to force themselves upon the attention of surgeons, and hence it happens that many have been concurrently working in the same direction, and have arrived at the same goal—the substitution of arthrectomy for excision. There are two or three questions which are now ripe for discussion. The first is this: Given a case of destructive joint disease in which only parts of the joint are affected, is the complete removal of those parts only likely to be followed by a speedy recurrence of the disease in those left behind? The older surgeons would have answered in the affirmative; they held that when one condyle of the femur was the seat of tubercular disease the other condyle was certainly specially predisposed to that disease. Arthrectomy largely rests upon the belief that the disease is a locally infective one, and that by removal of the diseased foci the healthy parts are protected and preserved intact, and that its chief element of success is the complete removal of every portion of diseased structure. As a corollary to this comes the question whether there is any practical advantage in leaving behind healthy portions of a joint. The evidence already accumulated is conclusive on this point. Deformity is lessened, more useful limbs are secured, and in some cases a movable joint is obtained where under other circumstances a synostosis would have resulted. How often movement can be preserved, and the value of a slight range of movement in such a joint as the knee, are questions on which different views are held by surgeons, and which can only be decided by further experience. Much will depend upon the extent to which the disease has implicated the joint, and upon how much of it needs removing; much will also depend upon the success with which an aseptic wound-course can be secured.

The most important question in relation to arthrectomy is as to the time at which it should or may be undertaken. The facts that removal of diseased structures protects the healthy from attack, that the operative procedures themselves can be rendered practically free from danger, and that in its early stages the morbid process is limited to small portions of a joint, logically lead to the conclusion that by early operation the integrity of a joint may be very largely preserved. In such a matter there is room for distinct difference of opinion, and it will require time to establish the best line of practice. It should act as a restraint upon those ardent operators who would resort to arthrectomy in the earliest period of tubercular arthritis to remember that undetected morbid tissues may escape a very careful search, and that a septic arthritis is a much worse affection than tubercular disease. On the other hand, those more cautious surgeons who would prefer to wait for any operation until suppuration evidences the severity of the morbid process, must often have to stand by inactive while further healthy tissue is being destroyed. The difficulty is to fix upon some happy mean which will give the patient the maximum of good with the minimum of ill. One thing at any rate is clear: no surgeon

should attempt an arthrectomy for early tubercular disease until he can practically guarantee that the joint shall not become septic, nor until he has made himself familiar with the details of the management of joint operations. The surgeon who opens a large joint to search for and remove a limited patch of tubercular disease assumes a grave responsibility, but so does he who stands idly by while a limited patch of tubercle slowly but steadily spreads and involves in destruction more and more of a joint. The truth would seem to be that arthrectomy rightly employed is a great advance in the therapeutics of diseased and injured joints, but that with the advance surgeons have to sustain a greater responsibility in the care of such cases.

To sum up the whole matter we may say that—1. Every excision of a joint should be an arthrectomy—i.e., a complete removal, as far as possible, of all diseased and injured tissues, with a minimum interference with healthy parts. 2. By a successful arthrectomy healthy parts of a joint may be preserved from disease, and thereby deformity may be prevented and function maintained. 3. Where rest and other palliative measures carefully carried out fail to secure a distinct improvement in a tubercular joint, early arthrectomy is advisable, as delay exposes the patient to the risk of general tubercular infection, to wider joint destruction, and to a more extensive operation at some future time.

The name arthrectomy is objected to by Dr. NEALE, who writes to us suggesting the use of the term "arthrotomy." But this term is already rightly employed to denote the operation of cutting into a joint, and great confusion would result from the application of the word to another surgical process. Arthrectomy denotes the cutting away of a joint, and, as such, is applicable to the old excision or the more modern procedure of erosion, to which we think it will be convenient to restrict the use of the word.

AN able and interesting lecture in commemoration of the services rendered to biological science in general, and to ophthalmic medicine and surgery in particular, by Sir WILLIAM BOWMAN, was delivered before the Ophthalmological Society of Great Britain at their last meeting by Dr. SWANZY of Dublin. The subject he undertook to illustrate was the value of eye symptoms in the localisation of cerebral disease. The great advances that have been made during the last few years in the determination of the functions of special areas of the brain by the united efforts of the anatomist, physiologist, and pathologist, and the knowledge that in many instances well-marked disease of the eye accompanies cerebral disease, naturally lead the ophthalmic surgeon to reciprocate the benefits thus obtained by supplying those facts which he has learnt from experience indicate disease of special regions of the brain. Unfortunately, as Dr. SWANZY remarked, in many of the cases that fall under the care of the ophthalmic surgeon no necropsy is made, whilst in many of those that are made the record obtained is so meagre and imperfect that little or no conclusions can be drawn from them. He therefore maintains that the interests of science as well as the reputation of the physician are best served by entrusting the examination of the brain in all cases of this kind to a skilled pathologist and microscopist, instead of undertaking it himself.

The principal affections to which Dr. SWANZY called the attention of the Society were, in the first instance, those of conjugate lateral deviation of the eyes: in these cases, when they are due to paralysis, the eyes look towards the side on which the lesion is situated; when they are owing to spasm, the eyes look from the seat of lesion. Conjugate deviation of the eyes may result from lesion of the cortex, of the internal capsule, or of the pons, in the latter case affecting the superior olivary body or special nucleus for the associated action of the sixth and third nerves, and in each case there are special symptoms which enable a diagnosis to be made with tolerable certainty in regard to the precise seat of the lesion. On the other hand, loss of the power of convergence probably indicates lesion of the posterior quadrigeminal bodies. Amongst the other paralyses of the cranial nerves supplying the motor apparatus of the eye which afford a clue to the seat of the cerebral lesion, is ptosis, which, if monolateral, may be a focal lesion of the cortex of the opposite side or of the pons on the same side, or, if double, may be due to some disease of the corpora quadrigemina, or, by forming a factor of a crossed paralysis may, serve to localise a lesion in the crus cerebri. Complete paralysis of all the branches of the third nerve, without any other paralysis, almost always indicates basal lesion. Paralysis of the fourth nerve is sometimes basal, but may indicate disease in the crus extending to the valve of Vieussens, especially if associated with more or less complete paralysis of the third. Paralysis of the sixth nerve, if accompanied with hemiplegia of the opposite side of the body, indicates a lesion in the pons, usually a hæmorrhage, on the side corresponding to the affected nerve. After referring to lagophthalmos, and to nystagmus, and to the localising value of paralysis of the fifth nerve, Dr. SWANZY discussed the condition of the pupils in intra-cerebral disease, which he thinks is rarely of much value in regional diagnosis; and then proceeded to consider the localising symptoms derivable from the visual apparatus, such as partial and complete hemianopsia and impairment or loss of colour vision or hemiachromatopsia. These symptoms, in accordance with their greater or less intensity and with their transitory or persistent nature, appear to afford much aid in the localisation of cerebral disease, especially when they are considered by a physician who is well versed in the general symptoms accompanying such affections. Dr. SWANZY adduced some remarkable cases of "mind blindness," as it has been termed. The affection is occasionally seen in the advanced cases of general paralysis, the patient being unable to recognise the streets of a city in which he has long been resident, and may not know his own door, or, stranger still, the face of his own wife, though recognition is immediate through the voice and the hearing. Some interesting information was also given in respect to the condition known as alexia, or loss of the power of understanding printed or written speech symbols, which is probably associated with lesion of the angular gyrus of the left hemisphere; and to that of dyslexia, in which there is marked indisposition to read. Dr. SWANZY is in accord with most physicians as to absence of value as a localising character of optic neuritis; that symptom occurs in most cases of intra-cerebral tumour, irrespective of the seat of the growth. Finally, he paid a fitting tribute of praise to the high professional character and great

scientific attainments of Sir WILLIAM BOWMAN, who, we may cordially hope, will long live to be the object of similar and well-deserved honours.

THOSE who have any business to bring before the Medical Council should remember that it meets next Tuesday, at 2 o'clock. The meeting is in accordance with a standing order of the Council, agreed to in November last, to the effect that the General Medical Council shall meet every year for general business on the fourth Tuesday in May, and, if necessary, again on the fourth Tuesday in November. This is without detriment to the power of the President, as provided in Section 9 of the Medical Act of 1858, to call the Council together at other times, either at his own discretion or on the written requisition of eight members of the Council. Speaking generally, the May meeting is that for the discharge of the general business of the Council, and the November one for such subjects as affect the purity and accuracy of the Register. Removals from the Register by the occurrence of death can of course be dealt with by the Registrar on information supplied to him from the Registrars of Births and Deaths. Registrars are specially charged with this duty, and receive a fee for such information. They are required to send a special certificate of the death of every registered medical man, whether in practice or retired at the time of death. The greatest number of deaths reported in any late year is 711. Unfortunately, almost every year there are cases in which names have to be removed from the Register on the ground of crime or seriously unprofessional conduct. And not the least grave, as it is certainly one of the most painful, duties of the Council at its November meetings is to deal judicially with cases of medical men convicted of crime by courts of law or charged with conduct condemned by the Medical Council.

One of the most important duties of the Council next week will be to discuss the reports of the Inspectors of Examinations appointed by the Council under the Act of 1886. The profession will remember that three gentlemen of great ability (DAVID W. FINLAY, B.A., M.D., Inspector in Medicine; EDWARD H. BENNETT, A.B., M.D., Inspector in Surgery; A. H. F. BARBOUR, M.A., M.D., Inspector in Midwifery) were appointed to visit and report on all the Final Examinations for the qualifying diplomas and degrees of the various medical authorities in each division of the kingdom. These reports were not quite ready for consideration in May. The Council will discuss them at a greater advantage now, as they have had more time to consider them, and especially as they can be read in connexion with the answers of the various bodies to the criticisms of the Inspectors. It is not a slight feat on the part of the Inspectors in one year to have done so much work. We shall not anticipate the nature of their criticisms, nor of the conclusions with reference to our examination system to which they may lead. It is never easy to anticipate the range of discussion or the duration of the session of the Medical Council, but we see little reason for their sitting more than a few days.

SURGEON-MAJOR JOHN INCE, M.D., is a candidate for a seat on the Kent County Council for the representation of the Dartford No. 2 Division.

Annotations.

"Ne quid nimis."

THE FRIENDSHIPS OF PHYSICIANS.

A SPECIMEN of what literature might gain from an effective volume on this subject is afforded by the recent essay of Moleschott on Donders, in which one eminent Dutch physiologist and consultant describes his recollections of another in some respects more eminent still. It is, it seems, an academic law in Holland that every occupant of a chair, no matter how vigorous and competent, becomes emeritus on completing his seventieth year. This has just been the fate of the distinguished ophthalmic physician of Utrecht, and the Professor of Physiology in Rome seizes the occasion to review the career now academically closed, and to set forth in a series of striking incidents its relations with others which have been closed also, or are still running their course. It was, he says, in the house of their common scientific parent Mulder, the great pioneer of physiological chemistry, that he and Donders came together and formed the attachment that has so deeply affected both of them. This was in 1844, when the discoveries of Schleiden and Schwann were but six years old, when organic morphology was beginning to be transformed, and when only in 1842 had appeared the great work of Henle, which impressed on the revolution they had effected the character of a comprehensive and fruitful reformation. Schwann and Henle, in examining the chemical nature of the tissues, knew no means beyond acetic acid and water; and Moleschott recalls the sceptical look of Henle when, in 1844, he told him that Mulder and Donders had determined on making their histological attack with potash and sulphuric acid! Mulder got Harting to work for him in the vegetable and Donders in the animal kingdom, and, thanks to a method at once consecutive and sound, they reached a stage when, according to Moleschott, the historian of histology will show how the principles that induced Virchow and others to classify the tissues and their components in great part proceeded from the micro-chemical researches of Donders and Mulder. It was the eye that had most attraction for Donders, however; and Moleschott well remembers the modestly furnished room in which his friend, in 1845, prosecuted his researches into the rotation of the organ. A red ribbon was his sole apparatus, and this he caused to hang perpendicularly to the wall, and then he observed the position of the images behind it, to ascertain if the eye simply follows the movements of the head, or if it effects a rotation independently of these movements. At our modest supper, continues Moleschott, he would sit with the lamp in front, and by means of a bit of perforated cardboard he followed the shadows of corpuscles situated on the surface or in the interior of the eye, and in this way he examined the so-called endoptic phenomena on which he wrote the memoir which still remains the best on the subject; a ribbon, a small mirror, a playing card, a microscope—his laboratory in those days contained nothing more—verifying the saying of Dove and Pflüger that exact experiment does not depend on costly and complicated apparatus. His work on the accommodation and refraction of the eye—translated into six European languages—procured him the friendship of Albert von Gräfe, into whose arms, says Moleschott, he was literally thrown by von Jäger in London in 1851. Von Gräfe called himself Donders' pupil, while Donders boasted of von Gräfe as his master—"masters both of them, Donders in the science, von Gräfe in the art, both complementing each other and indissoluble." Von Gräfe afterwards wrote to his Utrecht friend: "I want to see you soon and by every possible means. Not a day passes but I have something to tell you and to talk

to you of. This remains the true measure of the intimacy that unites us—that we are gathering, silently, the one for the other, those flowerets which each day is scattering on our paths. Yet sometimes we must express ourselves. Let us try and not fail to reciprocate in our short lives.” One great achievement of Donders’ life was the foundation of the Ophthalmic Hospital at Utrecht, subscribed for by the Dutch people, organised by Donders himself, and made by him the medium of such luminous and memorable instruction that there is not now a moderate-sized town in Holland which does not possess a sound and skilled oculist. With all this special proficiency Donders has never ceased to command the whole field of physiology—in all its ramifications of physics, chemistry, and microscopy. Form, matter, force, as abstractions and as entities, have been, says Moleschott, ever present to him. The circulation of the blood he has studied in connexion with the nervous influence that governs it. He has examined not only the laws of refraction which the accommodation of the eye (as explained by Cramer) completes, but he has measured even the velocity with which we see and hear, with which we judge, select, and will. He has analysed the sucking of the child at the breast and the speech of the adult. Many things which belong to Donders in science have the currency of sound coin, although they have not the Hall mark of his name. Embryology, according to Moleschott, is perhaps the only biological subject on which he has not left his impress. In private life the glimpses his biographer gives us of him are delightful: his skill in music, on the violin particularly, being such as to charm many a *maestro*; while his extraordinary command of living languages (to say nothing of his sound Latinity, which he attributes with gratitude to the fathers at Boxmeer) brings his conversational riches within reach of Englishman, Frenchman, and German with equal facility. And all this is set forth to us by a fellow-student and friend of Donders. How much more may we not one day expect from such a pupil as his successor in the Ophthalmic Hospital at Utrecht.

SMALL-POX PREVENTION IN THE PORT OF LONDON.

DR. COLLINGRIDGE’S report on the Port of London for the first half of the present year shows, as usual, that vigilance is maintained in the great water-way of the Thames to prevent the importation of disease, and to secure improvement in the sanitary state of shipping. The amount of infectious disease which may at any time have to be controlled in the port is by no means inconsiderable; and the difficulties that may have to be met in this respect lie not so much in the number of beds in hospital that may be required for this purpose, as in contriving that the several diseases shall be so isolated that persons admitted for one disease shall run no risk of contracting another. It is known that some years ago the Port Sanitary Authority erected the first portion of an excellent isolation hospital just below Gravesend; but Dr. Collingridge very properly points out that this first instalment does not suffice for preventing all risk of the spread of infection from patient to patient, and that further means to secure the due separation of different diseases is needed. The occasion that has given rise to this difficulty has been the prospect of the reception of small-pox cases, an emergency which was on one occasion got over by the purchase of a separate hospital marquee; the permanent hospital provision not admitting of the safe reception of that disease at the same time that other diseases are under treatment. The occasion when the marquee was used is stated to have been during hot weather. This point is of importance in two respects. In the first place, success, as regards the sick, can hardly

be expected if marquees are used on the banks of the Thames during winter weather, and hence a tent hospital should be regarded as of limited use only. And, in the second place, the fact that the small-pox did not spread to the permanent buildings may also be due to the fact that in hot weather small-pox is a waning disease, and the infection is, in all probability, not in its most virulent stage. And it is this second consideration that would lead us to go beyond that which Dr. Collingridge’s recommendation may at first sight appear to mean. He advocates the erection of another ward for small-pox only; but he wisely couples this with the injunction that it should be at a “safe distance.” We feel convinced that that safe distance is not, at all seasons and under the varying stages of epidemicity, to be obtained on or immediately adjoining the present site; and we should advise that the port authority should be prepared either to seek a small-pox hospital site at a substantial distance from other buildings further down the river, or to build a hospital block on the lines recommended by the Royal Commission on Small-pox and Fever Hospitals. The matter is one which involves questions of some considerable importance, and it is one as to which the matured counsel of the port officer of health should be sought before a decision is arrived at. But at the same time delay is to be avoided, for the need of the port of London in this respect is an obvious one.

ESTIMATION OF ALBUMEN IN URINE.

A QUICK and ready method for the determination of the actual quantity of albumen present in albuminous urine has always been desirable. Hitherto the methods in use—except that of Esbach, which is perhaps open to some objections—were either too complicated in their manipulation, or else took up more time than can be generally afforded by the majority of practitioners. H. Zähler has, however, in the *Zeitschrift für Physiologische Chemie* (12, 484–494), devised a simple process which gives results accurate to the first place of decimals, and which can be carried out clinically. It depends upon the difference in the specific gravity or density brought about in the urine by the elimination of the albumen. Such an estimation is termed a densimetric one. The method adopted is as follows. A preliminary examination of the filtered urine is made in order to determine approximately the amount of dilute acetic acid necessary to precipitate all the albumen when boiled. This is easily ascertained by taking a small quantity of urine in a test tube, adding acetic acid, and boiling. The urine is then filtered from the coagulum, when the filtrate should yield no further precipitate with acetic acid and potassium ferrocyanide. A convenient quantity of the filtered urine, after the addition of the proper quantity of acetic acid, is then placed in a flask well fitted with a good cork. The flask with its contents is next placed for ten or fifteen minutes in a bath containing water constantly boiling. This brings about the precipitation of the albumen, which is then carefully filtered off into a flask fitted with a cork with a hole in it, through which the funnel is passed. It is advisable to cover the funnel during filtration with a glass plate. The density of the urine and the filtrate is then determined by means of a urinometer graduated to the fourth decimal place. Of course the temperature must be the same for both liquids. This precaution is easily taken by placing them in two glass cylinders immersed in a bath of water kept at a convenient temperature—e.g., 17.5° centigrade. The difference between the initial density and the final density is then multiplied by the factor 400, the product giving the number of grammes of albumen present in 100 cubic centimetres of the urine. The factor 400 is found to yield by experiment with a number of albuminous urines approximately accurate results,

and depends upon the mean value of the specific gravity of albumen, which was found by the author to be 1.3747. It does not, however, appear to yield such good results with fluids containing albumen other than urine.

ALLEGED IMPROPER EXAMINATION.

It is to be hoped that the accumulating number of failures, on the part of women, to convict medical men of improprieties when in the discharge of ordinary professional duties will lead quickly to the discontinuance of that easy way of aspersing the good name of practitioners. Another case has ended in the complete discomfiture of the patient and vindication of the defendant—that of Alice Ann Adam, who brought an action for £50 against Mr. Robert James Cooke, practising at Chatham in partnership with Mr. Walter Buchanan, for an assault by an improper examination. The counsel for the plaintiff used that dogmatic statement against the defendant which is still the strange monopoly and privilege of lawyers, and than which nothing needs more to be brought under control. He said Mr. Cooke had committed a breach of professional etiquette, a breach of honour, and unquestionably an assault. Dr. Warren, afterwards called in, thought the examination deposed to by the witnesses for the plaintiff quite right, and said the girl was highly nervous. When the various evidence had percolated through the mind of the judge and jury they made short work of the case. The jury said at once that Mr. Cooke had made a perfectly justifiable examination, and the judge said costs would be allowed if applied for. Mr. Cooke generously declined costs, and the judge justly pronounced his conduct very handsome. It was an easy thought to make £50 out of a respected member of the profession, but it has met with merited failure. With all practicable precautions, it is next to impossible for medical men to avoid putting themselves into positions in which hysterical women can construct a theory of assault. But fortunately judges and juries are becoming skilled in estimating such cases. It is, however, very much to be desired that the friends of hysterical patients should think for them before sanctioning such ventures.

DEATH AFTER VACCINATION.

AN inquest was held by Dr. Danford Thomas last week concerning the deaths of two children which occurred in the St. Pancras Workhouse. These children had been vaccinated by the medical officer soon after admission, and while they were in quarantine, eight days after the vaccination, they sickened with measles, from which disease they eventually died. The only medical opinion before the jury was that of the medical man who performed the operation, and he stated that he did not consider that vaccination had accelerated or had taken any part in causing the death of these children. The jury, however, came to a different conclusion, and returned a verdict that the deceased children died from stomatitis when suffering from measles, and that the death was accelerated by vaccination, which took place eight days before the attack of measles; they added a rider that children in workhouses should not be vaccinated before or while in quarantine without the consent of the parents, when that can be obtained. We see no reason to differ from the medical opinion expressed, but the event is certainly unfortunate; it is undesirable that children not protected against small-pox should remain in the workhouse or go out into the world in a condition of susceptibility to this disease, and this has no doubt led to the rule to vaccinate all children who have not previously been subjected to this operation. The matter is, however, one in which discretion might well be exercised;

and in times when small-pox is not prevalent, if the operation can be deferred until the period of quarantine is over, it would tend to prevent even so rare an occurrence as that which has just taken place.

THE CARDIAC CHANGES IN CHRONIC BRIGHT'S DISEASE.

IN a valuable paper (*New York Medical Journal*, Nov. 10th), Dr. Loomis discusses the well-worn topic of the relation between cardio-vascular changes and chronic Bright's disease. He gives a table of forty cases, in which the details of the pathological lesions are summarised, and concludes that, as a rule, the more extensive the obliterating changes in the renal arterioles, the greater the degree of cardiac hypertrophy; and that if such hypertrophy be absent the general nutritive conditions are faulty. He clearly describes the subsequent occurrence of cardiac degeneration and failure. He also, from a study of a large group of cases of chronic valvular disease, finds that in a not inconsiderable proportion the secondary renal disease is sufficiently pronounced to be considered as coming under the category of Bright's disease. At the same time he holds no narrow view of the nature of Bright's disease, regarding it "as a constitutional disease, in which the repair and waste in all the tissues of the body are imperfectly carried on; and in one way or another the kidney changes are expressive of other visceral and arterial changes, which, combined with the kidney lesion, make up the clinical and pathological history of the disease."

SANITARY ADMINISTRATION AT BRIXHAM.

WE learn from a local journal that the town of Brixham, in Devonshire, is suffering heavily from scarlet fever, and the account published therein of a meeting of the local board gives some insight into the estimation in which public health administration is held in some districts. The population of Brixham at the last census was 5633, and the medical officer of health receives an annual stipend of £20 for the performance of his duties. A member of the board, commenting on a remark that had been made that little or nothing had been done by the authorities to check the epidemic of scarlet fever now prevailing, made the amazing statement that he had heard that the medical officer of health had been engaged not to do his duty. It is due to the medical officer, however, to state that, in reply to a question by another member, he said "he had not failed to act in any way different to what duty laid down." The outbreak is evidently a serious one, for we learn that during the fortnight preceding the meeting 150 persons had been attacked with scarlet fever and sixteen had died. It is doubtless some consolation to the local authority to know that the medical officer of health and his colleagues "had known worse epidemics in the town than the present"; and further, that "the fever had been imported into the town, and nothing could be done to prevent its spread." So much for sanitary administration in Brixham. We do not wish to take away the reputation of this salubrious spot, and we fully sympathise with one of the members of the local board, who is said to have stated: "Such matters had better not be reported; in Paignton last year, when typhoid and diphtheria were there, it was kept quiet." Everyone will agree with him that Brixham ought not to be treated differently from Paignton. But, seriously, these circumstances create a grave scandal. We trust they will become known to the authorities at Whitehall, and that both Brixham and Paignton will be inspected and some steps taken to prevent the occurrence of these epidemics. If this should result, some good will have come from the publicity which has been given to the

Brixham outbreak. When Dr. Davies examined this district on behalf of the Local Government Board in 1886, he stated that the sewers were inadequately ventilated, that "many houses were without any privy accommodation, there being no room about them; hence excrement was stored up in the bedrooms until collected by the town scavengers." It would be interesting to learn whether any improvement has taken place since that date.

OÖPHORALGIA TREATED BY INTRA-UTERINE FARADISATION.

DR. EVERARD of Mons contributes an interesting paper to *La Clinique* on the nature and treatment of oöphoralgia. In his experience the affection is usually accompanied by what are considered hysterical symptoms. The patients are as a rule young girls, and they complain generally of violent and frequent headaches, buzzing in the ears, exaggeration of the olfactory and gustatory senses, ocular troubles, loss of memory of words, anaesthesia and hyperaesthesia of different parts of the body, capricious appetite, bad digestion, irregular bowels, and cough more or less frequent, for which no reason can be found on examination of the chest. The treatment hitherto has been chiefly symptomatic, and has not been very successful. Dr. Everard has of late, however, employed Apostoli's method. He uses a bichromate of potash faradisation apparatus, to which is connected an Apostoli's bipolar rheophore containing the two currents, which are separated by a thin piece of gutta-percha. This sound is introduced either into the vaginal fornix or into the uterus itself. The coil is so arranged as to supply currents predominating in tension or in quantity at will. Care must be taken to increase the strength very gradually, and to diminish it the moment the patient complains of pain. The greatest cleanliness is required, antiseptic injections being used before and after the sitting. Dr. Everard gives some cases where some half-dozen faradisations produced a great change for the better in hysterical patients with enlarged and tender ovaries.

CHILDREN'S LODGING-HOUSES.

It is satisfactory to learn that the useful proposal to open special lodging-houses for homeless London children, which was brought forward a few weeks ago by Mr. Barnardo, has not fallen to the ground. At a full meeting on Tuesday week, the project was again discussed, with a view to the establishment of two such houses. These are designed for the reception of girls and boys respectively. In them it is intended to provide, at the low cost of a penny, shelter for the night and some warm food for each child. The case must be necessitous indeed in which this very trifling charge cannot be met, and it seems almost impossible that any real impression can be made on the expenses of the undertaking without the adoption of a much higher tariff. We must not forget, however, that results by no means contemptible have been attained by the distribution of penny, and even farthing, dinners to starving school children. It is not, therefore, hopeless that the penny fee may even do more than defray the cost of the food supplied in these lodging-houses. Should the nightly attendance be numerous, the contributions may do something to lessen the expense of rent, taxes, and lighting, and we may surely expect that public charity will not refuse to make up any small deficit which may remain. Other wants of this destitute class might also be considered by the many who will interest themselves in this good work. A common bath, if not too costly, would be an advantage. Advice, moral and religious, information as to work and how to obtain it, as to education, and the like, might also

be afforded to the inmates of these refuges, and would often be gladly received. In conclusion, we would express a hope that as far as possible overcrowding will be avoided. In the meantime all will agree that this well-intended project is worthy of a trial, and we therefore commend it heartily to public support.

CLINICAL CASES AT THE FELLOWSHIP EXAMINATION.

AT the final examination for the Fellowship of the Royal College of Surgeons, which has been held during the past week, the clinical cases on the Wednesday were of much interest. These included amongst their number multiple sarcomata in the subcutaneous tissue, secondary to a pigmented mole removed some six months previously; large sarcomatous tumour of buttock, (?) fibro-sarcoma of thigh; sarcoma of superior maxilla involving the skin and secondary growths in the cervical and submaxillary glands; primary scirrhus of cervical glands on the right, and another on the left, side; epithelioma of superior maxilla; scirrhus tumours of breasts; tumour in the floor of the mouth, with glandular enlargement; lymphadenoma of cervical glands; recurrent tumours of abdominal wall; three cases of advanced disease of the knee in patients the subject of tabes dorsalis; ankylosis after fracture into elbow joint, with injury to ulnar nerve; ankylosis of elbow in a child; tertiary ulceration of shoulder; epilepsy of four years' duration in a man who sustained a compound depressed fracture of the skull when a youth; tumour of abdomen; and dislocation of the shoulder in a man able to work as a fish porter, with great atrophy of the upper arm, the dislocation occurring when a child.

OXFORD UNIVERSITY AND THE LOCAL GOVERNMENT ACT.

A SCHEME which has been prepared jointly by the Town Council of Oxford and the Hebdomadal Council as to the relations of the city and the University under the new Local Government Act, has been submitted to Convocation, and, notwithstanding some strong protests to the effect that the University, by being always in a minority, would lose its influence and always be bound hand and foot in its proceedings, it has been accepted by 62 votes to 27. The agreement involves a number of financial arrangements, and it provides that the new County Council shall consist of 36 members elected by the city wards, 12 by the University, and 12 co-opted by the 48 representatives thus elected.

FANCY MUTILATION.

EVIDENTLY the time has not yet come when Nature is to be regarded as a competent judge of what ought or ought not to appear in her own handiwork. Her products, no matter how normal their development, do not necessarily meet with man's approval. If his eye for neatness in form is not satisfied, he still claims a right to prune or otherwise alter her creations to his liking. In particular is this true with regard to those animals in which he takes an interest. As a rule, he does not, at least in a civilised state, care to operate, save in cases of disease, on his own person, but here his agreement with natural modes of development ceases. He crops and docks his dogs, dishorns his cattle, blinds his pet birds, and otherwise exhibits a cruel originality in his self-assumed office of critic which on the whole does him little, if any, honour. Aesthetically considered, this practice of mutilation is of at least doubtful value. Tastes may differ, but, as a rule, the majority of those who weigh their reasons for a decision will prefer to accept the work of Nature as it stands, rather than an artificial

modification of it. On the ground of fellow-feeling (for such undoubtedly exists between the lower creatures and the lord of the creation) mutilation is even less defensible. In the young animal which is usually the subject of such treatment, sensation may not, indeed, be so acute as in the older; but the fact remains that at any age pain is hard to bear, and, if unnecessary, is cruel. The natural conclusion from these considerations bids us therefore, both from the motive of humanity and of truth in taste, to desist from such mutilation, and to let Nature's well-done work alone.

CASE OF TUMOUR OF THE STOMACH CAUSED BY HUMAN HAIR.

DR. J. BERG, of Stockholm, records a case in the *Vordiskt Medicinskt Arkiv* of a married woman, twenty-six years of age, who for three years suffered from anæmic and dyspeptic symptoms, accompanied by glisty vomiting. Two years before coming under observation a tumour began to form in the epigastric region, which had increased very rapidly during the last six months. On examination this tumour was found to be in the epigastric and left hypochondriac regions, between the middle and left nipple lines. It was as large as the hand, and was concave at its upper and convex at its lower border; it was movable, but could not be displaced downwards. The spleen was in its normal position. An exploratory laparotomy having been made, the tumour was found to be in the stomach, which was accordingly opened by an incision eight centimetres long and parallel to the greater curvature. The tumour thus exposed, being too large to remove in its entirety, was cut up and removed in fragments. It weighed 900 grammes, and was composed of hair tightly compressed. The wounds were sutured, union took place by first intention, and the patient left the hospital quite well at the end of three weeks. The patient herself did not remember to have eaten hair, but her mother said that she had that habit when quite a child. Dr. Berg has not been able to find more than two such cases reported, one by Schönborn and the other by Knowsley Thornton.

REGISTRATION OF GIPSIES AND VAN DWELLERS.

It does not reflect the greatest credit either on our social system or on the acumen of our legislators that the elementary needs of whole communities have in some cases been practically omitted from the consideration which has provided for the rest of the population. As an example of this kind of neglect, we may quote the case of gipsies and other itinerant classes. Inhabitants of towns even in the slums have been afforded the privileges of efficient sanitation and of education. As far as possible, a like provision has been made for the population of canal boats; but the gipsy and the van dweller, though nominally included within the scope of Acts drawn up in the interest of the nation as a whole, are practically exempted from their operation by the want of administrative machinery adapted to the conditions of their wandering life. The Education Act, while it applies itself with perhaps too great accuracy to the mental deficiencies of the more sedentary classes, is not sufficiently flexible to conform to the movements of these nomads. The sanitary authorities, on their part, take but little note whether four, five, or a dozen inmates occupy a moving cabin just large enough for one or two. Perhaps they rely, with some show of reason, on the free life in the open air enjoyed by the van man during the day as an antidote to the slow carbonic poisoning which he undergoes at night. Notwithstanding the existence of this safety valve in the case of the healthy, however, it is obvious that it does not meet the always possible requirements of

illness. The course of infectious disease, once begun inside a close van, is likely to be a somewhat rapid one, since the atmosphere must at any time be far from pure. While, therefore, we cannot but admit that some practical difficulties must inevitably attend any legal regulation of the life and habits of these wanderers, we should like to see in operation, as effectually as might be, some measure for the registration of this class of people with a view to enabling them to share in the advantages—moral, mental, and physical—enjoyed by almost all their fellow countrymen.

INTERCOLONIAL MEDICAL CONGRESS, 1889.

It is announced that Dr. Mackellar of Sydney has resigned the chair of the Section of Medicine, which will be filled by the senior Vice-President, the Hon. Dr. Taylor of Brisbane. Addresses will be given by the presidents of all the Sections, and general meetings of Congress will be held for the discussion of such subjects as hydatid disease, fevers in Australasia, Australasian climates, &c. Any members of the profession in the United Kingdom who may visit Melbourne at the time of the Congress will be associated with all its proceedings, and will, we are assured, be heartily welcomed. The Compagnie des Messageries Maritimes has consented to allow members of the Congress tickets from Marseilles to Melbourne at 30 per cent. under the usual rates, and to furnish tickets from London to Marseilles for five pounds. The agents of the Norddeutscher Lloyd have recommended their head office to similarly allow a discount of 20 per cent. on passages by their steamers. The San Francisco mail steamers will carry passengers from America to Sydney at 20 per cent. below the usual rates. For the protection of the companies, intending members of Congress are desired to furnish themselves with documents showing that they are members of the medical profession *en route* to the Congress. We urge on all medical men who can do so to accept the cordial welcome of the promoters of this Congress.

DRUNKENNESS AMONG CHILDREN.

ACCORDING to recent intelligence, the School Board of Vienna is placed in a painful position with regard to some of the school children. It appears that it is not uncommon for the children of poor parents to receive by way of breakfast nothing more than a glass of spirits, and even to appear in the school-room drunk. Instances of juvenile indulgence might be found in any country, and possibly in every social rank. The exposure of this wide and open prevalence of a vicious custom amongst the very youngest is, however, to most of us a new and startling revelation. One's first impulse on having the facts thus presented is to conclude that they have been magnified by rumour. This hopeful view of the case is but natural. At the same time, it is hardly possible to suppose that the interference of the authorities is not actuated by a proved necessity for their action. If this be the case, the question arises, What means are best calculated to reach and destroy this injurious habit at its root? To prevent the sale of drink to young children is a cardinal principle in our own by no means oppressive liquor law. It is a measure worthy of introduction into other codes, and we may look to its operation, if applied, for some abatement of this most unnatural form of excess. Any law of this kind, however, can only partially control the circumstances of these Viennese children. Here the parent is the chief offender, and the morning dole of spirits is given as a substitute for food. It would be very difficult for any Government to stamp out this practice by repressive edicts, and a better result may probably be expected from the judicious efforts of the School Board, armed with necessary powers. In all

such cases, however, it will be found that the introduction of the cheap loaf and of temperance principles; combined with a sympathetic interest on the part of the rich in the needs and struggles of the poor, will do more than twenty laws to bring about the desired reform.

RESINS USED BY THE ANCIENT EGYPTIANS.

A SMALL jar of resin was recently submitted to Mr. E. M. Holmes for identification by Mr. Flinders Petrie, of the Egypt Exploration Expedition. This jar, which was in a perfect state, was disinterred from a heap of rubbish found among the ruins of Naucratis and dates from the sixth century B.C. Naucratis was at this time the only Greek colony in Egypt; and it was through this town alone that trade with Greece was permitted. Mr. Holmes states in the *Pharmaceutical Journal* that the jar contained Chian turpentine. According to Flückiger there is no evidence that the old Egyptians were acquainted with the resin. The discovery of this pot of resin carries the history of the commerce of the drug two hundred years further back. The other resin was found on a mummy cloth on the body of a person to all appearance of some rank. It was found in Hawara Cemetery, in the Fayum province of Lower Egypt, and it dates from a period not earlier than the second century A.D. On heating some of the resin in a flame, the vapours of benzoic acid were given off, and a decided vanilla odour was recognised. This points to the conclusion that the resin must be a Siam benzoin. The authors of the *Pharmacographia* state that there is no evidence that the Greeks and Romans, or even the earlier Arabian physicians, had any acquaintance with benzoin.

PUBLIC MORTUARIES.

THE need for public mortuaries has been well shown by recent events at Fulham, where a woman died suddenly from small-pox. The body was removed to a small lumber-room in the Fulham Cemetery, where there appears to be space for one shell only. The coroner, Dr. Diplock, held an inquest, but the medical man in attendance said he had intended to make a post-mortem examination, but there being no attendant and no light he was unable to carry out his intention. The inquest was therefore adjourned, and the body was removed to a shop in the main road, where the examination was conducted, the body not being buried owing to these circumstances until about nine days after death had taken place. The vestry, it is stated, have for two or three years been considering the need for a mortuary, but have evidently failed to provide their district with this necessity. Now that the attention of the inhabitants is roused by the risk to which they were undoubtedly put, it may be hoped the action of the authority will be quickened.

YELLOW FEVER.

AT the meeting of the Mississippi Valley Medical Association on Sept. 28th a discussion upon yellow fever took place, which was opened by Dr. Comegys of Cincinnati. At the close of the debate the subject was referred to a committee, which drafted resolutions to the following effect:—“Resolved: That it is the sense of this meeting that yellow fever is not contagious in the ordinary sense of the term; that it cannot be communicated from the sick to the well, except in an atmosphere containing germs. That the mildness of the present yellow fever invasion, and the lateness of the season, warrant us in strongly deprecating the fear now existing in many southern communities, the present rate of mortality being not greater than that which ordinarily obtains in typhoid fever. That the self-imposed quarantine regula-

tions now in force in the States north of the infected districts are not only absurd, but inhuman and unworthy of the age in which we live. That the quarantine regulations, to be effective, should apply to the baggage, clothing, and effects, rather than to the person of the individual. That when such effects come from infected districts they should be destroyed by fire, and the owner reimbursed from the public funds. That cities and towns to the north and upon lines of travel may safely provide hospitals for the reception and cure of the sick.”

ANATOMICAL DISPLAYS.

THE police authorities have of late shown unusual zeal in repressing the public exposure of pictures unfit for exhibition on a common thoroughfare. The veto of the executive has, it seems, had special reference to anatomical diagrams and models. These are regarded as possessing for some minds a depraving tendency, and it must be allowed, in support of this reasoning, that a public street is not on any grounds entitled to the demonstrative privileges of the class-room. No tradesman is obliged to practise exposures of this kind in order to maintain his trade. His conduct, should he persist in this practice, need not, indeed, imply any obscene intention; yet it is injudicious. The official action, nevertheless, implies no censure. It merely provides against a source of injury to public morality, and, if it seem somewhat tutorial, is fairly defensible on account of its purpose and the necessities of the case with which it deals. We would only add that it must, in fairness, proceed with equal freedom and with far greater firmness to deal with exhibitions of notoriously indecent character, such as from time to time disfigure the streets and windows of every large and many smaller towns.

SHOCK.

DR. DAVID CHEEVER of Boston maintains, in a paper read before the American Surgical Association, that the nausea following anæsthetics, the prolonged duration of operations under anæsthetics, and the character of modern surgical dressings, all tend to produce a condition of exhaustion or secondary “shock.” In his opinion this is one of the most serious drawbacks to modern surgery, and should be as far as possible guarded against—by never operating in cases of primary shock before reaction has set in; by tranquillising the fears of the patient; by giving alcohol before administering an anæsthetic, and not prolonging such administration more than is absolutely necessary; by operating as rapidly as is prudent, making the dressing as short as possible, and avoiding chilling the patient.

INOCULATION WITH LEPROSY.

THE letter of Archdeacon Wright to *The Times* (Nov. 19th) will have been read with painful interest. This gentleman, it may be remembered, lately called public attention to the spread of leprosy, and the evidence of its contagiousness. He now furnishes a report from the Board of Health, Honolulu, giving information of the condition of a condemned criminal at Oahu Gaol who was inoculated with leprosy by Dr. Arning on November 5th, 1885. Dr. Emerson, the President of the Board of Health, and Dr. Kimball examined this man on September 25th of the present year, and reported that he presented marked signs of tubercular leprosy. Archdeacon Wright thinks that this “terrible experiment” goes far to prove the contagiousness of leprosy; and there is no doubt that such an experiment is proof of its inoculability. But we venture to think that the case for contagion is not rendered any stronger than it was already by the facts of the disease and

of its nature gathered from various sources of late years; and it is questionable whether the transmission of such a disease by inoculation, even on a condemned criminal, is an experiment that ought rightly to have been made.

OPERATION FOR TORTICOLLIS.

DR. LEVRAT has devised a new method of treating torticollis. Instead of operating subcutaneously, he cuts down upon the sternal tendon of the sterno-mastoid muscle, effected by a longitudinal incision two centimetres long. He clears the tendon with the forceps, passes a grooved director under it, and divides it. He then divides any tissue that may bind down the muscle at that spot, sutures the wound, and dresses it antiseptically with iodoform and gauze. Over the dressings he places the following apparatus. The head being enveloped in cotton wool, a silicated bandage is wound horizontally around it at the level of the forehead and a similar bandage vertically over the crown and under the jaw. Where these bandages meet at the level of the mastoid process on the sound side, a small hook, with the concavity looking upwards, is inserted. Another silicated bandage is wound round the body below the axillæ, and through the thickness of the bandage a hook is inserted in the middle line in front, having its concavity looking downwards. When the bandages have dried, the two hooks are connected by a band of indiarubber, which assists the sterno-mastoid of the sound side to keep up a continuous traction and so correct the deformity. This apparatus and the dressings are left untouched for fifteen days, and the success of the operation is said to be assured.

PROSECUTION UNDER THE DENTISTS ACT.

THE prosecution under the Dentists Act of Messrs. Huntley and Coe, for representing themselves as dentists without being registered, resulted in their conviction and a fine. The defence was that they had American qualifications (D.D.S.), but that these particular ones were not registrable in this country; and it was insinuated that the members of the British Dental Association were actuated by motives of professional envy. The ease with which degrees could, and still can be, obtained at some dental colleges, and the short time requisite for graduation, rightly decided the Medical Council not to recognise such colleges, and the diplomas of only Harvard and Michigan are registrable. The charge of jealousy, when made against such well-known men as the representative board of the British Dental Association, needs no serious refutation. What the Americans in their own country think on the matter is shown by a recent resolution of the Harvard Dental Alumni Association to remove the names of some of its members who are connected with the American Dental Institution.

DANGER OF LARGE DOSES OF MALE FERN.

DR. BAYER of Reichenberg, publishes in the *Prager Medicinische Wochenschrift* a case which has come under his observation in which very dangerous symptoms were produced by extract of male fern together with extract of pomegranate. The patient was a woman of twenty-six years of age, who was suffering from tapeworm. She had been ordered by a medical man to take capsules each containing 2.5 grammes of extract of male fern, along with the same quantity of extract of pomegranate. She took three of these capsules. Early in the morning, at intervals of an hour, they produced severe sickness, and a portion of the tapeworm came away. As, however, the head did not come, the patient proceeded to take four more capsules, so that altogether she had taken 17 grammes of each of the two drugs. These set up violent vomiting and

diarrhoea, which continued till late in the afternoon, with out, however, producing any further signs of the tapeworm. She then became exceedingly faint and prostrate, and in the evening fell into a comatose condition, in which she lay for thirty hours, notwithstanding continued efforts to arouse her. When at last she awoke, she found that her left eye was blind. When it was examined the next day, the pupil was found to be widely dilated, and quite inactive to light. The ophthalmoscopic examination revealed nothing abnormal; the pupil of the right eye reacted to light, but the acuteness of vision was diminished. After having been kept in the dark for forty-eight hours, the left eye was found to be sensitive to light, and as the patient regained strength vision gradually returned, and in a fortnight was nearly as good as ever. Dr. Bayer concludes that Gerhardt's advice never to give more than from five to ten grammes of extract of male fern should be rigidly adhered to.

THE GALEN CLUB.

THIS club, which was formed in April last to serve as a medium of intercommunication between medical men, has closed its doors, the action being taken by the proprietor apparently in opposition to the wishes of the committee. The reason of its failure is probably not far to seek; being similar to that which has led to the extinction of earlier efforts in the same direction. The majority of medical men have very little time to devote to club life, and those few who are more fortunate in this respect prefer to mingle in a general social circle, rather than to patronise a purely professional club. That this idea pervaded the minds of those ruling "The Galen" was shown a short time since, when its name was altered to "The Sackville," and an endeavour made to attract other than professional candidates for entrance. Correspondence which has reached us from late members shows that there is considerable regret at the dispersion of the nucleus that had already been formed, and the wishes of those who desire still to remain associated would probably be better met by some arrangement for their reception as a body into an older-established club, rather than by endeavouring, at least as yet, to found another exclusively medical institution.

DIPHTHERIA IN YORKTOWN, FARNBOROUGH.

IN reference to this outbreak, we are enabled to state upon authority that, although there have been some cases and several deaths, they have been entirely confined to the children of College servants living in the villages of Camberley, Yorktown, and Sandhurst. There has been no case in either the Royal Military or the Staff College. Just now the health of the gentlemen cadets is exceptionally good.

THE PREVALENCE OF EPIDEMIC DISEASES.

WE are at the present moment receiving numerous accounts of local epidemics, and as to some of the prevailing diseases it is difficult to judge whether the excess of reports indicates an exceptional amount of disease or increased publicity, owing to the steadily growing interest which the public takes in such matters. From different parts of London we hear of considerable fatality from measles, and it is to be noted that, whereas in the week ending Sept. 29th there were thirty fatal attacks, the number of deaths has almost uniformly gone up since that date until the fatality reached 124 last week. In some districts the excessive, and at such times mischievous, energy of school-attendance officers is credited with a needless diffusion of infection. Diphtheria has also been prevalent in several places, and we regret to learn that it has again shown itself in the neighbourhood of Camberley in Surrey, to which

paragraph we refer more particularly in another column. In the Vyrnwy Valley a reappearance of the disease seems to have subsided. In Derby scarlatina has been making rapid strides; the new hospital is not yet erected, and the disease is distributed about the town. The same disease has also appeared at New Brighton. To some of these occurrences we shall probably revert more in detail.

TENTS AND VANS.

A PARTY of gipsies have temporarily settled in the neighbourhood of Dawson's-hill, East Dulwich, where they have neither water supply nor any system of drainage or sanitary appliances, and scarlet fever has broken out amongst them. The encampment is near to private houses and a Board school where 600 children are in daily attendance. An evening contemporary, commenting on these facts, clamours for legislation to deal with such persons and their mode of life; it may be pointed out, however, that the Housing of the Working Classes Act, 1885, gives full power for such dwellings to be dealt with under Section 91 of the Public Health Act, and a sanitary authority may make bye-laws for promoting cleanliness in them, for preventing the spread of infectious disease by the persons inhabiting them; and generally for the prevention of nuisances; the same powers are conferred upon metropolitan sanitary authorities.

FÆTAL BLOOD AT BIRTH.

DR. SCHERENZISS of Dorpat has published some interesting observations on the condition of the blood at birth. The specific gravity is, he finds, markedly lower than that of the blood in the adult. The hæmoglobin is also much less than in adult blood, the proportion being 76.8 to 100. The amount of fibrin is only about two-sevenths of that in the blood of the mother. Fætal blood cannot be analysed quantitatively by washing with saline solutions, a large part of the constituents of the corpuscles which appear to be in a very loose state of combination, especially the hæmoglobin, going over in the filtrate. Fætal blood is richer in saline matters than the blood of adults, especially in insoluble salts. The sodium salts are somewhat greater in amount than in the blood of adults, but the potassium salts decidedly less. The sex and the weight of the child appear to have no influence on the quantitative constitution of the blood at birth.

SIR WILLIAM JENNER AND THE BRITISH MEDICAL ASSOCIATION.

WE are requested by Sir William Jenner to state that he has resigned the membership of the British Medical Association.

FOREIGN UNIVERSITY INTELLIGENCE.

Dorpat.—Dr. Carl Dehio, extraordinary Professor, has been appointed Professor of Special Pathology and Clinical Medicine.

Freiburg.—Dr. Killian has qualified as *privat-docent* in Rhino-laryngology.

Gothenburg.—It is proposed to establish a university in this populous town. The present scheme, for which the funds are already obtained, provides only for a faculty of arts or philosophy. If a medical faculty is ever added, it will probably only be thought seriously of after the lapse of considerable time.

Graz.—Dr. Oscar Eberstaller has qualified as *privat-docent* in Anatomy.

Greifswald.—Dr. Hoffmann has commenced work as *privat-docent* in Otolgoy, and Dr. Ballowitz as *privat-docent* in Anatomy.

Halle.—The students have shown their gratification at the refusal of Professor Kaltenbach to migrate to Würzburg by holding a torchlight procession in his honour.

Madrid.—Professor Calvo Martín has been obliged to resign the post of Dean on account of delicate health.

Montpellier.—Dr. Brousse has been appointed to the charge of the laboratory of clinical medicine. Dr. Carrieu has been appointed professor of Medical Pathology. Dr. Paulet has been appointed professor of Anatomy.

Padua.—Dr. Frari, professor of midwifery, has resigned on account of ill-health.

St. Petersburg (Military Medico-Chirurgical Academy).—A large number of names are mentioned in connexion with the vacancy in the Professorship of Surgery, caused by the death of Professor Bogdanovski. Amongst others may be mentioned those of Professor Pavloff of St. Petersburg, Professor Podrez of Kharkoff, and Dr. Sinitsin of Moscow. During the vacancy the clinical work is being performed by Dr. Multanovski, and the lectures are given by Dr. Kruglievski. In a short time another Surgical chair will become vacant by the retirement of Professor Pelokhin, who has nearly completed his twenty-five years' service. Dr. Korkunoff has been admitted as *privat-docent* in medicine and medical diagnosis.

Vienna.—The Professorship of Medicine vacated by the death of Professor von Bamberger is, it is said, to be given to Professor Schrötter, whose name is best known in connexion with laryngology. Professor Schrötter is, moreover, a general physician of great ability. His appointment is likely to be hailed with pleasure by English and American students, as he not only speaks English, but lectures in German in so simple a manner and with such distinctness of utterance that it is much more easy for a foreigner to understand him than many of the other teachers in Vienna. Meantime, the lectures at the late Professor Bamberger's clinique are being delivered by Dr. Neusser.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Gemmel, Privy Medical Councillor, of Posen.—Dr. Rudolf Maier, Professor of Pathological Anatomy in the University of Freiburg, and author of a well-known manual on that subject.

THE twelfth annual meeting of the American Academy of Medicine was held in the New York Hospital on the 13th and 14th inst.; and the sixteenth annual meeting of the American Public Health Association is being held this week at Milwaukee, Wis., from the 20th to 24th. In the latter Association the subjects selected for discussion were "The Pollution of Water Supplies," "The Disposal of Refuse Matter of Cities," "Animal Diseases dangerous to Man," and "Maritime Quarantine, and Regulations for the Control of Contagious and Infectious Diseases, and their Mutual Relations."

MR. EDWARD NUNDY, L.R.C.S., L.S.A., Barrister-at-law, resident medical officer of the Royal South London Dispensary, is a candidate for the representation of West Lambeth on the School Board of London.

THE medical practitioners of Alsace-Lorraine are forbidden to write their prescriptions in French. They must use either Latin or German.

ADVICES from Lisbon state that the island of Palma, one of the Canaries, is officially declared to be infected with yellow fever.

The *Aberdeen Herald and Weekly Free Press* states that Dr. Russell, medical officer, Glasgow, has traced an outbreak of scarlet fever in the west-end of the city to the milk supply from a dairy, fourteen of the ninety-two families supplied by which were found to be infected.

THE Government of Canada have, on the proposal of the deputies of the province of Quebec, given the name "Pasteur" to a canton of the county of Kamouraska. The canton adjoins the State of Maine.

THE Council of the Royal Society have selected Professor Huxley as the recipient of the Copley medal for 1888. The medal will be presented at the anniversary meeting of the Society on Nov. 30th.

REPORT OF THE LANCET

Special Sanitary Commission ON THE BRITISH EMIGRATION SERVICE.

IN the ports of London, Liverpool, Glasgow, Hull, and at the Ministry of Marine in Paris, we have made inquiries concerning the regulations that affect the emigration services. From the officials whose duty it is to see that the stipulations of the Emigration Act are enforced, from the directors of some of the principal steamship companies, from the surgeons in charge of vessels, from the port sanitary authorities and from the medical officers of health in seaport towns, from passengers, emigrants, and crews, and from all persons who are affected by the Imperial Passengers Acts of 1855 and 1863, with their several appendices, we have received the same answer. In reply to questions, one and all urged that the Act was out of date and required revision. The reasons given differed considerably, according to the source whence they emanated. Sometimes the motives were absolutely contradictory. Officials often thought that there was insufficient legislation, while some shipowners were alarmed at the prospect of "grandmotherly interference" on the part of the Government; but, in either case, it was admitted that the law as it now stands requires alteration, and also that the law is *de facto* to a large extent systematically disregarded. For instance, in Clauses 35 and 36 of the Act a dietary table is given. This is not observed. The emigrants, in many ships, are not rationed as there suggested. They are, we believe, much better fed. Instead of serving to each his allotted share, all are allowed to have as much as they can eat, whether they take more or less than the regulation amount. Any question of right for ship-owners to make the alterations is at once disposed of by Appendix L, page 106, of the Act. With the quick passages effected in these days, and the modern facilities of carrying provisions, the diet of the emigrants can be advantageously changed and improved. Still, the fact that the Act in this part is not observed, that ship-owners have of their own accord improved upon the Act, goes some way to show that it is now out of date. As another instance, we might mention the rules with regard to the medicine chest. These are altogether antiquated. The medicine chest must contain drugs no longer required, while others which the progress of medicine has proved to be urgently needed are not included in the official list. Thus a doctor is obliged to carry with him medicines he does not want, and must trust to the liberality of the ship-owners to obtain what will be of real service to him. For instance, the list does not include such serviceable drugs as *sp. æther. sulph.*, chlorate of potash, glycerine, tinctures of iodine, aconite, *nux vomica*, belladonna, diluted phosphoric acid, alum, mercurial ointment, salicylate of soda, iodoform, *syrupi ferri phosph.*, *syrupi ferri iodidi*; no labels, no mustard leaves, no linseed meal, or any kind of recent antiseptic

dressings whatever; but it does contain opodeldode, saltpetre, Friar's balsam, blistering paper, and any amount of salts, tartaric acid, and purging pills. We are informed, however, that since we commenced our inquiry on this subject measures have been taken into consideration by the authorities with a view to modifying and improving the contents of the medicine chest. We trust this information will prove correct, and that new regulations will be issued forthwith.

With regard to sanitary matters, there have also been great improvements effected since the Act was first framed, and we may now reasonably hope to enforce a much higher standard of comfort. That this can be done is practically demonstrated by our own colonial Governments. If the rules enforced by the Queensland, the New South Wales, and New Zealand Governments when chartering a ship are compared with our Emigration Act this fact will be rendered patent. Not only are the stipulations with regard to diet and to medical comforts drawn up on a much higher scale, but there is more breathing space allowed to each emigrant. Sixteen clear superficial feet instead of fifteen feet are allowed to each adult passenger, and even more during the hot season of the year; and, in addition, hospital and w.c. spaces are not included in that measurement. If the Act must be amended in so far as it governs the condition of ships, it must also be altogether altered with respect to the authorities that are to enforce its application. At present control and authority are so divided and often so conflicting that at times the result is utterly bewildering. This will become more apparent as we proceed to relate the result of our various experiences.

GLASGOW.

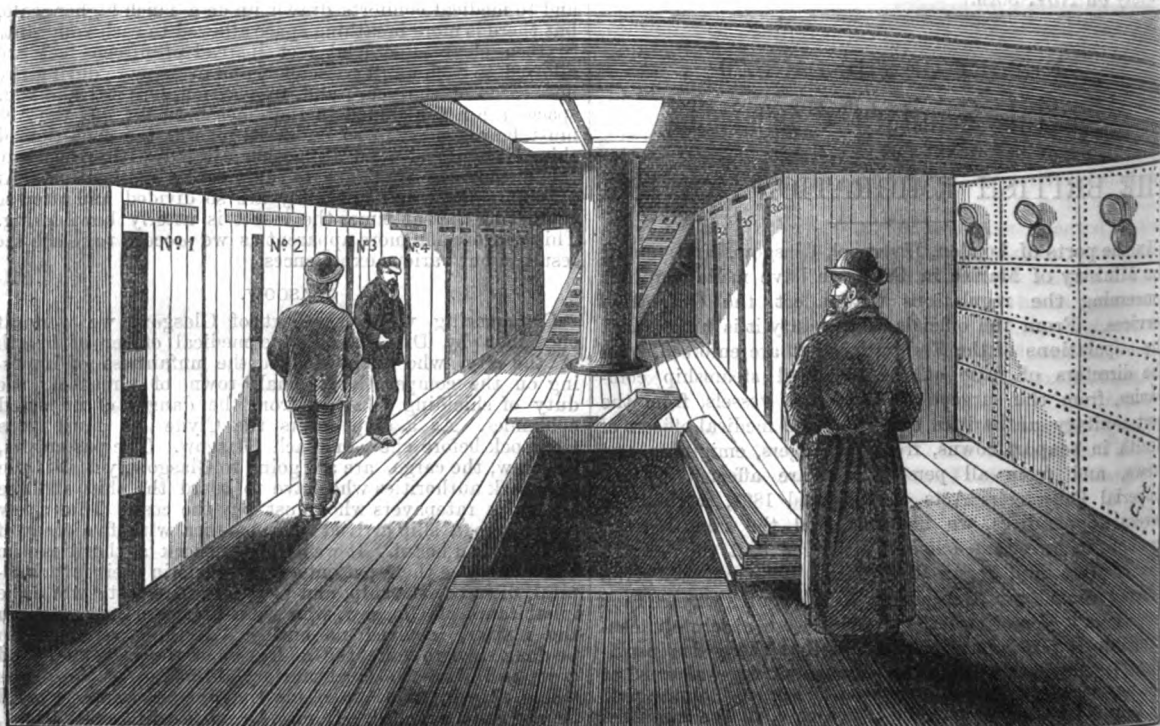
Commencing with the Port of Glasgow, we were at once met by Dr. Russell, the medical officer of health of the city, who acknowledged the unfairness of imposing on the comparatively small town of Greenock the duty of shielding Glasgow from the danger of imported epidemics. As a ship enters the Clyde she must pass Greenock before she can reach Glasgow. The passengers, the crew, the cargo, are all going to Glasgow, yet it is the Greenock authorities who have to board the ship, and the Greenock ratepayers who must pay the cost. Thus a few weeks ago a ship arrived from America with five cases of small-pox on board. It was the Greenock authorities who had to remove these patients, treat them in their fever hospital, disinfect the ship, and pay the entire cost; while the inhabitants of Glasgow, who were far more interested in the matter, incurred no outlay. Nothing remained to be done save to take the addresses of the passengers and crew, and warn the local sanitary authorities of the places where they intended to reside that the new comers should be carefully watched. It may be worth while noting that, in this case, the passengers and crew amounted in all to 110 persons. They were vaccinated and went to reside in ten different localities; not a single case of small-pox occurred among them. This ship paid no port dues or rate to the Greenock authorities, but to the Glasgow authorities, because it was at the latter town that she went into port. Evidently there should be but one authority and a uniform rate for the whole of the Clyde.

At Glasgow the control exercised over emigrant ships does not seem to be so severe as elsewhere. In Liverpool a cattle ship is not allowed to clear in less than seven days, but in Glasgow there is no such restriction, and the Board of Trade have no medical adviser who can enforce the required control. Should a steamer which has just conveyed cattle over the Atlantic be converted, in a few hours, into a passenger ship, there is no one qualified to see that this hasty transformation is free from danger. Anybody may be called in and simply asked if they notice any unwholesome smell, and of course, with a plentiful use of disinfectants, no such smell is noticed. There is no medical evidence forthcoming to support the entering of a case against the owner. Again, when the ship leaves the town, its bill of health is signed by an officer of the Customs, who of course knows nothing whatever of the health of the town. There may be a small-pox epidemic in the very district where the emigrants are lodged; the only person officially acquainted with the facts would be the medical officer of health of the town, and he does not sign the ship's bill of health; he is not even consulted. But the medical officer of health does control the condition of the lodging-houses or depôts where

the emigrants put up while waiting for their ship to sail. In Glasgow we visited some of these lodging-houses, and the result was not altogether satisfactory. The sleeping accommodation was very good, the beds and bedding clean, and very rigorous measures are taken to prevent overcrowding and to keep the sexes apart. The emigrant depôts are open to inspection both day and night. But, technically speaking, the drainage is not satisfactory. In one lodging-house there were fixed washing-stands in each room, with pipes communicating directly to the drains. There was no trap visible; if it existed, it was embedded in the wall, and therefore inaccessible, and could not be cleaned if it should happen to be stopped up. Our faith in the possibility of these pipes being properly arranged was very considerably shaken by finding upstairs two closets situated

In the port of Glasgow we inspected several ships, and one ship in particular had very defective accommodation for emigrants. It was a Wednesday when we went on board, and the ship was advertised to start for America on the Saturday, yet the painters had not commenced to work. The paint would therefore be wet when the ship started, and this would add considerably to the nauseating odours that prevail on board. We are not prepared to say that the measurements of space below deck for the emigrants were under the stipulations of the Act, but we do assert that they are altogether insufficient for the requirements of health, not to mention decency. On both sides were cabins partitioned off from the centre, where seats and a table for meals &c. were situated. The first cabin, as represented in a sketch made of general berthing

FIG. 1.

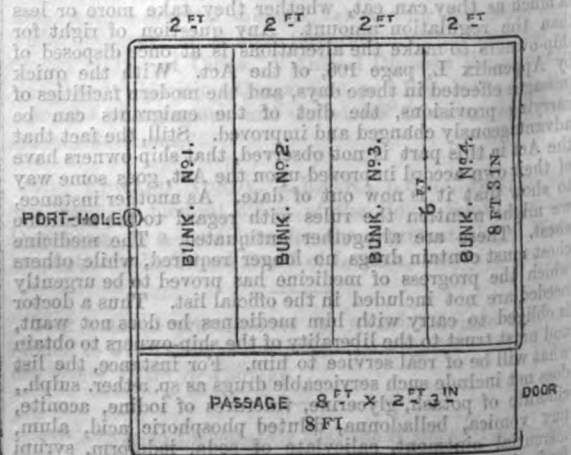


General view of berthing arrangements on the main deck of an emigrant ship, one side being only half complete.

in the centre of the building between two rows of bedrooms. These closets are absolutely dark; they have no windows opening on to the outside, and must ventilate into the passages and bedrooms. These technical and grave defects are all the more regrettable, as in every other respect the depôt is admirably kept. The rooms are lofty, the light and ventilation excellent; and, when there is an extra crowd of emigrants, a large meeting hall is divided off with movable wooden partitions and converted into a dormitory. On both sides there are lofty windows, and thus a flood of light and a through draught are readily secured to purify the place. Another lodging-house, frequented exclusively by foreigners, has also a closet which does not communicate with the outer air, but ventilates in a passage. The closet has been built in a corner of a bedroom, from which it is walled off merely by a wooden partition, and receives light from a little window giving in to the bedroom. This is, of course, altogether wrong. At the same time this depôt has for the general use of emigrants closets outside the house, away from all possibility of mischief, which are perfectly ventilated and effectively trapped. There is some difficulty in enforcing these technicalities of drainage. Convictions cannot be easily obtained on a question of a trap or of ventilation, magistrates not being technically qualified to judge such matters. But we cannot insist too much on their importance. The ingress of sewer air from a lavatory pipe or a badly constructed closet will, of course, destroy all the good effects due to cleanliness and the prevention of overcrowding.

arrangements on the main deck of an emigrant ship, had two rows of bunks, containing four berths each. (Fig. 1.)

FIG. 2.

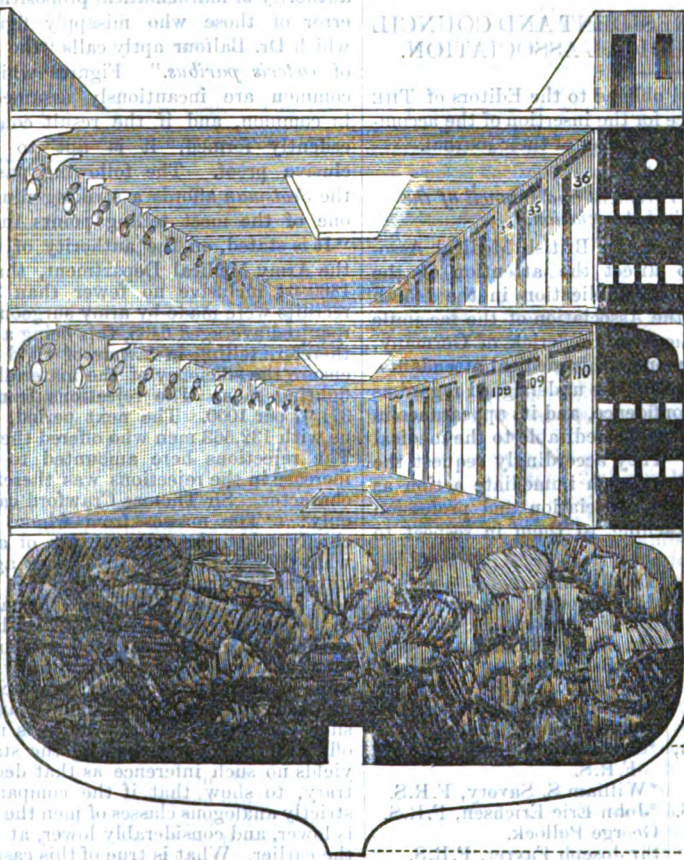


It measured 8 ft. 3 in. by 8 ft. 4 in., and 7 ft. 9 in. in height. The diameter of the side scuttles was 9 in. The next

and most of the other cabins had double the number of bunks—that is, eight on each side—with a passage between which measured only 2 ft. 3 in. in width. Thus we have sixteen people lying down in bunks 6 ft. 2 in. long, so narrow that there would not be room in them for a stout man, and a single passage dividing the sixteen people, this passage being only 2 ft. 3 in. wide. This will be better understood by referring to the accompanying plan. (Fig. 2.) As the side scuttles are generally closed—in fact, can only be opened in really fine weather,—these cabins ventilate into the centre portion of the deck by an aperture that runs along the top of the partition, and is from 8 in. to 9 in. wide. The section of the ship and the view of the steerage, partially fitted up, which accompany this report, will enable the reader to realise the position at once. (Fig. 3.) The

sanitary condition of the whole ship is thus gravely compromised. Of course it will be answered that the health of the travellers is excellent; that cases of zymotic disease are rare, if ever, occur. This is natural enough. The journey is so short that the passengers have not time to develop, but only to take in, the seeds of disease. The question to answer is what number of persons are taken ill after reaching their destination, and on this point, though of vital importance, there is no record whatever. The second or lower deck of this same ship is also used for emigrants, and here the state of affairs for want of ventilation is even worse, while the difficulty of getting to the closets and the temptation to soil the alley-way are even greater. On reaching the deck we found that the closets were on the trough system, and consisted of five seats without any

FIG. 3.



Midship section of emigrant ship.

gratings over the hatchway that give air to this central part of the ship have to be covered over when the weather is bad; that is precisely the time when most of the emigrants are ill. Soon the little narrow passage between the bunks becomes fouled with vomit. Then there are no closets below deck. Women, children, and men have to struggle up on deck to reach the closets. As a matter of fact, and though this is contrary to all regulations and to the ship's discipline, passengers sometimes make use of the alley-way which forms a sort of gutter round the side of the ship. This alley-way or gutter in bad weather is soon charged with vomit, urine, and faecal matter, and it gradually drains down into the bilge. Now, there is no such thing as steerage bilge. Class distinctions cannot be maintained in what is practically the ship's sewer. Consequently the bilge thus befouled through the overcrowding and insufficient accommodations of the emigrants' quarters floats all over the ship's hold, gradually evolves putrescent gases, which travel upwards, compromising the health of not merely the steerage but also the first-class passengers. The

partition, therefore devoid of privacy. On one side were the closets for women, on the opposite those used by the men; and in the same deck houses containing the two sets of closets are the two hospitals provided for the ship. Each hospital (one for women, one for men) has four beds. Consequently, if during a case of accouchement another woman were to fall ill with fever, she would have to be placed side by side with the former case. Evidently there should be either four, or at least three, hospitals on board, so that the infectious cases as well as the different sexes could be separated. The construction of hospitals in the same deck house as the closets, separated from the closets only by a more or less imperfect partition, is an act of neglect. The latter portion of Clause 21 of the Imperial Passengers Act says: "No part of any berth shall be placed within nine inches of any watercloset erected in the between decks." This sanitary provision is clearly evaded in spirit, if not in the letter, by placing w.c.'s and hospitals in such close juxtaposition on deck. Nor should women and children be compelled to come up on deck in all weathers and where there is no shelter. Some sort of accommodation should

be provided below; and where a water-closet cannot be constructed, the pail system or ash-closet could easily be introduced.

In Glasgow we further examined specimens of the stores, food, &c., provided for emigrants, and these seemed satisfactory. On board the *Norwegian*, an Allen line steamer, we had the satisfaction of noting that a sanitary steward had been appointed whose exclusive duty it was to see after the cleanliness of the closets. The division of responsibility in such matters is often the cause of much disorder. In several other respects, notably with regard to the taking on shore and carefully cleaning, after each voyage, the surgical instruments, this company deserves praise; and the principle of making one man responsible for each department is carried out extensively. It is an excellent method of avoiding and of checking all forms of neglect and inefficiency.

MEMORIAL TO THE PRESIDENT AND COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

THE memorialists will feel obliged to the Editors of THE LANCET if they can find space for the insertion of the accompanying document in the next number of their journal.
Nov. 17th, 1888.

Copy of Memorial to the President and Council of the British Medical Association.

The undersigned members of the British Medical Association and others beg to direct the attention of the President and Council to the publication in the 1450th number of the *Journal* of the Association of the facsimile of a "script" by the late Emperor Frederick of Germany, referring to his treatment by one of his medical attendants. The publication of this document the undersigned regard as a violation of professional confidence, and its appearance in the *British Medical Journal* as discreditable to the medical profession of this country. They accordingly request the President and Council to take such immediate action as may be required to clear the Association and profession from the discredit now attaching to them in respect to this matter.

Sir Risdon Bennett, F.R.S.

Sir Henry Pitman.

Sir George Paget, K.C.B.,
F.R.S.

Dr. George Johnson, F.R.S.

Sir Edward Sieveking.

Sir Alfred Garrod, F.R.S.

Dr. Munk.

*Dr. Matthews Duncan,
F.R.S.

Dr. Wilks, F.R.S.

Dr. Russell Reynolds, F.R.S.

Dr. Robert Martin.

Dr. Dickinson.

Dr. Pavy, F.R.S.

Dr. Andrew.

Dr. James Pollock.

*Sir Dyce Duckworth.

Dr. Broadbent.

Dr. Playfair.

Dr. Douglas Powell.

Dr. Cheadle.

Dr. Pye-Smith.

Dr. Sturges.

*Dr. Robert Liveing.

Dr. Edward Liveing.

Sir George H. Porter.

J. F. Banks, M.D.

Sir William Stokes.

Samuel Gordon, M.D.

Ed. H. Bennett, M.D.

J. Emmerson Reynolds, M.D.

J. Magee Finny, M.D.

J. Cunningham, M.D.

Dr. Ord.

Dr. Norman Moore.

Dr. Allchin.

Dr. Chepmell.

Dr. F. Taylor.

Dr. John Williams.

Dr. Barlow.

Dr. G. W. Pitt.

Sir James Paget, Bart., F.R.S.

John Marshall, F.R.S.

*Sir Joseph Lister, Bart.,
F.R.S.

*William S. Savory, F.R.S.

*John Eric Erichsen, F.R.S.

George Pollock.

Sir Joseph Fayrer, F.R.S.

Sir W. Mac Cormac.

Charles A. Aikin.

*Thomas Bryant.

Sydney Jones.

J. W. Hulke, F.R.S.

George Lawson.

*Thomas Smith.

Berkeley Hill.

John Croft.

Christopher Heath.

Arthur Durham.

Alfred Willett.

W. Morrant Baker.

John Langton.

J. Pickering Pick.

Charles Drage.

Warrington Haward.

H. G. Howse.

Edward Owen.

Pearce Gould.

C. J. Symonds.

W. A. Meredith.

* Anyone wishing to join in this Memorial is requested to communicate with one of those in this list whose name is marked with an asterisk.

THE STATISTICAL SOCIETY.

THE session of the Statistical Society was on Tuesday last opened by the President (Surgeon-General T. Graham Balfour, M.D., F.R.S.) with an address in which the highly necessary lesson of caution and exactitude in the use of figures was enforced with singular felicity of illustration. The fact that statistics may be grievously misread and figures made to prove anything has long since been sufficiently clearly recognised to pass into a proverb. But this general knowledge of the fact does by no means avail to protect even writers of reputation from becoming the victims of strangely mistaken deductions from statistical data and proceeding to invest crude and fanciful theories with the authority of mathematical propositions. The most common error of those who misapply figures is doubtless that which Dr. Balfour aptly calls "the neglect of the principle of *ceteris paribus*." Figures which have something in common are incautiously assumed to have all things in common, and if the result confirms an opinion antecedently formed, it is apt to be accepted as conclusive proof. The following passage from a paper in the *Scotsman* affords a striking illustration, and furnished one of the most telling points in Dr. Balfour's address: "It is stated, on the authority of the Director-General of the Army Medical Department, that 'in the period from 1860-64 inclusive no fewer than 32,324 examinations of recruits were made by army surgeons. The number of men required averaged 6465, this being a small one, and the fact therefore telling in favour of rigid tests being applied to ensure the efficiency of the material offered in the shape of fighting men. The rejections from all causes numbered 371.67 per 1000. The next period, from 1882-86, presents us with 132,563 men who offered themselves for enlistment. The rejections here amounted to 415.58 per 1000. The increase in the rejections was therefore of a most marked character. Sir Thomas Crawford can explain it in one way only: 'The masses from whom the army recruits are chiefly taken, he tells us, are of an inferior physique to what they were twenty-five years ago.' That is the plain unvarnished truth, and as such it is by no means of a palatable kind to those who regard the national welfare as a thing to be conserved and prized." That looks like a highly authoritative statement, and it is no doubt correct, so far as mere figures go; but Dr. Balfour, who brought an accurate knowledge of the processes by which the figures had been produced to bear upon their examination, was able to show that, when due allowance is made for changes in the official methods of compiling the statistics the comparison yields no such inference as that deduced, but, on the contrary, to show that if the comparison is made between strictly analogous classes of men the proportion of rejections is lower, and considerably lower, at the later period than at the earlier. What is true of this case is true of every other, and the importance of a careful regard to this fact, and the frequency of its neglect by such as "should know better," were most strikingly and forcefully exhibited in Dr. Balfour's paper. We heartily congratulate the author upon the skill and success with which he has invested an old subject with new significance.

BERI-BERI.

THE Administration Report for the Straits Settlements (Penang and Malacca) contains the following reference to this disease:

Beri-beri, the disease which has proved so fatal among the Netherlands Indian troops in Achin, and which has been prevalent from time to time among Chinese coolies at tin-mining centres in the Malay peninsula, has by no means disappeared from this settlement, though it is satisfactory to be able to note that the deaths in hospital from this disease were fewer in 1887 than in previous years. In a pauper hospital like ours, which is the refuge of paupers of all nationalities, many of whom have contracted the disease in places beyond the colony, beri-beri must naturally be looked for.

The statistics of the beri-beri cases in the pauper hospital for the last four years are as follows:—

	Cases treated.	Deaths.	Percentage.
1884	282	54	20
1885	490	172	35
1886	568	100	17
1887	402	54	13

At the Balik Pulau Hospital, the number of cases treated for this disease has diminished, though the death-rate has remained stationary. The figures are as follows:—

	Cases treated.	Deaths.	Percentage.
1885	106	22	20
1886	70	5	7
1887	52	4	7

In Province Wellesley, too, a marked decrease is reported in beri-beri cases, the total number being 95, with 9 deaths, or a death-rate of nearly 9 per cent. In Province Wellesley, the treatment advocated by Dr. Kynsey of Ceylon has been tried with good results. The prison was entirely free from beri-beri during the year. The last outbreak there was in 1880.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5582 births and 3553 deaths were registered during the week ending Nov. 17th. The annual rate of mortality, which had been 21·8, 19·6, and 19·0 per 1000 in the preceding three weeks, rose again last week to 19·7. During the first seven weeks of the current quarter the death-rate in these towns averaged 20·0, and was 0·7 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12·6 in Brighton, 14·1 in Bristol, 14·9 in Leicester, and 16·3 in Nottingham. The rates in the other towns ranged upwards to 24·3 in Wolverhampton, 24·7 in Manchester, 26·3 in Blackburn, and 29·3 in Cardiff. The deaths referred to the principal zymotic diseases, which had been 467 and 432 in the preceding two weeks, rose last week to 495; they included 212 from measles, 62 from scarlet fever, 62 from diphtheria, 55 from whooping-cough, 52 from diarrhoea, 61 from "fever" (principally enteric), and only one from small-pox. No death from any of these zymotic diseases was registered last week in Halifax, whereas they caused the highest death-rates in Salford, Blackburn, and Cardiff. Measles showed the greatest mortality in Oldham, Wolverhampton, Blackburn, and Cardiff; scarlet fever in Salford and Blackburn; whooping-cough in Cardiff; and "fever" in Manchester, Salford, and Blackburn. The 62 deaths from diphtheria in the twenty-eight towns included 44 in London, 5 in Salford, 4 in Manchester, 4 in Nottingham, and 2 in Birmingham. Small-pox caused one death in Cardiff, but not one in London or in any of the twenty-six other great towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained no small-pox patient during the week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 1080, against 1007 and 969 in the preceding two weeks; 83 cases were admitted during the week, against 71 and 85 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 522, 441, and 373 in the preceding three weeks, were last week 374, and were 61 below the corrected average. The causes of 71, or 2·0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bradford, Brighton, Blackburn, and in seven other smaller towns. The largest proportions of uncertified deaths were registered in Sheffield, Sunderland, Salford, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·7 and 19·1 per 1000 in the preceding two weeks, was again 19·1 in the week ending Nov. 17th; this rate was 0·6 below the mean rate during the same week in the twenty-eight large English towns. The rates

in these Scotch towns ranged from 15·0 and 15·4 in Edinburgh and Leith to 24·6 in Dundee and 37·9 in Paisley. The 484 deaths in the eight towns corresponded with the number in the previous week, and included 24 which were referred to measles, 11 to diphtheria, 10 to diarrhoea, 8 to scarlet fever, 6 to "fever" (principally enteric), 4 to whooping-cough, and not one to small-pox; in all, 63 deaths resulted from these principal zymotic diseases, against 58 and 70 in the preceding two weeks. These 63 deaths were equal to an annual rate of 2·5 per 1000, which exceeded by 0·3 the mean rate from the same diseases in the twenty-eight English towns; this rate ranged in the eight towns from 0·0 and 1·2 in Leith and Edinburgh to 4·1 in Greenock and 16·9 in Paisley. The fatal cases of measles, which had been 26, 23, and 27 in the preceding three weeks, declined again last week to 24, of which 18 occurred in Paisley, 3 in Glasgow, and 3 in Greenock. The 11 deaths from diphtheria showed a further increase upon recent weekly numbers, and included 6 in Glasgow and 3 in Edinburgh. The deaths attributed to diarrhoea, which had been 20 and 9 in the previous week, rose again last week to 10. All the 4 fatal cases of whooping-cough and 6 of the 8 deaths from scarlet fever were returned in Glasgow. The deaths referred to "fever," which had been 3 and 8 in the previous two weeks, declined last week to 6, of which 2 occurred in Aberdeen and 2 in Paisley. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 114, 98, and 84 in the preceding three weeks, were last week 97, and were 47 below the number in the corresponding week of last year. The causes of 59, or more than 12 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 21·9, 24·4, and 27·5 per 1000 in the preceding three weeks, declined again to 23·5 in the week ending Nov. 17th. During the first seven weeks of the current quarter the death-rate in the city averaged 24·1 per 1000, the mean rate during the same period being 19·2 in London and 15·5 in Edinburgh. The 159 deaths in Dublin last week showed a decline of 27 from the number in the previous week, and included 6 which were referred to whooping-cough, 5 to measles, 5 to diarrhoea, 3 to "fever" (typhus, enteric, or ill-defined), 1 to scarlet fever, and not one either to small-pox or diphtheria. Thus 20 deaths resulted from these principal zymotic diseases, against 21 in each of the preceding two weeks; these were equal to an annual rate of 3·0 per 1000, the rate from the same diseases being 3·0 in London and 1·2 in Edinburgh. The fatal cases of whooping-cough and diarrhoea showed an increase upon the numbers in the previous week, while the deaths from "fever," which had been 10 in each of the preceding two weeks, declined last week to 3. The deaths both of infants and of elderly persons showed a slight decline from the numbers in the previous week. Four inquest cases and five deaths from violence were registered; and 43, or more than a quarter, of the deaths occurred in public institutions. The causes of 21, or nearly 14 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Brigade Surgeon William Tanner has retired on temporary half-pay on account of ill-health (dated Nov. 7th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS.—The under-mentioned Acting Surgeons to be Surgeons, ranking as Captains (dated Nov. 21st, 1888): John James de Zouché Marshall, 1st Cinque Ports Rifle Volunteer Corps, and David Thomson, M.D., 3rd Volunteer Battalion, the Bedfordshire Regiment.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Staff Surgeon Penrose John Barcroft has been allowed to withdraw from Her Majesty's Naval Service with a gratuity.

The following appointments have been made:—Surgeon Edward H. Williams, to the *Duke of Wellington* (dated Sept. 26th, 1888); Surgeon Frederick J. Barnes, M.D., to the *Mariner*; and Surgeon James Bradley, to the *Sackville* (both dated Nov. 18th, 1888); and Richard B. Wrightson,

M.D., to be Surgeon and Agent at Aldeburgh, Sizewell, and Thorpe (dated Nov. 19th, 1888).

VOLUNTEER CORPS.—*Artillery*: 2nd Lancashire: Hugh Richard Jones, M.B., to be Acting Surgeon (dated Nov. 17th, 1888).—1st Renfrew and Dumbarton: Wm. A. McLachlan, M.D., to be Acting Surgeon (dated Nov. 17th, 1888).

Engineers: The following Officers are transferred from the 1st Newcastle-on-Tyne and Durham Engineer Volunteer Corps, on its division into two Corps—viz.: Acting Surgeons: W. Mearns, M.D., and F. W. Gibbon, to be Acting Surgeons (dated Nov. 17th, 1888).—*Rifle*: 2nd Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment): Acting Surgeon R. Bennet, M.D., resigns his appointment (dated Nov. 17th, 1888).—1st London (City of London Rifle Volunteer Brigade): Acting Surgeon A. J. Hubbard, M.B., resigns his appointment (dated Nov. 17th, 1888).

Correspondence.

"Audi alteram partem."

COMPARATIVE SURGERY.

To the Editors of THE LANCET.

SIRS.—There can be little doubt about the fitness and advisability of Mr. Macnamara's proposal, that candidates for the Membership of the Royal College of Surgeons of England should in future submit themselves to examination tests as to their training and manipulative skill in surgical operations. The implied compliment of the examinee to the examiner, "That in operative cases I should immediately send for you," has yet lost none of its relish; but an examination in surgery ought to be an examination in handiwork, and not the occasion for omitting every real practical test in operating with the hands. Under the present circumstances of omission, practical teachers in surgery find themselves *hors de combat*, and their working pupils deprived of the opportunity of showing their merit. This reform in examinations may be considered to be impracticable. I maintain that the Government can supply more bodies than would be required under the present powers of the Anatomy Act; even in case of its being unable to do so, there is no difficulty in getting an extension of that Act. It is presumable, amongst so many millions who surrender their bodies for teaching purposes when alive, that there would be some who might permit their bodies to be also utilised for teaching purposes after death, an example of this nature having recently occurred at the Westminster Hospital. My present object is to suggest that comparative surgery could be substituted for human surgery in bridging over an occasional difficulty of procuring bodies, and at the same time fairly test the dexterity of the candidate. These operations would be performed in every instance on the dead animal; individual structures that are wasted or used in manufacture in the ordinary course of trade would be utilised.

For example: (1) the use of the saw, drill, or trephine, the wiring of fragments, the removal of spicula, or the treatment of cartilage or periosteum can be as faithfully represented on the dead bones of a sheep as on those of the human subject; (2) tenotomy can be performed on the tendo Achillis of any dead animal; (3) the use of the knife and director can be demonstrated on the abdomen of any cadaver, as can also the varying forms of intestinal suture; (4) wounds of the skin can be manufactured and treated on the carcasses of lower animals according to ordinary surgical rules; (5) tracheotomy, laryngotomy, and removal of foreign bodies can be shown post mortem on any fair-sized windpipe; (6) ophthalmic surgery and practice can be exemplified on the lifeless eyes of a pig, bullock, or horse; (7) the removal of needles, shot, bullet, or foreign bodies from artificially made wounds on the cadaver can be undertaken on any lower animal; and (8) the handling of the sheaths of vessels and the ligature of arteries can be well illustrated on any dead animal.

The adoption of Mr. Macnamara's resolution will drive another hard hit at the system of "grinding." The necessary preliminary training of the candidate and the essentially practical tone of the examination would not be of a character favourable to students, being set as alarms to go off at the warning of the examination bell. Believing

that this new departure in examination conduct must strengthen the hand and teaching of both pupil and master, I trust that its acceptance may be shown to be not only advisable, but also practicable.

I am, Sirs, your obedient servant,
Welbeck-street, W., Nov. 20th, 1888. RICHARD DAVY.

MENSTRUATION AND THE OVARIES.

To the Editors of THE LANCET.

SIRS.—I have now going through the press a large work in which this subject is discussed at length, and I therefore can hardly expect you to give me space for more than a skeleton statement, prefaced by a question addressed to my friend Dr. Barnes—Upon what ground does he use the expression "old law," which declares that the ovaries rule over the function of menstruation? A law is the final stage of evolution at which arrives what was first a working hypothesis, and afterwards a theory; a law has a universal acceptance, but this "old law" is a mere statement which arose in 1827, and has been perpetuated by the custom of text-books (i.e., copying blindfold from one another) ever since, until it has got ingrained into professional belief and stands there as fully established as is the belief on the part of the public of the origin of the Gordius from a horsehair. I ask anyone to read Ritchie's papers in the *Medical Times and Gazette* of 1843 (reprinted in his son's book in 1875), Reeves Jackson's papers, or those of Kesteven, and, finally, some contributions of my own, of Arthur Johnstone, and Iland Sutton, and then ask himself the question, Will the ovarian theory of Menstruation stand? The uniform answer will be that it will not, and for the following among other reasons. Ovulation in the human animal occurs at irregular intervals, and probably not more than twice or three times a year, and not at monthly intervals, as had been believed until recently. Ovulation begins before birth, goes on all through life, and does not entirely cease even in extreme senility; whereas menstruation is connected with certain conditions of the uterus and Fallopian tubes (see Johnstone and Sutton) which are not concurrent with ovulation, but are limited to the time of life between puberty and the climacteric. Menstruation occurs only when true Fallopian tubes are found, and is the result (Johnstone) of the erect position. What have hitherto been regarded as Fallopian tubes, in non-menstruating animals, are only bifid uteri, and are not, either structurally or in any other way, analogous to the human Fallopian tubes. In countless thousands of animals ovulation produces nothing like the appearances of menstruation, but the assumption of the erect position and the appearance of ciliated Fallopian tubes are concurrent with the appearance of menstruation. The popular belief that menstruation is the same thing as the *astrus* of the lower animals is a delusion (Arthur Farre, in Todd and Bowman's "Encyclopædia"—an article the convincing and cogent reasoning of which has been strangely overlooked). The influence of the Fallopian tubes in being at least the starting point of the phenomena of menstruation is shown (a) by the almost constant symptom of precedent pain in cases of occlusion of the tubes; and (b) by the appearance of the menstrual discharge in the clump cloatrix before its appearance from the uterus. Complete removal of both ovaries, without injury to the tubes, has little or no influence in arresting menstruation. Complete removal of the tubes, without injury to the ovaries, arrests menstruation at once, and completely in about 80 per cent. of the cases. Complete removal of both tubes and ovaries arrests menstruation at once, and completely in 95 per cent. of the cases. Complete removal of both ovaries and tubes together, with removal of the uterus as completely as possible (as in Porro's operation), may leave menstruation absolutely uninterfered with. This is the fact in at least three cases known to me. The conclusion to be drawn from all this is that the old statement that the ovaries rule the function of menstruation is not based on fact, and that we must conclude that the origin of the function is situated in some nerve centre not yet discovered. My own belief is that Arthur Johnstone has gone a long way in arriving at the truth in pointing out the importance of including the large nerve trunk which lies in the angle between the tube and the round ligament when we perform the operation of removal of the uterine appendages. I have arrived at the

same conclusion when I said (twelve years ago, for the first time) that the tubes had more to do with menstruation than had the ovaries. This was ridiculed (by Martin, of Berlin, and others) as "Tait's tubular theory," but it is substantiated by the complete confirmation of the further facts which I then laid down—(a) that inflammatory and cystic diseases of the tubes *always* influence menstruation by deranging it, increasing its frequency and its amount, and rendering its performance excessively, often agonisingly, painful; and (b) that diseases of the ovaries themselves do not affect menstruation in the least. Finally, if ovulation (or the ovaries) rule the function of menstruation, removal of one ovary should diminish its frequency very perceptibly (for ovulation is not symmetrical), but no such result is apparent. Menstruation is therefore clearly independent of ovulation, just as the building and furnishing of a house are independent of its being inhabited. Menstruation is "nidation," the building and furnishing, the making ready for a tenant if one comes along. As Arthur Johnstone beautifully and in a perfect way puts it, the house is swept out and cleaned once a month ready for a tenant, but there is only a chance of a tenant two or three times a year; and then there is another condition—impregnation—necessary for the occupation of the domicile. Thanks to Johnstone's brilliant discovery, we have this mass of intolerable confusion reduced to a divine simplicity.

May I beg, then, of your readers who are concerned in the preparation of text-books of physiology and of the diseases of women to give this subject fair play, and its modern literature a serious study? They will then discontinue the absurd reiteration of statements sixty years old, which have not a single fact to support them.

I am, Sirs, yours &c.,

Birmingham, Nov. 17th, 1888.

LAWSON TAIT.

CASE OF CANCER OF THE RECTUM: SEQUEL.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 1st, 1887, I contributed a case of "Cancer of the Rectum; Excision; Recovery." As I think it advisable that the sequel of such cases should be made known, I now send you briefly the further history of the one referred to:

There was not the least indication of recurrence of the disease in the parts operated upon, or in their neighbourhood, which continued quite healthy in structure and function (with the exception latterly of occasional fecal impaction in the rectum) until the patient's death, which took place on the first of last month—viz., one year and ten months and a half after the operation. In the early part of March this year—i.e., nearly sixteen months after excision—I was asked to see the patient, and found an enlarged inguinal gland on the right side. This having increased somewhat rapidly on May 1st, at my suggestion she went to London and consulted Sir James Paget with regard especially to the feasibility of its removal by operation. His opinion was decidedly against this. Until this period, and for some time afterwards, her general health continued good in every respect. The tumour increased in size, ulcerated, and pursued the ordinary course of cancerous disease, until the occurrence of free hæmorrhage, which, as already stated, terminated fatally on Oct. 1st. One question of interest here arises, whether the "small, not hard, inguinal nodule in the right groin, which appeared to be innocent in character," mentioned in the report of the case, had, after remaining quiescent for so long a period, anything to do with the subsequent appearance of the disease in that region. I can hardly think so. It was not larger than a small split pea apparently, as it was doubtless at that time innocent in character. A circumstance worthy of note was the remarkable exemption from pain throughout the whole progress of the case, with the exception of a burning sensation in the edges of the wound after the dressings, which was more or less subdued by ointments of morphia or cocaine. For some time before death even these were not required, and she continued almost without suffering until the hæmorrhage which terminated her life. As I had found from my own experience and that recorded by others that, whatever other effect Chian turpentine may have had, diminution of pain appeared to follow its use. I gave this drug in large doses, with, I need not say, in such a case, but feeble hope of other material benefit. The absence of acute suffering was certainly remarkable, to whatever this was due;

and I could not but observe that, after taking the drug for a time, the sloughing process extended its destructive action into the hard mass of diseased structure, with but little encroachment upon the more healthy tissues surrounding. How far this result was promoted by the agency of the Chian turpentine is of course an open question. The medicine agreed well with the stomach, and was followed by a marked sense of comfort.

I am, Sirs, yours faithfully,

Swansea, Nov. 10th, 1888.

GEORGE PADLEY.

THE CAUSE OF CRAMP.

To the Editors of THE LANCET.

SIRS,—While reading in your issue of Nov. 10th the article on Cramp and Allied Affections, I could not help remarking that most of the instances cited as being due to pressure are equally capable of explanation by supposing a poison circulating in the blood. The feeling of languor and ill-being so common in dyspeptics is usually, I believe, attributed to that cause; is it not reasonable to push the point a line further, till we arrive at veritable cramp? "Hard cheese, shell fish, &c." are notoriously indigestible. Again, violent muscular exercise sets free in the muscle tissue products of muscle waste, which are harmful to the fibres themselves; and doubtless the cramps are, in such cases, due to these products of muscle waste being too slowly got rid of. As to predisposing causes, we should expect anything that tends to lower the general tone of the body to predispose that body to be affected the more easily by exciting causes. So doubtless a phthisical patient, after undue muscular exercise, might expect cramp with less chance of disappointment than a healthy man. While speaking of remedies, the author of the article gives it as his opinion that in a severe case of cramp refusing to yield to other remedies, chloroform must not be used if there be heart or kidney disease. Now the author has seen such cases terminate fatally from syncope due to pain. Is it not a safe rule among operating surgeons that, if chloroform is likely to kill, the pain of the operation is more likely to do so? I take it that in the case of cramp the pain stands in very much the same relation to the general rationale of the thing as does the pain of an operation; that this indicates that the patient is more likely to die without chloroform than with it, and forces one to the conclusion that chloroform should be used.

I am, Sirs, yours faithfully,

WILLIAM WOODWARD, M.R.C.S. ENG.

Lostwithiel, November, 1888.

RINGER'S THERAPEUTICS: STRANGE ADVICE.

To the Editors of THE LANCET.

SIRS,—Under the article "Aconite" in the above book, 11th Ed., p. 453, the following appears. Speaking of the use of aconite in scarlet fever, it is said: "It is well, therefore, during the convalescent stage to direct the nurse to take the temperature night and morning, and if this should rise beyond the healthy standard, she should at once give aconite, so as not to allow some hours to elapse before the patient can be visited by the medical attendant." Surely those who have given aconite know that it is a drug whose effects on a child's system require the most careful watching. Here a nurse is told to administer aconite—the dose or doses not mentioned—to a patient who is supposed to be developing "acute inflammation of the kidneys." It is to be hoped "the nurse" will have sufficient sense not to do so, else she may have reasons for doubting her power not only to prescribe but to administer so very active a poison, especially when a medical practitioner or "attendant" can be easily called in.—I am, Sirs, yours truly,

ROBERT R. RENTOUL.

Hartington-road, Liverpool, S., Nov. 18th, 1888.

PRESENTATION.—Dr. C. J. Wharry, the Superintendent of the Government Civil Hospital, Hong Kong, on the occasion of his leaving the service, has been presented by the members of the hospital staff, as a mark of their esteem, with an address, accompanied by a locket and chain, the former bearing a suitable inscription. At the same time a handsome gold bracelet was presented to Mrs. Wharry.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

UNIVERSITY OF DURHAM.

THE final examinations for degrees in medicine and surgery are fixed to commence on Monday, Dec. 3rd. The list of candidates is a long one. Dr. Charlton Bastian and Professor Annandale are the appointed foreign examiners. The annual dinner of the students of the College of Medicine was held at the County Hotel on Tuesday last, and passed off with great spirit. The chair was occupied by Professor Philipson, and the vice-chair by Dr. T. C. Nesham. A greater number of students were present than usual, and Drs. Limont, Horace, Page, and others contributed to the harmony of a very pleasant evening.

THE CASE OF QUADRUPLTS AT SUNDERLAND.

Her Majesty the Queen has graciously sent Mrs. McGrady, of Monkwearmouth, a gift of £3, notwithstanding the death of the four children to which the poor woman had recently given birth.

ACCIDENTS TO WORKMEN IN THE NORTH.

The records of the northern coroners' courts for the last few days show the great risks to which workmen in the north are exposed, and the perilous nature of their employments. On Saturday last a man about forty died in the Jarroo Memorial Hospital. He was engaged attending to an iron furnace, when a large sheet of flame burst out, completely enveloping the poor fellow, whose clothes were burnt off his body, scorching him in a shocking manner, and causing his death in a few hours. A fatal accident also took place last week to a workman at the Middlesbrough Chemical Works. While scraping a bichrome tank he slipped, and his right foot and leg dropped into the liquid. The limb was washed after the accident, and he was taken to the North Ormsby Cottage Hospital; but as he showed symptoms of scarlet fever, he was removed to the Fever Hospital, where he died. Dr. Malcomson, the medical officer, said the death was due to the effects of bichrome, which is an irritant poison.

MIDDLESBROUGH.

The old custom of accompanying the newly elected Mayor to church was observed at Middlesbrough on last Sunday, and quite an imposing procession was formed. The collection made at the church was on behalf of the infirmity and hospitals of the town.

DEATH OF DR. JACKSON OF NEWCASTLE.

I regret to notice the death of Dr. Edward Jackson of this city, which took place yesterday after a short illness. Dr. Jackson was a graduate of the London University, M.R.C.S., and L.S.A. As a student he received the Fellowes gold medal at University College Hospital, and the silver medal of the Apothecaries' Society. He was a native of Sheffield, where he was best known, being one of the founders of the Women's Hospital there. About seven years ago he retired from practice in Sheffield, but retained his connexion with the Women's Hospital as honorary consulting surgeon. He died at his residence in the Jesmond suburb of Newcastle, and if he practised at all there it was not actively.

Newcastle-on-Tyne, Nov. 20th.

EDINBURGH.

(From our own Correspondent.)

PROPOSED NEW MICROSCOPICAL SOCIETY.

It is proposed to form a Microscopical Society in Edinburgh—a society in which microscopists of all kinds may meet and discuss such points as they have in common. A preliminary meeting has already been held, at which a small committee was appointed to collect information and report. Those who are taking an active part in this matter—amongst whom are the President of the Royal College of Physicians (Dr. Peel Ritchie), Professors Greenfield, Annandale, and Balfour, Drs. Affleck, Woodhead, Buist, Hunter, Edington, and McFadyean, and Mr. Forgan—are agreed, so far as can be ascertained, as to the general lines on

which the society should be carried on, but little is as yet decided as to details. It is very probable that, if such a society could be constituted so as to work along with some of the other medical and scientific bodies, it could be made a most valuable means of stimulating microscopical research. Why should it not be, for instance, a peripatetic society, holding each of its meetings as one of the regular meetings of a society interested in the subject to be discussed. The Pathological Club, which is said to be in a most vigorous condition, is "ran" on some such plan as this.

ANTI-VIVISECTIONISTS IN EDINBURGH.

It is a pity that the "twenty" well-intentioned but very much misguided ladies who on Thursday last met, interested in the suppression of cruelty, especially of so-called scientific cruelty, to confer with the Rev. A. Noble Scott, President of the North British Anti-Vivisection Society, should not make themselves actually acquainted with the objects and work of the institutions which they attack. The chairman, at least, has no good excuse for ignorance, for he must have seen reported in the daily papers the results of researches carried on in the laboratories against which he fulminates, embodied in papers read before the Royal Society of Edinburgh and elsewhere. In not one single instance do the researches (italicised by the rev. chairman) involve a case of vivisection. In such straits do the anti-vivisectionists find themselves for argument that they have recourse to the time-honoured story of the dog whose timidity so touched the hearts of the students in the physiological class that they begged for its life. It would be interesting to find out how often this story has been made to do duty in Edinburgh, London, and elsewhere during the last twenty years. Neither medical students nor physiologists are brutes, and they would be as ready as anyone to revolt against wanton cruelty to animals. It is a curious reflection on the false sentimentalism of our age that it has to be recorded that there is never a word uttered against the cruelty to animals involved in coursing, hunting, shooting, and other forms of "amusement," whilst weakly sentimental people rave against what they term "scientific cruelty," a term without any actual meaning. There is more suffering inflicted by a small shooting party in a day on the moors than is met with in connexion with the work carried on in all the laboratories in Great Britain during a whole year.

Edinburgh, Nov. 21st.

DUBLIN.

(From our own Correspondent.)

ROYAL ACADEMY OF MEDICINE IN IRELAND.

THE opening meeting of the Medical Section was held on the 16th inst., when Dr. Lambe Atthill, the President of the College of Physicians (who is President of the Medical Section of the Academy), gave a short address on the action of drugs in uterine affections. He appeared to think, from some observations made, that ergot administered during the early months of pregnancy had no effect on the uterus, a statement which Dr. John Byrne could not endorse. In cases of amenorrhoea he had found the permanganate of potash an unreliable remedy, and Dr. William Moore also corroborated this view. Mr. Arthur Benson exhibited a rare case—an example of albuminuric retinitis occurring in only one eye.

THE AMALGAMATION OF THE MEDICAL SCHOOLS.

I have been informed that the opposition offered by one of the proprietors of the Carmichael School, to prevent that institution joining the scheme of amalgamation, will be fatal to the proposed measure unless some arrangement is agreed upon by the contending parties. It is probable, however, that a friendly agreement will ultimately be come to between those interested in the matter, and that the scheme will be adopted at no distant period. As regards the alleged illegality of transferring the Carmichael Prize Fund (some £2000) for the benefit of the new school, I cannot understand, if this be so, what parties will participate in the benefit if not the students of the combined schools.

A QUESTION OF COMPENSATION.

On Monday, the 19th inst., in the Exchequer Division, the Court gave judgment in reference to the application of

Dr. Pye, Professor of Anatomy and Physiology in the Queen's College, Galway, for compensation for loss of fees arising out of the dissolution of the late Queen's University. It appears that before the passing of the University Education Act, 1879, Dr. Pye's fixed stipend was £220 per annum, and also certain fees from the students attending his lectures, amounting on an average to £500 a year. The effect of the dissolution was that he ceased to be a professor of the University, but continued a professor of the College; as it was not compulsory, however, for students to attend his lectures who were candidates for degrees in the Royal University, his fees decreased considerably, and he sought compensation for the loss he had sustained. The Lord Chief Baron gave judgment for the Crown. His Lordship said that the office which Dr. Pye had held in the Queen's University was distinct from that which he held in the Queen's College. In respect of his office in the University he received certain emoluments, amounting to £20 yearly, and he now received in the Royal University larger remuneration for similar work. As to the office held in the College, that was not within the section of the statute, nor was he deprived of it. Judgment for the Crown should be given with costs, and this decision was concurred in by Mr. Baron Dowse and Mr. Justice Andrews.

HEALTH OF IRELAND.

The birth-rate for the September quarter was 1.6 under the average rate for the corresponding quarter of the past ten years; and the death-rate was 0.9 under the rate for the same period. Deaths from the principal zymotic diseases were considerably below the average. Compared with the corresponding quarter of 1887, the returns of pauperism, furnished by the Local Government Board, show a decrease of 1370, or 3.1 per cent., in the average number of workhouse inmates on Saturdays during the quarter, and a decrease of 1117, or 1.7 per cent., in the average number of persons on out-door relief.

Dr. Wm. Moore, physician to Her Majesty in Ireland, has been appointed High Sheriff for Antrim County for 1889. Dublin, Nov. 20th.

PARIS.

(From our own Correspondent.)

THE PASTEUR INSTITUTE.

WITH reference to your note in THE LANCET of last week anent the opening of the new Pasteur Institute, the following may be found interesting to your readers. After the eulogistic speech of M. Bertrand, Perpetual Secretary of the Academy of Sciences, on the scientific work of M. Pasteur, covering a period of nearly half a century, Dr. Grancher, M. Pasteur's principal coadjutor at the institute, read the report of the number of persons that underwent the anti-rabic treatment at Paris during the years 1886-87 and the first half of 1888, which amounted to 5384. In 1886, when the afflux of foreigners was considerable, 2632 persons were inoculated, 1778 in 1887, and 914 in the first six months of 1888. The mortality, counting all the deaths, even those affected with rabies on the day following the treatment, was—for 1886, 1.34 per cent.; for 1887, 1.12; and for 1888, 0.77. These figures are taken from the register to Oct. 31st, 1888. But the mortality among the persons who succumbed to rabies within the fifteen days following the treatment had, of course, to be excluded, as the inoculation to be efficacious should be carried out before the incubation of the virus of the dog which had bitten the subject had commenced in the nervous centres; for the virus of common rabies, transmitted directly to the surface of the brain of a dog, there incubates during fifteen or eighteen days before producing its effects. In the patients who succumbed to rabies within fifteen days after the treatment the latter had been useless, simply because it had been commenced too late. Excluding these cases, the mortality, notwithstanding the treatment, falls for 1886 to 0.93 per cent., for 1887 to 0.67 per cent., and for 1888 to 0.55 per cent. This gradual diminution in the mortality is due to the progressive perfecting of the first steps of the treatment. Dr. Grancher explained that the treatment now adopted is more energetic, more prolonged, and more intensive. He then showed that the statistics from foreign parts, at St. Petersburg, Odessa, Moscow, Warsaw, Samara, Charkow, Milan, Palermo,

Naples, Havana, and Rio Janeiro, accord with the statistics collected at Paris. He recalled the special report for 1887, which was drawn up by the Council of Hygiene from documents at the Prefecture of Police, concerning the persons who were inoculated at M. Pasteur's laboratory. In 1887 the number of persons bitten and inoculated amounted to 306, of whom three died, which gives a mortality of 0.97 per cent. On the other hand, seven cases of death from rabies occurred among the forty-four persons enumerated in the police lists as not having undergone the anti-rabic inoculation. In this group the mortality attains 15.90 per cent., which figure M. Pasteur and the Council had accepted as representing the average mortality before the adoption of inoculation. In concluding his report, Dr. Grancher said he wished it to be understood that the Pasteur Institute had been founded not only for the treatment of rabies, but also for the purpose of promoting the scientific study of the means to practically combat the maladies which decimate the human species, such as diphtheria, typhoid fever, phthisis, &c. The vast laboratories attached to the institute will be open to medical men of all nationalities, where they will be taught the principles not only of anti-rabic inoculations, but of microbiological science in general. A regular staff has already been formed who will be the coadjutors of M. Pasteur at the institute. Drs. Grancher, Chantemesse, Charrin, and Terrillon are to attend to the treatment of rabies; M. Duclaux, Professor of Biological Chemistry at the Faculty of Sciences, will direct the bacteriological laboratory; M. Chamberland will be charged with the science of microbiology in its relation with hygiene; Dr. Roux will teach the microbial methods in their applications to medicine; and two Russian savants, Drs. Metchnikoff and Gamaleia, will devote themselves to the morphology of inferior organisms, including comparative microbiology. The institute is composed of two principal buildings, each with its own facade, the principal one in the Rue Dutot, and the other in the Rue des Fournes. The first contains the apartments of M. Pasteur and his assistants, and in the chief hall may be seen the busts of the Emperors of Russia, Dom Pedro of Brazil, Baron Rothschild, Madame Boucicault, and M. de Laubespin, the chief subscribers to the institute. In the second building are to be found rooms for inoculations and various laboratories. Here also are kept the animals intended for experiments. At the close of the ceremony of the inauguration of the institute the President of the Republic, who presided on the occasion, conferred on Drs. Grancher and Duclaux the dignity of Officer of the Legion of Honour, and on Dr. Chantemesse that of Chevalier of the Legion of Honour. It may here be noted that M. Pasteur, who is Commander of the Legion of Honour, possesses fifteen other decorations; he is member of eighty-three foreign learned societies, and holds the honorary Doctor's degree of nearly every foreign University, and yet he is not a Doctor of Medicine of any faculty.

DEATH OF DR. FRÉMY.

Dr. Charles Frémy, honorary physician of hospitals, died on the 19th inst., in the seventy-second year of his age. The deceased was first cousin to M. Edmond Frémy, Member of the Institute and Director of the Museum of Natural History. He was the father of M. Henry Frémy, who is at the present time on a scientific mission to America. Dr. Charles Frémy was the author of several remarkable works on the treatment of typhoid fever.

TREATMENT OF DIPHTHERIA.

At the last meeting of the Hospitals Medical Society M. Gaucher gave additional evidence in support of a line of treatment for diphtheria which he had brought under the notice of the Society last January. It consists in the application of strong alcoholic solution of carbolic acid (50 per cent.) to the surface which has been denuded of false membrane. The application is made three times a day, and in addition the mouth is frequently well rinsed with an aqueous solution of carbolic acid (1 per cent.). The method indicates a return to the old plan of cauterisation, and the results quoted by M. Gaucher, which included a series of eighty cases treated on this plan by M. Dubouquet, are reported as having been very satisfactory. There was no inflammatory reaction, nor any symptom of carbolic acid poisoning, although there was usually carbolicuria.

STROPHANTHINE.

M. G. Sée finds that strophanthine is a valuable remedy in cases of mitral disease, especially in stenosis, but that it

is unsuitable in aortic disease. Under its use the pulse gains in force and improves in rhythm. It is the same in cases of cardiac dilatation and arterial-sclerosis, but in angina pectoris the drug is contra-indicated. M. Dujardin-Beaumetz recommended that strophanthus should be prescribed rather than strophanthine, of which no fewer than five varieties occur in commerce.

Paris, Nov. 20th,

Obituary.

HEINRICH VON BAMBERGER.

On the 9th inst., at Vienna, as mentioned in our last issue, died Dr. H. von Bamberger, aulic councillor (Hofrath), and head of the second medical clinique of the Viennese school, after a severe illness of several weeks' duration.

He was born on Dec. 27th, 1822, on the family estate in the vicinity of Prague. That city, as afterwards Vienna, was the scene of his studies, which, after a brilliant course, culminated in his graduation and appointment as assistant physician in the Prague General Hospital. In 1850 he went to Vienna, to work with Oppolzer there; and in 1854 he accepted the post of Professor of Clinical Medicine and primary physician in the Julius Hospital at Würzburg. On Oppolzer's death he returned to Vienna, and in the spring of 1872 was appointed director of the Medical Clinique of the General Hospital. His call to Oppolzer's chair was keenly opposed by the friends of Körner, who used all the then Minister Jirzek's influence in their candidate's favour; but Bamberger's claims were too powerful even for Government partiality, and his success in the post more than justified the wisdom of his selection. His high intellectual gifts, his clear and logical exposition, particularly at the bedside, combined with his profound medical knowledge to make him an ornament of his professoriate, which soon acquired a far more than local fame by the co-operation (invited and obtained by himself) of the not less richly endowed Nothnagel. His plain unaffected demeanour, his noble earnestness, also worked powerfully in his favour, so that it was difficult to say whether he was more honoured by the pupils who flocked to him from all parts of the world, or more beloved by the patients of low as of high degree who had the benefit, without distinction, of his care and skill. He was an ardent and unwearied worker in the domain of pathology, as is notably evinced by his publications on the "Diseases of the Chylopoietic System" and on the "Ailments of the Heart." Like Liebig, like Virchow, and like many of his most distinguished colleagues in science, and particularly in medicine, he had a deep and discriminating admiration for the great English pioneer of modern inductive research, and his "Bacon von Verulam, besonders vom Medicinischen Standpunkt" ("Bacon of Verulam, especially from the Medical Standpoint"), deserves the study of our profession, too negligent, it is to be feared, of the author of the "Novum Organum." Bamberger's activity in medical journalism was immense, and a selection from his papers of more permanent value would be indeed a boon, not to his compatriots alone.

The latter years of his life were embittered by the tragic fate of his son, a youth of noble promise, Richard von Bamberger, destined, like his father, for the medical career. On July 13th, 1884, the young man started on an ascent of the Schneeberg (Bavaria), and was never heard of more. A year passed in unremitting search, but not a trace of him was to be found. Only on July 18th, 1885, some forest rangers in the Frauenbachgraben, in the neighbourhood of the Great Höllenthal, at the foot of the Schneeberg, came upon some remains and effects which were recognised as belonging to the Viennese Professor's son.

On the 10th inst., Professor Nothnagel, on the assembling of his class, alluded to the death of his colleague and friend in language of which the following, contributed by a student who was present, may be taken as a faithful transcript: "It is often said that medicine is at once a science and an art; and the remark is nowhere more just than on the clinical side. We have great clinicians in whom scientific aptitude and power of thought are but little developed, but who seem gifted with the inspiration of the artist. Most commonly endowed with a far-reaching memory, there suddenly flashes on them a series of recol-

lections, ending, though often unwittingly, in a comparison with the concrete case and in a brilliantly improvised diagnosis. The feats of such clinicians lie more in the domain of practice than in that of literary exposition. With others, on the contrary, the rigid methodical discipline, the scientifically trained thinking power, is the Ariadne's thread which runs through their clinical activity, their medical art, their scientific work. Bamberger belonged to those happily constituted natures in which both endowments are represented. His special power as a clinician and as a consultant may be briefly summarised in this—that he thought as a *savant* and practised as an artist. Therein lies the secret of his fame as physician, as diagnostician, and as clinical teacher. In the uprearing of the scientific clinical schools of Germany, Bamberger co-operated in the front rank—Bamberger, and Frerichs, who was his nearest intellectual brother among German clinicians. In both, the fine, artistic, plastic skill in the treatment of clinical phenomena was dominated by the anatomical and physiological thinking power which won the admiration of all their professional brethren. Bamberger's work on cardiac ailments and on the derangements of the chylopoietic viscera are unequalled specimens of clinical conception and presentation; while, again, what he was as a teacher is known to the many thousands of his pupils, who admired his centripetal penetration in the most complicated cases, who were awe-struck at his vast experience, who were charmed by the masterly ease and perspicuity of his exposition. Science has lost one of her most outstanding votaries, the Vienna school one of its most shining stars. The name of Bamberger, the clinician, links itself brilliantly to those of Skoda and Oppolzer. With him has one of the lights gone out which helped to diffuse the lustre of the second great school of Vienna. Be honour and undying recognition to his Manes!"

GEORGE BORLASE CHILDS, F.R.C.S. ENG. (EXAM.).

MR. BORLASE CHILDS, until recently a prominent surgeon in the City of London, where he was surgeon-in-chief to the Police Force for forty-one years, and to the City of London Militia (4th Battalion of the Royal Fusiliers) for over thirty years, and for many years surgeon to the Metropolitan Free Hospital and to the Great Northern Railway, died of liver disease on the 8th inst., and was interred at Kensal-green on the 13th inst. His funeral was attended by several personal friends, and his coffin was borne to the grave by sergeants of the City Police Force, more than seventy of whom were present. He leaves a widow, one son in the Colonial Service, and two daughters to mourn their loss.

Mr. Childs was born at Liskeard in 1816, of parents of considerable standing and repute in the county of Cornwall. He received a good classical education at the grammar school of his native town, and was subsequently apprenticed to a successful practitioner, Mr. Vincent, of Camborne, where he had great opportunities for acquiring surgical experience in the treatment of mining accidents. On coming to London he attended the lectures at the Aldersgate School of Medicine, under the Graingers, Pereira, and others, and the practice of the Westminster Hospital. He became a Member of the College of Surgeons in 1838, and was appointed house surgeon of the Margate Seabathing Infirmary. Eight years after this he passed the Fellowship examination at the College, and commenced practice in London, where he attracted the attention of Mr. Coulson, whom he frequently assisted in his larger operations. He quickly gained considerable reputation as a successful lithotomist. When he became surgeon to the Metropolitan Free Hospital he was one of the earliest English surgeons to employ subcutaneous tenotomy for deformities of the foot, even suggesting the advisability of dividing the muscles for spinal curvature. In 1853 he performed what we believe was the first successful ovariectomy, an operation which had been previously many times attempted in both the Metropolitan Free and St. Mary's Hospitals so unsuccessfully that most of the leading surgeons at that period considered it to be an altogether unwarrantable operation. But he will be best remembered as surgeon to the Great Northern Railway and City of London Police, for it was in organising the medical departments of these institutions that he displayed on a larger field the same forethought and ingenuity which secured the success of his surgical operations. Mr. Childs

took great interest in the sanitary and physical well-being of the City policemen. He devoted much thought and attention to the selection of men for the force, and to their proper housing and clothing. He introduced the present police helmet, gaiters, &c., and established the City Police Hospital, which at first met with much opposition, on all sides, but now is highly valued. Besides his talent for organising, Mr. Childs had the tact and temper for ruling and leading bodies of men. He would have made a smart and successful officer in the army, and was always fond of his military duties. His social qualities were of a high order. He was in every sense a gentleman. He took a warm interest in the theatrical profession, wrote several good plays for, and was one of the founders of, the Royal Dramatic College. His open, cheerful, and obliging disposition won the love and esteem of his colleagues, friends, and patients. In consequence of a fall from his horse several years since he became somewhat deaf, but bore his infirmity with wonderful equanimity and resignation. Unfortunately for his friends, about two years ago he was tempted to accept a pension and to retire into private life; otherwise we believe his life might have been prolonged, and his friends and patients would not now have to deplore the loss of his cheerful and useful society.

JOHN CHALMERS, M.D. GLASG.

It is our sad duty to announce the death of Dr. Chalmers, which occurred in his house in Keppel-street, Russell-square, on the 9th inst. He died of septicaemia, caused, in all probability, by infection which was introduced into the system through a suppurating corn.

Dr. Chalmers studied medicine in the University of Glasgow, and there graduated M.B. (with commendation) in 1867. During his student days in Scotland he was obliged, by hard necessity, to earn by literary and other work, unconnected with his professional studies, the means wherewith his personal and college expenses were met. That is a condition of things by no means uncommon amongst the students at Scottish universities. It was probably in the hard conditions of his college life that he acquired, or at all events greatly strengthened, that strong sense of the sacredness of duty and of the need for self-sacrifice which so clearly marked his character, and controlled to a remarkable extent his discharge of his every-day work. After graduating in 1867, Chalmers spent a couple of years as assistant to a medical practitioner in Yorkshire. Just nineteen years ago he came to London and began to practise at Stoke Newington, whence in a short time he removed to the north of London, where he worked until the time of his death. In the early days of his London life he studied at St. Bartholomew's Hospital, and in 1871 took his Doctor's degree at Glasgow. In the metropolis practice soon came to him, and not a few of his patients became his close friends. To those who knew him well there was a peculiar charm in Dr. Chalmers' character. His information was of the most varied kind, and, when he chose, he could talk in a way which made him a delightful companion, for he had a considerable fund of that quiet, somewhat grim humour which is so marked a trait of the Scottish people.

On the professional side of his life Dr. Chalmers showed a wide knowledge of medicine, and was keenly interested in the outcome of modern scientific investigation. This was especially so with regard to various forms of septic infection—as, indeed, was but natural in one who had been a Glasgow student. When we remember that he was a very busy man, carrying on a large general practice, and find that he took time for that kind of work; and when it is known, as we happen to know, that of late years, and up to the time of his last illness, he was engaged in working diligently and carefully at an investigation of various points in connexion with vaccination,—it does seem, in face of all that, hard that a man with tastes of that kind should be cut off to a very great extent from scientific work simply because the conditions of the life of a general practitioner of medicine make it, as a rule, impossible for him to do much more than his daily round of professional work. In that work he spared himself neither day nor night; and in a large number of cases he gave his services as a doctor freely and willingly, knowing full well that for these he could not expect from the poorer class any money payment. It was while attending one of these

cases, about nine years ago, that he poisoned his finger, and from the effects of that unfortunate accident he never perfectly recovered. We never heard that Dr. Chalmers had an enemy; we are certain he never deserved to have one.

J. ALEX. AITKENS, M.R.C.S., L.R.C.P. EDIN.

WE record with great regret the death of Mr. John Alexander Aitkens, of Coventry, from scarlet fever—a sad reminder of the fact brought out by Dr. Ogle that the mortality of medical men from this disease is nearly four times that of the general population at ages over twenty. Mr. Aitkens was the affectionate and beloved son of Mr. John Aitkens, of Lincoln's-inn-fields, and of Twickenham. He was born on the 17th of July, 1853, at Hans-place, Sloane-street, London. He was educated at the Guildford Grammar School, Surrey, under the Rev. H. G. Merriman, D.D., head master. He studied medicine at King's College, and was dresser to the late Sir William Fergusson. Soon after obtaining his qualifications he was appointed house-surgeon to the Coventry and Warwickshire Hospital. He held this post till 1883, and in later years that of honorary surgeon, with great satisfaction to the governing authorities and patients of the hospital. Thereafter he commenced private practice, in which he was engaged when overtaken by his fatal illness. Mr. Aitkens was buried at Brompton Cemetery, on Friday, the 16th inst., where numerous wreaths from Coventry assured his family that they were not alone in their grief and sorrow. We may not quarrel with the fortunes of medical war. We wrestle with disease, and if we are sometimes worsted we have the satisfaction of knowing that we die at our post, and that the wrestlers are oftener victorious than beaten. Mr. Aitkens seemed to have years of life and usefulness before him. But they have been cut short—not, however, before he had acquired the respect and gratitude of those amongst whom he laboured with honour and success. He has left no wife or child to mourn his death, which is intensely felt by his parents and by his two sisters, who lived with him at Coventry.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.B. Examination:—

First Division.—John Hill Abram, University College, Liverpool and London; Samuel King Alcock, St. Bartholomew's Hospital; Evelyn Oliver Ashe, London Hospital; Percy Ashworth, B.Sc., Owens Coll. and Manchester Royal Infirmary; James Thomas Bays, St. Mary's Hospital; Robert Bidd, St. Bartholomew's Hospital; John Rose Bradford, D.Sc., University College; Ernest Henry Brock, Guy's Hospital; Weldon Cragg Carter, University College; Jas. Jackson Clarke, St. Mary's Hospital; Herbert E. Crook, Guy's Hospital; Henry Percy Dunn, B.Sc., Hilarion M. Fernando, B.Sc., and John Lucy Firth, of University College; Alfred George Francis, St. Bartholomew's Hospital; John Edwin Gould, University College; Aldo A. Kanthack, B.A., B.Sc., Liverpool Royal Infirmary and St. Bartholomew's; Priestley Leach, Owens College; A. Lyndon, St. Bartholomew's Hospital; Hy. J. Macevoy, B.Sc., St. Thomas's Hospital; William Job Maillard, Guy's Hospital; Ludovic William Darra Mair, St. Bartholomew's Hospital; William Page May, B.Sc., University College; Geo. Hartley O'Reilly, Northampton General Infirmary and King's College; Alfred Parkin, Guy's Hospital; John Porter Parkinson, University College; Bedford Pierce, St. Bartholomew's Hospital; Wm. Brunwell Ransom, B.Sc., University College; John Lloyd Roberts, B.A., B.Sc., and Harold Kennaway Roper, Guy's Hospital; Harry Arthur Sansom and R. Vaughan Solly, St. Thomas's Hospital; Ernest Henry Starling, Guy's Hospital; Walter Carless Swayne, Bristol Medical School and Guy's Hospital; John Herbert Tonking, St. Thomas's Hospital; James A. Wheeler, Guy's Hospital; Gilbert Benj. Mower White, University College; John Wilkie, B.Sc., St. Bartholomew's and Brompton Consumption Hospitals; Herbert Williams and Wm. Geo. Willoughby, St. Bartholomew's Hospital.

Second Division.—Frank Richardson Blaxall, University College; Arthur Thos. Brown, Guy's Hospital; Edward Vipont Brown, St. Bartholomew's Hospital; Henry Edwd. Leigh Canney, University College; Herbert Edmund Cuff, Guy's Hospital; Horace Duncan, St. Thomas's Hospital and Camb.; Frederick Edge, B.Sc., Owens College and Manchester Royal Infirmary; Harry William Elphick, University College; Arthur Grayling, St. George's Hospital; Edwin Birchall Hastings, University College; John Sydney Hicks, London Hospital; Arthur Hill Joseph, Bristol Medical School and King's College; George Herbert Lang, University College and Manchester Royal Infirmary; Arthur Nicholas Little, Bristol Medical School; Isabella Macdonald Macdonald, London School of Medicine and Royal Free Hospital; Brian Melland, Owens College and Manchester Royal Infirmary; Enoch Moss, Guy's Hospital; Patrick Moriarty

O'Brien, University College, Liverpool; Charles P. Oliver, Charing-cross Hospital; Philip Nicholas Randall, Guy Bellingham Smith, Thomas W. Smith, Guy's Hospital; Geo. W. Sutherland, B.A. Syd., University College, London, and Univ. Edinb.; Henry Symonds, St. Bartholomew's Hospital; Chas. Henry Taylor, King's College; Stuart Alex. Tidey, St. Mary's Hospital; Wm. Elliot Tresidder, Guy's Hospital; Francis W. Tunncliffe, St. Bartholomew's Hospital; Helen Webb, London School of Medicine and Royal Free Hospital; Ernest Wills, University College; Chas. Wilson, London Hospital.

LADY DUFFERIN'S FUND.—A Zenana hospital was opened on the 2nd inst. at Quetta in Beloochistan.

The memorial stone of the Blackheath and Charlton Cottage Hospital was laid on the 10th inst. by Lady Maryon-Wilson.

The widow and family of the late Mr. G. W. Petter propose to endow to his memory a ward in the North Devon Infirmary with £100 a year. The deceased was a native of Barnstaple.

QUEEN'S COLLEGE, CORK.—The following gentlemen have been awarded scholarships in the Faculty of Medicine:—Third year: James B. Moore, Michael Toomey; exhibitors, E. V. Eames, Martin J. D'Arcy. Fourth year: Anatomy, Physiology, and Surgery—John Hennessy.

THE NEW WATER-SUPPLY, LIVERPOOL.—The Chairman (Alderman Bower) stated at the meeting of the Water Committee held on Monday that the works at Vyrnwy were approaching the point of impounding the water, and the advantages of their many years of work would now be seen.

ST. GEORGE'S HOSPITAL.—The following scholarships have been recently awarded:—£125 Scholarship, open to the sons of medical men, to Mr. A. Russell Rendle; £85 Scholarship, for Cambridge men who have passed the 2nd M.B., to Mr. G. E. Hale; £50 Scholarship, open, to Mr. E. Little.

PROPOSED THAMES PRESERVATION SOCIETY.—In view of the constant attempts made by riverside towns on the Thames to drain down to the river, we understand that it is in contemplation to organise a Thames Preservation Society, to consist of all riparian owners and all residents in the metropolis who desire that the river shall be maintained, not only free from contamination as regards the water, but also that the air should be pure likewise. The objects of the Society will be to watch every attempt to injure the river as a health resort.

THE SANITARY INSTITUTE.—At an examination held on Nov. 8th and 9th, seventy-four candidates presented themselves—fifteen as local surveyors, and fifty-nine as inspectors of nuisances. Of the former class six, and of the latter thirty-one, were certified to be competent to discharge the duties of their respective offices.—At a meeting of the Council of the Institute, held on the 14th inst., Sir Douglas Galton, K.C.B., F.R.S., in the chair, Earl Fortescue, Dr. B. W. Richardson, F.R.S., Sir T. Spencer Wells, and eleven other members and Associates, were enrolled, and further applications were read.

GENERAL HOSPITAL, CROYDON.—Sir Thomas Edridge presided at the annual meeting of the governors, held at the Town Hall last week. The report of the committee of management stated that 7450 cases had been treated during the year, an excess on the previous year of 626. The financial statement, compared with that of 1887, exhibits a falling off in the receipts from annual subscriptions and the Hospital Sunday and Saturday collections. During the year several legacies were received, and thus the income of the hospital had been maintained. The total of the invested funds is now £11,113 9s. 9d.

REQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. James Brown McCulloch, of Dechmont Lodge, Bothwell, has bequeathed to the Royal Infirmary, and Western Infirmary, Glasgow, £500 each.—The Tong Street Concert Committee has handed over to the Joint Hospital Fund, Bradford, £35 5s. 5d., the proceeds of a recent concert.—A bazaar held at Trentham in July last, on behalf of the Children's Hospital, North Staffordshire, produced £23 4s. 9d.—Miss Hewitt has given £200 in liquidation of last year's deficiency on the funds of the Lytham Cottage Hospital, and also for providing funds for the complete repainting and redecorating the institution and other exceptional outlay.—Mr. Gervas Taylor has given £50 to the Meath Hospital, Dublin.

MIDLAND MEDICAL SOCIETY.—The inaugural meeting of this Society was held at the Grand Hotel, Birmingham, on Wednesday, Nov. 14th, when an address on "Plastic Surgery" was delivered by Sir William Mac Cormac. The president, Mr. Hugh Ker, occupied the chair, and there was a large attendance of members and others from all parts of the Midlands.

NORTH STAFFORDSHIRE INFIRMARY.—Mr. T. B. Udall presided at the annual meeting of this institution, held on the 15th inst. The income for the year had been £9759, against £8838 in the previous twelve months. The ordinary expenditure had been £8753. From the report of the trustees of Sir Smith Child's North Staffordshire Convalescent and Incurables Fund, it appears that 87 patients, against 122 last year, had been sent to the convalescent institutions during the year.

CARNARVONSHIRE AND ANGLESEY INFIRMARY.—The governors of this institution held their annual meeting on the 8th inst. The statement of accounts was read by the secretary, and showed that the total receipts for the year were £884 14s. 2d., a decrease of £117 4s. 3d. upon 1887. The expenditure was £807 17s. 6d., a slight increase on the previous year. The sum of £895 13s. 6d. had been received from the committee of the Penrhyn Memorial Fund, and expended on the building. The medical report stated that 1311 out-patients and 59 in-patients were admitted during the year—a decrease, respectively, of 844 and of 10 on last year.

SANITARY RESPONSIBILITY OF TENANTS.—At the instance of the sanitary inspector of the burgh, thirty householders were prosecuted on the 2nd instant, at a special diet of the Coatbridge Police-court, for allowing the courts, areas, and conveniences which they use and have access to remain in a dirty and unwholesome condition. The defendants, without exception, denied the charge, and contended it was not their duty to keep the place clean, and, if it were, it was impossible, as it was a public court. But, as was pointed out, according to the Act of Parliament, it is the duty of the tenant, and not the landlord, to keep the premises clean. The defendants were fined 5s. each, and ordered to keep the court clean.

UNIVERSITY OF BRUSSELS.—At the examination for the M.D. degree, which commenced on the 6th inst., eleven candidates presented themselves, of whom six failed to satisfy the examiners, and the following five were admitted to the degree:—1. Jehangir J. Cursetji, L.M. and S. (Bomb. Univ.), L.R.C.S., L.R.C.P., L.M. Edin., L.F.P.S. Glasg., of Bombay. With great distinction. 2. John Girling, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of York. With distinction. 3. Alexander L. Achar, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of London. 4. William Habgood, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of London. 5. Edgar Powell, M.R.C.S. Eng., L.R.C.P. Lond., of London.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A special meeting of the Birmingham and Midland branch of the above Society was held on Thursday, Nov. 8th, at the Council House, Birmingham, to consider the subject of tenure of office of medical officers of health. There were present Dr. B. Hill (Birmingham), Dr. A. Hill (Birmingham), Dr. Fenton (Coventry), Mr. H. May (Aston), Mr. Perks (Burton-on-Trent), Dr. Page (Redditch), hon. sec., and others. The immediate cause of the meeting was the great injustice that had recently been perpetrated at Ruthin in the case of Dr. Lloyd Roberts, who had held the office of medical officer of health for twelve years, during which time no complaint was laid against him. He resigned for the technical purpose of allowing his authority to acquire part of his salary (£25) from the Local Government Board, fully expecting to be re-elected, when the Town Council turned round and elected a local man. After some discussion on the injustice of the present method of tenure of office and the public health and professional bearings of the above case, on the motion of the President (Dr. B. Hill), seconded by Dr. Page (hon. sec.), the following resolutions were unanimously carried:—"1. That the Birmingham and Midland Branch of the Society of Medical Officers of Health desires to call the attention of the Local Government Board to the case of Dr. Lloyd Roberts, and, at the same time, to express the hope that the Board may in the near future use its influence, to give security of tenure of office to medical officers of health. 2. That this

Branch considers that, from the fact that the resignation of Dr. Lloyd Roberts' long tenure of office was only for a technical purpose, no other medical man should have applied for the post, and that such application on the part of Dr. Davies Jones is a breach of professional ethics. 3. That these resolutions be communicated to Drs. Lloyd Roberts and Davies Jones. *THE LANCET*, the *British Medical Journal*, the *Denbighshire Free Press*, and the *Birmingham papers*."

MANCHESTER AND SALFORD MEDICAL CHARITIES. The annual meeting of the subscribers to these charities was held on the 19th inst., when the committee presented a favourable report of the work done during the past year. The total sum raised this year was £8019, as against £7770 collected in the preceding twelve months. During the past nineteen years the sum of £138,227 had been raised for the local hospitals and dispensaries through this movement. At the conclusion of the meeting it was announced by the secretary that the collections in 1889 would be made on the following dates:—Hospital Sunday, February 10th; Hospital Saturday, February 16th.

CHARING-CROSS HOSPITAL.—The triennial festival dinner of this hospital was held in the Whitehall Rooms of the *Hôtel Métropole* on Wednesday, the 21st inst. The Right Hon. the Earl of Derby, K.G., was in the chair, and besides most of the members of the staff of the hospital many of those interested in its success were present, to the number of 180. After giving the usual toasts of the "Queen and the Prince and the Princess of Wales," the Chairman proposed the "Army, Navy, and Reserve Forces," to which Lieut.-General Sir R. Biddulph and Captain Probyn replied, the latter referring to the services which had been rendered to the Volunteer organisation by a former member of the Charing-cross staff, Mr. Cantlie. The Chairman proposed the toast of the evening, "Prosperity to Charing-cross Hospital," and mentioned improvements which had been made in the building during the past three years—viz., the opening of a special accident ward, the children's ward, and new operating theatre. He also referred to the enlargement of the medical school, rendered necessary by the increase in the number of students, and to the change in the nursing arrangements now being carried out in the hospital. The receipt of subscriptions and donations to the extent of £3250 was announced for the evening. The treasurer of the hospital, Mr. John B. Martin, replied. Mr. Robt. Stewart proposed the "Medical Staff," to which Dr. A. J. Pollock, the senior physician, replied.

MEDICAL NOTES IN PARLIAMENT.

The Committee on Smeating.

In the House of Lords on the 20th inst., Earl Brownlow was added to this Select Committee.

Infant Mortality.

In the House of Commons on Thursday, the 15th inst., Mr. Picton asked the President of the Local Government Board if he could give any further information as to the probable date of the issue of the Departmental Report on Infant Mortality, which was stated to be in the printer's hands early in July.—Mr. Ritchie said he was afraid he could not give the hon. gentleman a very satisfactory answer. It was true the report was in the hands of the printers early last July, but after being printed it had to undergo very careful revision, which, on account of the tables and figures, was a prolonged process. The revision was not yet completed, but it was being proceeded with as rapidly as possible, and he hoped the report would be issued without undue delay.

Broadmoor Criminal Lunatic Asylum.

On the vote of £32,802 for the Broadmoor Criminal Lunatic Asylum, Mr. Labouchere expressed his gratification that this vote was reduced from £36,549; but still the asylum was, he said, a nest of jobbery, as was shown by the fact that there were 151 officials to look after 541 criminal lunatics. The chaplain was paid £400, and also received £390 retired pay as an ex-chaplain and instructor in the Navy.—Dr. Farquharson said the inmates required extra supervision both as criminals and as lunatics. In this asylum there was a good deal of valuable clinical material wholly neglected. The connexion of crime with lunacy might be studied with advantage.—Mr. Stuart Wortley said there was an independent board of unpaid managers, and the Lunacy Commissioners always reported favourably upon the management of this asylum. The Committee divided, and the numbers were—for the amendment, 80; against, 177; majority, 97. The vote was then agreed to.

Typhoid Fever in Dublin Barracks.

On the 20th inst., Mr. Stanhope, in answer to Mr. Adjlison, said that four officers had been ill from enteric fever, believed to have been contracted in Dublin Barracks, but only one had died. There were serious difficulties in these barracks as to the disposal of the sewage, which difficulties could scarcely be overcome until the sewage arrangements of the city were improved. The sanitary state of the Royal and Wellington Barracks was a source of great anxiety, and he had determined to

institute a wholly independent inquiry into it.—Mr. Chaplin inquired whether reforms would not be extended to all barracks.—Mr. Stanhope thought it desirable that all barracks should be included; but he would like first of all to get the most important cases.

Bow-road Cemetery.

Mr. Matthews informed Mr. Cunningham-Graham that irregularities in this case had not been sufficiently brought home to warrant a prosecution, but the Inspector had been ordered to satisfy himself that the orders in council were obeyed in all particulars.

Pleuro-pneumonia.

Lord Lewisham, in answer to Dr. Farquharson, said that quarantine was rejected by the Departmental Committee on this subject, and that the travelling inspectors were directed to use their best endeavours to trace the origin of any outbreak. Compensation could only be given with the sanction of Parliament.

Surgeons employed on Mail Steamers.

On Thursday, Mr. Richard Power asked the Postmaster-General whether he had issued written instructions to the Orient and the Peninsular and Oriental Companies, carrying Her Majesty's mails under contract to Australia, directing that no surgeons shall be employed on the mail steamers who are not first approved by him, and that their age shall not be less than twenty-three or more than thirty years. If he will state how the age and qualifications of the surgeon affect the proper carriage and custody of the mails. What benefit the travelling public will derive from a rule providing that the surgeons on mail steamers shall not be more than thirty years of age. And whether he has issued the same instructions to other ocean-going mail companies; and, if not, can he explain for what reason.—The Postmaster-General, in reply, said the contracts recently entered into between the Post-office and the two companies mentioned by the hon. member require them to carry, as a part of their ship's complement, a competent surgeon, who, according to the usual custom in such cases, is appointed subject to the approval of the Postmaster-General. This approval is given under certain long-established conditions as to fitness, and he had found that those conditions were communicated to the Orient Company on the commencement of their contract in February last. The other company, being old contractors, were already aware of the Post-office regulations on this point. One of the conditions laid down is, that the candidate for employment as a surgeon shall not be less than twenty-three years of age, nor more than thirty years of age. The rule is a general one, and was not laid down with reference to any particular contract. He apprehended that any arrangement affecting the health and efficiency of the ship's company affected the proper carriage and custody of the mails.—Dr. Clarke said he should like to know whether the Postmaster-General intended to carry out the rule, and if he thought that medical men over thirty years of age were incompetent to carry out the duties. Would he give us some reasons why the Post-office had laid down this rule, and why they thought that thirty years of age was a period after which a medical man was not able to practise his profession in order to keep the crew of a ship in health.—The Postmaster-General said he did not see any reason to depart from the rule laid down.—Dr. Clarke said that on the estimate he would raise this question, and move the reduction of the Postmaster-General's salary.

The Royal College of Surgeons and the Supplemental Charter.

On Monday next Lord Randolph Churchill will ask the First Lord of the Treasury whether he will lay upon the table a copy of the statements made by the deputation of the Members of the Royal College of Surgeons of England to the Lord President of the Council on Nov. 11th, 1887, upon the subject of the supplemental charter since granted to the said College, and of all documents and correspondence relating thereto lodged in the Privy Council Office, including the petition to Her Majesty, signed by 466 members of the College.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALLINGHAM, HERBERT WM., F.R.C.S., Surgeon to the Great Northern Central Hospital, and Demonstrator of Anatomy at St. George's Hospital, has been appointed Assistant Surgeon to St. Mark's Hospital for Fistula.

DRAKE, J. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of the Halberton District, Tiverton Union. GOODALL, D. H., F.R.C.S., late Hon. Assistant Surgeon to St. Mark's Hospital for Fistula, has been appointed Hon. Surgeon, vice William Allingham, F.R.C.S. resigned.

JACOB, E. L., B.A. Lond., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Surrey United Sanitary District.

KITE, EDWIN W. D., M.B. Dur., M.R.C.S., L.S.A., has been appointed Obstetric and Ophthalmic House Surgeon to the Queen's Hospital, Birmingham, vice J. J. Blurton, M.B. Dur., M.R.C.S., resigned.

LEIGH, RANDLE, B.Sc. (Lond.), M.R.C.S., has been appointed Chloroformist to the Liverpool Royal Infirmary, vice A. W. Collins, M.B., M.R.C.S., resigned.

MORRIS, CHARLES ARTHUR, M.B., B.Ch., has been appointed Pathologist to the Chelsea Hospital for Women, vice Dr. Burnet, resigned.

PARKER, T. R. B., M.D. Univ. St. And., M.R.C.S., L.S.A., has been appointed Medical Officer of the 9th District, Croydon Union.

PEARSE, FRANK, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Colyton District, Axminster Union.

PRIEST, J. DAWER, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Urban Sanitary District of Waltham Holy Cross.

WHATELEY, JAMES, M.B., B.S. (Lond.), has been appointed Senior House Surgeon to the Blackburn and East Lancashire Infirmary, vice G. T. Gifford, M.R.C.S., resigned.

YARR, M. T., L.R.C.S. (Irel.), L.M.E.Q.G.P. (Army Medical Staff), has been appointed Acting Superintendent of the Government Civil Hospital, Hong-Kong, China, vice C. J. Wharry, retired.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Acting Surgeon.
BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House Surgeon. Salary £30 per annum, with board, washing, and lodging.
BOROUGH ASYLUM, Birmingham.—Resident Clinical Assistant, without salary.
BOROUGH OF BRADFORD FEVER HOSPITAL.—Resident Medical Superintendent. Salary £150 per annum, with board and residence.
CHELSEA HOSPITAL FOR WOMEN, Fulham-road, London, S.W.—Three Clinical Assistants. The fee is three guineas for a period of three months.
HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water.—Senior Assistant Medical Officer. Salary £250, with board, lodging, and washing. Also a Junior Assistant Medical Officer. Salary £120, with board, lodging, and washing.
HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Surgeon. Also an Assistant Surgeon.
LONDON LOCK HOSPITAL.—Surgeon to the Out-patients.
LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Registrar and Chloroformist. Salary £50 per annum.
LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—House Surgeon.
LUTON FRIENDLY SOCIETIES' MEDICAL INSTITUTE.—Medical Officer. Salary £200 per annum, with residence.
NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, E.—Junior House Surgeon. Salary £30.
ROYAL HANTS COUNTY HOSPITAL, Winchester.—House Surgeon. Salary £100 per annum, with board and lodging.
ROYAL SOUTH LONDON DISPENSARY, St. George's-cross, Lambeth, S.E.—Surgeon to the Walworth District. Honorarium £20 per annum.
STAFFORDSHIRE GENERAL INFIRMARY.—Assistant to the House Surgeon. No salary, but board and lodging.
SUNDERLAND INFIRMARY.—House Physician. Salary £80, rising £10 annually to £100, with board and residence.
THE SAMANA AND SANTIAGO RAILWAY COMPANY, 175, West George-street, Glasgow.—Medical Officer to the Company at Sanchez, Bay of Samana, Santo Domingo. Salary £200 per annum, with residence and expenses paid to destination. Engagement for two years.
UNIVERSITY OF EDINBURGH.—Examiner in Medical Jurisprudence. Salary £75 a year, with an allowance of £10 a year for travelling and other expenses, in the case of an Examiner not resident in Edinburgh.
WESTMINSTER HOSPITAL, Broad Sanctuary, Westminster, S.W.—Curator.

Births, Marriages, and Deaths.

BIRTHS.

ADAM.—On the 15th inst., at Malling Place, West Malling, Kent, the wife of James Adam, M.D., of a son.
CLARK.—On the 14th inst., at Rahere, Brunswick-road, Gloucester, the wife of Oscar Clark, M.A., M.B. Oxon., of a daughter.
GANDY.—On the 10th inst., at the Hill Top, Upper Norwood, the wife of W. Gandy, M.R.C.S., of a son (stillborn).
HARLOCK.—On the 15th inst., at Singleton, Sussex, the wife of Harry Harlock, L.R.C.P. Lond., M.R.C.S., of a daughter.
SMYTH.—On the 13th inst., at Castleacre, Adelaide-road, Brockley, S.E., the wife of F. Sydney Smyth, F.R.C.S., of a son.
WALKER.—On the 15th inst., at Stallham, Norfolk, the wife of Norman Hendrie Walker, M.B., of a daughter.

MARRIAGES.

HUMPHRY—ATHERTON.—On the 2nd ult., at Cliftonville, Mackay, Queensland, Ernest Humphry, M.R.C.S., L.R.C.P., of Townsville, Queensland, eldest son of Frederick A. Humphry, F.R.C.S., Marine-parade, Brighton, to Adelaide M. Atherton, eldest daughter of Edmund Atherton, of Cliftonville, Mackay, Queensland.
LEIGH—WALES.—On the 20th inst., at St. Edmund's, Downham, Norfolk, by the Rev. A. S. Latter, assisted by the Rev. Canon Beechey, A. H. Leigh, of Shortlands, Kent, to Edith Mary, eldest daughter of Thos. Garneys Wales, of Downham.
SINGLETON—PHILLIPS.—On Sept. 20th, at Trinity Church, Adelaide, by the Rev. R. Reid, Francis Elliot-Corbet Singleton, L.R.C.P., L.R.C.S. Edin., youngest son of the late Francis Corbet Singleton, of Glenelg, to Edith Margaret, third daughter of James Phillips, North Terrace.

DEATHS.

BEECROFT.—On the 20th inst., at Eye, Northamptonshire, John Beecroft, M.R.C.S., J.P., aged 64.
BUTTS.—On the 10th inst., at the residence of his son-in-law, Vaynor House, Breconshire, Harry Grosvenor Butts, M.D., of The Drill, and Georgetown, Demerara, aged 63.
JACKSON.—On the 19th inst., at Jesmond, Edward Jackson, M.B. Lond., M.R.C.S., aged 62.
O'MEARA.—On the 16th inst., at Sutton Bridge, Lincolnshire, John Brett Johnstone O'Meara, L.R.C.P.E., L.R.C.S.E., youngest son of the late Rev. Eugene O'Meara, Rector of Newcastle, Co. Dublin, aged 35.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, November 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
SOCIETY OF ARTS.—8 P.M. Capt. W. de W. Abney: Light and Colour. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. George Stoker: On a case of Goitre, illustrating a Theory in reference to the Function of the Thyroid Gland.—Mr. J. Astley Bloxam: Two cases after Excision of Goitre.—Dr. Beevor: Case of Polio-myelitis from Injury.—Dr. Hadden: Case of Neuro-muscular Irritability.—Mr. H. Allingham: Case of Resection of Inferior Maxillary Joint for Ankylosis.—Dr. Campbell: A case of Erythema Gangrenosum.—Mr. A. B. Barrow: Case of Ectopia Vesicæ after Operation. And other cases.

Tuesday, November 27.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.
 Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M.; Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.
ANTHROPOLOGICAL INSTITUTE OF GT. BRITAIN AND IRELAND.—8.30 P.M. The President will exhibit a Gold Breastplate from an Ancient Peruvian Grave. Rev. Benjamin Danks: Marriage Customs of the New Britain Group.—Mr. Osbert H. Howarth: The Survival of Corporal Penance.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. William Robert Smith: The Etiology of Puerperal Fever.—Dr. Samuel West: Acetonuria and its Relation to Diabetic Coma.

Wednesday, November 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
HUNTERIAN SOCIETY.—8 P.M. Dr. Davies: A case of Tumour of the Tongue.—Mr. Jonathan Hutchinson: Affections allied to Raynaud's Disease.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Conversazione.
SOCIETY OF ARTS.—8 P.M. Col. Gouraud: The Phonograph.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens will be exhibited by the President, Dr. Granville Bantock, Dr. Mansell Moullin, and others. Dr. James Oliver: Encysted Serous Peritonitis (pelvic in origin). Council 8 P.M.

Thursday, November 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, November 30.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, December 1.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, NOVEMBER 22ND, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks as above.
Nov. 16	30.08	S.W.	59	57	..	61	52	..	Overcast
" 17	30.08	N.W.	51	47	..	50	39	..	Clearing
" 18	30.02	W.	59	49	..	55	46	..	Cloudy
" 19	29.95	W.	54	51	..	50	40	..	Cloudy
" 20	29.76	N.W.	46	45	..	51	45	..	Cloudy
" 21	30.13	N.W.	45	41	..	51	41	..	Bright
" 22	30.19	W.	50	47	..	54	43	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

THE VIRTUES AND REMUNERATION OF ASSISTANTS.

Janus.—Our correspondent is very much exercised with an advertisement in which a principal wanted an assistant with a great combination of virtues—experience, gentlemanliness, Protestantism, total abstinence, churchmanship, power to disperse, to keep books, ability to attend "a little midwifery," to ride, to number thirty years—for the modest sum of £20 a year, in-door, as a commencing salary. We must admit that half of these virtues would be ill requited with twice the salary mentioned. And we are persuaded that it is good policy to pay assistants well. But the times have been hard, and we should have to know more of the *res domi* of the principal himself before being too severe on his advertisement.

Enquirer.—It is neither customary nor legal to charge for such certificate.

J. B. should consult his medical attendant.

P. H. W.—They are sufficient.

"THE METROPOLITAN HOSPITAL"—A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Permit me to make a correction in my last week's letter, and voluntarily express regret for making a statement which is not entirely accurate. The sentence "by underselling it in every item of payment" would be more accurately expressed thus: "By the adoption of a generally lower scale of comparative charges." This correction modifies but does not, however, vitally affect, my contention.

I am, Sirs, yours faithfully,

Dalston, Nov. 19th, 1888.

FREDK. E. COCKRELL, Jun., M.R.C.S.

CANCER.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if any of your readers can give me information on the question as to the extent to which Jews are more free from cancer than their fellow men? That they do not enjoy an entire immunity from it I can well believe, but am not aware of the limit or proportion of such immunity as they do appear to possess. Is it at all believed that their abstinence from pork has any influence upon this peculiarity?

I am, Sirs, yours faithfully,
P. J.

Nov. 15th, 1888.

MYOMA OF THE UTERUS.

To the Editors of THE LANCET.

SIRS,—In the report of the November meeting of the Obstetrical Society of London, published in THE LANCET of Nov. 17th, I note an error, due to myself, the reporter. In reply to Dr. Herman, I did not say that "the smallest interstitial fibroids were the purest *fibromata*," as appeared in the above report. I said the smallest fibroids were the purest *myomata*.

I am, Sirs, yours truly,

Granville-place, W. E. Nov. 23th, 1888.

ALBAN DORRIS.

DISEASES AMONGST WORKERS IN A RICE FACTORY.

DR. T. SPASSKI, District Medical Officer of Ijibski, in Russia, a locality where there is a large greasing manufactory, has published some elaborate observations on the effects of the various kinds of work on the employes. He found two classes of disease especially prevalent—intermittent fever and chest affections, especially phthisis. The first class constituted 18 per cent. of the total sickness, and the second 22 per cent. It was also noticeable that fever occurred principally among the women, and phthisis chiefly amongst the men. Plants and elevations are given by Dr. Spasski, which show that the workshops are raised above the level of the ground, which is damp and malarious. The men working in them are therefore less subjected than their wives, who remain at home in damp cottages, to malarial influences; while, on the other hand, they are exposed by the nature of their employments to other affections, arising chiefly from the cramped positions of the body and from the dust and small particles which necessarily fly about in the immediate neighbourhood of their work. More than one-third of the operatives suffered from bronchial catarrh, and 14.8 per cent. from phthisis. Amongst this latter class of cases, those who worked amongst dust were affected twice as much as those who were engaged in more cleanly occupations, the metal and mineral dust proving much more hurtful than wood dust. Those who worked with the file and at the grindstone were especially affected. The author presents charts showing the effect of the different kinds of work on the stature and chest measurement of the workmen. The chest seems to be especially narrow and small amongst the locksmiths who have much filing, the average difference at various ages between their chest measurement and that of the firemen being about three millimetres.

Mr. Pinner's communication has been received.

Mr. Foulerton (Chatham).—Next week.

CIRCUMCISION.

To the Editors of THE LANCET.

SIRS,—As there is usually a great deal of trouble in the dressing after a circumcision in a child, perhaps a description of the method I have lately adopted and found very successful may be of use to some of your readers, should you think it worth inserting in your widely read journal.

I pass a director under the prepuce as far as the corona glandis, and then pass a pointed curved bistoury along it, and divide the prepuce; then cut off the two triangular flaps thus formed, dividing the skin and mucous membrane together. All bleeding points are stopped by torsion. I use no sutures whatever, the skin and mucous membrane uniting quite well without any. I then guard the penis by a wire guard, similar to a vaccination shield, but larger and three-cornered, one corner passing under the scrotum, and the base being upwards. There is a tape attached to each upper corner to tie round the waist, and double tapes at the lower corner to tie round each leg. I use no dressing, but carbolic oil painted on the wound with a camel hair brush. The patient gets up the same day, or as soon as he feels quite recovered from the effects of the anæsthetic. I am, Sirs, yours truly,

Ipswich, Nov. 12th, 1888.

JAS. NORMAN VOGAN.

"THE PUNCTURE OF A VEIN IN HYPODERMIC MEDICATION."

To the Editors of THE LANCET.

SIRS,—The case related by Mr. Craig Ballant in THE LANCET of Nov. 10th is very interesting. But was the supposed morphia solution tested? The symptoms described resemble more those of some of the other alkaloids of ammonia, or of strychnia; and it seems unlikely that the mere fact of direct injection into a vein should produce symptoms so unlike those ordinarily exhibited by morphia.

I am, Sirs, yours truly,

Woolwich, Nov. 19th, 1888.

SIDNEY DAVIES, M.A., M.B. Oxon.

PRURITUS.

To the Editors of THE LANCET.

SIRS,—Can any fellow practitioner kindly suggest anything reliable in a hitherto intractable case of pruritus vulvæ associated with eczema of the thigh? The lady is about the climacteric period, and otherwise healthy; but her sufferings night and day are intolerable, and have been so for months. In vain have been tried solutions of nitrate of silver, ol. menth. pip., ext. conif., sodii hypostiph., hydrarg. bichlor., &c., as also alkaline ointments, quinine ointment, ungt. potass. sulphurata, potass. cyanill., iodine, &c.

I am, Sirs, yours faithfully,

Manchester, Nov. 6th, 1888.

M.B.R.

ARTHRECTOMY and ARTHROTOMY.

To the Editors of THE LANCET.

SIRS,—In your issue of to-day's date the treatment of joint disease by erosion is fully discussed. Would it not be better to give arthrotomy as a synonym instead of arthrectomy? We have nephrotomy and nephrectomy, colotomy and colectomy, and by parity of reasoning arthrotomy is synonymous with erosion, and arthrectomy with excision.

I am, Sirs, yours obediently,

Boundary-rd., N.W., Nov. 17th, 1888. RICHARD NEALE, M.D. Lond.

"HOT MOIST FOMENTATIONS."

To the Editors of THE LANCET.

SIRS,—Dr. Britton's note on the above in your issue of the 27th ult. reminds me of a "wrinkle" I got many years ago from a washerwoman whose daughter had peritonitis. It was this. She made a flannel petticoat hot before the fire, and then folded it. She then ironed it with a hot flat iron, and again folded it, continuing the process each time until the proper size was obtained. Then she sprinkled the side to go on the skin with boiling water, giving a final iron. If the thing is done skillfully, it is too hot to apply, except with care. Advantages: Retains the heat, is light, inexpensive, and clean, and does not damp the clothes.

I am, Sirs, yours faithfully,

November, 1888.

D. H. G.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—Allow me to correct an error in your report of the meeting of the Ophthalmological Society on Nov. 8th. In connexion with Mr. Swanzy's paper I mentioned a case in which conjugate deviation of the eyes to the right had existed during life. Your report runs: "At the post-mortem it was found that the left internal rectus was absent, the right being exceedingly ill-developed." Your reporter could scarcely imagine that defect of both internal recti would explain conjugate deviation. What I really said was: "At the post-mortem it was found that the right internal rectus was absent, and the left external rectus exceedingly ill-developed."

I am, Sirs, yours faithfully,

Nov. 17th, 1888.

J. B. LAWFORD.

A CAUTION.

To the Editors of THE LANCET.

SIRS,—I would caution the profession against a man calling himself Dr. Stewart of Inverness, speaking rather broad Scotch, who says he has been a surgeon on board a Liner steamboat, and has been trying to get a situation in London, but now making his way to Portsmouth to his friend, Dr. W—. I find he is a begging-letter impostor and a vagabond, and was had up the other day at Marylebone. He is tall, thin, has fair moustache curled up at each end, and states he is a M.B. and C.M. of Aberdeen or Edinburgh.

I am, Sirs, yours faithfully,

Godalming, Nov. 20th, 1888.

J. F. MILNER.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.**DIPLOMA OF FELLOW.****FIRST EXAMINATION.—ANATOMY AND PHYSIOLOGY.****PHYSIOLOGY.**

Nov. 8th, 1888, from 3 to 6 P.M.

(At least three of the four questions must be answered.)

1. State the mode of preparation of and tests for hæmoglobin. What are the modifications resulting from the action of acids and alkalies upon it? What is the evidence that bile pigments are related to hæmoglobin? 2. Explain the phenomena of the gas interchanges in external and internal respiration. 3. Describe the microscopic structure of the mammary gland, and the modifications which it undergoes during lactation. Name the constituents, organic and inorganic, of milk. What is the origin of the organic constituents? Give the evidence on which your answer is based. 4. Describe the structure of the scala media of the cochlea. What views are held with regard to its functions?

ANATOMY.

November 8th, 1888, from 11 A.M. to 2 P.M.

(At least three of the four questions must be answered.)

1. Describe the sixth rib and its costal cartilage; name the structures attached to, and in relation with, this rib on the left side. 2. Describe the Eustachian tube, giving its direction, connexions, and relations, and its arterial and nervous supply. Give also an account of its development. 3. Describe the adductor magnus, its attachments, the arrangement of fibres, its relations, nerve supply, and actions. 4. Describe the membranes of the spinal cord, and the means by which the cord is held in its place within the vertebral canal.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords ready means of finding any notice, but is in itself an additional advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls, throughout the United Kingdom and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 66, R. de Caumartin, Paris.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. G. H. Savage, London; Dr. Douglas Powell, London; Professor Brown, London; Dr. Whipple, London; Mr. E. Davy, London; Mr. Hare, Manchester; Dr. Bell Taylor, Nottingham; Mr. E. Owen, London; Dr. H. Shaw, Gloucester; Mr. W. C. Jeffries, London; Mr. John Beckton; Mr. G. Palmer, Ararat, Vic.; Mr. A. L. J. Smith, New York; Mrs. Wilcock, Plymouth; Mr. Gilroy, Waverbeck; Mr. M. de Meyer, London; Dr. Hale, Brondesbury; Mr. Haalam, Birmingham; Mr. Daglish, Milton; Mr. St. Dalmas, Leicester; Mr. J. H. Ashton, Richmond; Mr. Doran, London; Mr. Twynham, Lydney; Dr. Neale, Hampstead; Mr. Poland, London; Dr. Edmonds, Aberdeen; Mr. P. Thornton, London; Mr. Lawford, London; Mr. H. W. Allingham, London; Dr. Heron, London; Mr. Cockell, Dalton; Mr. Smith, Leeds; Mr. Woakes; Mr. Gilroy, Dumfries; Messrs. Richardson and Co., Leicester; Dr. S. Gibbon, London; Mr. Corner, London; Mr. De Gruyther, Leytonstone; Mr. O. Williams, Norwich; Mr. Lawson Tait, Birmingham; Dr. L. W. Marshall, Nottingham; Dr. S. Davies, Woolwich; Mr. Hopkirk, London; Dr. Wallace, Colchester; Mr. F. Pope, Leicester; Mr. Michelmore, Tiverton; Mr. Milner, Godalming; Mr. Robinson, Sunderland; Mr. Ford, Devonport; Mr. Laban, West Bromwich; Dr. Madden, Dublin; Dr. Ridge, Enfield; Mr. C. D. Roe, London; Mr. G. A. Wright, Manchester; Dr. Shroff, Bombay; Mr. L. Humphry, Cambridge; Mr. W. O. Travis, London; Mr. Elliot, Ottery St. Mary; Mr. Croft, London; Surgeon-Major Ince; Messrs. Sharp and Co., Glasgow; Mr. Rossell, Beckley; Mr. Desmure; Mr. White, Haughey; Mr. J. M. Cotterill, Edinburgh; Messrs. Hopcroft and Co.; Mr. J. B. Milne, Dewsbury; W. P.; Observer, Pittsburg; Stoke Newington; Reincrag, Clapham; General Infirmary, Staffs; Leeds General Infirmary; Climax; A Senior Assistant Med. Off. in a County Asylum; W., London; J. B., Bournemouth; Enquirer, Infirmary, Glam.; Student; Practice, London; A. B.; Liverpool; Principal, Brighton.

LETTERS, each with enclosure, are also acknowledged from—Mr. Day, Sheffield; Mr. Holt, Lancashire; Miss Hunt, Dublin; Messrs. Condy and Mitchell, London; Mr. J. Carter, London; Dr. Davies, Ebbw Vale; Dr. Halpin, Brighton; Mr. Turner, Hastings; Messrs. Dawson Bros., Montreal; Mr. Thompson, Manchester; Messrs. Rowntree and Co., York; Mr. Walker, Stalham; Mr. Barker, London; Messrs. Stent and Sons, Guildford; Mr. Heywood, Manchester; Mr. Cockell, West Hartlepool; Mr. Greenwood, Staffs; Dr. Philipps; Messrs. Squire and Son, London; Dr. Taylor, Huddersfield; Messrs. Godfrey and Cooke, London; Mr. Thomas, Swansea; Mr. Foote, Cirencester; Mr. James, Pontypool; Messrs. Warren, Bristol; Messrs. Potter and Clarke, London; Dr. Robinson, London; Messrs. Eason and Son, Dublin; Mr. Christie, Luton; Mr. Gardiner, Dulwich; Virtus, London; E. P., Bournemouth; Bristol General Hospital; Springfield House Asylum; Bristol Dispensary; Medicus, London; Hon. Sec., Stoke Newington; M.B., Lewisham; H. K., London; Smedley's Hydropathic Co.; Domum, London; L.S.A., Leeds; Marlboro', London; Staffs General Infirmary; G. H. Y.; Urban, London; Alpha, London; The Union, Winchcombe; R. H. S., London; Medicus, Margate; Lady Superintendent, Worcester; Dr., London; Cymro, Bristol; Duckers Portable Ho. Co.; C., London; Sirius, London; Surgeon, London; M.D., Crewe; Spes, London; Student, London.

Daily Free Press (Aberdeen), Croydon Advertiser, Herald and Weekly Free Press, Hertfordshire Mercury, Sussex Daily News, Sunderland Daily Echo, Surrey Advertiser, Western Mail, Reading Mercury, Hong Kong Daily Press, Coleraine Chronicle, Evening News (London), Yule Tide (Cassell's Christmas Annual, 1888), Glasgow Herald, Illustrations, Chemical News, Lady's Pictorial Christmas Number, &c., have been received.

ADVERTISING.

Books and Publications (seven lines and under)	..	£0 5 0
Official and General Announcements	..	0 5 0
Trade and Miscellaneous Advertisements	..	0 4 6
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Clinical Lecture

ON

TWO CASES OF PHOSPHORUS POISONING.

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GENTLEMEN,—In my systematic lectures on Medical Jurisprudence I am in the habit of insisting that the study of toxicology is of great scientific value on account of the fact that the symptoms manifested by the poisoned person flow from a single cause. In the majority of cases which we study in the hospital a number of causes have been at work, and it is often difficult for us to say which out of many may have been most potent in the production of the effects observed. When, however, a healthy person takes a dose of poison and is immediately made ill thereby, we can be in no such doubt, and it is most instructive to observe the numerous and varied symptoms which may arise as the result of a single cause. Poisoning by phosphorus has an especial interest, because in combination it exists plentifully in the body, and it is in itself an interesting fact that a few grains of pure phosphorus should be able to cause the death of the individual, and this without the production of an immediate and severe local lesion such as is produced by the corrosive acids.

It is only in recent years that phosphorus poisoning has become common, and it is evident that until phosphorus itself became a tolerably common article of commerce it was impossible for cases of poisoning by it to be observed and studied. Phosphorus is said to have been discovered by the German alchemist Brandt in 1678, who obtained it by the dry distillation of urine solids; but it remained a rare chemical curiosity until Scheele succeeded in producing it from bone ash. It was not, however, until phosphorus became a common article of commerce for the manufacture of lucifer matches that cases of poisoning by it began to be recorded. The phosphorus match industry (according to Paton in the article Matches in the "Encyclopædia Britannica") had its origin in Vienna in 1833, and for a long series of years Austria and the South German States were the principal centres of the new industry. Before this date cases of phosphorus poisoning were very rare, and arose from its injudicious use as an aphrodisiac (Briand and Chaudé). Orfila's knowledge of the subject seems to have been derived solely from experiments on animals; and Christison (writing in 1836) had never seen a case of phosphorus poisoning in the human subject, though he mentions three cases recorded by continental observers (the earliest being one by Worbe in 1824). The use of phosphorus as a poison has been hitherto more in vogue on the Continent than in this country; and Briand and Chaudé, writing in 1869, say, "This form of poisoning increases in an alarming manner," and they utter the warning that phosphorus paste used for the destruction of vermin may be the cause of poisoning if animals used for food accidentally partake of it. How small has been the amount of phosphorus poisoning observed in this country may be judged of by the fact that in the first edition of Guy's Forensic Medicine (1854) it is not mentioned; and that Dr. Wilks, in the first edition of his lectures on Pathological Anatomy (1859), does not mention phosphorus as a cause of fatty degeneration of the liver. It was not, indeed, until about the year 1861 that the action of phosphorus in producing fatty degeneration began to be appreciated. Jaundice had been noticed as a symptom of phosphorus poisoning, but its occurrence was regarded as a coincidence, and was attributed to the blocking of the bile duct by the swelling of the mucous membrane of the duodenum, brought about by the irritation of the poison. Fatty degeneration of the liver is a sufficiently common post-mortem appearance, and its occurrence in phosphorus poisoning did not at first excite any special attention. It is now, however, recognised that jaundice and fatty degeneration of the liver and other organs are the chief phenomena of phosphorus poisoning.

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Cases of phosphorus poisoning are usually accidental or suicidal. Its accidental occurrence has been seen in children who have sucked the ends of matches tipped with common phosphorus, or have eaten bread-and-butter smeared with phosphorus paste, which has been prepared for the destruction of vermin. Suicides in this country usually make use of phosphorus paste, a compound composed of fatty matter, flour, and colouring material, and containing about 4 per cent. of phosphorus. On the Continent, however, the heads of lucifer matches have been frequently used for suicidal purposes. It may be well to remind you that the ordinary form of phosphorus which fumes in the air is alone poisonous. Amorphous phosphorus is believed to have no poisonous action.

The cases to which I wish to direct your attention are two in number. The patients were both women, one of whom died, and the other recovered. The first case was one which I saw in consultation with Dr. Hurd Wood, of Leatherhead, and it is by his kind permission that I am enabled to bring the facts before you.

A. L—, aged twenty-three, a young woman living "under the protection" of a gentleman, in consequence of some annoyance to which she had been subjected in her quasi-conjugal arrangements, took at about 4 P.M. on the afternoon of August 30th the greater part of a fourpenny pot of rat paste, and it is a remarkable fact that in doing this she followed the example of her elder sister, who under similar circumstances had destroyed herself a few years previously by taking phosphorus paste. Five hours later—i.e., about 5 P.M.—she vomited, and medical assistance was summoned. It must be borne in mind that she had probably had eight or ten grains of phosphorus (about two grains being a fatal dose) lying in her stomach for five hours, so that ample time had been allowed for the absorption of the poison. Headache and vomiting were the chief symptoms. The first matter vomited, which it was alleged smelt of phosphorus, was thrown away; and it is to be noticed that none of the subsequent vomit had any smell of phosphorus, nor did it fume, nor was it luminous, which sometimes is the case. On Aug. 31st and Sept. 1st she continued to vomit. On Sept. 2nd the vomit had the appearance of altered blood. The vomiting was so incessant that it was practically impossible to give either food or medicine by the mouth. On the 2nd, jaundice, a symptom of very grave import, showed itself; and on the 3rd I saw the patient, about ninety-eight hours after taking the poison. She was in bed lying on one side, complaining of great pain in the abdomen, which was covered by a linseed poultice. She was quite sensible, but was very unwilling to talk or be disturbed or to attempt to take nourishment. The skin was very sallow. The ocular conjunctivæ were distinctly yellow; the depth of icteric tint was not very great. The pulse was regular, slightly quickened, and of good force. The heart sounds were normal. Tongue slightly coated; papillæ at tip and edges rather enlarged. The liver dulness was decidedly increased; the lower margin was well below the ribs; and the abdomen over the liver was exquisitely tender, but there was no tenderness elsewhere over the abdomen. There was no diarrhoea, and the stools were said to be natural. The patient complained of very severe pain in the back, and the least vibration or movement of the bed seemed to cause her great agony. There had been severe cramp in the legs. The urine was, it was said, scanty and high coloured; the bladder was apparently empty. It was not till the following day that Dr. Hurd Wood managed to get a sample of urine for examination, concerning which I will speak presently in detail. As the patient had taken no food since the poisonous dose, and very little during the previous week, I advised that she should have some morphia administered by the mouth, and that after an injection of turpentine she should be fed with peptonised arrowroot and milk per rectum. Owing to the irritable state of the stomach it was impossible to give turpentine (the recognised antidote) by the mouth, and I considered it probable that, seeing that ninety-eight hours had elapsed since taking the poison, not much good could have resulted, and probably some harm, by increasing her vomiting and exhaustion. We considered the prognosis to be very bad, almost hopeless. She continued in much the same state till her death, which took place on Sept. 5th. There was no delirium or coma, the cause of death being attributable to gradual failure of the heart. The patient lay at last almost motionless, and for some hours before death there were lengthy periods during which the radial

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pulse was not perceptible. The only symptom distinctly referable to the nervous system was cramp in the legs, from which the patient suffered severely during one night.

The post-mortem examination was not made until ninety-three hours after death, because Dr. Hurd Wood and myself hesitated to make it, under the circumstances, until the coroner had given his order. The cause of death was not a matter of doubt, and it was only after the inquest and verdict that the order was given. The examination was made under circumstances of difficulty, as are all necropsies made in private houses, but the main facts were sufficiently well ascertained. The body was still rigid and was fairly well nourished. The skin was distinctly yellow, the post-mortem staining being strongly marked. The abdomen was distended, and blood-stained fluid exuded from the mouth and nostrils. No luminosity was observed, but it should be added that the day was bright, and it was not possible to absolutely darken the room. There was no smell of phosphorus either before or after opening the body, but those present agreed that it had a peculiar odour. The chief facts observed were the following: 1. Marked fatty degeneration of the liver. It was distinctly not enlarged, but was of about average size. It was yellow in colour, sticky looking, and pitting on pressure. When divided, and looked at from a little distance, it had the appearance of a mass of soft yellow faeces. It broke down easily under the finger. Acini well marked. The microscope confirmed the marked fatty degeneration. The gall bladder was nearly empty, and contained little more than mucus. 2. The heart was perfectly empty, flabby, and flaccid, and in an advanced state of fatty degeneration. 3. Kidneys soft and flaccid; pyramids deeply congested; cortex swollen, of a dirty grey colour, mottled with yellow. A microscopical section kindly made by Mr. Murray showed the epithelium to be full of granular and fatty particles. 4. Spleen not enlarged, very soft, and of dirty plum colour. 5. Lungs deeply congested (hypostatic). 6. Stomach: Mucous membrane swollen, yellowish, and very soft. Not hyperæmic. No congested patch, except at one spot, where there was seen a white particle in the middle of a patch of congestion the size of a pea. This particle we took into a corner of the room, and, producing all the darkness we could, we gradually applied the heat of a spirit lamp, but no phosphorescent fumes were observable. 7. Duodenum yellow and soft; mucous membrane swollen; no ulceration or hyperæmia. 8. Colon fairly normal, and containing some masses of absolutely pale faeces. 9. A small ecchymosis was observed on the mesentery, but no ecchymoses were observed elsewhere. 10. Urinary bladder slightly injected; empty. 11. The vagina contained a good deal of grumous yellowish mucus. A small clot was observed blocking the os uteri. The uterus was deeply blood-stained inside, and contained some clot; and the ovaries on section showed some Graafian follicles, also containing clots. With the exception of the genital organs, no clots of blood were found anywhere, the blood appearing to be uniformly fluid. We could not ascertain whether or not the patient was menstruating at the time of her decease.

The symptoms and post-mortem appearances which I have shortly laid before you are those of the majority of cases of phosphorus poisoning. In some cases hæmorrhage is a more marked feature, and petechial ecchymoses are more abundant post-mortem. The liver is uniformly fatty, as in this case, but is sometimes mottled with patches of yellow and red. Its size varies: if the patient die early, it may be big; if, on the other hand, the patient survive some time, it may be in a state of marked atrophy. The kidneys vary also; they may almost escape, or may be nearly as fatty as the liver. The same may be said of the heart. These variations are to be expected, and depend on the amount of poison absorbed and the duration of the case. Sometimes delirium and coma are a marked feature, which depends probably upon the fatty degeneration of the blood-vessels of the cortex cerebri, and also probably to some extent on the conditions of the kidney, the coma being in a sense "uræmic."

Rationale of the symptoms.—When a poison is absorbed from the alimentary tract and enters the portal circulation, the liver is necessarily the first organ to suffer from the effects of it, and is usually more markedly affected than any other organ of the body. The effect produced when phosphorus is the poison is that of rapid fatty

degeneration. The liver cells are found to be filled with oily particles, and when the fatty change is as marked in the case under review, it is impossible to believe the organ is capable to any extent of performing its normal functions. The extent to which the other organs suffer from fatty degeneration depends probably upon the amount of phosphorus which passes through the liver or is subsequently given off by it into the general circulation.

Why does phosphorus produce fatty degeneration? is a field for speculation; but probably our best course is to get more exact information as to accept the fact, which is undoubtedly, and, with regard to the cause of this remarkable property of phosphorus, to say we do not know. This power of producing fatty degeneration is possessed by some bodies, and notably by antimony and arsenic, but not by the latter bodies (which, be it observed, belong to the chemical group as phosphorus) possess the power to a degree very inferior to phosphorus. It is possible that some interference with the process of oxidation in the liver cell may be the cause, and that in the rapidness with which phosphorus combines with oxygen may be found the explanation. That this has some bearing on the matter seems the more likely from the fact that it is only phosphorus in its fuming active form that is harmful, and that amorphous phosphorus is not a poison. Further, oil of turpentine, the vapour of which destroys the "fuming" power of phosphorus, is apparently not an antiseptic as a poison. It may be that phosphorus acts primarily upon the blood, and only produces its effect on the liver as a consequence of the blood change. It is certain, however, that in order of time and in severity of effect produced the liver holds the first place among the organs of the body in phosphorus poisoning. This fatty degeneration ultimately affecting all the tissues of the body accounts for all the symptoms, at least in part. The jaundice is partly caused by the swelling of the fatty liver; the albuminuria by fatty change in the kidney; the hæmorrhage so often observed is probably due to a fatty degeneration of the bloodvessels; and the coma and delirium may be due partly to a fatty change in the nerve cells and the bloodvessels of the cortex cerebri, partly to defective metabolism, result of the liver change, and partly to "uræmia" (the word in its broadest sense) the result of the kidney change. Finally, the weakness is due to fatty degeneration of the heart and voluntary muscles.

The jaundice in these cases does not, I believe differ essentially from ordinary obstructive jaundice, except that the bile which produces it is the final product of a liver whose physiological work is rapidly decreasing. The obstruction to the bile duct is produced partly in the duodenum, where the swollen mucous membrane obstructs the entrance of the common bile-duct, and partly probably by the swelling of the liver itself causing an obstruction in the smaller ducts. In the above case the bile pigment was plentifully present in the skin and the white of the eye. At the post-mortem examination it was found absent from the faeces in the colon, and is to be remarked, however, that there was no bile pigment in the urine, as shown by the negative result of the reaction with the acid test. The sample of urine examined (of which I say more presently) was obtained on the fifth day of illness, and probably many hours after the bile-forming power of the liver had ceased. When you have obstruction to the duct of a healthy liver, the formation of bile is continuous, the jaundice gets deeper and deeper in tint, the bile pigment in the urine increases in amount with increasing depth of the yellow colour of the skin. In many obstructive jaundices the yellow colour is detected in the skin after it has disappeared from the urine, and in this case the yellow colour remained in the skin when no trace of pigment was to be found in the urine, the reason being that the liver ceased to form bile after the jaundice had been produced. Whether or not there was bile pigment present in the urine in the earlier stages I cannot say, but probably there was. Again, looking at the state of the kidneys, it is not to be wondered at if the elimination of bile pigment by these gravely affected organs was defective. It must be borne in mind that in all cases of jaundice urinary bile pigment appears early, and usually disappears before the skin has cleared.

A few words about the urine; and, in saying these words, I must not forget to thank Mr. Ransom, who very kindly subjected the sample of urine obtained to a full chemical examination. The only sample of urine examined was obtained on the day before death. This

be borne in mind, and you must not assume that it is characteristic of all stages and all cases of phosphorus poisoning. When this urine was passed the patient was almost moribund, the liver had been changed to a (probably inert) mass of fat and incapable of proper function, and the kidneys were severely damaged. The quantity of urine obtained for examination was less than sufficient to fill an eight-ounce bottle, and of this only about three ounces were available for Mr. Ransom's investigations. It was turbid, with a considerable sediment, and of a golden yellow colour. It was very acid in reaction, and of high specific gravity (1035). The acidity was also remarkably persistent, and was very manifest even four days after the urine had been passed. It was distinctly albuminous, and after boiling and standing the albumen formed about one-fifth of the bulk. The albumen was caused by the fatty change which the renal epithelium had undergone, a fact which was further indicated by the presence in the sediment of a few granular casts. The high specific gravity was not caused by urea, for, on testing by the hypobromite method, the amount of urea was estimated, first by Mr. Kitchin, the clinical clerk, and afterwards by Mr. Ransom, to be 0.5 per cent. only. Mr. Ransom very thoughtfully suggests in his report that, since the hypobromite method "decomposes other nitrogenous bodies, this result was probably in excess of the truth, and," he says, "I failed to obtain any crystals of nitrate of urea. It is probable, therefore, that urea was almost if not totally absent." This deficiency of urea has been noticed in other cases of phosphorus poisoning, and also in "acute yellow atrophy of the liver," a disease which bears the closest resemblance to phosphorus poisoning, and of which I shall have more to say presently. The absence of urea is due partly to the inability of the patient to take nitrogenous or other forms of food, and partly also to the incomplete metabolism which results from the disorganisation of the liver. The urine contained sugar, which is a fact that I do not find mentioned in connexion with phosphorus poisoning or acute yellow atrophy. It reduced Fehling's copper solution, and also gave a rich Madeira wine colour when boiled with liquor potassæ, and this after the albumen had been removed by filtration. After being fermented with yeast for thirty hours, liquor potassæ and Fehling's solution gave negative results, so that we may feel sure that sugar was really present. Mr. Ransom estimated the amount of sugar to be equal to 2 per cent. Seeing that the urine was passed when, as I have said, the patient was almost moribund, and when the liver was in an extreme state of fatty degeneration, it seems impossible that the sugar in the urine was due to an increased activity of the liver cells. The more probable explanation seems to me to be that, owing to the disorganisation of the liver, glucose passed from the alimentary tract and through the liver without undergoing any change, or, if the patient was fed upon peptonised arrowroot by the rectum, sugar may have found its way direct into the general circulation through the hemorrhoidal veins.¹ There was, as I have said, a considerable sediment to the urine, and microscopically this sediment was found to be formed of (1) a very large quantity of epithelium, mainly from the vagina; (2) a few granular casts from the kidney; and (3) a very copious deposit of acicular crystals, arranged in bundles and occurring in small groups and singly. These were at first supposed to be tyrosin, and a well-known authority on the urine, to whom I showed them, pronounced them to be tyrosin. When dealing with a rare deposit like tyrosin, one with which even the most experienced cannot be very familiar, it is never advisable to trust to form only as a means of diagnosis. Mr. Ransom left a portion of the urine to stand for twenty-four hours with a quarter of its bulk of strong hydrochloric acid, when it was found that the crystals, instead of being dissolved, were even more numerous: "moreover, they were accompanied by and merged into larger crystals, which were obviously those of uric acid." These larger crystals had the colour of uric acid, but the small acicular crystals seen in the urine were very faintly tinged. The crystals were in reality crystals of uric acid, and one of my colleagues informs me that he has seen fine acicular crystals of this kind in diabetic urine. The urine, however, contained tyrosin, which was shown by the following methods adopted by Mr. Ransom: 1. The strongly acid urine was filtered to remove uric acid, then neutralised and

left to stand under four times its bulk of methylated spirit. A precipitate formed, and tyrosin crystals were obtained both from the precipitate and the supernatant fluid. 2. Crystals of tyrosin were also obtained from the original urine. Crystals of tyrosin were also formed from a decoction of the liver, which was first treated by basic lead acetate, and the filtrate subsequently treated with sulphuretted hydrogen to free it from lead, and evaporated to a syrup. In this way the characteristic crystals were obtained by further evaporation on glass slides, and the syrup gave a pink colour with Millon's reagent. No crystals of leucin were found in the liver or urine. The presence of *sarcosolactic acid* was, however, demonstrated, and it is possible that the persistent acidity of the urine may have been due to this body. No crystals of earthy phosphates were found in the urine. The condition of this urine affords much food for reflection. The ultimate stage of the metabolism of nitrogenous matter is, in health, urea; and the chief place where urea is formed is probably the liver. The diminution or absence of urea has been noticed by Parkes in cases in which a great destruction of the liver has taken place as the result of cancer or suppuration, and especially has it been noted in cases of acute yellow atrophy. In place of the urea, we find in these cases bodies which are the result of incomplete metabolism—such as uric acid, tyrosin, and leucin. Whether these bodies are formed in the liver, instead of urea, as the result of an interference with oxidation, or whether, being formed by the spleen and pancreas, they merely pass through the inert liver, is an open question, but I confess that in the present case the latter seems to me the more probable explanation.

We have seen how grave and widespread are the consequences when a healthy person takes a small quantity of pure phosphorus: vomiting, hæmorrhages, jaundice, headache, pain, cramps, albuminuria, coma, and death in five days, without fever; and post-mortem evidence of extreme fatty degeneration involving the liver and other glandular and muscular tissues. A point of great interest in phosphorus poisoning is the complete similarity, both clinically and pathologically, to that very rare disease which is described in our text-books as "Acute yellow atrophy of the liver"—a disease which is characterised by vomiting, hæmorrhages, jaundice, headache, pain, cramps, albuminuria, coma, and death, usually within five days, without fever; and post-mortem by fatty degeneration of the liver, heart, kidneys, and other organs. It has been sought to distinguish these two diseases in various ways. For example, it has been said that in acute yellow atrophy the liver is small, while in phosphorus poisoning it is big. To this rule, however, there have been found many exceptions, and, in fact, the conditions have at times been reversed. It has been asserted that histologically the livers in the two conditions vary, but now it is admitted that in both the predominant change is fatty degeneration. It was at one time thought that leucin and tyrosin were not found in the urine in phosphorus poisoning; but this, again, has been shown not to be true, and the case I have narrated is an example. Cases of phosphorus poisoning have been diagnosed as acute yellow atrophy. I believe I am right in stating that a mistake (if mistake it can be called) was made a few years since in this hospital, owing to the patient concealing the fact of having taken phosphorus, and a similar mistake was made some years ago at Netley. In short, I think there can be no doubt that, clinically and pathologically, the two conditions are indistinguishable. There are some other facts which tend to bring these two conditions (if they be two) together. Acute yellow atrophy is a very rare disease. Thierfelder, who writes the article upon it in Ziemssen's *Encyclopædia*, and who, with characteristic German thoroughness, has ransacked medical literature for his material, has to found his article on 143 cases only, scattered over a period of forty years. Like phosphorus poisoning, it is a modern disease, and its history is about coextensive with that of phosphorus poisoning, the first cases having been described by Bokitsky, of Vienna, in 1842, or nine years after the establishment of the lucifer match industry. Whether, as phosphorus poisoning has become more common and better understood, acute yellow atrophy has become less frequent, I do not know, but it is certain that the rarity of the latter condition is at least as great as ever. Acute yellow atrophy, it will be urged, differs from phosphorus poisoning in the fact that it is more common in women than in men. Of Thierfelder's 143 cases, 49 were males and 86 (or just 60 per cent.) were females. In the five years 1876-80 there were in this country

¹ Dr. Hurd Wood informs me that it was found impossible to administer nutritive enemata, so that the sugar cannot be accounted for by this theory.

(according to the Registrar-General's returns, as quoted by Mr. Wynter Blyth) 46 deaths from phosphorus poisoning. Of these 46, 17 were males and 29 were females, the females constituting 63 per cent. of the total. Of 56 adult cases collected by Falck, 43 were women and 13 men; and of 71 suicidal cases collected by Otto Schraube, 47 were women and 24 were men. Again, acute yellow atrophy has often occurred in pregnant women. The same may be said of phosphorus poisoning. Thus Hamberg, at the meeting of Swedish physicians in 1881, stated that of 19 fatal cases of phosphorus poisoning collected by him in Sweden, 16 were in women mainly between twenty and thirty years of age; and of these 16, 15 were pregnant—the phosphorus being presumably taken to produce abortion. Jäderholm has also published tables showing the increase of phosphorus poisoning in Sweden. He has made post-mortem examinations of 15 cases; of these 15, 3 were men and 12 women; of the 12 women, 2 were pregnant and 3 had recently aborted. In this connexion I may quote Hessler, who says that phosphorus has a great reputation as an emmenagogue and abortifacient. Thus it appears to be a fact that phosphorus poisoning not only has the closest resemblance to acute yellow atrophy, both clinically and pathologically, but that it still further resembles it in the great proportion of women (and especially pregnant women) who suffer.

Why are women more liable to suffer from phosphorus poisoning than men? In the first place, it may be urged that when women wish to commit suicide they adopt drowning or poison, while men more frequently make use of hanging or firearms. Dr. Ogle has pointed out that women, when bent on suicide, are less careful than men to select painless poisons, nearly 50 per cent. of female suicides by poison in England during the years 1863-82 being effected by strychnia, vermin killer, carbolic acid, and oxalic acid, while 60 per cent. of men employ prussic acid, laudanum, and other comparatively painless poisons. Again, it is evident that accidental poisoning and suicidal poisoning are very likely to be effected by poisons which are at hand, and phosphorus paste is, so to say, a household poison used by women and bought by women for the destruction of rats and beetles, while poisonous matches are, or were, everywhere to be found. Why should pregnant women suffer from phosphorus poisoning more than others? In the first place, it is probable that phosphorus is taken to cause abortion, and I think it will be found that many of the women who have died of phosphorus poisoning were not married, and were persons to whom pregnancy meant disgrace or inconvenience. Of the 47 female cases collected by Otto Schraube (as quoted by Wynter Blyth) 12 were prostitutes. The girl whose case I have been dealing with, and also her sister, who died in the same way, were "kept women." A case recorded in THE LANCET in 1882 by Dr. Capon occurred in a "kept woman"; and I have heard of a case very recently, the details of which were given me by a well-known practitioner in the south of London, in which the victim was also in the same condition of life. Thus facts seem rather to point to the conclusion that phosphorus poisoning is prone to occur among women of dissolute life, and it is possible that the traditional use of phosphorus as an aphrodisiac may have some connexion with this fact. Among the causes which predispose to acute yellow atrophy are mentioned (in addition to female sex) mental worry, dissolute habits, syphilis, and pregnancy. This rather points to the fact that acute yellow atrophy, like phosphorus poisoning, is prone to occur among women of dissolute habits. Dr. Fagge and other writers on acute yellow atrophy quote Graves's well-known case of three members in the same family, sisters, who died of the disease within eleven months. But in phosphorus poisoning there is also occasionally a family predisposition. I may remind you that, according to the evidence given at the inquest, the sister of my patient had previously committed suicide with phosphorus, and it was whispered—but only whispered—that the mother had met her death in a similar way.

The question will naturally arise, "Are all or the majority of cases of acute yellow atrophy really cases of phosphorus poisoning?" It is not possible to answer this question, but, the conditions being clinically indistinguishable, there can be little doubt that this disease, in its most common form, is due to phosphorus poisoning. It is, however, a fact that in some cases the conditions are not so clear, and that the disease may be due to other causes.

bent on suicide they have every reason for concealing the fact that they have taken poison. If phosphorus has been given with murderous intent, the fact will certainly be concealed. Again, phosphorus may be taken accidentally, and a drunken woman would not be unlikely to take phosphorus paste spread on bread if such had been prepared for the destruction of vermin. Again, it is possible that the flesh of animals, and especially chicken, which have died from eating vermin which have met their death by phosphorus, may be the cause of the symptoms in human beings. But we must not forget that other bodies besides phosphorus are capable of causing fatty degeneration, and among these are arsenic, antimony, chloroform, and the mineral acids. The fact that in acute yellow atrophy the liver is especially affected points to the conclusion that the poison, whatever it may be, is probably absorbed from the alimentary tract. The liver may atrophy rapidly under certain other conditions. Thus, Dr. Murchison, in his classical work on the liver, records two cases of "acute atrophy" which occurred in his own practice. One was that of a tailor, aged sixty-six, who was in the Middlesex Hospital for twenty-five days, and in whom post mortem was found an atrophied and fatty liver, with the common bile duct completely blocked by gall stones, with great dilatation of the bile ducts and some purulent deposits both in the liver and kidneys. The patient was febrile except for the last three days of life. This was clearly not a true case of acute yellow atrophy. The other case given by Dr. Murchison occurred in a girl who had been ill for a month. In this case there was acute peritonitis, and she was febrile to the last. This, again, was not an ordinary case of acute yellow atrophy. In short, acute yellow atrophy is a very rare disease indeed, and I think we shall all do well, whenever we feel justified in making such a diagnosis, to be exceedingly careful to investigate the possibilities as to the patient having had phosphorus administered either intentionally or accidentally. Phosphorus poisoning is of great interest as an example of profound constitutional disturbance occurring as the result of the ingestion of a chemical poison and running a fatal course without fever. In these days, when infective microbes are demanding a very large amount of our attention it is well to be reminded that such things may happen.

The other case I have to mention (and I am enabled to do so through the kindness of Dr. Ringer, under whose care the patient was admitted) need not detain us long. A married woman aged thirty-eight took phosphorus paste on bread at 8 P.M. on Sept. 14th, and she was admitted to the hospital within an hour. A powerful emetic was at once administered, and she vomited in ten minutes. The bread and vomit both smelt of phosphorus, but there was no luminosity. The stomach was then washed out by the stomach pump, and a drachm of old commercial turpentine was administered at 10 P.M., 11 P.M., 2 A.M., 4 A.M., 7 A.M., and half a drachm at 9 A.M.—5½ drachms in all. Vomiting and retching continued, with burning pain in the stomach and great tenderness of abdomen, and especially of the hepatic region, going through to the back. This persisted through the next day, and at 3 P.M. drachm doses of French turpentine were again ordered. There was diarrhoea, and one of the stools contained altered blood. This patient seemed very sensitive to vibrations, and complained that persons walking about the ward jarred her. The temperature was 100° when admitted, and it became normal. The urine never contained albumen, sugar, and contained a fair percentage of urea. The bile when examined under the microscope, appeared normal. The patient gradually recovered, and left the hospital on Sept. 26th. There can be little doubt that this patient owes her life to the active treatment pursued. The phosphorus had been long taken when she was seen, and probably no great amount had been absorbed when the stomach was promptly emptied of its contents by the emetic and stomach pump. The administration of turpentine was, however, probably conducive to the favourable result. This regarded as an antidote to phosphorus; it appears to render it inert; and we get a clue to its mode of action from the fact that the vapour of turpentine destroys the luminosity of phosphorus.

* This patient was readmitted a few days later, and was found to have slight albuminuria. She was again discharged.

A CASE OF

NASO-PHARYNGEAL TUMOUR AFFECTING
THE BASE OF THE SKULL.

REMOVAL WITHOUT EXTERNAL INCISION; RECOVERY.

By H. H. CLUTTON, F.R.C.S.,

SENIOR ASSISTANT SURGEON TO ST. THOMAS'S HOSPITAL.

THIS case has not been published for more than two years from the date of operation, in order that sufficient time should have elapsed to state with some degree of certainty the probability as regards its recurrence.

The case was that of a boy, fourteen years of age, who was sent to me at St. Thomas's Hospital in May, 1886, by Dr. Taylor of Mendlesham, Suffolk. For eighteen months he had been suffering from increasing difficulty in breathing and swallowing. He had latterly lost a good deal of flesh, and had become pale and thin for his size. He stood with his mouth widely open, the nose being completely obstructed, but there was no obvious distension of the nasal cavity. On examining the pharynx, the palate could be seen pushed forwards by a round globular mass, which projected down some distance below the level of the uvula. Digital exploration proved that it fitted the naso-pharyngeal space so tightly as to make it impossible to state with certainty its exact point of attachment. The finger could be forced only a short distance between the growth and the walls of the cavity in which it grew. It, however, appeared probable that it sprang from the base of the skull, as the palate was not infiltrated, and the lower extremity was distinctly round and projecting, as though pedunculated. The tumour felt soft and smooth, but its examination caused no bleeding; and there were no enlarged glands to be felt in any part of the neck. His sleep was so disturbed at night that during the day the instant he sat down he fell asleep. After a few days' rest and observation an operation for its removal was undertaken. Mr. Tyrrell, who gave chloroform, found considerable difficulty in keeping a passage for the air between the base of the tongue and the tumour, but it was determined to manage, if possible, without a preliminary tracheotomy. A strong loop of wire, attached to a Wilde's snare, was passed through the left nostril and pushed down between the tumour and the soft palate. It was then caught with the finger and dragged forward into the mouth. The loop, having been opened, was guided gently over the tumour to the posterior wall of the pharynx, and by a combination of pushing and pulling it was gradually drawn towards the base of the skull. After tightening the wire in the snare, and exercising some considerable traction, the wire broke. A larger snare, with a still stronger wire, was then employed and introduced in the same manner. The tumour was thus torn off from the base of the skull, and an assistant, having seized the growth with a pair of vulsellum forceps, brought it into the mouth as the base was divided. A bare patch of bone could then be felt, of about the size of a shilling, at the junction of the posterior wall and the roof of the pharynx. This was attacked with a sharp spoon, and as the bone crumbled away the finger very quickly entered a hole in the basilar process of the occipital bone.

On June 10th some suspicion of a return of the growth was entertained after an examination of the pharynx with the finger; this was confirmed on June 30th, and a further operation was decided upon. In the meantime a microscopical examination had been made by Mr. Shattock, who reported that the growth was composed of wavy fibrous tissue, with a few scattered cells; in fact, that it was probably a soft fibroma. This favourable view of the case determined me to try once more to eradicate the growth without dividing the soft palate or interfering with any of the bones of the face.

On July 10th, whilst the boy was under the influence of chloroform, sharp spoons of various curves and sizes were introduced through the nose, and the left index finger was placed in the naso-pharyngeal space behind the soft palate. The cavity in the basilar process of the occipital bone was then easily reopened and enlarged. Distinct masses of soft new growth were scooped away, and more of the bone covering this cavity removed, until, finally, it was quite clear that the sphenoidal sinuses had been reached. The vomer and rostrum were then broken away with a pair of Löwenberg's

forceps and the whole cavity freely exposed. The same kind of soft growth which occupied the basilar part of the occipital was then easily felt and removed with the sharp spoon. The impression conveyed to my mind at the time was that the cavity into which a way had been forcibly made at the first operation was really an extension of the larger one finally exposed—namely, the sphenoidal sinuses. A great deal of blood was lost during the operation, but it quickly ceased with sponge pressure.

The boy was collapsed and ill for some days, and then quickly rallied. He was examined three weeks afterwards, when the cavity in the base of the skull was felt quite distinctly, and thought to be free from any growth. On Aug. 4th his parents removed him from the hospital, as he was quite well, refusing to allow us to keep him a few weeks longer for observation. Dr. Fryer, under whose care he passed after the death of Dr. Taylor, wrote in answer to my inquiry on May 28th, 1888 (nearly two years after the last operation), as follows: "He is now quite well; there is no sign of any growth whatever in his throat or nasal passages; his breathing is quite normal." The microscopical examination of the portions removed at the second operation were, however, much more sarcomatous-looking. The sections were more cellular than those taken from the tumour first removed. The cells also were of variable size and shape—too much so to be looked upon as granulation tissue developed after the first operation. I had therefore reluctantly come to the conclusion that the naso-pharyngeal tumour was, as it were, the superficial expression of a more deeply seated sarcoma in the base of the skull; for the histories of most of these cases show that the so-called "polypus" of the naso-pharyngeal space is often followed very rapidly by a malignant growth in the walls and spaces of the surrounding tissues, even when the primary tumour has all the appearance of being innocent. Mr. Stonham¹ records an equally successful result in a very similar case of naso-pharyngeal growth, in which he found it necessary to divide the nasal bones and attack the tumour from the front. But one gathers from his description that the growth was more malignant than the one here recorded; and the fact that the tumour returned six months after the first operation more than justified the radical method he adopted for its removal. The second operation, which was performed in the same manner, was completely successful, as there has been no return for more than three years. The two cases appear to have been equally extensive, but the difference in the consistence of the growth enabled me in my case to use the sharp spoon with such effect through the nose, guided by the finger in the pharynx, as to completely eradicate the tumour without any division of the nasal bones; whereas in Mr. Stonham's case, with all the advantages of a large anterior opening and a complete exposure of the naso-pharyngeal space, he found that "some portions of the growth were so tough that the spoon made no impression." It is therefore clear that nothing less severe than the measure he adopted would have had any chance of permanent success. The contrast between these two cases, so far as their treatment was concerned, may serve some useful purpose if it only shows that naso-pharyngeal tumours which appear at first sight so similar may require a totally different line of treatment for their successful removal. From the experience derived from this case, and three others in which the tumour was visibly pushing the soft palate forwards, I am inclined to think that the polypus might in all cases be first removed by the snare, either cold or heated by a galvanic battery, and the question of a more serious operation decided by the condition found on digital examination of the bones after the main bulk had been removed. The other two cases to which I allude have not been recorded, as they were simple tumours, although very large, and not associated with any deep-seated growth in the bones of the base of the skull. They required no further treatment than the use of the snare in the manner described in the earlier part of this paper.

Portland-place, W.

¹ THE LANCET, Jan. 7th, 1888.

PROPOSED EXTENSION OF FULHAM HOSPITAL.—

We understand that the Local Government Board have refused to grant a provisional order to enable the managers of the Metropolitan Asylums Board compulsorily to purchase four acres of land for the purposes of an extension of their Western District Hospital at Fulham.

SPECIAL DIAGNOSIS IN ACUTE PERFORATIVE PERITONITIS.¹

By H. W. G. MACKENZIE, M.A., M.D. CANTAB., M.R.C.P.,
MEDICAL REGISTRAR TO ST. THOMAS'S HOSPITAL, AND ASSISTANT
PHYSICIAN TO THE ROYAL FREE HOSPITAL.

It is seldom that the physician is placed in a position of greater difficulty or more responsibility than when he is confronted with an obscure abdominal case. The patient is not only in the greatest pain and anxiety, but the physician, although perhaps he can alleviate the former, is only too often unable to relieve the latter by holding out hopes of recovery, however skilful and experienced he may be. Generally, although he may recognise the nature of the illness, he is in ignorance of its cause, and he remains in ignorance until the post-mortem examination is made, when he consoles himself with the reflection that a more definite diagnosis was impossible, and that, if it had been possible, nothing more could have been done for the patient than was done. One case he looks on as a case of obstruction due to internal strangulation, and it turns out to be a perforation of the vermiform appendix. Another he supposes to be perforation of the appendix, and it is really one of the duodenum. The first difficulty is to distinguish cases of acute secondary peritonitis from cases of internal strangulation or other mechanical acute obstruction; the second difficulty is to make a special diagnosis of the cause of the peritonitis. Sometimes the first is a serious difficulty, but I believe it can generally be surmounted, although it would take too long to enter into the question here, and I shall limit myself to the discussion of cases of perforative peritonitis due to different causes, and the possibility of distinguishing them from one another.

The possible causes of acute secondary peritonitis are so numerous, the lesion has previously given so little evidence of its existence, the illness is so rapid in its course that there is so little time to think the case out, and the number of cases seen by any one practitioner is generally so small, that it is the exception rather than the rule for more than a surmise to be made before death occurs. Now, with such obscurity of diagnosis, it is little wonder that so far so little success has attended the surgical treatment of such cases. To undertake a radical operation on a case of acute secondary peritonitis the cause of which is unknown is a heroic task. Even at the necropsy I have seen it take an hour to discover the lesion which could not be diagnosed during life. I am perfectly convinced that no important progress in treatment will be made until greater success is shown in the diagnosis. There is one lesson I have learnt from the acute abdominal cases which I have seen, and that is never to attempt to make a special diagnosis without first getting a full and trustworthy account of the present and past illnesses of the patient. An hour spent in getting a full history which may determine the situation of the lesion is less dangerous to the patient than an hour spent by the surgeon to find the lesion after abdominal section. Without an accurate history we may guess at what is probable, but nothing more.

Diagnosis is not generally difficult when peritonitis sets in from perforation in patients whose maladies are already recognised, such as in most cases of gastric ulcer, malignant disease of stomach or intestines, tubercular or typhoid ulceration, and in some cases of disease of the female pelvic organs. But in cases of latent gastric ulcer, of duodenal ulcer, of ulcer of the vermiform appendix, or of simple ulcer of some other portion of intestine, of perforation of the gall bladder, and in some of the diseases mentioned in the first group, the diagnosis of the cause is extremely difficult. The stomach or duodenum and the vermiform appendix are far apart, and it is obvious that, if the surgeon has to explore first one and then the other, the operation is much longer and more dangerous than if he knows in the first instance in which position to look for the lesion.

The onset of acute secondary peritonitis has been characterised in all the cases I have seen by a sudden attack of severe pain, generally soon followed by vomiting. According to Fagge, rigors are common at the onset, and they occurred in several of these cases. Most of the patients did not reach

the hospital until some hours after the occurrence of perforation; accordingly, I have a very small experience to what is to be found by examination of the patient directly after perforation. In seven cases of perforative enteric fever which I saw, the time of perforation was by the sudden onset of pain. In all these cases, even soon after the perforation, the pulse was accelerated, there was marked abdominal tenderness, but tenseness and rigidity of the abdominal muscles were absent, and diaphragm was still acting. In two cases of gastric ulcer which perforated while under treatment and observed in the wards, an hour or so after the occurrence of severe pain, there were noticed marked abdominal tenderness, acceleration of pulse, and a rise of temperature from normal to 100° F. In the cases of enteric fever temperature also rose within an hour or two between 98° and 100° F. It is stated in many books that a fall in temperature is usual when perforation occurs; but this is contrary to my experience, and Murchison states that a fall in temperature occurs in enteric fever an initial rise is usual. Observations of a negative or positive nature as regards point would be valuable in the second class of cases.

In most of the cases I am considering, by the time they presented themselves at the hospital the usual signs of peritonitis were present: the anxious expression, pinched cheeks and sunken eyes; the characteristic dryness; thoracic breathing; rigidity of abdominal wall with tenderness to palpation, sometimes distension, and then fluid in the flanks, and sometimes prominent abdominal veins; usually constipation; sometimes retention of urine; generally persistent vomiting; pulse always rapid; temperature seldom high, sometimes above normal; urine variable in amount, but generally scanty, and occasionally containing albumen. When there is distension a tympanitic note is usually present. Wag in a recent paper,² attaches great importance to physical signs as diagnostic of the presence of air in the peritoneal cavity, the result of perforation of a viscus. These physical signs consist in the absence of indication of peristalsis made out by inspection, palpation, and auscultation, due to the separation of the intestines from the abdominal wall. Listening with the stethoscope for a minute is said to be sufficient. If nothing is heard, then there is air in the peritoneum. Absence of liver dullness is a sign on which stress has been laid by Flint, although it is obvious that other causes may account for this besides the presence of air. Auscultation of the abdomen is probably too little practised in this country, and may give useful results; but I am unable to speak on this point from personal experience. If staltic movement is seldom to be seen or felt when peritonitis is developed, and I have generally correctly excluded general acute peritonitis when visible peristalsis is to be seen. Such physical signs, however, do not afford us much assistance in determining the cause. Dullness of the right iliac fossa may occur in peritonitis due to cause, the inflammation being generally most acute where the products of inflammation tend to gravitate. The situation of the sudden pain is misleading. If the patient is able to localise it at all, it is generally referred to the umbilicus. What I consider to be the first essential even an approximate diagnosis is to have a full and accurate history. I propose to relate some of the most striking cases I have seen, and to consider how far in these diagnosis was possible. I must here express my gratitude to the physicians and surgeons of St. Thomas's Hospital under whose care these cases were, for permission to publish them here.

Duodenal ulcer, though much rarer than gastric ulcer, is not so very uncommon as the text-books would imply. Considering how indefinite the symptoms it gives rise to, and how, unless as a matter of routine the duodenum is examined post mortem in continuity with the stomach, ulceration will be overlooked, the number of recorded cases is by no means insignificant. Eight cases have been published in the Pathological Society's Transactions, and cases in THE LANCET and British Medical Journal during the last twelve years, in all but one of which the ulcer was the cause of death. Osler has recently published some cases of duodenal ulcer which he had found post mortem in patients dying from other causes.³ Kraus,⁴ the German authority on duodenal ulcer, has pointed out that, although

¹ Graduation Thesis for degree of M.D.

² Deutsches Archiv für Klinische Medizin, Band xxxix.

³ Canada Medical and Surgical Review, 1887.

⁴ Das perforirende Geschwür im Duodenum. Berlin, 1896.

the disease may have been unsuspected until the perforation or hæmorrhage occurs, a careful inquiry into the history of the few preceding weeks will generally elicit symptoms which may help to a diagnosis. These symptoms consist of attacks of epigastric pain more or less acute, fulness about the epigastrium and tenderness to pressure in the same situation, and sometimes vomiting. The attacks of pain may have come on at intervals for years. Hæmorrhage or melæna may have occurred, as in gastric ulcer. During the time (a few days or a few weeks) that perforation is impending, these symptoms are present if they have not been experienced before. The history of three out of the four cases I am about to relate fits in fairly well with this description. In the other, the only antecedent symptoms were loss of appetite with pains in the stomach for a week or two, but even such slender evidence has its importance.

The difficulty which the surgeon encounters in opening the abdomen when the diagnosis is at fault was impressed upon me by a case of perforation of the duodenum which I saw along with Dr. Acland and Mr. Croft. The case will be published in full by Dr. Acland, who has kindly allowed me to refer to it. The patient was a man, aged thirty-one, who was brought by Dr. Acland to St. Thomas's Hospital very ill, suffering from constipation, abdominal pain, and vomiting. What I heard of the history and the general aspect of the case suggested to me rather a peritonitis due to perforation of the appendix than an internal strangulation. Dr. Acland and Mr. Croft were inclined to the opinion that there was a mechanical obstruction of the bowels, and it was agreed that abdominal section would give the patient the best chance. This was performed by Mr. Croft, who found a very general peritonitis; but the cause was not discovered, although the vermiform appendix and a considerable length of intestine were examined. The patient died a few hours later, and at the post-mortem examination a perforation in an ulcer just beyond the pylorus was found. Two days previously to his admission he had become collapsed, and it would be then that the perforation occurred, but for five days before that he had suffered from abdominal pain and vomiting. For years he had been subject to attacks of abdominal pain referred to the umbilicus, with constipation. This history, although in itself not very suggestive of duodenal ulcer, might have helped one, I think, to make a more accurate diagnosis. Admitting that one could say there was perforation, one had practically to choose between gastric ulcer, duodenal ulcer, ulcer of appendix, and ulcer of other part of intestines. As I shall have to say with regard to another case, I have not yet met with an appendix case giving rise to general peritonitis where there was a history of repeated attacks of pain. Duodenal ulcer does give rise to attacks of pain of this kind. The fact of perforation being preceded by pain and vomiting for five days was also significant.

H. G. S—, a blacksmith, aged thirty-eight, for three weeks had suffered from attacks of pain in the right side, with occasional vomiting. Three days before he was admitted to the hospital the pain increased, and twenty-four hours before admission it suddenly became very acute, and he had rigors and vomiting. There was a history of alcohol to the extent of five or six pints of beer a day. When seen he appeared to have an intense peritonitis. The right hypochondrium and loin were acutely tender to touch, and he was suffering great pain there; and the abdominal muscles were exceedingly tense on the right side. His temperature was 98°; pulse 100, tense. The abdominal pain and tenderness increased in spite of the free exhibition of morphia, and he died within eighteen hours of admission. Seven years earlier the patient had been in the hospital. He had been attacked one night with sharp pain in the lower part of the right side of the abdomen, and vomited several times. The pain continued, and at first he had constipation. Three days later he passed evacuations consisting almost entirely of bright blood, losing altogether about six pints in two days. The temperature was 101° on admission, and continued to go up at night a little for some days. The abdominal pain and tenderness gradually subsided, and he was discharged well at the end of six weeks. What this attack was is not at all clear, though it is possible that the hæmorrhage from the bowels was the first sign of a latent enteric fever just as perforation may be. When the abdomen was opened at the necropsy much brown fecal matter was seen, and there was much recent lymph on the intestines, chiefly on the right side. The cause of the peritonitis was an old

oval ulcer, about an inch and a quarter long, near the pylorus along the lower border of the duodenum. Just outside was a small abscess cavity, bounded above by the under surface of the right lobe of the liver, and close to the hepatic flexure of the colon below. A smaller but similar ulcer was situated immediately beyond the pylorus in the upper part of the duodenum. There was excess of mucus in the stomach and intestines, with thickening of the mucous membrane. The kidneys were of the contracted granular type.

M. S—, a carpenter, aged thirty-five, a stout, big, well-developed man, was suddenly seized while at work with abdominal pain, soon followed by vomiting. He was brought home soon after he was taken ill, and continued in the greatest agony, vomiting frequently, until, as a last resort, he was brought to the hospital in the early morning two days later. There had been no action of the bowels, and as he was supposed to have obstruction he was admitted under the care of Mr. Sydney Jones, with whom I saw him in consultation. He was in the greatest distress. Pulse rapid and feeble; extremities cold; temperature 98°8'; abdomen distended, but not very tender; dulness in right flank. He had an inguinal hernia, for which he had been operated on several years before, and this had come down since the attack occurred, but was easily reduced. With so much obscurity in the case, it was thought desirable to make an exploratory operation. Mr. Jones found a very acute peritonitis, but the cause was not discovered. He died the same afternoon. The necropsy showed the presence of a chronic ulcer on the anterior aspect of the duodenum immediately beyond the pylorus, and this had perforated. I elicited from the wife that he had been a heavy drinker like the man in the last case. He had never suffered from indigestion in any form until the last week or so, when his appetite had failed and he had suffered from pains in his stomach.

James B—, age twenty-six, while out walking one day, was suddenly seized with cramping pains in the stomach. He would have fallen if his companions had not prevented him. He vomited, and the pain continued. In the course of three or four days he was better, but he continued to suffer from attacks of the pain for a month, when, after a more violent attack than usual, he was admitted to the hospital. He had been a free drinker. Eight years previously to the present attack he had suffered for two months from attacks of pain in the epigastrium and vomiting after food. The pain would double him up and prevent him moving, and kept him awake at night, while the vomiting would occur two or three times a day. After two months he quite recovered and continued well until this fatal attack. When seen his face was expressive of great pain, and he said he was suffering agonies in his abdomen. He was bathed in profuse perspiration, and lay on his back with his legs drawn up. The abdomen was tense, and in the right flank and iliac region very tender, extremely hard, and resistant. No abdominal movement on respiration. The bowels had acted that morning. Temperature 99°2'; pulse rapid and feeble. His pain was relieved by morphia, but vomiting set in next morning and continued all day, and he died collapsed in the evening. The highest temperature observed was 101°4'. At the necropsy was found a very intense peritonitis, with a quantity of thick brown offensive fluid in the dependent parts. In the duodenum, immediately beyond the pylorus and actually touching it, was a circular ulcer the size of a threepenny piece, and the floor of this had given way. Another similar ulcer close to this had for its floor only the peritoneal covering of the bowel. The colon and duodenum were pretty firmly adherent to the liver by old adhesions.

In these cases, then, a careful inquiry should, I think, have suggested duodenal or possible gastric ulcer, for in some cases of gastric ulcer the symptoms may be similarly latent until nearly the time of the perforation, although much more commonly there are fairly definite signs of its presence.

The following case is interesting as one of the cases of gastric ulcer where, as in the duodenal cases, dyspeptic symptoms had only existed for some fourteen days before perforation.

A. S—, aged forty-six, a man who had been a hard drinker, had suffered for some fourteen days from pains in the stomach, when he was suddenly seized while drinking beer with violent pains in the abdomen, which increased in intensity until he was brought three hours later to the

hospital. He was a big powerful man, unable to sit or lie still for an instant, and evidently in great pain. He preferred to lie on his right side, with his knees drawn up, but he could not lie on his back. The abdomen was contracted, walls rigid, muscles prominent, and extremely tender on pressure; extremities cold; face pinched; temperature 96°; pulse 104, hard and wiry. He was retching a good deal, and vomited a small quantity of dirty green fluid. He said he had had much retching, but had been unable to vomit, although he had the desire. His bowels were last open on the morning of the acute attack. No difficulty in micturition. He died fifteen hours after the attack. On post-mortem examination an acute intense general peritonitis was discovered. The intestinal coils were much injected and adherent by recent lymph. The peritonitis was about equally distributed over the abdomen. On the posterior surface of the stomach, near the lesser curvature and about midway between the cardiac and pyloric orifices, was an old ulcer about the size of a sixpence. The edges were raised and thickened, and the floor, which was formed by the sub-peritoneal coat, showed a round perforation about four lines in diameter. The organs generally were healthy.

I have seen four other cases of gastric ulcer fatal through perforation. In these there was a pretty definite history of gastric ulcer, but in all of them the symptoms had been more prominent for some little time preceding the actual perforation. One was a man who for two years had suffered from attacks of pain in the chest about the middle of the sternum, with frequent vomiting. Two days before the acute attack abdominal pain came on and lasted all day, although he continued at work. Next day the pain was worse and vomiting occurred, but still he was able to work. Then came on the acute symptoms, and he came to the hospital with evident peritonitis. Another, who had had symptoms of gastric ulcer for ten years, had aggravation of symptoms for three months before the perforation occurred. It is important to bear in mind, then, that, although symptoms of gastric ulcer are generally present, sometimes they are as latent as in the duodenal cases. It is not, however, a matter of very great importance, after perforation has taken place, to be able to say whether the ulcer is in the duodenum or the stomach; but it is quite different when we have to decide between the stomach or duodenum and the appendix. If vomiting occurs, the ulcer is more likely to be in the duodenum than the stomach.

Perforation of the appendix has happened in all the cases I have seen to individuals in perfect health. Nearly all were young adults, and, as is to be expected, no history of premonitory dyspepsia was forthcoming. In St. Thomas's Hospital Reports for 1885 I published seven fatal cases of this disease, six of which I had myself seen. Since then seven more fatal cases have occurred, making a total of thirteen during the three years I was resident. In none of these had there been any previous similar attack, and careful investigation failed to discover anything of the nature of previous dyspeptic symptoms. If a patient has an attack of perityphilitis from which he recovers entirely, the adhesions left from it will, I take it, prevent anything like a perforation into the general peritoneal cavity; but if an abscess remain after the attack, then, of course, peritonitis may occur. The diagnosis I take to depend on a process of exclusion, assistance being derived from the age of the patient and the progress of the case.

The following case is instructive as a contrast to the cases of duodenal ulcer.

D. M—, a milk-boy aged eighteen, one afternoon, while washing his milk-cans, was suddenly seized with pain in the lower part of the abdomen, and was at once sick. Previously to this attack he had had perfect health. He went to bed, but, although the pain abated, the sickness and retching continued. For the next five days, however, he was able to do his work, and, although suffering some pain in the abdomen, he had no sickness. Meanwhile he had taken castor oil and a dose of medicine, which acted slightly on the bowels. On the evening of the fifth day he was again seized with such severe abdominal pain that he fell on the ground and kicked, being sick at the same time. Next day he walked to the hospital, and was found to have symptoms of acute peritonitis. Pulse 132, feeble; temperature 100.4°; voice feeble and broken; face expressive of pain; extremities cold; lips blue; decubitus dorsal, with legs drawn up; abdomen rigid and tender, and slightly fuller than normal, with motionless breathing and

dulness in the right flank; superficial abdominal veins distinct; difficulty in micturition. His pain was relieved by morphia, but his pulse increased next day to 160 condition went from bad to worse, and he died three later. The post-mortem examination showed a perforation in the middle of the appendix, through which a faecal cretion had passed; this had set up a peritonitis, intense in the caecal region. In this case there was what as far as my experience goes, an uncommon even premonitory attack of pain and vomiting, but the was in the lower abdomen, not the upper, and occurred a few days before the perforation. His age would have been an unusual one for duodenal ulcer.

(To be concluded.)

HYDATID CYST OF THE LIVER; ABDOMINAL SECTION; RECOVERY.

By WILLIAM H. BULL, F.R.C.S. EDIN. &c.

LOUISA M—, aged seventeen, first consulted me March, 1887, with the following history. Her family history was good, and she herself had enjoyed the best health up to the age of twelve, when she had an attack of typhoid fever. Twelve months after that she noticed small swelling on the right side of the abdomen, which could be easily moved about. At times it caused a good deal of pain, and occasionally interfered with sleep. The twelve months previous to my seeing her the appetite and strength had been failing. Her courses had been regular, but the bowels were habitually constipated.

The patient was a well-nourished, healthy-looking; with a somewhat anxious expression. She complained of gradually losing strength and being unable to follow occupation. The appetite was bad; the tongue clean, pulse quiet and regular, but rather weak. The urine normal. The menstrual periods came regularly every month. On examination, all the organs in the body were apparently healthy. She had never suffered from affection of the liver, and had not been jaundiced. On examining the abdomen, a tumour could be felt, about size of a large cricket ball, occupying the right hypochondriac region. It was smooth, elastic, rounded shape, and slightly tender when examined; no fluid could be detected by manipulation. When left alone it lay partly behind the ribs on the right side. It could be moved freely "all over the abdomen," and could be brought down into the right or left inguinal region, where it would remain for a short time and gradually recede; it could, however, be brought down into the pelvis. On inspiration it was forced down, so that the hand could be placed between the ribs and above the tumour and its ascent stopped; in this position there was perfect resonance of three or four finger's breadth (between the tumour and the liver). There was no pedicle to be felt, but the tumour seemed to move as a semicircle from side to side. Vaginal examination gave negative results. My first impression was that the tumour was ovarian, with long pedicle; but on further examination I was strongly of opinion that it was an omental cyst.

Early in May the patient was seen by Dr. Buzzard, his colleagues at the Northampton Infirmary, all of whom favoured the idea of its being renal, but surgical interference was not advised. Towards the end of May I sent the patient to St. George's Hospital under the care of my friend, Mr P. Pick. While there she was examined under either Dr. Champneys and Mr. Pick, and a consultation held the staff of the hospital. The general idea was that the tumour was omental, and an exploratory operation advised. She returned to the country early in June, and remained home for the summer months, during which time I treated her general health with a view to operation later on. The tumour gradually increased until it attained the size of a large cocoanut, when it became extremely uncomfortable and painful; and as she continued to lose strength, appetite and spirits, I admitted her into the Stony Stratford Hospital, and performed abdominal section on Oct. 9th, 1887. Ether was administered by my colleague, Mr. H. H. Tidswell. Mr. Pick assisted me, and to his invaluable help I owe much of the success of the operation. Having made an incision between four and five inches in length,

secured every little bleeding point with clip forceps, the peritoneum was opened and the hand introduced into the abdominal cavity. A large, tense, round, smooth tumour (lying under the liver) was brought to view, being embedded in and attached to the anterior border and under surface of the right lobe of the liver. It had no other attachments. The tumour was tapped with an ovarian trocar, and an attempt made to evacuate the contents, but it became blocked and had to be withdrawn. The anterior part of the tumour was then removed, along with dozens of hydatid cysts, varying from the size of a pigeon's egg to that of a pea, together with a quantity of pale watery fluid. The cyst was thoroughly washed out with warm carbolic lotion (1 in 40), and the cavity of the abdomen well swilled out with a warm solution of perchloride of mercury (1 in 1000). The edges of the cyst were sewn to the abdominal walls with silver sutures, a drainage tube introduced, and the rest of the wound brought together in the usual manner, the utmost caution being taken to include all of the peritoneum. The whole was covered with carbolised gauze and salicylate wool. No further antiseptic precautions beyond those already mentioned were taken. The patient was under ether fifty minutes. She bore the operation remarkably well, and while under ether presented no urgent symptoms. A suppository of two grains of opium was introduced into the rectum. During the day she suffered a good deal of pain in the abdomen at times, but was free from sickness, and in all other respects was fairly comfortable. Nothing but ice was allowed the first day. A second suppository of opium was introduced in the evening. At 8 P.M. the pulse was 114, and the temperature 99°.

From this time up to the termination of the case she made more or less uninterrupted progress. The wound was dressed night and morning, and the cavity of the cyst well syringed out each time with carbolic lotion. The drainage tube was removed on the twelfth day (Oct 21st), and the sac of the tumour came away on the thirty-fourth day (Nov. 12th). During the whole time the discharge was healthy, except on one occasion, which accounted for the rise in temperature. The morning after the operation the temperature rose to 102·8° and the pulse to 130; but on the second morning the temperature fell to 100·4°, and for the following nine days varied from 98·6° to 100·4°; it then rose for two days to 101°, which was due to a sudden increase of discharge (the only occasion on which it became offensive); but after this relief it rapidly fell, and became normal by Oct. 26th—i.e., seventeen days after the operation. The sutures from the lower part of the wound were removed on the eighth day, the parts being firmly united. On the ninth day two of the sutures from the cyst were removed, and the remaining sutures on the twelfth day. On Nov. 4th—i.e., twenty-six days after the operation—she was able to get up and sit in an arm chair for three hours, feeling pretty well, only weak. By Dec. 20th the wound had so thoroughly contracted that it would scarcely admit the end of a director, and there was but very slight discharge from it. The general health was very good, and she left the hospital that day, cured.

I saw the patient again on April 17th, 1888, when she stated that since her return home the wound had healed, but "at times" only there was a slight discharge, which had continued for the last two or three weeks, with a pricking pain in the parts. On examination I detected two silver sutures about half an inch below the level of the skin; these were easily removed, and the wound healed up in a very few days and became perfectly sound. The girl is now strong and active, and able to resume her usual work.

Among the points of interest in this case, the following may be mentioned. 1. The obscure nature of the tumour, illustrating well the impossibility of forming a correct diagnosis in these cases of abdominal tumours. A very interesting and somewhat similar case is recorded in THE LANCET of Feb. 12th, 1887. 2. The free mobility of the tumour, and the great extent of resonance between it and the liver (when pushed down), suggesting that its origin could scarcely be from the liver. 3. The grave aspect the case assumed on discovering the true nature of the disease. 4. The satisfactory progress of the case, although the suppuration which accompanied the separation of the cyst was so extensive; and likewise the entire absence of any troublesome or serious complication.

Stony Stratford.

A CASE OF REMITTENT FEVER, WITH PNEUMO-PLEURITIC COMPLICATION; PIGMENTED BODIES IN THE BLOOD; DESTRUCTION OF BLOOD CORPUSCLES; REMARKS.

By JOHN LUCAS, M.D.,
SURGEON-MAJOR, INDIAN MEDICAL SERVICE.

B. D.—, a boy aged twelve, came under my care on Jan. 28th, 1888. His father stated that on Jan. 2nd—i.e., twenty-seven days previously—on going to school the patient got wet, after which he complained of headache only, but said he did not otherwise feel ill. For about nineteen days he had been ailing with ague, and his medical attendant found the temperature to be 103° and sometimes 105° at mid-day; this was a few days prior to my first seeing the case. There had been some expectoration; the bowels were regular, and there was no pain anywhere.

When I saw the patient he was a thin, emaciated lad; skin dry and anæmic; temperature 102·4° (at time of my morning visit); features anxious and pinched; tongue coated with thick white fur, inclined to brown, and dry from checked saliva; and herpetic eruption on lips. He was conscious at the time, but was said to wander at night. Appetite poor; breathing difficult; dilated nostrils. On physical examination of the chest &c., the respiration was found to be diaphragmatic and abdominal; both bases were dull on percussion, the right side more than the left; breathing tubular and attended with moist râles, with other signs of double pneumonia. In front the physical signs were those of capillary bronchitis. Sputum frothy and slightly rusty. Liver enlarged slightly; some tenderness in it. Spleen also enlarged a little. Urine: sp. gr. 1010; reaction acid; no albumen; chlorides not absent.

The treatment ordered consisted of linseed poultices to the chest; a mixture containing squill, ipecacuanha, and senega; and milk diet.

Jan. 29th.—Is conscious, but appears to be deaf from previous quinism. Skin hot and dry; temperature in mouth 100·4°; last evening 99·6°; pulse now 132, small and wiry; respiration 44, diaphragmatic and abdominal. Tongue dry, with thick white fur, inclined to be brown. Expectoration freer; same in character. Cough troublesome. The pneumonic signs are much the same, but there is the addition of pleuritic effusion displacing the heart. Bowels moved once. Slept pretty well. A microscopic examination of the blood showed a relative increase in the number of the white cells; the red ones appeared disintegrated, and the pigmented bodies, two of which only were seen in the field, seemed to alter their form and show mobility, and were surrounded by a few red corpuscles which scarcely formed rouleaux; these bodies were spherical and quickly changed to an oblong and semilunar shape, with a black pigmented aspect, having a nucleus in the centre. The temperature of the patient at the time was 100·4°; at noon it was 101·3°; at 5 P.M. 99°. To continue the mixture, and to take ten grains of quinine and three minims of tincture of digitalis at once.

31st.—There appeared to be a maximum rise of temperature towards noon, and a fall in the evening. The boy is lying on the left side. The breathing is easier. He slept pretty well. Wanders a little. Pulse 126, small and wiry. Tongue still furred, white in the centre, but with red tip and edges. Bowels not loose. No tenderness or gurgling in right iliac fossa; no rash. Urine high coloured, clear, and no sediment or froth. Microscopic examination revealed nothing. To continue mixture, and to take the quinine and digitalis twice a day.

Feb. 1st.—Temperature 99·6°. Bowels moved twice during the night. An additional five grains of quinine were given, as it was suspected the pyrexial rise took place at night when the patient wandered. Ordered milk diet, with three ounces of brandy, beef-tea, and ice to suck. At 5 P.M. the temperature went up to 105°. A cold bath was ordered, which brought it down to 100° whilst in the bath, and to 97° on being taken out. An ounce of brandy was now given. Temperature at 6 P.M. 101·2°.

2nd.—Temperature 100·4°. Bowels moved. The bath appears to have done good. His general condition, as far as drowsiness and wandering are concerned, is decidedly better. Is conscious, and not so deaf as before. Tongue

coated white. Sleeps and takes nourishment well. Feels hungry now, and has some relish for food. The medicinal treatment now consisted of fifteen grains of quinine and three minims of tincture of digitalis in an ounce of water thrice a day. A cold bath was again given, with a view to the prevention of rise of temperature; at 9.45 A.M., before the bath, it was 99° 6'; just after it, 97°; at 5 P.M., 101°.

On Feb. 3rd the temperature was 100° 4', and the cough was better. He continued to improve, and on the 6th the digitalis was omitted. On the 7th a mixture containing five grains of quinine and five minims of tincture of the pernitrate of iron, in half an ounce of infusion of chiretta, was prescribed; and iodine liniment painted on the chest. On the 8th it was recorded that the signs of pneumonia &c. had nearly disappeared. On the 16th an examination of the chest showed only some slight hydrothorax, for which the painting of iodine was advised to be continued, with a little iodide of potash and squill internally.

Remarks.—The case is of interest in its diagnostic and therapeutic aspect. It is one of those cases in which it is difficult to pronounce a precise opinion as to whether the fever is a primary affection of malarial type, or symptomatic of pulmonary inflammatory disease. Therapeutically, it is of moment as indicating the value of the cold bath, as well as of digitalis, the *modus operandi* of the latter being, of course, due to stimulation of the inhibitory power of the vagus. The *raison d'être* of this paper, however, is the result of the microscopic examination of the blood. I had seen these spherical bodies before, and wondered what they were; this was previously to the publication of the most recent contributions on the subject. It struck me that there were two points to be considered—(1) the pigmented appearance, and (2) the amoeboid-like movements and change of form. I thought to myself whether the first-named characteristic might not be due to the hæmaturia after it had separated (by heat?) from the globin of the hæmoglobin of the broken-up red corpuscles. This I viewed in the light of physiology, but I was puzzled about the movements. These resembled the amoeboid movements of living white cells. That the blood undergoes certain changes in all morbid conditions in which the temperature is raised cannot be gainsaid. It is this that we must look to in fatty metamorphosis which takes place in the heart &c. in hyperpyrexia, which I have some years back shown in an article or two published in these columns and elsewhere. But as yet we are in almost entire darkness as to the precise nature of these changes. The red corpuscles are doubtless destroyed by high temperature in disease, in much the same way as happens physiologically in health by prolonged residence in the tropics. Whether the iron in it becomes less by separation, or what else takes place, has to be determined by the joint labours of the biologist and the physician. Rabbits and dogs might well be experimented upon by raising the body temperature artificially by subjection to graduated heat, by acting upon the thermic nerve centre mechanically, through the agency of drugs, and by the action of septic virus. The results obtained by the opposite experiment of lowering the temperature must also be considered side by side. I should mention that these pigmented bodies were absent in this case on other occasions when the blood was examined, which was done when the temperature was above normal. They were present and absent in other cases of pyrexia—oftener absent than present—without any fixed rule, so that no reliable inference can be drawn from it. The literature of the subject has been enriched of late years by but few additions. Proceeding on the track of Tommasi-Crudeli and Klebs, who discovered the bacillus malarie, now about ten years since, Celli and Marchiafava told us in 1884 or 1885 that the blood undergoes certain important changes in malarial fevers and the resulting cachexia. According to them, the hæmoglobin of red discs is removed by some process, presumably metabolic or chemical, and a hyaline material is substituted, and this new material can be easily stained with methyl, whereas in health red corpuscles cannot be stained by any aniline dye; and they further hold that these corpuscles undergo softening and "crenation." However important these researches may be from a histological standpoint and aids to future investigators, they throw little light on the path of the practical physician. Later on their researches received confirmation at the hands of Dr. Laveran, a *médecin-major* in the French army, who turned his opportunities at Algiers to very good account by studying malarial fevers there. Dr. Laveran appears to be inclined to regard what he calls

"leucocytes mélanifères" (the spheroids larger than red corpuscles which I had myself seen and wondered what they were) as white cells pigmented and rendered melanotic. He is very likely right. And my reasons for thinking so are—(1) the amoeboid movement of white cells, first demonstrated by our much-respected physiologist, Mr. Wharton Jones, is a well-known characteristic; (2) there is no reason why, as I believe, the separated colouring matter hæmaturin from globin escaping from the broken-up red discs and floating in the serum should not be taken up by the white ones, especially when the blood heat is raised. It would, I venture to think, be difficult for an adverse critic to controvert this contention, hypothetical though it may be. Then, again, Dr. Vandyke Carter, in his explorations of the vast clinical and pathological mines of the Jamsetjee Jeejeebhoy Hospital in Bombay, has got them to yield similar results.¹ He found certain micro-organisms in the blood in ague. Having examined the blood in about 120 cases of malarial and other fevers, it was only in but a small proportion of those more distinctly malarial (in this country I do not think we can very well separate the malarial element) that he found pigmented monads. Dr. Carter is cautious in not hazarding any very definite expression of opinion. The whole subject is of vast magnitude, and demands careful study.

Bombay.

ACCURACY IN ESTIMATING ERRORS OF REFRACTION.

BY A. ST. CLAIR BUXTON,

ASSISTANT SURGEON TO THE WESTERN OPHTHALMIC HOSPITAL.

THE diagnosis and treatment of errors of refraction form a large proportion of the work which falls to the share of an ophthalmic surgeon. This fact alone sufficiently emphasises the importance of the subject. It behoves the surgeon to estimate these errors, not merely approximately, but as accurately as is possible. It is not enough that a patient be able to read $\frac{1}{2}$. Many myopes, and more hypermetropes, can do this without the aid of spectacles. That being an admitted fact and beyond dispute, it follows that it is easy to find a lens which will enable many an ametropic eye to read $\frac{1}{2}$; but it does not follow that this lens represents the full measure of the error, nor that an over-correction has not been effected by it. When an ametropes reads $\frac{1}{2}$ without assistance, one of two things takes place: either the types are not very clearly seen (being only just sufficiently well discerned to be recognisable), or else the vision is rendered clear at the expense, so to speak, of the ciliary muscle.

Uncorrected errors of refraction are productive of many evils, of which it suffices to mention strabismus, spasm of accommodation, headache, and frontal neuralgia. The amount of evil effect is, *ceteris paribus*, usually strictly proportionate to the degree of error. And yet how frequently do we find that patients have been "fitted" with spectacles entirely on the strength of information supplied by subjective tests of the most incomplete kind. It is not surprising, therefore, that a certain number of these patients should acquire a lack of confidence in any gentleman who prescribes for them in this manner. As an act of common honesty, setting aside the higher dictates of humanity, it is the duty of the surgeon to do his very best for his patients. It cannot be logically argued that a man who does not take the trouble to ascertain the exact amount of, at any rate manifest, refractive error is in a position to prescribe the best possible remedy for that error; and, therefore, when an oculist is satisfied with simply finding the first lens which permits his patient to read $\frac{1}{2}$ he is falling short of his duty.

It is, unfortunately, not a very rare occurrence to meet with cases of mixed astigmatism in which the myopic meridian alone has been corrected by means of a spherical lens, the hypermetropia being entirely ignored, and of course artificially increased in amount to a corresponding degree. That some patients thus treated can read $\frac{1}{2}$ I have convinced myself times out of number; and the fact may be easily accounted for on the supposition that the ciliary muscle is capable of what my friend Dr. W. J. Collins very aptly calls "meridianal accommodation." But the overwork thrown on the ciliary muscle soon tells its tale to the

¹ Scientific Memoirs, part iii.

patient, who is generally tempted to seek fresh assistance in other quarters. This is not calculated to elevate the dignity of our profession in the lay mind. To assert that the surgeon who thus treats a fellow creature is using his ability to its utmost in affording relief is either an absurdity or a grave reflection on his professional skill. I am aware that many hold that, because the human eye is but an imperfect piece of optical apparatus, it is sheer waste of time to attempt to correct minute errors. Surely two wrongs do not make a right. It is, of course, easy to understand that a doctrine of this kind is comforting to the conscience of a busy man, but it is none the less unworthy of a scientist. Others, again, affect to consider errors of refraction almost beneath their notice. It is a pity that they do not consider them entirely so. Another argument urged against the necessity for accuracy is found in the statement that "experience teaches us that it is not necessary to the comfort or well-being of the patient that these errors should be so minutely neutralised"; and some go so far as to say that the subdivision of the powers of the test lenses into quarter dioptres is superfluous and practically needless. This reminds one of the remark made by the rich man who wondered why farthings were coined. Let the point be referred to a patient suffering from a small amount of mixed astigmatism, and who uses his eyes many hours daily in the performance of delicate work. I am content to abide by his verdict, provided he has had the opportunity of comparing the comfort afforded by accurately adjusted spectacles with that obtainable from those which only approximately neutralise his error. I can give copious examples of cases of this kind in which 0.25 D. more or less, makes the greatest difference as regards both vision and comfort. It is sometimes pleaded that it is only an arbitrary standard of emmetropia. So it is; and if we can get our patients to read it so much the better.

The employment of keratotomy, more properly called the shadow test, should never be neglected in estimating an error of refraction. It offers good and reliable data, and really occupies no greater time than the rough-and-ready plan. While speaking of keratotomy, I should like to dispel an idea which seems to a certain extent prevalent—viz., that in the case of hypermetropes the latent as well as the manifest (i.e., the total) hypermetropia can be computed without paralysing the accommodation. This is not so while any accommodation remains. I admit that the + lens, which apparently accurately corrects the hypermetropia by keratotomy, is probably a rather stronger one than could be used by the patient to read $\frac{1}{2}$. But if the eye be subsequently placed under the influence of atropine, it may be found that a still stronger one is needed to obtain the same acuity of vision. The reason of this, I take it, is that light stimulates to a less extent than does the effort to read the distinct types.

In conclusion, I maintain that no pains, no time, and no patience should be economised in ascertaining, to the very utmost of our ability, the exact condition of the refraction when called upon to prescribe spectacles. Our motto should ever be: "*Quicquid assequitur manus tua ut facias pro facultate tua fac.*"

A Mirror

OR

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

LAPAROTOMY IN CASES OF DOUBLE TUBERCULAR PYO-SALPINX AND STRANGULATED FEMORAL HERNIA.

(Under the care of Mr. PEPPER.)

TUBERCULAR disease affecting the Fallopian tubes to an extent sufficient to demand their removal is of extremely rare occurrence, and therefore the first case is an important one. It is not, however, an unusual experience for the pathologist to find the disease existing on one or both

sides to a slight extent, but associated with a general tuberculosis, and not of itself producing symptoms. References to this particular affection of the Fallopian tubes are few. Dr. Kingston Fowler, in a paper read before the Medical Society¹ in 1884, brought forward fifteen cases of disease of the Fallopian tubes which had come under his observation, and, with reference to their possible tubercular origin, considered it probable that in some the primary change was of that nature. Other cases are recorded in the Pathological Society's Transactions² and elsewhere,³ sometimes associated with tubercle of the uterus. Dr. Griffiths, in a paper read before the Pathological Society on Nov. 6th,⁴ on Tubercle of the Ovary, said that the most common seat of tubercle in the female generative organs was the Fallopian tube, then the uterus, and lastly the ovary. The other causes given for pyo-salpinx⁵ are: chronic catarrh of the vagina or uterus, gonorrhœa, exanthematic disease at puberty, inflammatory mischief in the pelvis in the post-puerperal state, infantile condition of the uterus, or stricture of the cervical canal. The complication which arose in consequence of the slipping of the ligature in the second case was one which demanded prompt and energetic action, and it is fortunate when such an accident, if it occurs, is recognised whilst the patient is on the operating table. The only procedure open to the surgeon is to secure the bleeding point at once, by the abdominal section in a case of femoral hernia, or by the enlargement of the wound in hernia in the inguinal region.

CASE 1. *Double tubercular pyo-salpinx; laparotomy; removal of uterine appendages; recovery.*—Emily L., aged thirty-one, a nurse, was admitted on April 15th, 1888. She was in the hospital four years ago for strumous disease of the left sterno-clavicular joint; arthrectomy was performed, the wound healed, the joint became ankylosed, and she had no further trouble for two years. At the end of that time a small abscess formed in the cicatrix, and was opened, leaving a discharging sinus, which never healed. Four months before admission the amount of discharge commenced to increase, and she began to suffer considerable pain.

On admission the patient was pale and careworn. There was an old cicatrix between the origins of the two sterno-mastoid muscles, and one inch and a half below this a red depressed scar, with an orifice discharging pus. There was slight swelling over and around the manubrium, but neither redness nor fluctuation. The left upper angle of the manubrium was wanting, and the sternal end of the left clavicle was irregular in outline. In the right iliac fossa was a painless swelling. This had been known to exist for fifteen days. At the beginning of that period she had considerable abdominal pain and a sharp attack of fever. The swelling referred to was semi-fluctuant; it occupied the true pelvis and the inner part of the right iliac fossa, but it did not reach down to Poupart's ligament. It could be swayed somewhat from side to side. On vaginal examination it was found to be connected with the broad ligament. There was also a smaller swelling of similar character on the left side. On aspirating through the abdominal wall some thick pulsatious matter was extracted, which proved to be inspissated pus. There was no disease of the lungs. The facts obtained by the above examination, taken with the previous history, led to the conclusion that the patient was suffering from tubercular pyo-salpinx.

On May 2nd patient was placed under an anæsthetic and laparotomy performed. The great omentum was fixed by recent adhesions at its lower edge to the parietal peritoneum; on separating it two tumours were exposed, that on the right being as large as an ostrich's egg, the one on the left the size of a goose's egg. The one on the right side was removed first; it was adherent in front to the omentum, behind to the intestines, and on the outer side to the abdominal wall. The adhesions were gradually torn through, and as the tumour was very tense it was aspirated. This done, and all the adhesions having been divided, the tumour was easily drawn out of the wound; it was attached to the right upper angle of the uterus by a narrow pedicle (the undistended portion of the Fallopian tube); this was ligatured and divided, and the mass removed; attached to

¹ THE LANCET, vol. i., p. 800.

² Ibid., 1885, Mr. Silcock, p. 303; 1886, Dr. Kidd, p. 257.

³ Ibid., 1884, vol. i., p. 800; 1888, vol. i., Feb.

⁴ Ibid., vol. ii., p. 914.

⁵ Ibid., 1887, p. 777; Tait, who refers to Singer. *New York Academy of Medicine*: Wyllie.

it was the ovary. On cutting the latter open, it was found to be of a dark-red colour from recent hæmorrhage. The tumour on the left side was next removed in the same way; there were very few adhesions, and, as on the other side, the inner part of the Fallopian tube was not dilated. The left ovary was cystic. The abdominal cavity was then carefully cleansed with 1 in 3000 perchloride of mercury solution, and the wound closed. Silk ligatures and sutures were used; no drainage tube was inserted. The operation lasted two hours and a half; it was rendered tedious by the extensive oozing from the adhesions, some of which were old and fibrous, but the greater number consisted of vascularising lymph.

The patient slept fairly well the night following the operation, having had the third of a grain of morphia administered hypodermically. She made a rapid recovery, the wound healing by first intention and the temperature never reaching 100°. On June 11th she got up, and was discharged, wearing an abdominal belt, on July 19th. Since leaving the hospital the patient's general condition has greatly improved.

CASE 2. Strangulated femoral hernia; herniotomy; hæmorrhage into peritoneal cavity; laparotomy; recovery.—Jane B—, aged fifty-three, was admitted on June 19th, 1888. She had suffered from a right femoral hernia for fifteen years, but had never worn a truss. The hernia had always been easily returned. On the 17th she commenced to have pain in the abdomen and to vomit, the hernia becoming irreducible. She gradually got worse, the vomit became stercoraceous, and she was brought to the hospital.

On admission, there was a large femoral hernia on the right side; taxis failing to reduce this, the patient was placed under an anæsthetic, and it was again tried, but without success. Herniotomy was therefore performed, and the sac opened; it contained a small piece of congested intestine, which was returned, and a large mass of omentum. The latter was ligatured in two pieces with catgut and removed. On completing the division the stump seemed to spring back into the abdominal cavity, and one of the ligatures separated. This was followed by welling up of blood in the wound. The patient became blanched. It being impossible to find the retracted omentum, the abdomen was opened in the median line below the umbilicus by an incision four inches in length; the omentum was now easily found, drawn out of the wound, and the three bleeding arteries secured with silk ligatures. The abdominal cavity was then rapidly but thoroughly sponged dry, and the median wound entirely closed with sutures; the wound in the groin was partly closed, and a drainage tube inserted. With the exception of the formation of a small abscess at the lower part of the abdominal incision, the case pursued an uninterrupted favourable course, both wounds were healed at the end of a month, and the patient was discharged well, wearing an abdominal belt, on Aug. 9th.

Mr. Pepper, in his remarks on the case, said that in future he would never again use catgut ligatures in abdominal operations, and he related several instances in which a calamitous ending had resulted from the slipping of gut ligatures. He insisted on the necessity of at once grappling boldly with such an emergency as the one under notice, and deprecated the practice of resorting to external pressure and internal hæmostatics.

CALCUTTA MEDICAL COLLEGE HOSPITAL.

LARGE VENOUS ANGIOMA OF ARM; OPERATION; RECOVERY; REMARKS.—**TRAUMATIC VENOUS ANEURYSM; OPERATION; RECOVERY; REMARKS.**

(Under the care of Dr. K. McLEOD, Brigade Surgeon.)

THE following are cases of considerable importance as illustrative of rare conditions of disease of the veins, and the account of them will be attentively perused by the profession. The notes were taken by Assistant Surgeon A. K. Shaha.

Extensive venous angioma of left arm; partial excision; suppuration; primary abscesses of left arm, forearm, and hand; secondary abscess of right knee joint; recovery.—Suresh Chunder D—, a healthy-looking male child, aged two years and nine months, was admitted into the first surgeon's wards on March 9th, 1888, with an extensive nævus involving almost the whole of the left upper extremity. The child was born with a purple spot over the left pectoral

major muscle and a soft swelling of the index and middle fingers and palm of the left hand. These swellings increased and extended until they attained the present dimension. At nine months iron was injected into the palm with benefit, and during the last year several severe bleedings had taken place from the chest swelling—one to a dangerous extent.

On admission the child was apparently healthy; livid somewhat enlarged; no sign of anæmia. There was a scaly swelling about the size of a hen's egg under the left clavicle, which collapsed on steady pressure. The skin was very thin, and of a purple colour over the most prominent part of it. (It was from this spot that the bleedings took place.) Around this patch the skin was thin, adherent, and blue, and several large blue veins were seen in the neighbourhood. The swelling passed down to the arm in the course of the cephalic vein, and occupied the whole of the flexor aspect of the arm and forearm, causing considerable increase of circumference, and presenting dull-blue colour. The palm and dorsum of the hand were much swollen, and the index and middle fingers greatly increased in size, soft, blue, and separated from each other and from the other digits. The first three metacarpal bones were separated from each other by the swelling. The muscles of the extremity appeared to be wasted.

After consultation with Dr. D. O'C. Kaye, the propriety of removal of the whole extremity by amputation at the shoulder joint was pressed on the child's father; but I would not consent to this measure; and, as an alternative, immediate excision of the oldest, most isolated, and most dangerous portion of the tumour—namely, the pectoral—was proposed, leaving the remainder to be dealt with afterwards as might appear advisable. To this proposal consent was obtained. Accordingly the skin was carefully dissected off the surface of the tumour, with the exception of the central patch; the nævus was isolated, and its base transfixed by catgut ligatures, which were firmly tied. The tumour was then removed by scissors. A ligature was passed below the prolongation of the tumour downwards about half an inch from the margin of the wound and tied tightly. The wound was dressed antiseptically for granulation, and the hand, forearm, and arm carefully bandaged. Very little blood was lost, every bleeding point being secured by Spencer Wells' pressure forceps as the operation proceeded.

The child was detained seventy-eight days in hospital during which time the following local events occurred. The discharge was moderate, and no bleeding took place from the wound at any time. The tissues, which had been ligatured, sloughed, but the sloughs separated and the wound healed slowly but kindly by granulation. The loop which had been placed below the wound caused suppuration, and a sinus resulted, from which a little blood came one day, but it eventually healed. The arm and forearm became more swollen and firm, also tender, and it appeared as if thrombosis had occurred throughout the tumour. About the fourteenth day this swelling subsided and the extremity had a shrivelled look. On the eleventh day the right knee was observed to be painful and swollen. The condition grew worse, and on the twentieth day the joint was found to be full of pus, and a free incision was made into it, a drainage tube inserted, and antiseptic dressing applied. On the thirty-second day fluctuating swelling was discovered at the lower end of the forearm, on the flexor aspect, at the site of the nævus. It was explored. Pus was discovered, an incision made, and a drainage tube inserted. On the thirty-ninth day a similar abscess was discovered above the elbow, and similarly treated. On the forty-eighth day a large abscess was opened below the right knee. On the fifty-first day two abscesses of the arm were opened which had formed in the situation of the original swelling. On the fifty-third day another abscess of the forearm was discovered and opened. Subsequently three small collections were found and opened: one on the ball of the thumb, one on the back of the hand between the first and second metacarpal bones, and one on the left arm. All these abscesses formed where the tumour had been. They were thin walled, and their cavities were large, and collapsed very readily. When the patient was discharged on May 26th they had all healed with the exception of four—one of the axilla, one of the arm, one of the forearm, and one of the right knee, which were small, slow and discharging very slightly. During this time the patient underwent severe constitutional disturbance. Pyrexia of remittent type set in early and continued throughout

fluctuating somewhat according to the state of the local lesions. Acute enlargement of the liver, bronchitis, and dysentery occurred intercurrently. Latterly the fever abated, but obstinately resisted treatment, and a change of air was advised. The child was seen about the middle of August. The fever had disappeared about a fortnight after he left the hospital, and the sinuses gradually healed. The cicatrices were visible, but all trace of the nœvus had disappeared, except that the fore and middle fingers were still rather swollen and blue. The right knee and joint was a little stiff. The child looked strong and well.

Remarks by Dr. McLEOD.—This angioma was decidedly of the venous variety, and seemed to implicate the cephalic, median, and radial veins principally; the cure evidently took place by suppuration of the thrombus which formed in the venous dilatations constituting the tumour shortly after the operation. The suppuration appeared to proceed from above downwards, and was probably caused by the percutaneous ligature which was tied at the level of the axilla.

Traumatic venous aneurysm; incision; ligation of vein; recovery.—Gunga Churn D—, an adult Hindu male, twenty years of age, was admitted on July 13th last with traumatic venous aneurysm below the bend of the right elbow. About eight months previously he was wounded in several places by the bursting of a bottle containing explosive substances (sulphide of arsenic and chlorate of potash). He received thirteen or fourteen wounds on the right side and front of his chest and abdomen, and four on the upper part of the right forearm, just at the site where the swelling made its appearance. The marks of these wounds were indicated by cicatrices. Four or five days after the accident he noticed a swelling below the bend of the elbow when the wound of that part was almost healed up. The swelling was accompanied with shooting pain and a burning sensation. He placed himself under medical treatment, by which the pain passed away altogether and the swelling subsided a little, but not entirely. He took no further notice of it till four months before admission, when the swelling began to increase. Finding the tumour getting larger day by day, he applied for relief at the out-door dispensary, where it was explored, and nothing but pure blood came out through the cannula.

On admission there was a large tense globular swelling, about the size of a large orange on the anterior aspect of the right forearm, just below the bend of the elbow. It was pretty firm in consistence, but soft in some places. A sense of indistinct fluctuation could be felt, but no pulsation was discovered or aneurysmal bruit heard over it. The radial artery of the affected side was weaker and more compressible than its fellow of the opposite side.

On July 14th, chloroform having been administered, and an elastic cord applied round the middle of the arm, a longitudinal incision about three inches and a half long was made over the tumour, and its cavity was freely laid open. It was found filled up with clots and fluid blood. The clots were turned out from the interior of the sac. Some of these clots were old, and presented a decolourised and laminated appearance; the rest had the colour and consistence of newly coagulated blood. The whole contents of the cyst weighed nine ounces. After carefully examining the interior of the sac, two apertures were found on its outer side, from which dark venous blood exuded. These were the proximal and distal openings of a vein. A needle threaded with catgut was passed under each and ligatured. There was no true sac, but a pseudo-sac was formed by the condensation of cellular and muscular tissues. The cord was then loosened, but no bleeding point was seen. The cavity was thoroughly washed with bichloride lotion, a drainage tube inserted, and the sides of the wound stitched with horseshair stitches. The wound was finally dressed antiseptically.

After the operation the wound mostly healed up by first intention, and the rest by granulation. On his discharge the following note was made: "The part has almost regained its natural size and shape, except the linear cicatrix marking the line of incision. The radial pulsation is still weaker than that of the sound side, but there is no difference in the brachial pulsation."

Remarks by Dr. McLEOD.—I have not been able to discover any description in the ordinary text-books of a case similar to this, in which a punctured vein remained patent and filled a cavity with blood, and continued to cause distension of that cavity by fresh influx of blood, after the manner of an arterial aneurysm.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Etiology of Puerperal Fever.—The Relation of Acetonuria to Diabetic Coma.

AN ordinary meeting of this Society was held on Nov. 27th, Sir Edward Sieveking, President, in the chair.

A paper on the Etiology of Puerperal Fever was read by Dr. WILLIAM ROBERT SMITH. The inquiry in connexion with this subject was carried out at the Brown Institution, at the request of the committee. Blood was obtained from the heart of a patient who had died of puerperal fever, and cultivations made on gelatine in the ordinary way. In the course of two or three days numerous colonies were present, all clearly of the same organism; this organism was isolated and its growth carefully noted in various media—e.g., gelatine, agar-agar, milk, and broth. It was found, microscopically, to be a micrococcus. Mide inoculated with the organism died in the course of two or three days, and the organism could be recovered from the heart's blood. Inoculations of the ears of rabbits produced in the course of twenty-four hours a diffused redness, not progressive in character, as was the case in erysipelas, such redness disappearing in the course of two or three days. Blood was further obtained from the finger of a woman suffering from puerperal fever, and cultivations made upon the surface and in the depth of gelatine in the usual way; numerous colonies appeared, in all cases resembling those originally cultivated from the blood of the previous patient. These colonies were isolated, and in every respect, both by cultivation and by experiments on animals, resembled the organism previously isolated. From these experiments &c. the following conclusions were drawn:—1. That this organism occurred in the blood of persons affected with puerperal septicæmia in considerable numbers in the form of streptococci. 2. That, culturally, differences of a marked character distinguished it from other streptococci. 3. That its action upon mice and rabbits was distinct and definite. 4. That it could be distinctly distinguished from the erysipelas streptococcus of Fehleisen and from the streptococcus pyogenes of Rosenbach.—Dr. QUAIN said the origin of the paper was peculiar, and as chairman of the committee of the Brown Institution he desired to acknowledge the generous gift by the Hon. Ronald Wilson through Dr. Klein of £100 to be devoted to research; the present communication was an outcome of that gift.—Dr. PRIESTLEY said that when he was president of the Obstetrical Society there was a great discussion on the subject of puerperal fever, and the question of micro-organisms as a cause was then scarcely foreshadowed. The influence of bacteria in the causation of inflammatory fever was as interesting to the obstetrician as to the surgeon, for the cavity of a uterus recently emptied of its contents had often been aptly compared to a wound. M. Pasteur seven or eight years ago made some interesting observations on this subject. He cultivated the blood of patients suffering from puerperal fever, and got bead-like bodies growing in definite forms, and he distinguished them from the pyogenic vibrios also present. Notwithstanding that Dr. Smith had shown the difference that existed between the germs of erysipelas and puerperal fever, he still would not feel justified in omitting to take every precaution when visiting a puerperal patient after having seen a case of erysipelas. With regard to puerperal fever, at least two very distinct forms were recognised: the first, a sapræmia or putrid infection, originating within the patient's own body; the second, a disease caused by poison introduced from without, producing a distinct form of disease. He would like to know something of the antecedents of the two cases that formed the basis of Dr. Smith's communication. Statistics formerly published showed that among parturient women 1 death in 22 was due to puerperal fever; the mortality now, though much diminished, was still considerable. It was a cruel disease which, in a good number of cases, he thought might be prevented, and the practice of preventive midwifery had recently made great strides, its object being to prevent the entrance of germs into the parturient tract, and to destroy any which had already gained admission. In the Copenhagen hospital, the mortality, which before the introduction of antiseptics had been 1 in 19, had fallen to 1 in 87; whilst in St. Petersburg, in the hospital founded

by the Grand Duchess Catherine, the aunt of the present Czar, which was most carefully administered, rigid antiseptic precautions being taken for three years, there was no death from puerperal fever, whilst there was a large mortality from that cause in the poor dwellings in the immediate vicinity of the institution.—Dr. BARNES insisted on the necessity of recognising more than one variety of puerperal fever. Scarlet fever, erysipelas, and other affections, might all be merged and lost in the fever of the puerperal state. In illustration of this he referred to a case which he was sure had a zymotic origin, and, after some difficulty, a history of indirect contact with a scarlatinal case was clearly proved. He thought the value of Dr. Smith's research would be much increased if he gave the history of the cases which had furnished him with material. Dr. Priestley had alluded to two forms of the disease, but he was sure there was an element in causation before either of these; the patient might be poisoned by her own secretions. In general medicine something of the same kind was known to happen—e.g., from the effect of cold and damp in producing rheumatism. He referred to the case of a woman who had not suckled her child, and was more or less an invalid; two months after her confinement she developed acute rheumatism after exposure to cold. Had this illness occurred during childbed it might have been hard to differentiate it from puerperal fever. He felt sure that the whole subject of the origin of this disease would not be cleared up by the discovery of organisms.—Dr. HERMAN felt convinced that future investigation would tend towards establishing the fact that puerperal fever owed its origin to micro-organisms, for all recent statistics showed that in proportion to the diligence with which antiseptics were used so the mortality diminished. In lying-in hospitals following rigidly the antiseptic system, if scarlet fever were introduced, the patients who caught it suffered from scarlet fever and nothing else, and the same with erysipelas; neither the one nor the other, nor both, produced puerperal fever, and he thought the evidence in this direction was overwhelming. As to whether Dr. Smith had succeeded in isolating the particular germ of this affection, he thought that two cases were not sufficient to dogmatise upon.—Dr. ROUTH could not help thinking that the germ doctrine, when applied to puerperal fever, was being carried too far. Three varieties of this complex affection had already been enumerated, and he would add two others, namely, puerperal peritonitis and the "sweating disease." Dr. Smith had brought forward no information with regard to treatment. It had been shown that many cases of diarrhoea were due to organisms, and administration of acids cured the disease, the germs being unable to live in an acid medium. Similarly great good would follow if Dr. Smith could suggest some medicine to be given by mouth that should be capable of destroying the essential poison of puerperal fever.—Mr. WALTERS (Reading) confessed himself a little sceptical with regard to the autogenetic origin of puerperal fever. The method of conveyance of the poison was often ascertainable; for instance, it sometimes followed the visits of certain nurses. He felt sure it was largely dependent on insanitary dwelling-houses, and the poison could be absorbed by the lungs; he quoted several cases showing the connexion between defective drainage and the origin of the disease.—Dr. GRIFFITHS said that, of Dr. Smith's patients, one was from Queen Charlotte's Hospital and the other from St. Bartholomew's Hospital. Both, he thought, were isolated cases, with absence of distinct history of cause.—Dr. WILLIAM DUNCAN found himself unable to assert dogmatically that every case must be of heterogenic origin, for he had seen cases, and he gave an account of one, which he thought must be autogenetic. He asked what was the evidence, in cases like those of acute diffuse periostitis, that the micro-organisms came from without.—Dr. ANGEL MONEY said that undoubtedly micro-organisms might enter through the smallest scratch on any part of the body.—Dr. SMITH, in reply, referred to the difficulty in finding suitable clinical material. The case at Queen Charlotte's Hospital was traced to be connected with a nurse who had attended some similar cases outside, and, if he remembered aright, the St. Bartholomew's case was one of the same class. The subject of treatment would be taken up afterwards, but nothing would contribute so much to the application of rational treatment as a knowledge of the true causes of the affection.

A paper by Dr. SAMUEL WEST was then read on Acetonuria and its relation to Diabetic Coma. The follow-

ing is an abstract. The relation of acetonuria to diabetic coma had been investigated by experiment and by clinical observation, and this paper was a contribution to the clinical side of the problem. The results of experiments were briefly referred to, and the conclusion to which they led. Clinical observation was for a long time difficult on account of the want of trustworthy tests. A short account of the ones was given: 1. Lieben's iodoform test. 2. Gunz and Le Nobel's modification of it. 3. Reynolds' test. 4. Legal's test with nitro-prusside of potassium. 5. Nobel's modification of it. 6. Penzold's test. Legal's was found to be the most convenient for use in the direct, and Lieben's in the distillate, but this reaction also obtained if alcohol was present. But if the urine gave a reaction with Legal's, and the distillate both Legal's and Lieben's test, the presence of acetone might be accepted. As control experiments two series of convalescent cases were examined. In the first thirty cases, a doubtful Legal's reaction was obtained in three. In the only one which was distilled neither a reaction was obtained in the distillate. In the second series of the same number no evidence of acetone was obtained in any. Of non-diabetic patients actually suffering from illnesses at the time of examination, acetone was found in fifteen cases. Acetonuria was therefore very rare in healthy or convalescent persons, but common in various forms of acute and chronic disease. Of diabetic patients fourteen were examined, four being at the time comatose. In some of these cases the examination was continued many days. The following conclusions were arrived at: 1. Acetonuria was common in diabetics without coma. 2. It was not constantly present in cases of diabetic coma. 3. It varied greatly in the same case from time to time without definite cause. 4. It varied independently of variations in the amount of sugar, specific gravity, or acid reaction. 5. It might even disappear when coma developed. The reaction showed also no relation either to coma or to the amount of sugar. Experiment and clinical observation therefore led to the same conclusion—viz., that acetone was not the cause of diabetic coma. Clinical observation, however, seemed to show that acetonuria had a clinical value as indicating that the patient was in a critical condition when it was absent. The symptoms of diabetic coma depended, in all probability, upon intoxication by some substance rapidly generated within the body, but at present unknown. It might be that in some cases the chemical processes which developed it, and the allied body giving the iron reaction were produced so that the presence of these bodies in the urine might be a "danger signal."—Dr. MAGUIRE said that acetone was evidently not the poison which produced diabetic coma, nevertheless, the condition was undoubtedly due to the presence of a poison. The liver either might split it up, or the kidneys eliminate it, so that, although it might be found in the blood, serious symptoms might not develop. He believed upon the presence of albuminuria as a valuable diagnostic signal when occurring in the course of diabetic coma, its presence being probably due to renal irritation. In case he had examined, the kidneys had presented exudative inflammation, and such a condition might be brought about by the injection of diacetic ether or acetone into the blood. He thought that, if albumen were found after acetone had been ascertained to be present, that was graver than if acetone were found alone.—Dr. A. MONEY had on two occasions found hyaline necrosis in the kidneys from cases of diabetic coma. The iron reaction was absent, and he had never failed to find it when a sign of danger, and he had never failed to find it when the knee jerk was absent. Albumen was generally present in fatal cases.—Dr. WEST replied that albumen, like acetone, was by no means a constant phenomenon in fatal cases, therefore might or might not be a "danger signal."

CLINICAL SOCIETY OF LONDON.

Purulent Pericarditis: its Origin, Symptoms, and Treatment.

AN ordinary meeting of this Society was held on Nov. 18, 1890. Dr. W. H. Broadbent, F.R.C.P., President, in the chair. The announcement of the death of Dr. Greenhow, the practical founder of the Society and its former treasurer and president, was received with signs of much regret. The meeting was most successful, and the audience was numerous.

Dr. DICKINSON related a case of Purulent Pericarditis successfully treated by aspiration and drainage. A

aged ten was brought to St. George's Hospital, having had symptoms which Dr. Harris and Mr. Noad, both of Norwood, interpreted as pyæmic. A large gluteal abscess was followed by signs of pleural effusion and œdema of the face and chest. On admission, on June 15th, 1887, there was evidence of effusion in the left pleura and in the pericardium. The position of the heart was almost undiscoverable amid the dulness, which involved the left pleural and precordial regions. There was much dyspnoea, blueness, and irregularity of pulse. There was œdema more or less general, but especially marked about the thorax. The liver was enlarged or depressed so as to reach the umbilicus. On the 18th the pleura was aspirated, and thirty-seven ounces of serum drawn off, which operation was repeated on the 23rd, with the removal of thirty-two ounces. The dyspnoea, blueness, and œdema were but slightly and temporarily relieved by each operation, which had to be repeated on the 25th and 28th, so great was the distress and so rapid the reaccumulation. On the 30th, the futility of dealing with the pleura having become apparent, the pericardium was aspirated by Mr. Rouse, and one ounce of creamy pus withdrawn; the aspiration was repeated with more success on the 8th of July, and twelve ounces of similar fluid withdrawn, and also on the 15th, with the withdrawal of nineteen ounces. The place selected for puncture was on the right side close to the edge of the sternum, in the fifth interspace. The heart before each of these operations had been drawn to the left by a preceding evacuation of the pleura. The lower part of the pericardium, where the swing of the heart was greatest, and the right extremity of the cavity, from which the heart was farthest removed, was obviously the part which could be penetrated with the greatest safety. By July 22nd the pericardium was again as full as ever, and the general symptoms distressing. It was clearly necessary to replace aspiration by a tapping opening. Mr. Rouse accordingly made an incision where the punctures had been, and put in a tube. The aspiration was followed by some faintness and subsequently by great relief. Not to follow the case in further detail, recovery, after some temporary drawbacks and three subsequent aspirations of the pleura, became complete. By the middle of September there was no remnant of the pericardial puncture except a small cicatrix, which moved with each beat of the heart. In the course of less than two months the chest had been punctured sixteen times; the pleura twelve times with the aspirator, and removal of serous fluid; the pericardium four times, three times with the aspirator, and once so as to leave an opening and a constant discharge of pus. The nearly total absence of friction, which was recognised but on one occasion, was remarkable.

Mr. PARKER related a case of extensive pyo-pericarditis (associated with osteo-myelitis of the tibia) which he had freely incised. Death had occurred while irrigation was being practised to wash out the thick membraniform pus with which the pericardium was distended. The patient was a girl aged nine. She had been under treatment for acute osteo-myelitis of the tibia, complicated with secondary septicæmic suppuration of the knee joint. The case went from bad to worse, treatment and antiseptics notwithstanding. In the fifth week of the disease extensive pericardial effusion supervened, and the girl's position became desperate. Tapping at first brought some relief, but as the effusion recurred it was decided to incise the pericardium and insert a drainage tube. When the pericardium had been opened, the contained pus was found thick and to contain large membraniform shreds, and so irrigation was resorted to in order to wash them out, it being feared that if left behind they would decompose and become a source of further danger. The already weakened heart was unable to bear this additional strain, and the child died. After relating his case, Mr. Parker raised the question as to the mode of causation of purulent pericarditis, and referred to the usually accepted teaching. He then discussed the most appropriate treatment. Should free incision be advised? If so, in what cases—in small as well as in large effusions of pus? Was spontaneous cure a clinical possibility? Finally, as to the best place for making an opening. The author, from observations on the dead subject, recommended the fourth left intercostal space, close to the sternum. An opening at this spot, he contended, would longest afford a direct communication with a gradually retracting pericardium, an important point in facilitating complete drainage. The author finished by advocating for pericardial

effusions the same line of treatment as had been so successfully applied to pleural effusions, and emphasised, in this effort, the essential importance of aseptic conditions.

Dr. GOODHART related a case of pyo-pericardium occurring in a middle-aged woman, who had repeatedly suffered from attacks of exhaustion and emaciation. The patient was first seen by him a few days before her death, when the physical signs of pericardial effusion were not remarkably obvious; and though pyo-pericardium was suspected, yet on the whole it was thought that a mediastinal tumour existed. The breathing in the left lung was much obscured. The necropsy proved that there was nothing else but a large purulent effusion in the pericardium, which, however, had accumulated chiefly in the posterior region of the fibrous sac. In this case, as in others, friction sound was absent. The mode of onset and clinical course of pyo-pericardium were very insidious; the physical signs were often indefinite, so that a diagnosis could not be certainly arrived at without the use of the exploring syringe.

Dr. SAMUEL WEST discussed the subject very fully. Rosenstein in 1881 first recorded a successful case of, purulent pericarditis treated by incision and drainage under antiseptics, just as is so often done in empyema. Dr. West's case, published in the Royal Medical and Chirurgical Transactions, vol. lxxvi., was the second on record, and Dr. Dickinson's the third. The most suitable place for puncture is, as a rule, in the fifth left interspace close to the sternum, but each case must be considered on its own merits. The best instrument for the puncture is a sheathed needle or hollow needle, not the ordinary trocar and cannula, for the trocar had wounded the heart in one case at least, because it projected so far beyond the cannula. This puncture must be made in order to detect the fluid and its nature; if found to be purulent, the fluid should be removed by incision and free drainage. As a method of exploration, Dr. West did not concur in Mr. Parker's suggestion that the pericardium should be first exposed and then incised, with a view to ascertain the presence and nature of any fluid. Speaking of the site of puncture, he alluded to Rotch's experiments, which consisted in injecting caseo butter into the pericardium. These experiments were held to prove by Rotch that dulness in the right fifth interspace proved the presence of a pericardial effusion, and that such a spot was the best for puncture. Dr. West asserted that Rotch stood alone in this belief. It was better not to puncture nearer the base or nearer the right side of the heart than could be avoided, because of the thinness of the walls of the organ in these regions. The absence of friction in cases of pyo-pericardium was remarkable, but well known, and was to be explained by the nature of the effusion. As to the origin of purulent pericarditis, further information was required. That it arose in connexion with pyæmia and empyema was certain, but some cases occurred in which the pericardium was the only seat of purulent effusion; perhaps such were of bacillary origin. At all events, even in freshly drawn pus from the pyo-pericardium the number of bacilli was very remarkable, and Dr. West's recent experience confirmed this. Again, pneumonia has been complicated by purulent pericarditis, and Dr. Angel Money had noted cases of the kind. The symptoms of pyo-pericardium were sometimes indefinite, and even a low temperature might prevail throughout, just as had been noted in cerebral abscess.

Dr. ANGEL MONEY said that the remarks of the two previous speakers covered much of the ground for discussion, and his own experience generally accorded with their observations. He questioned whether mere pressure would always account for the serous effusion in the left pleura in cases of pyo-pericardium, because his recent experience afforded two examples of cases of perinephric abscess in the left side, and the pleura on the same side contained for weeks, in one case for months, a serous effusion. He related a case of extreme pyo-pericardium which was diagnosed during life as extreme empyema; the necropsy proved the almost entire absence of the left lung, which formed merely a thin layer between the pyo-pericardium and the parietes, in this case the heart was beating almost in its natural position, and the fluid accumulated chiefly behind and to the left side of it.

Dr. BARLOW referred to some experiments he had made to show the relationship of the heart to the surface of the chest wall; needles were inserted through the parietes into the heart substance at various sites and different intervals; the experiments made on cases of pericarditis went to prove that the effusion had a great tendency to be stowed away in

the posterior region of the pericardium, so as to leave the heart near to the front surface. He confirmed Dr. Dickinson's view of the mechanism of the pleural serous effusion on the experience that when the pleural cavity was inflamed the nature of the fluid should be the same as in the pericardium.

Mr. GODLEE drew attention to some anatomical features. In children the left pleura so far covered the anterior surface of the pericardium that if the puncture were made an inch away from the side sternal line the chance of the puncturing instrument's laying open the left pleura before it penetrated the pericardium was very great, and pneumothorax might be added to the list of symptoms from which a patient might be suffering. The internal mammary artery, too, ran so close to the sternum in the fourth and fifth interspaces that sufficient space between it and the sternum for the passage of the blade of a knife hardly existed. This would not be of much consideration in free incision, because the vessel would be first secured and ligatured.

Dr. SIDNEY PHILLIPS believed that rheumatism could cause purulent pericarditis. In the case of a female aged twenty, admitted with all the symptoms of rheumatism, death suddenly occurred, and a pyo-pericardium was found at the necropsy.

Dr. DICKINSON, in reply, remarked that in one case a distinguished surgeon thrust a very long aspirating needle into the fourth left interspace a good distance away from the sternum, so as to avoid wounding the heart; the whole proceeding suggested a bayonet thrust, and Dr. Dickinson was relieved as well as the patient when the needle was withdrawn. The patient's relief proceeded from the circumstance that the needle had gone through the pericardium into the pleura, and the pericardial effusion had emptied itself into the pleura. Dr. Dickinson's relief proceeded from the circumstance that he was mistaken in supposing that the surgeon's needle had entered the heart—a suggestion which not unnaturally presented itself from the escape of a jet of blood through the needle immediately after its rapid insertion.

The following living specimens were exhibited:—

Mr. H. BAKER: A case of *Cervicæ Recurvatum*.

Mr. CLUTTON: A case of Compound Dislocation of the Elbow, with Complete Recovery of the Joint.

Mr. T. SAVILLE: A case of Hystero-epilepsy and Functional Contraction.

Mr. J. F. PAYNE: A case of *Molluscum Fibrosum* with Multiple Neuro-fibromata.

MEDICAL SOCIETY OF LONDON.

Goitre.—Traumatic Polio-myelitis.—Neuro-muscular Irritability.—Resection of Inferior Maxillary Joint.—Erythema Gangrenosum.—Ectopia Vesicæ.

THE meeting of this Society on November 26th was a clinical evening. The President, Sir William Mac Cormac, was in the chair.

Mr. GEORGE STOKER read a communication on a case of Goitre, illustrating a theory in reference to the function of the thyroid gland. He showed the patient, who came under his care in April, 1888, with a hard, central, well-defined goitre about the size of a small hen's egg. He was given iodide of potassium and fluoric acid internally, and external applications were made of a counter irritant and absorbent nature, but all without benefit. In June he had symptoms of chronic hypertrophic rhinitis, which caused much inconvenience, the turbinated bodies being considerably thickened. The galvanic wire was applied in the usual way, the hypertrophied tissues being punctured and scarified; after the second or third application the goitre began to diminish; the cauterisation had been continued at intervals of a fortnight up to the present time, and the goitre had quite disappeared. The medicines and external applications were discontinued when the cauterisation was commenced. It seemed to him that the nasal treatment had produced reflex irritation of the vaso-motor nerves, causing constriction of the blood-vessels in the gland and diminution of the hypertrophy, illustrating the intimate connexion existing between the functions of the thyroid body and the vaso-motor system. There was, further, some pathological evidence in support of the theory. Ziemssen reported eight cases in which degenerations were detected in the middle and inferior

cervical ganglia in association with thyroid disease, and another case had been recorded by Dr. Shingleton. In his own case he thought the result had been brought about reflexly through the fifth nerve; he had another case of the same kind under similar treatment, in which the size of the neck had already diminished nearly an inch and a half.—Mr. LENNOX BROWNE referred to the cases of three young male patients, two of whom were exhibited. From two of them he had removed the isthmus, from the other the isthmus and right lobe, weighing 7½ oz., and in each instance with the result of giving complete relief to distressing dyspnoea. He was disposed to think that the danger of myxœdema after entire removal had been exaggerated; but seeing that it did exist, and that it was impossible to foretell the cases in which it might occur, he thought it better to do a partial operation. He had now removed either the isthmus or the isthmus and one lobe in ten cases, and in all with a completely satisfactory result. Hemorrhage at the time of the operation was but slight, but in two instances there had been rather severe secondary hemorrhage on the seventh or the eighth day. Mr. Browne showed the portions removed in the three cases, as well as photographs before and after operation.—Sir WILLIAM MACCORMAC said that surgeons were justified in hesitating to remove the entire gland, which might be followed by spurious cretinism, when a good result followed the taking away of the isthmus alone.—Dr. HADDEN said that symptoms of spurious cretinism sometimes did follow partial excision, but that was perhaps because the part left behind was diseased. In some cases, where all the thyroid had been removed and no myxœdema had followed, post-mortem examination had revealed hypertrophied accessory thyroids, which had carried on the work of the gland.—Mr. PITTS had found the trachea altered in shape and flattened where dyspnoea was present. In all cases but one the compression had been from side to side, but in one case a tumour of the isthmus extending behind the manubrium sterni had caused antero-posterior flattening.—Mr. BERRY inquired if the gland enlargement were local or general. Goitres often disappeared spontaneously, and he doubted the effect of the cautery in Mr. Stoker's case; he was likewise sceptical as to the connexion between goitre and disease of the sympathetic nerve. He advocated an oblique incision in operating on large goitres, and preferred to ligate vessels separately rather than tying the isthmus *en masse*.—Mr. STOKER replied that the cauterisation was very thorough; the enlargement of the gland was a local one, and his patient exhibited many evidences of sympathetic disturbances.—Mr. LENNOX BROWNE said that in many cases the symptoms were distressing from the dense character of the growth and its tendency to constrict the trachea; he had seen sympathetic disturbance without evidence of direct pressure on the nerve, and he preferred the vertical incision as producing less disfigurement. In removing the whole gland, he tied the vessels separately, but transfixed and tied *en masse* when dividing or removing the isthmus.

Dr. C. E. BEEVOR showed a case of Polio-myelitis (?) from injury. A boy, aged twelve, at the beginning of last August fell on his left elbow in getting over a stile. He was unable to move the left arm after the accident, and it was put in splints immediately after, there being fracture of the humerus. When the splints were taken off a month later, the left arm was found to be paralysed in certain muscles, especially the supinator longus, biceps, brachialis anticus, deltoid, supra- and infra-spinati, and teres major; but there was no anaesthesia. At present he had paralysis in the above muscles, and they did not react to the faradaic current, but showed the reaction of degeneration. There was some thickening about the lower end of the humerus and about its neck. The case, he considered, was either one of injury to the spinal roots (the fifth and sixth cervical), or a case of polio-myelitis. Owing to the absence of any history of anaesthesia the latter was considered to be the cause. An important symptom was the fact that the patient was able to use the upper part (clavicular) of the pectoralis major in conjunction with the sternal part in pressing the hands together and adducting the humerus, but he was unable to throw the clavicular part into action in raising up the arm when advanced (i.e., flexing the shoulder) where the muscle should act with the paralysed deltoid. It seemed that in this case there was a muscle paralysed for one movement and not for another, and this would be in favour of the physiological functional grouping of muscles in the spinal cord.—Dr. SYDNEY PHILLIPS asked if any part of

the retentive apparatus used for the fracture pressed on the fifth or sixth cords.—Dr. ANGEL MONEY was somewhat sceptical as to the existence of fracture, and conjectured that a spinal hæmorrhage might have been the cause of the lesion, and the fall a secondary matter. Some associated movements, such as conjugate deviation of the eyes, had a separate governing centre, and probably some similar arrangement in the cord explained Dr. Beevor's case.—Dr. BEEVOR replied that there was nothing in the application of the splints to cause the lesion. If the damage were to the nerve roots, some anaesthesia would probably have remained.

Dr. HADDEN exhibited a patient with Neuro-muscular Irritability. The man originally had a condition of spasmodic paraplegia, which was evidently not of spinal origin. A similar rigid state could be induced in the arms by mechanical stimulation of the muscles or nerves, and even in other muscles, such as the sterno-mastoid and masseter. The rigidity of the legs disappeared under rest and treatment, but could be brought about afterwards by percussing the muscles. The man was an athlete, and it was possible that the condition was due to over-exertion. The condition of the patient resembled in some respects what was sometimes seen in hysteria, and also the morbid state known as Thomsen's disease. From both these, however, it was probably quite distinct.—Dr. ANGEL MONEY had seen conditions somewhat like it. In some cases of chorea the quadriceps tendon went into smart spasm on percussion. In one case of severe typhoid he had produced a tetany-like spasm on percussing the ulnar nerve and muscles of the arms; also some cases of hysteria and epilepsy presented conditions somewhat like it. Many people who walked rapidly developed sometimes dorso-flexion of the foot from tonic spasm of the muscles in front of the leg.—Dr. HADDEN looked upon the condition as one of irritability induced by fatigue.

Mr. HERBERT ALLINGHAM showed the case of a boy, aged seven, who fell upon the front of his chin from a height of about ten feet. On examination some months later, he could only open the mouth enough to admit the tip of the little finger, and mastication caused great pain in the right temporo-maxillary joint. After repeatedly forcing open the jaw under anaesthetics with no satisfactory result, he excised the condyle and neck in the following manner. An incision was made over and along the zygoma for about two inches, and downwards along the posterior margin of the jaw for the same distance. The skin was dissected downwards off the parotid fascia, and this fascia and the masseter were then divided from the lower border of the zygoma and pushed down so that the facial nerve and parotid gland were left uncut. When the muscles had been separated to the same extent as the skin, a small Adams's saw was introduced, and the neck of the jaw divided as far as possible downwards and backwards, the cut being completed with forceps. The condyle was so firmly ankylosed that it required an elevator to force it from the socket. After its removal the superficial parts were replaced, an antiseptic dressing applied, and the patient made an uninterrupted recovery. The operation was done a year ago, and movement was perfect at the present time.

Dr. CAMPBELL exhibited a case of Erythema Gangrenosum in a patient, a female, who had been under his care for fifteen months. There was then a well-marked papular syphilide covering the face, erosions on the tongue and fauces, the inguinal glands were indurated, and below the left knee was a copper-coloured ulcerating nodule. A sore had existed on the genitals some months previously. The lesions disappeared under iodide of potassium, and the patient remained free for six months. In the beginning of November a red erythematous patch appeared under the right jaw, which vesiculated, and later the superficial epidermis peeled, disclosing a superficial ulcer. Similar lesions occurred elsewhere about the neck, and later between the nates. A vesicular eruption appeared on the vulva, and there was pain, sleeplessness, and malaise. The ulcers were healing under the influence of iodol. An excellent drawing of the condition was exhibited.—Dr. RADCLIFFE CROCKER thought the case might be self-induced, the patient being of neurotic type.—Dr. CAMPBELL considered that the multiplicity of the lesions was against malingering.

Mr. BRYCE BARROW showed a case of Ectopia Vesicæ in a female child, after operation. It illustrated a slight departure from the ordinary method of treatment, and he

thought it simplified the operation and gave a more satisfactory result. The posterior wall, the only representative of the bladder, bulged forwards considerably, and was covered in in the following manner. A V-shaped flap, the base of which corresponded with the upper limit of the bladder, was turned over from above, the skin surface being opposed to the vesical mucous membrane; this was fixed down by lateral sutures. The skin and subcutaneous tissue on each side were next dissected up, commencing on a level with the apex of the surface which had been detached in forming the first flap, and extending down as low as the lowest part of the bladder. The dissection was carried for several inches outwards, thoroughly undermining the skin on each side. A button suture was then inserted, the wire passing through the skin at the extreme outer limit of the dissection, and this when tightened brought the lateral flaps together all the way down the middle line without tension. They were secured by harelip pins, between which catgut stitches were placed. Thus these lateral flaps had an opportunity of uniting, not only with each other along their opposed edges, but also with the raw surface left by the turning down of the upper flap, as well as with the raw surface of that flap itself. A tube was inserted into the newly-made bladder, and the wound dusted with iodoform and dressed with salicylic wool. Three weeks later, the bladder having a tendency to protrude underneath the flap, an incision was made round the lower aperture; it was deepened so as to turn the skin surface of the inner side of the flap inwards, and the outer flap was still further dissected on each side, and then they were drawn inwards and united across the middle line, harelip pins and catgut sutures being again used. The wounds healed rapidly, and the result obtained was a very good one.—Sir WILLIAM MACCORMAC inquired how far the pubic bones were separated. He referred to a case in which there was separation to the extent of two inches and a quarter, and he did Trendelenburg's operation of division of the sacro-iliac synchondrosis, and the bones then came together to within a quarter of an inch, though the case unfortunately proved fatal from an unexplained cause.—Mr. BARROW replied that there was only slight separation of the pubic bones in his case.

HUNTERIAN SOCIETY.

At the meeting on Nov. 14th (a clinical one) Mr. R. Clement Lucas, President, in the chair, Sir William Jenner Bart., and Sir Joseph Lister, Bart., were elected Honorary Fellows of the Society; a long list of books recently presented to the library of the Society was also announced.

Contracted Puckered Kidney.—The PRESIDENT showed this kidney, which had been removed on the previous day from a boy aged eleven. The kidney had suppurated, and was opened through the loin twelve months before; a calculus was removed three months ago, and the suppuration continuing, the relic of the organ was removed, leaving the capsule behind.

Exaggerated Wrist and Elbow Jerks.—Dr. HINGSTON FOX showed a woman, aged fifty-eight, with ataxic gait, failing memory and general powers, and weakness of left arm and leg. She had suffered from lightning pains and two attacks like gastric crises; also left hemiplegia twice, if the imperfect history is reliable. Some ptosis was present; pupils contracted and moderately active. The knee jerks were exaggerated, and all the superficial muscles of the arm and forearm could be similarly excited by tapping on the left side; to a less extent on the right. Syphilitic history doubtful.

Syphilitic Disease of the Nervous System.—Dr. HINGSTON FOX also showed a woman aged forty-three years. Twelve years ago she had secondary symptoms. Eight years ago paralysis of the right arm and left leg occurred, and three years afterwards paralysis of both legs. She soon recovered after each attack. A year and a half ago she was mentally affected for three weeks; ten months later atrophic paralysis of the extensors of the right knee set in, and had persisted, followed by passive effusion into the joint. The knee jerks were lost. The case illustrated the erratic nature of syphilitic nervous diseases and its multiple lesions. Gum-mata in the cord were suspected.

Epithelioma of Gum.—Dr. HINGSTON FOX introduced a man, aged sixty-four, with a rounded tumour, two inches in

diameter, ulcerated on the surface, occupying the gum and hard palate on the right side. It was of six weeks' growth, and the molar and bicuspid teeth, which were loosened, had been removed. His general health was fairly good, but he had lost flesh of late.

Recovery from complete Paraplegia following Spinal Injury.—Dr. TATHAM showed a man aged thirty-eight, who had fallen in a fit in a public-house, striking his head against the counter and forcibly flexing his neck. Unconsciousness existed until the next day, with complete paralysis of motion and sensation below the neck. Respiration and deglutition were difficult, and there was incontinence of urine and feces. He remained in this state for over three months, taking only light nourishment; after this, movement and sensation began to appear in the right fingers and toes, and steadily increased, so that at the end of fourteen months he was able to stand. He can now walk ten or twelve miles, though he cannot yet follow his occupation. There is still some irregularity and thickening about the third cervical vertebra.—The President, Mr. John Poland, Mr. Brownfield, and Mr. Bowkett took part in the discussion, and Mr. Tatham replied.

Acute Transitory Universal Dermatitis.—Mr. COTMAN exhibited two cases of this affection, in which a bright-red rash commenced on the back and buttocks and spread symmetrically over the entire surface of the body, preceded and accompanied by severe burning and itching, and followed by desquamation and exfoliation of cuticle, leaving a soreness and discolouration of the skin. In one case there were cramp and lumbago; in the other severe neuralgia. The cases occurred simultaneously in January, and again in October, within two days of one another. There was no sore throat, strawberry appearance of the tongue, or any rise of temperature.

Spasmodic Wry-neck.—Dr. G. A. CARPENTER showed a boy, aged seventeen, in whom this had existed for two years. There was some spasm of the facial muscles, and marked deficiency in his mental condition, probably congenital. Treatment was of no avail.

Typical Case of Sporadic Cretinism.—Dr. Turner exhibited a child, aged thirteen, with characteristic fatty tumours about the neck, absence of thyroid gland, &c.

Inflammatory Tumour of the Tongue.—Dr. TURNER also related this case, which was due to irritation of a carious tooth, in a child aged five years.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

At an ordinary meeting held Nov. 2nd, Dr. Spottiswoode Cameron in the chair, Dr. BARRS read a paper on Peripheral Neuritis caused by Septic Infection, with remarks on the sensory disturbances in peripheral neuritis. (The paper will be published in *extenso*.)

Operations on Pregnant Women.—Mr. MAYO ROBSON reported five cases in which he had performed serious operations at various stages of pregnancy. All the patients had recovered, and in no case had premature labour occurred. The cases were:—1. Fibroid of the cervix uteri completely filling the vagina; removed in seventh month of pregnancy. 2. Carcinoma of breast and axillary glands; removed in third month of pregnancy. 3. Multilocular papillomatous ovarian cyst, with extensive adhesions to the uterus and bowel; ovariectomy at tenth week of pregnancy. 4. Strangulated femoral hernia; operated on in third month of pregnancy. 5. Rotation of ovarian tumour in second month of pregnancy causing acute symptoms; ovariectomy. Mr. Robson attributed the results primarily to the absence of pain and the lessening of shock during the operation by the use of anesthetics; and secondarily to the entire absence of any wound complication, such as pain, fever, or tension, owing to the strict observance of antiseptic methods. In no case was any sedative required or given, and in all the cases the wound healed by first intention.—Mr. PRIDGIN TEALE had performed ovariectomy four times during pregnancy. All the patients miscarried, and one died. In other operations his experience was favourable.—Dr. CAMPBELL BLACK asked if there was any particular period of pregnancy at which operations might be most safely conducted. He had an impression that about the sixth month was best.—Mr. ATKINSON thought that the period of pregnancy was not of so much importance as the urgency of the condition

for which operation was required, and that such cases to be looked at all round.

Dislocation of Metatarsus from Tarsus.—Mr. A1 related this case. J. M. W., a butcher, aged two, was admitted on Oct. 7th, 1888, with his right injured that he could not stand upon it, the injury occurred only fifteen minutes before being seen by resident surgeon. He was riding a horse bareback; the horse plunged and fell over on the right side on to the patient's right foot, who kept his seat. On admission, a prominence was found corresponding to the line of the tarso-metatarsal joint. Posterior prominence there was a hollow, on examining with the finger the articular surfaces of the four outer metatarsals could be distinctly felt. The base of the first tarsal was raised about a quarter of an inch above that of the internal cuneiform. The whole front of the foot was everted, forming a distinct angle with the tarsus; the feet were "flat," but the sole of the right was so convex downwards, the greatest convexity corresponding with the anterior extremity of the tarsus. A slight depression over the internal cuneiform clearly showed that the metatarsal was partially dislocated upwards. The tendons on dorsum prominent. Length of foot from tip of hallux half an inch shorter than on the left. From external malleolus to the tip of the fifth toe a half of an inch shorter than the left. After three days interval, to allow of a plaster cast and photograph taken, Mr. Atkinson reduced the dislocation easily with chloroform. He made traction on the metatarsus (counter traction was made), at the same time pressing the bases of the bones with both thumbs. The bones were previously fixed, were now easily movable. A crepitus was felt near the articulation of the metatarsal with its corresponding cuneiform bone. The foot was put up on a back splint with a foot-piece. On Oct. 11th all displacement on the dorsum had disappeared, but was still a considerable projection on the inner side of the sole, which exaggerated the pre-existing flat-foot. The foot was then put up in plaster of Paris. When on Nov. 2nd the plaster was removed and the patient that he could put a fair amount of weight on the foot. The plaster was reapplied. Mr. Atkinson remarked on the rarity of the accident and gave a *résumé* of the case previously recorded.

Several pathological specimens were afterwards shown.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

At an ordinary meeting held on Nov. 8th, 1888, I. Martin, President, in the chair, the following specimens were exhibited:—

Dr. HARGREAVES: A Sarcoma of Breast from a woman aged forty-two.

Dr. HUNT: A Hæmatocele removed from the Sciatic nerve of a man aged seventy-two.

Coloboma of Iris.—Mr. SNELL introduced two boys, eight and five with this defect. The father and mother were similarly affected, and the father's mother was also so as well. The cleft in each of the four corneas was large, and was situated downwards and outwards.

Sinus of Orbit connected with Diseased Tooth.—Mr. H. related this case. The sinus was situated under the lower eyelid. Extraction of the right central incisor in a speedy cure. This tooth had been fractured ten years before.

Cancer of Cæcum.—Mr. LYTH showed specimens of cancer of the cæcum, which had caused perforation before any serious mischief was suspected. Symptoms not compelling the patient (a married man aged forty-five, with a family of six children in straitened circumstances) to seek advice. There was a cancerous stricture at the junction of the cæcum with the ascending colon, and a perforating ulcer opposite the ilio-cæcal valve. There were numerous secondary cancerous nodules in the liver, a microscopical section from which presented the appearance of columnar epithelioma.

Piece of Cartilage removed from side of Knee.—W. F. FAVELL related particulars of this case. The patient was a collier aged sixty. On the inner side of the knee, and movable over the femur was a loose foreign body, cutting down, a perfectly loose piece of bone capped

cartilage was removed from a cavity having no communication with the joint. The cavity contained no fluid. As to the origin of this specimen, was it an exostosis broken off the femur, or a case of quiet necrosis from repeated injuries to bone incurred in the way of work? This specimen, as well as Mr. Lyth's, was referred to the Pathological Committee.

Rickets.—Dr. Gwynne read this paper, and maintained that the disease could not reasonably be assigned to errors of diet or character of the water or insanitation, but to all these, more or less combined, added to certain influences of locality not yet understood, in this respect somewhat resembling goitre and cretinism. The distortion of the limbs he referred to irregular ossification, such as produced an abnormally large internal condyle in the case of the femur, in conjunction with the influence of weight. In the treatment of knock-knee he preferred Macewen's operation through the shaft of the femur to Ogston's section through the internal condyle. The operation in itself was less dangerous; there was less chance of wounding the main artery, as the saw was applied to the outside of the bone, and was not carried right through, the remainder being broken. In Ogston's operation, especially if the chisel is employed, there was always danger of wounding the popliteal. A straighter limb was left after Macewen's operation than after Ogston's.

Notices of Books.

The Diagnosis and Treatment of Diseases of the Rectum. By WILLIAM ALLINGHAM, F.R.C.S., Senior Surgeon to St. Mark's Hospital, &c. Edited and Revised, with much additional New Matter and numerous Diagrams, by HERBERT W. ALLINGHAM, F.R.C.S., Surgeon to the Great Northern Central Hospital, Demonstrator of Anatomy at St. George's Hospital, &c. Fifth Edition. London: J. & A. Churchill. 1888.—Mr. Allingham's work on the diseases of the rectum has been so long before the profession, and is so well known, that under ordinary circumstances it would suffice merely to notice the fact of the appearance of a new edition of it. But no one can take up this edition and compare it with any of its predecessors without being struck with its great superiority over them. Nor shall we be unfair if we attribute to Mr. Herbert Allingham a large share of the credit due for these improvements. His additions and alterations have been, in our opinion, wholly beneficial. It is true that sometimes the fusion of the new with the old has not been so complete as might be desired, and that we suddenly become conscious of the dual authorship, but this was very difficult to avoid, even had it been possible. We have not space to allude to more than one or two of the matters treated of in this volume, and perhaps the question of Colotomy is as interesting and important as any. Of the value and application of the operation the authors have nothing new to say, but of its technicalities they urge two or three things which are new to many British surgeons. First of all, they give the preference to inguinal colotomy over the lumbar operation in the majority of cases. They claim that this operation is simpler, free from the chance of failure which attaches to lumbar colotomy, and that the artificial anus is in a position more easy of access by the patient, and where the abdominal muscles form for it a fairly efficient sphincter. The arguments adduced in favour of this operation are certainly weighty; but, on the other hand, sufficient importance is not given to the disadvantage attaching to its performance in two steps. It may be quite true that the opening of the bowel is a painless process, but, none the less, to some very nervous patients its anticipation causes a good deal of distress. And in other cases there is of course an urgent need to relieve obstruction at once; in such circumstances the lumbar operation is certainly preferable. Great stress is laid upon the necessity of forming a good and efficient "spur" at the artificial anus to prevent the passage of any faeces

past the opening, and for this purpose a large portion of the circumference of the gut is recommended to be cut away. In our experience we have not met with the unfortunate effects of a failure in this respect that Mr. Allingham cautions his readers against; but we have seen, and we fancy surgeons generally will corroborate this, very distressing effects from a too large and ill-supported anus. Has Mr. Allingham had no cases of considerable prolapse after his operation? Turning now to the Lumbar operation, we find that great stress is laid upon clearly seeing a band of longitudinal muscular fibres on the bowel before opening it; but this does not seem to us to be so important as one or two other points which are omitted. One of these is the necessity of dividing freely the fascia which lies between the perirenal fat and the colon. Unless this is done, the colon does not bulge, nor can it be drawn into the wound. This is perhaps, of all other steps, the "key" to a rapid and successful operation. Secondly, the fact that, on the left side, the colon is the only portion of the intestine ever uncovered by peritoneum in any part is not referred to. And so, if the surgeon carefully picks through the tissue over the suspected coil of bowel until he comes down to muscular tissue, he is quite sure that it is colon. Should he, on the other hand, see the glistening surface of the peritoneum, he will easily recognise his mistake, and should at once make use of it by passing his cleansed finger into the wound and determining precisely where the colon is, making it protrude from the wound, and then closing the peritoneal wound before proceeding further. Two other matters of detail have also been omitted. The opening in the bowel should be small, and the sutures should be passed and tied gently so as not to tear the bowel, which may be very soft. If when the bowel is opened faeces escape, it is of great advantage to roll the patient a little on to his back and play on to the wound a stream of warm antiseptic lotion, which will wash away the faecal matter, thoroughly cleanse the wound, and greatly facilitate its primary union. We had intended to refer to the chapter on Excision of the Rectum, which is a very good one, but our space is too limited. We can but repeat, in closing, that this edition is considerably improved, and that it can be referred to with confidence as a thoroughly practical treatise on a very large and important class of diseases.

On the Surgery of the Knee Joint, and the Responsibility placed on the Physician and General Practitioner by the Modern Progress of Surgery. By C. B. KEETLEY, F.R.C.S., Senior Surgeon to the West London Hospital, and Surgeon to its Orthopaedic Department. London: Baillière, Tindall, and Cox.—Mr. Keetley has in this pamphlet reprinted the Addresses he delivered at the commencement and at the close of his term of office as President of the West London Medico-Chirurgical Society. The former is the more important and valuable of the two, and in it Mr. Keetley discusses, all too briefly, matters upon which he is eminently qualified to express an opinion. This address records many striking advances recently made in the surgery of the knee joint. The second and shorter address emphasises the importance of early and correct diagnosis in many internal affections which have of late years been made amenable to surgical treatment.

Proceedings of the New York Pathological Society for the Year 1887. Printed for the Society. 1888.—The volume contains a large number of interesting reports and discussions upon specimens presented to the Society during the session 1887. Amongst them is one by Dr. T. E. Satterthwaite on Laryngeal Carcinoma, in which he raises the question of the value of microscopical examination in diagnosis. The case was one of epithelioma, in which the laryngeal cavity was half filled with nodular and papillary excrescences, the lower part of the growth being ulcerated,

partially destroying the cartilages, and the tracheal wall infiltrated for a considerable distance. The cervical glands were enlarged. But Dr. Satterthwaite says that the papillary and nodular growths were frequently examined during life by himself and assistant, and *nothing cancerous was found*. He therefore urges against too great reliance being placed on microscopical evidence to the exclusion of clinical signs, for although the microscopical characters of carcinoma are unmistakable, yet in such cases as these, when the papillary or villous outgrowths can alone be examined, failure to detect the distinctive evidence of cancer is highly probable. The value of the volume is greatly enhanced by two lectures upon Multiple Neuritis and its relation to certain peripheral neuroses, delivered by Dr. Allen Starr.

Description of a Case of Coloboma of the Iris, Lens, and Choroid, with a Study of the Visual Fields. By CHARLES A. OLIVER, M.D.—The interest of the case chiefly lies in the colour fields of the patient. White gave the largest area, then yellow, blue, red, and finally green, which had the smallest area.

Letts's Medical Diary for 1889. Letts's Medical Ledger. Cassell and Co., Limited (London, Paris, New York, and Melbourne).—*Collins's Diaries, 1889.* Collins, Sons, and Co. (London and Glasgow).—*Blackwood's Medical Call-book, 1889. Blackwood's Shilling Scribbling Diary, 1889.* Griffith, Farran, Okeden, and Welsh (London and Sydney, N.S.W.).—These Diaries and Call-books specially provide for all matters of interest to the general practitioner, and include space for the entry of daily visits, accouchements, vaccinations, &c. The Medical Ledger is arranged to facilitate and lessen the trouble of book-keeping, as well as to ensure accurate accounts when used in connexion with the Diary published by the same proprietor. All the volumes are well printed, and bound in durable and substantial covers, and, as doubtless they will be again used by those who have tested their value in previous years, we may predict for each of them a large—deservedly large—circulation.

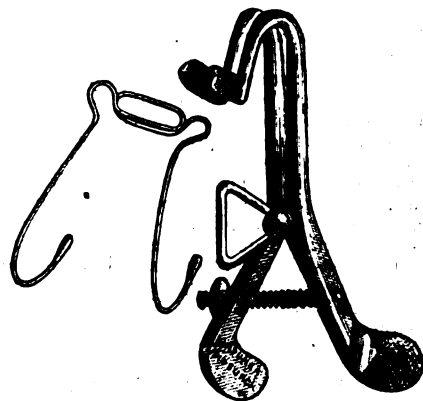
New Inventions.

GAG, CHEEK RETRACTOR, AND TONGUE DEPRESSOR.

I WISH to bring before the notice of the profession the above-named instruments figured below. Professor Annandale, Professor Chiene, and others, who use them in operations for cleft palate, speak of them as the best instruments for that purpose. From a considerable experience in operating and assisting others to operate in such cases, I am of opinion that this form of instrument is more handy and gives better access to the parts than any other I have used hitherto. The gag must be fixed in first, and it will be found most convenient in the case of cleft palate to put it on the *left* side of the patient's mouth; the cheek retractor is then put in position, and fastened to the triangle on the gag by a double tape (which is preferable to a leather strap) passing behind the neck. When the patient is fully anaesthetised, the tongue depressor, of suitable size, is slipped into place, the button on the instrument fitting under the chin immediately behind the symphysis of the jaw. If the patient become restless he may possibly dislodge the tongue depressor, but this wastes no time, as it can be easily and instantaneously replaced as soon as the patient is sufficiently under the influence of the anaesthetic to allow of the continuation of the operation.

The advantages I claim for this set of instruments are as

follows. 1. The single gag is less in the way than double one, the teeth plates of which are apt to get in the way while one is making the lateral incisions usually necessary in uranoplasty. The single gag can be easily moved out of the way if necessary, without dislodging the rest of the apparatus, from which it is separate. 2. While the tongue depressor is in position the tongue is held firmly



down, and cannot slip out behind, and so necessitates a readjustment of the whole apparatus. 3. As a matter of economy. The box containing gag, retractor, and the four sizes of tongue depressor, costs 38s. This is rather less than one has to pay for *one size* of the instrument commonly used in cleft palate, three or four of which



are necessary to fit mouths of different sizes. It is unnecessary, too, for the practitioner to invest in any other form of mouth gag, as the one figured above, being separate from the tongue depressor, answers admirably in any case where simply a gag, and nothing more, is wanted. The instruments are made for me by Mr. Gardner, Lothian street, Edinburgh.

J. MONTAGU COTTERILL,
Assistant-Surgeon, Edinburgh Royal Infirmary.

THE INFLUENCE OF INCREASED ARTERIAL TENSION ON ALBUMINURIA.

To the Editors of THE LANCET.

SIRS,—In your issue of Nov. 17th Dr. Ralfe writes: "I incline towards the theory that albumen transudes either through the glomeruli or renal epithelium, or both, whenever pressure is raised in the renal vessels." For many years I have believed that the opposite theory was correct, viz., that increased arterial tension, instead of causing albuminuria, sometimes prevents it, and always lessens the amount of albumen passed through the kidneys. In a short note which appeared in a contemporary I advanced a few of the many reasons I had for believing in this theory. All experiments and all clinical records, when carefully looked into, support this theory.

I am, Sirs, faithfully yours,

Llandudno, Nov. 23rd, 1888.

JAMES CRAIG.

Brit. Med. Jour., Feb. 18th, 1889.

THE LANCET.

LONDON: SATURDAY, DECEMBER 1, 1888.

ALTHOUGH the General Medical Council will not have to decide on any question of vital professional importance, they have nevertheless before them subjects of considerable interest in regard to medical education. The admirable address of their President gives a useful summary of the duties which will engage the Council's attention, and of the progress which has been made concerning the registration of foreign and colonial diplomas. Since the last session of the Council, Mr. MARSHALL stated, only ten foreign medical diplomas have been entered upon the home Register, and as yet no colonial or foreign practitioner has been registered in accordance with the provisions of Sections 11 and 12 of the Medical Act of 1886. One application has, indeed, been made by a graduate of the University of New Zealand, this colony having been declared by the Privy Council to be a British possession to which this Act applies, but the applicant has received his degree *ad eundem*, and the Executive Committee have referred to the legal advisers of the Council the question as to the power of the Council to recognise such a degree. The unfortunate position in which English practitioners in Switzerland are placed by the action of the Swiss authorities does not show any improvement. No recent communication from Switzerland, the President said, had been received by the Privy Council on the question of the Swiss authorities granting special or reciprocal facilities to practitioners duly registered in our home Register to practise among Her Majesty's subjects or otherwise in that country. It may be hoped that the Swiss Government will, in the interest of their own country, adopt before next summer the reasonable course which is now open to them, English visitors will be loth to travel in a country where in time of sickness they will be unable to obtain the aid of English physicians.

The reports of the inspectors of examinations are now before the Council. They deal with the sufficiency of the final examinations of the qualifying bodies, and the Council will have the opportunity of considering the replies of the examining bodies to the conclusions at which the inspectors have arrived. Inasmuch as the Examination Committee have themselves prepared a report upon these proceedings, it may be anticipated that the action of the Council will be of a formal nature; but the discussion to which this report will give rise will be probably not the least useful of the influences which will tend to improve the method of examination.

We feel much sympathy with Dr. HAUGHTON's proposal that the Council should appoint inspectors of examinations for public health diplomas. We trust there are no serious grounds for his fear that the large number of applicants for this distinction—the result of the passing of the Local Government Act—will lead to laxity of examination; but it is very desirable that there should be a sufficient standard of examination by the different qualifying bodies, and it is the

business of the General Medical Council to know what each examining body is doing in regard to this subject. The State is now relying upon the verdict of the examining bodies as to the fitness of candidates to undertake responsible medical duties for large populations, and the Council is the only controlling power available. Dr. HAUGHTON's further proposition, that the licensing authorities should be required to appoint a number of experts as examiners, appears to suggest an action which would extend beyond the powers of the Council; his object would be ultimately attained if these authorities were made to recognise the necessity of holding examinations of the kind required, and this could be best brought about by careful inspection of the examinations. It is matter for regret that the reference of this question to the Standing Committee on Education should lead to the postponement of any useful action during the next six months, when a large number of candidates will have obtained possession of the diploma.

It seems likely that the question of the notification of infectious diseases is about to enter on a new phase. We have from time to time recorded the efforts of Dr. TATHAM in the direction of making even the partial system which is now in force more national in its objects, and there seems at last some prospect that these efforts may constitute the beginning of an important fresh departure. According to a report which he has recently issued, it would appear that during the prevalence of small-pox last winter he was strongly impressed with the fact that the benefits which his own borough and other protected towns had derived from notification within their own territories was seriously impaired by the exclusive and merely local application of the powers they possessed. There were at that time some fifty important British towns where the system of compulsory notification was in force, but each town kept the information thus acquired to itself; no machinery whatever existed by means of which the local information could be published and rendered available for national purposes; and towns endeavouring to protect the public health within their own limits by means of the special powers they had obtained were ignorant as to the amount of disease prevailing in other, and even in neighbouring, notification towns, and were hence unable to take any adequate measures against fresh importations of disease.

At this stage Dr. TATHAM brought the matter before his own Health Committee, and it is to the credit of Salford that the corporation endorsed the proposal that their health officer should seek the co-operation of the other towns having a system of notification, with a view to the weekly collection of the information which each district had at its disposal, and to its distribution amongst all the contributing authorities. Thirty-two medical officers of health, with the sanction of the bodies under whom they serve, undertook to take part in the scheme, and Dr. TATHAM at once made arrangements for the tabulation, in his own office, of the weekly returns from the thirty-two contributing towns, and by the aid of a copying press a copy of the tabulated material was early in each week sent to every medical officer of health taking part in the scheme. This having been in progress since the early part of the year, he next took steps to introduce the matter to the Local

Government Board, with a view of transferring to the central authority as a "going concern" the work of compilation and distribution which he had thus initiated and successfully carried out. With a view to this his colleagues who were aiding in the matter were again approached, and he asked them to obtain from their Health Committees an expression of opinion affirming the desirability of the weekly publication of the sickness returns by the Local Government Board instead of by himself. The resolutions which were passed in response to this, as also one by the Health Committee of the Salford Corporation, were forwarded to the President of the Local Government Board, who in turn addressed a circular of inquiry to the several sanitary authorities of all towns in England and Wales possessing notification powers, asking whether, in the event of the Board's undertaking the publication of these weekly returns of sickness, the authorities, individually, would agree to furnish the requisite data. The nature of the answers is of course not known, except in the case of certain towns the authorities of which have made no secret of their willingness to fall in with the scheme; but Dr. TATHAM gives an assurance that he has received from a number of his colleagues information which leads to the conclusion that the proposal made by the central Board had met with general approval.

A considerable time has evidently elapsed since this information was imparted, and there seems to be some difficulty in understanding the delay which has ensued since the formal request was addressed to the Local Government Board without any answer being forthcoming. We are inclined to think that the long interval of silence in no way involves discouragement. Such intervals are by no means uncommon in the case of Government departments, and a somewhat prolonged silence is more frequent when an affirmative answer is in process of being slowly evolved than when a refusal has been determined on. The suggestion made to the Board is rightly spoken of as a feasible one, and the function is altogether appropriate and consistent with the other duties performed at Whitehall. We therefore think it by no means improbable that the scheme will before long be placed on a permanent footing.

In this and other ways notification is making steady progress in the country. Every year fresh towns seek Parliamentary powers to secure its advantages, and Mr. RITCHIE has all but promised that some other means shall be available for securing this end than the unsatisfactory and costly one of private legislation. When this promise is fulfilled the demand for notification will certainly increase, and, with a central compilation of the returns for the use of those sanitary authorities who are willing that the information they receive shall be made available for other than mere local purposes, a distinct advance will have been made in the direction of giving a national character to a scheme which has been favourably reported on in most districts where it is now in operation. It is important, however, if the system is to work without unpleasant friction, that the interests of general practitioners should be adequately safeguarded.

A NORTHERN lay contemporary has been conducting a "doctors' symposium" with a view to elicit the opinions of

the members of the profession upon the vexed question whether we are as a nation retrograding in physique. The four following queries have been widely circulated:—1. Does your experience suggest to you that the race of Englishmen is degenerating physically? 2. Do you think that the great advance in the healing art is responsible for keeping alive much weak life that will in time affect the whole race injuriously? 3. Do you think that the increase of indulgence in physical sports has, on the whole, a good influence on health? 4. Has it ever struck you that probably the great attention paid to health in these days may be producing an anxiety about bodily ailments which is a disease in itself? Answers have been received from a long array of practitioners, amongst whom we note the names of eminent London physicians.

It is satisfactory to note that, on the whole, considerable unanimity exists upon all the four points at issue. With two or three exceptions, all the medical men responding are of opinion that there is no foundation for fearing that a process of national physical degeneration is in progress. Several scout the idea as preposterous, and some are convinced that, so far from degenerating, we are rather rising in the scale of physical fitness and well-being. It is very fairly pointed out by others that the question involves various issues difficult of precise determination; that degeneration and regeneration everywhere coexist; that the former is undoubtedly at work among town-bred populations as the consequence of unwholesome occupations, improper diet, and juvenile vice; and that, while the optimistic view is most to urge in its favour, it would be wrong to ignore the existence of widespread evils and serious dangers to public health. Amongst these evils and dangers are enumerated sexual indulgence in early life, premature marriages, over-pressure in education, improper food, increased tension of life, and the abuse of alcohol and tobacco. It would be interesting to inquire how far there is any evidence that these evils, which are very real, have always existed more or less in civilised communities are actually on the increase. We doubt if any satisfactory proof of such increase could be afforded. The fact that sexual vice did not prevail in a state of Aristocratic simplicity, or that it is at present as notably absent from rural districts as it is notably present in large centres of population, is a pure delusion. It would be difficult to prove that premature and improvident marriages are increasing, and there is good evidence for hoping that we are far from becoming a more drunken nation, we are gaining steadily in sobriety. Three possible sources of degeneration are left—viz., over-pressure in education, increased competition and worry, and a departure from early simplicity of diet. We think there is some danger from all three. On the other hand, we are getting more and more alive to that danger, better able to cope with it, and on the credit side of the national health account we must reckon increased attention paid to hygiene, the improved water supply of our large cities, the provision of better housing for the artisan class, the progress of medical science generally, and the cheapening of food and clothing.

The second query elicited a practically unanimous expression of opinion that the prolongation of weak life by improved methods of treatment is in no sense a

to the public weal. It is pointed out with force and truth that, even granting that invalids are now kept alive who in former days would have quickly died off, their number is not sufficiently large to affect the race injuriously, and that the net result of medical science is not so much the prolongation of feeble life as the preservation of the vigorous and the reduction of infant mortality. Whether the averting from sickly children and invalid adults the extinction which nature, if unhindered, would quickly consummate is or is not a benefit to the race as a whole may be an interesting problem for the exercise of moral casuistry, but it is not a practical question. The educated sense of humanity demands that we should do the utmost for our suffering fellows, and no proposal for any form of euthanasia is at all likely to gain even a hearing. It would be a purblind view to regard physique exclusively. The feeble body may contain a soul of inestimable worth, and the frail infant may one day be the guide, benefactor, or pioneer of his race. The Spartans, who exposed the sickly child to die, acted logically if the nurture of a race of hardy warriors were the only aim of national effort, but regarded from any other point of view their policy was as senseless as it was inhuman. The real point to be aimed at is not the refusal to prolong the life of the physically unfit, but the restriction of their right to propagate their unfitness. This is an unwelcome truth, to which we must some day open our eyes.

Regarding the value of athletic sports, the "symposium" brought out a practically unanimous verdict that, on the whole, their influence is beneficial. One observer thinks such sports are but rarely indulged in with a view of making the feeble strong, but are rather the means adopted by the strong for disposing of some of their superfluous energy. It is, no doubt, a serious error to order the feeble to indulge offhand in fatiguing sports without regard to the condition of their muscular system and circulation. From such haphazard advice much mischief will necessarily result; but hardly any competent person will deny that the pursuit of prudently ordered and temperate physical exercise is likely to prove highly advantageous to all but the victims of profound debility or grave organic disease.

The last query elicited a general consensus of opinion that the increased attention to health now prevailing is on the whole advantageous, and tends to promote physical well-being rather than to encourage or aggravate hypochondriasis. The neurotic and hysterical are, and always have been, with us. It is too readily assumed that their number is on the increase. Apart from such persons, a reasonable attention to health ought not to encourage the growth of morbid fancies. We are glad to see that several observers deprecate the dissemination of popular medical literature and the self-drugging that so largely prevail.

THE publication of Professor BROWN's Report on Eruptive Diseases of the Teats and Udders of Cows, of which an abstract will be found in another column, revives a controversy which was carried on with much vigour twelve months ago. The memorable inquiry conducted by Mr. POWER and Dr. KLEIN on behalf of the Local Government Board resulted in an apparently conclusive demonstration that an epidemic of scarlet fever originated in an eruptive

disease that attacked the teats and udders of cows in a dairy farm at Hendon. The conclusion was startling, and could not fail to excite commotion amongst the dairy interest as well as not unreasonable alarm amongst the community at large; for if scarlet fever could be propagated through the medium of milk without the patient being previously exposed to contamination from a human source, no precautions to guard against such contamination would be of service; and if, on the other hand, a disease in the cow could communicate scarlet fever to man, it was vitally important that such disease should be recognised, and the infected animals removed from dairy farms. The Agricultural Department of the Privy Council have done well in undertaking to investigate the affections of milch cows allied to the historical Hendon disease, and if the conclusions arrived at by Professor BROWN are justified, his report will go far to allay the fears aroused by the former inquiry. These conclusions have to a certain extent been already before the profession in the debates which took place at the Pathological and Epidemiological Societies at the close of last year and the commencement of this; and it will be remembered that the question from the scientific side, especially as regards the bacteriological investigations of Dr. KLEIN and of Professor CROOKSHANK, was practically left undecided. It remains to be seen whether the additional facts which now appear in Professor BROWN's report will lead the Local Government Board authorities to modify their conclusions.

The value of the statement of Professor AXE that at the time of this outbreak there were cases of scarlet fever at no great distance from the farm, and that there was evidence of free intercourse between the infected dwellings and the dairy, was minimised by Dr. KLEIN's reply at the Epidemiological Society. Then, as to the nature of the Hendon cow disease itself. Dr. KLEIN maintained that it was different from the examples of allied affections brought under his notice by Professor BROWN, but the latter, in the course of his inquiries, has accumulated a mass of information which, to his mind, goes far to prove the identity. Several outbreaks of this "cow-pox," as it is termed by the milkers and farm-labourers (and in the case of the Wiltshire outbreak investigated by Professor CROOKSHANK that term seemed strictly accurate), have been investigated in various parts of the country, notably one in the Derbyshire farm from which the infection was conveyed to Hendon. The disorder is a locally contagious eruptive disease of the teats and udders, communicable to the hands of milkers, and spreading from cow to cow in a herd; and there would seem to be few obvious points in which this comparatively common affection differs from the Hendon disease; whilst, as to the pathological characters, Professor CROOKSHANK clearly believes that there is nothing specially distinctive in them. Another line of evidence adduced by Professor BROWN to dissociate cow disease from scarlatina is that arising from inquiries into the prevalence of such cow disease and of scarlet fever in the same district. The result is to show that the two affections, bovine and human, seldom coexisted, not more often indeed than could be explained by coincidence. Then there is the experimental side of the question: the failure to communicate scarlatina to calves by feeding with scarla-

tinal products; the demonstration that lesions induced by inoculation with microbes cultivated from scarlatinal blood are not to be distinguished from those met with in septic poisoning; and, lastly, Professor CROOKSHANK'S contention that the so-called scarlatinal organisms are forms of streptococcus pyogenes. These are matters of history, and in the present state of bacteriology must be decided by the expert. Of more general interest are the facts adduced by Dr. HIME respecting the prevention of milk contamination during epidemics of scarlet fever. As regards the determination of the special question of Hendon cow disease or the possibility of a similar source of scarlet fever ever being again observed, whether the views of Professor BROWN and his colleagues prevail or not, at least one good effect will result—viz., the bringing home to the dairy farmer the need for scrupulous care of his stock, and the enforcement of sanitary measures in his own interest and in that of his customers. Even although it be proved that scarlatina is not one of the diseases communicable from animals to man, there is no ground for much congratulation in the fact that in many cases milk is sent into the market from diseased animals; and that, as Professor BROWN states, "milk is often collected, both in country and town, with contemptuous disregard of the most elementary sanitary precautions, amidst surroundings which can only be characterised as filthy." This is strong language; but it comes with authority; and it will, we trust, lead to a stricter supervision in the supply of an article of food which is one of the necessities of life.

THE judgments recently delivered in the Court for Consideration of Crown Cases Reserved in the matter of the QUEEN v. CLARENCE—wherein nine of Her Majesty's judges (the Lord Chief Justice, and Justices WILLS, SMITH, MATHEW, GRANTHAM, STEPHEN, MANISTY, HUDDLESTON, and POLLOCK) expressed their opinion that the conviction must be quashed, and four judges (Justices HAWKINS, DAY, FIELD, and CHARLES) supported the conviction—afford matter for serious consideration by the medical profession and the general public. It will be remembered that the then prisoner CLARENCE was indicted (1) for unlawfully assaulting his wife and causing her actual bodily harm; and (2)—under another section of the Act 24 and 25 Vic., c. 100—for unlawfully and maliciously inflicting upon her grievous bodily harm. At the trial at the Central Criminal Court he was convicted. The question was reserved whether he was rightfully convicted on both or either of these charges, inasmuch as there had been consent to the act which caused the injury. The alleged assault consisted in communicating a venereal disease. It was argued, on the one hand, that the wife had given an implied consent to the act which caused the injury, and that she had not revoked such consent; and that therefore, according to the provisions of the statute there could be no assault. This may be true at common law; at the same time we fail to see the equity of the enactment, since it was not shown that the wife was cognizant of the peril in which she was placing herself, and therefore could scarcely be adjudged a party to the infliction of the injury. On this head we are of opinion that the minority judgment of the justices was correct in

principle, providing that the offending party (the wife) was aware of the fact that he would transmit the disease in question. Nevertheless, on grounds it is fortunate that the judgment majority was against the conviction; for in the first place, as Mr. Justice STEPHEN and some of his colleagues contended, if the conviction were to stand, it would be tantamount to making the act of a father affecting his child an assault at common law. The Legislature never intended the statute to be so interpreted. Moreover, if the conviction were to stand, the consequences would be so vast and inclusive as to be tantamount to a disruption of society, since there are cases of varying degree of moral guilt and cases where there was no moral offence at all which would fall under the same category, and we opine the differentiation imposed by the law would be beyond the power of discrimination. A man marries knowing that he is still suffering from a venereal disease and that he will certainly or probably communicate it to his wife, no one would extend to him sympathy or raise an objection to the consequence of his malicious assault. But it must be borne in mind that there are several other phases of the general question. A man who has had a venereal sore which he believes he has cured, may not be aware of the possibility of contracting a fresh infection, and so of the communicability of the disease to his wife; or, again, in a known case of syphilis, he may undergo local and constitutional treatment, and nevertheless marry in the false belief that he is cured, when the malady still remains a communicable one. If it were the consequence of his act were to carry the usual interpretation of guilt, a hardship would be inflicted although the statute might not recognise it, would be by common sense to be intolerable and unmerited. Communication of venereal disease, considered in itself, is one of the grounds upon which a divorce can be instituted, but the difference between the breach of a civil contract and commission of a criminal offence is great that they can scarcely, for forensic purposes, be considered together. And, again, venereal infection itself is sufficient to support a petition for divorce, and can be proved that the disease was acquired by the respondent after marriage, when of course it is evidence of infidelity.

For many reasons the recent decision of the majority of the judges is a fortunate and an equitable one. In future time the Legislature decide to enact that communication of venereal disease shall be a criminal offence, it may be taken for granted that the statute will be fully fenced about with stringent and precise conditions.

AN International Exhibition of Alimentary Science will be opened at Cologne on May 18th, 1889, and will remain on view till Oct. 15th of the same year. Hungary, Great Britain, Russia, Italy, Holland, Belgium are already named among the nationalities represented, and others are expected to give their adhesion shortly. The grounds set apart for the exhibition are eminently spacious and picturesque, and every effort is being made to ensure its utility and a

Annotations.

"Ne quid nimit."

HEALTH TEACHING IN BOARD SCHOOLS.

THE Manchester School Board have taken a step in connexion with their work of education which cannot fail to commend itself to all interested in sanitary reform; and who is not? They have introduced a system of practical instruction in the art of living wholesomely, though in a state of poverty aggravated by the demands of civilisation. The usefulness of practical methods in teaching is now universally admitted. Their application in the manner we have indicated is particularly appropriate. Recognising the special needs and difficulties of the children under their charge, the Manchester Board have set themselves to show that the principles of health, cleanliness, thrift, and domestic comfort are as capable of being taught as the elements of what is called scholarship. The plan observed by them is instructive, and its details are carefully adapted to the age and intelligence of different children. In the case of infants under seven years of age the Kindergarten system is in general activity. The right uses of clothes, food, soap and water, &c., are thus continually presented to the developing mind. When the child can read, the ideas already formed are further impressed by the employment of class-books, which, though primarily intended to teach reading, serve also as elementary manuals of personal and domestic hygiene. The theories thus imparted are gradually assimilated and transformed into action in a variety of ways. The first great lesson of cleanliness is practically applied by holding an inspection of the children twice daily with regard to this important matter. Lavatories for common use have been provided, and in some schools young children are, if needful, washed by a person appointed for the purpose. At certain hours various public baths are thrown open for use by the children at a trifling cost. The older girls are taught cookery in a similarly efficient manner, the materials used being purposely of a kind adapted to the usages of a humble home. Pupils on leaving school are advised to attend evening classes, opened by the Board for their further education in matters relating to health. It is hardly possible to speak too highly of this promising endeavour to improve the social life of the poorer classes. We cannot, of course, expect a large and immediate measure of success. Until we can abolish poverty, overwork, and overcrowding, dirt and disorder are inevitable. It is evident, however, that such a course of training as we have sketched, especially when supplemented by the hopes and energies bred by a sound general education, should go far to modify and to prevent those two common evils.

SCARLET FEVER IN RELATION TO A GLASGOW MILK SERVICE.

DR. J. B. RUSSELL reports the occurrence of another outbreak of scarlet fever associated with the use of milk from a special dairy. The occurrence was practically limited to a well-to-do part of the city; and, after local investigation into the distribution of the milk from two separate shops, and by means of vans and carriers, it appears that of 363 families thus supplied twenty-nine were infected, and forty-three cases resulted. It is also noteworthy that of a total of fifty-six cases of scarlet fever heard of between Sept. 25th and Oct. 31st last, as many as forty occurred with unwonted suddenness in the three days Oct. 18th to 20th. The story told by Dr. Russell is a complicated one, but the salient points may be summarised as follows. At one of the two milk shops lived a family, some members of which had suffered from scarlet

fever whilst away from home, between Aug. 17th and Sept. 18th, when they returned to the shop, to remain there until the 20th. During this time it is impossible to conceive that they could have been free from infection, for even as late as Oct. 22nd one child was found to be still desquamating on his feet; and another is stated to have been pulling bits of skin off his hands on Sept. 22nd. Notwithstanding this, and although there was free communication between the residential part of the house and the dairy, no material (if indeed any) mischief appears to have accrued to the milk supply. But it is held that there are strong grounds for believing that during what must be regarded as an exceptionally dangerous period the infection became communicated to the second dairy shop, where sore throats and ill-defined ailments are admitted to have existed; and that it was essentially through the agency of these sufferers that the milk supply became infective. Incidentally, several points of interest are noted. In the first place, examination of the cows elicited no information as to disease. In the next place, there was a greater incidence of the scarlet fever in that branch of the business which carried milk to the largest houses, and Dr. Russell expresses his conviction that, whilst all users of the milk risked infection, the risk rose, and fell with the quantity used. The great lesson which the reporter desires to enforce is the folly of mixing up the milk business with family life. In this case the fortunes of two families were so interlaced with a milk distribution as to have ensured risk on any chance occurrence of infectious disease. It is also noteworthy that the most trifling ailments, whether of man or beast, must not be thought beneath attention where milk supplies are in question. Recent research into the relation of diseases in the cow to the consumption by man of milk has abundantly shown this as regards the lower animals, and Dr. Russell's story enforces it again as to those minor throat ailments in the human subject which appear to be so trivial, but which are often singularly potent in their infectiveness. The occurrence recorded is regarded as having been brought about by some ill-defined throat affections, and the result of consuming the milk was not only that of inducing the series of well-marked scarlet fever attacks to which we have referred, for there also followed in the line of the milk distribution a "cloud" of undefined but plainly specific illnesses of the nature of sore throat, vomiting, diarrhoea, &c.

FLOATING HOSPITALS FOR FISHERMEN.

WE feel that no charitable object has a better claim upon the interest and liberality of our readers than the hospital system now being formed in connexion with the mission to deep-sea fishermen. The undertaking, even in its present imperfect stage, affords ample proof of its practical utility. During the present year no fewer than 6575 smacksmen have by its means been provided with medical treatment while at sea, and of these ninety-six have been in-patients on board the dispensary mission smacks. It is obviously desirable, however, that the aid which these afford, valuable though it is, should be supplemented by a still fuller provision for cases of serious emergency. The *Queen Victoria* hospital ship, with ten cots and quarters for a resident surgeon, has accordingly been almost prepared for sea, but is awaiting the completion of her equipment, and her sister vessel the *Albert* is now on the stocks. Funds are wanted to enable the mission committee to carry out this important portion of their work. Until they are forthcoming we must be content to leave our floating hospital system in the near but absent future, and to be content with imperfect arrangements and a promise of better things to come. Meanwhile the winter, with its unavoidable and

aggravated risks, injuries, and illnesses, is upon us, and the question of the hour is whether or not we shall furnish in time to meet the force of its onset at least one ward in sea-going condition on behalf of the fishermen. There is no question of our ability. It is, will we do it? The work itself needs no commendation. It rests firmly supported on the great fact of urgent necessity. It offers to all who care for the good of their fellow men the opportunity of making a thoroughly creditable investment in the bank of charity, an investment which we venture to say will not be overlooked. We may mention that subscriptions towards this most deserving object will be gladly received at Bridge House, 181, Queen Victoria-street, E.C.

"INFECTIOUS JAUNDICE."

DR. W. P. VASSILIEFF contributes to the *Ejenedelnaya Klinicheskaya Gazeta* of St. Petersburg an interesting article on "infectious jaundice," founded on observations made in the Alexandrovski Military Hospital in 1883. There were eleven cases, at first somewhat puzzling, of an acute infectious disease, which has recently been described under several different names—typhus hépatique, nephrotyphus biliosus, typhus abortivus cum ictero et nephritide, morbus sui generis, &c. This disease is usually met with as a sporadic affection. There is fever very often at the beginning, then enlargement of the liver and spleen, jaundice, and kidney trouble. The disease usually terminates favourably. From the histories of the eleven cases given by the author, it is clear that it is an acute general affection, which commences suddenly with a chill. In some patients nausea, and even vomiting, occurred, after which there were general debility and severe pains in some of the joints, often also in the muscles, especially those of the lower extremities; the appetite was usually bad at the beginning; sometimes there was very great thirst; the patients generally slept badly, and frequently suffered from delirium. When the cases were seen early the temperature was found to be high, the pulse soft and rapid; the tongue was moist and slightly coated; the skin hot and dry. At the beginning there were usually observed enlargement and tenderness of the liver and spleen. Albumen and sometimes casts were found in the urine; also, when there was jaundice, bile pigment. The lungs sometimes were affected slightly (with bronchitis); in two cases pleurisy occurred. The bowels were usually constipated at the beginning. Later on they were sometimes relaxed, the motions generally being colourless. Frequently at the commencement, and sometimes throughout the whole illness, there were attacks of epistaxis; occasionally also herpes labialis occurred. No micro-organisms could be detected in the blood. The patients, especially when they were admitted in an early stage of the disease, gave the impression of great prostration, but after some days this passed away, and they began to get better. The temperature generally fell about the eighth day, sometimes as early as the seventh, at others as late as the eleventh; sometimes there was a second rise of temperature, which did not usually appear to affect the patient much. Although the disease was of such short duration, the patients after the temperature had fallen appeared to be extremely weak, and regained strength somewhat slowly. Although Dr. Vassilieff has only recorded eleven typical cases, he has from time to time had an opportunity of observing others of a similar character in the hospital. One of these proved fatal; at the post-mortem examination extravasations of blood were found on the serous and mucous membranes, and slough of the mucous membrane of the pharynx. Thirty-six other cases have been described by Landouzy, Mathieu, Weil, Goldschmidt, Wagner, Roth, Aufrecht, Fiedler, and

Haas; at least, Dr. Vassilieff has come to the conclusion that his cases and theirs are all examples of the same affection. This disease is met with chiefly in the summer, and nearly always affects working men, only three cases being on record where the patients were women; most of those affected were between sixteen and twenty-five years of age. It occurs in different parts of Europe in the form of a sporadic, acute, feverish affection, with severe nervous symptoms, and with enlargement of the liver and spleen, functional kidney disturbance, jaundice, and pains in various groups of muscles. In Dr. Vassilieff's opinion, it bears most resemblance to the bilious typhus met with in Egypt and Smyrna and described by Drs. Kartulis and Diamantopulos, and it appears to be a disease *sui generis*, differing from recurrent bilious typhus.

TEMPORARY DETENTION OF CHILDREN IN WORKHOUSES.

A CASE recently heard before Mr. Slade at the Southwark Police-court reveals a state of affairs that certainly demands inquiry at the hands of the Local Government Board, and also shows the necessity of provision other than the workhouse being made for the reception of children who have to be temporarily provided for. The details are briefly as follows. Two little children were committed on remand to St. George's Workhouse by Mr. Slade, under the provision of the Industrial Schools Amendment Act, for living in a house frequented by women of loose character. On the case being heard a second time, one of the children brought from the workhouse was in a filthy state; and, in addition, it was found that the child, who had when sent to the workhouse "beautiful golden hair," had had it cut off, and that it ultimately found its way to a wax doll maker's. The magistrate, after hearing the case, very properly expressed great indignation. It is to be hoped that the Local Government Board will see its way to ordering workhouse authorities to afford proper accommodation to the hapless little waifs and strays that are so frequently committed to their care by the magistrates. Surely a pauper ward, under the charge of a pauper nurse, is not a fit or proper guardianship; nor should the authorities be permitted to traffic in the hair of these temporary inmates. If the child's hair is free from disease they have no right to cut it off, since their charge is only a temporary inmate, and not sent for punishment; on the other hand, if the scalp or the hair be diseased, or filthy the wax doll manufactory is not a fit place for its disposal.

SMALL-POX IN ITALY.

AT Rome, it is officially announced, there will be opened immediately an "Istituto Vaccigeno" or dépôt for the supply of pure vaccine lymph, under the direction of the Ministry of Health. The institution has not been started an hour too soon. From all parts of Italy, but especially from the southern provinces and the islands, comes an appeal for systematic vaccination under duly qualified medical surveillance. Town councils have proved inadequate to the strain imposed upon them by recent small-pox epidemics, and, indeed, something worse than mere incompetence is alleged of some of them. The *Tribuna*, an ably conducted and widely diffused organ of the advanced Liberal party, publishes, under the heading "Vainolo e Camorra" (Small-pox and the Camorra) some scandalous details as to the mode in which the malady, still unsubdued in Sicily, is sought to be combated. The public health, it seems, is not sufficiently sacrosanct for the avaricious contractor, and from the most sordid of motives the vaccine lymph supplied to the municipalities (that of Catania is specified by the *Tribuna*) is so largely adulterated with glycerine as to be worse than useless.

Town Councillor De Felice, according to the *Tribuna*, has tabled a series of charges inculpating certain prominent Catanese with this nefarious traffic in the resources of sanitation, and the names of the leaders in this Camorra or ring are to be made public in connexion with a criminal prosecution. We hope that a severe example will be made of the culprits, and that ere long a well-ordered system of State-controlled prophylaxis will put Italy on an equal footing, hygienically, with Germany and France. Meanwhile there are symptoms that the small-pox epidemic has, for the time, seen its worst in the Sicilian towns, Catania now recording ten cases and Messina only two per diem. Such, at any rate, are the figures supplied us by the municipal registrars, and, now that the bull's-eye of an official inquiry is directed on Catania at least, we may accept the returns as fairly representative of the facts.

A TRICYCLE AND AMBULANCE FOR THE POLICE.

AT the meeting of the Society of Cyclists on Tuesday evening the President (Dr. B. W. Richardson) exhibited a tricycle from the works of the Surrey Machinists Company, adapted, on his suggestions, to the police service. The usual tandem form had been adhered to, arranged to be worked by either one or two officers, according to requirement. The machine was strongly built and the tires were of inch rubber, so as to run smoothly and quietly. The lamps were of the bull's-eye kind, and easily removable. The tricycle was furnished with a box, which could be used for various purposes—as a despatch-box or for carrying anything that had been lost &c. to or from a station. By the side of the machine was fixed a light ambulance, which could be unlimbered rapidly by a single officer, and could be placed on the top of the seats of the machine, so as to carry a wounded or disabled person, the machine being pushed easily along by the hand—a plan Dr. Richardson thought that would be most practical for ambulance work, because it placed the work at the command of one man, and secured rapid movement with less jolting than if the machine were propelled by the pedals. This ambulance might also be used by the army. In conclusion, Dr. Richardson said that to make the machine complete for police service he was about to add to it a lethal apparatus, which would enable a policeman to put an animal, fatally wounded in the streets, painlessly out of its suffering, and to carry away the body of a small animal for interment or cremation after its death by euthanasia.

RESPIRATION IN UTERO.

DR. J. E. BERGWALL, a district physician in Sweden, reports in the *Eira* an instructive case which came under his observation in his official capacity, which shows that implicit reliance ought not to be placed on any lung test as a proof that a child has been born alive. A middle-aged married woman who had already had two children, both of whom were stillborn, had complained of severe abdominal pain during the last few weeks of her third pregnancy. When labour commenced the midwife was sent for, and until she arrived an officious and ignorant neighbour took charge of the case. This woman, finding the cord prolapsed and the liquor amnii escaped, proceeded to tie the cord in two places and to cut it through between the ligatures. When the midwife arrived shortly afterwards, she found the two ends of the cord hanging out of the vulva; the os about the size of half-a-crown, the pelvis narrow, the membranes ruptured, and the foetal head in the first position, but lying very high. The labour progressed satisfactorily for some time, but it was ultimately found necessary to have recourse to the forceps, which were

applied about eight hours later, a well-developed female child being extracted—dead, of course. There was a good deal of post-partum hæmorrhage. The woman died in two days from endometritis and perimetritis, notwithstanding the attendance of a medical man. The post-mortem examination of both bodies was made ten days afterwards by Dr. Bergwall. He found them in an excellent state of preservation. The remarkable thing was that the foetal lungs floated readily in water even when connected with the heart and thymus. The anterior and upper portions of the lungs were of a bright-red colour, and had an elastic feel, crepitating on pressure. The inferior and posterior portions were of a brownish colour, with a few bright-red spots here and there; these portions presented a firm feel, and did not crepitate on pressure, while pieces cut off from them sank in water. It was therefore evident that some amount of respiration had taken place in utero. No attempts at artificial respiration had been made. Before coming to the conclusion that the lungs contained air during life we should like to be quite certain that there was no putrefaction, seeing the long interval that elapsed between death and the post-mortem examination. Dr. Bergwall, for his part, is positive that the aeriform contents of the lungs were not due to putrefaction.

VERY HOT COMPRESSES IN SURGICAL PRACTICE.

PROFESSOR I. I. NASILOFF, writing in the *Vratch*, gives an account of several cases of inflammation of the lymphatic glands which he treated with marked success by means of very hot compresses. These compresses consisted of a four-fold piece of linen, rather larger than the surface over the affected glands. It was dipped into water at a temperature nearly or quite equal to 212° F., wrung out, and applied quickly over the glands, its own temperature being then from 140° to 165° F. These applications were made morning and evening, the compress being allowed to remain on covered over with cotton wool for about fifteen minutes. As may be supposed, the applications produced somewhat severe pain, but this did not last long, though sometimes not only redness, but a blister was caused. The treatment was continued for about a fortnight. It was found that it very soon began to promote absorption; this action was always accompanied by a rise of temperature, depending apparently upon the size of the diseased glands, and upon the extent to which absorption was taking place. It was noticed that the earlier the treatment was adopted the more effective it showed itself. Professor Nasilloff believes that hot compresses are a valuable form of treatment, not only in strumous glands, but in rheumatic osteo-myelitis and in fungoid inflammation of the joints.

DISPOSAL OF REFUSE.

A NOTICE to the parishioners of Camberwell has just been issued by the vestry of that district calling "the serious attention of all householders to the objectionable practice of depositing vegetable refuse and other decomposable matter in their dustbins." The vestry have two reasons for making this protest: in the first instance, they argue it is injurious to health; and in the second, it imposes a heavy tax upon the ratepayers, who have to bear the cost of its removal. As much as £4000 a year is actually expended in the removal of refuse which householders could without difficulty destroy; this is not an insignificant sum, and the vestry not unreasonably call upon the ratepayers for their co-operation to effect this saving. In the majority of houses there is no difficulty in adopting the custom of burning all vegetable matter, and both for health and economic reasons it ought to be done. If we assume

that the cost of dust collection per house in other parts of London is the same as in Camberwell, something like £70,000 a year would be saved if Londoners generally would destroy by fire the refuse which now is improperly placed in the dustbin. At the present time, when there is unfortunately a great tendency for local taxation to increase, a possibility of reducing the annual expenditure of London by £70,000 ought not to be overlooked. All that is wanted is a little care on the part of householders, and this they might readily give if they would recollect that they are acting in the interest of their own health at the same time.

MEDULLARY GLIOMATOSIS.

GLIOMA of the spinal cord, or syringomyelia, is a rare affection, and very difficult to diagnose with certainty. M. Wladimir Roth, of Moscow, has contributed a sound article on medullary gliomatosis to the current number (48) of the *Archives de Neurologie*. Syringomyelia may result from the softening of a gliomatous neoplasm, and in this case the cavity possesses nothing in common with that of hydromyelia or any species derived from other morbid processes. A strict delimitation of some varieties of hyperplasia of the neuroglia from syringomyelia is not warranted. Among the anatomical processes grouped together under the name of syringomyelia we must recognise four kinds: 1. A congenital hydromyelia, and the dilatation of the central canal or of its posterior part detached during the embryonic period. 2. Epithelial cells of the central canal which have remained imprisoned in the posterior columns of the white matter may by their proliferation give rise to tumours occupying some space in the spinal cord; degeneration may occur in them, with the formation of a cavity. 3. The ependyma of the normal central canal may undergo hyperplasia and cause a tumour. 4. The neuroglia may become hyperplastic and cause a diffuse infiltrating growth. The most characteristic symptom is partial anaesthesia of the sense of temperature, often combined with analgesia. Paralysis and muscular atrophy may also be present. Trophic and vaso-motor symptoms are also of common occurrence. With all respect to M. Roth's opinions, we cannot believe the differential diagnosis is so devoid of difficulty.

"RINGER'S THERAPEUTICS: STRANGE ADVICE."

THE letter from Dr. Rentoul, which was published in our last issue under the above heading, has brought us many letters for which we regret we are unable to find space. Several of these appear to have been written under a misapprehension. They assume that Dr. Rentoul is in haste to quote adversely from the last edition of Dr. Ringer's book. This is not the case, although the words are to be found in it. By a coincidence, the letter reached us very shortly after the issue of the twelfth edition, but Dr. Rentoul's reference was to the eleventh edition. One writer points out that the paragraph quoted has appeared for years in successive editions, as though this afforded any justification for the looseness of statement to which Dr. Rentoul objects. Others consider that it is wilfully obtuse to think that Dr. Ringer's statement can be misinterpreted into meaning that the nurse should give aconite upon her own responsibility without any directions about dose or method of administration. Many join in a chorus of praise of the judicious employment of aconite under the conditions indicated, but this point was scarcely raised in the letter we published, which merely pointed to danger in the event of the instructions given in the text-book being literally followed by any nurse into whose hands it might fall. A lady correspondent engaged in nursing says: "It is the absence of thought I would blame in the

nurse if she gave a wrong dose." "Absence of thought" seems to have pervaded the construction of the paragraph which has led to this misunderstanding. We willingly believe that Dr. Ringer intended the medical man in attendance to direct the nurse to take the temperature and to give aconite according to his instructions, under certain conditions, but it is to be regretted that he has not worded the paragraph so to avoid any appearance of ambiguity.

THE SENSE OF SMELL

THE mystery surrounding the curious association of ideas likely to be aroused by unfamiliar odours has frequently puzzled scientific and semi-scientific writers and thinkers, and ingenious theories have often been put forward to account for this. Undoubtedly certain odours impress themselves strongly, and can be recognised again after a long interval; during the interval, however, no effort of will can reproduce them in any form, except as distinct notions of the pleasure or pain they originally excited. Mental reproductions of sounds or sights can be called up readily enough, the facility and order differing largely with individuals and with habit; but the sense of smell stands upon a lower level, in spite of its occasional delicacy of perception. Town life may, to a large extent, account for this. It necessitates a certain habit of indifference to unsavoury odours. The every-day smells in our streets lead us to tolerate or disregard many inevitable opportunities of cultivating the sense at the expense of comfort. On the other hand, there is little doubt that by undue employment of powerful condiments and of tobacco the sense is liable to be greatly impaired. A contemporary, in urging the recognition and cultivation of this "neglected sense," considers that a nomenclature for smells, such as we have for colours and sounds, would help matters by enabling us to put upon record and compare our impressions. At present we flounder about with more or less fanciful comparisons. Chemists and pharmacists have agreed that it is legitimate and useful to speak of camphoraceous, terebinthinate, or alliaceous odours, and even occasionally refer to singeing or burnt feathers. It is difficult to imagine upon what basis a new nomenclature for smells can be developed. Rapidity of vibration and the spectrum have helped the higher senses to a certain extent, but even now chemists are far from adopting the cold precision of the spectrum as an exact measure of the colours to be expected with various reagents. A new nomenclature, if it can be devised upon a sound basis, would doubtless be useful, and might help to save the sense from total extinction according to the doctrines of evolution; but meanwhile many of the similes employed for some organic compounds lend an idea of freshness and pleasure with which we are reluctant to part.

"NOVEL MEDICAL CONSULTATION."

IN *The Times* of Nov. 20th appeared the following paragraph, headed as above:—

"Philadelphia, Nov. 19th.

"The Canadian Pacific Railway telegraph line was united with the ocean cables yesterday afternoon, the physicians at Victoria, Vancouver, being thus enabled to converse with Sir Andrew Clark in London about the case of Lord Ennismore, who is lying dangerously ill of typhoid fever. Questions of temperature, pulse, respiration, &c., were asked and answered, the operation in each case requiring only a few minutes' time. This novel consultation continued for three hours."

This paragraph was obviously capable of being misunderstood, and we have been requested by Sir Donald Smith, K.C.M.G., a gentleman in London interested in the case of Lord Ennismore, to give the true version of the circumstances upon which it was based. It appears that Sir Donald

Smith on Sunday, the 18th, asked Sir Andrew Clark, when attending him professionally, to accompany him to the Central Telegraph Station in order to assist him in interrogating the doctors in Victoria in medical charge of the patient as to his exact condition, in order that precise information might be conveyed to Lord Ennismore's family. Sir Andrew replied that he could not consent to that course, but would write down for him on paper the questions which would elicit the information he required. This was done, and in the transmission of the cablegram the name of Sir Andrew Clark was in some way inadvertently associated with the message, and the telegraph authorities on the other side used it for the purpose of concocting the story. There was therefore no "consultation" in the proper sense of the word, the only part taken by Sir Andrew Clark in this matter being the assistance rendered by him to Sir Donald in framing the message.

THE ABERDEEN UNIVERSITY CLUB.

THE Aberdeen University Club seems in a very thriving way. Its members number well over 200. At its dinner on Nov. 21st, at the Holborn Restaurant, Mr. Goschen, the Rector of the University, presided, and about 140 gentlemen were present. Mr. Goschen was in good health and spirits. It seemed as if he had escaped into a congenial and academic atmosphere from one very different. He tantalised his University by speculating on the chances of the blandishments of the Lord Rector overcoming the virtues of the Chancellor of the Exchequer in dealing with appeals to Government for financial help; and he entertained his audience, largely composed of Aberdeen graduates practising in London, by wondering whether there was any corresponding invasion of Aberdeen by graduates of London. His allusion to the premature death of Colonel Duncan, seconded by an equally sympathetic one from Dr. Ford Anderson, was in admirable taste. Whatever the obligation of the graduates to the distinguished president, it was equally great to Dr. Burnet, the honorary secretary of the club, on whom the burden of the arrangements fell; and a memorably pleasant evening was spent, all the better for shorter speeches than have sometimes ruled.

PATHOGENY OF THE COMPLICATIONS OF SCARLATINA.

DR. M. A. RASKIN publishes in the *Vratch* (No. 44) some investigations he has made on the source of the malignant complications of scarlatina. In uncomplicated cases of the affection he has never been able to detect streptococci in the blood or, in fatal cases, in the organs. Streptococci never appear in the skin, and they were only found in two cases out of eighteen in the desquamation. These streptococci when inoculated into animals only produced the ordinary results of streptococci obtained from other sources. It is, he says, probable that such complications as inflammation of the glands, phlegmonous cellulitis of the neck, suppurative and perhaps serous inflammations of joints, broncho-pneumonia, and purulent otitis are due to a secondary infection by means of chain-like cocci. It is not possible to say the same regarding diphtheria. Though streptococci are found very constantly in diphtheritic membranes, they are not generally admitted as having a causal relation to the disease. Dr. Raskin has also never been able to succeed in inducing diphtheria by inoculating mucous membrane or the raw surface of sores with streptococci; a specific form of bacillus has, moreover, been found in diphtheritic tissues by Löffler and other observers; and it is difficult to understand how the same micro-organism (a chain coccus) can set up two such different diseases as diphtheria and suppurative inflammation.

According to the author's researches, secondary suppurative processes are set up by chain cocci, which may or may not be associated with other micro-organisms—staphylococci in otitis and micrococcus pyogenes tenuis in pyæmia. These organisms enter the system through the scarlatinal ulcers of the throat, and make their way to distant parts by means of the lymphatics. There are two especially favourable conditions in existence—the readiness of these bacteria to travel along the lymphatics, and the richness of the pharyngeal tissues in these vessels. When streptococci enter the blood they are disposed of in three different ways: (1) they may rapidly die and disappear without producing any further disturbance than some degree of pyrexia; (2) they may emerge from the vessels into the organs, and there set up suppurative changes; and (3) they may set up pyæmia and cause death. The morphological and biological relations of the streptococci examined did not differ from those of other streptococci. The practical advice which Dr. Raskin is led to give is to keep the mouth and the throat particularly clean, to be very careful as to the cleanliness of everything that is introduced into the mouth, and, to make assurance doubly sure, to use disinfectants.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE Lord Mayor presided at a largely attended meeting of the Council held at the Mansion House on Wednesday. The report presented for the year stated that the total collections amounted to £40,379 9s. 2d., showing, we regret to say, a decrease of £228 18s. 2d. on the previous year, which included a legacy from the late Dr. Wakley of £1000, and a special contribution received from the Jubilee Service at Westminster Abbey. The largest contribution was from St. Jude's, South Kensington (Prebendary Forrest, D.D.), amounting to £1164; the next being £1002 from St. Michael's, Chester-square. The gross receipts were somewhat less than last year, but, by various savings, a distribution of awards to hospitals &c. had been made of £39,408, which was considerably in excess of any previous year. A legacy of £22 10s. had also been received. The distribution of the Fund comprised 107 hospitals and 50 dispensaries, and £1600 had been set apart for the purchase of surgical appliances. For the first time, Guy's Hospital had participated in the awards. The working expenses (£1272) slightly exceeded 3 per cent. on the gross amount. The 23rd of June was selected as the date of Hospital Sunday next year.

ENTERIC FEVER AND SLAUGHTERHOUSES.

MR. SPEAR has recently visited New Brighton, in the Wallasey Local Board district, to receive evidence as to an alleged connexion between a slaughterhouse and a prevalence of enteric fever in its more immediate neighbourhood. The evidence given was not such as to prove the connexion in question; and, even if the slaughterhouse is a source of nuisance, it is quite certain that there exist other conditions which are much more likely to have influenced the prevalence of enteric fever. These include, amongst other evils, the blocking and the faulty ventilation of sewers. If the authority are in earnest, they will see that such conditions are forthwith remedied, and, if need be, that steps are taken to revoke the licence of any slaughterhouse which ought not properly to be maintained. In the meantime we learn that certain measures involving the provision of so-called "deodorising covers" for the sewer manholes are in course of being carried out. Etiologically, the inquiry leaves us where we were; that is to say, no connexion has as yet been proved to exist between any conditions either of slaughterhouses themselves or of slaughterhouse refuse on the one hand and enteric fever on the other.

BURIAL ON CERTIFICATE OF MIDWIVES.

THE *Bucks Herald* contains a report of an inquest on an illegitimate child which had been buried in the Ivinghoe churchyard on the strength of the certificate of a midwife who had been called in after its birth, and after it had ceased to breathe. The midwife was told by one of the women in attendance that the child had made a whining noise once or twice, but she could not say if it was born alive. When these facts reached the coroner he very properly ordered the body to be exhumed. An examination was made by Mr. H. A. W. Sandell of Leighton Buzzard. His opinion was that the child had been born alive, and died from want of prompt professional attendance. The jury returned a verdict of "Accidentally suffocated," and expressed surprise at so loose a system in the burial of infants. They desired the coroner to write to the vicar of Ivinghoe, and ask him that no interment should take place without a certificate from a qualified medical man or a registrar of births and deaths. The jury have done their duty, and a great public service. It is to be regretted that the Registrar-General does not use more his enormous influence to prevent persons whose deaths are uncertified from being buried without an inquest.

PERITONEAL TRANSFUSION.

THE blood of the dog has been transfused into the peritoneal cavity of the rabbit by MM. Héricourt and Richet, who connected the carotid artery of the dog with the peritoneum of the rabbit by means of an antiseptic tube. The quantity of blood transfused was ascertained by weighing, and found to vary between thirty and fifty grammes. Only one rabbit of thirty-four died. Polyuria, with a lowering of the temperature of the rabbit by two or three degrees, and a flaccidity of the abdomen, were the phenomena observed soon after the transfusion. These are to be explained by the rapid passage of the intra-peritoneal blood into the vascular system, and by the dissolving action of the dog's serum on the red blood corpuscles of the rabbit. Inoculations of cultivations of the streptococcus pyosepticus into the rabbits thirty-six hours after the peritoneal transfusion proved that the rabbits had in some way acquired an immunity from the noxious effects of the streptococcus, for the resulting oedema was slight, the temperature less raised, and the animals frequently survived.

NEWSPAPER LIBEL.

THE law of newspaper libel received a useful illustration lately in the action of Venables against Fitt, in which the plaintiffs sought to recover damages for the republication of injurious remarks which had been made at a public meeting. The defence was that the publication was privileged, as being a fair and accurate report, made without malice, of what had passed at the public meeting, and the facts being practically admitted on both sides. Mr. Justice Denman, who tried the case, summed it up to the jury in six questions, upon which he asked their findings. 1. Was the matter complained of a libel? 2. Was it a public meeting? 3. Was it lawfully convened for a public purpose? 4. Was it a fair and accurate report? 5. Was it published without malice? 6. Was the publication of the matter complained of for the public benefit? The first five questions do not seem to have given the jury any difficulty, but a natural repugnance to outrage the common-sense view of the case made them reluctant to say that, although libellous, the publication was for the public benefit. Accordingly, they sent to ask the judge whether this could possibly be so. He had no difficulty about reassuring their minds on this point, for to the thought of a

lawyer there is no necessary antagonism between libel and meritorious truth. Happily, the jury were quite prepared to receive this sound if somewhat odd-sounding ruling, and the case terminated in a verdict and judgment for the defendants, which is such very good sense that one rejoices to find it authentic law.

BRITISH NURSES' ASSOCIATION.

WE are informed that the British Nurses' Association will give a *conversazione* on Friday, Dec. 7th, at 9 P.M., at the Grosvenor Gallery. The President, her Royal Highness Princess Christian, has announced her intention to be present, and many leading medical men have accepted invitations. The gathering will be most picturesque, as several hundred nurses will probably be present, wearing the uniforms of their different hospitals. The Pastel Exhibition will be on view, and also an Exhibition of Nursing Appliances. A short ballad concert will be given, and Mr. Corney Grain has promised to give one of his clever musical sketches. To afford a few of the many interested in nurses and nursing an opportunity of being present on such an interesting occasion, a limited number of cards of admission (price half-a-guinea each) will be issued to the general public. But we are informed that any member of the medical profession can obtain cards for himself and members of his family at the price of five shillings for each by making early application to the Hon. Secretaries, 20, Upper Wimpole-street, W.

THE CHINESE COLLEGE OF MEDICINE.

THE second winter session of the Chinese College of Medicine, Hong Kong, opened on October 1st, His Excellency the Governor presiding. In the absence from ill health of the Dean, Dr. Manson, a report of the work of the College was read by Mr. Cantlie, F.R.C.S. Eng. From this it appears that during its first year classes have been held in Botany, Chemistry, Physics, Latin, Anatomy, Physiology, Materia Medica, Minor Surgery, Clinical Observations, and Military Ambulance work. There are seventeen students on the books of the College, and the first professional examination took place last August, examiners being appointed to act as assessors to the lecturers in every subject. Twelve candidates presented themselves, and six passed the examination in all subjects. In his address, the Governor referred to the obligation they owed to Mr. Cantlie for his efforts in founding and assisting the institution, and to the disinterested motives which had led to the foundation. He hoped the College would be supported by many who had made fortunes in China, and he thought the object one which might also be well supported by Government. The prizes were then distributed. Lieutenant-General Cameron expressed the thanks of those present to the teaching staff, and urged that the attention of the public "at home" should be called to the institution, which was deserving of more assistance than it could be expected to get from local support.

HOUSE PROPERTY AND THE SMOKE TEST.

MR. F. M. CORNER, medical officer of health for Poplar, draws attention in a recent report to repeated occurrences of enteric fever and diphtheria, which he has found, by means of the smoke test, to be due to defective conditions attaching to the drains of houses; these defects admitting the entrance of sewer air, first from the sewers into the house drains, and next from the house drains into the dwelling. The point which he desires to enforce by reason of this experience is the facility which the smoke test affords for detecting these structural defects. He states that when the apparatus by which he applies it was purchased, some six

years ago, it cost £2 15s.; and he thinks that if it were generally known that so simple and effectual a test is available to all at a reasonable cost, many persons, such as house agents, owners of property, and others, would, in advance, put the dwellings in which they are interested to the test, and if the drainage was found to be defective they would procure the remedy of those defects, and so obviate the occurrence of nuisance and disease.

INFANT MANAGEMENT.

A CORRESPONDENT directs our attention to the possible dangers which may result from the use of so-called "baby soothers," and it merits comment if only from the fact that it is not written by a medical man, but by one who has thoughtfully observed what he considers to be an error in the management of infants. It would be ungracious for us to criticise too closely his theory of the means by which the child's constitution may be injured; or to suggest that the connexion between rickets or consumption and a continual flow of saliva is not scientifically an accepted fact. Rather would we welcome the spirit with which he endeavours to account for the pallor of the "victims" by seeking for some trivial error, instead of contenting himself with theorising about heredity. Nothing is more difficult, however, than to attempt to control the management of infants among the poorer classes, or to induce mothers to give up any pernicious habit which for the time being seems to do good, and which appears to be sanctioned by universal custom. Scientific recognition of the evil results of some forms of artificial feeding is yet far from having eradicated the wholesale employment of many starchy infant foods without milk.

THE UNIVERSITY FOR LONDON COMMISSION.

THE meetings of the University for London Commission were resumed at the Commission's rooms, 5, Craig's-court, Charing-cross, on Saturday last. There were present the Earl of Selborne, Sir James Hannen, Sir William Thomson, D.C.L., Professor Stokes, M.P., and the Rev. E. Cowell Welldon, M.A. Vice-Chancellor Ball was absent. We understand that the Commission was mainly engaged in considering the chief features of their report, and it seems improbable that the decision of the Commission will be issued during the present year.

BACTERIAL HÆMOGLOBINURIA.

THE bacterial hæmoglobinuria of the ox has been confounded with the bovine pest. It is a contagious disease, and very fatal in the ox; cows nearly always resist it, and calves are refractory. M. Babès describes the bacterium as brilliant, round, and measuring about 5μ ; it is divided into two by a transverse mark, and often into four by another septum. The microbe resembles the gonococcus, because it forms diplococci; it has been cultivated on nutritive media at the temperature of the body.

GIRL NURSES.

THE irrepressible "British Matron" has written to an evening contemporary to complain of the hard work of nursing as a profession. She considers it far beyond the untrained and immature strength of most young girls, and draws terrible pictures of the risks of illness from sheer overwork. She advocates the employment of male nurses for male patients, and, in her excessive generosity, considers that many men will be glad to avail themselves of a new opening in the struggle for life. Meanwhile she looks with satisfaction to the position of lady doctors, and endeavours

to show the qualifications of members of the male sex for the new rôle assigned to them by delicate compliments: Men can be "gentle and deft"; "What hand is as tender in its handling as that of a doctor?" Clearly men as doctors are in their wrong place, and must hasten to change over. Before doing so, however, it may be well to appraise the knowledge of our adviser rather more closely. She affords us a clue a little later, when, in urging some ladies to become nurse-girls, she puts forth the strange inducement: "It requires no training to look well after a baby." After all, it may be worth while remaining in the profession a little longer, to treat our children when these nurse-girls, who "require no training," have done their work.

YELLOW FEVER IN THE CANARIES.

A MADRID medical journal (*El Siglo Médico*, of Nov. 25th), referring to the existence of yellow fever in the Canaries, states that the number of cases has fortunately been small, and remarks that an unnecessary amount of alarm and a totally needless disturbance of commercial affairs have been caused by the epidemic, inasmuch as it has been supposed that Las Palmas, in the Gran Canaria, was affected, though as a matter of fact that town and the whole island is as healthy as ever, all the cases of yellow fever being limited to the little island of Santa Cruz, forty leagues farther off.

SIR MORELL MACKENZIE AND THE ROYAL COLLEGE OF PHYSICIANS.

WE are informed that Sir Morell Mackenzie has resigned his membership of the Royal College of Physicians of London.

FOREIGN UNIVERSITY INTELLIGENCE.

Bahia.—Dr. Braz Hermenegildo do Amaral has been appointed Assistant Professor of Clinical Surgery.

Genoa.—Dr. Fano has been appointed Professor of Physiology.

Giessen.—Professor Overbeck, of Greifswald, having declined the invitation to the chair of Physics, this post has been offered to Professor Linstedt, of Darmstadt.

Göttingen.—The new chemical laboratory was formally opened on Nov. 18th. It is looked upon as one of the best arranged laboratories in the world—if, indeed, it do not surpass all others.

Greifswald.—Dr. Ballonatz has qualified as *privat-docent* in Anatomy.

Kharkoff.—Dr. Popoff has been raised to the rank of Extraordinary Professor of Anatomy.

Marburg.—A new medical polyclinic has been opened under Professor Rumpf.

Montpellier.—The selected names for the clinical chair of Diseases of the Nervous System are—(1) M. Mairat; (2) MM. Blaise and Regimbaud.

Munich.—Dr. R. Emmerich, first assistant in the Hygienic Institute, has been raised to the rank of Extraordinary Professor.

Parma.—Dr. Ceccherelli has been appointed Professor of Special Surgical Pathology, and Dr. Rattone Professor of General Pathology.

Santiago.—Señor Don A. Martinez de la Riva has been appointed Professor of Midwifery.

St. Petersburg (Military Medico-Chirurgical Academy).—Dr. A. M. Levin has qualified as *privat-docent* in Clinical Medicine and Diagnosis.

El Siglo Médico is publishing a translation into Spanish of Dr. Howship Dickinson's Lectures on the Tongue, delivered before the College of Physicians.

DR. JOHN W. BYERS is a candidate for one of the examinerships in Midwifery to be filled at the next meeting of the Senate of the Royal University, Ireland. There is a strong feeling that the Belfast Medical School is entitled to a larger share of representation on the examining boards than it possesses. At present there is not one examiner from Belfast at the final M.B., although this school sends up, it is said, more than one-third of the candidates.

THE Universities of Oxford and Cambridge have drawn up regulations for the promotion of home reading and study in connexion with their University extension schemes. The University extension work in London is carried on by the London Society for the Extension of University teaching, in conjunction with the Universities' Joint Board. The Universities' Board are preparing a similar scheme of home reading and study for London.

IN August next the Anthropological Societies of Bonn and Vienna will combine to hold a great Congress in the Austrian capital. The opening of the Natural History Museum there will coincide with the meeting of the Congress, which will also increase its attractions by an Exposition of Prehistoric Objects. Men of science from all parts of the world are expected to assist at the proceedings.

MR. C. A. BALLANCE, M.B. Lond., F.R.C.S., has been appointed Assistant Surgeon to the Hospital for Sick Children, Great Ormond-street.

MR. NELSON HARDY, F.R.C.S. Ed., L.R.C.P. Ed., is a candidate for the representation of the Dulwich division of Camberwell on the County Council.

ARTHRECTOMY.

By G. A. WRIGHT, M.B. Oxon., F.R.C.S. Eng.

ERASION or arthrectomy of the knee is an operation consisting in fully exposing the whole of the interior of the joint, and in completely removing the diseased synovial membrane, ligaments, cartilage, and bone without any formal removal of the articular extremities, as in excision. In fact, erosion is removal of all the diseased structures from a joint, and removal of diseased structures only. The operation has been in use in the Children's Hospital, Pendlebury, since 1881. The first case was published in *THE LANCET* of that year, under the heading of "Cases illustrating the Surgery of Childhood." In 1883, at the meeting of the British Medical Association in Liverpool, a paper was read entitled "On the importance of recognising the Primary Lesion in Joint Disease." The question of erosion was discussed, and cases were shown. In 1885 a series of sixteen cases was published in the *Medical Chronicle*. The question of priority is unimportant, but it is important to recognise that in certain cases, under certain restricted conditions, the operation yields better results than excision. The operation is, I think, chiefly, if not entirely, applicable to the knee joint, though I have performed it in the ankle and the elbow; but in joints with complex bony surfaces, and in joints where free mobility is an important element, also in joints where the primary and main lesion is bony, the operation can, I think, never have any great measure of success. The transpatellar method is the best. The removal must be most thorough, careful, and complete. Drainage should be through the back of the joint. The results in successful cases are better than those of excision, in that there is no shortening whatever, either immediate or as growth goes on, while the results in other respects are like those of excision; for a firm, stiff, straight limb is obtained.

Mobility, though possible, is not to be counted upon. The operation is not applicable to cases where there is great and widespread disease of bone, or where there is much suppuration, or where there is general tuberculosis. It is applicable to cases of disease that resist treatment by rest, but are not so far gone as to require amputation—in fact, to the majority of the cases which are now excised; though it is admitted that a considerable number of cases still require excision, and are not suitable for erosion. Erosion is, however, justifiable at a less advanced stage of disease than excision would be. The operation is chiefly applicable to children. Cases of both erosion and excision require long watching to prevent distortion, and there is little difference between the two in this respect. I have had many failures, and expect always to have a considerable number of cases in which erosion fails, and has to be followed by excision or amputation; but I think that most of these would have required the severer operation in any case, so that, though the patient has had an additional operation to go through, he has not been a loser in any other way.

The noticeable points in the operation are: 1. Full exposure of every cranny in the joint. 2. Absolutely complete removal of all disease, scraping at any doubtful bony spots. Well-localised foci of disease in bone, if of limited extent, are no bar to success. The use of the canterly afterwards is often good. 3. The crucial ligaments should be preserved if possible, as they tend to steady the joint afterwards. 4. The limb should be well fixed until healing is complete; then the patient may get about with crutches and a patten in a Thomas's knee-splint, or with the limb fixed in plaster of Paris. 5. As in excision, flexion will occur unless the limb is kept fixed for from two to three years at least. 6. In some cases actual lengthening of the limb occurs after the operation, just as overgrowth not uncommonly follows necrosis from acute periostitis.

Since the cases published in the *Chronicle*, I have operated nine times upon the knee and once upon the elbow. Of these, the elbow case and two of the knee cases are incomplete; one will probably ultimately do well, and the other badly, since the patient has general tuberculosis. Of the seven other knee cases, one in which there was far-advanced bone disease required amputation; one in which there was subluxation at the time of the erosion subsequently came to excision; and the other five have done well.

ERUPTIVE DISEASES OF THE TEATS AND UDDERS OF COWS IN RELATION TO SCARLET FEVER IN MAN.

WHEN, in the report of the Medical Officer to the Local Government Board for 1886, the investigations of Mr. Power and Dr. Klein respecting the Hendon cow disease and scarlatina were made public, it was felt that a thorough investigation into diseases of cows ought to be made to test the validity of the conclusions then arrived at. Such an investigation has been undertaken by the Agricultural Department of the Privy Council Office, and its results have been embodied in the report just issued by Professor Brown, C.B. The report opens with a reference to the statements that an eruptive disease of the teats of cows on the late Mr. Panter's farm at Hendon had caused scarlatina among the consumers of milk; that a micro-organism had been found in the ulcers on the cows' teats which was identical with that found in scarlatinal blood, and that inoculation of calves with the micro-organism from either source induced morbid conditions related on the one hand to the Hendon cow disease, and on the other to scarlatina in man. Regret is expressed that Mr. Power did not extend his inquiries to two other farms which, like the Hendon farm, furnished milk to the districts of the scarlatinal outbreak. The investigation by the Agricultural Department was at first limited to the history of the Derbyshire cows which had introduced the disease into the Hendon herd, and early in 1887 Professor Axe reported the results of this investigation, further details of which are appended to the present report. Owing to the alarm

¹ Report on Eruptive Diseases of the Teats and Udders of Cows in Relation to Scarlet Fever in Man. By Professor Brown, C.B., Agricultural Department, Privy Council Office. With an Appendix. 1888.

aroused among dairymen by Mr. Power's report, it was at first difficult to get information upon udder disease among dairy cows; and no cases were recorded until the autumn of 1887, since when abundant material has been forthcoming. It was soon evident that among the several eruptive diseases of the teats and udders of cows, long known to veterinary surgeons and stock-owners, there is a very common one usually called cow-pox by dairymen. This affection bears no resemblance to the effects of vaccination in a child's arm, and in all respects is similar to the affection described by Mr. Power, Dr. Klein, and Dr. Cameron as the Hendon cow disease. Special investigations were made by Professors Crookshank and McFadyean, and a number of veterinary experts were employed to give information upon the outbreaks of udder disease reported. Professor Brown deals first with the practical and then with the scientific results of these inquiries, all of which are embodied in an appendix to the report. Professor Axe found that the disease which had been introduced into the Hendon farm from the infected Derby herd was also introduced into other herds, the cow-pox not being regarded by dairymen as of any moment. Moreover, Professor Axe found out that at the time of the Hendon outbreak there was a possible source of infection of milk at this farm with scarlatinal poison in the existence of cases of scarlatina in the mead, 600 yards from Mr. Panter's sheds, where six out of the fourteen men employed by Mr. Panter resided. In 1887-88 Mr. Villar reported seven outbreaks of udder disease in Middlesex, one of these being at Hendon, on the same farm as that investigated by Mr. Power in 1885, and declared by Professor Brown to have precisely the same characters as the "Hendon cow disease." Like the first outbreak, this also was introduced by cows purchased in the Derby market. Several cases were kept under observation, and it was proved that the affection was communicable to the hands of milkers and to the nose and mouth of calves sucking the diseased cows, but consumers of the milk of these animals did not suffer any injury. Other outbreaks were reported from Lanarkshire, Lincolnshire, Somerset, and Wiltshire; but in none was scarlatina found to exist among the consumers of the milk. Professor McFadyean described a cow disease at Edinburgh coincident with an outbreak of sore throat among the consumers of the milk; but although this affection presented different characters from those of the Hendon disease, yet the morbid appearances in the organs of calves submitted to inoculation were very similar to those obtained by Dr. Klein. Mr. Duguid inspected more than 600 of the metropolitan cowsheds, containing more than 9000 cows, without obtaining a single case of udder disease, although scarlatina was very prevalent in London at the time. The travelling inspectors also made an extended inquiry all over the country without being able to trace any connexion between the prevalence of scarlatina and eruptive udder disease.

Professor Brown states that he has been unable to discover any special symptom or any microscopical character which could enable him to distinguish between the udder disease in Middlesex, Bucks, and Wilts and that of the Hendon cows. He sums up the facts bearing on the practical aspect thus:—"1. The Hendon cow disease of 1885-86 was not an isolated outbreak confined to Mr. Panter's farm, but was going on at the same time with several other outbreaks, all of which were due to the introduction of cows from the Derby dealer's herd. 2. Scarlatina was coincident with the distribution of milk from the Hendon cows only, while the consumers of milk from the diseased cows in the other dairies do not appear to have suffered. 3. There was a possible source of infection of the milk by human agency, as scarlatina existed in the mead, between which and Mr. Panter's sheds constant communication was kept up. 4. Scarlatina-infected districts which were supplied from the Hendon dairy had also supplies of milk from two other farms which were not visited in the course of the inquiry. 5. A cow disease identical in general character with the Hendon cow disease of 1885-86, according to the testimony of experienced observers, who saw the original Hendon outbreak, appeared in 1887-88 at Hendon and elsewhere, and in no case was scarlatina coincident. This disease was carefully watched day by day for several months, and in Mr. Villar's report the characters of the udder disease, the skin eruption, and the constitutional derangement which occasionally accompanied the local disease are accurately described. A comparison of this description with that of the original Hendon disease as given by Mr. Power, Dr. Klein, and

Dr. Cameron will leave little room for doubt that all the descriptions are applicable to the same disease, and if scarlatina had been coincident with the cow disease of 1887-88 the identity of the affection with the Hendon outbreak of 1885-86 would have never been questioned."

Professors Crookshank and McFadyean were requested to investigate the subject scientifically. The latter failed to produce scarlatina in cattle by inoculation with the blood of scarlatinal patients and causing the cattle to drink water thickened with the desquamated cuticle. But by inoculating with a micro-organism obtained from scarlatinal blood, morbid changes were produced apparently similar to those obtained by Dr. Klein in his inoculations of calves by streptococcus obtained from scarlatinal blood or from the sore teats of the Hendon cows. Then Dr. Edington got like results by inoculation with a bacillus obtained from scarlatinal blood, Professor Crookshank by inoculating with matter from ulcers on the teats of Wiltshire cows, and Professor McFadyean by employing organisms from the sores on the teats of the Edinburgh cows. Professor Crookshank harmonises these results by considering Klein's "streptococcus scarlatinae" to be a septic organism—the streptococcus pyogenes,—and gives in his report a full exposition of the subject. Professor Brown goes on to quote examples of scarlatinal outbreaks when milk was suspected, with especial reference to the difficulty in determining the source of infection, showing how the exclusion of ordinary sources leads to the conclusion that the disease must have arisen in the cow. This leaves the subject in a very unsettled state, and makes the existence of any cow disease in dairy sheds coincident with outbreaks of scarlatina or diphtheria to be held as damaging evidence. But, as a matter of fact, the theory of cow infection rests mainly on the single outbreak at Hendon in 1885-86; and medical officers of health should exercise great caution before coming to a like conclusion. A paper by Dr. Hime of Bradford appended to this report is of considerable value, since owing to the compulsory notification of infectious diseases in that town he was always enabled to trace the history of outbreaks of fever and to ascertain their relation to milk supply; his conclusion being that the danger of milk infection has been much exaggerated. Professor Brown concludes his report by reference to the "contemptuous disregard of the most elementary sanitary precautions" with which milk is often collected both in country and town, whereby we trust the dairy interest will take warning. The report is full of interest, and is supplemented by thirteen appendices, those of Professor Crookshank being abundantly illustrated by microscopical plates.

BRITISH NURSES' ASSOCIATION.

A MEETING of this Association was held on Friday, Nov. 23rd, at 8 P.M., in the rooms of the Medical Society of London. The chair was taken by Dr. Octavius Sturges, and there were over 100 present.

A paper was read by Miss C. J. Wood on the Training of Nurses for Sick Children. It opened with a comparison between the sick adult and the sick child, drawing out the complete dependence of the latter upon his attendant, and also his complete inability to help on his treatment, or to give any rational account of his progress or disease. The paper sketched the sick child's life in the ward; the amount of work that had to be done for him; how carefully he had to be watched, his symptoms noted, and all minute changes observed; how rapidly changes occurred, for the better or the worse, and therefore what an amount of vigilance and special knowledge was required on the part of his nurse. This necessitated a special training, and such training to be efficient must be in harmony with the work that had to be done, and could not be given in the wards of a general hospital. The system that Miss Wood advocated was that which had been carried out in the Children's Hospital, Great Ormond-street, since 1852, and was the nursing of the individual child by the individual nurse; the child being the nurse's special care, she felt herself responsible for him, studied him, observed him, watched the progress of his case, and thus gained experience. Each nurse had a certain number of patients allotted to her according to her experience, and in the case of a probationer she would at first have charge of patients for whom only nursemaid's care was necessary, and thus she would learn the first steps

of attending upon children. The work of the nurses would be supervised by the sister, who would be responsible for the whole of the patients in the ward, and she would instruct the probationers. Miss Wood drew especial attention to the art of feeding a sick child or baby, and this she thought would be better learned if a nurse felt herself individually responsible for her patients, and so knew intimately their peculiarities and idiosyncrasies. The sick children required "mothering," and their nurse for the time they were in hospital must give them a mother's care and love or they would not thrive. To sum up, the most efficient way of training nurses for sick children had proved itself in that hospital to be the placing individual children in the care of individual nurses.

Dr. OCTAVIUS STURGES opened the discussion by stating his experience in the difficulties of handling or feeding a child, and said that he cordially approved of the system advocated in the paper, the results of which he had seen at the Great Ormond-street Hospital.

Dr. BEDFORD FENWICK asked how many children should be assigned to each nurse, and pointed out that, however desirable the principle of mothering the children might be, it implied a very large staff of nurses, and a consequently large expense to the hospital.

Miss FROST asked how soon a probationer could be put in charge.

Mrs. ROBINSON strongly supported Miss Wood's views.

Miss EAST wished to know what number of patients was put under one nurse at night, and how special nursing was managed at night, also whether two nurses were not needed for each child in private nursing.

Miss FOGGO-THOMSON wanted to know why training in a children's hospital did not count, as after a year in children's work a probationer entering a general hospital would not be considered competent for responsible work.

Miss WOOD, in reply, stated that if the patients were all sick, without an admixture of convalescents, seven, or at the outside eight, patients were as many as a nurse could properly manage. At night a nurse could look after twenty-one or twenty-two; but in cases where special nursing was required a second nurse or probationer would be necessary. The time that would be requisite before a probationer could take charge must vary according to her capability. After she had been through the initiatory course of learning order, discipline, and cleaning, she might be fit for charge in a fortnight from the time of having patients assigned her, but not for responsible charge under three months. The requirements of private nursing must depend upon £ s. d.; but there was no doubt that private nurses were at times grievously overworked.

Mrs. BEDFORD FENWICK said that the reason why children's training did not count upon commencing work at a general hospital was because it was necessary that every probationer should enter under the same rules and go through the same routine of training, whatever their previous work might have been, and consequently in that respect children's nurses were on the same footing as nurses from any other hospitals.

Dr. STURGES put the principle advocated in the paper to the vote, and its advisability was confirmed almost unanimously; about six abstained from voting, and no one voted against it.

Mr. BRUDENELL CARTER proposed a vote of thanks to Dr. Sturges for taking the chair, which was carried by acclamation.

Dr. STURGES, in responding, proposed a vote of thanks to Miss Wood for her excellent paper, and congratulated the Association upon such a large and successful meeting. The proceedings then terminated.

MEMORIAL TO THE PRESIDENT AND COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

THE memorialists will feel obliged to the Editors of THE LANCET if they can find space for the insertion of the accompanying document.

Copy of Memorial to the President and Council of the British Medical Association.

The undersigned members of the British Medical Association and others beg to direct the attention of the

President and Council to the publication in the 1450th number of the *Journal* of the Association of the facsimile of a "script" by the late Emperor Frederick of Germany, referring to his treatment by one of his medical attendants. The publication of this document the undersigned regard as a violation of professional confidence, and its appearance in the *British Medical Journal* as discreditable to the medical profession of this country. They accordingly request the President and Council to take such immediate action as may be required to clear the Association and profession from the discredit now attaching to them in respect to this matter.

Sir Risdon Bennett, F.R.S.
Sir Henry Pitman.
Sir George Paget, K.C.B.,
F.R.S.

Dr. George Johnson, F.R.S.
Sir Edward Sieveking.
Sir Alfred Garrod, F.R.S.
Dr. Munk.
*Dr. Matthews Duncan,
F.R.S.

Dr. Wilks, F.R.S.
Dr. Russell Reynolds, F.R.S.
Dr. Robert Martin.
Dr. Dickinson.
Dr. Pavy, F.R.S.
Dr. Andrew.
Dr. James Pollock.
*Sir Dyce Duckworth.
Dr. Broadbent.
Dr. Playfair.
Dr. Douglas Powell.
Dr. Cheadle.
Dr. Pye-Smith.
Dr. Sturges.
*Dr. Robert Liveing.
Dr. Edward Liveing.
Sir George H. Porter.
J. F. Banks, M.D.
Sir William Stokes.
Samuel Gordon, M.D.
Ed. H. Bennett, M.D.
J. Emmerson Reynolds, M.D.
J. Magee Finny, M.D.
J. Cunningham, M.D.
Dr. Ord.
Dr. Norman Moore.

The following additional names have been sent to us for publication:—

Sir Andrew Clark, Bart.,
F.R.S.
Sir William Gull, Bart.,
F.R.S.
Sir William Aitken, F.R.S.
Prof. Annandale, F.R.S.E.
Dr. T. Acland.
Dr. James Andrew.
Dr. Brodie.
Dr. Percy Boulton.
Dr. Watt Black.
Dr. Rayner Batten.
Mr. C. A. Ballance.
Dr. Alexander Bruce.
Dr. Brackenridge.
G. A. Berry, M.B.
Dr. Beddoe, F.R.S.
Mr. A. B. Barrow.
Dr. Lionel Beale, F.R.S.
Dr. Charles Beaumont.
Mr. W. Mitchell Banks.
Dr. Blanc.
Dr. William Bruce.
Dr. Cavafy.
Dr. Sidney Coupland.
Mr. D'Arcy B. Carter.
Mr. W. Harrison Crippa.
Dr. William H. Copley.
Mr. J. Montagu Cotterill.
Dr. Francis Cadell.
Dr. William Carter.

Dr. Allechin.
Dr. Chepmell.
Dr. F. Taylor.
Dr. John Williams.
Dr. Barlow.
Dr. G. W. Pitt.
Sir James Paget, Bart., F.R.S.
John Marshall, F.R.S.
*Sir Joseph Lister, Bart.,
F.R.S.
*William S. Savory, F.R.S.
*John Eric Erichsen, F.R.S.
Mr. George Pollock.
Sir Joseph Fayrer, F.R.S.
Sir W. Mac Cormac.
Mr. Charles A. Aikin.
*Mr. Thomas Bryant.
Mr. Sydney Jones.
J. W. Hulke, F.R.S.
Mr. George Lawson.
*Mr. Thomas Smith.
Mr. Berkeley Hill.
Mr. John Croft.
Mr. Christopher Heath.
Mr. Arthur Durham.
Mr. Alfred Willett.
Mr. W. Morrant Baker.
Mr. John Langton.
Mr. J. Pickering Pick.
Mr. Charles Drage.
Mr. Warrington Haward.
Mr. H. G. Howse.
Mr. Edward Owen.
Mr. Pearce Gould.
Mr. C. J. Symonds.
Mr. W. A. Meredith.

Mr. R. Brudenell Carter.
Mr. N. Davies-Colley.
Dr. Hector Cameron.
Dr. Cholmeley.
Mr. W. Bruce Clark.
Mr. Thomas Collins.
Sir W. Dalby.
Dr. Lovell Drage.
Dr. Clement Dukes.
Mr. Richard Davy.
Dr. Pritchard Davies.
Mr. William Eddowes.
Dr. Easton.
Dr. R. Kingston Fox.
Mr. Alex. G. R. Foulerton.
Dr. Godson.
Dr. Mortimer Granville.
Dr. E. A. Gibson.
Dr. Gervis.
Dr. W. B. Haddon.
Mr. C. D. B. Hale.
Dr. Donald Hood.
Dr. James A. Hunter.
Dr. de Havilland Hall.
Rev. S. Haughton, F.R.S.
Dr. Hollings.
Mr. H. Nelson Hardy.
Mr. Jonathan Hutchinson.
Dr. Herringham.
Mr. W. H. H. Jessop.
Dr. R. Mackenzie Johnston.

Dr. W. Allan Jamieson.	Mr. Butler Smythe.
Dr. Johnston Jones.	Mr. Henry Smith.
Mr. Christopher Johnson.	Dr. R. Seanes Spicer.
Dr. Kidd.	Mr. W. W. Smith.
Sir Thomas Longmore, C.B.	Mr. H. P. Symonds.
Dr. Law.	Mr. James Stedman.
Dr. John Lowe.	Mr. W. R. H. Stewart.
Mr. Edward Lund.	Dr. Saunders.
Mr. H. Cripps Lawrence.	Mr. J. J. Stack.
Professor Leishman.	Mr. W. S. Scott.
Sir G. H. B. Macleod, F.R.S.E.	Mr. R. W. Scott.
Dr. McBride, F.R.S.E.	Mr. R. Butler Stoney.
Dr. R. McDonnell, F.R.S.	Professor Struthers.
Mr. John Morgan.	Dr. Aquilla Smith.
Mr. William A. Morris.	Sir William Turner.
Mr. George Mowat.	Dr. Thursfield.
Dr. MacLagan.	Mr. Edward Tegart.
Mr. Edmund Metcalfe.	Mr. Pugin Thornton.
Dr. Claud Muirhead.	Dr. William Travers.
Dr. P. H. MacLaren.	Mr. E. W. Tait.
Dr. W. Moore.	Dr. H. H. Taylor.
Dr. Mackern.	Mr. E. S. Tait.
Mr. F. E. Manby.	Mr. Henry B. Tait.
Dr. Nias.	Mr. A. Joseph Tapson.
Dr. Frank Nicholson.	Dr. Robert Thompson.
Dr. J. W. Ogle.	Mr. Edgcombe Venning.
Dr. Priestley.	Dr. Wyatt.
Dr. Potter.	Dr. Hermann Weber.
Professor Pettigrew, F.R.S.	Mr. W. Spencer Watson.
Dr. John Phillips.	Mr. E. M. Wrench.
Dr. Poore.	Dr. Whipham.
Mr. Bernard Pitts.	Dr. A. L. Wade.
Dr. Phillips.	Mr. Russell E. Wood.
Arnold Royle, C.B.	Mr. H. E. Waddy.
Mr. Henry Rundle.	Dr. Patrick Heron Watson,
Mr. James S. Robertson.	F.R.S.E.
Dr. Street.	

* Any one wishing to join in this Memorial is requested to communicate with one of those in this list whose name is marked with an asterisk.

SOLDIERS' RATIONS.

A LECTURE on Soldiers' Rations was delivered on the 22nd ult. at Aldershot by Surgeon A. M. Davies, M.D., Assistant Professor of Hygiene at Netley, Surgeon-General Sir T. Crawford, Director-General of the Army Medical Department, occupying the chair, of which the following is an abstract.

Commencing by discussing the general composition of soldiers' food, and the relation between food and work, Surgeon DAVIES arrived at the following conclusions as to what a soldier's diet should consist of:—1. About 300 grains of nitrogen and from 4500 to 5000 grains of carbon are required daily. 2. For ordinary work, the proportions in which the four classes of proximate principles should be ingested are—albuminoids, $4\frac{1}{2}$ oz.; fat, 3 oz.; carbohydrates, 14 oz.; salts, 1 oz. 3. Making use of the most ordinary articles of food, a diet to furnish such an amount of nutriment might consist of—meat, $\frac{1}{2}$ lb.; bread, $1\frac{1}{2}$ lb.; cheese, $\frac{1}{2}$ lb.; butter, 1 oz.; potatoes, $\frac{1}{2}$ lb. 4. Work done is estimated and expressed as so many tons raised one foot high, or "foot-tons"; 300 foot would constitute a fair day's work. This is about equal to a ten-mile march, carrying 60 lb.; and, finally, the previously mentioned diet is sufficient for such an amount of work. The soldier's food comes from at least three sources. There is, first, the Government ration, which is the same throughout the kingdom as regards quantity; though as regards quality there may be some difference. Secondly, there is the grocery ration, provided by the company messing, the rate of stoppage of pay varying, generally, between 3d. and 4d. a day: the articles composing this ration differ in different regiments and corps, there being no general regulation as to them. Thirdly, there is the food that the man buys himself, according to his own taste, at the canteen, the coffee-shop, the recreation-room, or outside barracks. This of course varies very much, but there are certain articles of food which, on inquiry, are found to be particularly in favour and purchased to a con-

siderable extent:—1. The ration given by Government, free, consists of $\frac{1}{2}$ lb. meat and 1 lb. bread. This $\frac{1}{2}$ lb. meat includes bone, which, on an average, should amount to (not more than) one-fifth—i.e., 20 per cent. Deducting one-fifth of 12 oz., we have 9.6 oz. left. 2. The composition of the grocery ration varies in different regiments and corps: the daily stoppage for this ranges between 3d. and 4d., and is generally, Surgeon Davies believed, $3\frac{1}{2}$ d. The articles most usually provided for this are: bread $\frac{1}{2}$ lb.; potatoes, 1 lb.; other vegetables, $\frac{1}{2}$ lb.; but perhaps not quite every day; a sufficiency of tea, coffee, sugar, and milk for both morning and evening meals; condiments, such as salt, pepper, and mustard, for dinner; and, in addition, flour, rice, or oatmeal and fruit, is occasionally provided, according as the mess funds allow any such extra expenditure. In some cases 1 oz. of butter is also issued daily. This gives 276 grains of nitrogen and 4588 grains of carbon. The amount of nitrogen is considerably below that in the standard diet, while the carbon is not far short; but it is given principally in the form of carbohydrates—i.e., starch, and not as fat. It is seen at once that the class of fatty food is very deficient, $1\frac{1}{2}$ oz. instead of 3 oz. 3. That the soldier himself feels this deficiency, and that the theoretical requirement is not only theoretical, but also a practical fact, is shown by the extra articles of food that are most commonly purchased by the men themselves (as far as one is able to judge of the matter, which is one that presents a good deal of difficulty) at the coffee-shop, recreation-room, or canteen. It appears that cheese, butter, bacon, and preserved meats are the most favourite articles of consumption, together with bread to a small extent, biscuits, fish, and so on. It is hardly possible to determine the amount consumed per head, but probably 1 oz. of butter, or 2 oz. of bacon, or 2 oz. of cheese are about the quantities bought at a time. On looking at the table of Rations of Continental Armies, and for the moment taking into consideration only the bread and meat, it is seen that all, with the exception of the Spanish, have over 26 oz. of bread, and six out of the fourteen have 30 oz. or more, while the British soldier is only provided with 16 oz., which he makes up to 24 oz., usually out of his own pocket. On the other hand, the meat ration for the British soldier is 12 oz., while the average for the Continental armies is only 8.7 oz., and only one reaches 11 oz. In what way, then, can the present ration or diet of the soldier be improved? The most striking deficiency, both in the Government ration and in the supplementary grocery ration, is in the class of fatty foods. In the free ration he has only just over one ounce, and in his total diet (not reckoning private purchases) only $1\frac{1}{2}$ oz. fat, whereas the standard diet should contain not less than 3 oz. of this class of proximate principle. The food stuffs which are available to supply this deficiency are butter, bacon, and cheese. Butter contains about 90 per cent. of fat, bacon 75 per cent., and cheese 25 per cent. 1 oz. of butter would give 9 oz. of fat, 2 oz. of bacon would give 1.5 oz. of fat, 2 oz. of cheese would give .5 oz. of fat. Next to the deficiency in fats, the want of nitrogenous matter is most obvious; this may be met by increasing the meat or the bread, or by adding cheese. If the meat ration were increased from 12 oz. to 16 oz.—i.e., by 33 per cent., or one-third,—the increase in nutritive principles would be: albuminoids .48 oz., fats .27 oz. If the bread were increased from 16 oz. to 20 oz.—i.e., by 25 per cent., or one-fourth—this increase would give: albuminoids .32 oz., fats .06 oz., carbohydrates 2 oz. The addition of 2 oz. of cheese would give .06 oz. albuminoids, as well as the .5 oz. fats already noted. Obviously, as far as albuminoids go, this latter addition, that of the cheese, is the most valuable. The cheese is also valuable from the large proportion of fatty matters present, though bacon and butter excel in this respect. If now an addition of 2 oz. of cheese or 2 oz. of bacon is made alternately, and if we suppose the grocery ration to include, as at present, $\frac{1}{2}$ lb. of bread and 1 lb. of potatoes, we get a diet which shows a considerable increase in the fats, and a slight increase in the albuminoids. It contains 287 grains of nitrogen and 4800 grains of carbon. There is still deficiency in the fat, which would be made up by 1 oz. of butter. But if both the bacon and cheese are supplied daily we get the nearest approach to a standard diet that Surgeon Davies had been able to construct, and this is the diet that he recommended. As to the quality of the Government ration, Surgeon Davies said that the meat should not contain more than 20 per cent., but often does, and the bread is often made from flour of indifferent quality. Improvement was also needed in the

cooking. For the first of these evils some change in the manner in which the contract system is worked and some increased responsibility on the officer actually in charge of supplies were needed; and for the second it was suggested that greater interest might be taken in their work by the cooks if some incentive were given in the way of awards or competition for prizes. On a brief review of the hours of meals, it was suggested that coffee (and perhaps a bun) the first thing in the morning; a more substantial breakfast, to include the proposed addition of bacon; dinner as at present; tea rather later than is now the custom; and supper for men remaining in barracks, to consist of a bowl of soup made from the bones, and the additional cheese; these five meals, so composed, would form an ample and satisfactory dietary; lastly, a sketch was given of a proposed field ration, with the points arrived at in its composition.

General P. SMITH said that the 9·6 oz. of meat were rarely if ever got by the soldier; 7 oz. was a good deal nearer the actual amount received. He was glad that an allowance of butter was advocated, for he felt sure that bread was frequently thrown away for the reason that there was nothing to eat with it. It was of the utmost importance to have as much work done as possible, and he was of opinion that the hour for dinner would be best postponed until the conclusion of the duties of the day.

Colonel SLADE said that there was too much bone in the ration of meat. The great fault was that there was no spare meat in the quartermaster's store to equalise rations, and he was in favour of a supplemental allowance for this purpose. As regards tea, he would do away with it altogether, it being now useless and a waste of money. The soldiers' eating rooms should also, he thought, be made more comfortable. He advocated the introduction of an early meal, and stated that in his experience a cup of cocoa and a biscuit had been supplied at a halfpenny per man, leaving a profit. The ration was enough, provided the bone in meat did not exceed 20 per cent.; but improvement was needed in the quality of the food and the comfort of soldiers.

Dr. MYERS said that cheese was essential, as it gave the special addition which was needed to the present ration. He did not approve of General Smith's proposed alteration in the hour of dinner; it would be most unpopular in the army.

Colonel CREALOCK said that, when he was in India, he had proposed to alter the dinner hour, but no one would agree to it. He would like to see the meat ration increased to 1 lb., and supported the proposed alteration in the evening meal.

Major HUTTON adopted General Smith's view of the dinner hour. The question of the sufficiency or insufficiency of the Government ration was of extreme interest. It was now beyond doubt insufficient. All regiments now purchase, or the men buy for themselves, $\frac{3}{4}$ lb. of bread, and $\frac{1}{4}$ lb. of the Government allowance was wasted. Messes might pay for bacon and cheese, but Government ought to supply sufficient bread. If this were done, the grocery books would be able to provide the other extras, even early coffee.

Surgeon-General WEBB said that every day the ration question attracted his attention. The bread, made from indifferent flour, was bad and not well made. There was a great difference between barrack and hospital bread. The latter did not turn sour, and he was informed that the difference in price did not exceed 1s. 10d. per man. As to the meat, there was a great waste in cooking, and the examination of supplies was not conducted by proper experts. Groceries should be got from the canteen; the dinner hour should not be altered; and he strongly advocated the provision of facilities for obtaining beer with dinner.

Dr. DAVIES having briefly replied, Surgeon-General Sir T. CRAWFORD proposed a vote of thanks to the lecturer. He believed that the officers of the garrison were on the right track for finding out what was best for the army at large. The eyes and taste and habits of the soldiery should be consulted, and they should be encouraged to feed themselves. Afternoon tea was a waste, and supper, which was actually necessary, should be substituted for it. The proceedings then terminated.

MEDICAL MAGISTRATE.—Mr. John Sherburn, M.B., C.M., L.M. Edin., M.R.C.S., has been placed on the Commission of the Peace of the Borough of Hull.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

TUESDAY, NOV. 27TH.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

In opening the Council, the PRESIDENT said: "I am able to congratulate the Council on meeting to-day unchanged in number and in personality, each member experienced in the obligations of the Council, and all desirous of forwarding its work. The chief incident which I have to record as having occurred since our last meeting in May is that I decided not to summon the Executive Committee in July. In adopting this resolve, I trust you will find that I was fully justified when I state that I could discover no business whatever for that committee to undertake. On the question of my power so to act, it seemed to me that the words of the standing order, 'as a rule,' inasmuch as they imply a possible increase in the number of meetings of that committee, allowed also of a possible decrease, according to the needs of the Council. An important step, provisionally taken under my directions, has been definitely adopted by the Executive Committee—namely, that of accepting the 'leaving certificate' granted by the Scotch Education Department amongst those recognised as fulfilling the conditions of a preliminary examination to be undergone by medical students before registration. The first report concerning this examination, which resembles closely the *abiturienten* examinations of the German schools, shows highly satisfactory results, and appears to indicate that it must supersede all other preliminary examinations in Scotland. It further suggests some possible simplification and strengthening of the corresponding test examinations in the other divisions of the kingdom, regard being had to the special conditions of area, population, and the convenience of the examination centres. Since the last session of the Council only ten foreign medical diplomas have been registered as additional qualifications upon the home Register. The total number now thus registered is 214, of which 180 were registered in 1887 and 34 in 1888, so that, as indicated last May, the applications for the registration of these additional foreign titles will speedily cease. No entry either in a colonial or in a foreign Register, pursuant to Sections 11 and 12 of the Medical Act, 1886, has yet been made. In addition to the dependency of Ceylon, the colony of New Zealand has been declared by the Privy Council to be a British possession to which the above-mentioned Act applies. Following upon this, a request has been received at the office that a graduate of the University of New Zealand may be registered as a 'colonial practitioner' under the Act. The Executive Committee, in pursuance of its powers, has, after due inquiry, recognised generally the diploma of the University of New Zealand as deserving of registration; but, as the practitioner applying to be thus registered has received his degree *ad eundem*, the Executive Committee has referred to the legal advisers of the Council the question as to the power of the Council to recognise and register a colonial *ad eundem* degree. I have been informed by Mr. Peel that there has also been received an application to the Privy Council from the colony of New South Wales, to be brought under Part II. of the above-quoted Act; but that, as the latest Act on medical education and examination in that colony is of so ancient a date (1855), the Privy Council has suggested 'that the colony should pass another Act more applicable to the altered condition of things.' No recent communication from Switzerland had been received by the Privy Council on the question of the Swiss authorities granting special or reciprocal facilities to practitioners, duly registered in our home Register, to practise amongst Her Majesty's subjects, or otherwise, in that country. A correspondence has taken place between the American Embassy and this office relative to the admission to our proposed foreign Register of the degree of M.D. of Michigan, but the preliminary conditions required by the Privy Council have not yet been fulfilled. As to the business immediately before the present meeting of this Council, the important duty of considering the reports of its inspectors of medicine,

surgery, and midwifery, takes the first place, and, as is well known to all, this duty has now to be performed for the first time. 1. The reports of its inspectors on the final examinations of the several qualifying bodies, including statements as to the 'sufficiency' of those examinations, having been presented to the Council, together with the replies of those bodies, there will follow the presentation and discussion of a report framed by the Examination Committee, to which this important task has been assigned. It is not for me to anticipate your immediate judgments and action, or the future outcome of these proceedings; but I may be allowed to claim, on behalf of this Council, that all such inquiries, accompanied as they are by open discussion and criticism, have contributed, and will continue to contribute, to the general advancement of medical education and the improvement of medical qualifications throughout the United Kingdom. After the Council has completed its formal consideration of its inspectors' reports, which I may be allowed to characterise as both laborious and impartial, the Council will have further to consider its duties under the Act of 1886, in reference to the further appointment of inspectors for future work; for the Council will remember that the commissions of its recent inspectors expired on the last day of September. In connexion with this duty, the Council may desire to issue some special instructions, or it may direct the Executive Committee to do so along certain indicated lines, having reference to the periods and extent of its future inspections. It may further be open to consideration whether, and, if so, when and to what extent, the visitation of the earlier examinations should be repeated. 2. The memorandum, drawn up by myself, with suggestions from the legal advisers of the Council, relating to the 'disciplinary and penal powers of the Council, and of the several qualifying bodies,' having been forwarded by order of the Executive Committee to those bodies, with a request for the expression of their opinions upon the suggestions contained in that memorandum, a recommendation on this subject will be presented to you from the Executive Committee. 3. There are, I regret to say, several charges to be investigated against registered practitioners for various acts of association with unregistered persons. These it is desirable to adjudicate upon at this session of the Council. 4. Other business may arise, but I sincerely trust that with the help of the Council this meeting will not be a protracted one."

On the motion of Sir J. SIMON, seconded by Dr. STRUTHERS, thanks were voted to the President for his address, and it was ordered to be entered on the minutes.

An opinion by the Solicitor (Mr. Farrer) was read with reference to a motion by Mr. Macnamara, to the effect "that the fee paid for registration of the qualification or qualifications which admit a practitioner to the Medical Register should in future be credited to the Branch Council of the division or divisions of the kingdom in which the qualification or qualifications were obtained."

The opinion was as follows: "(a) Each Branch Council is entitled to the fees paid for registration by the persons registering through it, whencesoever may come the qualifications on account of which such persons are registered. (b) No Branch Council can apply the fees received by it for any other than its own purposes, except as directed by the Act of 1858, Section 13. Hence the Branch Council for England cannot credit fees received for registration through it to any other Branch Council, whatever may be the qualifications in respect of which such registration has been obtained. (c) The General Council has no power whatever over moneys belonging to the Branch Councils. (d) The Branch Councils have to pay a proportion, according to their receipts, of the cost of the General Council, and that is all the General Council has to do with their money. The above is my opinion on Sections 13 and 15 of the Medical Act (1858), in which opinion Mr. Muir Mackenzie coincides."

The opinion was ordered to be entered on the minutes, Dr. QUAIN expressing a hope that nothing more would now be heard on the subject.

A communication was read from the Royal College of Surgeons of England, stating that on April last William Henry Emeris Burke, a Member of the College, had been convicted of wilful murder and sentenced to be hanged, the sentence being subsequently commuted to penal servitude for life; and that the Council had removed him from membership of the College. Certificates of the conviction and the commutation of the sentence were also read, and the name of the convicted person was accordingly ordered to be removed from the Register.

Another communication was read from the Royal College of Surgeons, enclosing a copy of the following resolution, passed by the Council in August last: "That the pamphlet entitled 'The Pathway of Safety,' issued by Mr. Charles Frederic Groom, of 44, Great Charles-street, Birmingham, admitted a Member of this College on July 27th, 1870, is an offence against Clauses 1 and 2, Section 16, of the bye-laws, being in the opinion of the Council, under Clause 1, 'an indecent advertisement relating to his practice as a surgeon, and, under Clause 2, 'prejudicial to the interest and derogatory to the honour of the College,' and 'disgraceful to the profession of surgery,' and that, in consequence of the issue by him of such pamphlet, he be and is hereby removed from being a Member of the College."

The PRESIDENT put it to the Council whether Mr. Groom had or had not committed the offence charged against him.

Sir J. SIMON asked if it was not the law that the accused person having ceased to be a Member of the Royal College of Surgeons, and thus lost his only qualification, he thereupon *ipso facto* fell from the Register. The Council had been advised that it only had a ministerial duty to perform in such cases, and had no power to consider whether the judgment of the College of Surgeons was a correct one. It had only to see that the person accused had not been removed on the ground of holding any medical doctrine.

Dr. WILKS thought it had been ruled in a recent case that the Council ought to have investigated it themselves.

Dr. STRUTHERS thought that there should be some further inquiry before the name was removed.

Dr. GLOVER considered that the Council ought to know something more as to the facts of the case. After recent experience great care should be taken in the matter. He was disposed to read the words of the Act as implying a duty on the part of the Council to satisfy itself that the accused person had been properly dealt with.

Dr. LEISHMAN said that if Dr. Glover's suggestion were followed, the Council would have to re-hear every case, which would involve them in even greater difficulties than they had to face at present.

The PRESIDENT said that by the bye-laws the Council were bound to pass two resolutions, one to remove the qualification and the other to remove the name. In the case referred to the two resolutions had been put as one, but it was held that they must be two separate resolutions. In answer to Sir W. Foster, the President said they had direct evidence from the Council of the College of the causes for which Mr. Groom had been removed from being a Member of the College.

Sir W. FOSTER said there was no evidence to justify the Council in declaring the conduct of this Member to have been disgraceful. There was no evidence that it might not be some question specially affecting the College, or that might come under the head of "doctrine or theory." He did not believe it would for a moment, but wished the Council to be perfectly safe from any attack as to its decision.

Sir WILLIAM TURNER said the communication from the College of Surgeons was quite explicit; it was for "an indecent advertisement relating to Mr. Groom's practice as a surgeon," which was "disgraceful to the profession of surgery." He nevertheless thought that public bodies ought to be exceedingly careful to give the Council all the information they could when taking steps of that kind.

Dr. PETTIGREW doubted whether the Council was sufficiently informed to decide this important matter.

Mr. TEALE said that Sir Walter Foster's suggestion would involve a re-trial of the case by the Council.

Dr. A. SMITH contended that the Council could not ask the College to give any justification for an act which the College was perfectly qualified to perform.

Dr. BRUCE asked whether Mr. Groom should not have been informed that the Council was about to take this step.

The PRESIDENT said this question had been discussed over and over again. The Council was bound by its standing orders. They had power to erase the qualification and the name "if they thought fit," and if members did not think fit they must vote against the motion.

The motion for the removal of the qualification from the Register was then put from the chair and agreed to.

The PRESIDENT then put the motion for the erasure of the name.

Dr. HAUGHTON said he would prefer leaving the name on the Register without a qualification unless the Council themselves were prepared to go into the evidence. The man should have the opportunity, if he thought fit, of appearing

before the Council and stating his own case, so that the Council would act as a court of appeal.

Sir DYCE DUCKWORTH said there was no precedent for such a proceeding. There was no instance in the whole Register of a name being left in without any qualification. In such a case as this, where no other diploma was left, the name must follow the diploma, and both go out.

Dr. A. SMITH said that to constitute the Council a court of appeal was an indirect way of bringing the College of Surgeons to account, and that the Council had no power to do.

Sir HERON WATSON thought the decision was irregular. The Council was bound by its standing orders.

The PRESIDENT said the only way to settle the question was by vote. He was bound to put the resolution from the chair.

The resolution to remove the name of Mr. Groom from the Medical Register was then put and agreed to.

A communication was received in regard to Mr. James Camac Smyth (registered as L.R.C.P. Edin., 1879; L.R.C.S. Edin., 1879), who was convicted at the Wicklow Assizes, on the 15th of October, for conspiracy and fraud, and sentenced to six months' imprisonment.

On the motion of Dr. HAUGHTON, Mr. Smyth's name was directed to be removed from the Register.

Certain documents, in regard to a memorandum by the President on the disciplinary or penal powers of the qualifying medical authorities and of the Medical Council as regards the erasure of qualifications and names from the Medical Register, were submitted to the General Council by direction of the Executive Committee, with the recommendation that they should be forwarded to the several medical authorities, and the consideration of them deferred to the next meeting of the Council in May.

The Executive Committee reported to the Council a resolution passed by it under Section 13, Sub-section 1, of the Medical Act of 1886, admitting the University of New Zealand to the Colonial Register.

The PRESIDENT explained that the committee had taken every guarantee in regard to the nature of the examinations of the University in medicine, surgery, and midwifery.

Sir WALTER FOSTER said that complaints were continually being received by members of Parliament in regard to the slow progress made in the admission of foreign and colonial degrees on the Register.

The PRESIDENT pointed out that the Council was in no degree responsible for the slowness of procedure. The Act required the colonial or foreign bodies to apply to the Privy Council, offering certain conditions, especially with respect to reciprocity, and when the Privy Council was satisfied reference was made to the Medical Council. The delay complained of had occurred through ignorance of the conditions of registration.

Dr. HAUGHTON moved: "That taking into consideration the fact that the recent County Government Act of Parliament requires all sanitary inspectors to hold a diploma in public health, and, in consequence, a large number of medical men are 'reading up' for special qualification in that subject, it is desirable that the Medical Council should appoint inspectors to visit examinations in this subject during the coming year, so as to secure that the standard of examination for public health diplomas shall not fall short of what the Act of Parliament evidently intended to secure." He said his attention had been called to the fact that there was a very great danger of an ugly rush at this present moment for sanitary testimonials, and that therefore it was advisable to "stiffen" the examinations for such certificates. The first idea which occurred to him was that the Council should appoint inspectors of these public health examinations, to see that the standard of the examination was kept up to the level that the Act of Parliament intended it should be; but although he gave notice of motion to that effect, he was afraid that it would be very difficult to procure competent inspectors without very great expense. He was therefore willing to adopt an alternative resolution which should require that all the courts of examiners should contain at least six competent examiners in the different subjects.

Mr. COLLINS seconded the motion.

Sir WILLIAM TURNER said Dr. Haughton seemed to infer that the examining bodies were during the coming year intentionally not going to do their duty. (Dr. HAUGHTON: Some of them are.) Dr. Haughton had private information

should be brought to the notice of the Council. He asked what power existed in the Council to appoint such inspectors as were asked for. The only clause which referred to the matter was Section 21 of the Act of 1886, which gave power to the Council to register certain qualifications in public health, but it gave no power to inspect the examinations. Still less had they power to take up the alternative proposition to insist that every examining board in public health should consist of a definite number of examiners. Practically the motion was *ultra vires*, and he should therefore vote against it.

Dr. STRUTHERS thought that the Council had power, under the Act of 1886, to send inspectors, for how otherwise could they judge as to whether the diplomas given "deserved recognition on the Medical Register"? They had a right to take their own way of being satisfied, and therefore to appoint an inspector if they thought fit. He would make the diplomas as difficult to be got as possible.

Sir J. SIMON thought the time had come when the Council should take the question of hygiene and preventive medicine in hand, and see that every member of the profession was competent, at any rate, to act as officer of health in places of secondary importance, such as small country towns or rural districts.

Sir W. FOSTER said he was afraid Dr. Haughton's resolution would tend to dislocate the ordinary machinery of public health, because it was framed from an academic desire for rapid perfection, a kind of condition of mind that did not usually do very well in the practical administration of the affairs of every-day life. There were at present a large number of officers of health who could not meet the requirements of a special medical qualification; but it was hoped, as the Local Government Act was administered by competent local authorities, that the smaller offices would be gradually grouped together, and that then the officers would be required to possess this special qualification. Many of the best medical officers of health in the country had no sanitary qualification whatever, and if the Council were immediately to begin to raise the standard to the height proposed, those men would be very seriously interfered with, which would not be just.

Mr. MACNAMARA said there would be an idea of forcing gentlemen already in such positions to go through the examinations. What was suggested was that the smaller districts should be grouped, and if a gentleman wished to be appointed to one of the larger districts he must prove his competency to discharge such an important duty.

Dr. LEISHMAN said the funds of the Council were limited, and it was a matter of considerable difficulty to determine to what extent they were able to go in the direction of the inspection of these examinations. Under the Act the Council were specially authorised to inspect any qualifying examinations. He thought the better way would be to postpone this question until the Council came to consider "questions relating to the appointment and future duties of inspectors," which appeared lower down in their programme of business.

Dr. QUAIN suggested that the Council should obtain by its next meeting a full and complete statement of the requirements of the various bodies, and should then proceed to appoint inspectors.

Dr. HERON WATSON said that under the Act of 1886 there was very little doubt that this examination in public health could not be included in the qualifying examination in medicine, surgery, and midwifery, and that therefore special inspectors must be appointed. He hoped that the Council would not stir the quietness of the examining bodies to an unnecessary extent, and that unless Dr. Haughton was able to state definitely that there was one body which was certain to make the admission to this extra qualification too easy a matter this resolution would not be accepted.

Mr. BRUDENELL CARTER said it was quite clear that in a competition for an appointment as officer of health a sanitary diploma would tell, and therefore this discussion would do good even if only by calling the attention of the licensing bodies to the fact that the Council was clearly alive to the question. Dr. Haughton was right when he spoke of there being considerable probability of a rush for these qualifications just now, and that rush was likely to be increased by the knowledge that the examinations might be made more stringent. On that point the Council was somewhat pressing.

these examinations, and suggested that these regulations should be referred to one of their standing committees to report at their next meeting, in order to guide the Council as to how far they should recognise individual diplomas.

After some further discussion, Dr. Haughton withdrew his motion in favour of the following motion, moved by Dr. Struthers, and seconded by Sir Dyce Duckworth:—"That, taking into consideration the fact that the recent Local Government Act requires certain medical officers of health to hold a special diploma in public health, and that, under Section 21 of the Medical Act (1886), the General Medical Council is required to satisfy itself that diplomas in sanitary science, public health, or State medicine deserve recognition in the Medical Register before being admitted to the Register, the Council resolves to appoint an inspector or inspectors to visit examinations in that subject during the ensuing year."

Mr. TEALE then moved as an amendment—"That the question of the efficiency of the existing diplomas in State medicine be referred to the Standing Committee on Education, with a request that they present a report thereon to the next meeting of the Council."

Sir WALTER FOSTER seconded the amendment.

Dr. GLOVER supported the amendment on the ground that the Council could not deal with the matter at this stage.

Sir W. TURNER said he wished it to be understood that he had opposed Dr. Haughton's motion because he considered it *ultra vires*. He supported the amendment.

Dr. HAUGHTON protested against the amendment as a postponement of the question for six months, by which time all the mischief would be done.

The amendment was then put from the chair, and was adopted by 16 votes to 9. It was then put as an original motion and adopted.

The Council then adjourned.

WEDNESDAY, NOVEMBER 28TH.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

Alexander Lindsay (registered as M.D. 1883, Mast. Surg. 1884, M.A.O. 1885, R. Univ. Ireland) was summoned to appear before the Council on the following charge: "That he, being a registered medical practitioner, had acted, and still did act, as cover to one Edwin Middlebrooke, of Smallthorne, Stoke-on-Trent, in the county of Stafford, an unqualified person, thereby enabling the said Edwin Middlebrooke to carry on a medical practice as though he were a legally qualified medical practitioner."

Mr. Muir Mackenzie, legal adviser to the Council, and Mr. Farrer, solicitor, were in attendance.

Dr. Alexander Lindsay was called in, and was attended by Mr. Riddell as legal adviser. Mr. Middlebrooke, the other person mentioned in the charge, was not present.

Mr. FARRER stated that a man of the name of Middlebrooke having been in practice without having the proper qualifications at a place called Smallthorne, Stoke-on-Trent, upon information lodged by Mr. Percy John Wilkinson, a duly qualified medical practitioner living in the same village, the Apothecaries' Society of London recovered a penalty of £20 and costs against Middlebrooke in February of this year. Middlebrooke previously had his name on a brass plate on the door, but since the date of this action his name had been taken down and that of Dr. Lindsay, surgeon, practising at Burslem, two miles distant, was substituted. A judgment summons being taken out against Middlebrooke in order to recover the penalty, by representing himself to be only receiving £60 per annum from Dr. Lindsay, he was allowed to pay the money by monthly instalments. The charge was that Middlebrooke had since that date gone about representing himself to be qualified, and had practised as such, and that in any case of difficulty he called in Dr. Lindsay, but not otherwise. It appeared from a declaration made by Dr. Lindsay that in February last, Middlebrooke being then an insolvent debtor, and his goods having been sold by the trustee, he (Dr. Lindsay) purchased his drugs and stock-in-trade for the sum of £3. Previous to the day of the sale Middlebrooke had ceased to practise himself, and had entered into negotiations with Dr. Lindsay to receive him as assistant, and he subsequently became

his assistant, being paid a salary at the rate of £60 per annum. He continued in that capacity until Oct. 25th, upon which day the balance of salary due was paid, and Middlebrooke had not since been employed by him. Dr. Lindsay further stated that from the time Middlebrooke became his assistant he acted for him and in his name; that his practice was to attend daily at the surgery; that all fees received by Middlebrooke were received in his name, and accounted for by him to Dr. Lindsay; that he (Dr. Lindsay) attended almost all the cases seen by Middlebrooke, and directed what manner of treatment should be pursued.

Mr. WILKINSON stated that Middlebrooke came from Leek, where he had a herbalist's shop, to Smallthorne between three and four years ago. After he had been there a short time he obtained the services of a surgeon, and they together started a dispensary. The surgeon left, and Middlebrooke continued to practise on his own account, representing by the brass plate on his door that he was fully qualified. He styled himself M.D. and L.M., and also described himself on the death certificates as an "Associate of the British Medical Reform Association." He (witness) said that while Middlebrooke was previously practising by himself he frequently attended cases in conjunction with Dr. Lindsay. Accounts were sent in to patients for professional attendance, and he also gave death certificates, being described as a duly qualified practitioner. It was in consequence of information given by him (Mr. Wilkinson) that the Apothecaries' Society took action. Of course, after that action Middlebrooke could not practise any longer, and he would in the ordinary course of events have had to go. In place of that, he made some arrangement with Lindsay; his own name was taken off the door and Lindsay's put up, and since then he had continued to practise. He mentioned specifically four cases which, he said, had been attended by Middlebrooke, and produced two accounts sent to patients headed, "Dr. Lindsay, per E. Middlebrooke."

Mr. RIDDELL, on behalf of Dr. Lindsay, said that Dr. Lindsay had stated in his declaration that two or three of the cases specifically referred to were of the greatest urgency, and that Middlebrooke was called in by the parents of the sick person at a moment's notice, and that no humane man could do otherwise than act as he did for the patient. He also said that, so far from having left his practice to this man, he had seen and checked the treatment of almost every patient, and those had been duly accounted for to him. He paid Middlebrooke £60 a year, and the house in which the business was carried on was held by him direct from the landlord. Having purchased the stock and taken over the business, he looked about for an assistant. Middlebrooke was on the spot, he knew all the people, and appeared to have been a man trusted by them; therefore Dr. Lindsay made an arrangement with him that he should become his assistant. He pointed out that all evidence brought forward prior to the action taken by the Apothecaries' Society related to Middlebrooke and not to Dr. Lindsay, and submitted that the statements made against Dr. Lindsay were such as would not be admitted in any court of justice.

Mr. MUIR MACKENZIE said the statement was that the business was transferred in February, 1888. One of the accounts put in was for professional charges from Aug. 2nd to Sept. 20th, six months before Middlebrooke joined with Dr. Lindsay; but still the account was headed "Dr. Lindsay per E. Middlebrooke." If that was an account in which Dr. Lindsay lent his name to enable Middlebrooke to recover a charge for attendance before Middlebrooke joined with him, the Council would think that was a matter which should be explained.

Dr. LINDSAY stated that the account was not sent in by his authority, and that he knew nothing whatever about it. In answer to several members of the Council, Dr. Lindsay stated that he had no receipts with reference to the payment of Middlebrooke's salary, and that, in fact, Middlebrooke paid himself out of the receipts of the surgery, and handed the balance to him. He might have met Middlebrooke in one or two cases previous to his purchase of the business, but at that time he understood him to be an M.D.

Mr. MUIR MACKENZIE having made a short statement to the Council on the effect of the evidence, strangers were directed to withdraw. The Council deliberated for some time in private. On the readmission of strangers,

The PRESIDENT, addressing Dr. Lindsay, said it was his painful duty to inform him that the Council were of opinion that he had committed the offence charged against him, and, further, that that offence was "infamous conduct in a professional respect." They had, therefore, directed the Registrar to remove his name from the Register. He added that instances had occurred in the history of the Council in which persons whose names had been erased had been subsequently restored.

Mr. RIDDELL asked if there was any time within which the Council thought that Dr. Lindsay might apply for restoration.

The question was not answered.

The Council then proceeded to consider two other cases, the charges in which were ultimately dismissed.

The Council then adjourned.

THURSDAY, Nov. 29th.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

The Council proceeded to consider the case of a gentleman registered as Mem. R. Coll. Surg. Eng. 1886, Lic. R. Coll. Phys. Lond. 1886, who had been summoned to appear on the charge of having acted as cover to an unqualified person. The consideration of this case occupied the Council during the whole of the sitting, and was adjourned without any decision having been arrived at.

EXCRETION OF SULPHURIC ACID.

DR. SEREN B. SHER, of the Military Medico-Chirurgical Academy, St. Petersburg, has published, as a graduation thesis, a research on the relation existing between the total sulphuric acid excreted by the kidneys and that portion of it which is found in the urine in the form of a compound ether under conditions of rest and work. It is well known that a part of the sulphuric acid in the urine exists in combination with such substances as indoxyl, scatoxyl, pyrocatechin, phenol, cresol, &c., and several observers have written on the subject. Dr. Sher estimated the total sulphuric acid and that existing in the compound ethers in the urine of twenty-six persons under circumstances of both rest and work, keeping the results of the urine passed during the day separate from those of that voided at night. He found that the relation between the total acid and that combined with organic substances was altered very perceptibly by work, the mean total amount of sulphuric acid passed in the twenty-four hours without work being 2.75 grammes, or 8.2 times as much as the acid in a state of combination in compound ether, while when work was being performed the total quantity of the acid was 2.97 grammes, or 9.2 times the amount of the acid in the compound ethers. It therefore appears that the ratio between the two increases with work, but in cases where the work was very excessive and the physical powers exhausted thereby the ratio was decreased. The total amount of sulphuric acid excreted was increased by work, if not excessive; the quantity of sulphuric acid excreted in the form of compound ethers, on the other hand, was found to be diminished by work, the mean daily numbers being 0.3334 gramme at rest and 0.3211 at work. Consequently, the effect of work is either to decrease the formation of aromatic acid in the intestines, or to distribute these substances in the tissues by means of the muscular contractions and the increased formation of the blood. During the daytime more sulphuric acid is excreted than at night, both during rest and during work, the difference being greater during work than during rest, and the same rule holds good for the acid of the compound ethers.

EDINBURGH UNIVERSITY COURT.

WE learn from the Edinburgh daily newspapers that the University Court met on Thursday, Nov. 22nd. Present: Principal Sir William Muir (in the chair), Mr. T. G. Murray, W.S., Mr. James Colston, Dr. P. H. Watson, and Professor Campbell Fraser.

The following deliverance was adopted in the matter of the inquiry into the charges preferred by Mr. Herbert H. Ashdown, M.B., against Professor William Rutherford. The deliverance was also under consideration, and was generally agreed to, on the 19th inst., on which occasion the Solicitor-General was present, in addition to the members named above:—

"University of Edinburgh, Nov. 22nd, 1888.

"The University Court having made a full investigation into the matters in controversy between Herbert H. Ashdown, M.B., F.R.S.E., a graduate of this University, and William Rutherford, M.D., F.R.S., Professor of the Institutes of Medicine in this University, by considering the written pleadings of parties, taking proof, and hearing counsel, find that no evidence has been adduced to support the allegation made by Mr. Ashdown in his application to the Court of June 9th, 1888, to the effect that 'gross and revolting forms of vice were allowed to go on within the University uninvestigated and unrebuked by either the Senate or the University Court'; that no attempt was made to justify this allegation except by references to certain conversations, hereinafter referred to, held by Professor Rutherford with Mr. Ashdown and others, and the Court express their disapprobation that, in the circumstances, so serious and unfounded a charge should have been made. Further, with respect to the specific allegations laid before the Court, they find: (1) that on Dec. 11th, 1886, Professor Rutherford called Mr. Ashdown into his retiring-room and complained of certain gestures on his part as personally annoying to him, and as having attached to them an improper significance; (2) that Mr. Ashdown understood Professor Rutherford to impute to him the intention to make use of the said gestures in that sense, and that Professor Rutherford's expressions were capable of such meaning, although he has all along denied, and still denies, that he intended to make such an imputation; (3) that in consequence of this conversation Mr. Ashdown resigned his office as Professor Rutherford's class assistant; (4) that Professor Rutherford shortly afterwards expressed regret and apologised to Mr. Ashdown for making use of the said expressions, and unreservedly withdrew them, and that to this apology he still fully adheres; (5) that, according to reliable medical evidence, Professor Rutherford, on said Dec. 11th, 1886, and for some time before, in consequence of overwork in connexion with his duties as professor, was in a weakened state of physical health, which led to a condition of nervous irritability, and to a diminution of mental control, with a tendency to magnify trifles, and to misinterpret gestures in themselves innocent and harmless; and (6) that Mr. Ashdown's gestures complained of were innocent and harmless; and as he was entirely without blame in the matter, the Court regret that the occurrences in question should have resulted in the loss of his services to the University; further find (7) that in 1884 and in 1886 Professor Rutherford held conversations of a similar kind with one or two other persons connected with the University; that he was then in the same bodily and mental state as at the time of his conversation with Mr. Ashdown; that the gestures of which he complained on these occasions were innocent and harmless; and that there was no ground for imputing blame to those persons; further find (8) that, according to the uncontradicted evidence before the Court, Professor Rutherford is now, as the result of the extended leave of absence allowed to him by the deliverances of the Senatus Academicus of Feb. 26th and Oct. 17th, and of the Court of March 21st and Oct. 24th, 1887, completely restored to health; that he is conducting a class of 430 students, with a great advantage to the University; and that there is no reason to apprehend a recurrence of his illness. Therefore the Court see no cause for exercising any of the powers conferred upon them by Section 12, Sub-section 5, of the Universities (Scotland) Act, 1858."—Signed in name and by authority of the University Court, W. MUIR, Principal.

Communicated by direction of the University Court, J. CHRISTISON, W.S., Secretary.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Taunton Sanitary Hospital.—Dr. Alford's annual report on this institution shows, as heretofore, the useful part which it plays in the sanitary defence of the Taunton urban and rural districts; but it is a great pity that the year reported on ends with the month of September, and so renders comparison with the death statistics of the year difficult and all but impossible. In the year reported on, and which formed part both of 1887 and of 1888, the number of cases admitted was 63; of these, 33 suffered from scarlet fever, 18 from diphtheria, and 10 from enteric fever, the 2 remaining cases being attacks of measles. The urban district contributed 27, and the rural district 36 cases. The cost of the hospital during the year was £418 9s. 4d., and towards this £27 4s. was received from paying patients. Since the

opening of the hospital in 1879, the total number admitted has been 749.

Wolstanton and Burslem Rural Sanitary District.—Mr. F. de B. Collette, in a report just issued, refers to an extension of measles into his district from the Potteries, and he gives some useful hints as to the proper arrangements that should exist between school and sanitary authorities as to infectious diseases. It is, however, not quite clear that the relations which do already exist are thoroughly understood. Thus, on Mr. Collette's recommendation that the schools ought to be closed, the clerk is reported to have said that they had no authority over the School Board, and could only recommend the closing of the schools. This is not a correct interpretation of the Education Code, which distinctly states that the managers "must comply" with any notice of the sanitary authority requiring them "for a specified time" to close the schools. Under these circumstances, it is the obvious duty of the sanitary authority to take action in the matter, under the advice of their medical officer of health.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5693 births and 3278 deaths were registered during the week ending Nov. 24th. The annual rate of mortality in these towns, which had been 19.0 and 19.7 per 1000 in the preceding two weeks, declined last week to 18.2. During the first eight weeks of the current quarter the death-rate in these towns averaged 19.8 per 1000, and was 2.0 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 9.8 in Derby, 12.4 in Hull, 13.2 in Leicester, and 13.7 in Birmingham. The rates ranged upwards in the other towns to 24.7 in Halifax, 25.2 in Manchester, 26.4 in Cardiff, and 28.9 in Blackburn. The deaths referred to the principal zymotic diseases, which had been 432 and 495 in the previous two weeks, further rose last week to 501; they included 239 from measles, 62 from scarlet fever, 57 from diphtheria, 51 from whooping-cough, 49 from diarrhoea, 42 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these zymotic diseases were recorded last week in Hull and Norwich, the highest in Salford, Cardiff, and Blackburn. The greatest mortality from measles occurred in Huddersfield, Leeds, Liverpool, Oldham, Cardiff, and Blackburn; from scarlet fever in Sheffield, Derby, and Blackburn; from whooping-cough in Newcastle-upon-Tyne and Cardiff; and from "fever" in Birkenhead. The 37 deaths from diphtheria in the twenty-eight towns included 41 in London, 6 in Manchester, 3 in Salford, and 2 in Newcastle-upon-Tyne. Small-pox caused 1 death in Cardiff, but not one in London or in any of the other great towns. No small-pox patients were under treatment in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital at the end of last week. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 953 on Saturday last, against 969 and 980 at the end of the preceding two weeks; 59 cases were admitted to these hospitals during the week, against 85 and 83 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 373 and 374 in the preceding two weeks, declined last week to 287, and were as many as 198 below the corrected average. The causes of 62, or 1.9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Leeds, Sunderland, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Cardiff, Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19.1 per 1000 in each of the preceding two weeks, declined to 17.8 in the week ending Nov. 24th; this rate was 0.4 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 14.1 and 14.8 in Edinburgh and Aberdeen to 22.4 in Perth and 27.0 in Paisley. The 449 deaths in the eight towns showed a decline of 35 from the number in the preceding week, and included

19 which were referred to measles, 9 to diphtheria, 9 to whooping-cough, 6 to diarrhoea, 6 to scarlet fever, 4 to "fever" (principally enteric), and not one to small-pox; in all, 53 deaths resulted from these principal zymotic diseases, against 70 and 63 in the preceding two weeks. These 53 deaths were equal to an annual rate of 2.1 per 1000, which was 0.7 below the mean rate from the same diseases in the twenty-eight English towns; this rate ranged in the eight towns from 0.0 and 0.9 in Perth and Aberdeen to 2.3 in Glasgow and 11.8 in Paisley. The fatal cases of measles, which had been 27 and 24 in the previous two weeks, further declined last week to 19, of which 13 occurred in Paisley, 2 in Glasgow, and 2 in Greenock. The 9 deaths from whooping-cough exceeded by 5 the number in the preceding week, and included 6 in Glasgow. The fatal cases of diphtheria, which had risen from 4 to 11 in the previous three weeks, declined last week to 9, of which 6 occurred in Glasgow and 2 in Dundee. The 6 deaths referred to scarlet fever showed a slight further decline from recent weekly numbers, and included 4 in Glasgow and 2 in Dundee. The fatal cases of "fever," which had been 8 and 6 in the preceding two weeks, further declined to 4 last week, of which 2 occurred in Edinburgh. The 6 fatal cases of diarrhoea were below the number recorded in any recent week. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 84 and 97 in the preceding two weeks, declined to 90 last week, and were 66 below the number in the corresponding week of last year. The causes of 50, or more than 11 per cent., of the deaths registered during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 27.5 and 23.5 per 1000 in the preceding two weeks, rose again to 25.9 in the week ending Nov. 24th. During the first eight weeks of the current quarter the death-rate in the city averaged 24.3 per 1000, the mean rate during the same period being 18.9 in London and 15.3 in Edinburgh. The 175 deaths in Dublin showed an increase of 16 upon the number in the previous week; they included 5 which were referred to "fever," 3 to whooping-cough, 2 to measles, 1 to scarlet fever, 1 to diarrhoea, and not one to small-pox or diphtheria. Thus the deaths from these principal zymotic diseases, which had been 21 and 20 in the previous two weeks, declined last week to 12; they were equal to an annual rate of 1.8 per 1000, the rate from the same diseases being 3.0 in London and 0.8 in Edinburgh. The fatal cases of "fever," which had been 10 and 3 in the preceding two weeks, rose again to 5 last week. The deaths referred to whooping-cough, which had been 4 and 6 in the previous two weeks, declined to 3 last week. The 2 fatal cases of measles also showed a decline from recent weekly numbers. The deaths of infants showed a slight increase, while those of elderly persons were fewer than in the preceding week. Seven inquest cases and four deaths from violence were registered; and 65, or more than one-third, of the deaths occurred in public institutions. The causes of 27, or more than 15 per cent., of the deaths in the city were not certified.

FRENCH VITAL STATISTICS IN 1887.

A brief report upon the movement of the population in France during 1887 has recently been published in the *Journal Officiel*, and shows that during last year the excess of births over deaths, although slightly greater than in 1886, did not exceed the rate of 1.4 per 1000 of the population, whereas in England and Wales the rate of natural increase, or of excess of births over deaths, was equal to 12.6 per 1000. The marriage-rate in France last year was 14.6 per 1000, and slightly exceeded the rate in England and Wales, which was 14.2. The birth-rate, on the other hand, was 23.5 in France, against 31.4 in England and Wales. It is pointed out that while the legitimate births in France steadily decline from year to year, the number of illegitimate births does not show a corresponding decline, and that consequently the proportion per cent. of illegitimate births, which was 7.5 in 1881, rose to 8.2 in 1887. The proportion of still-births remains practically stationary at 4.7 per cent., the sex-proportion among the still-births being 145 boys to 100 girls. The death-rate in France last year was 22.0 per 1000 of the population, while in England and Wales it was only 18.8. Part of the excess in the French

death-rate is, however, due to the age-distribution of the population; the population of France contains an exceptionally small proportion of infants and young children, but the favourable effect of this on the death-rate is far more than counterbalanced by the effect of the very large proportion of elderly people in the population, who are liable to a still higher death-rate than are infants and young children. M. Vannaeque, the author of the report before us, seems, however, to labour under the old and deep-rooted fallacy that, because high birth-rates so often prevail in the same communities that suffer from high death-rates, the high death-rates are due to the high birth-rates. Reference is made in the report to the fact that the highest birth-rate in 1887 was 34.0 per 1000 in the department of Le Finistère, and that the highest death-rate—30.0 per 1000—was also recorded in the same department, and the author remarks that there is nothing surprising in the dependence of the death-rate upon the birth-rate, because it is well known that the greatest mortality occurs in the early years of life. In another part of the report it is incidentally mentioned that this department suffered from the prevalence of various epidemic disorders, which was undoubtedly the true cause of the high death-rate, for the very fact of a high birth-rate in a population invariably infers an age-distribution of the population more favourable to the death-rate than the distribution of a population in which a low birth-rate prevails. In all populations having a low birth-rate the proportion of elderly persons is so large as to more than counterbalance the favourable effect of the small proportion of young children. The recent French census shows the abnormal age-constitution of the French population, due to the low and constantly declining birth-rate. The proportion of the population aged upwards of sixty years is higher than in any other nation of which this information is available, signifying that the mean age of the living population is higher than in any other civilised country. As a natural consequence the mean age of persons dying in France also exceeds the mean age of persons dying in other countries. It must not, however, be assumed from this that "a greater proportion of the population of France attains old age," as was recently asserted in a letter addressed to a contemporary. The fallacy involved by confusing the mean age at death with the mean duration of life, in populations having birth-rates exceeding the death-rates, is almost as deep-rooted as that which assumes that high birth-rates cause high death-rates.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-Major John Roche Rahilly is granted retired pay (dated Nov. 28th, 1888).

BENGAL MEDICAL ESTABLISHMENT.—Surgeon-Major Kenneth McLeod, M.D., to be Brigade Surgeon (dated June 26th, 1888).

ADMIRALTY.—The following appointments have been made: Surgeon Chas. Dickinson, to the *Duncan*, additional (dated Nov. 22nd, 1888); Surgeon James A. Vasey, to the *Amphion*, when commissioned (dated Dec. 4th, 1888); Surgeon Standish O'Grady to the *Archer*, when commissioned, Surgeon Francis Woore to the *Indus*, and Surgeon Richard Miller to the *Iron Duke* (all dated Dec. 11th, 1888); Fleet Surgeon John S. Dobbyn, to the *Hibernia* (dated Nov. 22nd, 1888); Staff Surgeon William Thompson and Surgeon Richard A. Fitch, to the *Cleopatra* (both dated Nov. 29th, 1888); Surgeon Alfred Rimell to the *Canada*, Surgeon B. C. E. F. Gunn to the *Rattlesnake*, Surgeon George R. D. Charlton to Chatham Hospital, Surgeon William H. O'Meara to the *Linnæa*, and Surgeon Percy B. Bury to the *Cambridge* (all dated Nov. 20th, 1888); Surgeon John L. Barrington to Portsmouth Division, Royal Marines, and Surgeon James O'B. Williams to the *Asia* (both dated Nov. 24th, 1888); Surgeon John Jenkins to the *Duncan*, additional, and Surgeon Cornelius Bradley to the *Curlew* (both dated Nov. 29th, 1888); Surgeon John Andrews to the *Peacock*, and Surgeon Harold R. Osborne to the *Histioleot* (both dated Nov. 27th, 1888).

VOLUNTEER CORPS.—*Artillery*: 1st Banff: Francis William Grant, M.D., Acting Surgeon (dated Nov. 24th, 1888).—*Rifle*: 1st (Dundee) Volunteer Battalion, the Black Watch (Royal Highlanders): Surgeon and Honorary Surgeon-Major D. MacEwan resigns his commission; also is

permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement (dated Nov. 24th, 1888).

Correspondence.

"Audi alteram partem."

INFANTILE SYPHILIS AND VACCINATION.

To the Editors of THE LANCET.

SIRS,—The prominence which you gave last week to a criticism upon my article Vaccination in the "Encyclopædia Britannica" must be my apology for calling attention to a singular mistake on a matter of fact into which the otherwise careful editorial writer has fallen. As I believe he would be the first to wish the error fully corrected, I shall state the whole circumstances.

The writer says: "Nothing in all the history of pathology can be more grotesque and, in the light of present knowledge of the nature of syphilis, more absurd than his contention that infantile syphilis is largely due to the vaccine virus"—i.e., to the inherent and latent properties of the vaccine virus. If I had anywhere contended that infantile syphilis was largely traceable to that source, still more if I had so contended in a standard work of reference, the editorial censor might have said as much as he pleased about grotesqueness and absurdity without my reclaiming from these terms, although I do not know enough of the history of pathology either to affirm or to deny the truth of his remark in all its generality. But, in fact, I have nowhere contended, nor even affirmed, that infantile syphilis is largely due to the vaccine virus, whether with or without its hypothetical contamination. In so far as I have contended on the subject at all, I have contended exactly the opposite—namely, that infantile syphilis was not, and could not be, largely due to the vaccine virus. Not only so, but I gave a new and (I should have thought) a welcome explanation, which I am sure the editorial writer had not taken the trouble to read, of what infantile syphilis was largely due to. So far as the article in the *Encyclopædia* is concerned, there is only one general reference in it to infantile syphilis in connexion with vaccination. The question having often been raised, in Parliament and elsewhere, whether the remarkable increase in the deaths of infants from syphilis (255 in 1847, rising to 1733 in 1884) was not somehow connected with the great coincident increase in the public vaccinations, I thought it necessary to give the figures in a table; but I added that the interpretation of them was by no means easy or free from fallacies, and that there were "doubtless other and better reasons" for the increase than vaccination. That is all that I said about infantile syphilis in general. There were two other remarks of a concrete kind: one, that "fatalities were not very common" in the recorded epidemics of vaccinal syphilis (of which I gave a long list); and another, to the effect that Whitehead, writing in 1859, had found fourteen cases, besides twenty doubtful cases, of vaccinal syphilis, during twenty months' hospital practice among children. It will puzzle anyone to discover, in these brief references, a contention that infantile syphilis is largely due to the vaccine virus; and yet it is ostensibly in connexion with my article in a standard *Encyclopædia*, and as a censure upon it, that the editorial writer fixes such a contention upon me, and at the same time characterises it as the most grotesque and absurd in all the history of pathology. But I will suppose that the writer was at liberty to go beyond the *Encyclopædia* article, and to include in his disparaging judgment what I had written elsewhere about infantile syphilis in connexion with vaccination. I added a chapter to my book on "Cow-pox and Vaccinal Syphilis," published last year, with the object of discussing at length the question whether the remarkable increase of deaths from syphilis in infants was due, or could possibly be due, to vaccination. The whole drift or purport of my inquiry and argument ran counter to the well-known contention that the increase of infantile syphilis is largely due to vaccination. Applying a doctrine of congenital disease, as distinguished from inherited, which I had given some account of in the article Pathology in the "Encyclopædia Britannica,"

with special reference to rickets and to congenital syphilis, I endeavoured to show how the increase of infantile syphilis could be accounted for merely as congenital. I showed also, by reference to the registration figures for Scotland, that most of the deaths from infantile syphilis happened in the first three months of infancy, whereas the statutory limit of vaccination in that country is six months. Dr. McVail used that argument, doubtless independently, in his book published two months after mine, and he has been duly commended in your own columns and elsewhere for establishing a fact so well calculated to meet the alarmist charges against vaccination. But the argument from the Scottish statistics was first established by myself; and it formed only one small part of a general exposition of the pathology of infantile syphilis as congenital syphilis. My critic in your columns speaks of viewing a thing "in the light of present knowledge and the nature of syphilis." I commend the ninth chapter of my book on "Cowpox and Vaccinal Syphilis" to his notice, as throwing additional light on the congenital nature of infantile syphilis, and on the causes of the remarkable and hitherto inexplicable increase of the same during the last thirty-five years. If he had read that chapter, I am sure that he would never have ascribed to me the contention that infantile syphilis was largely due to the vaccine virus, whether uncontaminated or not. I believe the mistake primarily arose among the anti-vaccinist writers, who imagined, from the context of my chapter on the increase of infantile syphilis, that I was going to prophesy in favour of their own alarmist teaching on that point, and read no farther. Is it possible that an editorial writer in your columns can have been taking statements at secondhand from the antivaccinists?

I must not occupy your space to traverse your editorial criticism in general. But I should like to remark that the "spontaneous" origin of cow-pox is the usual teaching (see especially Clayton's "Veterinary Evidence from Gloucestershire," in Beddoe's "Contributions to Physical and Medical Knowledge," Bristol, 1799; and Ceely's "Classical Memoirs," 1840-42). Further, the doctrine that so-called vaccinal syphilis is not due to contamination of the lymph with the venereal virus was ably defended by an editorial writer, evidently of great experience and sound judgment, in your own leading columns on May 6th, 1871, on the occasion of Mr. Hutchinson bringing forward his first series of cases. The only point which he did not adequately deal with was the occurrence of a few cases which did have secondary or constitutional symptoms, side by side with a much larger number where there was only the primary sore, both in the London group of cases, infected from a common source, and in the great epidemic among infants in the Morbihan in 1866; and that point, which he did not grapple with, is, I think, the crux of the whole matter. My last remark is to deprecate the feeling of amazement with which readers of my book on Cow-pox are said by you to regard the inclusion of its argument in a standard work of reference. The book was published thirteen months before the article, and was designed to show by a full statement of facts the incorrectness of the Jennerian doctrine that cow-pox is "small-pox of the cow." The upholders of that doctrine have had an ample opportunity of answering my indictment, but they have not availed themselves of it. Am I not entitled to say, therefore, that judgment has gone against them by default?

I am, Sirs, your obedient servant,

C. CREIGHTON.

Nov. 26th, 1888.

* * We gladly accept Dr. Creighton's disclaimer of views, which seemed too fanciful for him to have promulgated intentionally. At the same time, we fail to see the force of the reasoning whereby he claims for "vaccinal syphilis" an origin independent of "venereal syphilis," and cannot admit that he is wholly free from the charge of laying at the door of the former the responsibility of a certain proportion of the increasing mortality from infantile syphilis. We have referred to the chapter he mentions, and would direct his attention to his own arguments on pp. 153 to 156, which surely justified our criticism. It appears, however, that we have misunderstood him, and in that case, when he speaks of vaccinal syphilis as a return to the primary cow-pox, and this as being "on all fours with venereal pox," he did not mean that vaccination could induce infantile syphilis.—

ED. L.

MENSTRUATION AND THE OVARIES.

To the Editors of THE LANCET.

SIRS,—Drelincourt collected the theories of generation, and found them to be 262. We seem threatened with an equal number on the subject of menstruation. Every year produces a new hypothesis. The two most recent are the Uterine and the Fallopian, propagated by Dr. Johnstone and Mr. Tait. The old ovarian theory, however, I believe, still remains unshaken, and it must not be confounded with the ovarian theory, the holders of which maintain that menstruation is dependent upon and synchronous with the ripening and escape of an ovum from the ovary. The ovarian theory is that menstruation primarily depends on the existence of an ovary, and the facts upon which this belief rests are—(1) that when the ovaries are congenitally absent menstruation is also wanting; (2) that when the ovaries are removed early in life the same result is observed; (3) that when the ovaries are removed after puberty menstruation generally ceases; (4) that all the secondary sexual characters in the female are dominated by the ovary, and menstruation is one of these. The prime and all-important act of the sexual apparatus is the production of ova in the female and spermatozoa in the male. The ovaries and testicles furnish the generative elements essential to reproduction. The rest of the reproductive organs and their functions are subservient. Menstruation, nidation, the sexual appetite, the growth of hair on the face and pubes, the change of voice, the development of the pelvis and breasts, &c., are all dependent upon the presence of an ovary or testicle for their existence; and they are not essential to the acts of impregnation and gestation.

The connexion of the ovaries with menstruation was pointed out by Roederer in 1779. He noticed their enlargement at puberty and their atrophy at the menopause; and this leads us to the consideration of the ovarian theory, which has a certain amount of truth in it. Menstruation without doubt appears during the period of life when the ovarian function of ovulation is most active; but it has not been proved that the menstrual flow and the escape of an ovum have any causal relation determining their occurrence at the same time.

The uterine theory of menstruation advanced by Dr. Johnstone is difficult to accept. He maintains that the uterus is "an independent organ," and performs its menstrual function without any aid from the appendages; but the Fallopian hypothesis is still more impossible to believe. Although propounded in its "divine simplicity" by Mr. Tait, it appears utterly untenable and quite destitute of any scientific foundation. The reasons why he believes the Fallopian tubes to be the "starting point" of menstruation are: 1. Pain when the tubes are occluded. 2. The first appearance of menstrual fluid in the tubes. 3. The continuance of menstruation after removal of the ovaries. 4. The arrest of menstruation after removal of the tubes. The conclusions he draws from these reasons are: "That the old statement that the ovaries rule the function of menstruation is not based on fact," and that "the tubes have more to do with menstruation than the ovaries." To my mind, these deductions cannot be logically arrived at from the propositions he has enumerated, even granting them all to be true. If pain in an occluded tube confirms the Fallopian theory, pain in an occluded uterus must equally substantiate the uterine theory. The point at which the menstrual fluid first appears might also be used in support of both hypotheses; but the site at which an excretion is first seen has not necessarily any connexion with its primal determining cause. No one would think of attributing the secretion of milk to the influence of the lacteal ducts. It is quite possible that the extirpation of the Fallopian tubes may cause permanent amenorrhoea, but this is probably not so much due to the absence of the tubes as to the injury inflicted on the vessels and nerves of the ovaries. Mr. Tait also urges against the ovarian theory that the removal of the ovaries does not arrest menstruation. Now here we have arrived at an important part of the subject, and one which should always be borne in mind. It seems to be a fact that after puberty the system receives an impression (ovarian?) which enables it to continue and maintain, although in a modified form, the secondary sexual functions, even after the removal of the organs upon which they primarily depended. The extirpation of the ovaries and testicles before and

after puberty has widely different results upon the individual. If done before puberty, he or she becomes a sort of neutral being between man and woman. If performed after puberty, the sexual characteristics are to a great extent maintained. And here I will present Mr. Tait with the only feasible argument in favour of his Fallopian theory with which I am acquainted. It is drawn from analogy. If in castration the epididymis be left, the result is an imperfect eunuch. Erection, copulation, and ejaculation of fluid still remain possible. Now, although the parovarium is the analogue of the epididymis, the Fallopian tube is the excretory duct of the ovary as the epididymis is part of that of the testicle. It is just possible, therefore, that spaying may not be complete without removing at least a portion of the tube with the ovary. But, even if we consent to endow the tube with some ovarian attributes, it is impossible to believe that the secondary sexual manifestations can be due to its sole influence. After exhausting his arguments for the Fallopian theory, Mr. Tait makes the following extraordinary statement: "Menstruation is nidation." Now, as I was the first to employ the word "nidation," I may perhaps be considered a competent authority as to its meaning. The definition I gave in 1874 was this: "The act of nidation consists of the periodical development of the lining of the interior of the body of the uterus." Nidation is a function of the uterus separate from menstruation, and has nothing to do with the Fallopian tube. Denidation takes place during menstruation, and the casting off of the nidal decidua probably bears the same relation to the catamenia as the shedding of the gravidal decidua does to the lochia. Perhaps Mr. Tait will explain what he means when he says "menstruation is nidation."

It is to be hoped that the writers of text-books will, as Mr. Tait wishes, give this subject much serious study before they promulgate, with the magisterial confidence of its author, the groundless and unscientific Fallopian theory of menstruation.—I am, Sirs, yours truly,
Upper Wimpole-street, W., Nov. 1888. JAMES H. AVELING.

To the Editors of THE LANCET.

SIRS,—The facts brought forward by Mr. Lawson Tait in your last issue conclusively show that the monthly flow in woman may take place independently of the ovaries, and strongly suggest that it is largely dependent upon a nervous structure situated in or near the Fallopian tubes. That the menstrual rhythm is initiated by a nervous rhythm, I, for one, have little doubt. Just as there is a rhythmically pulsating respiratory and cardiac centre, so likewise is there, probably, a rhythmically pulsating sexual centre. What may be the position of this hypothetical centre I do not profess to say, but I venture to suggest that it furnishes fibres both to the ovaries and uterus, those to the latter passing for the most part along the Fallopian tubes, but some few to the uterus directly. This hypothesis explains all the facts of the case: (1) that the periodic flow continues after the removal of the ovaries; (2) that it generally ceases when the tubes have been removed; (3) that in rare cases it continues after both ovaries and tubes have been removed.

I have assumed, it will be observed, that ovulation is an essential part of the menstrual rhythm. Thus was I taught, and thus I must continue to believe until the most indisputable arguments to the contrary can be advanced. The view that ovulation only recurs two or three times a year in woman must excite a thrill of surprise in all those who hear it for the first time. I am aware that most animal organisms display redundancies. These are the necessary accompaniments of organic evolution. Such redundancies of structure are, however, in very large measure functionless. They take no part in the general economy of the organism. Now, of all redundancies, this presumed menstrual redundancy is surely the most extraordinary. Can it be possible that the human female organism is such a strange bungler as to put itself to the trouble of "building and furnishing" a nest every month for the reception of the human embryo, without at the same time providing a potential occupant in the shape of a fertilisable ovum? The reply may be made that there is a redundancy, whether ovulation be monthly or not, seeing that menstruation is often to no purpose on account of non-impregnation. Let it be remembered, however, that

in the ordinary course of nature the ovum would very seldom escape unimpregnated, and under these circumstances the woman would practically never suffer a monthly loss of blood, for her whole period of reproductive life would be occupied in gestation and lactation, during which times menstruation does not ordinarily occur.

I am, Sirs, yours faithfully,

Nov. 26th, 1888.

HARRY CAMPBELL, M.D.

THE LATE MR. BORLASE CHILDS.

To the Editors of THE LANCET.

SIRS,—In the notice of the late Mr. Borlase Childs, reference is very properly made to his excellence as a lithotomist amongst his other surgical qualifications. He was perhaps as remarkable for his ready resource and decision in a difficulty as he was for his manual skill, and as an illustration of this fact permit me to relate a circumstance connected with an operation of lithotomy which I witnessed, and to which I have often referred. Some thirty years ago a well-known surgeon requested Mr. Childs, the late Mr. Gay, myself, and one or two others to be present and assist him in an operation for stone on a boy in private. After anaesthesia had been produced the surgeon in question proceeded to sound the patient, but on making prolonged and careful search he could not feel the stone. The sound was then handed to each of us in turn, but the only person who said he could detect it was Mr. Childs. A consultation being held, it was agreed that the intending operator should follow the rule under such circumstances, and not attempt the lithotomy; but as Mr. Childs averred that he felt the stone, the offer was made to him that he should perform the operation. He at once decided that he would do so; the patient was placed in position, the bladder was skilfully opened, and a stone extracted. This was a bold course of action, and, considering the errors which have been committed in connexion with the diagnosis of stone in children, some may say it was rash; but, knowing the man well, I not only was not surprised, but admired his decision, his confidence in himself, and with others present congratulated him on the accuracy of his judgment.

I am, Sirs, yours obediently,

Wimpole-street, Nov. 1888.

HENRY SMITH.

"SANITARY ADMINISTRATION AT BRIXHAM."

To the Editors of THE LANCET.

SIRS,—My attention has been called to an annotation in your issue of Nov. 24th, headed "Sanitary Administration at Brixham," in the course of which you proceed to severely censure the sanitary administration of Paignton, on apparently no better authority than the "hare-brained chatter" of some "irresponsible" member of the Brixham local board, who is reported to have stated that "in Paignton last year, when typhoid and diphtheria were there, it was kept quiet." Then, Sirs, you go on to remark that "these circumstances create a grave scandal," and that you "trust they will become known to the authorities at Whitehall, and that both Brixham and Paignton will be inspected, and some steps taken to prevent the occurrence of these epidemics." The slightest investigation would have shown you that such remarks with regard to Paignton are entirely uncalled for, and constitute a gross libel on the town. "Last year" there was no case of diphtheria in Paignton, and no typhoid fever, epidemic or sporadic; there were only four deaths from zymotic disease during the year, all due to scarlatina—one occurring in January, one in July, and two in December, the latter occurring in the sanitary district, but at a distance of three miles from the town; the death-rate from all causes for the whole year (1887) was only 12·7 per 1000 on an estimated population of 6500. This year there have been six cases of diphtheria, two in May in the same house, and four in August, two of which were fatal. All the cases were at once reported to the medical officer of health, and the exciting cause of the disease was in each case promptly discovered and removed, and successful measures taken to prevent any spread of the disorder. A full report as to these cases was made to the urban sanitary authority, the local board, at their meetings on the first Mondays in June

and September, accounts of which are always published in the local papers. There has been one case of typhoid this year, which ended in recovery; and with the exception of the two fatal cases of diphtheria mentioned, there has been no death from any zymotic disease. It will therefore be seen that there has been no epidemic of infectious disease in Paignton "last year" or this (or previously as far as I am aware); that such few isolated cases as may occur are not "kept quiet," but are properly investigated and dealt with, and that the local medical men, the medical officer of health, and the local board of health, are fully alive to their duties. Paignton has been, and is, one of the most healthy towns in the kingdom, and I trust that, now the facts have been laid before you, you will promptly and prominently withdraw a charge which ought never to have been made. I fear my letter is somewhat long, but the importance of my subject must be the excuse for it.

I am, Sirs, yours truly,

T. H. TRACEY MUDGE, M.R.C.S. &c.,
Medical Officer of Health for the Paignton Urban
Sanitary District.

Nov. 27th, 1888.

To the Editors of THE LANCET.

SIRS,—In an annotation in last week's LANCET headed "Sanitary Administration at Brixham," you make some remarks about Paignton which are quite unwarranted and misleading, and I think it is unfair of THE LANCET to send forth such a statement on the mere *ipse dixit* of some member of the Brixham local board who knows nothing about what he took upon himself to aver. The facts are that during last summer there were at intervals six cases of diphtheria and two deaths. These cases were at once reported to the medical officer of health, and by him to the local board, and immediate steps were taken, and with success, to check the spread of infection. There was only one case of typhoid that I know of, and this was also reported. The sanitary condition of Paignton is good, and we have a most efficient medical officer of health, who takes every precaution to maintain the reputation of the town for salubrity. May I ask you to insert this letter prominently in your next issue as some reparation for the unjust comments published in your last?

I am, Sirs, yours obediently,

JAMES ALEXANDER, M.D.

Bishop's-place, Paignton, Nov. 27th, 1888.

* * We gladly give publicity to the above letters vindicating the sanitary condition of Paignton. If our correspondents will again read our comments they will observe that they referred especially to Brixham. The statement relating to Paignton was reported in the local press to be made by a member of the Brixham local board at a public meeting. We note with pleasure that this statement is without foundation.—ED. L.

REFORM AT THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—Will you be so good as to insert in your forthcoming issue the following letters, received by me from the private secretary of Lord Randolph Churchill, in answer to a request on the part of the Association of Members of the Royal College of Surgeons, for a motion in the House of Commons.

"2, Connaught-place, W., Nov. 20th.

"Dear Sir,—Lord Randolph Churchill desires me to acknowledge, with thanks, the receipt of your letter of the 15th instant, together with the accompanying papers, and, in reply, to say that he intends to ask the First Lord of the Treasury on Monday whether he will produce the documents to which you refer.

"I am, dear Sir, yours faithfully,

"W. Ashton Ellis, Esq."

"FRANK D. THOMAS.

"2, Connaught-place, W., Nov. 27th, 1888.

"Dear Sir,—I am desired by Lord Randolph Churchill to send you the enclosed, from which you will see that he has moved for the papers you wish for. They will probably be published in the course of a few weeks.

"Lord Randolph Churchill:—Royal College of Surgeons

(Supplemental Charter).—Address for Copy of the Statements made by the deputation of the Members of the Royal College of Surgeons of England to the Lord President of the Council on the 11th day of November, 1887, upon the subject of the Supplemental Charter since granted to the said College, and of all documents and correspondence relating thereto lodged in the Privy Council Office, including the Petition to Her Majesty, signed by 4665 Members of the College."

"W. Ashton Ellis, Esq."

"FRANK D. THOMAS.

You will see from the above correspondence that an important step has now been taken in Parliament.

I am, Sirs, yours obediently,

WM. ASHTON ELLIS,

Joint Hon. Sec.

Nov., 1888.

THE BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—Will you kindly insert in your next issue the following list of original members of the British Laryngological and Rhinological Association who have resigned their membership, and oblige,

Yours faithfully,

RICHARD A. HAYES, M.D.,
Late Hon. Sec. B.L. & R.A.

Dublin, Nov. 28th, 1888.

Mr. E. Cresswell Baber.

Dr. R. A. Hayes.

Dr. Prosser James.

Dr. Coleman Jewell.

Dr. P. McBride.

Mr. W. R. H. Stewart.

Mr. Spencer Watson.

Dr. Thos. Whipple.

Dr. W. McNeill Whistler.

Dr. Edward Woakes.

Mr. Arnold Woakes.

MEDIASTINAL TUMOUR.—TOLERANCE OF FOREIGN BODIES IN THE TISSUES.

To the Editors of THE LANCET.

SIRS,—The cases mentioned in THE LANCET of Nov. 10th, p. 912 and p. 924, remind me of two cases which were under my observation several years ago.

In 1848, a labouring man from the country, about thirty-five years of age, was admitted into St. Bartholomew's Hospital under the care of Dr. Hue, complaining of pain in the chest, with shortness of breath, and general want of strength to follow his work as a gardener. The symptoms were not those of aneurysm of any of the great vessels, nor was any important disease of the heart or lungs detected by auscultation. Dr. Hue inclined to the opinion that there was a tumour of some kind pressing on the trachea. He directed that the patient should rest in bed for the opportunity of further examination. Early in the morning, before Dr. Hue's visit, he complained of a sudden increase of the pain, and he fainted under it. The assistant apothecary, Mr. Newell, was called to him. He bled the man from the arm, taking some few ounces from the vein, and he was to some extent relieved from his chief suffering. At that time I was acting as clinical clerk, and when I entered the ward the man was evidently dying. He was lying on his back, unable to speak above a whisper. In the subclavian region on the left side a swelling was visible, about the size of a flattened orange, which was tightly bound down by the deep structures; and a swelling, less defined, extended behind the mastoid and between the muscle and the trachea. The man was too much exhausted to allow a minute examination. He was sensible, and, in reply to something, I said, he turned his head to me, as I stood at his left side, and said, in a whisper: "I must die; I must die. A wife, and four small children—what will they do?" He died as I left the ward. An examination of any kind was forbidden, through the governor on whose recommendation he had been admitted into the hospital.

About twenty-five years ago, a girl eighteen years of age was admitted into the Radcliffe Infirmary with a small abscess on the palmar aspect of the hand over the carpus, between the pisiform bone and the carpal joint of the thumb. It was of recent formation, and was attributed by her to the free use of her hand in house work. I punctured it with a lancet, letting out about a drachm of well-formed pus. The point of the lancet struck against some metallic substance. Drawing aside the edges of the puncture, a small black substance was seen at the bottom, and with-

drawn with forceps. It was a piece of a copper percussion cap, much discoloured. The patient could not give any account of a former injury. Upon inquiry of her mother, she said that the child, when about five years old, was playing with her brothers bursting some percussion caps on a piece of slate pencil, and that she then received a wound on the hand. This healed readily, and nothing more was thought of it. The piece of copper, it seems, must have entered at the time, and remained without giving trouble until lately.—I am, Sirs, your obedient servant,

Oxford, November, 1888.

E. L. HUSSEY.

OVARIOTOMY.

To the Editors of THE LANCET.

SIRS,—In your obituary notice of Mr. Borlase Childs in THE LANCET of to-day, you say, "In 1853 he performed what we believe was his first successful ovariectomy, an operation which had been previously many times attempted in both the Metropolitan Free and St. Mary's Hospitals so unsuccessfully that most of the leading surgeons at that period considered it to be an altogether unwarrantable operation." Permit me, then, to say that in 1852 I was present at an ovariectomy performed by Dr. Charles Clay, of Manchester, in a small house in a narrow street off Piccadilly in that city. The incision was carried from ensiform cartilage to pubis, and the pedicle secured by hemp. Beyond the room being well heated prior to operating, none of the precautions of a hygienic character, now so well provided for, were present. The tumour weighed thirty-nine pounds, and the patient left for her home in Staffordshire three weeks after the date of the operation. The improvements in the methods of operating and in the after treatment which we owe to modern surgery are so numerous, and have exercised so important an influence upon the success of the operation, that we are in danger of forgetting the surgeon to whose skill, courage, and determination we are indebted for rendering ovariectomy a justifiable operation. Ten years before I saw Dr. Clay operate, and repeatedly in the interval, he had done so successfully.

I am, Sirs, yours faithfully,

Tunbridge Wells, Nov. 24th, 1888.

ALFRED C. POPE.

LIVERPOOL.

(From our own Correspondent.)

THE ROYAL SOUTHERN HOSPITAL.

FOLLOWING the example of his predecessors for many years past, the newly elected mayor (Mr. Cookson) attended morning service at St. Barnabas Church on the second Sunday after his election (the 18th inst.), when a sermon was preached by Canon Robson, and a collection made on behalf of the Royal Southern Hospital. The resources of the hospital have been severely taxed this year in consequence of the rebuilding of the Royal Infirmary, which has thrown many extra cases into the other hospitals. After the service the mayor, with some of the aldermen, city councillors, and officials who were with him, visited the hospital.

A YEAR'S INQUESTS.

The annual report of Captain Nott-Bowen, the head constable of Liverpool, gives, among other tables, one detailing the number of inquests held during the year, from Sept. 30th, 1887, to Sept. 29th, 1888, before Mr. Clarke Aspinall, J.P., the city coroner. The total number of inquests was 687, in addition to 760 other cases reported to the coroner by the police and others in which no inquest was held, making a total of 1387 cases which were investigated by the coroner during the year. Of the 687 bodies which formed the subjects of inquests, 160 were of illegitimate children of one year and under; 56 were above one year and under seven, also illegitimate. The respective numbers for legitimate children were: one year and under, 31; above one year and under seven, 3. At the age of sixty and above there were 36 males and 39 females. The verdicts found by the jury comprised: murder 2, manslaughter 7, suicide 34; accidental death—males 219; females 145; excessive drinking 43; natural causes 79.

A YEAR'S ACCIDENTS.

Another table gives the number of accidents occurring in Liverpool during the same period, which reached a total of 2185. Most of them are such as might be expected in a city like Liverpool. Thus, 428 were run over by carts, cars, &c., 23 being fatal cases; 116 fell from buildings; 9 were injured in dock works, 146 on dock quays, and 326 in the dock itself. Of the cases of immersion, 357 fell into the docks, canals, &c., of which 21 were fatal cases, 43 were rescued by the police, and 249 by other persons. Fire caused 68 accidents, of which 5 were fatal; firearms caused 4, and "other means" accounted for 742 cases.

MANAGEMENT OF DIFFICULT LABOURS.

At the last ordinary meeting of the Medical Institution, Dr. Armstrong, medical officer to the Ladies' Charity and Lying-in Hospital, read a paper on the management of difficult labours in some cases of abnormal pelvis. He instanced (1) cases of uniformly contracted and obliquely contracted pelvis, in which the conjugate diameter at the brim measured from four to three inches and a quarter, and the head was engaged in the brim, as cases suitable for the forceps, preferably the axis traction forceps; (2) cases of rickety pelvis in which there was marked projection forwards of the sacral promontory, the conjugate at the brim being from four to two inches and three-quarters, and the head lying extended in the transverse diameter, and freely movable above the brim, as cases in which version was preferable to forceps in the interests both of mother and child; (3) cases of rickety pelvis with well-marked projection of the sacral promontory, and with a conjugate diameter so narrow as to necessitate the induction of premature labour, were best treated by version afterwards, as there was so little space to use ordinary forceps. Dr. Armstrong showed Tarnier and Simpson's axis traction forceps, and also a pair designed by Mr. Rawdon for premature cases, in which, from want of space, the ordinary forceps are not available. He also referred to Sloane's antero-posterior compression forceps for use in cases in which the narrow diameter of the head is engaged in the narrowed conjugate of the brim of a rickety flat pelvis. He invited discussion upon the following questions: 1. In which cases should forceps be used? 2. What kind of forceps? 3. In which cases should version be adopted?

THE STANLEY HOSPITAL.

The difficulties experienced in supporting a hospital, however greatly required and carefully conducted it may be, is shown in the case of the Stanley Hospital. It was commenced eighteen years ago to meet the exigencies of a large and increasing addition to the north end of Liverpool, and was then of modest dimensions, with a small number of beds. As years advanced it became necessary to enlarge it, and this was done by erecting additional wings, the hospital now containing 104 beds. In spite of every economy, there is a debt upon the charity of nearly £3000, and it is proposed to hold a bazaar in Whit week next year in the hopes of securing a sufficient sum to pay this off. At present forty beds remain unoccupied for want of funds.

DR. BARR.

Your readers will be glad to learn that Dr. James Barr has completely recovered from the recent dangerous assault made upon him by a prisoner in H.M. Prison, Kirkdale.

Liverpool, Nov. 27th.

MANCHESTER.

(From our own Correspondent.)

MANCHESTER MORTALITY.

THE high death-rate of our city, and its excess over that of all other English towns, still continues to be the subject of much attention, both from private individuals and from public bodies. Amongst the latter, not the least active is the sanitary association, which recently, in addition to other steps taken to arouse public opinion upon this matter, memorialised the School Board on the desirability of including the elements of hygiene in the curriculum of their schools. The Board have replied, to the effect that they cannot undertake to make this another distinct or separate subject of instruction, but that every opportunity

shall be used for inculcating the elementary principles of cleanliness and the laws of health into the minds of the children. For some years the association has each winter organised a series of "Health Lectures for the People"; a somewhat new departure has been taken this year, and, in place of these, it is contemplated to arrange for a number of public meetings or conferences, to be held in Manchester and Salford, to specially consider the causes of the high death-rate in both communities. The first of these is to be held to-morrow (Wednesday), in the Ancoats district, when many well-known sanitarians, members of the corporation, clergymen, and others, are expected to take part in the proceedings.

HEALTH REPORT OF SALFORD FOR 1887.

The annual report of the medical officer of health for Salford for the preceding year has lately been given to the public, and although thus late in appearing, it contains, like all Dr. Tatham's reports, much matter for reflection by those who have the health of that borough at heart. It is by no means a cheerful tale he has to tell: a high and actually increasing death-rate, unwholesome dwellings, densely overcrowded districts (where the death-rate reaches even 35 per 1000 under ordinary conditions, with no special epidemic of any sort to swell it), filth pollutions of air, ground, and dwellings, an insufficient sanitary staff—these are some of the salient points referred to by him. Respecting the proposed new fever hospital for Salford, considerable opposition to its erection is still met with, even from within the council itself. Mr. Councillor Sharrocks has lately drawn up and circulated a kind of report, in which he endeavours to show that, from a financial point of view, the Salford fever hospital has been an extravagant and costly institution compared with that in Manchester, and that the better policy of the council will be to arrange terms for all the Salford patients to be treated by the Manchester authorities, as for some years a portion of them have been thus received. Dr. Thorne Thorne, of the Local Government Board, has been here, and he advises that Salford should erect its own hospital, and bases this recommendation on the opinion that the accommodation existing at the Manchester fever hospital is insufficient for the combined districts.

MEDICAL CHARITIES.

At the annual meeting the committee of the Hospital Sunday and Saturday Funds reported that the total amount received this year was £7991, as compared with £7738 for last year. The committee also expressed a strong opinion that the time had arrived when the system of "recommendations" should be abolished at all our hospitals, and that the only necessary recommendation should be need for medical relief which the sufferer was unable properly to provide for himself. This subject of "recommendations" was recently referred to in these columns in connexion with the Ancoats hospital; it is stated that any hard-and-fast rule has been considerably relaxed there. It is gratifying to find that the contributions to the new Albert Edward wing of this hospital now exceed £8000, though a considerable additional sum will be required to leave it free of debt.

OFFICER OF HEALTH TO MANCHESTER.

By the recent death of Mr. John Leigh, already reported in THE LANCET, the important post of medical officer of health to the city becomes vacant. This is the first vacancy that has occurred since the office was originally instituted in 1868. At that time there were candidates for the post outside the ranks of the medical profession, but since those days considerable progress has been made in preventive medicine, and amongst the number of candidates who will sure to be forthcoming for this important appointment it is certain that there will be men of the foremost rank as sanitarians. Although the vacant office has not yet been advertised or, indeed, the terms on which it will be made, published, intending applicants are already astir, and amongst some of the names mentioned are Dr. Tatham, officer of health to Salford; Dr. Tomkins, officer of health to Leicester; and Dr. Vacher, officer of health to Birkenhead; all of whom are well known to the profession as having done good and useful sanitary work.

CREMATION.

The movement inaugurated some months ago in favour of cremation continues to progress. A Manchester Society has been formed, and nearly a hundred members have already joined, comprising ladies and gentlemen repre-

senting various sections of society, members of Parliament, lawyers, clergymen, doctors and educationists, and others. Dr. Emrys-Jones and Dr. Scott are the honorary secretaries, and it is expected that within a year or two at most a crematorium will be erected in this district.

November 27th.

BIRMINGHAM.

(From our own Correspondent.)

WAIL AND CHAIN MAKING TRADE.

FOR many years past these trades have been on the wane, owing mainly to the severity of the competition with machinery. Yet in the neighbourhood of Birmingham, in the South Staffordshire district, it is estimated that at least 15,000 people are engaged in this occupation. A large number are women, and even children, who labour from early until late for a mere daily pittance, and who live under conditions of inevitable poverty and ignorance. Mr. John Burnett, labour correspondent to the Board of Trade, has lately issued his official report into the condition of this class of workers, and has concluded it with a number of useful suggestions for their amelioration. The sweating system now engaging the attention of the Committee of the House of Lords might well include this branch of industry. There is plenty of room for reformation both in the working arrangements, and in the social and moral state of those employed in this industry.

MEDICAL STUDENTS' DINNER.

Mr. T. F. Chavasse presided at the annual dinner held on the 22nd inst., and made a humorous speech on the condition of the Queen's College with regard to its *alumni*. There was a large attendance, a great deal of enthusiasm, and much apparent enjoyment. The good feeling between the authorities and the students was marked by reciprocal compliments, and altogether the meeting was a distinct success.

THE EYE HOSPITAL.

A generous donor, who desires to be unnamed, has proposed to give £5000 to this hospital, the money to be devoted to paying off the existing mortgage of £4000, the remainder to be employed towards the current expenses of the charity. The object is to clear the institution from debt, and to place the working condition for the future in a position of freedom from financial embarrassment. Some conditions are imposed so as to stimulate the public to further contributions, but these can be readily accepted by the committee. It is needless to say that the offer was cheerfully and gratefully accepted.

THE GUEST HOSPITAL, DUDLEY.

The annual meeting was held on Nov. 27th. The report showed a favourable balance of £64 odd, in addition to the clearing off of an adverse balance of £341 13s.

COVENTRY AND WARWICKSHIRE HOSPITAL.

The forty-seventh annual meeting was held on Nov. 27th. The report showed that the number of in-patients had been 511, the largest number on record. The number of out-patients was 3573, an increase of 520 on the preceding year. The expenditure was £2968 13s. 8d.; an adverse balance of £120 8s. 2d. was due to the treasurer.

Birmingham, Nov. 28th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

ADULTERATION OF FOOD PROSECUTION.

SOME retailers were summoned last week before the Newcastle city magistrates under the Food and Drugs Act for having sold adulterated lard. It was shown by the city analyst that the lard in question was adulterated with 40 per cent. of beef fat and 1.90 per cent. of water. In defence it was urged that the wholesale dealers never guaranteed the lard as pure, but it was invoiced as "refined lard"; but the plea did not hold good, as the defendants were fined and mulcted in costs. Most people would think

that refined lard would imply a pure article, but it seems that "trade refinement" has quite a different meaning.

SCARLET FEVER IN THE COUNTY OF DURHAM.

Scarlet fever is at present epidemic in many villages in the county of Durham. The sanitary reports speak of its existence as an epidemic in Chester-le-street, and also in the district of Chester Moor.

CURIOUS CASE OF POISONING BY DYNAMITE.

An inquest was held at Wearhead last Saturday on a miner, aged twenty-four, a noted wrestler named Whitefield. It was shown that he had been in a desponding state of mind, and had made unsuccessful attempts to destroy himself by drowning and by wounding his throat. At last, according to his own confession, he ate "two bobbins" of dynamite, from the effects of which, according to the evidence of Dr. Hewitson, he died. A jurymen said the bobbins of dynamite would be about four inches long and three-quarters of an inch broad, and confirmed the remark of the deceased that "it was hard work chewing them." It would be interesting to have more medical evidence of the symptoms observed in the case.

THE POISONOUS PLANTS IN THE LAKE DISTRICT.

A lecture on the poisonous plants in the lake district was given last week by the Rev. R. Wood, of Rosley. The lecture was given in the Carlisle Museum under the auspices of the Scientific Society, Dr. Carlyle presiding. The lecturer lucidly described the lake district flora as to the poisonous plants or those that had poisonous qualities attributed to them, the knowledge of which, he thought, should be more widely diffused, as he was sure that the present ignorance was lamentable. Botany might be taught in schools as an extra subject, but unfortunately many of the masters were as ignorant of it as their pupils. Your readers—in confirmation of Mr. Wood's remarks—will remember the lamentable cases of poisoning by henlock a short time ago of two brothers near Consett, county of Durham, and of which I gave you details at the time, as arising from pure ignorance of our poisonous indigenous plants.

A SURGICAL AID SOCIETY FOR NEWCASTLE.

Mrs. Arnison, wife of the senior surgeon of the Newcastle Royal Infirmary, has been the means of originating a praiseworthy movement for supplying surgical appliances such as artificial limbs, trusses, &c., to the poor standing in need of such aids. It appears that the Royal Infirmary has no funds at its disposal for the purpose, and seeing that about sixty patients leave this institution minus limbs annually, the need for help in this way must be very pressing, and up to this the want has been in part supplied by begging. It was shown at a meeting held at the infirmary last week, and at which the minor institutions were fairly represented, that this mode of supplying the want was open to serious objections. It was also shown that the poor suffered much hardship, and had their infirmities aggravated from the want of such relief as was afforded by water beds and air cushions, not to mention the minor appliances, such as hearing trumpets, respirators, inhalers, &c. At the meeting referred to, it became a question as to whether a separate society should be formed, or whether an effort should be made to join and extend a society which has existed in the city for lending appliances to invalids, and which confessedly has done much good within its limited means. But, at a later meeting, held to-day, it was decided to form a separate society for the north of England, the first committee to be the senior medical officers of the hospitals of Newcastle. Mrs. Arnison was appointed treasurer.

Newcastle-on-Tyne, Nov. 28th.

EDINBURGH.

(From our own Correspondent.)

THE ROYAL SOCIETY OF EDINBURGH.

ON Monday afternoon the statutory meeting of the Royal Society, for the election of office bearers, was held in the Society's rooms, when the following list was unanimously approved:—President: Sir William Thomson, F.R.S. Vice-Presidents: John Murray, LL.D.; Professor Sir Douglas MacLagan; Hon. Lord McLaren; Rev. Professor Flint,

D.D.; Professor Chrystal, LL.D.; and Thomas Muir LL.D. General secretary: Professor Tait. Secretaries ordinary meetings: Professor Sir W. Turner, F.R.S., and Professor Crum Brown, F.R.S. Treasurer: Adam Gilli Smith, C.A. Curator of Library and Museum: Alexander Buchan, M.A., LL.D. Councillors: Sir Arthur Mitche K.C.B.; Stair Agnew, C.B.; R. M. Ferguson, Ph.D A. Forbes Irvine of Drum, LL.D.; Dr. J. Batty Tuk Professor Bower, Dr. G. Sims Woodhead, Robert Cox Gorgie, Professor Isaac B. Balfour, Professor Ewing, Professor Jack, and Professor James Geikie.

VOLUNTEER MEDICAL STAFF CORPS (SECOND DIVISION).

This corps seems to be in a most flourishing condition. The company is recruited to its full strength, and last year every man on the roll was efficient or proficient. The enthusiasm of the members appears to be without limit. The other evening the surgeon in command, Dr. Cathcart delivered a lecture before the East of Scotland Tactic Society, on "The Necessity for the Extension of the Volunteer Medical Staff." He gave a full account of the organisation and equipment of the Army and Volunteer Medical Staff Corps, and then entered at considerable length into the means to be taken to increase the efficiency of the local medical corps. He pointed out what a great deficiency there was in the want of lay companies, deficiency that could not be filled by medical student companies, as he looked upon these latter as too valuable (from their training) to be used as bearers in action, and he expressed his great readiness to co-operate with the Volunteers in manœuvres, in order that both of these branches of the Volunteer service might be improved. He further pointed out how necessary it was that there should be a northern station for stores and for training, showing that the staff corps became familiar with the work of dressing stations, collecting stations, and field hospitals, the work of base hospitals and the lines of communication would not demand much attention. It was gratifying to see, from the discussion that followed Surgeon Cathcart's lucid and interesting lecture, that there was a desire on the part of those in authority in the Tactical Society to utilise the medical companies as much as possible, and also to see that they are as fully trained and equipped as circumstances will allow.

THE FRENCH FASTING MAN.

For some time past M. Alexandre Jacques, the French fasting man, has been demonstrating his ability to undergo a considerable amount of exertion without taking anything but his vegetable powder and pure water. As an effort, the feat is wonderful, but as yet M. Jacques has not made a sufficiently powerful impression on the public to induce any of them to give him his price of £20,000 for this marvellous powder; £600, we are informed, was offered by a Glasgow firm, but most people seem to think that it is simpler and more pleasant to rely on ordinary food and drink under ordinary circumstances where they have much work to do. It will be better to withhold further comment until the scientific report, promised by those interested in the physiology of the metabolic processes, is issued.

THE "SCOTTISH MICROSCOPICAL SOCIETY."

The Society of which I spoke last week has in the interval assumed much more important proportions. All who are actually working at histological or microscopical subjects in Scotland or the north of England are eligible for membership, and it is proposed that, if a society sufficiently strong be formed, quarterly transactions should be issued. Arrangements are so far completed that a committee has been formed and empowered to arrange for the admission of members, and subsequently to call a meeting for the election of office-bearers.

Edinburgh, Nov. 27th.

DUBLIN.

(From our own Correspondent.)

ROYAL UNIVERSITY OF IRELAND.

A WARRANT for the alteration of the statutes of the University has recently received the Royal sanction. For the future the Senate cannot elect more than twenty-nine Fellows of the University at a salary of £400; and, in the

event of the elected receiving a salary in respect of another Fellowship, the two salaries are not to exceed £400 a year.

THE CHILDREN'S HOSPITAL, DUBLIN.

The present premises, which are situated in Harcourt-street, cost some £3300, and the Managing Committee, with praiseworthy energy, have reduced the debt to £1200. In order to obtain the greater portion of this sum, they have organised for Tuesday and Wednesday a silver *fête*, which, in the interests of the hospital, it is to be hoped will be thoroughly successful. The institution contains some fifty beds, of which upwards of forty are at present occupied. The hospital has been gaily decorated for the occasion, the entrance hall is represented as a silver grotto, and there are a dozen silver stalls surrounded by silver banners. Besides the ordinary attractions of a bazaar, there will also be concerts and dramatic performances each evening.

ASSAULT ON A MEDICAL PRACTITIONER.

At Douglas Petty Sessions last week an inmate of the Cork Workhouse was charged with having seriously assaulted Dr. Murphy, resident medical officer, by striking him on the head with an iron bar. It appeared that Dr. Murphy was passing through a gate in the yard of the workhouse, and while turning round to lock it he received a severe blow on the forehead, and saw the prisoner raising an iron bar to strike him a second blow. The iron bar was the leg of the bedstead, and the only explanation that can be given as to the reason of the attack on Dr. Murphy is that the prisoner believed that the medical officer had entered some complaint against him in the workhouse book. The prisoner has been committed for trial.

THE WATER SUPPLY OF CROSSMAGLEN.

Dr. Palmer, medical officer of Crossmaglen, has written to the Local Government Board in reference to the insufficient and impure water supply of this place. The water, he alleges, is undrinkable, and has a bad smell and a worse taste. Already at least one of the residents has been attacked with enteric fever, due to the contaminated water supply, and the inhabitants are entirely dependent for water on wells in the neighbourhood.

Dr. C. Westropp, J.P., medical officer of Derrylin Dispensary, has resigned. The vacancy will be filled up on Dec. 4th. Dublin, Nov. 27th.

PARIS.

(From our own Correspondent.)

TREATMENT OF RABIES.

DR. ODO BUJOID of Warsaw has made a very important communication to the Academy of Sciences, and also to the Academy of Medicine, giving the result of his treatment of rabies after M. Pasteur's method. After having passed some time at the laboratories of M. Pasteur, Dr. Bujoid, on his return to Warsaw, applied the procedure which he had seen employed at Paris. According to the author, rabies, in Russian Poland, had suddenly undergone, since the introduction of the Pasteurian inoculations, a similar augmentation of frequency to that which it had presented in France, for in the course of six months Dr. Bujoid was able to inoculate 104 persons on M. Pasteur's method. Of these 104 persons, a child died after having been bitten by a dog which had never been found, so that it was doubtful whether it was rabid or not. Somewhat alarmed and influenced by the writings which Frisch of Vienna published at that time, Dr. Bujoid, in a further series of 193 persons inoculated in the following seven months, employed a more attenuated treatment; amongst these cases there were eight deaths from rabies. Struck by this great mortality, he courageously applied the intensive method, which M. Pasteur only employs with great circumspection, and of 370 persons bitten by rabid dogs not one has died, although sixteen months have elapsed since treatment. During the same time eight persons, non-inoculated, died from rabies at Warsaw. These results are certainly remarkable, and no document has hitherto appeared which has proved more favourable to the Pasteurian method of the treatment of this dire disease.

THE MICROBIC THEORY OF TETANUS.

Referring to the conclusions of the report formulated by Professor Verneuil to the Academy of Medicine on the nature of tetanus, Dr. Alphonse Guérin complains that the old pathological anatomy is somewhat neglected since microbic researches have been in vogue. He admits with M. Verneuil that tetanus is inoculable, but that it is of a microbic nature and of equine origin appeared to him very questionable. M. Guérin asks how, on this latter theory, one can explain the thousand cases of tetanus which were observed the day after the battle of Prague. And, if the cause of tetanus resides in a micro-organism transported in the air, how was it that the cotton-wool dressing did not suffice to protect the wounded against this micro-organism as well as against the microbe of purulent infection? How was it that Lister's dressing was inefficacious against it? Dr. Guérin, supporting himself on the anatomical lesions, considers tetanus to be an infectious myelitis, and is disposed to attribute its occurrence to a ptomaine. In four necropsies Dr. Guérin had clearly demonstrated softening of the spinal cord, and it is here, he thinks, that the virus is to be found. Professor Verneuil reserved his reply for a subsequent meeting.

IMMUNITY FROM RABIES.

At the Academy of Sciences, M. Chauveau announced that M. Galtier has ascertained that the intravenous injection of rabic virus on animals bitten by rabid dogs conferred immunity on these animals—such as oxen, cows, sheep—at least for four months. They are thus protected not only against previous bites, but also for a considerable time against future ones. Moreover, the operation is easy, for, unlike other viruses, it produces no local manifestations if it fails to be wholly introduced into the vessel.

STROPHANTHINE.

Dr. Laborde announced at the Academy of Medicine that M. Arnaud, chef of the laboratory of M. Chevreul, has extracted from strophanthus a crystallised substance of which he has established the chemical formula which alone deserves the name of strophanthine, because it is the only one pure; all the other products known under this name are, he said, properly speaking, only extracts of strophanthus. *Après* of strophanthus, Dr. Fano, a well-known oculist, declares that, according to his experience, he has not found this substance so useful as others have done in ophthalmology, and that in the cases which it would be thought necessary to treat with "ine" the employment of curare would be preferable.

JUVENILE SMOKING.

Owing to the increase of juvenile smoking in this country, the Society against the Use of Tobacco has taken steps to obtain a law to prevent children from smoking. It founds its arguments on a series of observations which have recently been made. Of thirty-eight young smokers, aged from nine to fifteen years, it was found that twenty-seven experienced a certain degree of malaise, and twelve, seriously affected, had contracted the germs of grave maladies.

Paris, Nov. 27th.

VIENNA.

(From our own Correspondent.)

THE LATE PROFESSOR BAMBERGER'S SUCCESSOR.

At the last meeting of the Professoren Collegium a special committee, consisting of Professors C. Braun von Fernwald, Kundrat, Meynert, Nothnagel, and Wiederhöfer, was formed for the purpose of nominating a candidate for the chair of Internal Medicine. As far as I am informed, the claims of Professor Schroetter of Vienna, Professor Kahler of Prague, well known by his papers on nervous diseases, and Professor Naunyn of Strasburg, will be taken into consideration. It is also possible that a third clinic for Internal Medicine will be instituted.

THE DIRECTOR OF THE GENERAL HOSPITAL.

Since the appointment of Professor Boehm as Director of the General Hospital the local newspapers have occupied a good deal of their space with reports on hospital troubles in Vienna. Professor Boehm is alleged to have treated the

physicians of the hospital with scant courtesy, and the Professoren Collegium has forwarded protests to the Minister of Public Instruction and to the Minister of the Interior.

Vienna, Nov. 26th.

NEW YORK.

(From our own Correspondent.)

YELLOW FEVER.

THE yellow fever epidemic has by no means spent its force at Jacksonville. A large number of new cases occur daily. The total number to date is 4518, and the number of deaths 390. Though this outbreak of yellow fever has ruined the reputation of a favourite health resort for winter in the south, yet it has accomplished a certain good by awakening public attention to our coast sanitary defences. The epidemic has again emphasised the conclusion that our quarantines, as now organised and managed, are merely obstructions to commerce, but in no proper sense protections against the invasion of the germs of pestilences. In 1879 Congress organised a National Board of Health under the pressure of the widespread epidemic of yellow fever which prevailed in the valley of the Mississippi. That body placed its chief reliance for preventing the spread of the germs of the fever upon medical inspection of vessels, passengers, cargoes, railroads, &c., and sanitary cleansing. Instead of the ordinary seaboard quarantine, which depends upon detention, the board required constant cleanliness of the ship and cargo, and healthiness of the crew and passengers. To effect these objects, it required medical inspections in ports and the enforcement of sanitary regulations while at sea. To meet the exigencies of the approach of an infected ship, island stations were created where such vessels could undergo rapid cleansing, the passengers be housed and protected, the sick cared for, and the cargo disinfected. Under these provisions of law yellow fever was effectually excluded from the country for four years.

THE NATIONAL BOARD OF HEALTH.

The reform in our quarantine system thus happily began lapsed with the board. As there was no epidemic to alarm the country, Congress refused to make appropriations for the continuance of the work of the board, but diverted them to other channels. The natural result of a reliance upon the old quarantine organisations, which were renewed after the board ceased its operations, has been a widespread epidemic over the fairest portions of the southern territory, causing sickness, death, and suffering too aggravating to be recalled. The cost of this epidemic in money would have supported the work of the Board of Health a decade or more.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

This Association meets at Milwaukee, a western metropolis, on Nov. 20th. The subjects selected for discussion are: the pollution of water supplies; the disposal of refuse matter of cities; animal diseases dangerous to man; maritime quarantine; and regulations for the control of contagious and infectious diseases, and their mutual relations. The lessons taught by the recent epidemic will be freely discussed, and an effort will be made to secure a reorganisation of the national health service at the approaching session of Congress. This Association embraces in its membership the members of the principal sanitary organisations of Canada, and a number of interesting papers will be read relating to sanitary reforms in the Dominion. The Lomb Prize has brought out upwards of sixty competing essays, and the decision of the committee will be announced.

New York, Nov. 14th.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At the ordinary meeting of this Society on the 23rd ult., Dr. Jones occupying the chair, a debate was held on the question—Do systematic lectures and examinations occupy too much space in the present curriculum? Messrs. Shaw and Murray supported the affirmative, and Messrs. Rees and Bell the negative side of the question; and, as several other members desired to express their views, the debate was continued until after the membership of the Society did not exceed 100, and the books contain the names of about 100 members.

Obituary.

E. HEADLAM GREENHOW, M.D., F.R.S., F.R.C.P.,
CONSULTING PHYSICIAN TO THE MIDDLESEX HOSPITAL.

IN the sudden death, on the 22nd ult., of Dr. E. Headlam Greenhow the London medical world has to mourn the loss of one of its best-known members, for until his retirement from active consulting practice, in 1881, there were few more constant attendants at the various medical gatherings in the metropolis. The news of his death will be regretfully received by a large circle of friends and old pupils. Although of late his health has been indifferent, he possessed great rallying power, his indomitable energy enabling him to overcome physical enfeeblement. The account of his fatal illness is soon told. During three days of last week he had been in London, attending to his duties at the Pensions Commutation Board, and he was at Charing-cross Railway Station, on the point of returning home to Reigate, when he was attacked with syncope. He was assisted to the waiting-room, where, in the course of half an hour, he passed peacefully away. It was a fitting conclusion to a well-spent life to have died thus, as may be truly said, "in harness," attending to public duties, which he had always so faithfully and scrupulously performed. He was seventy-three years old at the time of his death, and the story of his career is one long and honourable record of steady arduous labour—labour in which he delighted—in the service of sanitary and scientific medicine.

Edward Headlam Greenhow was born at North Shields in 1814, where his grandfather and father were in medical practice. Indeed, he came of a family of doctors, and used to say that on his parents' side there had for a hundred years been a member of one or other family upon the staff of the Newcastle Infirmary. His uncle, Dr. T. M. Greenhow, was well known as a practitioner in Newcastle, and afterwards at Leeds, where he died a few years ago at an advanced age. Headlam Greenhow was barely sixteen when he was apprenticed to his grandfather, having received his early education in schools in North Shields. His medical education began at Edinburgh, where he spent two years, and received the gold medal for the class of pathology and the practice of medicine (under Dr. Mackintosh), at the Argyle-square School of Medicine. After this he studied at Montpellier; and in 1835, when twenty-one years of age, he began to practise at Tynemouth in partnership with his father. For eighteen years he continued in general practice, and his active mind found occupation in the pursuit of science, for he took a great interest in botany and natural history, and gave lectures on those subjects and also in sanitation. He became a valuable member of the Tynemouth Town Council and chairman of the Board of Health, thereby laying the foundations of much of his valuable work in the future. He promoted with zeal all schemes for improved sanitation, and did especial service in securing for North Shields an efficient system of drainage. Whilst here he had experience of the cholera epidemic of 1848-49 which visited Tynemouth, and his experience was afterwards embodied in a paper communicated to the Epidemiological Society in 1855, on Cholera in Tynemouth in 1831-32, 1848-49, and 1853, and in some interesting articles upon cholera contributed to the *British and Foreign Medical-Chirurgical Review* (1856-57).

In 1852 Dr. Greenhow graduated M.D. at King's College, Aberdeen, and decided to leave the north and take rank as a physician in London. Accordingly, in 1853 he removed to London, taking up his residence in Upper Berkeley-street, whence in 1871 he removed to Manchester-square. He became a Licentiate of the Royal College of Physicians, and was appointed physician to the Western General Dispensary. In 1856 he received, at the suggestion of Mr. Simon, then an active member of the staff, the appointment of lecturer on public health at St. Thomas's Hospital, in recognition doubtless of the good service he had rendered to hygiene when at Tynemouth. It may be mentioned that this was the first lectureship of the kind that had been made at any medical school in the United Kingdom; and Dr. Greenhow spared neither time nor

trouble in making his course complete and original. A paper of his upon Bills of Mortality was prepared at this time, and is printed in the Board of Health Reports. In 1864 his experience of cholera in the north was put to good service by his appointment under the Board of Health to the charge of cholera districts in Southwark during the epidemic of this year. In 1867 we find him reporting to the Board upon Murraim among Horned Cattle. But the work which deserves the foremost place as indicating his characteristic energy in questions relating to public health, and also as marking a new departure in the pursuit of measures for improving the same, is his "Inquiry into the different Proportions of Deaths produced by certain Diseases in different Districts in England." This inquiry he had undertaken for his own purposes, in order to furnish him with trustworthy material for his lectures. It lasted over two years, and must have involved enormous labour. The paper was printed in 1868, and presented to Parliament by Mr. Simon, then medical officer of the Board of Health. It extends over 164 pages, and abounds with valuable statistical information, being the first systematic attempt to collate and compare the mortality in different parts of the kingdom in selected classes of disease. It is preceded by a valuable introduction from the pen of Mr. Simon, who thus alludes to it. He states that it "exposes in a very remarkable manner the present wasteful expenditure of human life in England. It is the work of Dr. Greenhow, lecturer on public health at St. Thomas's Hospital, who, having recently found it requisite for his own purposes, as a teacher of sanitary science, to analyse more minutely than had hitherto been done the distribution of diseases among different parts of the community, has done me the favour of acquainting me with the results of his inquiry; and as these results appear to me of singular public interest with reference to sanitary administration, I have begged Dr. Greenhow to let me submit to you the paper in which he has embodied them. . . . There are some of its conclusions which I would ask leave particularly to mention, partly because of their own very great interest, and partly because, in the new light which they afford, the sanitary state of the people of England almost imperatively claims to be reconsidered as a whole." In the paper, Dr. Greenhow points out the want of definite knowledge of the causes of excessive mortality, and says how, on preparing his first course of lectures, he became aware of the vague and imperfect information upon which the sanitary agitation of the preceding twenty years had been based. Hence his plan of supplying this want by an extended personal inquiry, which embraced 105 registration districts, dealing with their mortality in selected groups of disease in each of the seven years 1848-54. These groups were—A, pulmonary affections; B, contagious disease; C, alvine flux; D, typhus and erysipelas; E, cramp, influenza, and ague; F, strumous diseases; G, nervous diseases of children; H, apoplexy and paralysis; I, rheumatic fever and rheumatism; K, carbuncle and phlegmon. This is not the place to enter into further detail respecting this work, which Dr. Greenhow pursued with enthusiastic ardour. Fortunately he was so circumstanced as to be able to devote the time necessary for so large an undertaking; but, looking back upon it now, one cannot but see how fully it bears the stamp of that painstaking accuracy which characterised all his work. That this labour was not expended in vain is shown in the fact that it was made the basis of the valuable reports of many successive years, which were undertaken by the direction of Mr. Simon when medical officer to the Privy Council. The first of these Annual Reports appeared in the following year; they marked the passing of the Public Health Act in 1858, and the inauguration of a new and more thorough administration of sanitary law. There is no question that Dr. Greenhow's paper formed the statistical basis of administrative reform in public health; as, indeed, it was the cause of the valuable decennial reports on comparative mortality issued from the Registrar-General's office. During the next few years Dr. Greenhow was employed in this public work. The Second Report of the Medical Officer of the Privy Council (1859) contained a paper from his pen upon Diphtheria, which had been alarmingly prevalent in various parts of England since 1855. Comparatively little was known concerning the disease at this time. Hence we find these reports dealing fully with the relationship of diphtheria to other diseases, and to the conditions under which epidemics prevailed, as well as recounting facts upon its communicability, its symptomatology, and treatment. To the same

volume he contributes a report upon Diarrhoeal Diseases in certain Districts. To the Third Report (1866) Dr. Greenhow contributed the results of his inquiries into the prevalence of Lung Diseases in different industrial districts in England. His work in this field is well and widely known; for, indeed, before that time the influence of dust as a factor in producing pulmonary affections had been but little considered. He investigated the prevalence of such diseases in the pottery districts, amongst metal workers, miners, flax dressers, and many other allied industries, gaining a vast amount of information upon the nature of the work performed in these pursuits, the liability of the workers to phthisis, &c. The same matter formed also the subject of a further inquiry, recorded by him in the Medical Officer's Fourth Report (1861). To this report he also contributed a paper on the excessive mortality of young children among various manufacturing populations. From this time his attention was more occupied with subjects of clinical medicine and pathology; he had received a hospital appointment, and had an increasing private practice. His services were on more than one occasion required by the Government upon Royal Commissions, of which we may instance the Penal Servitude Commission (1878), of which Lord Kimberley was chairman; and when the Pensions Commutation Board was established in 1870, he was appointed examining physician, an office which, as above noted, he held to the day of his death, as he did also that of Visitor under the Privy Council of the Examinations of the Pharmaceutical Society, to which he was appointed in 1868 under the provisions of the Pharmacy Act.

Dr. Greenhow's connexion with the Middlesex Hospital began in 1861, when he was appointed lecturer in public health, and joint lecturer on medical jurisprudence (with Mr. Henry) in the Medical School, and shortly after assistant physician to the hospital. For ten years he worked diligently in the out-patient department of the hospital, until in 1870 he was appointed extra-physician, and in the following year physician, to fill the vacancy occasioned by Dr. Murchison's appointment on the staff of St. Thomas's Hospital. He held the office of physician for another decade, and when he retired in 1880 he was made consulting physician. In the Medical School he continued to lecture upon medical jurisprudence until 1871, and during part of this period held the office of examiner in this subject to the University of London. In 1871 he succeeded Dr. Murchison as lecturer on medicine. Dr. Greenhow was a warm friend of the Middlesex Hospital and its school, of which his acknowledged business capacity and methodical habits made him an excellent dean (1866) and treasurer (1870). He discharged his duties faithfully and punctually, and his clinical teaching was thorough and sound. His aim ever was that his pupils should go forth into the world well equipped for the emergencies of practice, and the experience of his early training and medical life stood him in good stead in his endeavours to attain that aim. His lectures were thoroughly systematic and precise, sound and practical, without being ornate. He also took a leading part in the affairs of the hospital, where his judgment and practical sagacity were often of great service. The weekly board of governors recognised his worth, and when, in pursuance of a scheme which he had much at heart, and for which he had collected a considerable sum of money, the authorities a few years ago set aside a whole ward and a day-room for male cancer patients, the ward was called by his name.

Nor was his attachment to medical science less marked. From the time of his taking up his residence in London he pursued it with the same zeal and industry as he showed in his sanitary work. He became a Member of the Royal College of Physicians in 1855, and was elected a Fellow in 1859. In 1875 he delivered the Croonian lectures, taking for his subject Addison's Disease, with which his name will always be associated. These lectures form the standard of reference on the subject of this remarkable and obscure affection. In 1880-81 he held the office of Censor of the College. In 1870 he was elected to the Fellowship of the Royal Society, a just recognition of his labours in sanitary and medical science. He was an active member of many scientific and medical societies. Some of his earliest writings were communicated to the Epidemiological and Statistical Societies (an important one to the last named being "On a Standard of Public Health for England," 1859); whilst to the Royal Medical and Chirurgical Society he contributed, *inter alia*, papers on "Brassfounders' Ague"

(1862) and "Abdominal Aneurysm successfully treated by Terminal Pressure of the Aorta" (1873). It was, however, to the Transactions of the Pathological and Clinical Societies that he made his most numerous contributions. Of these, we may especially indicate his papers in the first-named Society upon the Pathology of Pulmonary Disease amongst Operatives (1864-5-8), of which his inquiries in connexion with the reports of the Medical Officer of the Privy Council had furnished him with much material; and his papers on Diseases of the Suprarenal Capsules (vol. xvii., 1866), wherein he collated a large body of evidence tending to show the invariable association of the symptoms of Addison's Disease with a particular morbid change in these bodies. Although in his Croonian lectures and in the paper read before the London International Congress in 1881 his earlier views upon the subject of Addison's Disease underwent slight modification, especially as concerns the share taken in the production of the symptoms by involvement of the abdominal sympathetic, yet the service he rendered to medical science and to Addison's fame was no mean one. He was entitled by these labours to be considered, as he is, an authority upon this subject. The Clinical Society was founded mainly by his exertions (1867); he was its first treasurer, and in 1879-80 held the office of president. Naturally he took a lively interest in its proceedings, and until he retired from London was a most constant attendant at its meetings. Its Transactions contain many papers contributed by him, among the latest being one on Rheumatic Fever treated by Salicin and the Salicylates (1880).

In addition to the active share Dr. Greenhow took in the work of these Societies, he contributed papers on Intermittent Hematuria (1868), Diphtherial Nerve Affections (1863), and many other subjects to medical journals. He also published works (1) on Diphtheria (1860), which at that time was not well understood, and upon which, it will be remembered, he had made an exhaustive report to the Medical Officer of the Privy Council; (2) on Chronic Bronchitis, of which a second edition appeared in 1878, a series of clinical lectures upon a subject that has been but seldom treated with such elaboration; and (3) on Addison's Disease (1865 and 1875), of which we have already spoken. This record proves how assiduously he devoted himself to professional work. Of his contributions to practical medicine, those which will be most associated with his name are his researches in Pulmonary Diseases of Operatives and on Addison's Disease. Had these stood alone, he would merit the position that will be assigned him by posterity, for they established facts which are of undoubted practical value.

Dr. Greenhow married, in 1842, the widow of William Barnard, Esq. She died in 1857, leaving one son, now the Rev. E. Greenhow, vicar of Earsdon. In 1862 Dr. Greenhow again married, his second wife (Miss Eliza Burnley Hume) being the second daughter of Mr. Joseph Hume, M.P. He was again left a widower in 1878. By this marriage he had two daughters, who survive him. In 1881 he retired from practice and went to live at Reigate, still retaining one or two appointments in town, and occasionally appearing at meetings at his old hospital, the College of Physicians, or the Clinical Society. To the last he retained a warm affection for his former surroundings, and nothing delighted him more in the evening of his days than to tell his battles over again, or learn what was going on at institutions with which he had been connected. If any man can be said to have entered fully into the spirit and labours of professional life, or to have worked with all his power in his sphere, it can be truly said of him. It is only when we look back through the long years of his fruitful and busy life, when we remember the qualities of perseverance and energy, the love of method and discipline, and the attachment he had to medicine, that we can estimate how "full" his life was, and how much he accomplished. He at least must be admitted to have earned his "rest."

ROBERT CORBETT, M.D., F.F.P.S. GLAS.

THIS much-esteemed practitioner died at his residence, Barrhead, Renfrewshire, on Nov. 10th. He was educated at Glasgow University and Anderson's College, and graduated M.D. at St. Andrews in 1845. Shortly thereafter he settled in Nitshill, but eventually removed to Barrhead, two miles distant. For over forty years he had practised in this well-populated manufacturing district,

and was one of the most widely known general medical practitioners in the West of Scotland. His father, Dr. Thomas Corbett, practised in Pollokshaws, and took a leading hand in municipal affairs of the burghs, having been for a term of years its provost, or chief magistrate. Here the subject of our notice was born in 1825. Dr. Corbett's heart was in his work, and it was only in virtue of a robust constitution that he was enabled to continue in harness unremittingly as he did for the long period of forty years. Holidays with him were few and far between, and when he did get a day or two, the anxiety he displayed to be back to the sphere of labour, it is believed, tended to cut short a life that might have seen a much greater age. As it is, he reached his sixty-third birthday, and had been more or less laid aside for a period of six months. His death is mourned by a large community in the upper ward of the county of Renfrew. He was a man who kept well abreast of current medical literature, and had often to travel long distances at the request of patients, who, while they had removed their residence, would insist on having him in consultation when things appeared serious. Leeds and Bradford have been visited by him on this mission, while, more immediately surrounding his own district, it is hard to name a town to which he has not some time or other been called professionally. Dr. Corbett belonged to a well-known family, and one in which the medical element is well represented. Two of his cousins are M.P.'s, and he was a first cousin of the late Dr. Robert Telfer Corbett of Glasgow, and subsequently of Tuakua, Auckland, New Zealand. It is noteworthy that both cousins were witnesses and gave evidence at the Palmer poisoning trial, and that given by Dr. Robert Corbett was specially cited by the judge in summing up the case to the jury.

By Dr. Corbett's death our profession loses a most devoted member, and the community in which he worked a highly skilled adviser, and withal a warm-hearted friend. Dislike of ostentation or show of any kind was a special feature in his character, and was noticeable in his funeral. Holding various public appointments, among which were factory surgeon for the Barrhead and Neilston districts, parochial medical officer for Abbey parish, surgeon to the Nitshill Collieries, and battalion surgeon of the 3rd Renfrew Rifles, in which he held the rank of surgeon-major, a desire was expressed by public bodies in the vicinity to pay a public tribute of respect to his memory by attending the funeral; but evidently it was felt by his relatives this would be contrary to the wishes of the deceased. He was buried at Pollokshaws and leaves a widow and grown-up family, of which a son carries on the father's practice.

EDWARD JACKSON, M.B. LOND.

WE had last week to record the death of Dr. Edward Jackson, which occurred at his residence, 69, Osborne-road, Newcastle-upon-Tyne, on Nov. 19th, after a short illness, the causes of death being congestion of the liver and pneumonia. Although resident in Newcastle at the time of his decease, nearly the whole of Dr. Jackson's active career was passed in Sheffield, where his talent and energy had secured for him a leading position. His father, the late Mr. William Jackson, is still remembered in Sheffield as a very capable and laborious surgeon, who remained in active practice until late in life, enjoying the esteem and confidence of a large circle of patients. Under his guidance, Dr. Edward Jackson received an excellent early training, which bore fruit in his successful career at University College, London, as also later in life. Whilst a student in London, besides other class prizes, he obtained the Fellowes Clinical Gold Medal of University College, and the Silver Medal for Materia Medica at the Apothecaries' Hall. In 1851 he graduated as M.B. of the London University, and subsequently, in 1853, became a Member of the London College of Surgeons. Shortly afterwards he commenced practice in Sheffield, where he rose rapidly in the esteem of his professional brethren and the public, and soon came to be looked on as a leading man in the department of medicine—that of midwifery and diseases of women—to which he more especially devoted himself. In 1864 he took an active part in the founding of the Sheffield Hospital for Women (now known as the Jessop Hospital), and no one was more delighted than he when, through the noble generosity of the late Mr. Thomas Jessop, the charity was at length firmly established in the

permanent and extended form it now presents. Up to the last, Dr. Jackson discharged the duties of surgeon to the hospital with unflagging zeal and ability, and few things in connexion with his removal from Sheffield caused him more regret than being compelled, by failing health, to relinquish a work in which he had been so long and usefully employed.

Like many other earnest and modest workers, Dr. Jackson published very little, his chief contributions being Operations for Vesico-Vaginal Fistula (THE LANCET, 1861) and Four Cases of Ovariectomy (THE LANCET, 1868); but he was amongst the first and most successful operators in the south of Yorkshire when, some twenty-five or thirty years ago, the operative treatment of pelvic disease in women was entering on that rapid development which it has since attained.

In private life Dr. Jackson was of domestic and retired habits. Though much esteemed by the public and by the profession to which he belonged, his intimate friends were few in number. Those, however, who knew him well loved him for his kindness of heart, his loyal character, and his steady unflinching friendship.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At meetings of the Court of Examiners held last week, the following were admitted Fellows of the College:—

Michael Francis Macnamara, Army Medical Staff; Edwd. Wolfenden Gray, Army Medical Staff.

UNIVERSITY OF OXFORD.—The Visitation Board having declared the Linacre Professor of Human and Comparative Anatomy to have become disabled for the performance of the duties of his office, a Deputy-Professor to perform those duties will be appointed at an early date. The appointment will be made for one year from Jan. 1st, 1889, and the salary will be at the rate of £500 a year.

PROPOSED HOSPITAL IN MOSCOW.—The Municipal authorities of Moscow have voted a large sum of money towards the establishment of a hospital for incurables as a thank-offering for the escape of the Czar on the occasion of the late railway disaster.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.—It was announced at the quarterly court of governors last week that the silver *filix* held in July at the Danish Exhibition had resulted in a benefit to the charity to the amount of £4088 18s. 3d.

GUY'S HOSPITAL.—The governors of this institution announce that by the liberal response to their appeal for funds, amounting to £97,000, they have been enabled to make an appreciable increase to the 400 beds to which the hospital was reduced. Thus encouraged, they hope by further public generosity to accomplish the utilisation for the sick and suffering of the total number of 600 beds which the institution can accommodate.

FOOTBALL.—Major Marindin, C.M.G., presided at an important Commission of the Football Association, held at Nottingham last week. It was resolved to issue a circular urging referees and umpires to rigorously enforce penalties upon players for breaches of the rules by violence, and to request the club committees to prevent improper demonstrations by spectators at matches.—At Carlisle last week, while the Maori football team was playing a match, one of the players had the small bone very near his ankle broken.

UNIVERSITY OF EDINBURGH.—The following bursaries and prize are officially announced as having been awarded:—The Thomson Bursary, for the subjects of the preliminary examination, to Mr. Alfred Cowper; the Grierson Bursary, for the same subjects, to Mr. J. F. Carruthers; the Neil Arnot prize in natural philosophy, to Mr. H. S. W. Jones; the Grierson Bursary, for chemistry, botany, and natural history, was not awarded; the Grierson Bursary, for anatomy and physiology, to Mr. R. M. Horne; the Grierson Bursary, for materia medica and pathology, to Mr. George Wilkinson.

SUPERANNUATION.—Mr. John Sharman, late medical officer of the Norwood district and the schools, has been granted a superannuation allowance of £80 per annum.

FUNERAL REFORM.—The Home Secretary has appointed the 11th inst. for receiving the deputation of the Church of England Funeral Reform Association, which will be introduced by the Duke of Westminster, to ask for an inquiry by Royal Commission into the condition of cemeteries and modes of burial, with a view to further legislation, the consolidation, and simplification of the existing Burial Acts, and the abolition of the power of selling the right of burial in perpetuity.

THE SANITARY INSTITUTE.—The first ordinary general meeting was held on Nov. 22nd, Sir Douglas Galton, K.C.B., F.R.S., in the chair. The council reported the successful commencement of the institute. Nearly 500 members and associates had been enrolled, and the institute had before it a large field of useful work. The Duke of Northumberland was elected as president, and Inspector-General R. Lawson, LL.D., as treasurer. H.R.H. the Duchess of Albany has consented to become Patroness of the institute.

PRESENTATION.—On the 21st ult., in the presence of a large assembly, a portrait of Dr. M. de Bartolomé, the senior physician to the Sheffield General Infirmary, was hung in the library of the new Medical School. Mr. W. Favell, on behalf of the subscribers, stated that he presented the portrait not to Dr. Bartolomé personally, but to the School of Medicine, and requested the doctor to accept it as a tribute of regard and affection from his medical brethren. The portrait is said to be an admirable likeness, and a plate beneath it bears a suitable inscription.

THE NEW HOSPITAL AT VILLANOVA.—The opening of this institution took place on the 6th ult. The hospital has been entirely built by Verdi, the composer. It is a large building, and eligibly situated. There are two wings, one for each sex, with a separate ward for contagious cases. There is also a hydropathic establishment, and ample arrangements for the disinfection of linen and other sanitary purposes. An efficient staff of nurses and attendants is also provided. Verdi has deposited adequate funds for the future maintenance of the hospital. On the opening day twelve patients were admitted.

DUNDEE ROYAL INFIRMARY.—Arrangements have been made by the directors and medical staff to allow medical students to attend the Dundee Royal Infirmary. A prospectus has been prepared, which states that the infirmary contains 250 beds, with an annual average number of over 2000 in-patients, and an average daily residence of 150. During the year 1887-88 the in-patients were classified thus:—Medical, 1111; surgical, 797; fever, 151; total, 2059. This number includes 354 children, for whose treatment there is a special ward. In addition to these, 3650 patients attended the infirmary waiting-room, and 7478 were seen by the district surgeons at their homes.

NEW MORTUARY.—A new public mortuary and coroner's court, which has just been built by the vestry of the parish of Marylebone, from designs and under the superintendence of Mr. Saxon Snell, was opened on the 27th ult. by the Bishop of London. The buildings, which are situated in Paddington-street, opposite the old St. Marylebone burial ground, are arranged in three blocks, and consist of a spacious mortuary, a post-mortem room, and viewing lobby arranged after the style of the Paris Morgue, and a commodious room arranged for the coroner's court. Rooms for a caretaker have also been provided, and an apartment has been set aside for use as a chapel. The contract for the building amounted to £3131.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At a very largely attended meeting of the Society held on the 8th inst., Dr. Edward Macmillan of Pollokshields was unanimously elected for the ensuing year as the first representative of the Society on the Board of Governors of the new Victoria Infirmary, now in course of construction at Queen's-park. The privilege of annually electing one of the Board of Governors has been extended to this Society, in recognition of the very important part taken by its

members in originating and promoting the scheme for additional hospital accommodation in the south side of the city. In the year 1866, the late Dr. Rice first drew attention to the want of a hospital for that district in the course of a paper he read to the Society on Hospital Accommodation. About five years afterwards the matter was taken up by Dr. A. L. Kelly, and in 1878 the movement to promote a scheme for a new infirmary took a more definite shape at the hands of Dr. Duncan and the other members, when a committee was appointed and a subscription list started.

THE Worshipful Company of Goldsmiths have generously granted a donation of £50 towards the funds of the Deaconesses Institution and Hospital, Tottenham, which is in immediate and pressing need of further help.

ON Nov. 28th, a remarkable case of sudden death was reported at Felmingham, Norfolk. A man, after attending a meeting in the Primitive Methodist Chapel, walked home, sat down in a chair, and expired immediately. He appeared to be in his usual health when he left the chapel.

THE GENERAL HOSPITAL, BRISTOL.—This hospital was a few days ago in imminent danger of destruction. A fearful explosion occurred in the Bathurst Basin, which is in proximity to the hospital, by a naphtha ship being blown up. It naturally produced great consternation amongst the patients, numbering over 150. The wards for surgical cases were chiefly affected. By the activity of the medical staff and numerous helpers the patients were removed to places of safety as quickly as possible, and apparently without any ill effects beyond fright. The building has sustained considerable damage. A Government inquiry is being held as to the cause of the disaster.

ST. JOHN AMBULANCE ASSOCIATION.—The annual report, just issued, of this Association contains full details of the continued extension of the movement among all classes of the community. Prominent in these records are the acceptance of the office of President by the Prince of Wales, and the closer connexion between the Association and the Order of St. John, formed by its constitution as the "Ambulance Department" of the Order. New centres, at home and abroad, have been formed; in addition to which 596 "detached classes" have been held during the year, and 22,181 certificates awarded, making a total of nearly 150,000 certificated pupils. The "Invalid Transfer Corps" continues its useful work by the removal of invalids to any distance, either at home or on the Continent.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Brighton Hospital Sunday collection this year, after deducting expenses, amounted to £1622 4s. 7d., of which the County Hospital has received £888 5s., the Dispensary £209 19s., the Children's Hospital £226 2s., and the West-street Institute £137 5s. 6d.—The collections of the railway workmen at Forth goods station, Newcastle and district, on behalf of the medical charities, have, during the present year, amounted to £94 1s. 6d., which has been distributed as follows: Royal Infirmary, £40; Newcastle Dispensary, £18 18s.; Hospital for Sick Children, £10 10s.; Hospital for Diseases of the Chest, £5 5s.; Eye Infirmary, £8 8s.; Gateshead Dispensary, £2 2s.; and Whitley Convalescent Home, £8 18s. 6d.—The football match given by the Strand-road shopkeepers, in aid of the Bootle Borough Hospital, realised a net profit of £7 12s. 1d., which has been handed over to that institution.

PRACTICAL PLUMBING.—At a great meeting held on the 27th ult. at the Lambeth Polytechnic Institute, Ferndale-road, the Lord Mayor said that in going through their workshops he was delighted beyond measure to find that they had a class for practical plumbing. There was no greater need at the present day than the need for a knowledge of sanitary science. One of the livery companies of the City (the Plumber's Company) had started a system of registration for plumbers, and at the last examination twenty out of thirty were rejected. It might be asked, Why should plumbers be registered? He would say, Why should chemists be registered? The object was that they might not poison their neighbours. But where a chemist poisoned one man had plumbing poisoned fifty. Therefore he said, Go on with your plumbing classes and with your technical schools, and the probability is that you will greatly improve the condition in which you live.

MEDICAL NOTES IN PARLIAMENT.

Public Health Acts Amendment (Building in Streets) Bill.

In the House of Lords, on the 27th ult., Lord Basing moved second reading of this Bill, the object of which was, he said, to confer on municipal authorities to prevent houses being brought forward in such a way as to mar or interfere with the frontage of streets. Bill was read a second time.

Vaccination.

In the House of Commons, Mr. Ritchie, in reply to Mr. Ptolem, that he was in communication with the coroner respecting the case Elizabeth Murray, of Southport, who was vaccinated on Oct. 22nd died on Nov. 3rd. He had directed inquiries to be made into the case of Mary Wood, of New Humberstone, Lincolnshire.

Juvenile Criminals.

On Thursday, in reply to Mr. Fowler, the Home Secretary said that there were on the 31st of March last in prison about 220 juvenile offenders, of whom about 100 were over fourteen years of age. depositions in the cases of all juvenile offenders were examined by self, and the children were not detained in prison except with approval.

BOOKS ETC. RECEIVED.

CHURCHILL, J. & A., New Burlington-street, London.

Clinical Lectures on Diseases of the Urinary Organs. By Henry Thompson. Eighth Edition. 1888. pp. 470.

Humboldt Lectures on Tension, as met with in Surgical Practice. Inflammation of Bone, and on Cranial and Intracranial Injuries. By Thos. Bryant, F.R.C.S. 1888. pp. 146.

Recent Materia Medica: Notes on their Origin and Therapeutic Use. Third Edition. By F. Harwood Leach, F.R.C.S. 1888. pp. 32.

DOIN, OCTAVE, 8, Place de l'Odéon, Paris.

Le Crachat dans ses Rapports avec le Diagnostic, le Prognostic, le Traitement des Maladies de la Gorge et des Poumons. Traité et annoté par le Dr. Léon-Petit, précédé d'une préface par le Professeur Grancher. Avec 34 planches chromo-lithographées hors texte. 1888. pp. 144.

LEWIS, H. K., 136, Gower-street, London, W.C.

The Pathology and Treatment of Displacements of the Uterus. By Dr. B. S. Schultz. Translated from the German by J. Macan, M.A., M.R.C.S., and edited by A. V. Macan, M.D., M.Ch. With 120 Illustrations. 1888. pp. 378.

MASSON, G. Paris.

Mémoires de Chirurgie. Commotion, Contusion, Tétanos, Syphilis et Traumatisme. Par le Dr. A. Vernieuil. 1888. pp. 297.

NISBET, JAS., & CO., 21, Berners-street, London.

"Norard of the Dogger," or Deep-sea Trials and Gospel Triumph. By R. J. Mather. With Illustrations. Thirteenth Thousand. 1888. pp. 370.

REMINGTON & CO., Henrietta-street, Covent-garden, London.

A Correlation Theory of Chemical Action and Affinity. By T. Wright Hall, M.D. 1888.

SPOTTISWOODE & CO., Gracechurch-street, London.

The British Pharmacopoeia, 1885. Reprinted 1888. pp. 636.

SMITH, ELDER, & CO., Waterloo-place, London.

Clinical Lectures and Essays on Diseases of the Nervous System. By John S. Bristow, M.D. Lond. 1888. pp. 403.

STENHOUSE, A., Hillhead, Glasgow.

Note-book for the Examination of Eye Diseases. 1888. V. Appendix of Formulae.

THE SPECTATOR COMPANY, New York and Chicago.

The Life Insurance Examiner. A Practical Treatise upon Medical Examinations for Life Insurance. By C. F. Stillman, M.D. 1888. pp. 187.

THE JOURNAL PRINTING WORKS, New-street, Birmingham.

Lectures on Ectopic Pregnancy and Pelvic Hematocoele. Lawson Tait, F.R.C.S. Edin. and Eng., LL.D. 1888. pp. 145.

VOSS, LEOPOLD, Hamburg and Leipzig.

Über die ophthalmic Migratoria (sympathische Augenentzündung). Von Prof. Dr. R. Deutschmann. Mit einer lithographischen Tafel. 1889. pp. 145.

WARD, LOCK, & CO., Salisbury-square, London, E.C.

The World's Inhabitants; or Man-kind, Animals, and Plants. G. T. Bettany, M.A., B.Sc., F.L.S. With about 900 Illustrations. 1888. pp. 340.

Die Theerfarben mit besonderer Rücksicht auf Schädlichkeit. Gesetgebung; von Dr. Th. Weyl. 1. Lieferung (Von August Hirwald, Berlin, 1889).—The Pirate's Hand, a Romance of Hercey, edited by C. Groves, with illustrations (Gilbert Dabiel, "Judy" Of 99, Shoe-lane, Fleet-street, London, E.C.), price 1s.—Revised List of J. Richardson and Company's Soluble Pearl-coated Pills. Medical Specialties, 12th edition, 1888, Friar-lane, Leicester.—Climat de Nice (Réponse à ses Détracteurs), par le Dr. M. O.

Médecin à Nice (Eug. Gauthier et Cie., 27, Avenue de la Gare, Nice, 1887).—Vorlesungen über Krankheiten der Harnorgane, von Prof. Dr. Robert Ulmann, 1. Heft. Mitgeteilt, von Dr. J. H. Brik (M. Breitenstein's Buchhandlung, Wien, 1888).—Studies in Pathological Anatomy, especially in relation to Laryngeal Neoplasms; by R. N. Wolfenden, M.D. Cantab., and Sidney Martin, M.D. Lond. (Churchill, New Burlington-street, London, 1887).—Medical Communications of the Massachusetts Medical Society, Vol. XIV., No. 11, 1888 (David Clapp and Son, 35, Bedford-street, Boston, 1888).—Index Medicus: Authors and Subjects, Vol. X., No. 10, October, 1888 (Trübner and Co., and Lewis, London).—The Scots Observer, a Record and Review, Nov. 24th, 1888 (Edinburgh: 9, Thistle-street), price 6d.—The Asclepiad, Vol. V., No. 20, 1888 (Longmans, Green, and Co., Paternoster-row, London), price 2s. 6d.—Paracelsus, the Reformer of Medicine; by Edward Berdoe, L.R.C.P. Edin. (Richard Clay and Sons, Bread-street-hill, London, 1888).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ABBOTT, F. G., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

ARCHER, E. G., M.R.C.S., L.S.A., has been appointed Medical Officer of the Methwold District, Thetford Union.

BOYCOTT, A. N., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

BRADSHAW, ROBERT, L.A.H., L.M.Dub., has been appointed Medical Officer of Health of the 10th District, Hexham Union.

BRISTOWE, H. C., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

BROOK, W. F., M.R.C.S., L.S.A., has been reappointed House Surgeon to St. Thomas's Hospital.

BUCKELL, ERNEST H., L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed District Medical Officer, and Medical Officer of the Work-house, Chichester Incorporation.

CALVERT, J. T., M.B. Lond., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

COOKE, C. W., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

COPPELAND, W. H. L., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

CRISP, E. H., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

DUNCAN, H., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

ECCLES, C. H., L.R.C.P., M.R.C.S., has been reappointed Hon. Resident House Physician to St. Thomas's Hospital.

FAWSETT, F., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

GUNN, R. MARCUS, has been appointed Surgeon to the Royal London Ophthalmic Hospital.

HARNETT, W. J., F.R.C.P., L.R.C.S.I., has been appointed Examining Surgeon to the Great Northern Railway Company, vice G. Dorning Childs, F.R.C.S., deceased.

HULBERT, H. H., L.S.A., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

HUME, WALTER, M.B., C.M. Edin., has been appointed Joint Medical Officer of the Jedburgh Union.

JAMES, C. H., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

LAW, W. G., M.B., C.M. Edin., has been appointed Clinical Assistant in the Special Department for Diseases of the Eye at St. Thomas's Hospital.

LUARD, H. B., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to St. Thomas's Hospital.

MALDEN, WALTER, M.A. Camb., M.B., M.R.C.S., has been appointed Medical Officer of the 8th District, Tonbridge Union.

MORGAN, JOHN H., M.A. Oxon., F.R.C.S., Surgeon to Charing-cross Hospital, has been appointed Surgeon to the Hospital for Sick Children, Great Ormond-street.

ORD, W. W., M.A., M.B., B.Ch., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

PRISTON, GEORGE, L.R.C.P. Edin., L.M., M.R.C.S., has been appointed Medical Officer of the 5th District, St. German's Union.

SEDDON, H. B., L.R.C.P., M.R.C.S., has been reappointed Assistant House Physician to St. Thomas's Hospital.

SPENCER, M. H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Eye at St. Thomas's Hospital.

THORNE, G. L., M.D. Aberd., M.R.C.S., L.S.A., has been appointed Medical Officer of the Cheriton Fitzpaine District, Cession Union.

WILSON, JOHN S., L.R.C.P. Edin., M.R.C.S., has been appointed Coroner for the Kiama District, New South Wales, and for the Colony generally, vice Connell, resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

DISPENSARY, Workshop.—Resident Surgeon. Salary £120 per annum, with rooms, coals, gas, furniture, and housekeeper.

GLoucester FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Assistant Medical Officer. Salary £100, out-door.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES, 32, Portland-terrace, Regent's-park, N.W.—Physician to Out-patients.

HOSPITAL FOR WOMEN, LONDON SCHOOL OF GYNÆCOLOGY, Boho-square, W.—Clinical Assistants in the Out-patient Department. Fee for course of three months, 5 guineas.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Registrar and Chloroformist. Salary £50 per annum.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, E.—Junior House Surgeon. Salary £80.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant. No salary, but board, lodging, and washing in the hospital. Also Resident Surgical Assistant. No salary, but board, lodging, and washing in the hospital.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon. No salary, but board and lodgings in the hospital.

STAFFORDSHIRE GENERAL INFIRMARY.—Assistant to the House Surgeon. No salary, but board and lodging.

SUNDERLAND INFIRMARY.—House Physician. Salary £80, rising £10 annually to £100, with board and residence.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

DENT.—On the 23rd ult., at St. Mary Abbot's-terrace, Kensington, W. the wife of Harry L. R. Dent, M.B. Lond., of a son.

DUNDAS.—On the 26th ult., at Litcham, Norfolk, the wife of Mr. Dundas, M.R.C.S., &c., of a daughter.

HASLAM.—On the 23rd ult., at Mecklenburgh-square, the wife of W. D. Haslam, M.D., of a daughter.

MARSH.—On the 26th ult., at Grasmere, Rotton-park-road, Edgbaston, the wife of F. Marsh, F.R.C.S., of a son.

POPE.—On the 24th ult., at Grosvenor-place, Newcastle-on-Tyne, the wife of Charles Pope, L.R.C.P. and S. Ed., South Shields, of a son.

SPROTT.—On the 14th ult., at Netherleigh, Beeston, Nottingham, the wife of W. J. Sprott, M.D., of a daughter.

SQUANCE.—On the 15th ult., at Beaulieu-terrace, Sunderland, the wife of T. Coke Squance, M.D., F.R.M.S., of a son.

MARRIAGES.

MASON.—FOSTER.—On the 21st ult., at the Parish Church, Emsley, Francis J. G. Mason, M.R.C.S., son of R. Mason, F.R.C.S., of Woolwich, to Mary Theodora, daughter of Major F. A. Foster, late B. M. Artillery.

MINNS.—PEARSON.—On the 27th ult., at All Saints' Church, Sheffield, by the Rev. J. B. Draper, Vicar of Strensdale, York, assisted by the Rev. H. Shaw, Vicar, Alban Glasier, Minns, L.R.C.P. Lond., &c., of Thetford, Norfolk, to Emily, third daughter of the late John Pearson, Esq., of Hall Carr House, Sheffield.

MOFFAT.—MACLEOD.—On the 21st ult., at Greenock, by the Rev. John Barclay, John Gay Moffat, M.B., C.M. (Edin.), Keighley, son of the late Robert Moffat, M.D., &c., of Falkirk, to Bella Munro, youngest daughter of the late John Macleod, I.R., Alness, Ross-shire.

WOOLLETT.—MACKAY.—On the 21st ult., at St. Mary's Church, Horseferry-road, Westminster, Charles Jerome, M.R.C.S., L.R.C.P. Lond., eldest son of the late John Moore Woollett, Surgeon, Monmouth, to Dorothy, daughter of John Mackay, of Brom, Sutherland.

SHARPE.—VAUGHAN.—On the 22nd ult., at St. Paul's, Camden New Town, Cyril Herbert Sharpe, L.R.C.P., L.R.C.S. Edin., of Langley, Worcestershire, to Amy, second daughter of the late James Vaughan, of Filzroy-square, W.

THOMAS.—HETHERINGTON.—On the 21st ult., at St. Andrew's, Hillingdon, David Thomas, F.R.C.S. Eng., to Charlotte Elizabeth, third daughter of George Hetherington, of Cumberland Lodge, Uxbridge.

DEATHS.

CHALK.—On the 21st ult., William Oliver Chalk, M.R.C.S., L.S.A., of Nottingham-terrace, Regent's-park, and Norwood-green, Middlesex.

COWHERD.—On the 25th ult., at his residence, Stoneydale, near Cartmel, Grange-over-Sands, James Cowherd, M.R.C.S., L.S.A., F.L.S., formerly of Kendal, Westmoreland, in his 77th year.

FURNIVALL.—On the 6th ult., drowned while bathing on the coast of Barbadoes, Bryan Furnivall, M.B. Lond., L.R.C.P., aged 26.

GREENHOW.—On the 22nd ult., suddenly, Edward Headlam Greenhow, M.D., F.R.S., of Reigate and London, aged 73.

THOMPSON.—On the 13th ult., at Humberstone-gate, Leicester, Charles Thompson, Esq., M.D., aged 80.

WOOSAM.—On the 27th ult., at Tyn-y-graig, Bullh, Breconshire, Richard Woosam, Surgeon retired H.M. Bombay Army, aged 73.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, December 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
 ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
 ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—8 P.M. Dr. Mitchell: Some Suggestions on Metal Cap Crowns. Casual communications by Mr. Bland Sutton and Dr. St. George Elliott ("Copper Amalgams"). An exhibit of a series of Accumulators and other Electrical Apparatus.
 SOCIETY OF ARTS.—8 P.M. Capt. W. de W. Abney: Light and Colour. (Cantor Lecture.)
 MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Knowsley Thornton: Some additional cases illustrating Hepatic Surgery.—Dr. Savage: Puerperal Insanity of Septic Origin.

Tuesday, December 4.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.
 PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. A Debate on the Pathology of Chronic Alcoholism will be opened by Dr. Payne. Drs. G. Harley Beale, Savage, and others will take part in the discussion. Specimens illustrative of the subject will be shown. Dr. Stephen Mackenzie will show an unusual case of Localised Symmetrical (Edema (living specimen).

Wednesday, December 5.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
 OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Dr. Herman: On the Effects of Glycerine on the Quantity of Secretion poured into the Vagina.—Mr. C. B. Lockwood: Obliteration of the Central Canal of the Spinal Cord in the Early Human Embryo.—Dr. Herman: Sequel to a case of Bright's Disease during Pregnancy.
 SOCIETY OF ARTS.—8 P.M. Mr. Henry Edmunds: The Graphophone.

Thursday, December 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
 THE SANITARY INSTITUTE (Parkes Museum, 74A, Margaret-st., W.).—5 P.M. Sir Douglas Galton: The Future of the Amalgamated Societies, the Parkes Museum, and Sanitary Institute of Great Britain.
 HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. Cheadle: The various Manifestations of the Rheumatic State as exemplified in Childhood and Early Life.

Friday, December 7.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, December 8.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 29th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Nov. 28	30.23	W.	54	51	..	58	50	..	Overcast
" 24	30.11	W.	54	50	..	58	50	..	Cloudy
" 25	29.99	S.W.	56	53	..	57	52	..	Cloudy
" 26	29.60	W.	48	47	77	53	47	49	Overcast
" 27	29.38	S.W.	51	50	..	54	47	07	Cloudy
" 28	29.48	S.W.	43	42	..	47	42	19	Foggy
" 29	29.36	S.E.	46	45	..	..	42	31	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors." Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

SKIN HOSPITALS.—APPEAL TO THE BENEVOLENT.

LORD CARMARTHEN writes to the *Morning Post* to plead for the London Skin Hospital, Cranbourne-street, Leicester-square. Surely, we have too many of these special hospitals, and especially so now that in every general hospital there is provision made for the treatment of skin cases. We advise the benevolent public to send their contributions to the great and tried hospitals, which are sadly in need of help.

W. L. A.—It was Karl Vogt who, when still a young man, declared that every University professor on completing his sixtieth year ought to retire from his chair. But Vogt celebrated his professorial jubilee in 1887, when all Geneva joined in congratulating him on being so hale a septuagenarian, and so fit to hold the Chair of Natural History in her University, the fame of which he still enhances.

Mr. Thos. A. Buck, M.B.—We are reluctant to insert a correspondence so incomplete. We may do so if Mr. Buck, after further efforts in the kindly spirit which is not absent in the letter sent us, still fails to elicit a friendly answer to a reasonable inquiry.

Fidelis.—THE LANCET, Feb. 24th, 1888, and three following numbers, March 31st, April 14th and 21st.

CASE OF INSANITY FROM OPIUM-POISONING.

To the Editors of THE LANCET.

SIRS,—Dr. Sutherland's paper in your issue of the 17th inst. contains a miscalculation. One grain of opium is contained in 144 minims (nearly) of tinct. opii, not in 40 as stated. The three drachms of laudanum would therefore contain over twelve grains, and the two one-grain morphia pills being equivalent (as is usually reckoned in practice) to eight grains, the daily dose purchased at each chemist's amounts to twenty grains instead of eight.

I am, Sirs, yours faithfully,

Shoot-up-hill, Nov. 16th, 1888.

ALFRED R. HALL.

"We forwarded a copy of the above note to Dr. Sutherland, who writes as follows:—"Dr. Hall is quite right. There was obviously an error in the calculation of the strength of the laudanum; but this fact really makes the case stronger, as it proves that a larger quantity of opium was taken than would appear from my article in THE LANCET of Nov. 17th. The fact that the patient recovered after the cautious administration of sedatives is sufficient proof that appropriate doses were given during the time she was under my care. I may add that I myself take fourteen minims of tinct. opii about once a year if I take cold, believing one grain to be a fair average dose."—ED. L.

LUXURY AND LAZARUS.

CANON FARRAR cannot understand the enormous sums spent on plate and dress and flowers, with Lazarus in the hospital, or rather not in the hospital because of wards closed for want of funds. Neither can we. Christmas is at hand, however, and perhaps Lazarus will come in for a little more consideration.

A Senior Assistant Medical Officer in a County Asylum.—Some such examination as that in psychological medicine founded by the Medico-Psychological Association is much needed, if only for the protection of medical practitioners; for at the time it was instituted many vexatious actions were being brought against the profession for alleged carelessness in filling up certificates in lunacy. It is true that the necessity for the study of mental diseases is not sufficiently recognised by the examining bodies; but until this is acknowledged there can be no more harm in the Medico-Psychological Association granting a diploma in mental diseases than there is in the Universities of Cambridge or Durham conferring licences in sanitary science. It cannot be said fairly that the Medico-Psychological Association are "enriching themselves at the expense of their junior brethren." Their fee for examination is £3 3s., as compared with £5 for the sanitary science licence of Durham. The examiners of the Association obtain a fee of £3 17s.—surely not a large sum for each examination. Should there be any profit on the fees from candidates, it will most likely be expended in improving the journal, or on some worthy object outside the Association, to the advantage of the insane, the public, or the profession.

Physician.—1. No.—2. "Loss of caste" is a strong expression; but men maintain the respect of their medical brethren by the use of titles strictly appropriate to their qualifications.

"THE PUNCTURE OF A VEIN IN HYPODERMIC MEDICATION."

To the Editors of THE LANCET.

SIRS,—In answer to the letter of Mr. Sidney Davies in your issue of to-day referring to the above, I have to say that the solution was not tested chemically, as there was nothing to indicate a necessity for so doing. The dry tartrate of morphia was dissolved by myself, and acted in a perfectly satisfactory manner on every other occasion both previously to the accident and subsequently. Moreover, the symptoms produced were exactly similar, though slighter, at another time and with a different specimen of morphia, when the needle was withdrawn before the full dose was given, and dark venous blood flowed from the puncture. I first mentioned the occurrence to one of the principal therapeutists, who kindly communicated with me on the subject. The symptoms were doubtless produced by the stimulant and irritant effect of the morphia acting directly on the brain and nerves of the heart.

I am, Sirs, yours faithfully,

Redbourne, Nov. 24th, 1888.

J. CRAIG BALFOUR.

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. Sidney Davies, in his communication in your last issue casts some doubts on the purity of the solution of morphia used by Mr. Craig Balfour, and which produced certain symptoms when by accident injected into a vein. The same accident once happened to me with similar symptoms, though fortunately not carried to such an extent, though the dose was very large, more than two grains of the acetate of morphia. I may say that the patient is accustomed to very large doses of morphia, once or twice having injected thirty grains of the acetate (five drachms of the solution B.P.)

I am, Sirs, yours faithfully,

Ipswich, Nov. 23rd, 1888.

JAS. NORMAN VOGAN.

EFFECTS OF STATIC ELECTRICITY AND LIGHTNING ON THE BODY.

DR. ROJDESTVENSKI of St. Petersburg, who has been carrying out a series of observations on the effects of static electricity on animals, finds that the death is, usually at least, due to the action on the cardiac muscle. In cases of death from lightning it is by no means always possible to demonstrate the existence of morbid changes in the nervous tissues. During the experiments with static electricity it was found that the greatest effects were produced when the animal was insulated. As to the electrolytic or chemical effects, Dr. Rojdestvenski regards them as having little, if any, relation to the fatal result.

Enquirer.—Mr. J. Bell's book, reviewed in THE LANCET of Nov. 17th. A little volume just published by Ward and Lock, entitled "Our Nurses, and the Work they have to do," by H. C. O'Neill and Edith A. Barnett, would be of use.

THE CLIMATE OF SORRENTO.

To the Editors of THE LANCET.

SIRS,—I should be much obliged for information as to the suitability or otherwise of the climate of Sorrento for a phthisical patient.

I am, Sirs, your obedient servant,

Crail, Fife, Nov. 24th, 1888.

F. A. SAUNDERS, F.R.C.S. Ed.

"TREATMENT OF PRURITUS."

IN reply to the query by "M.D." on this subject, we have received a large number of communications, the gist of which we give below.

H. W. J. suggests that an undiscovered diabetes or inflammatory or cystic disorder of the cervix uteri will often render a pruritus vulvæ intractable. Barring these important causes, he should try the 50 per cent. ointment of ichthyol with lanoline.

Surgeon, presuming there is no gout or uterine disease, recommends a mixture containing sod. bicarb., mag. sulph., and inf. gent., to be taken three times a day in sufficient quantities to keep the bowels moderately open. Also the following lotion, to be applied on linen cloths three or four times a day:—R Liq. plumbi, 1½ drachm; pulv. boracis, 3 drachms; zinci oxid., 2 drachms; glycerine, 2 ounces; water to sixteen ounces. No alcoholic drink to be taken.

Mr. Henry Byley (West Brompton) has during a practice of thirty years found the disease yield to an outward application of the following:—Liq. plumbi, liq. op. sed. (Battey), ung. cetacei, and pure cream from the cow, of each one ounce. The ingredients must be well mixed and dispensed in a wide-mouthed bottle, to admit the fingers.

Mr. J. F. Bricot suggests a systemic examination of the external and internal organs of generation for tinea, animal or vegetable, vascular caruncle, and other possible sources of irritation within the vagina or rectum, and an examination of the rectum.

Dr. Thursfield (Leamington) asks if cocaine, either as a lotion or an ointment, has been tried. He suggests that the condition of the os and cervix uteri be ascertained, and that coffee be forbidden.

Mr. J. C. Balfour (Redbourne) suggests that relief may be obtained by bathing the parts with a solution of boracic acid in water, or a lotion composed of hydrochlorate of morphia, hydrocyanic acid, and water. Bromide of ammonium given at night as a sedative has also been found useful.

Mr. H. E. Rowell (East Rudham) suggests, if no cause for the disease can be found, great cleanliness, and a lotion containing glycer. boracis, 2 ounces; water to 6 ounces. He also observes that in the 1883 edition of the Universal Medical Sciences a sitz bath of hot salt water (from 1 to 5 p.c.) just before retiring and an ointment of cocaine oleate and lanoline to be applied twice a day, are recommended by Piffard.

Mr. Percy Newell (Ipswich) recommends a careful regulation of the diet and the use of vinolia. The following lotion is, he says, recommended by Dr. Atthill, in his work on Diseases of Women:—Acid. carbol., 20 grains; tinct. opii, 4 drachms; acid. hydrocyan. dil., 2 drachms; glycerine, 4 drachms; water to 4 ounces.

Mr. J. Wrixon (Watford) says that he has found the following prescription effectual:—Ung. plumbi, hyd. nit. ox., and acid. borac., of each 2 drachms; cocaine (1-30), ½ ounce; ft. ung. This is to be gently rubbed on night and morning for a month, and the parts bathed in a lotion composed of two teaspoonfuls of borax to a pint of cold water. A strong infusion of green tea is also useful.

R. W. W. suggests a trial of the following lotion:—Liq. ammon. acet., 1 drachm; acid. hydrocyan. dil., 1½ drachm; inf. tabaci to 8 ounces. The parts subject to irritation to be bathed two or three times a day. The inf. tabaci to be made by infusing sixty grains of bird's-eye tobacco in boiling water for a quarter of an hour.

Ision recommends vinolia, which, he thinks, will allay the irritation at once. The preparation is said to consist of zinc, antiseptics, &c.

Student.—Our correspondent puts forward most ably many of the well-known objections to the "old apprenticeship system," but there is nothing in his letter which has not been referred to in our previous articles and communications on the subject.

Dr. J. Roberts Thomson will see that the matter to which he refers is engaging the serious attention of the profession.

Liverpool.—The transaction cannot be regarded as satisfactory.

THE PUFF OBELIQUE.

To the Editors of THE LANCET.

SIRS,—In the *Barnet Press* of Nov. 10th appeared the following paragraph:—

Hearts of Oak Benefit Society.—The medical society has started under very favourable conditions, over twenty members having given in their names. The number will doubtless be largely increased when it becomes fully known that members can avail themselves of the skilful services of Drs. — and —.

As no disclaimer from these gentlemen has appeared it may be assumed that the above notice is not displeasing to them, even if they did not actually cause it to be inserted. I shall be glad to know what the profession think of this method of advertising their "skilful services."

I am, Sirs, yours obediently,

Nov. 21st, 1888.

A. B.

*. We should still expect the gentlemen alluded to in the paragraph to find some means of expressing their disapproval of the above advertisement, which we can easily imagine them to have been quite ignorant of till it appeared.—ED. L.

A CURIOUS STORY.

A CURIOUS story of twin brothers is at present going the round of the American press. The two, Erskine and Carmine Kemp, had for the past thirty-three years resided in the town of Stafford, Connecticut, the first-named, Erskine, being just thirty-six hours older than his twin brother, Carmine. Over the latter all his life he had absolute control, and, it is said, whenever one brother was ill the other would also become so. About three weeks ago it chanced that the brother who came into the world thirty-six hours before the other was taken ill with typhoid fever, and precisely thirty-six hours afterwards Carmine was stricken down with the same disease. Erskine succumbed to it, and all hope of saving Carmine's life was given up, until about thirty-six hours after his brother's death, when he rallied in a most unexpected way. From that moment he grew rapidly better, the latest tidings of the patient being that he is on the high road to recovery.

DELIRIUM RESEMBLING MANIA.

To the Editors of THE LANCET.

SIRS,—Will you kindly permit me to inquire through your columns whether any of your readers have encountered in cases of peritonitis the symptom noted by Mr. Keetley on page 1021 of your last issue—namely, "a curious kind of delirium resembling mania"? This exactly describes symptoms which I have recently observed in a case of peritonitis. My case, however, differs from that of Mr. Keetley in that no operation was performed, and in that the patient, a child aged three, had been treated by the external application of extract of belladonna and the internal administration of small doses of laudanum. But the condition persisted for some time after the discontinuance of the belladonna; nor could I in any way ascribe it to the opium.

I am, Sirs, your obedient servant,
Westgate-on-Sea, Nov. 27th. ALFRED F. STREET, M.D. Cantab.

EYE STRAIN.

THE feat of transcribing the *Iliad* in characters so minute as to admit of its being enclosed in a nutshell has just been surpassed by an *employé* in a paper manufactory at Podgora. This man, Cassoval by name, has written on one ordinary sheet of paper the entire "*Divina Commedia*" of Dante—a poem consisting of 14,233 verses, 96,000 words, and 400,000 letters. His transcript is quite legible under a strong magnifying glass, and is at present on view at Naples. Cassoval, whose eyesight has as yet betrayed no sign of impairment from the strain he has put it to, worked with the quill—the writing implement with which the Benedictine monks in the middle ages reproduced the manuscripts but for which so much of the ancient literature, sacred and profane, would have been lost to posterity.

Fred.—We can find no reason for believing the tenure of the office mentioned to be a disqualification for the post.

ANTI-PYRIN.

To the Editors of THE LANCET.

SIRS,—Among the manifold properties of the now much-vaunted antipyrin, I beg to add that of causing urticaria, accompanied by intolerable itching all over the body, and a very disagreeable sensation of uneasiness. I have experienced this effect in my own person, after a ten-grain dose for relief of headache. This is my third trial of it, and on each occasion the unpleasant effects mentioned came on in about ten minutes after taking the drug. On the two previous occasions they passed off in about half an hour. I have not seen any reference made to this fact before, and I should like to know what your readers have to say on the subject.

I am, Sirs, yours faithfully,
Knighton, Nov. 21st, 1888. JOHN J. STACK, L.R.C.P., L.R.C.S.I.

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COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. J. H. Aveling, London; Dr. Craghton, London; Dr. Whitelegge, Nottingham; Mr. Barwell, London; Mr. H. H. Clutton, London; Mr. Spence Watson, London; Dr. Hayes, Dublin; Mr. Godlee, London; Mr. Nelson Hardy, Dulwich; Dr. Sansom, London; Dr. S. Haughton, London; Dr. Stowers, London; Mr. W. L. Strain, Brazil; Messrs. Collins and Sons, London; Dr. A. F. Hawkins, Birmingham; Mr. Rowell, East Rudham; Dr. Czartoryski, Stockton, California; Messrs. Boobyer and Pryce, Nottingham; Dr. Squire; Mr. A. C. Pope, Tunbridge Wells; Mr. A. G. R. Foulerton, Chatham; Messrs. Deighton, Bell and Co., Cambs; Mr. J. Wallace, Bombay; Mr. Lynn, Charlton; Dr. H. Campbell, London; Mr. P. Butler, London; Mr. F. A. Saunders, Orail; Mr. P. Newell, St. Clements; Dr. T. J. Woodhouse; Mr. W. Macdonald, Leadhills; Mr. Keeling, Sheffield; Dr. Dobeb, Bourne-mouth; Dr. Buck, Ryde; Mr. Craig, Llandudno; Dr. McO. Robertson, Glasgow; Mr. Stack, Knighton; Dr. J. N. Vogan, Ipswich; Mr. J. C. Balfour, Redbourne; Dr. Jacob, Leeds; Mr. Ball, London; Mr. Ellis, Leicester; Mr. Meannell, London; Mr. Stokes, London; Dr. Erskine, Glasgow; Mr. Snell, Sheffield; Mr. Keely, Notts; Mr. Llewellyn, Somersham; Mr. Hine, Honiton; Dr. Murrell, London; Mr. White, Staffs; Mr. Lindon; Mr. McNab, Sterling; Messrs. Danielson and Co., London; Mr. H. Ryley, London; Messrs. Wood and Co., New York; Mr. Fuge, Taunton; Dr. Leatham, Liverpool; Mr. S. Snell, London; Dr. Kealy, Gosport; Mr. Butler-Smythe, London; Mr. J. A. Gordon, Birmingham; Mr. Wrixon, Watford; Dr. Young, Augusta, Maine; Mr. Norman, Skegby; Mr. Mudge, Pailinton; Dr. R. J. Lee, London; Mr. Oldham, Burton-on-Trent; Dr. J. R. Thomson, Bourne-mouth; Dr. J. F. Nicholson, Hull; Mr. Coles, London; Mr. A. B. Kelly, London; Mr. G. C. Harrison, Southport; Dr. J. Alexander, Pailinton; Dr. Fraser, Salford; Mr. Richardson, Hull; Dr. Street, Westgate; Dr. Adams, Kent; A Constant Reader; Enquirer; H. W. J.; J. H.; London; Ixion; Medicus, Manchester-square; P. M. J.; Southern Hospital, Manchester; H. L. M., Leeds; R. W. W.; Guardian; R. B., London; Surgeon; Ignoramus; Physician; P. B., Alpha, Sheffield.

LETTERS, each with enclosure, are also acknowledged from—Dr. Waters, Liverpool; Rev. A. J. D. D'Orsey, London; Messrs. Dale, Reynolds and Co., London; Dr. Frain, Newcastle-on-Tyne; Mr. Oliver, West Malling; Mr. Boon, China; Dr. Napier, London; Messrs. Roberts and Co., London; Mr. Hefferman, Salop; Messrs. Burgoyne and Co., London; Mr. Boyce, Salop; Mr. Lee, Leeds; Messrs. Hill and Co., London; Mr. Gosford, Durham; Mr. Nilleth, Cheshire; Mr. J. Cooke, London; Dr. Findlater, Norwich; Mr. Stenhouse, Glasgow; Dr. Thomson, Dalkeith; Mr. White, Haughley; Dr. Taylor, Birmingham; Mr. Hannah, Ashton; Dr. Adams, London; Mr. Laird, Birkenhead; Mr. Minns, London; Mr. Meffat, Keighley; Mr. Heywood, Manchester; Mr. Greaves, Salford; Dr. Rieley, London; The Whittington Life; Medicus, Salop; Clericus, Isle of Wight; Thompson, Leicester; Deaconess Townson, Cheshire; W. C., Blackburn; M. H., London; Surgeon, Edinburgh; M. A., London; J. T. T., London; Manager, Argyll Baths; G. L., Liverpool; C. B., Warrington; Medicus, Bolton; R., Birmingham; Medicus, Preston; M. D., Crewe; Clifford, Bristol; Diapason, London; G. D., London; H. W., Durham; Trobang, London; Beta, Manchester; Nil Desperandum, London; Alpha, London; Alpha, Edinburgh; T. D., Ireland; N. M., Lancs; T. H., London; X., Lonnun; Kensington, London; Western Medical School, Glasgow; A. G., London; Midland, London.

Sheffield Daily Telegraph, Glasgow Herald, Evening News, Herald and Weekly Free Press, The Cape Argus, Hertfordshire Mercury, Sydney Morning Herald, Reading Mercury, Western Morning News, Huddersfield Examiner, Observer and Chronicle for Hants and Dorset, The Star (Guernsey), The Scotsman, &c., have been received.

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Clinical Lecture

AMPUTATION STUMPS.

Delivered at the Middlesex Hospital, October, 1888,

By J. BLAND SUTTON, F.R.C.S.

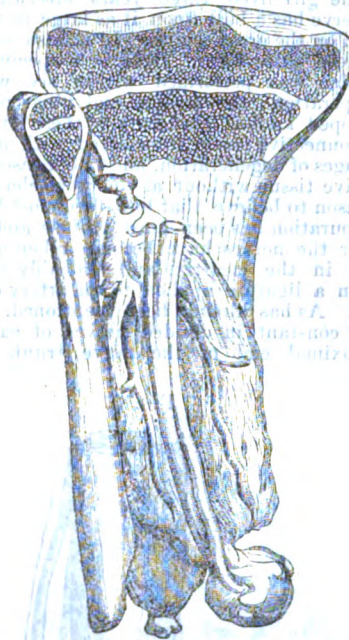
GENTLEMEN,—To-day I propose to bring under your notice some facts concerning amputation stumps for the following reasons. Recently I have had under my care an interesting and suggestive series of cases requiring amputation, in which the operations were not only successful in so far as the patients' lives are concerned, but successful in that I have been able to secure for each of them a useful stump. Three years ago, whilst assisting Dr. J. K. Fowler in preparing a printed catalogue of the pathological portion of our museum, we discovered that the series illustrating the anatomy of stumps was sadly defective. To remedy this, I have been accumulating specimens to illustrate the subject, several of which we will consider to-day. It is also a matter of regret that the text-books of surgical pathology fail to deal with the subject with the care its importance demands. This is much to be regretted, for most of you are aware that a troublesome stump will make life very miserable, and, in some cases, render it more unbearable than the disease for which the amputation was performed. It is impossible always to ensure a good stump. Many circumstances may intervene over which the most experienced surgeon can exercise no control; but it is the duty of every surgeon to make himself acquainted with the pathological anatomy of stumps in general. Mr. Bryant, in writing of stumps, says: "Many of the most promising stumps after an amputation often turn out badly, whilst the least promising end well." Further on he writes: "It is quite certain that bad dressing may destroy the best stumps, and good dressing improve the bad."¹

I shall now proceed to discuss some of the more interesting specimens which are on the table before you; it will be convenient to commence with conical or sugar-loaf stumps. A conical stump is often seen after primary amputations through the thigh or arm, but is rarely seen in amputation through a joint, or in the leg or forearm, except in the case of children. In adults it commonly arises from the wasting of the tissues, especially if much muscular tissue was included in the flaps. Most stumps containing a single bone tend to become conical with time, but here is a specimen taken from a boy seven years old, who died of acute tuberculosis ten weeks after the operation; the cut end of the femur projects beyond the flaps, and for a distance of two inches is merely covered with an exceedingly thin layer of skin. In children conical stumps may arise from a very different cause, as the following case will illustrate.

Mary —, aged thirteen years, came under my care suffering from a painful stump. When two years of age she underwent amputation of the leg at the junction of its upper and middle third for injury. As she grew older the stump became painful, and at last so distressed her that she sought relief. I found the skin over the end of the stump red, tender, excessively thin, and the end of the tibia, which was pointed, nearly through the cicatrix. Amputation was performed at the knee joint by the method known as Stephen Smith's; the semilunar cartilages with the patella were left. The whole of the incision united by first intention except where the drainage tube was inserted, and speedy convalescence was looked for. Seven days after the operation the stump became painful, swollen, and tender. To put it briefly, my little patient had an acute synovitis of the knee joint. This was treated by drainage, and she has now an excellent stump, all parts of the joint being preserved except the top of the tibia. The anatomy of the original stump is shown in Fig. 1. The tibia and fibula are united near their extremities by a broad osseous band; the ends of the bones are blunt points. The posterior tibial nerve terminates in a very large bulb, and was involved in the cicatrix. On bisecting the head of the tibia and fibula each epiphysal line was found normal in every respect.

The cause of the stump becoming conical in this case is obvious; growth had continued at the epiphysal lines, and gradually pushed the sharp ends of the bones through the thin tissue of the cicatrix. Most surgeons can recall similar conditions. Mr. Bryant mentions the case of a boy aged

FIG. 1.



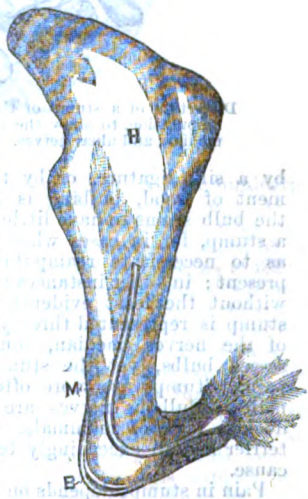
Dissection of a stump, showing epiphysal lines and bulb on posterior tibial nerve.

seven years, whose leg was amputated. Subsequently on two occasions, at intervals of three years, it became necessary to remove a piece of the tibia an inch long; the tibia grew faster than the fibula, so that at the second operation the fibula required no shortening.² So troublesome is this condition

after amputation through the tibia in children that I think it better practice to remove the leg at the knee. Conical stumps from continued growth at the epiphysis only occur in the arm and leg; the tibia, fibula, and humerus increase in length from their proximal epiphyses; whereas the radius, ulna, and femur depend mainly upon their distal epiphyses. So many cases are known in which after amputation through the arm in childhood it has been necessary to remove portions of the humerus in consequence of continued growth at the epiphysis, that it would be justifiable to intentionally injure the growing line at the time of the amputation.

The pain and tenderness of which this patient complained were owing mainly to the large bulb on the posterior tibial nerve. These curious bulbs are constant

FIG. 2.



Stump of the arm of a culture after amputation. H, Humerus. M, Median nerve with bulb. B, Bursa.

structures in stumps after amputation in the human subject; they also occur in the lower animals after accidental ablation of the limbs by traps, guns, or bites from other animals, but are far less constant than in man. I had dissected a great many specimens before finding one with bulbs upon the nerves. A good specimen is represented in Fig 2; it is the

¹ Practice of Surgery.

² Ibid.

humerus of an Egyptian vulture which was broken, and subsequently amputated. A year afterwards the bird died; on dissecting the stump the median nerve was found bulbous.

As far as I can ascertain, these nerve bulbs bear no constant relation to the size of the nerve trunks. Here is a stump after amputation through the upper third of the thigh. The girl lived three years afterwards, and the saphena nerve has a bulb upon it as large as the one which has formed on the great sciatic. It is also surprising how rapidly these bulbs form. Here is a specimen in which reamputation was performed within six weeks of the original operation; the median and ulnar nerves present well-developed knobs. Structurally these bulbs are composed of connective tissue intermixed with nerve fibres in various stages of degeneration, and in old cases they consist of connective tissue without any nervous elements. There is good reason to believe that bulbs are most likely to form where suppuration has been most profuse and healing long delayed, or the nerves have become adherent to bone or bound up in the cicatrix, and probably in some cases included in a ligature applied to an artery on the face of the stump. As has already been mentioned, bulbing is by no means constant in divided nerves of cats and dogs. If the proximal end of the nerve trunk be irritated

the nerve been shortened at the time of the amputation. When pain in a stump is due to pressure upon a nerve or a bulb, it is usually spasmodic in character, and likened by intelligent patients to an electric shock. In addition to the above-mentioned causes, pain, intense in character and spasmodic, is often experienced even after reamputation has been performed, or the enlarged end of the nerves excised for its relief. In such cases the pain is to be attributed to a subacute or chronic neuritis, which induces sclerosis of the nerves, but on this matter we require more positive knowledge.

It is not my intention to deal at any length with the delusions patients experience after amputation. As yet I have only found one person who did not experience sensations referable to the absent member, and this was the little girl whose stump is represented in Fig. 1. Her immunity from such delusions may be attributed to the fact that her leg was amputated at the early age of two years. In order to test this point I made the following examination. With a mild faradic current I gently stimulated the skin of the thigh and evoked sensations referable only to the stump; suddenly and without any warning I increased the current, and applied the electrodes over the course of the great sciatic nerve; instantly she experienced pain in the great toe of the missing foot, a toe she never remembered to have

FIG. 3.

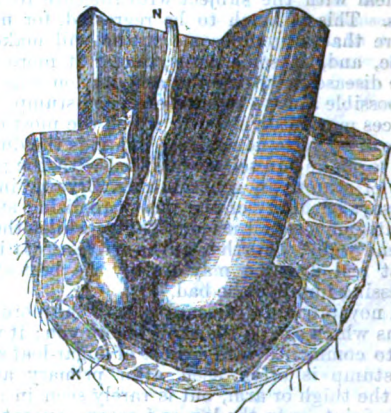


Dissection of a stump of the forearm three years after amputation, to show the bulbs on the musculo-spiral, median, and ulnar nerves.

by a silk ligature, or by the insertion of a small fragment of wood, bulbing is sure to follow. The size of the bulb seems to have little influence on the pain felt in a stump, for in cases where the pain has been so severe as to necessitate reamputation only small bulbs were present; in other instances exceedingly large bulbs existed without the least evidence of pain. Thus in Fig. 3 a stump is represented three years after amputation. Each of the nerves (median, musculo-spiral, and ulnar) possessed bulbs, yet the stump was absolutely devoid of pain. Stumps are more often painful in females than in males. Bulbous nerves are often very sensitive in the docked tails of mammals. My favourite black and tan terrier has an exceedingly tender caudal stump from this cause.

Pain in stumps depends on other conditions than bulbous nerves. I would strongly recommend you, when performing an amputation, to bear in mind this brief axiom—*shorten the nerves*. Its importance may be illustrated by the specimen shown in Fig. 4. It is a stump removed three years after the original amputation on account of intense pain. The ends of the tibia and fibula are much enlarged, rounded, and covered with dense fibrous tissue. They project into a large bursal sac; lying on the floor of this bursa is the posterior tibial nerve. Whenever pressure was applied to the stump this nerve would be squeezed between the end of the fibula and the cicatrix. It is difficult to estimate how much pain this girl would have been spared had

FIG. 4.



Dissection of a stump with a large bursa surrounding the cut ends of the tibia and fibula. N, the anterior tibial nerve; X, the posterior.

perceived mentally or physically. Interesting as such questions are, time will not permit us to pursue them to-day. Those interested in this matter should read the concluding chapter of Weir Mitchell's admirable work on the Injuries of Nerves.

We will briefly consider the bursæ which form in relation with stumps. The one shown in Fig. 4 is exceptionally large. In some specimens they seem to form independently of pressure, probably from traction exercised by muscles involved in the cicatrix. In the case of the vulture (Fig. 2) this could be demonstrated, for the triceps was adherent to the bursal wall, and when the muscle was made tense the cicatrix moved on the end of the bone. Though bursæ at the end of a stump are common, they are far from constant, and are most frequently seen in leg and thigh stumps.

We will now consider the bones. After an amputation the bone or bones in the stump are liable to several pathological changes. As a rule the bones atrophy, and the ends may become thin and pointed. The medullary canal in old stumps is closed by compact tissue due to ossification in membrane. When the bone retains the original size, it becomes extremely thin and delicate; the interior is filled with diffuent medulla. When the operation has been conducted through the middle of the thigh, especially in young subjects, the bone undergoes a curious change. As you all know, the angle which the neck of the femur forms with the shaft is greatest in the young, and diminishes with advancing years. Mr. Pollock³ has recently shown that in thigh stumps this angle resumes the infantile proportion, and in some cases actually

³ Med. Chir. Trans., vol. lxxix., p. 275.

exceeds it. Thus, in this specimen (Fig. 5) the dotted line indicates the angle normal for the age of the patient who possessed this stump. Professor Humphry has described a specimen of this nature in the Cambridge Museum, in which the angle is equal to about 150° . Roughly, the angle at birth is about 140° , and in the adult about 130° . No satisfactory explanation has yet been offered to account for this change. Before leaving this specimen I would draw your attention to its distal end. You will notice that it presents a deep groove or furrow. During life this piece of bone below the groove had necrosed and was in process of separation. A piece of dead bone at the end of a stump is often called a sequestrum; now you must bear in mind that a piece of dead bone is not a sequestrum unless it is sequestered by living bone or an involucrum. Dead bone at the end of a stump is rarely sequestered; indeed it may project an inch or more beyond the flaps, reminding one of the unicorn's horn. The separation of such pieces of dead bone is a tedious but interesting process, described in text-books as follows. When a piece of bone dies, it acts as an irritant upon the surrounding bone, sets up inflammation and ulceration, which form a groove between the dead and living bone—the line of demarcation. The furrow deepens until finally the dead bone loosens and falls away. This is surely not an explanation. It has been suggested that the line of demarcation is due to an excess of carbonic acid in the blood occupying the congested area of the periosteum, dissolving the lime salts and forming an acid carbonate; or that lactic acid is formed, which produces a soluble sarco-lactate. As a matter of fact, the furrow or line of demarcation is produced by the activity of the leucocytes. When a piece of bone dies, leucocytes crowd around the dead portion and attack and erode it by a process of cellular digestion. During the attack, all these furrows, bays, recesses, and tunnels, which are so conspicuous on the separated pieces of dead bone, are filled with detachments of leucocytes and giant cells, busily engaged in bringing about its separation.

FIG. 5.



Upper end of a femur from an amputation stump, to show the open angle formed by the neck and the line of demarcation due to the activity of leucocytes.

Among rarer conditions of the end of the bone in stumps is the formation of a large amount of granulation tissue, which may ossify and give rise to a rounded boss of bone. This is rarely the source of trouble or inconvenience, but it has been known to prevent the healing of a stump. Mr. Barwell⁴ reported such a case, which occurred after amputation in the middle of the

thigh. As the wound never healed, the stump was removed at the hip joint by Mr. Hancock; but the patient died.

Among other changes to which bones in stumps are liable fracture may be mentioned. It is a very rare accident, and up to the present time I have seen no example of it, but *apropos* of the subject the details of the following case may interest you.

Thomas —, aged forty, came under my care for fracture of the olecranon. The affected limb presented the malformation known as intra-uterine amputation. The arm was well developed, but the forearm, from the olecranon to the end of the small rounded projections resembling fingers, measured six inches. Whilst walking on a frosty day, he fell and broke the olecranon of the malformed arm. Though the limb was so deformed, it was to him exceedingly useful; in his occupation as a carman he utilised it for holding the reins and various other purposes. As he was extremely anxious that the fracture should unite, and the house surgeon found great difficulty in keeping the parts in apposition, I wired the fragments together ten days after the accident, with a very satisfactory result.

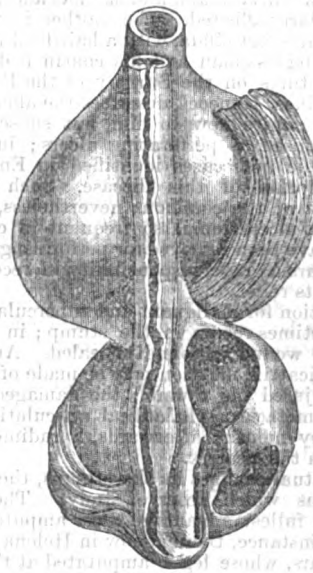
From the bones I will now direct your attention to the vessels. In old stumps the main artery or arteries, as the case may be, are usually found either as impervious cords or, if patent, greatly reduced in size. In the dissection

shown in Fig. 3 the brachial divided high in the arm; after the amputation a collateral branch seems to have enlarged and formed an arterial loop. In very exceptional cases the vessel in a stump may become the seat of an aneurysm. Gross⁵ briefly mentions the three following examples. The first case was reported by G. W. Smith, of Pennsylvania. It was an aneurysm of the brachial artery after an amputation of the arm, due to an injury inflicted on the artery by the knife during the operation. The second was reported by Warner in his "Cases of Surgery." An aneurysm formed three times on the brachial artery after an amputation; the artery was twice tied near the aneurysm; on the third occasion it was ligatured in the axilla and gave no subsequent trouble. The third case occurred to Delacour. An aneurysm formed on the posterior tibial artery and gave rise to repeated hæmorrhage; as the bleeding and pulsation could be arrested by pressure on the femoral, this artery was successfully ligatured.

Charters Symonds recently exhibited at the Pathological Society, London, a specimen illustrating this rare condition.⁶ It was an aneurysm which had formed at the end of a twisted artery after amputation at the knee joint; nine weeks after the operation the sac gave way, necessitating ligature above and below the sac. The patient recovered.

Aneurysmal varix occurs in stumps. The best known example is the oft-mentioned case recorded by Cadge, where,

FIG. 6.



An aneurysmal varix from a stump after amputation of the thigh. (After Dr. Robinson.)

after amputation at the ankle joint, a communication formed between the posterior tibial artery and vein. Gross refers to one which he saw in a "coloured" man aged twenty-four. After amputation in the lower third of the thigh, a mass formed in the stump as large as a fist; it pulsated violently and emitted a whirling sound. The femoral artery was ligatured, but on the sixth day hæmorrhage occurred at the situation of the ligature; the patient died exhausted three days later. Agnew⁷ has met with a somewhat similar case. It occurred in a negro boy who had undergone amputation in the lower third of the thigh three years before. An aneurysmal varix had formed on the stump. All the veins were varicose, pulsated strongly, and yielded the peculiar sound characteristic of this form of aneurysm. The last contribution to this subject is a specimen exhibited at the Pathological Society by Dr. A. Robinson.⁸ A man aged thirty-two years, whose thigh had been amputated sixteen years before, received a blow on the stump. When seen two weeks later the stump was painful and occupied by a pulsating tumour. The artery and vein were dissected out, and an aneurysm of the size of a small orange was found on the artery; the sac communicated with the dilated and varicose vein by a flap-like orifice. (Fig. 6.)

⁵ System of Surgery, sixth edition, vol. i., p. 530.

⁶ By an oversight the details of this interesting case are omitted from the Transactions.

⁷ System of Surgery, vol. ii., p. 320.

⁸ Path. Soc. Trans., vol. xxxix., and THE LANCET, Aug. 1888

⁴ Path. Soc. Trans., vol. xl., p. 199.

Ulceration of the cicatrix is another condition which interferes with the comfort of a stump, and not infrequently requires reamputation; in rare cases epithelioma has been known to attack such a scar. The most intractable ulcers are those which attack stumps after amputation has been performed for perforating ulcer. The details of the most extraordinary case I know may be agreeable to you. For an opportunity of examining the patient and obtaining the following particulars, I am indebted to my friend Mr. W. D. Wilkes of Salisbury. The history begins when the man, at the age of twenty-eight, was admitted into the Salisbury Infirmary, suffering from a disease we now recognise as perforating ulcer. By rest and treatment the sinuses were closed; this was in 1868. The ulceration recurred, and in 1873 he was readmitted into the infirmary for amputation of the right foot. Ulceration occurred on the other foot and in the stump. In the interval from 1873 to 1881 this poor fellow underwent seven amputations for recurrent ulcers—viz.: right ankle, 1873; below the knee, 1874; left ankle, 1875; right thigh, 1876; left leg, 1876; left thigh, 1880; and reamputation of the right thigh in 1881. Since this date he has scarcely ever been free from ulceration of the stump. I examined him in 1887, and found that he had occult spina bifida in the lumbar region, which was greatly obscured in consequence of the large size of the erector spinæ muscles, which had enlarged beyond the normal in consequence of the loss of the legs. This man's mother has suffered from perforating ulcer for thirty years, and she has another son and a daughter similarly affected. The mother is the subject of a typical occult spina bifida, with a hair-field in the loins. The case of the legless man and his cousin is described in Hancock's "Lectures on the Surgery of the Foot." In a letter to Mr. Wilkes, Hancock describes the affection of the foot as something quite new to him, but subsequently we find them recognised as perforating ulcers; indeed, they were probably the first cases identified in England with Nélaton's description of this disease. Such a case as this is quite out of the common; nevertheless, reamputation for recurrent ulceration is so frequent in cases where parts of limbs have been removed for perforating ulcer, that the operator incurs a grave responsibility in recommending amputation for its relief.

After amputation for malignant and tubercular affections the disease sometimes recurs in the stump; in some cases even before the wound is soundly healed. Among other changes in the cicatrix, mention may be made of the following. A man injured his thumb; the damaged digit was removed at the metacarpo-phalangeal articulation. When I saw him many months afterwards, a rudimentary nail had developed in the cicatrix.

Besides the actual changes in the stumps, there are associated conditions which deserve study. They may be observed to the fullest advantage after amputation at the hip joint. For instance, there is now in Helena ward a girl aged sixteen years, whose leg I amputated at the hip joint for peripheral sarcoma at the lower end of the femur. Immediately after the operation the pulse rate rose to 120 per minute; twelve hours afterwards the pulsations of the artery were so strong, and caused the stump to move so forcibly with each beat, that it was deemed prudent to control it with a bag containing one pound of shot. The pulsations remained of the same force and rate six days, then gradually declined, and in twenty days the artery could only be perceived as a mere thread. A high pulse rate seems to be an almost constant result of amputation at the hip joint; its duration varies greatly. When patients survive this operation even a few weeks, the circulatory system undergoes some important changes; the diminution in size of the femoral artery extends to the external iliac and involves the aorta, and the heart undergoes a marked diminution. These changes may be demonstrated within ten weeks of the operation. After amputation through the upper part of the thigh or at the hip the innominate bone of the corresponding side atrophies, becoming exceedingly light and porous. Professor Humphry has shown that this atrophy leads to a corresponding increase in the diameter of the pelvic inlet and outlet.

Among other remote changes following amputation, mention may be made of the atrophy of the nerve roots belonging to the nerves of the lost limb, and subsequent changes in the cord. I have been watching for an opportunity to dissect the brain from cases which have long survived amputation at the hip or shoulder, in order to examine the condition of the motor region of the cerebral

cortex, but as yet without result. Some of you may perhaps be able to assist me in this search. Thus far I have dealt only with the effects following amputation of limbs. I have been gradually collecting specimens illustrating amputations of organs: tongue, penis, testis, ovary, kidney, and the like. With such I intend to deal on a future occasion.

SPECIAL DIAGNOSIS IN ACUTE PERFORATIVE PERITONITIS.

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MEDICAL REGISTRAR TO ST. THOMAS'S HOSPITAL, AND ASSISTANT
PHYSICIAN TO THE ROYAL FREE HOSPITAL.

(Concluded from page 1067.)

PERFORATION of the appendix, being probably the commonest of the causes of secondary peritonitis, is apt to be too often diagnosed. In females diseased conditions of the right ovary or Fallopian tube may set up peritonitis which, from the continuity of the parts, closely resembles that due to appendix mischief. In the following case, which very closely resembled one of perforation of appendix, the history of previous similar attacks, together with a history of menstrual irregularities, made me suspect the ovary as the origin of the mischief.

E. C—, a nursemaid, aged twenty, was always a strong healthy girl until the end of January, when one night she was attacked quite suddenly with violent sickness and pain across the lower part of the abdomen. The attack was so severe as to suggest poisoning to those with whom she was living. The pain and sickness continued severe for a week, and then she gradually recovered. The attack occurred at a catamenial period. In March she was so well that she was able to take another situation, and she continued well till the beginning of June. She then had another attack of the same character as the first, and this attack also coincided with a period. She quite recovered from this, and on Aug. 22nd was able to walk fourteen miles without feeling fatigued. The catamenia, however, since the first attack had been very irregular; they had occurred about every week for some time, and had then ceased for two months, when on Aug. 27th she was again suddenly seized with severe abdominal pain and sickness, which continued till she was admitted to the hospital two days later. The pain was felt sometimes in the right hip, sometimes across the abdomen. Between the attacks she had not suffered from indigestion; in fact, she was able to eat anything. The attacks themselves were unlike those due to gastric ulcer from the situation of the pain. The patient presented all the symptoms of acute peritonitis. Pulse very rapid, 148; temperature 99.6°; abdomen tender, almost motionless during respiration, somewhat distended; dorsal decubitus, with legs drawn up; face anxious and dusky. The tenderness was most marked on the right side and over the right iliac fossa, where there was dulness and a distinct sense of resistance. There was nothing, I thought, to suggest ulcer of the stomach or duodenum. The history of the past attacks made affection of the appendix unlikely, although taken by itself the present attack had much in common with that disease. In the previous attacks constipation had not been a symptom, and purgatives had been given without harm to the patient; therefore I considered it very unlikely that the attack was due to strangulation by a band. The coincidence of the previous attacks and the present one with catamenial periods and the irregularity of the menses pointed, I thought, to disease of ovary or Fallopian tube. A suspicion of poisoning, due to the patient having said she would make away with herself, was dismissed because it did not agree with the symptoms of peritonitis. The case was treated medically on the usual lines, but the patient steadily got worse, and died five days after the attack came on. At the necropsy it was found that she had an abscess of the right ovary, which had probably ruptured and set up a very acute peritonitis with a large purulent effusion. A specially interesting point was the condition of the vermiform appendix. The inflammation had been specially acute in its neighbourhood, and until the abscess was found it looked as if the appendix had caused the peritonitis. On the other hand, perforation of the appendix may simulate perimetritis, and

suggest such to the obstetric physician, as in one of the cases in St. Thomas's Hospital Reports.

The following case is another illustration of disease of the ovary, giving rise to very acute symptoms.

One day this year I was asked by the resident accoucheur, Mr. Ballance, to see a patient, a young woman aged twenty-four, whom he had admitted to the obstetric ward on the previous day. She had been taken ill about two days previously. She was very ill when I saw her. Pulse rapid. Temperature 99°. Tongue much furred. The abdomen was much distended, and over the left hypogastric region there were resistance and dullness. The bowels had not been open since the attack, and she was frequently sick. I think there had been no sudden attack of pain, but rather a gradual onset of pain. I thought the case was probably one of internal strangulation; but the appearance of the abdomen and the condition of the patient were such as suggested acute peritonitis. I got Mr. MacKellar, who was in the hospital at the time, to perform abdominal section. When the patient was put under ether and the abdominal walls were relaxed, the case was clearer, for where the dullness and resistance were noticed before a tumour could be made out. When the abdomen was opened, some blood-stained fluid escaped. The tumour was found to be an ovarian cyst, twisted on its pedicle, and so become strangulated. The patient died two days later, but there was no peritonitis.

The following case I give as an illustration of the impossibility in some cases of making even a guess at a diagnosis of the cause. It is one where acute peritonitis was started by perforation of the gall bladder from an ulcer due to a small gall stone. Murchison mentions similar cases, where the perforation of the gall bladder occurred during enteric fever. The case was published in THE LANCET, p. 912, vol. ii. 1887, so that I may allude to it very briefly.

The patient was a single woman, aged twenty-three, who was suddenly seized with abdominal pain referred to just above the umbilicus, followed almost immediately by vomiting. The pain and vomiting continued for four days, and then she was brought to the hospital, where I saw her and sent her to the ward. She had then the symptoms of acute peritonitis. A catamenial period had just commenced. The catamenia had been regular, and there had been no dysmenorrhœa. She had not suffered from dyspepsia, and had never had any previous similar attack, although during the last two years she had had a series of illnesses unconnected with the abdomen. There was nothing, then, in the history to guide one to a diagnosis. There was none of the premonitory dyspepsia of latent gastric or duodenal ulcer, and the fact that it was already four days since the onset, made it unlikely, although not impossible, that there could be a perforation of any part of the intestinal tract except the appendix, for the peritonitis was a general and not a local one. The patient died eleven days after the occurrence of the acute onset, and the necropsy showed an acute peritonitis, with several pints of bile-stained fluid in the peritoneal cavity. It took quite an hour before the cause of the peritonitis was found to be perforation of a chronic ulcer of the gall bladder due to the presence of a small gall stone. This case not only illustrates how we are baffled in diagnosis, but also how, during life, it would have been wellnigh impossible for the surgeon to have attacked the lesion itself, even if he could have discovered it. The next the surgeon could do in such a case would be to make an abdominal incision, to wash out the cavity, and to drain. Volkmann's case, related by Wagner, shows that recovery may occur when nothing more is done.

As another example of a case where I think diagnosis was impossible, I may mention the following.

One evening my colleague, Mr. Battle, asked me to see with him a man, aged thirty-three, who had been admitted a few hours previously to a surgical ward for retention of urine. The man had been a total abstainer for four years. Until two days before, he had been perfectly well. He then thought he had caught cold, and took some sweet spirits of nitre. During the night he felt a sudden pain in the abdomen. Next morning his cold was worse; he had some slight shivering, pain across the abdomen, and he was unable to pass his urine. He came to the casualty department for this, and was seen by the dresser on duty, who drew off about twenty-four ounces of urine by catheter. The dresser took the man's temperature and found it to be 101.4°, but he did not consider he was bad enough to take in. The patient came again next day, saying he had passed very little urine during the last twenty-

four hours, and it was found that there was very little urine in the bladder. His temperature was then 103.2°. When I saw him his abdomen was distinctly tender, somewhat distended, and moved little with respiration; and his aspect and pulse also suggested peritonitis, but the history was difficult to reconcile with that, and gave no clue to a cause. I thought it possible it would turn out to be an appendix case. We thought the best thing to be done was to explore by means of abdominal section, and this Mr. Battle proceeded to do. On cutting through the transversalis fascia, however, the subperitoneal tissue was noticed to be very oedematous, and the fluid which escaped seemed to contain little bubbles of air. It was thought by some of the bystanders that the fluid had a distinctly urinous odour. This led Mr. Battle to think that extravasation had occurred, and so, instead of opening the abdomen, he performed Cock's puncture in the perineum. The patient died about twelve hours later. On making a post-mortem examination, I found a very intense peritonitis, with escape of liquid fæces into the cavity, and the cause of this had been a perforation in the small intestine, six inches from the ileo-cæcal valve. Five Peyer's patches in the neighbourhood of the valve were found to be ulcerated, but the floors of the ulcers were clean, smooth, and cicatrising. The perforation had occurred in the floor of one of these ulcers, and was as large as a threepenny piece. The spleen and mesenteric glands had returned to their normal size. The case was one of the late stage of enteric fever, and is interesting as showing how latent sometimes the symptoms of this disease may be.

I have purposely hitherto not quoted any but fatal cases, for they are the most instructive from the point of view of diagnosis. When a patient recovers, there is at present always a degree of uncertainty as to what has been the cause. I should, however, like to mention two cases which I saw within a week of one another, which had many points in common. They were both young women with a history of dyspepsia, and were both attacked under similar circumstances with acute symptoms. Both came to the hospital within an hour of the attack. In both there was the difficulty first as to diagnosis, and secondly as to treatment. One recovered with operation, the other without.

M. H.—, aged twenty-one, an unmarried woman, had suffered from pain after food and nausea, but without vomiting, for a few months, and had been treated two years previously for gastric ulcer at Westminster Hospital. She had never had hæmatemesis or melæna. A few hours before she was taken ill she had eaten fruit and mince pie. While out for a walk she was suddenly seized with violent pain in the epigastrium, faintness, shivering, and vomiting. She was brought to the hospital about an hour after the attack, having meanwhile been sick a second time. When I saw her, she was pallid, anxious, lying on her back, with the head bent forward and legs drawn up. Her pulse was 90, fairly strong; temperature 97.4°. There was much tenderness all over the abdomen, especially in the epigastrium, and there was very little movement on respiration, but no obvious distension; no hernia. The case seemed urgent, and, taking her history, together with her present condition, into consideration, it seemed not improbable that she had had a gastric ulcer which had perforated, and an exploratory abdominal section was decided on, which was performed by Mr. Makins. When the peritoneal cavity was opened, a small quantity of blood-stained serum and two or three flakes of lymph were found to be present, and the surface of one of the uppermost coils of intestine was red and congested. No perforation was discovered, although carefully looked for; and after washing out the cavity with warm water the opening was closed. The patient's recovery was tedious, but eventually she went out well.

The other case was E. C.—, aged twenty-five, a single woman, who had often suffered from vomiting after food, but not very recently. Once she had brought up a small quantity of blood. Bowels always constipated; catamenia regular, but always a good deal of pain and tendency to faintness during a period. She had taken mushroom soup to dinner about 2 o'clock on the day she was taken ill. At tea-time (5 o'clock) she had a feeling of fullness about the abdomen, but nothing more till about 8 o'clock, when, while out for a walk, she was suddenly seized with violent pain in the upper part of the abdomen. She was taken to a chemist, who gave her a draught which made her sick. She was admitted into the hospital

an hour later, exactly a week after the case I have just related. When I saw her she was very pallid, skin cold and damp, face anxious, and she lay on her back with the legs drawn up. The abdomen was tender in the upper part, but not more in one spot than another. Temperature 98°; pulse 100. Last catamenial period three weeks ago. Dr. Gulliver saw her soon afterwards, and it was decided to treat her medically. Next morning her temperature was 100° and the pulse 126. Abdomen moderately distended, more tender, almost motionless with respiration. For the next four or five days her temperature varied between 99·6° and 101·3°, and her pulse between 132 and 120. The abdomen remained distended for some days, and then both the distension and the tenderness passed off. The catamenia came on on the fourth day of the illness. She went out well in six weeks.

In neither of these cases can one say what was the nature of the attacks. That the second case had peritonitis seemed quite clear, but whether the course of the first would have been the same without operation we cannot tell.

I have time for only one more case in conclusion, and it also is a case where recovery took place without operation after apparent perforation.

E. B—, a married woman, aged thirty-six, was, on the night of Jan. 23rd, awakened out of her sleep with intense abdominal pain referred to the pit of the stomach, and followed almost immediately by vomiting. She continued to suffer from constant pain and frequent vomiting until she came to the hospital on Jan. 26th. From the beginning there was absolute constipation, the bowels being last open on the morning of the attack. The amount of urine she passed was also very scanty. Previously to this attack she had been quite well. Three years before this she had had a miscarriage, which was followed by abdominal pain and constipation, but no vomiting. This only lasted a few days, and there did not seem sufficient reason to suppose she had had pelvic peritonitis. She said she always had a tendency to constipation and flatulence with fullness of the stomach. When I saw her on the 26th she looked very ill, with sunken eyes, pinched face, and an anxious and distressed expression. Her tongue was dry and covered with a thick white fur. Her breath was fetid. Pulse 112, jerky, and compressible; temperature 100·2°. She lay on her back with the legs drawn up. The abdomen was somewhat distended, but not very much so, and there was no movement of its walls on respiration. There was great rigidity of the abdominal muscles above the umbilicus, but not below. There was tenderness all over the right side of the abdomen, most marked in the right epigastric region. The pain, starting from near the right costal cartilages, would dart across the left flank. There was resonance all over, except in the left iliac region, where there was dulness half way to the umbilicus. Dr. Ord, under whose care the patient was placed, came at once to see her, and brought with him Sir William Mac Cormac. Her condition was so bad that it was agreed that surgical interference would be unjustifiable, and, in accordance with Dr. Ord's directions, she was treated with morphia, a very small amount of nourishment being allowed by mouth, nutrient suppositories being given per rectum. For three days her condition remained very critical. She was comparatively free from pain, but the distension of the abdomen increased, and the pulse was rather more rapid, keeping up to 130. The constipation remained absolute until the 28th, when she passed a good deal of flatus. She only vomited once after the morphia was commenced. On the 30th the bowels acted of their own accord, and from that date there was continuous improvement. The abdomen gradually became soft and flaccid. I saw her nearly two years later, and she said she had remained perfectly well since. Her only trouble was occasional pain in the lower part of the abdomen. She had had no menstrual trouble either before or after her illness.

Now, what was the nature of this attack, and what would have been found had the abdomen been opened on the 26th? I do not think there can be any doubt that she had peritonitis, as was Dr. Ord's opinion at the time. The onset was characteristic of perforation. As regards the cause, I think we may exclude gastric and duodenal ulcer as well as the pelvic organs. The most likely cause would then be the appendix, although there was nothing to be felt in this region afterwards. I do not think that negatives such a diagnosis. If the ordinary lump one feels in typhitis is produced by local peritonitis, disappearing when that

disappears, one would not expect a lump to necessarily appear when recovery follows general peritonitis.

These cases illustrate the difficulties of diagnosis and the consequent difficulties of treatment. As Dr. Goodhart well puts it, each fatal case makes us wish we had operated, each recovery makes us glad we did not. Unfortunately there is a much larger percentage of deaths than of recoveries. It is the very heavy mortality which makes one long for greater success in diagnosis, followed, as I hope it would be, by greater success in treatment. One great obstacle in the way of progress is the tendency to treat all cases of perforative peritonitis alike on the same lines medically. The mental attitude which this induces is—if a routine treatment is to be adopted, what use is it making attempts to go further into minutiae concerning cause? I am not so sanguine as to believe that the surgeon will ever be able to save most of these cases. There is little hope for the alcoholic man with granular kidneys who gets duodenal perforation. But I hope that if a time comes when we are able to say with confidence fairly early in these cases where the lesion is, a large proportion may be rescued from an untimely death. For the attainment of this object, I think the publication of a large number of well-reported and carefully-observed cases, with an accurate history of the past illnesses which have any bearing on the abdominal lesion, together with a faithful record of the acute abdominal attack, is very much to be desired, as a means towards making diagnosis a little less difficult, especially to those who have little experience of their own to guide them. It might then be that points the importance of which is at present not recognised might be discovered, and we should better know what value to attach to the symptoms we at present regard as important. At present we must do our best, and, knowing the difficulties that each case presents, study it on all sides, and, after making a diagnosis to the best of our ability, have the courage to act and adopt the treatment which gives most hope of recovery.

CASE OF GUNSHOT WOUND OF THIGH AND ABDOMEN;

FOUR APERTURES; DEATH.

By SURG. VIDAL G. THORPE, R.N., M.R.C.S., L.S.A.

ON Aug. 25th, 1888, H.M.S. *Paluma* was anchored off Cardwell, a small port on the east coast of Queensland, a place so far removed from civilisation that the nearest doctor could not possibly arrive under forty-eight hours' notice. At 3.30 in the afternoon of that date a boat came alongside the ship, and I was summoned hastily to attend the following case.

Mrs. S—, a German, thirty-nine years of age, the wife of a German labourer, a stout, healthy woman in a struggle with her daughter for the possession of a loaded revolver, sat down on a box, and in attempting to throw the weapon underneath a bed the trigger caught in the counterpane, causing one of the loaded chambers to be fired. At the moment of firing, the woman was in a sitting and stooping position, the abdomen being flexed upon the thighs, "skin to skin." The bullet in its course traversed the right thigh from its outer to its anterior aspect, and then entered the part of the abdominal wall in apposition with the thigh, continuing its straight course to the opposite side of the abdomen.

On making an examination, I found the following conditions. In the right thigh there were two apertures, situated three inches apart from one another. That of entry, charred and blackened with gunpowder for some distance around, was on the outer aspect, about three inches below the great trochanter; that of exit, on the anterior surface, was about five inches directly below the anterior superior iliac spine. In the abdomen there were also two apertures, eight inches apart from one another. That of entry was situated on the right side, below the level of the umbilicus, two inches and a half from the anterior superior iliac spine, four inches and two-thirds from the middle line of the abdomen, and four inches from the aperture of exit in the thigh. The line of flexure between the abdomen and thigh exactly bisected the line between the aperture of entry in the abdomen and that of exit in the thigh. The aperture of exit in the abdo-

men was situated on the left side, a little above the level of the umbilicus, and three inches and one-third from the middle line. The line between the two abdominal wounds passed diagonally across the abdomen about half an inch below the umbilicus. That the course of the bullet was influenced by the position of the sufferer at the moment of its discharge is confirmed by the corresponding size and aspect of the exit wound in the thigh and entry wound in the abdomen; also that the former wound presented no laceration or jagged edges, but had the appearance one would expect if the skin of the thigh had the abdominal wall as its support, as when thigh and abdomen are flexed on one another; and by the fact that the lines between the entrance and exit wounds in the thigh was nearly parallel with the line between the same wounds in the abdomen. These two lines could evidently be brought into one and the same straight line by flexing the thigh upon the abdomen. None of the wounds were jagged, the first three being merely rounded apertures, and the exit wound in the abdomen presented merely a slit, as though cut with a blunt knife. There was no protrusion of viscera, and but the slightest oozing of blood from the wounds themselves.

The patient was lying on the bed, conscious, but exhibiting all the conditions of shock; pale, cold, and faint; pulse 100, small and fluttering. Her temperature I was unable to take, having in my hurry left my thermometer on board, but it certainly was not above normal. She complained of pain in the left flank. The abdomen was tympanic all over; there was no particular tenderness except in the region of the wounds. Shortly after the accident the patient had vomited up a full meal. She had also micturated quite naturally, and there was no trace of blood either in the urine or in the vomited matter. There were no definite symptoms of injury to any of the viscera, and I was in great hopes that the bullet had merely burrowed through the thick layer of adipose tissue beneath the skin of the abdomen, and not entered the abdominal cavity at all. I therefore injected morphia hypodermically, and ordered the patient to be kept strictly quiet and nothing but milk to be given. In order to ensure the proper nursing of the case, my sick-berth steward took up his quarters in the house, to superintend everything under my orders. During the evening most painful cramps of the recti abdominis muscles took place and lasted throughout the night. These were relieved by morphia injections and the application of hot turpentine fomentations. At midnight the temperature was 98.4°; respiration 32; pulse 118.

Aug. 26th.—Severe pain in the regions of the epigastrium and flanks throughout the day; fomentations continually applied. Vomited milk at 1 A.M. and at 6 A.M., and also several times during the day, but no blood. Urine voided naturally.—8 A.M. Temperature 101°; clothing changed. Holes were found in the underclothing corresponding to entrance wound of thigh and exit wound of abdomen. The dress was found to have been set on fire by the explosion of the gunpowder, and was partly burnt. The bullet had not been found. One-third of a grain of morphia was injected hypodermically.—11.30 A.M.: Temperature 100.6°.—12 noon: Temperature 100.8°. Condition worse. Addition of lime-water to milk.—3 P.M.: Temperature 99.2°; respiration 30; pulse 106. Appears to be sinking.—5.30 P.M.: Temperature 100.4°. Worse. Morphia was injected subcutaneously.

The patient's condition appearing to be getting worse every hour, I decided to operate, and sent on board for my instruments. My reason for coming to this decision was the apparent abdominal course of the bullet. If it was found that the bullet had made a passage merely through the subcutaneous tissue and fat no harm could come of the incision. If, however, on the other hand, it was found that the abdominal cavity had been penetrated, the probabilities were that the course of the bullet would be superficial, and an opportunity would be given of suturing any injuries which the intestines might have sustained.

Operation, 8 P.M.—Pulse 136. Chloroform having been administered, an incision was made in the middle line of the abdomen, from the umbilicus to a point three inches below it, and crossing the line of the bullet. I dissected through about an inch of adipose tissue to the linea alba, but did not come across any canal or injury. Deciding to convert the simple operation into a partial gastrotomy, I opened the abdominal cavity through the linea alba by an incision nearly the same length as the original one. (See engraving.) A considerable quantity of gas escaped, but

with no foul smell. There was a slight blush over the great omentum, but no peritonitis, and no trace of injury to the intestines (which looked fairly healthy, but rather pale) could be discovered. Not considering it advisable to continue the investigation after all bleeding had ceased, the wound was closed with five catgut sutures and strapping, and dressed with carbolic gauze and salicylic wool. It was not



necessary to tie any arteries, and there was very little bleeding. The whole operation was performed under strict antiseptic conditions. During the operation, which lasted three-quarters of an hour, a hypodermic injection of ether was given. At 9.30 P.M. she was sleeping. At 12 midnight the pulse was 134, and she had passed urine. A hypodermic injection of morphia was then administered.

27th.—Slept fairly up to about 5 A.M. Passed urine three times. Temperature 99°; pulse 136.—11.30 A.M.: Pulse 136. Picking at the bedclothes. Small doses of brandy ordered with the milk. Sleeping at intervals, being still under the influence of morphia.—3 P.M.: Pulse 146. In great pain over the epigastrium. One-third of a grain of morphia injected under the skin. Wants to pass urine, but cannot; no dribbling; bladder does not appear to be full. Hot cloths applied to the lower part of the abdomen.—7.20 P.M.: Pulse 146. Swallows brandy-and-milk eagerly, but vomits it up after almost every drink. Extremities very cold.—9.30 P.M.: Pulse 144, nearly imperceptible. Cold clammy sweats. Deep stertorous breathing. The patient is conscious, is in great pain, and entreating in a whisper for another sleeping draught. Another third of a grain of morphia was accordingly injected under the skin, and hot cloths applied to the abdomen. In ten minutes afterwards death took place, being fifty-five hours since the occurrence of the accident and twenty-five hours after the operation.

At the necropsy made nine hours after death, the following interesting conditions were noted. Rigor mortis very marked. A probe, passed through the wounds in the thigh, traversed merely skin, subcutaneous tissue, and fat. Operation wound perfectly sweet; union appeared to have taken place along the incision through the linea alba, but very little union along the primary incision through the skin; the edges were, however, in perfect apposition. On opening the abdominal cavity, an escape of gas took place, but with no particular odour. A general bloodless condition of the organs was noticed, and there was a large quantity of blood at the most dependent part of the abdomen. On passing a director severally through the apertures of entry and exit, and slitting the canals up, it was found that the bullet had penetrated the right rectus muscle, and sheath, and entered the abdominal cavity about an inch and a half to the right of the linea alba. On turning up the great omentum, which contained a large quantity of fat in its folds, the stomach was found to have been perforated in two places in its greater curvature, just below the pyloric orifice, the distance between the two apertures

being about half an inch. One of the apertures bore traces of partial cicatrization. Moreover, the trunk of the superior mesenteric artery, contiguous to the wounds in the stomach, was completely divided across, and a probe could be passed for some distance down its lumen. The bullet had then entered the sheath of the left rectus muscle, about an inch from the middle line, finally making its exit from the body by the slit-like opening before described. No injury to the intestines, which were well distended, could be discovered.

Remarks.—There are several points of interest in this case, which perhaps make it worthy to be placed on record—viz., (1) the number of apertures, and the apparently erratic course of the bullet; (2) the utter absence of blood in the vomited matters, though the stomach was wounded in two places; and (3) the length of time the patient lived, though such a large artery as the superior mesenteric had been wounded. The severe pains over the epigastrium I attributed to the cramps of the recti abdominis, caused by the injury sustained by these muscles. I do not believe that death was hastened in the least by the performance of an operation, but that it was entirely due to the slow but constant internal hemorrhage. Many, perhaps, will not altogether approve of the treatment adopted, and may consider me not justified in having operated. I would ask their leniency, considering how entirely I was thrown upon my own judgment and resources in one of the most difficult cases I have ever come across.

Australia.

ANEURYSM OF THE ABDOMINAL AORTA TREATED ACCORDING TO TUFNELL'S METHOD.

By VINCENT D. HARRIS, M.D., F.R.C.P.,

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IN the seventeenth volume of the St. Bartholomew's Hospital reports I have given an account of a number of cases of aneurysm of the aorta treated by rest and restricted diet, according to Tufnell's plan. Since publishing that account I have pursued the same method of treatment, with more or less success, in a number of cases of aortic aneurysm, but, with the exception of the following, these have all been aneurysms of the aorta within the thorax. This case of aneurysm of the abdominal aorta, however, seems to me to teach an important lesson, and, without waiting to collect the notes of the other cases, it appears well to place it on record without further delay.

John A.—, aged thirty-five, a policeman, was admitted into the City of London Hospital for Diseases of the Chest, Victoria Park, on Sept. 23rd, 1887, with the following history. He stated that he had had a pain in the back for about eighteen months, at first slight, but latterly constant and increasing. The pain was liable to frequent exacerbations. At its greatest intensity it had been of a dragging, aching character, and had radiated from the lumbar region to the front of the spine of the ilium and upper part of the thigh, both in front and laterally; it had not reached the scrotum. In addition to pain there had been constipation, but otherwise the patient's general health had been good. There had been no weakness or pain in the legs.

On examination after admission into the hospital, the patient was found to be a strong healthy-looking man, well nourished, and muscular. On the left side of his chest there was noticed distinct pulsation, which extended outwards as far as the vertical nipple line, and was most marked in the second, third, and fourth interspaces. The area of cardiac dulness was but slightly increased, and was displaced to the left and downwards. A loud systolic murmur was heard both at the base and at the apex of the heart. At the right base the second sound was accentuated. The systolic murmur at the base of the heart was traceable down the sternum, and was heard with maximum intensity at the fourth left costal cartilage and at the very tip of the ensiform cartilage. There was no thrill. Both sides of the chest expanded equally. On examination of the chest posteriorly, there was found an extensive patch of dulness on the left side, extending from the ninth rib close to the spine downwards to the level of the upper lumbar vertebrae. There was distinct tenderness on pressure over the dull area. A distinct

systolic murmur was heard from rather above the inferior angle of the scapula traceable down the spinal column as far as the sacrum, but very much louder over the lower dorsal and upper lumbar vertebrae than elsewhere. In the abdomen neither tumour nor pulsation was discovered, but the systolic murmur was heard with great distinctness on auscultation of the epigastric region, but not so plainly as posteriorly. Some tenderness was complained of on pressure over the epigastrium. With the exception of these physical signs nothing abnormal was to be found in the patient's condition. There was a history of syphilis eight years before admission. On consideration of the physical signs and symptoms, the diagnosis of an aneurysm of the upper part of the abdominal aorta was arrived at.

The patient was kept perfectly quiet in bed for about a fortnight, and was given fifteen grains of iodide of potassium three times a day, but the rest did not appear to alleviate the pain, as it steadily increased, and radiated in all directions from the lower dorsal spine even to the lower extremities; it prevented sleep. Pulsation in the epigastrium appeared about the end of this period. Such being the condition of the patient, especially as he was getting worse rather than better, it was deemed best to attempt Tufnell's method of treatment. The plan was explained to the patient, and he, having agreed to try it, cordially and loyally co-operated in carrying it out. He was ordered for breakfast two ounces of solid food and three ounces of liquid; for dinner, four ounces of solid and two ounces of liquid; for tea, two ounces of solid and two ounces of liquid; and for supper, two ounces of solid and two ounces of liquid; so that he took in all ten ounces of solids and nine ounces of liquid. An improvement consisting of alleviation of the pain almost at once took place, and for a fortnight he distinctly improved. It was noticed, however, that the pulsation in the epigastrium increased, and by Oct. 21st a distinct pulsating tumour, with a thrill of a marked character, was first observed; the pain also returned, but was not of so severe a character. After three weeks of rigid adherence to the restricted diet and absolute rest, since the aneurysmal tumour was evidently increasing in size forwards, and as the pain had returned to an appreciable degree, it was concluded that it was no longer of use to continue the irksome restraint of the treatment, and absolute adherence to the nineteen ounces of food per diem was not insisted upon. For another week, however, this amount of food was very little exceeded. By Nov. 11th the physical signs of the aneurysm had increased, and the pain had become more severe. The patient was not comfortable, except when sitting up in bed with his legs drawn up. The question of operative interference was now mooted, but, as my colleague, Mr. Macready, considered the aneurysm to be situated too high up and near the diaphragm for an operation to be attempted with any likelihood of success, such a procedure was dismissed as impracticable. The patient was ordered iodide of potassium (twenty grains) three times a day. No marked change occurred in his condition either for better or worse until Nov. 17th. On the evening of that day he commenced to spit up large quantities of blood, and on the following day he died, choked with an increased gush of blood. Various expedients were tried from time to time to relieve the pain while he was in the hospital—such as morphia, opium, chloral, bromide of potassium, and the like,—but their good effects were but temporary.

Necropsy.—On opening the chest, under the cartilages of the first, second, and third ribs on the left side a blackish-blue clot enclosed by the pleura was seen. The larynx, trachea, thoracic, and abdominal organs were removed together. In attempting this removal, the aorta near the diaphragm, dilated into an aneurysm, was opened, and a quantity of black liquid blood mixed with black clot escaped. After removal, the aneurysm was found to occupy the lower part of the thoracic and the upper part of the abdominal aorta; viz., its posterior wall was formed by the bodies of the tenth, eleventh, and twelfth dorsal and first and second lumbar vertebrae, from which the anterior ligament and periosteum had disappeared, while in parts the compact bony tissue was eaten away, exposing the carious cancellous tissue. Naturally the sac was adherent as far as the junction of the transverse processes with the bodies of the vertebrae, but on the left side it was adherent to the eleventh rib as far as the angle, the rib being laid bare and corroded anteriorly and laterally. The aneurysm formed a rounded mass adherent to the

diaphragm and slightly also to the stomach. It was a sacculated dilatation of the aorta forwards and laterally. A probe could be passed through the abdominal aorta and along a groove in the posterior wall of the aneurysm into the thoracic aorta. The aneurysm was about the size of a small coconut. It had very thin walls in front and at the sides, so thin that they tore on removal. The aneurysmal cavity, besides black liquid blood, contained solid and adherent blood clot. The largest clot was situated in front of the sac: it was flat and laminated, three inches in diameter. Other smaller clots were also found in the sac, especially to the right of the entrance orifice of the thoracic aorta. The rupture of the aortic sac upwards through the diaphragm into the pleural cavity and into the left lung was very rugged, and was protected on one side by firm old blood clot. The œsophagus was not pressed upon or displaced. The sympathetic and vagus nerves passed down behind the aneurysm, were intact, and easily dissected out. The heart weighed 12½ oz. The pericardium contained an excess of fluid, but was not inflamed. The endocardium of the left auricle was thickened; the left ventricle was hypertrophied, but little dilated, three-quarters of an inch thick, with its muscular structure normal in appearance and in consistence. There was no dilatation of the right side of the heart, but the cavities contained black clot. The right lung was slightly adherent here and there, but the pleura did not contain an excess of fluid. The lung tissue was normal. The left pleura was adherent in part to the thoracic parietes and totally to the diaphragm. It was greatly distended with black clot, which was turned out like a cast on slitting up the pleura, but owing to adhesions it could not be removed entire. The source of the blood was seen to be a rupture of the lower lobe just above the diaphragm. The aperture in the pleura here was about two inches in diameter and with very ragged edges; it was filled with black blood clot, which extended into the lung tissue. The lung tissue itself elsewhere was found to be normal. With the exception that the stomach and intestines contained some black blood, no other deviation from the normal condition was found elsewhere.¹

Remarks.—Of the three methods of treatment of internal aneurysms—viz., by drugs, by operative interference, and by rest and restricted diet according to Mr. Tufnell's plan—two were tried. At first during his stay in the hospital, as well as later on, the patient was given fairly large doses of iodide of potassium, but without any apparent improvement. The other method, by rest and restricted diet, was tried with more or less strictness for about a month, and was then discontinued. It is chiefly to the effect of this treatment that attention is directed. Without any doubt the patient was much relieved by it; his pain was diminished, he slept better, and his general condition was much improved; but, except quite at first, the aneurysmal tumour distinctly increased in size. The increase in size was in a forward direction, inasmuch that the aneurysm, which had been very deeply placed in the abdomen, was felt plainly in the epigastric region. It was due to the evident enlargement of the tumour that the discontinuance of Tufnell's treatment was determined upon. My impression now is that the treatment ought to have been persevered in for some weeks longer, in spite of its apparent want of success. Indeed, as was found at the necropsy, the danger was not so much from the increase of the aneurysm anteriorly as from its getting thin posteriorly, in which latter situation the rupture took place. Moreover, the anterior wall was well lined with laminated clot. It seems likely, therefore, that a prolongation of the treatment would have resulted in a deposition of laminated clot throughout the interior of the sac. From my experience of the treatment of aortic aneurysms according to the method under consideration, nothing has been impressed on my mind so much as the necessity for great patience; and this has been still further brought home to me from this case. Nearly all the successful cases, indeed, of Tufnell's method have been those under treatment for many weeks or months. For instance, in a highly successful case published by Mr. Haulin Martin,² the treatment was continued for many months.

An additional point of interest about the case was the situation of the pulsation, to the left of the sternum. This pulsation was cardiac, and was apparently due to the position of the aneurysm behind the heart, which pushed

it upwards and to the left. No distinct murmur was heard over the area of pulsation, although the systolic murmur was very loud up and down the sternum, as well as at the right base and at the apex of the heart.

Wimpole-street, W.

CANNED VEGETABLES AND LEAD POISONING.

BY FALLON PERCY WIGHTWICK, M.B. DUR.,
D.P.H. COLLEGE OF PHYSICIANS AND SURGEONS OF ENGLAND.

THREE cases have recently come under my observation which again point to the desirability of the medical profession offering an earnest veto against the preservation of articles of diet in tins. So long ago as 1881 THE LANCET asked the question, "Why not substitute bottles for tins?" And still the question may well be asked. It is strange that, although cases of lead poisoning from tinned vegetables have been reported by French and other foreign physicians, some leading English authorities appear to dispute the fact. The presence of tin and lead, however, has been often demonstrated, notably by M. Gautier and Otto Hehner, but whether in sufficient quantities to cause alarm the following cases will show.

E. C—, aged forty-two, account-book binder; married. Father died at sixty-four; mother still living, and in good health. He always enjoyed good health until ten months ago. Up to that time his work had been a pleasure to him, and he was always bright and energetic, so that he was appointed foreman. Now everything became "a misery to him." He felt languid and incapable of energy. He turned against his food, and complained of continual headache and obstinate constipation. His wife and fellow-workmen all noticed how white and miserable he looked, and told him his liver was out of order. He informed me he lost several friends during this time, as he stayed at home rather than visit, and that his temper became very irritable both to his children and the men he was over. These insidious symptoms were steadily increasing until the beginning of last July, when he suddenly developed an attack of gout, which confined him to bed for four days. After this attack he had symptoms of colic with increasing constipation. The present attack commenced on Sept. 24th with very severe pain in the abdomen, especially referred to the umbilicus. His face was pale, with an anxious expression, and there was cold perspiration on the forehead; bowels constipated. The urine contained a trace of albumen; specific gravity 1010. The gums presented a well-marked blue line. There was no paralysis of the extensors. Dr. Sidney Coupland kindly saw the case in consultation with me, and agreed that it was an undoubted case of lead poisoning. We were at some loss at first to account for the entry of lead into the system. The man uses no lead at his work, and none of his fellow-workmen have suffered. He lives with his wife and seven children; all of whom are strong and healthy, and he is in the habit of eating his food at home with them. He then informed me that he was accustomed to eat large quantities of tinned tomatoes, but that none of his family liked them or would eat them. For about three years he has been in the habit of eating tinned tomatoes, usually two tins each week. He told me that there would have been a great "row" if he had come home to his Saturday dinner and not found his tomatoes ready for him. He preferred the tinned to fresh tomatoes, and he always ate the same kind. In order that there should be no error, I handed a sample of the tinned tomatoes to Mr. William Foster, lecturer on chemistry at the Middlesex Hospital, who kindly made an elaborate analysis of the contents of the tin. He states that the stannic salts expressed as the oxide are present to the extent of 0.987 gr. per pound of preserved vegetable. The lead salt, weighed in the form of chloride, amounted to 0.389 gr. per pound of sample, with a slight trace of bismuth. Thus, practically, this man may have taken 3 gr. to 1½ gr. of lead salt each week for two or three years.

¹ For the notes of the post-mortem examination I am indebted to my colleague, Dr. Sidney Martin, who was at the time pathologist to the hospital. ² St. Bartholomew's Hosp. Reports, vol. xxiii., 1887, p. 83.

¹ In the *Annals of Universal Medical Sciences*, edited by Sajous (1882) the following sentence occurs: "Professor Atfield has stated that the public have not the faintest cause for alarm respecting the occurrence of tin, lead, or other metals in canned goods." I have been unable to verify this citation.

The next two cases are those of mother and son, living and taking meals together. For about three years they have been in the habit of eating large quantities of tinned tomatoes, but not so regularly as the first case. The family history is good, and there is no history of gout.

W. T—, aged forty, single, vellum binder, always enjoyed good health till the last eighteen months, since which time he has frequently complained of severe colic and constipation, for which he has sought medical advice. The face is now pale, and he complains of a sensation of numbness in the hands, with frequent "pins and needles." There is a blue line at the margin of the gums. The urine is normal, tongue rather coated, and the appetite bad.

E. T—, aged sixty, mother of the above, always enjoyed good health till about two years back, when she had an attack of gout. Since then she has often complained of colicky pains and constipation. In this case there is no blue line to aid the diagnosis, as she is edentulous. From the general malaise and occasional colic and gout, I think there is little doubt that the lead is affecting her constitution.

According to Dr. Hehner,² the quantity of tin present in canned vegetables may be sufficient to cause symptoms of chronic poisoning. These symptoms are, however, very indefinite, and, if ever present, have not led to any distinct recognition on the part of the medical profession. The cases above recorded, on the other hand, present well-marked and recognisable symptoms of chronic lead poisoning.

Horselydown, S.E.

A NEW METHOD OF TREATMENT FOR ENDO-METRITIS AND ENDO-CERVICITIS BY MEANS OF MEDICATED BOUGIES.

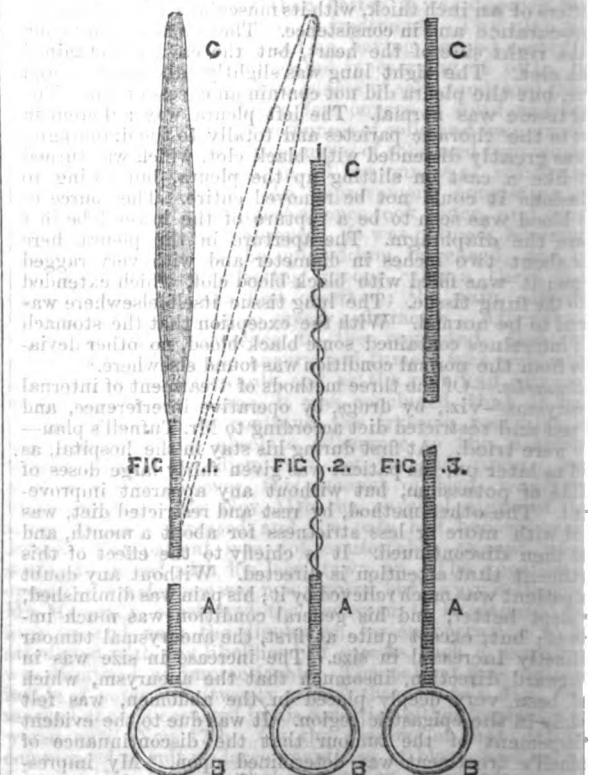
By ALEX. G. R. FOULERTON, L.R.C.P., M.R.C.S.,

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WHILST the several forms of chronic inflammation included under the above heading are amongst the commonest kinds of uterine disease which come under general hospital treatment, they are also amongst those in which the result of that treatment is the least satisfactory. Nor do they fare any better in private practice, when perhaps greater attention can be paid to individual cases than is possible in the out-patient room of a hospital, so that they often come, and not altogether unjustly, to be classed amongst the often-spoken-of *opprobria medicinae*. Various reasons may be given for this. First, there is sometimes a certain sense of inaccessibility surrounding the uterus when the question of local treatment of its interior comes under consideration. Then, again, it is to be feared that there are still a few who regard disease of the female pelvic organs as a something almost apart from general surgery as dominated by the ordinary laws of physiology and pathology, who cannot bring themselves to look upon an inflammation of the lining membrane of the uterus by the same light as that with which they would view, say, an inflammation of the urethra in the male. Above and beyond all this, there is the difficulty, even the impossibility, of obtaining for the organ in question any near approach to that first and most important element in the treatment of inflammation, upon which Hunter insisted and Hilton discoursed so eloquently—physiological rest. In the case of the uterus, the ever-recurring phenomena attendant upon ovulation, the congestion of the pelvic organs accompanying sexual intercourse, and probably, though to a lesser extent, sexual emotion, will render the attainment of even comparative rest a matter of the greatest difficulty. Not, indeed, that the uterus is singular amongst the viscera in this respect, but with it the difficulty is perhaps better exemplified than with any other.

These things being so, any attempt to simplify and render more effectual the treatment of such cases would seem to be justifiable, and, with that end in view, I wish to call attention to a method of applying local remedies to the mucous membrane of the uterus by means of bougies, which I have been using for some little time past in my out-patient room. The accompanying sketches of the bougies will need but

few words of explanation.¹ (Figs. 1, 2, 3.) The instrument is made of a single piece of fine spiral wire similar to that used for urethral "antrophores." The stem, five inches and a half in length, is stiffened so that it can be bent to any angle required, and so that by it the medicated portion may be guided into the uterus. The medicated portion, an inch and a half in length, contains stiffening only in its first half-inch, and may be coated with any drug that the fancy of the practitioner or the needs of the case may indicate. The ones which I have myself used have been coated with one of the following: iodoform, 20 per cent.; argentic nitrate, 2 per cent.; thallin sulphate, 5 per cent. I am also hoping to get a satisfactory bougie prepared containing pure iodine. Other drugs that will at once suggest themselves as appropriate to the purpose are zinc and cupric sulphates, alum, tannin, and plumbic subacetate. The medicated spiral wire portion possesses the qualities of pliancy and softness, combining with them, however, sufficient stiffness to render its guidance into the body of the uterus a matter of ease in most cases. The bougie is passed up the os through a Fergusson's or bivalve speculum, the stem being first bent just below its upper termination



so as to adapt the instrument more or less to the uterine vaginal curve. Before being used, the medicated portion is dipped into cold water in order to remove the powdered talc with which it is coated externally; its action will also be rendered more efficient if the cervical canal is well cleaned out as a preparatory step. The instrument is left in position, for from fifteen to twenty minutes, by the end of which time the medicated coating will have dissolved. It is then withdrawn, by the patient herself if necessary, and the recumbent position is to be continued as long as may be convenient, an hour or more if possible, so that the application may remain in contact with the uterine mucous membrane sufficiently long to be productive of benefit.

The frequency with which these bougies are to be used will vary with individual cases, and according to the nature of the coating of the bougie. When iodoform is used, one bougie a day may be passed in most cases; with nitrate of silver, especially if a stronger percentage than that mentioned above be used—as it often might be with advantage, every second or third day will be sufficient. In conjunction with the bougies, other curative measures may of course be

¹ For the ordinary run of cases a bougie of somewhat smaller size than that depicted will be found convenient.

adopted: local depletion by puncture about the os, or by means of vaginal glycerine pledgets of cotton wool; painting of epithelial erosions of the vaginal portion of the cervix, when present, with tincture of iodine or nitric acid. With respect to the passage of the bougies, however, in some cases a difficulty will arise from smallness of the os and narrowness of the cervical canal. The commonest cases, in my practice at any rate, are those dating from childbirth, either endometritis and endo-cervicitis combined, or the latter alone. In such cases the canal is of fair size, and the os usually patulous, and so, as noted before, the bougie can be passed with ease. But in another important clinical group of cases—viz., those occurring chiefly amongst nulliparous married women and reputed virgins, in whom, nevertheless, I believe that the metritis is most frequently but the upward march of gonorrhoeal vaginitis—a different condition of things prevails. Here the fundal inflammation is more marked than the cervical; the vaginal portion of the cervix will be seen to be swollen and congested, the os itself small. The discharge, flowing freely from the os as the Fergusson's speculum is pushed home, instead of presenting the viscid opaque characteristics of abnormal cervical secretion, will be comparatively thin and of greenish colour, resembling, in fact, the "laudable pus" of the older surgeons, and so indicating the fundus of the uterus as being its principal source. In these cases, then, the smallness of the os will present some difficulty, but in them I have nearly always succeeded in introducing an instrument, after rapid dilatation with a three-bladed dilator if necessary. This preliminary dilatation of an inflamed os is, I believe, in itself more or less of an evil. But what alternative is there? From no drug whatever, administered internally, can we hope to get the slightest relief. The patient's general condition may, it is true, be improved by iron or other tonics, but the disease itself will remain. The inflammation is a local disease, and amenable only to local treatment. If, on the other hand, it be neglected, it too often (though insignificant as far as life itself is concerned) entails an immense amount both of mental and bodily suffering, reducing the patient ultimately to a miserable state of hypochondriasis.

In connexion with the foregoing remarks, I wish it to be understood that I do not place any great importance on an exact differential diagnosis between endo-metritis and endo-cervicitis, so far at least as regards treatment. In many cases we can fairly infer that the cervical canal is alone affected; but in at least an equal number it is almost impossible to say for certain that the disease is limited to above or to below the os internum; quite impossible to localise a particular spot in the area of the fundus as being alone the seat of inflammation. Examination of the cavity by endoscopy might perhaps give us more precise information on this and other points. This much, however, I think can be said: that after a general inflammation—following gonorrhoeal infection, for instance—of the uterine mucous membrane has all but subsided, there is a tendency for the disease to perpetuate itself as chronic cervical catarrh, in the same way that, after acute urethritis, the bulbomembranous portion of the urethra so often becomes the seat of a chronic indolent ulceration. This tendency of the inflammation to linger in a chronic form about the cervix after it has subsided in the fundus may perhaps be explained by the normally rugose condition of the lining membrane of the former, and by the abundance of glands and mucous follicles opening on its surface, conditions which together would greatly favour this result.

In conclusion, I would claim for the bougies that they possess certain advantages over most of the methods in general use for applying drugs to the interior of the uterus, whether by syringes, insufflators, or ointment repositories. They are easy of introduction, could scarcely be made to inflict mechanical injury on the uterus, and the application used is distributed thoroughly and uniformly throughout its cavity. An additional point in their favour is that they contain the drug required in a very portable and cleanly form, and are always ready for immediate use. When, however, liquid caustics, as nitric or carbolic acid, are required, the bougies are necessarily out of the question. It is also suggested that in midwifery practice the daily passage of an iodoform bougie after parturition would be an efficient means of keeping aseptic the cavity of the uterus in cases where there are retained shreds of placenta or blood clot, or in other circumstances which might seem to demand unusual precautions. My thanks are due to

Messrs. Christy and Co., the makers of the bougies, for the great trouble they have taken to produce an instrument which would fulfil my requirements, and for their liberality in placing a considerable quantity of them at my disposal for use in the hospital.

CHOLECYSTOTOMY.

By ROBERT TORRANCE, F.R.C.S. EDIN.

FOUNDER OF BLACKETT-STREET THROAT AND EAR HOSPITAL, AND CONSULTING SURGEON TO THE THROAT AND EAR INFIRMARY, NEWCASTLE-ON-TYNE.

THE success attending ovariectomy has led to the adoption of abdominal section for other pelvic and abdominal tumours likely to affect seriously the life of the patient, unless of a cancerous nature. Dr. Handfield Jones had the merit of suggesting operative measures, particularly in cases of threatened death from impacted gall stone, though Jean-Louise Patat¹ was the first to recommend a similar proceeding in 1748. Dr. Marion Sims was the first to follow out the plan, but unsuccessfully; and the present case was one, amongst others by various surgeons, that has been successful since that time. It seems to be a very general opinion that exploration of the abdomen is justified, if antiseptic precautions are only strictly carried out; but in this case it was performed successfully without their use at all. I debated in my mind whether to make the opening, as Sir Spencer Wells has suggested, by means of potassa fusa, in order to obtain adhesion of the peritoneal lining, or by incision, but eventually adopted the latter method, from which there was not much difficulty from hæmorrhage, and, moreover, there was very little dragging on the gall bladder when it was attached to the abdominal wall.

The patient, S. B.—, aged thirty-seven, had been married thirteen years, was the mother of four living children, and had had two miscarriages. Her menstruation was normal and health good till the early part of the year 1887, when she began to experience spasmodic pains in the right side over the liver, which extended to her right shoulder and epigastrium, and were aggravated by walking and lifting slight weights. A swelling noticed in August slowly increased, and during last winter the pain became more intense, and she presented a cachectic appearance on coming to me in December, suffering from incessant headache, sickness, and obstinate constipation. These symptoms were sometimes so severe that they were accompanied by vomiting and shivering, and she suffered intermittently from severe attacks of colic, making her so ill that she was obliged to lie almost constantly upon a sofa during the greater part of the day. Latterly her attacks had increased both in number and severity—so much so, indeed, that she was scarcely able to get out of bed. The urine gave only negative results. When the swelling was first discovered by herself it was painfully tender to the touch, and remained so more or less up to the time of her coming to consult me. The tumour was found to be a distended gall bladder, which moved freely up and down with respiration. Puncture with a hypodermic syringe showed its contents to be of a white starchy-looking fluid, and operative interference suggested itself to me. The operation was performed on Jan. 3rd, the tumour being exposed by a vertical incision through the abdominal parietes immediately over it, and about three inches long. After placing three pads behind the distended gall bladder, an aspirator needle was introduced at the fundus, and four ounces and a half of opalescent fluid removed. The anterior wall of the gall bladder was now pulled forwards by two pairs of long forceps, and opened sufficiently between them to admit easily my index finger. Forty-three small round stones, about the size of coffee beans, were scooped out by my forefinger and partly by the use of a curette, then washed out with a Higginson's syringe. They were closely packed together, each gall stone having quite made a bed for itself, so to speak, on that of its neighbour, and weighing fifty-three grains. The gall bladder was sponged dry, the bile ducts exposed without finding anything, and the pads removed from the abdominal cavity. The edges of the thickened gall bladder were now fixed to the abdominal wall, including the

¹ Mémoires de l'Académie de Chirurgie, tome I., p. 165

peritoneum, by a continuous suture, the edges of the wound being brought together above and below by interrupted sutures, which were removed on the eighth day; a rubber drainage tube was left in the gall bladder, and removed on the twentieth day, while the wound was left very much to the *vis medicatrix naturæ*. For ten days more only a small sinus was left, from which some mucus continued to be discharged, the diet up to this time being restricted almost wholly to milk and beef tea. Her after progress, I might say, was uninterrupted, a temperature chart indicating the evenness and rapidity of her recovery. She got up on the nineteenth day, and gained strength daily. The wound was entirely healed at the end of six weeks, and her health now is as good as ever it was, and certainly very much better than it had been for twelve months previously.

Newcastle-on-Tyne.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

CASE OF IDIOPATHIC THROMBOSIS OF CEREBRAL SINUSES AND VEINS OF GALEN IN A YOUNG WOMAN.

(Under the care of Dr. DOUGLAS POWELL.)

THROMBOSIS of the cerebral sinuses, not due to pyæmia, injury, or extension from disease of bone, is one of those conditions very rarely met with in medical practice, and of which there are few records in literature.¹ Hubner found thrombosis of the superior longitudinal, transverse, and cavernous sinuses, also of the ophthalmic vein, at the post-mortem examination, in a patient who had died with cerebral symptoms. The case had not been diagnosed during life. He says that the diagnosis is based on three orders of symptoms: (a) stasis in the vessels situated on the proximal side of the point of obstruction, giving rise to slight characteristic cerebral symptoms; (b) dilatation of the collateral veins; (c) direct signs of compression at the level of the seat of vascular obstruction, such as that produced by pressure on the nerves around in affection of the cavernous sinuses. Lebert indicated the mutability of the symptoms. Mr. Corner² related the case of an anæmic man aged sixty-three, who died from thrombosis of the lateral and occipital sinuses, the clot extending into the torcular Herophili, and generally throughout the veins of the chest. Dr. Coupland³ records the case of a man aged thirty-one, not exhausted from cachexia, who died from hæmorrhage into the pons and hæmorrhagic extravasations, secondary to thrombosis of the left lateral, the straight, and also the right lateral sinuses. He also refers to Dr. Bright⁴ for a further account of these hæmorrhages. Dr. Dowse⁵ mentions the occurrence of punctiform hæmorrhages in the brain of a man who died with thrombosis of the cavernous sinuses after a fall followed by erysipelas. Quite recently Dr. Bristowe⁶ has described two most interesting examples of the disease in young girls. In one of these, aged nineteen, recovery took place; she was anæmic; the symptoms were epileptic fits, headache, sickness, optic neuritis, severe pain in the neighbourhood of the right ear, later in the neighbourhood of the left (thrombosis of the lateral sinuses), and phlebitis in the leg. The second, also the subject of anæmia, suffered from headache, sickness, optic neuritis, and temporary hemiplegia. After death, which took place suddenly from syncope, thrombosis was found in the lateral sinus and internal jugular vein. The walls of the sinuses were healthy, but a little pale clot adhered here and there to the lining of the right lateral sinus. Two years ago an anæmic girl who was under treatment for thrombosis

of the left femoral vein, under the care of Mr. Mackellar,⁷ developed thrombosis in the opposite limb, which passed into the vena cava. On the seventeenth day symptoms of thrombosis of the cerebral sinuses developed, with much headache, vomiting, drowsiness, and some twitching of the arms. On the nineteenth day she died comatose. The patient, who was under the care of Dr. Powell, in addition to the severe headache, vomiting, and unconsciousness, had hemiplegia on the left side and twitching of the limbs, and it was noted that she was anæmic, though not extremely so. There does not appear to have been any optic neuritis, nor had she suffered from epileptic fits. Dr. Powell does not think that the thrombosis in his patient was due to the anæmia, although admitting its occurrence sometimes in that disease. As regards this question, we would draw attention to the fact that the case resembles greatly those under the care of Dr. Bristowe and Mr. Mackellar, both as regards age, sex, and the presence of the anæmic condition. There was noted in Dr. Powell's patient a hæmic murmur at the base, a sign absent in the three cases mentioned.

We also publish some remarks of Dr. Powell's on the condition of the pulse in a case of albuminuria with marked arterial tension.

For the following report we are indebted to Dr. Pasteur.

Jane H—, aged twenty, was admitted on Nov. 20th, 1887, in a comatose condition. Her relatives supplied the following history. Although never afflicted with serious illness, she was always delicate and very pale. Five years ago she was told by a doctor that her heart was not strong, and about the same time she had an attack of hysteria. For the previous two years she had been troubled by morning sickness. Otherwise her general health was always good. Catamenia normal. Her present illness began on the evening of Nov. 13th with an attack of vomiting. During the next day she felt much as usual, but on the 15th the sickness became frequent and distressing, and was accompanied by great pain all over the head. She continued in this condition until the morning of the 18th, when the headache and sickness ceased, so that she was able to get up towards evening, feeling much better. She was restless that night, however, but seemed brighter at 8 A.M. next morning. When some food was brought to her at 11 A.M., it was observed that she was paler than usual, had a vacant look with partially closed eyes, and that her mouth was drawn to one side (it is believed the "right"). She was quite unconscious, and made no attempt to speak. The left arm and leg were motionless, but she occasionally moved the right limbs. She had passed urine under her. (Coma, left hemiplegia.) She was admitted in this condition on the 19th at 8 P.M.

The patient's condition at noon on the day of admission (the 20th) was as follows:—Dorsal decubitus. Face flushed. Apparently quite unconscious. Eyelids drooping, but not quite closed; eyes directed downwards, the right somewhat inwards; movements of eyeballs often independent of each other; pupils equal, rather small, and not in the same plane; occasionally raises both eyelids (evenly) and moves the eyes languidly in various directions. Respiration 38, shallow, irregular, occasionally interrupted by a deep sigh. Size and position of the heart normal; sounds those of health; over pulmonary area a hæmic bruit of varying intensity. Pulse 72, quick and regular. Temperature last night 98.4°; this morning 104.2°. Urine passed involuntarily; no albumen or sugar. Limbs extended, with a tendency to pronation. Rigidity of legs not constant, and aggravated by all attempts at passive movement. No clonic spasm. Knee jerks exaggerated. Toes generally in a state of marked extension. During the tonic spasms flexion and adduction of the shoulder, with extension of the elbow and digits, occur. The arms are not always affected simultaneously. There is no clonic spasm.—7 P.M.: Coma complete. Temperature 105.8°; pulse 88. Pupils dilated, equal, fixed; retinal vessels full; no papillitis.

The patient was placed in a bath at 90° (gradually reduced to 80°) for thirty-five minutes, the head meanwhile being sponged with iced water. Immediately before removal from the bath the temperature was 100°; pulse 60; respiration 36; no return of consciousness. The temperature fell to 98° after the bath, and did not rise again before death, which occurred suddenly two hours later.

Necropsy, fifteen hours after death (by Mr. Leopold Hudson).—Rigidity well marked. The body of a well-

¹ *Med. Hist.* Ranking's Abstracts, vol. i., 1869, p. 9.

² *Med. Times and Gazette*, vol. i., 1858, p. 400.

³ *Ibid.*, vol. ii., 1861, p. 874.

⁴ *Medical Reports*, vol. ii.,

⁵ *THE LANCET*, vol. i., 1876, p. 132.

⁶ *Diseases of the Nervous System*, cap. xii., p. 184.

⁷ *St. Thomas's Hospital Reports*, 1886, p. 857.

made and well-nourished girl. Thick layer of subcutaneous fat. The dura mater presented nothing abnormal. The convolutions appeared flattened, and the entire brain, especially the right half, felt abnormally soft. A firm contracted ante-mortem clot was found in the superior longitudinal sinus, which, at a point two inches and a half above the torcular was greyer, more flexible and adherent, and evidently of older date. The straight sinus contained a firm parti-coloured clot, dark for the most part, but lighter where it projected into the tributary vessels. Near the torcular it was much older and adherent, and extended through it for an inch and a quarter along the right lateral sinus. The remainder of this sinus was empty and of normal aspect. All the other sinuses were normal. All the arteries of the brain presented a healthy appearance. On raising the occipital lobes, the cut end of the thrombus in the straight sinus could be seen projecting from the great transverse fissure. The right centrum ovale majus was studded with minute multiple hemorrhages. The right corpus striatum and optic thalamus were in a state of red softening. There had been capillary oozing from the choroid plexus of the right lateral ventricle, which had coagulated *in situ*. The ventricles were not dilated, and contained no fluid. The left centrum ovale contained a very few minute hemorrhages. On raising the fornix, the veins of Galen were seen to be much distended and rod-like. They were both completely filled by firm half-discoloured ante-mortem clot. There was no marked injection of the meninges, nor was there any excess of subarachnoid fluid. No local cause for the thrombosis was discovered anywhere, although the most minute search was instituted. With the exception of a slight superficial erosion of the os uteri, all the other organs of the body presented normal naked-eye appearances.

Remarks by Dr. DOUGLAS POWELL.—The above case is perhaps best left without comment to accumulate with experience of other cases, since no satisfactory explanation of it can at present be offered. The patient was anæmic, but by no means extremely so. It is true that venous thrombosis is not uncommon in anæmia, and the naturally retarded circulation through the cerebral sinuses may be held to be favourable to the occurrence of thrombosis in them; but, practically, such thrombosis in simple anæmia is of most rare occurrence.

HIGH-TENSION PULSE WITH PERIPHERAL REFLUX IN ALBUMINURIA.

Dr. Douglas Powell, in the course of some clinical remarks upon a typical case of contracted kidney, with characteristic cardio-vascular changes, resulting in cerebral hæmorrhage, drew attention to a point with regard to the high-tension pulse of this form of albuminuria which the case before him illustrated very strikingly. On compressing the radial artery with one finger with sufficient force to close the vessel—and it required hard pressure to do this,—and applying a second finger to the vessel an inch further in its course, it was felt to pulsate with great distinctness and rhythmically with the central portion of the vessel. Now, keeping up the pressure with the first finger, and applying the second with just sufficient force to check the pulse wave under it, it could be distinctly felt that the blood wave impinged against the side of the finger directed towards the hand of the patient, whilst of course the pulse wave impinged upon the trunk side of the finger first applied. It was clear, therefore, that in this case the pulse was stopped by the first finger, and a peripheral reflux pulse was felt by the second finger of the observer. This phenomenon threw some light upon the “incompressible” high-tension pulse of albuminuria and in some other conditions, suggesting that the vessels were applied to the blood they contained with such a degree of tension that they became almost like rigid tubes; and when the overflow through an artery of a limb was stopped at a given point, the peripheral end of the vessel remained full and received a back impulse through the capillary system or anastomosis short of the capillaries with each systole of the heart.

DEWSBURY AND DISTRICT GENERAL INFIRMARY

SUBACUTE CATARRHAL NEPHRITIS.

THE following notes (for which we are indebted to Mr. Milne, house-surgeon) of a case of subacute catarrhal nephritis in a young man, followed by uræmic poisoning

and convulsions, may be of interest as illustrating the good effects to be obtained by venesection in suitable cases.

J. B—, aged twenty-one, collier, presented himself at the out-patient department of the infirmary on July 5th, 1888. He had œdema of the face, legs, and feet, and on examination his urine was found to contain a large amount of albumen. He ascribed his illness to a chill caught through standing in water while at his work in the coal-pit some days before. Subsequently he suffered from pains in the loins, and noticed his urine to be dark and his face swollen. On being asked to become an in-patient, he refused, and nothing was seen of him till about noon on July 17th, when he was driven up in a cab for admission. The œdema had got very much worse, and he had had a severe attack of convulsions that morning.

On admission the man was in a semi-comatose condition, and scarcely recognisable from the enormous swelling of his face, body, and limbs. His breathing was stertorous, and he could not be roused to answer questions, and with difficulty was made to swallow. Calomel (twelve grains) and compound jalap powder (a drachm) were given, and a hot wet pack ordered. The latter made the skin act freely. Violent epileptiform attacks continued at intervals of about two hours; during them, notwithstanding the efforts of the nurse, his tongue got severely bitten. The seventh and last fit he had, and the first seen by Mr. Milne, occurred about 11.30 P.M., while he was standing at his bedside. It commenced with rotatory movements of the left arm, followed by clonic spasms over the whole body; his face became dark and congested, the muscles twitched violently, and the tongue was protruded. On the spasms ceasing he appeared to be dead; respiration had ceased, and only an occasional pulse beat was to be felt. A few slaps on the chest re-started respiration, and Mr. Milne injected twenty minims of ether. Thinking another fit might prove fatal, and as the pulse was now of fair strength and volume, Mr. Milne determined to try venesection. The œdema of the arms made opening a vein a little difficult, and failure was experienced in the left arm, but the median basilic of the right was opened. Twelve ounces and a half of blood were withdrawn, and immediate improvement followed. His breathing, which before had been loud and snoring, became much easier and quieter; in twenty minutes he was with some effort got to answer questions; in three hours he became completely conscious. The convulsions were not repeated. Finding the purgatives given had not acted, two minims of croton oil were given after the venesection. The bowels acted very copiously during the night. A hot vapour bath was given in the morning, and a diuretic mixture with five grains of citrate of caffeine ordered. On the 19th he passed 58 oz. of urine, and for subsequent days the quantities were 109 oz., 110 oz., 101 oz., 89 oz., and 64 oz. Afterwards about the normal amount was passed per diem. The hot vapour baths were continued for a few mornings, and the œdema rapidly disappeared. He left the hospital on Aug. 25th in good health, and with no albumen in his urine, although it was collected at various times (after being up for some time, and after meals), and tested repeatedly.

Remarks by Mr. MILNE.—I do not think there can be much error in this man's case in ascribing the immediate improvement after venesection to the good effect of that operation. To me at the time it seemed to be the means of saving the patient's life. In conclusion, I would point out that in this case the patient was a young man of good previous health, and his illness of short duration, so that vigorous measures in the way of bleeding, free purgation, and hot vapour baths could be adopted without danger.

ARARAT HOSPITAL, ARARAT, VICTORIA.

CASE OF SUPPURATING HYDATID OF THE LUNG, TREATED BY ASPIRATION AND CLEANSING WITH CARBOLIC LOTION.

(Under the care of Mr. GEO. PALMER.)

THIS case resembles in many points the one published by Mr. Joshua in our issue of Oct. 20th.

T. L—, aged twenty-five, was admitted on Oct. 26th, 1885, to this hospital, in a weak, hectic, and emaciated condition, suffering from hydatid of the right lung, which had suppurated and opened into the bronchi. Through the latter small cysts and fetid pus were being freely discharged. As the natural efforts at expulsion of the contents of the

cyst were daily becoming weaker and less effectual, an attempt was made to supplement them by aspiration. Careful examination and exploration in various situations with the hypodermic needle showed that healthy compressed lung intervened between the chest wall and the suppurating cavity, which occupied the centre of the lung; aspiration was therefore resorted to below the inferior angle of the scapula. After the needle had penetrated to nearly its whole length, most offensive pus flowed freely into the syringe. More than half a pint of fluid was drawn off and replaced, without removing the needle, by injecting tepid carbolic lotion (1 in 80). This was withdrawn after a few minutes. The man felt faint but much relieved in his breathing after the operation. Hamoptysis followed two nights afterwards, but did not recur. The aspiration and injections (in the same situation) were repeated twice at intervals of a week, the amount of pus withdrawn and lotion injected being less on each occasion. The patient gradually but markedly improved after each aspiration, and was discharged on Dec. 29th, 1885. The expectoration gradually lost its purulent character, and for the last two years he has been able to follow his occupation, that of a jockey, and has had good health.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Debate on the Morbid Anatomy and Pathology of Chronic Alcoholism.

An ordinary meeting of this Society took place on Tuesday, December 4th, Sir James Paget, F.R.S., President, in the chair.

The debate was opened by an able address by Dr. J. F. PAYNE. He commenced his remarks by stating that he did not intend to discuss the action of drinks on the human body generally, nor all the diseases to which habits of excess could give rise, nor, still less, the moral or economical consequences of such habits, but solely the material changes which the use of alcohol in excess had been actually shown to produce in various tissues and parts of the body. He then proceeded to a historical study of the subject, taking in the first period the history of ancient medicine up to the sixteenth century. He could find here but scanty notices of the effects of inebriety, and no recognition at all of the anatomical changes due to it. The second period, including the sixteenth and seventeenth centuries, saw the rise of morbid anatomy, which now began a separate existence as a science, at first under the protection of her elder sister—normal anatomy—and gradually afterwards assuming a more independent position. Anatomical changes were now for the first time referred to inebriety. In Harvey's lectures, though nothing could be found referring directly to alcoholism, diseased livers evidently produced by this cause were described. One case he saw was "russet, hard, contracted; absque, sanguine"; apparently it was a small cirrhotic liver. Another was "russetish, ingentum et durum, plane scirrur tumour, absque fere sanguine, aspera superficie": a large hard liver, evidently like a scirrhus tumour, almost bloodless, and with a rough surface, which could hardly have been anything else than cirrhosis. Harvey wrote in 1616, and not long after this time some notices of alcoholic diseases began to appear, but the only lesion referred to this cause by writers of the seventeenth century was cirrhosis of the liver and its consequent ascites. The earliest case of this kind which he could find was of date 1626, though published many years later, in the great storehouse of such observations, Bonet's "Sepulchretum" (Geneva, 1679), where it was quoted from Gregorius Horstius. Dr. Payne quoted another case from the same work, and in both these and many others there related strong wine was clearly recognised as the source of evil. English medical literature of this period yields few valuable observations. There was one by Walter Harris, the correspondent and friend of Sydenham, the author of a book on the diseases of children and of "Pharmacologia Antiqua" (London, 1653); the case was related in the latter work. John Browne, surgeon to St. Thomas's Hospital, published an account of a case in the "Philosophical Transactions," vol. xv., 1685, entitled "A Remarkable Account of a Liver, appearing Glandulous to the Eye." It

was accompanied by a figure, "accurately taken down by Mr. Faithorn," an eminent artist and engraver of the day. Dr. Payne had copied this picture and exhibited it to the Society. It appeared from the account that Mr. Browne did not recognise the dependence of this lesion upon alcoholic drinks. The drawing was an excellent one of atrophic cirrhosis, and appeared to be the first published illustration of this lesion. The third period dealt with by Dr. Payne was from 1700-1850, the earlier part of this period being marked by the introduction of distilled spirits as a beverage, and then followed a rapid increase of alcoholic diseases. In 1724 the College of Physicians made a public representation as to the evils of spirit drinking, and the Rev. Stephen Hale, the physiologist, exerted himself to check the practice. J. C. Lettsom was the first to notice some of the symptoms of alcoholic paralysis, and James Jackson of Boston, U.S.A., in 1828, gave a good account of the same affection under the name of arthrodynia. The classical work of Magnus Huss on "Alcoholismus Chronicus," contained careful descriptions of the morbid changes met with in all parts of the body in drunkards, and he regarded the nervous disturbances, being unaccompanied by any change in structure, as symptoms of a certain kind of poisoning. The fourth period, from 1850 to the present time, embraced the era of the rise of pathological histology, the most conspicuous advance being the demonstration of minute changes in various parts of the nervous system, and the uniformity of the action of alcohol throughout the whole body had become clearly manifest. We were now able to clearly recognise the toxic action of alcohol, and to compare it with the action of other poisons. The third section of the subject was discussed by Dr. Payne under the head of the "general pathology of alcoholism." He considered at some length the question whether alcohol was a poison, taking as the pathological definition of a poison "a substance capable of injuring the body, either by causing damage to the tissues or by producing functional disturbance." He used the word "poison" not as a term of unqualified condemnation, but as meaning something capable of producing injury, though not necessarily doing so; it would be as absurd to condemn alcohol as to condemn common table salt, because a large dose of either of them might be fatal. He defined a functional poison as one disturbing the mode of action of the tissue elements without permanently altering their composition; a tissue poison as one damaging the structure of the tissue elements themselves. Tissue poisons acted on all or most tissues of the body, which they reached in proportion to the degree of concentration in which they might be present and to the susceptibility of the different parts; and they all had, within certain limits, the same action, or at least there were certain modes of action common to all. Studying alcohol in this light, he found that its action on the human body was threefold:—1. It checked oxidation, and thus favoured the accumulation of fat, producing fatty infiltration or steatosis in parts naturally disposed to it. This mode of action resembled that of phosphorus. 2. It acted as a functional stimulus, or, in a larger dose, as a functional poison on the nervous system, especially on the brain. This action was not here regarded except in so far that prolonged functional derangement might give rise to structural change. 3. It acted as a tissue poison, destroying the vitality of some tissue elements, and setting up inflammation in others. Generally speaking, the parenchymatous elements, nervous or epithelial, suffered degenerative or necrotic changes, while the connective-tissue elements or stroma proliferated and underwent chronic inflammation. These two classes of changes were concurrent effects of the same poison, not one dependent on the other. This action of alcohol was comparable to that of mineral poisons. In the fourth and last section Dr. Payne dealt with the morbid changes produced by alcohol in various organs. He confined his remarks especially to the liver and nervous system, taking the morbid changes in these parts as types of the effects produced in the organs generally. He referred, in passing, to the stomach, the mucous membrane of which showed degenerative and necrotic changes, whilst the walls sometimes became sclerosed. With regard to the liver, he discussed first fatty infiltration, in which the essential structure of the organ was preserved. This change was an example of steatosis, and was produced especially by the dilute forms of alcohol and in those who were well fed. He questioned if it ever passed into cirrhosis, and thought the accumulation of fat was, so far as it went, evidence of the destruction of some alcohol. In reference to the pathology of cirrhosis.

he said it was generally accepted that concentrated forms of alcoholic drinks brought into the stomach were absorbed into the portal vein and carried to the liver, where inflammation of the interstitial stroma was set up, by which new fibrous tissue was produced. In consequence of the pressure of this tissue and its subsequent contraction, the liver cells were compressed and destroyed, and were found in various degrees of degeneration loaded with fat, yellow granules, and so on. To this explanation he demurred; he looked upon cirrhosis as a twofold change, degeneration and necrosis of liver cells being accompanied by hyperplastic inflammation of connective tissue, these changes being concurrent and probably simultaneous effects of the alcoholic poison, as was confirmed by examination of the change called acute red atrophy. Dr. Lionel Beale had urged some years ago that the change was essentially atrophic, not inflammatory. Dr. Payne remarked on the comparative rarity with which cirrhosis was found in the bodies of drunkards; Peters found it in only four or five cases out of seventy persons who died from the excessive use of ardent spirits. The effects of alcohol on the nervous system were next discussed. The cerebral membranes were usually oedematous, hyperemic, or chronically inflamed with excess of fluid. The dura mater had frequently been observed to be thickened, the Pacchionian bodies being largely developed; chronic pachymeningitis, sometimes in the form of the so-called pachymeningitis hæmorrhagica or hæmatoma of the dura mater, had been more rarely observed. In the brain, the chief changes were atrophy of medullary and cortical matter, sometimes with increase of neuroglia or sclerosis; the changes generally were like those of old age. The cerebral atrophy was no special kind of degeneration, no change being described as at all characteristic of alcoholism. The relation of alcoholism to paralytic dementia or general paralysis was a difficult and abstruse question; it could not be disputed that excessive indulgence in alcohol was one of the factors in the production of this disease, yet the conclusion seemed to be that general paralysis was distinct from chronic alcoholism, and that for the production of the former out of the latter some additional cause was necessary. In the spinal cord changes were not frequent or important. A few cases of sclerosis of certain tracts had been recorded, especially the posterior or postero-lateral columns, and there were cases of what was thought to be acute myelitis from excessive drinking. Dr. Wilks was the first in this country to give a clear description of the symptoms due to changes in the peripheral nerves under the name of alcoholic paralysis. Dr. Payne related in detail many points bearing on the clinical aspect of this question, and gave references to the extensive literature of the subject. The changes described in the nerves affected with this form of multiple neuritis came under the heads parenchymatous and interstitial. The first included cloudy or granular appearance of the nerve fibres, segmentation of the myelin and collection of it in round and oval masses, sometimes absence of the axis cylinder and other similar changes; in fact, all the evidence of degeneration ending in necrosis. The interstitial changes were seen in the perineurium or endoneurium, either diffused or mainly external. These tissues might show an increase in the number of nuclei or infiltration with leucocytes, and were generally thickened. In some cases actual increase of connective tissue had been observed. These changes were what was usually described as inflammation leading to hyperplasia. He submitted that both these lesions were produced by the direct action of alcohol, and he showed the similarity of these morbid changes to the neuritis produced by other toxic agents, such as arsenic, lead, bisulphide of carbon, &c. Dr. Payne then briefly mentioned the most important points in regard to changes in other organs. Dr. Dickinson's observations and statistics told strongly against the view that drinking to excess was a frequent cause of Bright's disease. The effects of alcohol on the generative organs had been very little investigated. It had long been believed that excessive drinking diminished the fertility of both sexes, and especially the male. The organs of respiration suffered, obstinate catarrhs of larynx and bronchi being common. With regard to the influence of alcohol on the production of tubercle, the utmost divergence of opinion prevailed, many holding that phthisis was rare in drunkards, and that drinking freely checked the progress of consumption. The only new fact in this connexion was the undoubted frequency of tubercle in the subjects of alcoholic paralysis. The skin in chronic alcoholism was soft, smooth, satiny,

generally pale, and sometimes waxy-looking, the change depending partly upon accumulation of adipose tissue under the skin and partly a wasting of the skin itself or of the epidermis. The association of chronic nasal and facial hyperæmia and of acne rosacea was well known. Drinking habits made such diseases as psoriasis and eczema inveterate and sometimes quite incurable.

Dr. GEORGE HARLEY said the habit of moderate drinking aggravated the severity of a large number of constitutional diseases, and called into existence many others in persons predisposed to them. They were assembled to consider the detrimental influences of alcohol on the body as pathologists, in contradistinction to mere morbid anatomists; and, seeing that human brains, like human faces, in spite of all possessing a collective similarity, had each its own individual peculiar turn of thought, he would try to direct their attention into an entirely different groove, in order that they might have the advantage of getting as many new ideas as possible out of the discussion. He was all the more desirous of doing so, as he considered it a mistake to imagine that the morbid lesions found after death as the result of alcohol, either in stomach, liver, kidneys, or heart, no matter whether they were in the form of hypertrophies or degenerations of tissue, were in any case the actual disease that killed, but only the outcome or the mechanical products of the disorder. Just the same as the ejected lava and scoria from a volcano were not the disturbing cause, but only the result of the chemical catclysm which produced the seismic disorder. The mode in which alcohol acted on the tissues of the body was purely chemical, and in proof of this he cited the results of many experiments, both of his own and of others; among these were the artificial production of diabetes by the injection of alcohol into the portal vein, the increase of acidity of the urine after alcohol was taken by the mouth, as well as the effects it had on the transformation of urea and uric acid. Added to which he mentioned the remarkable property alcohol possessed of acting like opium on the constituents of the blood, and preventing them from being oxidised during the process of respiration, thus preventing the pabulum of the blood becoming fitted for the processes of nutrition. The oxidation of all assimilable materials was, he said, one of the greatest essentials in animal life, and it was easy to understand how that, when from any cause whatever the oxidative changes were interfered with, tissue degeneration was the result. Moreover, Dr. Harley quoted a number of statistics which tended to show that, although alcohol, like any other toxic agent, even the deadly prussic acid itself, acted on the human body as a poison, it was nevertheless not only a medicine in disease, but a food in health, in direct accordance with the constitution of the person and the quantity and conditions under which it was taken. But its prolonged and habitual use in a much smaller amount than was usually supposed was shown by life insurance office statistics materially to shorten life. For these death-rate tables conclusively pointed to the fact that not only did moderate drinkers live very much longer than intemperate persons, but that the average life of teetotallers was considerably longer than the average life of temperate drinkers. Dr. Harley concluded his remarks by pointing out that as the study of mere symptoms as well as of morbid specimens either with the naked eye or by aid of the microscope had totally failed to reveal to us the genesis of disease, we must in the future advance a step further and see what could be learnt of the causes of morbid structure, as well as of disordered function, by means of the test tube and balance; for many of the structural changes met with in the deadhouse, like perhaps most of the symptoms of disease seen in the sick room, were no doubt the mere visible manifestations of disordered chemical action.

Dr. LIONEL BEALE brought forward some specimens illustrating what he regarded as the true morbid anatomy of cirrhosis. He showed that if the interlobular tissues were prepared in certain ways various structures would be found in them, such as debris and waste products of the normal tissue of the gland. Many tubes were present which were filled with liver cells. The essential change, he considered, was atrophy and degeneration of liver cells themselves, beginning at the periphery of the lobules. This could easily be seen if the specimen, instead of being hardened and shrunk in the usual way, were impregnated with some fluid like glycerine and water and then mounted direct.

Dr. STEPHEN MACKENZIE showed specimens and a water-colour drawing of the liver of a girl of twelve affected with

well-marked atrophic cirrhosis, though no history of alcohol could be obtained. She entered the hospital complaining of an enlargement in the upper part of the abdomen, but there was no urgency in her symptoms. One day she developed severe hæmatemesis, which continued until death, a week later. He felt sure that in cirrhosis the primary process was a nuclear proliferation occurring at the periphery of the lobules; the cells always showed change (such as fatty degeneration) after death. The changes might go on, as Dr. Payne had suggested, hand-in-hand, but he considered the shrinking and distortion produced by the contraction of the cicatricial tissue led to the development of changes which were secondary in the cells.

Dr. MOTT exhibited a specimen of Fatty Degeneration of the Heart, stained with osmic acid, obtained from a patient who died of syncope after a bout of drinking. The fatty change was most marked in the columnæ carneæ and musculi papillares. There was no stenosis of the coronary arteries. Schrötter, in "Ziemssen's Medicine," mentioned alcohol as capable, among other poisons, of producing this change.

The following drawings and specimens were shown to illustrate the subject:—

Dr. CAYLEY: A drawing from Middlesex Hospital Museum of a Liver, which Dr. Payne regarded as an instance of "red atrophy."

Dr. PAYNE: 1. Copy of a drawing by Faithorn of Cirrhosis of the Liver (the first known illustration), published in 1825. 2. Specimen of Pachymeningitis Hæmorrhagica.

Mr. LEOPOLD HUDSON: A series of seven specimens from the Middlesex Hospital Museum, illustrating: (1) a form of minute Gastric Ulcer associated with alcoholism, leading to profuse hæmatemesis; (2) Hypertrophic Cirrhosis; (3) Atrophic Cirrhosis, with capsular thickening of liver and spleen; (4) Chronic Atrophy of the Liver.

The following microscopical specimens were shown:—

Dr. STEPHEN MACKENZIE: Non-alcoholic Atrophic Cirrhosis.

Dr. PAYNE: Atrophic Cirrhosis, showing: (1) fatty change and increase of connective tissue; (2) liver-cell degeneration; (3) pigmentation and excess of connective tissue.

Mr. LEOPOLD HUDSON: (1) Atrophic Cirrhosis from a beer drinker and a spirit drinker; (2) Hypertrophic Cirrhosis; (3) Renal Changes associated with Atrophic Cirrhosis.

Dr. LIONEL BEALE: Atrophic Cirrhosis from Man and Frog.

Mr. TARGETT: Alcoholic Atrophic Cirrhosis from a boy of eight.

Dr. MOTT: Fatty Degeneration of Heart from a heavy drinker.

Dr. STEPHEN MACKENZIE then showed a case of Localised Symmetrical Edema. The patient, a male, aged twenty-eight, noticed in March of the present year a swelling behind the left ear, and almost at the same time, or a few days later, a similar swelling behind the right ear. The swelling spread downwards, and in the course of a fortnight extended to the shoulders and to the upper parts of the arms, to which parts it had remained limited. It reached its maximum development in about a month, and had since fluctuated. The swelling around the lower jaw at one time was so great as to interfere with opening the mouth and to prevent mastication. There had been at no time redness or pain in the swollen parts, the superficial veins were not distended, and the glands had not been enlarged. Syphilis was denied. The patient now presented swelling of the skin from below the ears to the middle of the arms, and corresponding level of the thorax. The swollen parts were firm and (especially the shoulders) felt subjectively and objectively rather colder than neighbouring parts. There were red linear atrophicæ, from stretching of the skin, over the upper parts of the arms. The heart and kidneys were normal. The appearance presented was most peculiar and unusual, the greatly swollen shoulders and the upper arms contrasting most remarkably with the small lower parts of the arms and fore-arms. The explanation offered was that the swelling was an œdema of vaso-motor origin, but as to the condition that had brought this about there was no evidence to show.

The following card specimens were exhibited:—

Mr. RAYMOND JOHNSON for Mr. BERKELEY HILL: Pulmonary Embolism.

Dr. RADCLIFFE CROCKER: Atrophoderma Pigmentosum.

Mr. BERKELEY HILL: Cancer of the Prostate.

MEDICAL SOCIETY OF LONDON.

Cases illustrating Hepatic Surgery.—Septic Puerperal Insanity.

AN ordinary meeting of this Society was held on Dec. 3rd, Sir William MacCormac, President, in the chair.

Mr. J. KNOWSLEY THORNTON read a paper on some additional cases illustrating Hepatic Surgery. He gave brief notes of six cases operated upon by him since he made a communication to the Society on Cholecystotomy in November, 1887. The first two were cases of abscess in connexion with perforation of the gall bladder, presumably by gall stones, though the stones were not found. Of these, one occurred in a woman who was seized with chills, severe abdominal pain, and swelling over the gall bladder. On cutting down, pus was reached without opening the peritoneum. Two loculi were found—one deep, the other superficial,—and a rubber drainage tube was passed into each. In the second case, on which he operated in February of the present year, the patient was a fat cook, aged sixty. The illness commenced early in December with pains in the back and loins, which at Christmas became more severe and localised. On admission into the Samaritan Hospital a large tender swelling was found over the gall bladder; this was opened, and several channels were found leading into deep pockets. It was treated, like the first, by drainage. The third case occurred in a widow aged sixty-two, who was emaciated, anæmic, and jaundiced. Examination revealed a swelling, hard and tender, over the region of the gall bladder. It was incised, and the cystic duct examined. It was found funnel-shaped, hard, and contracted at its lower end, and two gall stones were wedged in the common duct. Manipulation failed to dislodge these, the lower one being only slightly moved. The operative interference had caused such serious bruising to the walls of the gall bladder that it was decided to remove it entirely. This was then done with comparative ease, the operation being almost a bloodless one, the cystic duct being carefully ligatured close to its origin from the common duct, the stones being left in the latter. The calculi were afterwards expelled, and were recovered from the feces and shown to the Society. They gave rise to serious constitutional disturbance, rise of temperature, and abdominal pain as they passed through the ileo-cæcal valve. The fourth case occurred in a widow of fifty-one, who presented a distended gall bladder, easily defined, smooth and elastic. Cholecystotomy was performed, the gall bladder being sutured in the usual way to the opening in the abdominal parietes and a drainage tube inserted. The case did well, but the patient recently returned complaining of pain due to the dragging of the adherent gall bladder on the abdominal wall. The fifth case occurred in an anæmic woman of twenty-one, who presented a hydatid cyst in connexion with the left lobe of the liver. An incision was made over it, the surrounding peritoneum being protected by packing with carbolio sponges. The cyst was freely opened, and syringed out with iodine and water. In the pelvis, when the hand was passed down, another cyst could be felt, surrounded by matted intestines. This it was deemed advisable to let alone. There was great after-discharge, and the patient left the hospital fifty-one days after admission with a small sinus. She came back some time afterwards, and the pelvic swelling was found to have entirely disappeared; it had apparently communicated with the liver cyst, and had drained through the same opening. The sixth case occurred in a lady aged thirty-five, and was one of abscess in connexion with perforation of the gall bladder. Many stones were found in the abscess, in the gall bladder itself, and in the cystic duct, there being altogether over one hundred. In all the cases where suppuration occurred it was found that the swelling formed to the right of the position of the normal gall bladder. Mr. Thornton dwelt on the risk of delay in those cases in which symptoms of impacted gall stones were present; he likewise pointed out the advantages following a free opening and proper drainage in hydatid cysts over the older method of aspiration. He said that the question of selection of the operation of cholecystectomy in those cases for which cholecystotomy was now advocated would soon have to be seriously considered. With regard to the purposes served by the gall bladder, he had no doubt that it not only acted as a storage place for bile, but also secreted a

mucus which lubricated the passages and enabled the secretion to pass more easily; and he pointed out, finally, the unfavourable action exerted by the bile on a healing wound. The whole of the cases he had related recovered, and were well at the present time.—Sir WILLIAM MAC CORMAC asked how long the fistulous openings continued in the first two cases. He likewise inquired whether in the cholecystectomy case any surrounding adhesion added difficulty to the operation. He thought that the calculi shown were too small to have given rise to serious trouble at the ileo-colic valve. He preferred the incision *à deux temps* in opening hepatic suppurations where no adhesions were previously present.—Mr. DAVIES-COLLEY related a case of hepatic hydatid that came under his care at Guy's Hospital eight years ago. It was at first thought to be an aneurysm, but on tapping clear fluid came away. It refilled, but a second tapping resulted in absence of flow. An incision was therefore made in the median line under antiseptic precautions, and the wound stuffed with gauze. Adhesions between the parietes and the liver swelling soon formed, and on opening the latter more than a pint of small daughter cysts were evacuated. He considered this method preferable to emptying the cyst at one operation.—Mr. DAVSON referred to a case he saw at Edinburgh, where a hepatic hydatid cyst was emptied through an issue wound in the skin, the latter being produced by the action of *potassa fusa*.—Mr. THORNTON, in reply, said that the fistulae in the first two cases took about seven or eight weeks to heal. The chief difficulty in cholecystectomy was, he thought, the hæmorrhage likely to be caused in separating the attachments of the gall bladder from the liver, but in the case he had related there was no trouble in doing this. He thought it easy to guard the peritoneum thoroughly, and hence preferred completing the operation at one sitting. Stitches placed in the liver held readily, and as a rule gave rise to no trouble.

Dr. G. H. SAVAGE read a paper on Puerperal Insanity of Septic Origin. He said that the confusion as to puerperal fever and puerperal mania had really some justification in experience, and the object of his paper was to point out the connexion. Ordinary puerperal insanity was very common, and provided 8 to 10 per cent. of cases seen in hospitals for acute cases of insanity, and a large proportion were treated at home. In a lying-in hospital one patient in 400 had mental disorder. Puerperal insanity was not so curable as generally supposed; 5 per cent. of the acute cases died, and 20 per cent. remained uncured. In ordinary puerperal insanity any form of mental disorder might occur—mania, melancholia, or dementia. The cases of septic puerperal insanity were mostly of the delirious or acutely maniacal type. Of the 5 per cent. of fatal cases, many, if not the greater number, depended on septic causes. He did not claim originality in pointing out the septic relationship of these cases. Similar predisposing causes might start the ordinary and the septic cases. Hereditary nervous instability might predispose to septic influences, and such persons were more liable to grave delirium than others when affected by febrile disease. He quoted the opinions of Hunter Gooch, Griesinger, Marcé, Maudsley, and Campbell Clark as to there being a septic cause for puerperal insanity. Insanity might depend on albuminuria. Sir J. Simpson looked upon puerperal mania as being directly connected with this state. He himself had rarely found albumen in the urine, though he had met with insanity following albuminuric eclampsia. In these septic cases there might be exaggerated delirium, delirium passing into delirious mania, or into ordinary acute mania, or into a form of post-febrile mental depression. Septic cases might follow miscarriage or ordinary childbirth, and nervous disorder might predispose to septic trouble. There was nothing special in the general causation of the sepsis which might arise from without or from within. Symptoms generally arose within the first week; the onset might be sudden or more gradual, and preceded by mental depression. Rigors were not common, and the insanity modified the bodily symptoms. The secretion of the milk might be present or absent, and the lochia might be arrested or might continue, the latter discharges being uncertain in all cases of puerperal insanity. The pulse was rapid, and the temperature was a little raised, the early mental symptoms frequently resembling delirium tremens; this condition might rapidly get worse and kill the patient, or it might change its character. The general bodily symptoms of septicæmia, more or less modified, might

arise. A larger number of insane patients with septic symptoms recovered than would have been expected. It was difficult to draw any line between certain cases of delirium of pyæmia and certain others with acute delirious mania following pyæmia. The differential diagnosis turned upon the special moral causation in primary mania, and bodily disorder in the septic cases. His conclusions were as follows: Some special cases of puerperal insanity were very fatal, and many of these had some septic relationship; albuminuria might occur as an accident, it might be a cause of insanity alone, or it might follow eclampsia; the ordinary symptoms of septicæmia might be modified by the insanity, and the diagnosis must depend most on the history of the development of symptoms, whether the mental or the bodily symptoms appeared first. Dr. Savage related several cases which illustrated the various points in his paper.—Dr. BARNES quite concurred with Dr. Savage that heredity was a great predisposing cause in these cases, whilst the evocative causes might be blood diseases. He thought a careful distinction should be made between cases of insanity during gestation and those occurring after gestation and during lactation. In the insanity of gestation albuminuria was frequent. In pregnancy there was a state of great nervous and vascular tension, whereas after labour the reverse conditions were present—depression and tendency to absorption. In the cases happening before labour the question of sepsis did not come in, but after labour sepsis might occur as an evocative cause. He had noted marked anæmia after labour; also cholæmia and a flabby condition of liver was common at this period. He felt sure that emotion and shock were most powerful predisposing causes of sepsis. The insanity that developed after several months of lactation was due to exhaustion, the quality of the blood being impaired. He had more than once seen cases of insanity cured by putting right a displacement of the uterus.—Mr. KNOWSLEY THORNTON said that all surgeons must have remarked that nerve depression was a fertile predisposing cause of septic trouble. Surgeons had not published many cases of insanity after operations. He had met with both the melancholic and violent forms after operations on the abdominal cavity, and all recovered. He asked if, in the cases related by Gooch, where there was rapid pulse, it was not possible that a septic peritonitis was present, though masked by the insane condition of the patient, and he thought this would also account for the small percentage of septic cases in Dr. Savage's list. If the case were a septic one, renal congestion with albuminuria, and even suppression of urine, might follow; and this was in consonance with the modern pathological teaching, that the kidney was the great excretor of septic material.—Dr. H. G. MACKENZIE said that in these cases Armstrong recommended large doses of calomel, followed by aperients, and he had seen benefit result from similar treatment.—Dr. SYMES THOMPSON said it was a common observation that the action of septic poison was greatly facilitated by nerve prostration.—Dr. SAVAGE, in reply, said that the older statistics showed that there was more danger of this condition among the upper classes, and Dr. Barnes asserted that the same held good at the present time. Cases had been related in which albumen had been absent during pregnancy and yet insanity had developed after labour. Depression and fear tended to the onset of septic poisoning in a most remarkable way, and it was surprising to note the extent to which insanity might mask the presence of acute septic disease. He thought the disastrous experiences of depletory treatment in bygone days was an argument against the method of treatment by calomel and purgation.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President's Address.—Pulsating Tumours of Bone.

THE opening meeting of the Surgical Section was held on Nov. 8th, Mr. Fitzgibbon, President, in the chair.

THE PRESIDENT delivered an address on Syphilis, outlining its history from a period over 2000 years B.C., refuting the suggestion that it was introduced into Europe after the discovery of America; describing the nature of the disease as a specific one produced by the presence of a morbid virus transmissible by contact; noting its early stages in the period of incubation during which the virus was latent; giving the periods of eruption of varying severity, and

yet with a degree of order and regularity; and, finally, emphasising as an ascertained fact that one attack of the disease generally confers immunity against a second. The President quoted statistics showing the successful operation of the Contagious Diseases Act in garrison towns, and advocated the desirability of its extension.

Dr. ROBERT MACDONNELL read a paper on Pulsating Tumours of Bone. He detailed the case of a lady who had been sent to him by Mr. Erichsen nearly five years ago. She then suffered from a pulsating tumour over the upper part of the fibula, which he and Mr. Erichsen agreed in regarding as probably a hæmatoid sarcoma of the bone. It continued for some time to increase in size. Operation was delayed on account of the lady's pregnancy, but she was directed to wear an elastic stocking. She suffered after delivery from phlegmasia of the other limb, which caused her to remain in bed for nearly six months, still, however, wearing the elastic stocking. When she came again under Dr. MacDonnell's observation, some time after her parturition, the tumour was found to have disappeared. The case, which the result showed to have been probably an osteo-aneurysm, was of much interest as pointing to the difficulty of diagnosing between osteo-sarcoma and osteo-aneurysm. In this particular case the resemblance to the former disease was so marked, that, but for the delay caused by the pregnancy of the patient, an operation (which the result showed was not necessary) would probably have been performed.—Dr. MAPOTHER said his case (to which Dr. MacDonnell had referred) arose some twenty-six years ago, and there was a previous one treated by Dr. Bickersteth of Liverpool. In his own, the patient, aged twenty-eight, got a knock on the shin, and four months afterwards a tumour as large as a walnut formed, half of it projecting beyond the level of the tibia without discolouring the skin, while the corresponding portion went into the substance of the bone. There was a distinct distensible pulsation, thrill, and bruit. Aided by Dr. Hutton, he removed the cuticle by potassa fusa, and then applied a cautery. After an interval of ten days, intense hæmorrhage occurred as of a nævus suddenly wounded. In a few days the nœvoid matter came away, leaving a granulated surface. Thereupon a most rapid cure took place. Sixteen years subsequently to the operation—now ten years ago—he had heard of the patient as being alive and well in New Zealand. There was only a slight cicatrix, and thick bone around. Denying the possibility of non-malignant aneurysm, Mr. Holmes at first assumed that the case was one of mistaken diagnosis; but in his recent publication he regards it as a non-malignant case, and both it and Dr. Bickersteth's as examples of what might be called osteo-aneurysm.—Mr. WHEELER concurred as to the rarity of such cases. He had himself seen two cases of pulsating tumours of bone; both were sarcomata—one in the practice of Mr. Butcher, the other in his own. In the case which was under his own observation, the seat of disease seemed to be the lower end of the tibia, which was distended. There was distinct bruit. He amputated at the knee joint, revealing a tumour which Dr. Barker described as an osteo-sarcoma. Eighteen months later the patient died of tumour in the liver, and he believed also in the spleen. He regarded Dr. Robert MacDonnell's case as one of aneurysm by anastomosis. He asked whether Dr. MacDonnell attributed cure to the rest and pressure the patient had while suffering from phlegmasia dolens. In Guy's Hospital Reports a case was recorded of aneurysm by anastomosis at the lower end of the tibia, afterwards implicating the astragalus. Amputation was effected at the middle third of the leg, and, there being no record of a return of the affection, he presumed it was one of an innocent nature, such as Dr. MacDonnell had described.—Mr. WILLIAM STOKER said he had had a case of pulsating tumour starting from the fibula in a boy aged twelve. At first the tumour seemed localised to the shaft of the fibula so distinctly that he determined to remove the upper part, but the child's mother would not consent, and she took the child away. Rapid distension having taken place, the child was brought back in a month, and the pulsation was notable, while the circumference of the limb had increased two inches in the interval. Although the rapidity of the distension made the result doubtful, yet he amputated above the knee, and the then child was now a young man alive and well. Dr. Phineas Abraham had pronounced the tumour to be a giant-celled sarcoma. There had been no return of the tumour.—

Mr. HENRY GRAY CROLY called attention to the fact that the discussion had extended both to the subject of osteo-aneurysm and that of malignant disease attacking the bone, while Dr. MacDonnell's paper was conversant with a case which was not malignant. So, too, was Dr. Mapother's case. Osteo-aneurysm, it was agreed, was a disease that was not malignant, and the great interest in Dr. MacDonnell's case was the cure of the aneurysm. He did not understand how phlegmasia dolens, even occurring in the same limb, could affect the cure. He had had a case of osteo-sarcoma, a girl, aged eighteen, with a growth involving the lower end of the femur. Dr. MacDonnell concurred with him that her only chance was by amputation below the trochanter. The operation was performed, and she made a good recovery. At the end of four or five years, however, he was informed by the doctor of the district in which she resided that she was attacked in the upper extremity at the opposite side with the same disease, which rapidly proved fatal.—Dr. BALL said they had at present a case in Sir Patrick Dun's Hospital in which the difficulty of diagnosis suggested by Mr. Croly presented itself—namely, of distinguishing between pulsating sarcoma of bone and pure angioma. On admission, the patient complained of a small tumour on the top of his head, with intense pain in the back of his head and neck. The tumour was soft, and no pain could be detected in it; but very soon it enlarged and the pulsation became marked, a train of cerebral symptoms developing apparently from pressure. He had periodical attacks of vomiting. Double optic neuritis and loss of sight ensued. Believing that if they arrested the blood supply, which seemed to be derived from the meninges of the brain and the arteries outside the cranium, they might be able to retard the rapid progress of the tumour, he ligatured simultaneously the two external carotid arteries above the facial artery. The result was an amelioration of the symptoms. Indeed, the vomiting entirely disappeared, the pulsation ceased, and the tumour decreased in size till it became imperceptible. However, now, at the end of a month, the symptoms were again developing—slight pulsation and a severe pain in the head. There were veins as big as the little finger radiating round the skull, and the blood could be squeezed out and a small hole detected where the communication existed. The case was one of angioma perforating the skull.—Dr. MACDONNELL, in reply, said he had delayed publishing his case until satisfied that the lady was really and permanently cured. His object in bringing it forward was to elicit discussion, in the hope of ascertaining whether, at any period of its growth, they could tell the malignant from the non-malignant tumour, and so be in a position to decide as to an early operation. In his own case, he hardly doubted that if the lady had not been pregnant she would have lost her limb. He told her husband, and Mr. Erichsen told him also, that they looked forward to amputation as the only chance of saving her life. But, happily, pregnancy made it desirable to temporise, and time revealed what neither of them in the beginning could tell—that they had not a malignant case to deal with at all. Therefore the real question was, What were the signs by which they might hope to distinguish cases in which operation was necessary and there was a reasonable chance of cure?

MIDLAND MEDICAL SOCIETY.

A MEETING of the Society was held on Oct. 17th, the President (Mr. Hugh Ker, F.R.C.S. Ed.) in the chair, when the following papers were read and several specimens exhibited.

Purpura: its Etiology, Pathology, Symptoms, and Treatment.—Mr. SAUNDBY read a paper on this subject, illustrated by numerous cases. The subject of the paper was a curious series of cases, chiefly of the hæmorrhagic form, which had been under his care at the General Hospital during the past summer. While purpura may be broadly distinguished from hæmophilia, by the latter being always congenital and persistent, cases were quoted to show that not uncommonly some traces of a hæmorrhagic diathesis may be discovered in purpuric patients, such as a tendency to bruise easily, a liability to epistaxis, &c. Its association with erythematous eruptions was illustrated by three cases. On the other hand, it was shown to occur at times in persons in previous good health without assignable cause. The

various pathological doctrines were discussed. In all these cases search for micro-organisms had proved fruitless, except in one fatal case, where organisms were found in the tissues by Dr. Crooke, but were believed by him to be putrefactive. The theory inclined to by the author is that the disease is due to a toxic dyscrasia due to some poisons produced in the body, either in the intestine, the tissues, or the blood. A case was related of purpura following an injury, where the rash spread from the seat of a hematoma at the end of one finger, caused by a contusion. In the only fatal case there was fatty degeneration of the heart, and microscopic foci of necrosis in the liver. The temperature was raised in all the hemorrhagic cases, in one to 104° F. The blood showed diminution of hæmocytes and hæmoglobin only when there was hæmorrhage. Epistaxis was the common form of bleeding, but free hæmaturia occurred in one case. No retinal hæmorrhages were present. Ergotine injected subcutaneously proved most efficient in checking bleeding. Turpentine failed completely. No drug had shown itself to be of decided value in checking the eruption where this showed a disposition to persist.

Paralysis of the Fifth, Sixth, and Third Cranial Nerves.—Dr. SUCKLING showed a man suffering from paralysis of the right fifth, sixth, and third cranial nerves. The paralysis of the fifth nerve was almost complete, both motor and sensory divisions being paralysed. The muscles of mastication were completely paralysed, the lower jaw when depressed projecting to the right side. The skin of the right side of the face, exactly up to the middle line, was anæsthetic, as was also the scalp as far as a line drawn vertically at the level of the external auditory meatus. There was anæsthesia of the right half of the mouth and tongue and of the right half of the soft palate, of the right nostril, right conjunctiva, and external auditory meatus. The sense of taste was impaired on the right side of the tongue from tip to root, that half of the tongue being furred; smell was also slightly impaired in the right nostril, irritating odours being scarcely perceived at all. Hearing was a little dull on the right side. There was almost complete immobility of the right eye, and the only direction in which it could be moved was downwards and inwards; ptosis was almost complete; the internal muscles of the eye had escaped, the pupil being small and responding normally to light and accommodation; there was no change in either fundus oculi. The man contracted a chancre four years and a half ago, and the right testicle was much enlarged, and had lost all feeling. There was no sign of inflammatory mischief in the right eye. The lesion was evidently syphilitic, and Dr. Suckling considered that the fifth nerve was damaged outside the pons in the posterior fossa between its superficial origin and the Gasserian ganglion. The sixth and third nerves, being close to the fifth, might be affected by the same lesion, which, in all probability, was a gumma. The absence of ophthalmia on the right side Dr. Suckling attributed partly to the presence of ptosis on that side, but he also considered that it showed that the nerve was damaged behind the ganglion, the fact that both motor and sensory roots were injured showing that the trunk of the nerve, and not its nucleus, was the seat of the mischief. The escape of the intra-ocular branches of the third nerve suggested an affection of the nucleus, but might occur on pressure of the trunk of the nerve. The contraction of the pupil on the right side might be explained by injury to the sympathetic dilating fibres which pass to the orbit by the fifth nerve. The man had improved under the influence of iodide of potassium and mercury internally, with inunctions of blue ointment daily. Dr. Suckling also pointed out that neuralgia in all three divisions of the fifth nerve was the first symptom in the case, and he laid stress on the importance of searching for anæsthesia in such cases, which, if present, would be a certain indication of grave organic mischief.

Mr. EALES showed a new Lamp suitable for reading-table and for ophthalmoscopic and laryngoscopic examination. It is made by the Corporation Gas Department, and is moderate in cost. Mr. Eales also showed a case of Symmetrical Caries of the Malar Bones in a child.

Dr. SUCKLING showed a case of Bilateral Spastic Hemiplegia in a child; other members of the family suffered from allied disorders.

Dr. KIRBY showed the Kidneys and Suprarenal Bodies from a case of Addison's Disease. The kidneys were large and the adrenals broken down by suppurative changes.

The patient was a young woman, and had been ill for four months; the leading symptoms were mental delusions, headache, constipation, enlarged spleen, and bronzing of the skin during the last two months of life. Two years before she had a similar attack, from which, however, she completely recovered.

Mr. JORDAN LLOYD showed Macewen's Instruments for Spinal Operations, also his Hernia Needles and Periosteal Raspator.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THE following is a report of the proceedings of the meeting held on Nov. 22nd.

Exophthalmic Goitre.—Dr. PORTER showed two patients, one a young married woman, twenty-one years of age, suffering from exophthalmic goitre. The goitre first made its appearance eight years before; the other symptoms were nervousness, palpitation, throbbing in carotids, marked exophthalmos with Graefe's sign, anæmic bruits on pulmonary artery and at the apex, also blowing murmur in the carotids. Had not menstruated for three months.

Aortic Stenosis.—The second case was one of aortic stenosis, in a man aged fifty-five, a pudler by trade. There was a history of an illness with feverish symptoms seven or eight years previously, but no definite rheumatic history. There was an aortic systolic murmur, prolonged into the second sound, and propagated into the carotids. The pulse was so small as to be almost imperceptible at the wrist. The general symptoms were syncope attacks and vertigo, the patient sometimes falling in them, but never fainting quite away. Face rather pale and anxious looking, and extremities cold.

Intermittent Fever.—Dr. SIDNEY ROBERTS related a case of intermittent fever in a man who had never had a previous attack, and had not been in a malarial district for ten months. The attack, which had occurred early every morning for a month, with a temperature of over 105°, at once ceased on the exhibition of large doses of quinine at bedtime.

Cheirpompholyx.—Mr. BURGESS read a note on a variety of cheirpompholyx. The main features of the case were the course, duration, and extent of the bullous eruption and the simultaneous presence of eczema. The patient was a thin, pale, undeveloped girl, seventeen years of age. For about five weeks during the summer successive crops of vesicles kept springing up at intervals of days, and the eruption spread over the front and backs of both hands and forearms, reaching as high as the elbows. The back of the left foot was also slightly affected. A week after the last bulla of the series had disappeared, and after the cuticle had peeled off in large pieces from the elbows downwards, a second outbreak of vesicles occurred on the hands and lower parts of the forearms. The different diagnosis between eczema, vesicles, and pompholyx was briefly discussed. Remarks were made by Dr. S. Roberts and Mr. Atkin.

Croup.—Dr. WHITE read notes of a case of membranous croup, which occurred in his practice. The patient was a boy of four years of age. The disease commenced insidiously and apart from the laryngeal membrane, with complete aphonia, dyspnoea, and slight feverishness. There were none of the symptoms or sequelæ of diphtheria. On the sixth day of the disease the dyspnoea became alarming, and tracheotomy was performed. Flakes of dirty membranes came away during several days subsequently, and the boy made a rapid and complete recovery. The speaker alluded to the existing very prevalent belief that membranous croup was but a manifestation of diphtheria; and, while allowing that most cases of croup, especially when occurring epidemically, were diphtheritic in character, maintained that cases such as the one related ought to be classified separately. Dr. White condemned operative interference in cases in which the sole object in view was euthanasia. There was no evidence to show that death from dyspnoea was a specially painful one, except to onlookers; while the indiscriminate performance of tracheotomy brought the operation into disrepute. In suitable cases, children over two years of age, when alarming dyspnoea without great prostration of the strength supervenes, the operation should be done always and early.—The following took part in the discussion: Dr. Martin, Mr. W. M. Jones, Mr. Jackson, and Mr. Atkin.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE Irish quarterly meeting of this Association was held in the King and Queen's College of Physicians, Dublin, on Thursday, Nov. 29th. In the absence of Dr. Clouston, President of the Association, the chair was taken by Dr. Eustace. Other members present were Dr. Garner, Dr. Finnegan, Dr. Ringrose Atkins, Dr. Ashe, Dr. Patton, Dr. Maziere Courtenay, Dr. Drapes, Dr. Nolan, Dr. Molony, Dr. Thornley Stoker, Dr. Hetherington, and Dr. Conolly Norman, Secretary for Ireland. Walter Bernard, F.K.Q.C.P., was elected a member of the Association. Dr. Drapes read a paper on Psychology in Ireland, in which he dwelt at some length on the various causes which retarded the progress of this branch of science in Ireland. In the discussion which followed Drs. Eustace, Hetherington, Patton, Finnegan, Courtenay, and Atkins took part. It was resolved, on the motion of Dr. Finnegan that at least one meeting in each year should be held at some asylum in Ireland, with a view to rendering the work of the Association more practical. Dr. Maziere Courtenay read a paper on a case of Foreign Body in the Oesophagus, on which remarks were made by Drs. Thornley Stoker, Ashe, and Atkins. Dr. Nolan read a paper on "Folie à Deux," which was discussed by Drs. Drapes, Finnegan, Eustace, and Ashe. Dr. Conolly Norman read a paper on Sulphonal, in the discussion of which Drs. Drapes, Thornley Stoker, and Atkins took part. Dr. Drapes read a paper on Hyoscine in Insanity. The members of the Association subsequently dined together at Jury's Hotel, College-green. Among the guests were Dr. Atthill, President of the King and Queen's College of Physicians, and Dr. Nugent, Commissioner of Control of Lunatic Asylums.

Notices of Books.

The Movements of Respiration. By MAX MARCKWALD, M.D. Translated by THOMAS A. HAIG. With an Introductory Note by JOHN MCKENDRICK, M.D. Pp. 177. London: Blackie and Son. 1888.—This is a valuable contribution to the physiology of respiration, and much credit is due to Mr. Haig for the very readable translation he has made of the original memoir. Dr. Marckwald discusses two main points—first, whether there are respiratory centres in the spinal cord, as well as in the medulla oblongata; and, secondly, the cause of the rhythm. The results at which he has arrived are that there is a pair of centres in the medulla oblongata in the situation of the "neud vital" of Flourens, one of which presides over the movements of inspiration and is the more excitable of the two, whilst the other regulates the movements of expiration. Both can be brought into play automatically and by reflex action, and there do not appear to be any centres governing the respiratory acts, either above or below the medulla oblongata. He considers normal rhythmic respiration to be a reflex act, mainly liberated by the vagi, which prevent the gathering tension in the centre becoming too great, and convert the inherent stimulations of the respiratory centre into regular respiratory movements. He differs from a view now very generally entertained that the normal stimulation of the respiratory centre is due to or depends upon the circulation through it of imperfectly oxygenated or carbonised blood, on the ground that animals continue to breathe without a circulation, and after bleeding, for a considerable time, and he attributes the active stimulating matters of the respiratory centre itself to the products of decomposition of intercellular fluids. He finds, lastly, that there are fibres which pass upwards to the brain which are of great importance for the liberation of regular rhythmic respiration, since they are capable of replacing the vagi when these are inactive. The memoir is illustrated by numerous tracings made with an ingenious, double lever,

showing the effects of section of the phrenics, of the vagi, and of other nerves. He has ascertained that rabbits above the age of four or five months may live after division of the phrenics. Younger ones die from insufficiency of air in consequence of incomplete expansion of the thorax. The memoir is deserving of careful study.

The Diseases of the Chest. By VINCENT D. HARRIS, M.D. Lond., F.R.C.P. London: J. & A. Churchill. 1888.—In this handy volume, forming one of the admirable "Students' Guide Series," Dr. Vincent Harris has succeeded in compressing a very large amount of information within a comparatively small compass. By a free use of leaded type and tabulation the prominent facts in the diagnosis and treatment of pulmonary and cardiac diseases are presented in a manner which cannot fail to bring home to the student their relative importance. Nevertheless, the book is far removed from that class of work which aims at little more than to supply the student with a *catalogue raisonné* of such facts—a species of writing that is to be much deprecated; for the author is careful to enter into detail when detail is needed, and to afford full explanation of the phenomena observed and the *rationale* of treatment. The result is a readable and instructive manual, which deserves to become a favourite with the student class. Dr. Harris has done well in introducing the subject with chapters bearing on anatomy and physiology, and a general disquisition on symptomatology; for the right understanding of morbid conditions can only be obtained by the possession of a knowledge of normal structure and functions. As regards the main body of the work, we fail to find any notable points to which exception could be taken. The teaching is sound and systematic throughout.

Headaches; their Nature, Causes, and Treatment. By WILLIAM HENRY DAY, M.D. Fourth Edition. London: J. & A. Churchill. 1888.—There are few symptoms that are capable of being treated to an analysis such as that presented by Dr. Day in his monograph on Headache, which has now reached a fourth edition. In the case of this subject such an analysis is desirable and useful; for headache owns so many causes that it is absolutely essential to be enabled to differentiate them if the pain is to be relieved; and, difficult as the task may be, there was a distinct need for it to be undertaken when the author first published his work. Objection may perhaps be taken to the large number of conditions which the author describes; for although he is doubtless justified in distinguishing between the headache of cerebral hyperæmia and what he terms "congestive headache," or between "nervous" and "nervo-hyperæmic" headaches, the subject is one which must of necessity involve a considerable amount of theoretical reasoning; but, after all, the proof of the correctness of diagnosis is to be found in the efficacy of the line of treatment it suggests. It is from this practical side that Dr. Day's book is especially valuable, for it abounds in hints as to appropriate treatment, a very copious formulary being appended to the book. The chapters on Headaches in Children and on Over-pressure are of especial interest in connexion with the present controversies on elementary education.

The Journal of Physiology. Edited by MICHAEL FOSTER. Vol. IX., No. 4. Cambridge Scientific Instrument Company's Works. November, 1888.—This number contains several interesting communications. The first is by Mr. J. S. Haldane, on the Elimination of Aromatic Bodies in Fever. The second, by Dr. Vincent Harris and Dr. Howard Tooth, on the Relations of Micro-organisms to Pancreatic (proteolytic) Digestion, in which they state their belief that micro-organisms are not necessarily present. The third, by C. S. Roy, M.D., on the Elasticity Curve of Animal Tissues. He finds that the elasticity curve of healthy animal tissues is a mathematically true hyperbola. The fourth, by Dr. D.

Haliburton, on the Nature of Fibrin Ferment, in which he discusses and in certain points invalidates Dr. Wooldridge's recent experiments, which tended to show the importance of lecithin as an agent exerting a powerful influence in the coagulation of the blood. Lastly, Dr. Bradford describes some of the phenomena in the physiology of the Gland Nerves.

La Thérapeutique Medico-Chirurgicale en 1887. Edited by Dr. PAUL RODET. Pp. 394. Paris: J. B. Baillière. 1888.—Under this title the various notices which have appeared during the year in the *Répertoire de Thérapeutique* have been bound up together and issued in book form. No rearrangement has been attempted; hence, when articles were published in part in successive numbers, their portions remain separated by much other material. An index and an analytical table are added to remedy this defect, but the latter is misleading, names of the authors of original communications appearing beside those of the writers of condensed reports from extraneous sources. As a chronological retrospect the book may be useful, but its utility would have been increased by weeding and rearrangement according to some definite plan.

CHRISTMAS NUMBERS.—Three of these seasonable productions have come to hand. *Yule Tide* (Messrs. Cassell and Co.) is, as usual, excellent, especially in respect of its accompanying coloured pictures—a larger one being a copy of Mr. Arthur Stock's "At last," representing the unsuspected return of the soldier son of an old woman who sits musing in a chair, with her back to the door. The two smaller pictures represent pathetic scenes of humble life, and are entitled "The First Customer" and "The Last Customer." There is also a comic tinted plate for juvenile delectation, called "Mrs. Tabby's Academy." The reading matter includes, amongst other things, a good tale entitled "Tom a' Tuddlums."—The contents of the *Graphic* Christmas number are of noteworthy merit. The illustrations are all coloured, and for the most part of a humorous character, in harmony with the season. The large accompanying pictures are three in number, representing the "First Attack," from the painting by Seymour Lucas, and two Shakespeare heroines, "Sweet Ann Page" and "Juliet," from the pictures of Leslie and Calderon respectively.—*The Ladies' Pictorial* gives for its Christmas supplement a large coloured plate representing an English girl in ball costume with a swan's-down boa encircling her neck; and a comic photogravure by Louis Wain entitled "The Merry-go-round." The engravings and literary contents of this number are also of considerable merit.

ROYAL VETERINARY COLLEGE.—The course of lectures, on special subjects, which were arranged by the Principal, commenced at the Royal Veterinary College, Camden-town, last week. On Nov. 28th, 29th, and 30th, Professor Crookshank gave the first series, selecting as his subject "Actinomyces in Animals and Man." The lectures were illustrated by means of photographs of diseased animals projected by the oxyhydrogen lantern, by morbid specimens, and by a very extensive collection of microscopical preparations illustrating the pathology of the disease in animals and in man. Reference was made to many points which have been specially investigated in this country, but details were withheld, as it was announced that they would shortly be published.

SEWERAGE OF WEYBRIDGE AND OATLANDS.—A Local Government Board inquiry was opened at Weybridge, on the 27th ult., by Colonel Walter M. Ducat, R.E., accompanied by General Scott, metropolitan water inspector, upon an application of the rural sanitary authority for the Chertsey union, for sanction to borrow £15,000 for works of sewerage and sewage disposal for Weybridge, and the special drainage district of Oatlands.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

FRIDAY, NOV. 30TH.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

THE Council resumed the consideration of the case of alleged covering adjourned from the previous day, and after hearing evidence and arguments strangers were directed to withdraw.

The Council remained in deliberation for about two hours. Strangers having been admitted,

The PRESIDENT then, addressing Mr. S. J. Daly, said: I have to say to you that the Council have taken considerable pains to deal with your very important case. They have come to the conclusion that you have committed the offence charged against you; that the offence is in the opinion of the Council "infamous conduct in a professional respect"; and that the Registrar be directed to remove your name from the Medical Register. In communicating these very serious circumstances to you, the Council have empowered me to add this, that the Council have on a few occasions restored to the Medical Register, after an interval, the names of persons penally removed therefrom.

The Council then adjourned.

SATURDAY, DEC. 1ST.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

Inspection of Examinations.

On the motion of Mr. WHEELHOUSE, seconded by Dr. HERON WATSON, the report by the Examination Committee on the reports of the inspectors of examinations was received and entered on the minutes. It was stated that the inspectors—Dr. Finlay (medicine), Mr. Bennett (surgery), and Dr. Barbour (midwifery)—had during the year visited the examinations held by the licensing bodies, with certain exceptions. Owing to a misunderstanding as to date, the surgery examination at the University of London was not inspected. At the University of St. Andrews, owing to the retirement of the single candidate who presented himself, a partial inspection only of the examination could be carried out in medicine, and the inspection in midwifery was not made; further, the inspector in surgery was unable to attend the examination in clinical surgery which was held at Edinburgh on April 12th, at which time, the committee are informed, an examination in operative surgery was conducted. Moreover, the inspector found it impossible to be present at the clinical examination in surgery at the University of Edinburgh, and at the oral examination in general surgery and surgical pathology at the University of Durham. The examination in midwifery in all cases is pronounced to be sufficient. In the cases of the two Conjoint Boards in Ireland, the absence of material, obstetrical and gynaecological, is commented on. The inspector attributes these defects to the recent institution of the examinations, and adds in the one case—that of the College of Physicians and Surgeons—that "provision will have to be made for furnishing the examination table with the necessary material"; and in the other case—that of the College of Surgeons and the Apothecaries' Society—that the examination is provisionally sufficient.

In regard to medicine, in the case of the Conjoint Board in Ireland, consisting of the Royal College of Surgeons and the Apothecaries' Hall, the inspector reports that the examination was in many respects good. He adds, "Seeing that no candidates passed in all parts of the examination, I can express no opinion regarding the complete standard. But as the two candidates whose examination has been described [the oral examination, in which they "showed great want of precision and so little knowledge that they might fairly have been relieved from appearing for the clinical examination"] have been passed in the written and oral parts, and will be exempted in them from future examination, I do not regard the standard as sufficient." With reference to this point the committee are informed by the representatives of the Royal College of Surgeons and the Apothecaries' Hall in Ireland on the Medical Council that there is no exemption of the kind stated, and

that any candidate rejected in the written, oral, or clinical part of the examination will be required to be examined in all these parts when he again presents himself for examination. The conjoint examination of the College of Physicians and the College of Surgeons in Ireland was inspected on two occasions. On the first the inspector considered the standard of examination to be not sufficient to guarantee the requisite knowledge, this opinion being founded mainly on the fact that "a candidate was passed who was considerably below the passing standard laid down by the regulations." On the second occasion "also candidates were passed who were not up to the standard in medicine, even upon the official marking; but there were no such conspicuous cases as in the first examination." This second examination is, therefore, reported as sufficient. The other examinations in medicine are reported to be sufficient.

With regard to the examinations in surgery, the committee state that the absence of any test in operative skill by the performance of operations on the dead body is noted in the reports on the inspections in England at the Conjoint Board of the Royal Colleges of Physicians and Surgeons, at the Society of Apothecaries, at the Universities of Oxford and Durham, and at the Victoria University; and in Scotland at the Conjoint Board of the Royal Colleges of Physicians and Surgeons and the Faculty of Physicians and Surgeons, and at the Universities of Edinburgh, Aberdeen, and St. Andrews; and the inspector, on this ground, hesitates to pronounce these examinations to be sufficient, or at least qualifies his conclusion as to their sufficiency. Alluding to the replies of the several bodies, the report states that at the Royal College of Surgeons the matter has been referred to a committee of the council. In the reply from the Society of Apothecaries of London on this point, the examiners in surgery appointed by the Medical Council state that "they are prepared to make the addition of operative surgery, and to raise the standard of the clinical examination, if it be thought desirable by the Upper Court or the General Medical Council." The University of Durham replies that the M.B. is not a degree in surgery. The University of St. Andrews replies that "it is no worse plight in this respect than nearly all the examining bodies, university and corporate, of the United Kingdom," and remarks on the difficulty under the Anatomy Act of obtaining the means for employing this test. The reply from the Victoria University is that the board "is considering how far it may be practicable to carry out efficiently an examination in operative surgery." Other bodies refer to other difficulties in carrying out the examination required. Except for the absence of tests of co-operative skill on the dead body, the examinations in surgery at the Conjoint Board of England and at the Universities of Oxford, Durham, and Victoria, of the Conjoint Board in Scotland, and of the University of Edinburgh are stated to be sufficient. The absence of a written paper in systematic surgery, as well as of a real test in operative surgery, is noted at the University of Aberdeen; but the clinical and oral parts were so thoroughly conducted that the inspector hesitates to take exception to the examination as a whole. In its reply, the University points out that "the examination in systematic surgery forms part of the second professional examination, at the end of the third year of study." At the University of St. Andrews the examination is pronounced insufficient in consequence of the absence of a clinical test, as well as of operative surgery. The inspector observed, however, that the candidate had passed the clinical examination a year previously in Edinburgh. The examination in surgery by the Conjoint Board in Ireland, consisting of the Royal College of Surgeons and the Apothecaries' Hall, is pronounced insufficient, in consequence of the examination by written papers being unsatisfactory in its method and standard, in consequence of the superficial character of the examination in clinical surgery and on surgical appliances, and in consequence of the violation of the principle of conducting the oral examinations by at least one examiner and one assessor. At the same time, the inspector states that the answering at the oral examination was better than at the written, and that the operations were well performed almost without exception. It appears, moreover, from the reply of the Conjoint Board that it was the first time the examination was ever held; that the arrangements for holding it had not been completed; and that "the Conjoint Committee have under their consideration such alterations in the mode of conducting the examinations as may be

suitable for carrying out the recommendations of the inspectors." The examinations in surgery by all the other licensing bodies which were inspected are pronounced to be sufficient.

Dr. HUMPHRY, in moving the adoption of the report, stated that by the Act of 1886 the Council were directed to appoint inspectors to see that the qualifying examinations in the several licensing bodies were such "as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery." It was the duty of such inspectors not to interfere with the examinations, but to report to the Council their opinion as to the sufficiency of the examinations; and if it appeared to the Council that the standard was insufficient, the Council were to make a statement to that effect in sending their report to the Privy Council. The report of the committee dealt therefore simply with the reports of the inspectors as to sufficiency or insufficiency, and any point bearing upon that. With regard to this, it was a matter of great congratulation to the Council that in no instance was the entire examination regarded as completely insufficient, and there did not appear to be any necessity on the part of the Council to report to the Privy Council any body as having an insufficient examination. Some comments were made in the report on the conjoint examination of the Colleges of Physicians and Surgeons in Ireland, and also on the conjoint examinations of the Royal College of Surgeons and the Apothecaries' Hall in Ireland, but explanations had been given by the bodies referred to. With regard to the exception taken by the inspector to the examination in surgery by the Conjoint Board in Ireland, the statement made by the Conjoint Committee seemed to warrant the assurance that that examination in the future would be conducted in such a manner as to satisfy the inspector.

Sir WALTER FOSTER seconded the motion.

Sir JOHN SIMON asked whether it was necessary for the Council to adopt the report, which was a mere matter of statement.

Mr. MACNAMARA said the report was not a complete one, as there should have been very serious observations made upon the omission on the part of the inspector in surgery to inspect the examination in surgery in the University of London, and also upon the fact that at the oral examination in that University the examiners sat apart.

Sir JOHN SIMON said there were several matters in the report for discussion, but they would come up in the succeeding motion, of which Professor Humphry had given notice.

Dr. HUMPHRY said, if it was the general feeling of the Council that it should merely receive the report, he was quite willing to withdraw his motion.

The motion was then withdrawn.

Dr. A. SMITH moved that the consideration of matters arising out of this report, which was educational, should be postponed to the May sitting.

Dr. MITCHELL BANKS seconded the motion.

Dr. HAUGHTON said this was a penal sitting of the Council. May was the right time to discuss this matter.

Dr. HUMPHRY did not see any other reason for postponing the discussion than the convenience of members of Council. The various bodies were waiting to know the result, and he hoped the question would not be postponed.

Dr. GLOVER strongly advocated going on now, and was supported in that view by Mr. BRUDENELL CARTER.

Dr. HERON WATSON thought this business, as being strictly in connexion with education and examination, should be deferred till May.

Dr. LEISHMAN pointed out that one obvious reason for deferring the consideration of the report was that it was incomplete, as had been pointed out by Mr. Macnamara.

After some considerable discussion, the Council resolved to proceed with the consideration of the report at the present sitting.

Dr. HUMPHRY then moved: "That the Council fully recognises the value and importance of the performance by the candidates of operations on the dead body as a test of qualification for the efficient practice of surgery, and cannot but express its regret that the difficulty of providing the requisite material still prevents so many of the licensing bodies in England and Scotland from rendering their examinations more complete in this respect." He said that if the Council passed over this question it would be to some extent impeding this important work, and discouraging

certain bodies which were evidently preparing themselves to carry out this work. He pointed out that there was ample reason for showing the importance and value of such operations, and, with regard to the last part of the resolution, said his own feeling was that the difficulty was not nearly so great as was stated.

Mr. TEALE seconded the motion. A certain amount of progress had been made in this matter, and he hoped the pressure of the Council would induce the bodies to consider this subject and prepare to face some of its difficulties.

Sir JOHN SIMON said his only difficulty was that Dr. Humphry's motion did not go far enough. He admitted that there were difficulties, but he would not admit that the bodies were unable to make the attempt to carry this out. He would move as an amendment that the resolution take this form: "That the Council, being of opinion that the performance of operations on the dead body is a highly important part of a complete test for the efficient practice of surgery, regrets that so many of the licensing bodies of England and Scotland have not hitherto felt themselves able to render their examination more efficient in that respect, and the Council earnestly recommends to these bodies to reconsider the means they might use for amending that part of their examination."

Mr. MACNAMARA seconded the amendment.

Sir GEORGE MACLEOD said he was very pleased to find that the Glasgow School seemed to have taken the lead in this matter, attaching as it did the highest value to this as part of the primary examination. He could not understand how it could be supposed that operative surgery, taught with the greatest detail and care, was not absolutely necessary to every young surgeon. In Glasgow they also taught their students the application of all sorts of surgical appliances. The inspector did not see that done, but it was done with great care. They were trying their very best to make the examinations perfect in the department with which he (Sir G. Macleod) was concerned, and he would like the report to have given them a little more credit for what they were doing.

Dr. CAMERON said as a means of education he, in common with every surgeon, held operative surgery in the very highest esteem; it was, however, he thought, hardly possible to estimate surgical dexterity by an operation on a dead subject. He therefore objected to sending it down as a necessary recommendation from the Council that examinations should be made in operative surgery, but would leave it to the discretion of the different bodies.

Dr. HERON WATSON moved a second amendment: "That the General Medical Council, in forwarding the report of the inspectors of the qualifying examinations to the Privy Council, together with any observations thereon made by the body or bodies inspected, resolve to state that in their opinion these reports satisfy the requirements of the Medical Act in so far as the essential sufficiency of the final examinations is concerned, but that, in so far as the subject of operative surgery on the dead body is referred to, they deem it inexpedient to make such a requirement an absolute test of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery, especially in view of the circumstances connected with the anatomical supply admittedly existing in some parts of the kingdom." The Council had a certain statutory duty to perform in the matter, that of reporting to the Privy Council, and that duty could not be disregarded. On the question of whether operative surgery should form part of medical teaching they would probably all be at one, but the case was different in regard to the examinations of the students; and, after the reports made by some of the bodies on the difficulties in the way, it would be unfortunate to go further than recommend that the required tests be uniformly applied, or the examinations would be held to be insufficient. If they went further, they would be bound to report anybody to the Privy Council that did not comply with their recommendation. It ought not to be forgotten that some great surgeons had expressed their belief that there were many admirable medical practitioners who never could under any circumstances perform an operation. Were such men to be prevented from becoming physicians because they could not or would not "dirty their hands with surgery," as the phrase went? No one presumed that everybody was to become an operative surgeon. Mr. Syme had remarked that not one medical student in fifty would ever be able to perform an operation if their performances on the dead body were to be taken as a test of their skill. To insist, therefore, on the application

of such tests would be like insisting on the possession of certain qualities not inherent in the nature of the student. Again, there were medical men who had lost a hand or some other limb; and were they to be excluded from the profession because of their inability to operate? The difficulties existing in the case of large schools were very great; in the case of a comparatively small school like Cambridge it might be otherwise.

Dr. HUMPHRY remarked that the anatomical school at Cambridge was the largest in the kingdom.

Dr. WATSON said that the number of medical students in Cambridge was but a handful compared with the number in London. He hoped that the Council would seriously consider the matter before passing any such resolution as that proposed by Dr. Humphry.

Sir W. TURNER seconded Sir J. Simon's amendment.

Mr. HEATH said that, as a teacher of surgery, he agreed almost entirely with the remarks of Dr. Humphry. He regarded the position of a man who would attempt to perform any serious operation, such as lithotomy, upon the living body without doing it previously upon the dead body as a most lamentable one, while that of the patient was still worse. At the University of Durham a medium course was pursued. For the B.S. degree a rigorous examination in operative surgery was required, each of the candidates being required to perform from two to four operations; but the authorities had considered that candidates for the M.B. degree should not be required to undergo the same tests, as they would probably not be likely to undertake the performance of the greater operations in surgery. But on reading the clause in the Act, it became evident that they were bound to insist on all candidates being examined in operative surgery. Under some circumstances, as on board ship, a man might have no choice whether he would perform certain operations—in a case of strangulated hernia, for example.

Dr. WATSON asked how that could be performed on a dead body.

Mr. HEATH said that an artificial hernia could easily be made, and all the steps could be gone through. He had observed, as an examiner, that students who answered their written questions well often failed in the practical examination. He believed that the University of Durham was the first qualifying body that adopted the plan of having a clinical examination conducted in the wards, where the candidates could absolutely be examined on the living subject.

After some remarks by Dr. KIDD on the question of supply of material,

Sir J. SIMON asked that precedence might be given to Dr. Watson's amendment over his own. If the former was rejected, he would then submit the latter to the Council.

The further discussion of the subject was adjourned.

Before the Council adjourned,

Sir DYCE DUCKWORTH called attention to the circumstance that the President very rarely exercised his power of voting on a division. While, he said, the members greatly appreciated the delicacy of his action, and the impartiality with which he held the balance, they would probably desire that he should vote oftener than he did, since by his abstention the interest of the important body which sent him to the Council was not represented. Of course, the President had a casting vote, but he hoped he would consider whether he could give his ordinary vote more frequently than he had done.

MONDAY, DEC. 3RD.

MR. MARSHALL, PRESIDENT, IN THE CHAIR.

The debate on the motion by Dr. Humphry and the amendments thereto by Sir J. Simon and Dr. Heron Watson was resumed.

Dr. MOORE said that the question was not a purely surgical one, but was a wider question of the three qualifications, and came as much under the cognisance of the physician as under that of the surgeon. As a member of the Examination Committee he was disposed to take a more positive view of the question than had been expressed in the report. He supported the amendment of Sir J. Simon. What they had to do was to maintain the principle involved, which was an unanswerable one, that operative surgery was indispensable to the qualification of a surgeon. All the rest was a matter of detail which might be easily arranged.

Sir WILLIAM TURNER, in supporting Dr. Watson's amendment, and referring to the statement of Dr. Humphry that

none of the bodies had stated that the operative surgery class was unimportant, called attention to a paragraph in a former answer from the College of Surgeons of England expressing the belief that any attempt to introduce the test in question on a large scale and for every candidate would end in its becoming a hardship to the student or a delusion. It was evident, he thought, from the tone of the reply of that body, that the test was not regarded as so important as Dr. Humphry would lead the Council to infer. Even the surgical opinion on the Medical Council was divided on the subject. Since being in London he had endeavoured to obtain the opinions of some of the eminent surgeons practising in the metropolis, and there was certainly anything but a unanimous opinion amongst them with regard to the extreme importance of the test. Illustrations had been given as to making incisions on a dead body, showing bones, and applying ligatures, but he maintained that the difficulties to be overcome in such operations did not really present themselves in the dead body. Opening abscesses also had been alluded to, but abscesses did not exist in dead bodies except on very rare occasions. Such illustrations, therefore, could be of no practical value, and something more was required to prove the desirability of making the test compulsory. The great question was one of teaching and of anatomical supply, and they ought not to press too hardly upon the bodies situated in parts of the kingdom where such supply was difficult to obtain.

Dr. QUAIN called attention to the requirements of the Act of Parliament by which he maintained the Council was bound. He had known cases in which a qualified practitioner knew no more of surgery than a boy at school, and was even unable to bleed a patient. If they endeavoured to carry out the requirements of the Act, the difficulties in their way would soon be removed.

Mr. BANKS said he believed that no surgeon would deny that he had obtained the greatest assistance from performing operations on the dead body before attempting them on a living subject. Experience in the dissecting-room gave the student very little idea of operating. If certain bodies were so congested that the students could not obtain the necessary facilities, they should go elsewhere. The Act of Parliament could not be avoided because a school was either too large or too small. The Council, however, should content itself with the expression of a strong desire that the test should be applied by all bodies wherever it was possible to do so.

Mr. BRUDENELL CARTER agreed with all that had been said as to the value of operating on a dead body and the importance of testing in examinations the skill thus obtained, but that was very different from requiring such a test as a condition to the admission of the student to the Register. Not 10 per cent. of the general practitioners in the rural districts and towns of England ever attempted to do an operation at all or allowed themselves to be placed in circumstances which would call upon them to do so. He attached great value to the careful teaching of operative surgery which was carried on in the medical schools. It was in that way that a large proportion of men discovered that they would never have any practical aptitude for operating, while a smaller proportion found that they had that aptitude and took pleasure in that class of work, becoming operators by a sort of natural selection. The Council should obtain more exact knowledge of the facts of the case before issuing such a recommendation as had been proposed. While he was willing to support Dr. Humphry's second resolution with regard to the Apothecaries' Society, he could not support his first resolution, and should vote for Dr. Watson's amendment.

Sir W. FOSTER agreed with those who had contended that it was the first duty of the Council to insist upon a high standard of examination requirements. He differed from Mr. Carter's assertion that not 10 per cent. of general practitioners ever attempted operations. It was a constant matter of surprise to him, living in a large manufacturing district, to find so many important operations daily done by the surgeons and pupils of the medical schools. It was their duty to see that the students were thus thoroughly qualified before they were allowed to go forth to practise. They ought not to be deterred by possible difficulties in the way. If a public need existed, the Legislature would find means of meeting it.

Mr. CHAMBERS contended that, while an opportunity should be given to candidates to show their capacity for higher qualifications, the test in operative surgery should

not be required for a pass examination. He could not join in the expression of regret contained in the motion.

Dr. BRUCE said that the duty of the Council was to administer an Act of Parliament, and he did not see how a student could be qualified for "efficient" practice in surgery, as required by the Act, without the opportunity of practising on the dead body. The Council had been doing its best to make its examinations more practical, and it would be committing a serious error to interfere with the steady progress being made in that direction.

Dr. STRUTHERS thought it was ridiculous to dictate to great bodies like the College of Surgeons and the School at Edinburgh how to examine in surgery from the point of view of a small provincial hospital at Cambridge. He was at a loss to understand the inspector's remark that students might not be able to open an abscess or secure a bleeding vessel. The deficiencies complained of ought to be supplied in teaching; and the dissecting-room was the place where to lay the foundation of good surgery. When the student understood his anatomy, and had acquired habits of neatness, he should go to a hospital where there were plenty of operations. In a previous inspection of the examination of the College of Surgeons of England, he (Dr. Struthers) had remarked—and he was still of the same opinion—that if the students were occasionally required to operate on the dead body, the knowledge that they might be called upon would operate in the right direction. Further than that he did not think it necessary to go. If such a liability existed, the students would direct their thoughts to the subject, and the teachers would do their best to provide facilities.

Sir J. SIMON said that his amendment only asked the bodies to reconsider the means at their disposal, and that, he thought, was sufficiently moderate. Dr. Watson had besought consideration for the fastidious students who shrink from surgical operations. The question was, were they prepared for the efficient practice of surgery? If they were not, it was no justification to say that they had no taste that way. Dr. Watson might remember a certain gentleman who "but for those same guns himself had been a soldier." In like manner there might be many a student who but for scalpels and unpleasant bodies had been a surgeon. If he disliked that kind of thing, let him go into another career. Could the thing be done? If not, *cadit questio*; but if it could, they were bound to see it done, if not in one locality, then in another. For himself, he should be slow to believe that the necessary provision could not be made in a great capital like Edinburgh; but if there were insuperable difficulties there, let the thing be done in Glasgow. The arguments advanced might be a reason for the students going to Belgium, France, or Germany to learn their profession; but they established no reason why the test required should not be imposed. As an experienced surgeon himself, he declared his belief that an examination in surgery could not be completely conducted unless a part of it was carried on with a dead body. If his amendment were adopted, he should not object to the introduction of a few words admitting the existence of certain difficulties in the case.

Sir DYCE DUCKWORTH desired, as an examiner on the Conjoint Board of England, to say a few words on the subject. The debate that had taken place had been of a most extraordinary character. They were asked to believe that in the great metropolis of England and in that of Scotland young men for years past had been sent forth from the examining bodies not properly qualified to practise surgery. To that he gave an absolute denial. There was an amount of surgical ability among the humblest medical men which no other country could show. He had himself never met with surgeons who could not open abscesses or tie bloodvessels. The curriculum of the modern medical student was already too full, and it was a marvel to him that such excellent work was produced. One valuable method of obtaining experience was in the out-patient rooms of great hospitals. Many of the students became dressers, and had the opportunity of operating under the eye of the house surgeon or of their own masters. As to the inability to bleed, the physicians, not the surgeons, were responsible for that, as they had foolishly allowed bleeding to go out of practice. That, however, was a reproach which he hoped would be wiped out. He did not deny the value of the proposed examination test, but it should not be required of every student. He supported Dr. Watson's amendment. If the motion were carried, the next thing required would be a regular provision for post-mortem examinations. So long as there was

a limited four years' curriculum it was not fair to the student to demand so much extraordinary work.

Dr. HUMPHRY expressed his willingness to accept Sir J. Simon's amendment.

The PRESIDENT said he had been so long connected with the College of Surgeons that he wished to say a few words on the subject of the debate. The opinion of that body had been already recorded in the minutes of the Medical Council, and the Council of the College had recently appointed a committee to reconsider the subject. When that committee reported, the College would also have the benefit of the resolutions passed by the Medical Council. As a matter of principle, he had no doubt as to the desirability of introducing an examination of the kind referred to, and he could not go the length of saying that it would be too severe a test and a hardship upon the student. But practically the question could not be pressed home upon every examining body. It would, indeed, be absurd to ask any great body that had to examine 500 or 600 students to undertake the responsibility at once. It could not be done. Sir J. Simon's proposal, however, did not press the matter unduly, but only expressed a strong desire on the part of the Council that the bodies would carry out the principle of perfecting the examinations as far as they possibly could. With regard to reporting to the Privy Council, all that they were required to do was to send to that Council the reports of the inspectors and the answers of the bodies; they were not required to commit themselves in any way on the subject unless they were specially applied to for advice.

Dr. Humphry having withdrawn his motion in favour of the amendment of Sir J. Simon, the latter became the original motion.

Dr. Watson's amendment was then put, and rejected by 16 votes to 8.

On the original motion being put, the following words were (by permission) inserted after the words "and the Council," "while prepared to admit the existence of difficulties connected with the anatomical supply," and with that addition the motion was adopted by the Council.

Dr. HUMPHRY moved: "That, the surgical examiners of the Apothecaries' Society of London having stated that they are prepared to make the addition of operative surgery and to raise the standard of the clinical examination if it be thought desirable by the Upper Court or the Medical Council, the Council inform the Society that in their opinion it is desirable that the addition of operative surgery should be made, and that the standard of clinical surgery should be raised." He said the resolution was one which required no words to commend it to the Council.

Mr. BRUDENELL CARTER seconded the motion.

Dr. HERON WATSON thought the interference of the Council was hardly fair at this stage. He moved the previous question.

Mr. BRUDENELL CARTER mentioned that he had received an official communication from the clerk of the Society, expressing approbation of Dr. Humphry's motion.

Dr. STRUTHERS thought that this body in particular should not have been selected. He seconded Dr. Watson's amendment.

The previous question was then put and carried.

On the motion of Dr. HERON WATSON, seconded by Dr. BANKS, it was resolved: "That the question of the appointment and future duties of inspectors of examinations be referred to the Executive and the Examinations Committee to report to the next meeting of the Council."

The Pharmacopœia.

The report of the Pharmacopœia Committee was read:—

"The Pharmacopœia Committee begs leave to report that 26,200 copies of the British Pharmacopœia of 1885 have been sold, the estimated profit from this source in favour of the Council being £1800. It has been found necessary, in consequence of the stock in hand being nearly exhausted, to order a reprint of 3000 copies, which is now being issued. Advantage has been taken in issuing this reprint to restore the synonyms of *paregoric elixir* and *paregoric for tinctura camphore* co., and of *laudanum for tinctura opii*. A complete list of the alterations and corrections which it has been found necessary to make in the three reprints issued has been prepared, and may be had gratis on application to the Registrar at the office of the Council, or to the printers of the Pharmacopœia—Messrs. Spottiswoode. The committee, having considered a statement of the solicitor as to the authority of the British Pharmacopœia, which they now submit to the Council, resolves to recommend to the Council that the subject of the new clauses suggested should be placed in the hand of the President of the Council, the chairman of the committee, and the solicitor, with the view of taking such steps as they may find to be necessary to obtain the required amendment of the law."

Dr. QUAIN, in moving the adoption of the report, congratulated the Council upon its satisfactory character. He called special attention to the statement as to the authority of the British Pharmacopœia, drawn up by the solicitor to the Council, and embodied in the programme, and to the summary of suggested amendments—viz.:

"That the English and Scottish Pharmacy Act should be brought into harmony with the Irish Pharmacy Act by inserting in the Pharmacy Act now before Parliament a clause amending the Pharmacy Act of 1868, and directing that the penalties under that Act should be recoverable summarily. That the Food and Drugs Act should be made consistent with the Pharmacy Acts by declaring the British Pharmacopœia to be the legal standard, acknowledged as it has been so simply and for so long a time under Orders in Council and Acts of Parliament by a clause or words to that effect in the proposed amended Pharmacy Act."

Sir J. SIMON, in seconding the resolution, said the thanks of the Council were very greatly due to the chairman of the Pharmacopœia Committee for the great attention he had given now and on many previous occasions to the business of the Council.

The resolution was agreed to.

A communication from the British Medical Association was read, calling the attention of the Council to the following resolution passed at the Dublin meeting of that body: "That the Association is of opinion that the diplomates of the Irish universities and corporations should possess the same privileges in respect of public appointments that are enjoyed by diplomates of the other divisions of the kingdom."

Mr. MACNAMARA then moved: "That this Council cannot look with satisfaction upon the adoption of regulations by public institutions tending by their exclusive character to reflect injuriously upon qualifications granted by medical authorities, for the efficiency of whose examinations this Council is responsible." He said the principle of the motion was that all the qualifications admitting to the Register should be of equal value with regard to hospital appointments.

Dr. BANKS seconded the motion. He said there was no difference between the Royal College of Surgeons of England and the Royal College of Surgeons of Ireland; indeed, there were some points in which the Irish College had the advantage. It was well that this exclusion did not extend beyond some hospitals in England, otherwise the very distinguished gentlemen who presided over the medical reform of the army and navy could not hold their positions. He protested against the monopoly attempted to be set up.

Dr. MOORE said all they wanted was reciprocity. He understood the motto of the Council to be "Tros Tyriusque mihi nullo discrimine agetur."

Mr. MITCHELL BANKS said the Council had nothing to do with the action of certain hospitals and infirmaries, which were in every sense of the word private bodies, and entitled to do as they chose.

Dr. GLOVER, while sympathising with Mr. Macnamara in his object, agreed entirely that the Council had no power to deal with this question. He thought if it were properly represented to the hospitals that the Council had tried to recognise the equality of diplomas, this very reasonable reform would be accomplished, but it certainly was beyond their power to interfere in the matter.

Dr. KIDD considered the matter an extremely important one, seeing that the whole course of legislation had been to establish equality between the different parts of the kingdom. He thought the Irish and Scotch divisions of the kingdom were insulted by being treated as unworthy to be associated with their English fellows. They had acted much more generously in Ireland, where, although the College of Surgeons had a monopoly, they had abandoned it, and the county infirmaries were now open to all the divisions of the kingdom.

At this stage of the discussion Dr. HERON WATSON moved the previous question, which was seconded by Dr. TUKE, and carried.

Standing Orders.

Sir WALTER FOSTER moved: "That a committee be appointed to consider the Standing Orders, Cap. XIV., penal removals from the Medical Register, and to report to the next session of the Council on what steps they think necessary (1) to improve the procedure of the Council in relation to penal removals from the Medical Register, and (2) to increase or amend the powers of the medical authorities to remove from its ranks medical practitioners convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or who shall, after

due inquiry, be judged by the General Council to have been guilty of infamous conduct in any professional respect." He said they had taken in that session of Council steps to get rid of practitioners who, they considered, had disgraced the profession and been guilty of infamous conduct; but everyone would agree that the form and method of their procedure had been somewhat complex, and had taken up a considerable amount of their time. Whatever they had cost, they were well worth the money, and the profession at large would think so too; but at the same time there was no reason why steps should not be taken if possible to make the methods more speedy. No doubt, having the experience of the last two sessions, such a committee could devise some means of doing the work more expeditiously, and at the same time with equal efficiency. It would also be well to consider whether the powers of the medical authorities should not be increased to enable them to remove from their list of licentiates and members practitioners who came under the clauses of the Medical Act as having been guilty of infamous conduct. Many of the licensing bodies had not that power, though they would be very glad to possess it.

Dr. QUAIN seconded the motion. He said the Council must arrive at some other method of carrying on its penal business. The two cases referred to had cost the Council £800, and if such cases multiplied, their funds would be considerably interfered with. With regard to the second half of the resolution, it was very desirable that the bodies should have the power of removing unworthy possessors of licences or diplomas. Of course whatever was suggested would come before the Council hereafter.

Dr. HERON WATSON said there was a very great difference between finding a man guilty in a public court like that Council, and convicting him in a private meeting of the council of any college or university. He hoped that fact would not be lost sight of by the committee.

Sir WILLIAM TURNER said there was a very important omission in the motion. He moved that the following words be inserted before the words "standing orders": "documents named in Clause 12 of the minutes of Nov. 27th, 1888, and, added as an appendix to the minutes, the provisions of the Medical Act of 1859 and the."

Sir WALTER FOSTER having accepted the additional words proposed by Sir Wm. Turner, the resolution was agreed to in the amended form.

Some discussion arose as to the composition of the committee, and the matter was eventually referred to the Executive Committee.

Mr. MACNAMARA, in the absence of Dr. Haughton, asked on what grounds the Branch Council for England had antedated the commencement of professional study of a particular person to May 1st, 1887, when, as a matter of fact, he did not begin his professional studies until October, 1888, or pass the preliminary examination until July, 1888.

To this question, by the President's request, the Registrar gave the following answer:—"Ordinary cases of antedating have been entrusted by the Branch Council to its Registrar, who deals with them in accordance with the Council's regulations. The case in question, being out of the ordinary course, was dealt with by the President, in accordance with decisions repeatedly given, as precedents, on former occasions, by both the Branch Council and the Executive Committee. As an example, in November, 1882, the Executive Committee considered and acceded to such an application from a gentleman who since 1867 had been an unqualified assistant, but was registered as a student at Charing-cross Hospital only in 1880, and, at his request, allowed his studies to be antedated sufficiently to enable him to present himself for the final examination of the Apothecaries' Hall of Ireland. In November, 1884, the English Branch Council also gave permission to an unqualified assistant to be registered and antedated in like manner. And many more such precedents might be cited. Now, in July, 1888, the person referred to sent proof of having passed at the Glasgow Faculty in all the subjects of preliminary examination except Latin and geometry. In that letter he stated that he was anxious to become qualified as soon as possible; that his father had been a medical man in Manchester for forty years; that he had been with his father till twenty-six years of age, and had been assistant for thirteen years subsequently; and that he was a married man with a family, his age being thirty-nine in August. The President directed that he should be informed that

when the further two subjects had been passed he could be registered as a medical student, and that the question of antedating would then be considered. On October 22nd, 1888, certificates from Glasgow having been presented showing that all the required subjects had been passed, he was accordingly registered. The question of antedating was then considered as an exceptional case by the President, and as it appeared that the applicant had been an assistant to a registered practitioner as far back as from 1876 to 1881—a fact subsequently proved by a legal statutory declaration,—and that he had carried on his studies continuously since, he was allowed to antedate to May 1st, 1887. This the President did, as believing that the Council's desire was that every facility should be given to unqualified assistants to become duly qualified."

Sir W. FOSTER said the cases must not be taken in any way as a precedent.

Sir JOHN SIMON said the Council would have to consider the fact that there were a very large number of persons practising in the country as unqualified assistants, who had been in that position for many years, and who in numerous cases had acquired a good deal of practical knowledge, and could not be altogether abruptly and harshly dismissed from their posts. Were they to be converted into mere dispensing assistants, or were they to be assisted to become legally qualified practitioners? The position was not very much unlike that which took place when the Apothecaries Act passed, and in some degree when the Medical Act passed. The Council would have to consider whether it might not help in providing some facility for admitting to modified examinations *sine curriculo* unqualified assistants who could fulfil certain conditions.

Sir WILLIAM TURNER said, without accepting the examination *sine curriculo*, as the Council had always refused to be prosecutor in such cases as those that had come before them, they should also decline to be persecutors, and should, in such minor points as allowing a man to antedate his preliminary examination, accept the course adopted by the President as the right thing to do.

This concluded the business of the Council.

ERRATUM.—In the first edition of our last issue it was stated in error by our shorthand reporter that the name of James Camac Smyth, convicted of "conspiracy to cheat and defraud," had been ordered by the Medical Council to be removed from the Register. The requisite notice not having been served upon the prisoner, the Council was unable to adjudicate on the case.

Analytical Records.

THE TOILET AND BATH TABLET.

(R. HOVENDEN & SONS, BERNERS-STREET, LONDON.)

This curious preparation appears to consist of starch and a perfumed effervescent mixture. It effervesces when added to water, and the perfume is thereby diffused, while the water is softened by the alkaline carbonate.

NEW SANITAS PREPARATIONS: SANITAS WOOL;

SANITAS DOG SOAP.

(SANITAS CO., LIMITED, LETCHFORD'S-BUILDINGS, BETHNAL-GREEN, E.)

The enterprising Sanitas Company send us two more of their preparations, each of which may safely be commended, but which call for no special remark. Each has the well-known odour of the interesting and useful disinfectant invented by Mr. Kingzett. The wool is well adapted for surgical dressing, and the antiseptic qualities of the soap will render it useful in the treatment of domestic animals. It is said to be a remedy for mange.

CONDENSED CREAM AND MALT EXTRACT, EXCELSIOR BRAND.

(JOHN LORENTZEN, CHICAGO; J. J. VICKERS, EASTCHEAP, LONDON.)

This preparation consists essentially of cream and well-prepared malt extract. The sample we examined contained 20.68 of water, 1.6 of ash, and 8.96 of fat. It converts starch rapidly, which proves that it contains active diastase. We regard the preparation as of great value. It is of course

agreeable in flavour, and may well replace cod-liver oil in cases in which the latter is inapplicable.

TAPP'S MAGIC WATER SOFTENER.

(W. TAPP & CO., BRISTOL.)

A closed porous cell, which, when immersed in water, slowly yields to the latter a well-known precipitating compound. We are unable to approve of this invention, as it is evident that the quantity of the precipitant introduced will depend on the time of the immersion of the cell, and we find by experiment that it is easy to introduce an injurious amount.

COLEMAN'S LIEBIG'S EXTRACT OF MEAT AND MALT WINE.

(COLEMAN & CO., ST. GEORGE'S, NORWICH.)

Our analysis shows that this fluid extract is correctly described by its title. The animal and vegetable extracts are readily identified and the ash contains much phosphoric acid. It is undoubtedly a powerful and valuable food stimulant. We were, however, unable to detect any diastase power in the fluid.

COOK'S PATENT MEAL FOR PORRIDGE. MANUFACTURED FROM FINEST CEREALS.

(MANUFACTORY, PAWSEY, WILTSHIRE.)

A well-prepared and perfectly genuine preparation, made from mixed cereals. Such a mixture is, we are inclined to think, superior to a meal made wholly from oats.

RHENS: A PURELY NATURAL SPARKLING MINERAL WATER FROM THE CELEBRATED RHENS SPRING ON THE RHINE.

(KNIGHTON, HAYMAN, & CO., 139, MINORIES.)

This is an interesting and evidently genuine saline water. Analysis shows the presence of sulphates, chlorides, and bromides, the chief metals being calcium, magnesium, sodium, lithium, and iron. The sample examined by us contained 169 grains of solid matter per gallon. The water is therefore a mild alterative with distinct tonic power, and as such is certainly valuable. The bromine is more than a mere trace, and is detected with ease by chlorine and bisulphide of carbon.

HEALTH OF TRINIDAD.

THE report of the Surgeon-General on the medical service and medical institutions of Trinidad, for the year 1887, shows the health of the colony to have been fairly good. There was no outbreak of epidemic disease during the year, though in the latter part of it dysentery and diarrhoea were rather more prevalent than usual. There appears to be a great want of additional hospital accommodation in Trinidad, for, although three new district hospitals, with an aggregate of 100 beds, were opened during the year, all the hospitals seem to have been greatly overcrowded. This is probably to be explained by the fact that "the hospitals still continue to be the refuge for the destitute, very little progress having been made towards any organised system of out-door relief.....It is evident that until a general system of assistance to the poor in the destitution preceding sickness is established, the public hospitals must continue to be crowded, and the consequent heavy hospital expenditure be maintained." In the Colonial Hospital of Port of Spain the daily average number of patients was about 40 per cent., and in the San Fernando Hospital about 50 per cent., above the authorised numbers. The three new district hospitals are stated to have been built on a uniform plan, and to be well arranged for administrative purposes; they cost on an average about £30 a bed. The admissions into the Hospital of Port of Spain during the year were 5292, and the deaths 559, or 105.6 per 1000 admitted. In the San Fernando Hospital the admissions were 2740, and the deaths 291, or 102.5 per 1000, corresponding very closely with the rate in the Port of Spain Hospital. The most prevalent diseases were malarial fevers, chiefly of the intermittent type, anæmia, ulcers, consumption, dysentery and diarrhoea, and venereal affections. The admissions into the Lunatic Asylum were

109; the daily average number resident was 342, and there were 34 deaths, being in the ratio of 99.42 per 1000 of the average resident. The hospital appears to have been brought into a very satisfactory condition, and to be efficiently managed by Mr. Seecombe, the medical superintendent, who, however, remarks that, "after all that has been done to increase the accommodation, we have still a resident population far in excess of the number of beds, and the question of erecting another asylum comes prominently forward for consideration." Much detailed information is given in tabular form respecting the patients and the occupations in which they are engaged in the asylum.

Dr. Beaven Rake has given a very interesting report of the work done at the Leper Asylum during the year. There were sixty-five cases admitted, but several of them were readmissions of cases which had been discharged. The average number in the asylum seems to have been 176, and there were 30 deaths, or 170 per 1000. Two of the men who died were Europeans, a German and a Frenchman; there are now no Europeans in the asylum. Dr. Rake seems to differ from the Royal College of Physicians on the question of the contagious character of the disease; but he says, "I have, however, a large number of experiments still going on, and I shall of course have no hesitation in changing my opinion if I find scientific grounds for so doing." He has given a section on the blood in leprosy, and another on the value of nerve-stretching in this disease. The latter he has found to be beneficial in 47 out of 100 cases in which he has tried it. There is a table in the appendix which gives full information respecting these cases and the results of the operations. Dr. Rake has tried various new remedies in this disease, but none of them seem to be of any decided value.

The report altogether is one of much interest, and affords evidence of the excellent manner in which the service is carried on by Surgeon-General Leonard Currie and his staff.

THE INFLUENCE OF ARTERIAL TENSION ON ALBUMINURIA.

To the Editors of THE LANCET.

SIRS,—Dr. Ralfe's article on this subject, which commenced in your issue of Nov. 17th, is a valuable digest of our present knowledge of "functional albuminuria."

Probably the most interesting point connected with "functional albuminuria"—under which title Dr. Ralfe includes a number of conditions—is indicated by the title of his paper. What relation does albuminuria bear to arterial tension? I believe we are at present little beyond the threshold of this inquiry, and very few ever question the generally accepted belief—viz., that albuminuria is always associated with a high arterial tension. Inquiry will, I think, prove that albumen appears with a low arterial tension as well as with a high one. It would therefore appear to have no direct relation to the arterial tension itself, though most likely it is connected with it indirectly. Some observations I made some years ago on albuminuria as it occurs after scarlatina convinced me, in the majority of cases (which majority I believe to be unconnected with any truly inflammatory change in the kidney), that this symptom is associated with a diminished blood tension. In a letter to the *British Medical Journal* of Oct. 29th, 1887, I said: "In an ordinary case of post-scarlatinal albuminuria.....the condition of the blood tension in the arterial system I believe to be opposite to that which it becomes in Bright's disease—that is to say, it is diminished; and without going so far at present as to say that this diminution of the blood pressure in the arterial system and the appearance of albumen in the urine stand in relation of cause and effect, I am inclined to believe that they are very closely associated." In the course of the various fevers, and in erysipelas and pneumonia, it seems to me very probable that when albumen appears in the urine during great prostration of the vital powers—and it often appears, together with a low muttering delirium and a watery diarrhoea during the last days of life—it is, along with these manifestations just mentioned, but a symptom of a greatly diminished blood tension in the arterial system generally. Such a condition would naturally have its effect on every organ in the body.

I am, Sirs, yours faithfully,

Sheffield, December, 1888.

C. HENRY WILLEY.

THE LANCET.

LONDON: SATURDAY, DECEMBER 8, 1888.

THE business of the General Medical Council has this week related principally to two subjects: the consideration of the report of the Examination Committee dealing with the conclusions of the Council's inspectors as to the sufficiency of the examinations of the several qualifying bodies; and, secondly, the consideration of the cases of certain members of the profession accused of "infamous conduct in a professional respect," the offence being that they had acted as "cover" to unqualified persons, thereby enabling the latter to carry on medical practice as though they were legally qualified medical practitioners. In regard to both these subjects the action of the Council is calculated to exercise a material influence upon the profession. Examinations have been inspected to some purpose, and have been found wanting in one or more particulars, and although the Council have not felt it their duty to report to the Privy Council these deficiencies as being of so serious a nature as to render the examinations generally insufficient, it may be anticipated that the method of procedure of one and another examining body will have to be modified as the result of the inspections which have already taken place.

The decision as to offending practitioners will, it is to be hoped, be generally known throughout, and most seriously considered by, the profession. In the cases before the Council the facts were sufficiently proved that certain qualified men entered into an alliance with unqualified practitioners, enabling them to carry on a practice, and indeed appearing in the position of their assistants. The public, unable to distinguish in such a matter, have practically been misled into the belief that the unqualified practitioner was competent to undertake independent charge of them during sickness and to perform important operations. In regarding such conduct as "infamous in a professional respect" the Council have taken a step which will go far to protect the public against such imposition, and to raise the profession in general estimation. The penalty which has been inflicted is in no sense too severe; the removal of a name from the Medical Register carries with it disabilities which will tend to check a continuance of conduct which for years been an opprobrium to the profession. The President of the Council, in communicating the decision, stated that restitution to the Register had in certain cases been allowed, but we assume that before this could take place evidence of a weighty character would have to be forthcoming to warrant renewal of confidence.

We sincerely trust that the examples that have been made will lead to an immediate abandonment of this system of "covering," which, it is to be feared, is still maintained by some whose names appear on the Medical Register at the present time. The restitution of such names, if they should in the future be removed, will after this ample warning obviously be still more difficult of

attainment than for those who are the first to receive punishment for this form of professional misconduct.

But the most interesting feature in the proceedings of the Council, from an educational point of view, was the discussion introduced by Professor HUMPHRY on the desirability of making operations on the dead subject a necessary part of the final examination for all surgical degrees and diplomas. The conjoint boards in Ireland and the Universities of Cambridge and Glasgow have already included such operations in their examinations, and other examining bodies are considering the question, and will evidently follow their example. But the difficulty of providing the requisite material for the examinations at which candidates are especially numerous, as at the conjoint boards in England and Scotland and at the University of Edinburgh, is greater than Professor HUMPHRY and some other speakers seem to think, if the examination is to be of any value as a test, and to be fair and just to the candidate. The supply for the necessary teaching to every student, if he is to be compulsorily examined, has also to be considered, and we doubt if the supply can be increased to any large extent. However, as the inspector in surgery appointed by the Council hesitated to pronounce efficient any examination in which operations were not performed, and as the majority of the Council preferred to the mild expression of regret of the original resolution the stronger terms of Sir JOHN SIMON's amendment, "That the Council, being of opinion that the performance of operations on the dead body is a highly important part of a complete test for the efficient practice of surgery, regrets that so many of the licensing bodies of England and Scotland have not hitherto felt themselves able to render their examination more efficient in that respect, and the Council earnestly recommends to these bodies to reconsider the means they might use for amending that part of their examination," the examining authorities will doubtless soon have to carry out the recommendation so far as lies within their power. The Apothecaries' Society of London announced, through their representative at the meeting, that the addition would be made to their surgical examinations, and universities and conjoint boards can hardly afford to allow this body, depreciated and sneered at by many as giving an inferior examination and an inferior title, to be the foremost in carrying out this important recommendation.

THE influential protest against competitive examinations and the attendant evils of cramming and over-pressure, to which we made allusion in a recent issue, has been answered by a counterblast which quotes the opinions of a large number of the head masters of the great English schools, the great majority of whom regard the present system of examinations as necessary and as free from serious evils and abuses. In a widely circulated magazine we also note a discussion on the true scope and function of education, with special reference to the part therein to be played by the systematic training of the senses. This activity of interest in the question of education is a wholesome and welcome sign. Next to inheritance, education is the most potent factor in the life of the individual, and no efforts to cultivate a healthy state of public

opinion upon a subject of such far-reaching importance can be too solicitous, nor are such efforts ever likely to be wholly fruitless. The question, indeed, abounds in difficulties, and it would be vain to expect a speedy settlement of all its controversies. What is the object of teaching? What subjects shall we teach? How shall we teach? How shall we test the results of teaching? Such are problems to none of which can it be said that we as yet possess a final and adequate solution. Let us glance briefly at some of their phases.

We may congratulate ourselves that upon the *object* of teaching there has been a distinct progress towards enlightenment of opinion. Not only philosophic thinkers, but the public generally, now recognise more or less clearly that the object of education is not to make scholars, but to make men; not to crowd the memory with facts, but to help the development of faculties; not to provide the learner with the ready-made opinions of others, but to aid him in forming just opinions of his own; in a word, to help the individual to make the most of the endowments of nature and to play a reputable and useful part in the work of life. This conception, always present to those who in all ages have thought deeply over the problems of education, has undoubtedly in these days become a popular axiom, not the less valuable because it may seem to many to partake of the nature of a truism.

On the second question there is much less general agreement. The value of the classical tongues, of modern languages, of mathematics, of physical science, of metaphysics, and of general literature, as instruments of education, is still vigorously debated, and the whole question is yet *sub judice*. The feature of modern progress in this department has undoubtedly been the general recognition of the right of physical science to play an important part in general culture. This battle is finally fought and won; but biography still reminds us of a time when it was far otherwise. It is amusing to read in the "Life of Darwin" of the indignation of Dr. BUTLER of the Shrewsbury school at the perversity of his apparently worthless pupil, who neglected Greek for the purposes of wandering far and wide in search for beetles. Little did the worthy pedagogue foresee that the idle boy who had no stomach for Latin hexameters would one day inaugurate a new era in science, and turn the current of human thought into new channels. It would, however, ill befit the advocates of scientific training to underrate the refining influence of literature—the *litera humaniores*—or to refuse it a just share in education. We merely emphasise the fact, already obvious, that its reign of monopoly is finally over.

The *how* of teaching raises many questions of supreme interest. In this department the modern drift is towards education by the senses, rather than, as of old, through the intellect solely. We have come to see that boys and girls learn faster, more easily, more fruitfully, by being taught by the eye and hand, than if made to acquire all knowledge "through the spectacles of books." This conception is an enormous stride in advance. It is a return to nature in the best sense, and, as in the ancient fable, contact with nature is the true source of strength. Sense education is not only an obviously natural method; it has many indirect advantages. It makes learning a delight; it implies physical training as the instrument and correlative of intellectual

culture; it has fewer dangers to health than the more ancient methods.

The *testing* of the results of education is the special subject before the bar of public opinion to-day. Some test is clearly indispensable, and it is hard to see how examinations could possibly be dispensed with. But there is evidently much uneasiness in the minds of many regarding the portentous development of the competitive system, and a growing conviction that it carries serious dangers in its train. Doubt arises as to whether examinations are too numerous, too elaborate, too much occupied with book work, too much the perquisite of a special class. Those who recognise such dangers are not necessarily hostile to all free competition, or desirous of a return to the old-world method of promotion by personal influence and favouritism. Cramming meets with universal reprobation, but it will continue to flourish so long as the passing of examinations is regarded by scholar and teacher alike as the be-all and end-all of education. Our safety would seem to lie in the cultivation of a sounder and juster public opinion upon the whole question; in strengthening the hands of those who seek to train the individual wisely, and to whom examinations and result-fees are a secondary consideration; and in deprecating the multiplication of tests or the increase of the already heavy physical strain of modern education.

IN connexion with prison discipline and administration, there is no question of greater importance than how far it is safe and proper to subject prisoners to separate or what used to be called solitary confinement. The word "solitary" is, indeed, no longer appropriate, for solitude is a regimen which no one nowadays would advocate. But the separation of prisoners from the society of one another is an expedient to which, for many reasons, recourse may be had; and its proved efficiency for some important purposes lends a very special interest to the discussion of its use and application. To this discussion Dr. GOVER's paper, published in the present year's Report of the Directors of Convict Prisons, forms a valuable contribution. The writer is able to show that there is abundant ground for reconsidering the rule which makes nine months the limit of time during which convicts subject to penal servitude may be kept in separate confinement. The rule was adopted many years ago, when popular sentiment was very naturally and, indeed, very properly influenced by the results of a system differing *totò calo* from that which now obtains in our own prisons. Solitary confinement, which meant absolute solitude, was in those days inflicted, in America and elsewhere, with the accompaniments of darkness, absence of employment, and unwholesome sanitary conditions. It is certainly matter of surprise, not that in such circumstances mind and body both should break down, but rather that any civilised community should ever have been sufficiently callous to sanction the infliction of such horrible torture. It was surely excusable enough that those who had the experience thus acquired to go upon should have been disposed to attribute to the principal cause some of the results which really flowed from its accessory incidents, and thus have been led to impose upon the infliction of separate confinement a limit more or less arbitrary, and to that extent open to criticism.

A sound theory and a good rule in this matter are of considerable importance, both from a moral and an economical point of view. It is now beginning to be recognised that the theory and practice of outlawry is radically bad. The criminals who fill our prisons are not to be treated as the mere outscouring of society. There is a duty which society owes to them and cannot justly evade, and the treatment to which they are subjected in confinement must be directed not less to the reformation of criminals than to the repression of crime. For this purpose separate confinement is the most powerful engine which society possesses. It does what nothing else can possibly effect in the way of preventing that intercommunication by which the corrupting influence of the most vicious among convicts is brought to bear upon those of less deteriorated character, and it renders the prisoner more accessible to the improving influence of the schoolmaster and the chaplain. Thus is the efficiency of prison discipline improved and its cost proportionately diminished, since the risk is lessened that any particular convict will descend to the rank of the habitual criminal, and the end aimed at by the punishment becomes attainable in a shorter time.

So much may be said for separate confinement in the abstract; the result of Dr. GOVER's very careful analysis of the experimental record is to show that under proper conditions the prisoner may receive from this system of treatment not only moral but also physical benefit. For the ten years preceding 1853 the system of separate confinement was on trial at Pentonville Prison, and annually reported on as an experimental operation by the Prison Commissioners; and although their reports bear evident traces of the jealousy and suspicion with which the system was regarded, the statistical results enable Dr. GOVER to say: "There was but little sickness among them; cases of insanity originating in the prison occurred but seldom; and deaths were few."

There is, however, still stronger evidence that separate confinement, as now practised, may be inflicted for considerable periods without injurious effects. In the first place, sentences of imprisonment for two years—which do not carry penal servitude—are at present passed in separation, with actual and demonstrable advantage to the mental and physical health in the great majority of cases; and furthermore in the case of habitual criminals, some of whom pass many years in prison with but short intervening periods of liberty, individuals endure many such terms of separate imprisonment in succession without personal harm. These considerations amply justify, in our view, the prominence which has been given to this question by the convict prison directors in the present year's report; and since the infliction of all punishment is now placed under efficient medical vigilance and control, we shall be prepared to welcome a reformation of prison rules which will enable the system of separation to be carried out for longer periods than at present, and its effects to be more fully developed in that very numerous class of criminals to whom it may with great moral advantage be applied.

LIFE INSURANCE, as it is generally called, though life assurance is the more correct term, comes before members of the medical profession in three aspects. As members of

society at large, they are either policy-holders, or for reasons more or less plausible have not insured their lives. As medical practitioners, they are, as regards this question, in the position of lookers on, who see most, not of the game but of the battle of life; and they have admirable opportunities of observing—what form the first principles of life assurance—(a) the uncertainty of any individual life on the one hand, and (b) the certainty that a proportion of any given number of healthy individuals will live an average term of life on the other. Setting aside for the present the accidents which occur both to medical men and laymen, the former see from time to time cases where men in the very pride of health and in the full enjoyment of robust manhood are cut off after a very few days' illness from fever, or, it may be, a severe attack of pneumonia or bronchitis, the result of a neglected cold. The third aspect in which life assurance is viewed by physicians and surgeons is in the capacity of medical examiners or medical referees, in which they act as umpires between the applicants for assurance and the office to which they apply, receiving a fee for each case or an annual salary. There are, moreover, physicians and surgeons on the directorate of many of the leading life insurance offices. The advantages of making a provision for those dependent upon him by insuring his life must have presented itself to every medical practitioner who is not possessed of means independent of his profession, and yet it is surprising how many such are uninsured; we might almost say how comparatively few are insured. That it is their duty to set the general public an example in this respect is plain, for reasons already indicated. Each practitioner, whether general or special, whether practising in town or country, knows how uncertain is his own individual life; how he shares in common with all the liability to accident by rail or road, while he is exposed to greater risk of infection from fever and exposure to weather. In spite of these, the lives of medical practitioners for assurance purposes are, *ceteris paribus*, good risks, and are accepted at ordinary rates. Every practitioner ought to be insured both against accident and death. The reasons generally given for not insuring are in reality excuses, not reasons at all. One is that the annual premiums might be saved and more profitably invested, to which it may be observed that this presumes living to old age, an uncertainty which it is the object of insurance to safeguard; it also presumes that the non-insurer can invest his money as profitably as a well-established life office, which is quite erroneous. Another less illogical reason is that in recent years insurance offices have failed, causing disastrous loss, and even ruin, to policy-holders and their families. But it would be as logical to distrust all banks, and to decline depositing in any, because some have failed. There are several insurance offices which have weathered the storms of commercial crises and panics for more than a century and a half; there are many others, less ancient but equally stable, the very names of which are a guarantee of security. Anyone proposing to assure his life has a number of perfectly sound, well-established offices from which to select, and so to secure himself from the possibility of future loss. This should be the guiding principle of choice, and not the wish to oblige a friend, whether actuary, secretary, or medical examiner. A recent Act of Parliament has made it impos-

sible to start any "bogus" life insurance company, it being first necessary to deposit a substantial sum in Government securities; and there are young offices whose position is secure and reliable. The position of those offices which have proved to be unsound was previously known to be so by actuaries and others well acquainted with insurance matters, and a confidential opinion as to the stability and prospects of any office could always be obtained from a competent authority. Hence this fear of the insecurity of any office cannot be accepted as a valid reason for not insuring. Life insurance possesses so many advantages to society, individually and collectively, that it has been proposed to make it compulsory. This is clearly impracticable, but the system is capable of very considerable development. If it were more universally adopted among members of the profession, there would not be so many harrowing appeals made in these columns and in those of our contemporaries for the widows and orphans of medical men, and the example would spread to those outside the profession. A practitioner who is himself insured may by his example, followed by a word spoken in season, induce patients or friends to take out a policy when such a course may be most desirable, if not a positive duty.

In conclusion may be mentioned a phase of life insurance which has been suggested before and adopted by very few, but which deserves the most vigorous advocacy. The insuring of sons' lives by their fathers at the age of fifteen or thereabouts. Should the former live to manhood, there is a policy ready for him to take up at a very moderate rate of premium, instead of the heavier rate which would have been inevitable had the assurance been postponed. On the other hand, should the young insurer die, he has an estate to leave to his parents, brothers, and sisters. There are many other advantages in connexion with life assurance, such as the insuring of a sum payable at a certain age or at death, the insurance against accident, &c., which must be left for a future occasion. Enough has been stated to show that every member of the medical profession who is dependent upon it should insure his life in an office of good standing, and that this duty should not be postponed, as it too often is (like the making of a will), from a foolish fear that it means preparing for a speedy death.

Annotations.

"Ne quid nims."

MEASLES MORTALITY IN OUR LARGE TOWNS.

THE considerable increase of the mortality from diphtheria and measles in England and Wales in recent years, concurrently with the marked decline of the mortality from scarlet fever, typhus, and enteric fever, is a fact which calls for the most serious consideration at the hands of all earnest sanitarians. The annual death-rate from measles averaged 379 per million in the ten years 1871-80, whereas in the first seven years of the current decennium the mean annual rate rose to 440, and the rate in 1887 was 594, and was higher than in any year of which record exists since 1839. It is unsatisfactory to note, from the Registrar-General's weekly return, that at the present time this disease prevails with exceptional fatality in many of the large towns dealt with in that return. The curve of mortality from measles usually reaches its maximum in December, and this year proves no exception to this rule. The weekly number of deaths

from measles in the twenty-eight great towns reached its minimum this year (25) in the middle of June, after which the numbers fluctuated during the summer, and were 55 in the first week of October. Since the last-mentioned date the weekly numbers have rapidly and pretty steadily increased, and last week the number reported was 264. It is necessary to go back as far as 1878 and 1879 to find an equally high rate of mortality from measles in these large towns, although, as has been mentioned, the mean rate in England and Wales has shown a marked increase since 1881. Last week more than half the 526 deaths referred in the twenty-eight towns to the principal zymotic diseases resulted from measles, causing an annual rate from that disease equal to 1.5 per 1000. The highest death-rates from measles in the several towns were 1.7 in London and in Huddersfield, 1.9 in Oldham, 2.1 in Leeds, 3.3 in Liverpool, 4.8 in Blackburn, and 8.6 in Cardiff. Class-mortality statistics, so far as they exist, prove that fatal measles is almost exclusively a disease of the poorer classes, confirming the correctness of its classification among the most strictly preventable diseases. This is further corroborated by the fact that the mean death-rate from measles during the last ten years in the great Lancashire towns exceeded by nearly 50 per cent. the mean rate during the same period in the other great towns. The evidence of comparative sanitary neglect afforded by the mortality statistics of the great Lancashire towns is beyond cavil. The problem claiming solution is how to check the increasing mortality from measles with success similar to that which has attended the sanitary measures adopted for the reduction of the mortality from scarlet fever, typhus, and enteric fever.

INDUSTRIAL VILLAGES.

THE Society for promoting the growth of industrial villages has set before itself an object with which it is impossible not to sympathise. The aggregation of men in towns and cities has been historically the condition of some of the greatest and proudest achievements which human society can boast. But although urban life has its advantages, and is in its measure essential to the corporate well-being, it has its disadvantages also, and very grievous these disadvantages are. The benefits are obvious. It needs no comprehensive survey or elaborate statistics to prove that the near neighbourhood of a town enables its denizens to co-operate for their mutual advantage in a way quite impossible to the dwellers in rural districts. This is obvious to the most casual observation, and it has been so clearly seen by Englishmen within the last half-century that a perfect rush has set in of the rural population into towns, with the result that, while these latter have grown with unexampled rapidity and attained unprecedented proportions, many country districts have been almost denuded of inhabitants, and villages, with their domestic industries and institutions, have perished in the shadow of colossal neighbours. This wholesale obliteration of the village type has undoubtedly involved a serious loss to the community, perhaps even a national loss. At any rate, the sentiment cannot be mistaken which has led Sir George Campbell and his associates to cast about for the means of restoring the deserted village and recalling public attention to the possibilities of benefit to town and country alike in the provision of an outlet within our own borders for that most miserable and most dangerous of all social growths—a surplus town population. The diffusion of sound views, and still more the establishment of sound practice, in such a matter must be a work of time, and it may well be that the formulated programme of the Society will be subject to considerable modification in the light of experience, but we are glad to learn from a report just issued that they have met with some measure of encouragement. Among this

instances which are mentioned the following is peculiarly satisfactory. A large West-end firm of bootmakers has for some time past given to any of their older hands the privilege of living in the country, and having boxes of materials sent to them periodically, which they return filled with the manufactured article. The firm pay London wages, and the men pay the carriage of the goods, reaping the benefit of lower rents, fresh air, and healthy surroundings in the rural cottage. In bringing about such results we heartily wish the Society a long continuance of success.

THE STATE OF THE MEDICAL PROFESSION IN RUSSIA.

DR. C. YAROSHEVSKI contributes to the *Russkaya Meditsina* a long article on the state of the medical profession in Russia. He points out that there are only 18,000 doctors for a population of one hundred millions, or one medical man to every 6500 persons. This number of doctors in proportion to the population is very much less than in other European countries, yet the destitution amongst members of the profession is alarming. Of late, there have been numbers of suicides of medical men who were without the bare necessities of life. The fees for medical attendance are very low. Still, in Odessa 40 per cent. of the whole population and 94 per cent. of the very poor died without having had medical attendance. A similar state of affairs exists at Kostrome. Dr. Yaroshevski attributes this deplorable condition of things to the ignorance of the Russian people, who prefer to consult soothsayers and magicians rather than educated medical men, to the monopoly enjoyed by the pharmacists, and to the large number of Feldshers who are allowed to practise. The Feldshers are men who have some rough knowledge of surgery and the use of a few drugs. They are generally men who have served in the Ambulance Corps or have been hospital attendants, and on the strength of this slight knowledge they are licensed to practise. The author suggests the appointment of a medical minister to take active measures against the magicians, the removal of the pharmacists' monopoly, and the abolition of Feldsherism.

THE OPERATIVE TREATMENT OF PRIAPISM.

DR. VORSTER, surgeon to the Bethany Deaconesses' House, Berlin, has published two cases of priapism, which were successfully treated by Professor Rose by means of operation. The first patient was of a hæmorrhagic diathesis, and was admitted to hospital suffering from violent epistaxis. This was soon stopped, but severe symptoms of acute cerebral anæmia remained—headache, vomiting, and extreme feebleness of right arm and leg. Priapism came on in consequence of straining at stool, and further cerebral symptoms followed—insomnia, pains in neck, paralysis of sixth cerebral nerve, and loss of consciousness. The author consequently supposed that the priapism was due to hæmorrhage in the brain produced by the violent straining. The measures employed consisted of local cold applications, camphor, morphia, and chloral internally, long-continued tepid baths, and even the administration of chloroform, but all proved useless. After the priapism had continued for thirty-two days, Professor Rose determined, notwithstanding the hæmorrhagic diathesis, to make an incision in order to relieve the paraphimosis which existed. This was followed by hæmorrhage, which continued for three hours. The priapism then began to diminish, and in four days after the operation the penis had returned to its ordinary condition. Subsequently marked splenic leukaemia developed. The author considers, notwithstanding the coincidence of leukaemia with priapism, which has been noted in medical literature, that here the leukaemia cannot have been in any

way the cause of the priapism, because it was not developed until the latter had ceased. In the second case the priapism was due to hæmorrhage into the right corpus cavernosum, caused by an accident. This effusion exercised pressure on the veins, and thus caused stagnation of the venous blood in the corpora cavernosa. Professor Rose having diagnosed with certainty the occurrence of a rupture of the urethra, proceeded to perform external urethrotomy, with the object of relieving the great distension of the bladder. During the operation a hæmatoma was found bulging forwards into the urethra. Upon an incision being made into this tumour the priapism disappeared. The patient was discharged cured in seven weeks.

CHLOROFORM AS A ROUTINE ANÆSTHETIC.

How deeply men's minds are interested in the question, "Which is the safest anæsthetic?" has been amply shown by the prolonged correspondence which has followed our leading article dealing with the subject. We regret that pressure upon our space has prevented a wider discussion. At least two most opposed views are held by those who regard chloroform as a safe—nay, the safest—anæsthetic: holders of the one view contend that the less instructed the chloroformist is the better for the patient, provided he neglect the pulse, and, watching the respiration, drag the tongue forward with artery forceps if any sign of respiratory trouble occurs; those who favour the other view, which has been advanced most recently by Mr. Foy of Dublin, assert that a large percentage of chloroform deaths are due to maladroit chloroformisation. But, as we pointed out, the danger of chloroform lies in the fact that a little carelessness on the part of the administrator will lead to fatal results. Ether when administered by itself has many disadvantages; but disadvantages are preferable to dangers, and so it seems desirable that it should oust chloroform as a routine anæsthetic, the latter agent being reserved for special operations and special individuals. When it is admitted, as we are glad to see it is, even by the strongest advocates of chloroform, that the utmost care is needed in its administration, our main contention is supported—viz., that were any casualty to occur under its influence, it would become the duty of the coroner to inquire whether due care had been exercised in the choice of the best anæsthetic for that individual case, and whether proper care had been taken in the administration of the anæsthetic selected. It is not, of course, germane to the question to contend that many coroners and most coroners' juries are incompetent to settle such weighty questions. Their inefficiency is equally likely to be shown in the conduct of an inquest upon any case of poisoning.

POOR RELIEF.

IN an address upon "Altruism considered economically," which was recently delivered before the Statistical Section of the American Association for the Advancement of Science by Mr. C. W. Smiley, the vice-president of the section, some interesting details are given respecting the working of poor relief across the Atlantic. The mischief of injudicious almsgiving has often been illustrated, but we doubt whether the utterly fictitious character of the distress to which an unwise charity ministers has ever been more clearly and strikingly demonstrated than in the case of Brooklyn, where it appears that 46,350 persons were relieved during 1877 at a cost exceeding £29,000, in addition to those who received in-door relief in workhouse and hospital. The next year the heroic remedy was adopted of refusing out-door relief altogether. No money whatever was given away, but the consequent increase of distress as measured by increase in the number of inmates in the institutions for the relief of the poor was inconsiderably small even at

first, and disappeared altogether, giving place to a diminution of these numbers in subsequent years. The actual figures given are as follows: 1877, 1371 inmates; 1878, the same number; 1879, 1389; 1880, 1199; 1881, 1171. It is further stated that at about the same time Philadelphia took similar action with the like result; and the experience of Cleveland and of Cincinnati is adduced in further corroboration of the prudence of the law. There is of course a latent defect in statistics which deal only with the experience of circumscribed localities, inasmuch as the adoption within a limited area of a particularly strict rule has a tendency to drive the poorer population to adjacent parts lying just outside the jurisdiction. As Mr. Smiley does not deal with this aspect of the question, his quoted results can only be accepted with a certain reserve, but the lesson which he enforces is always timely, and never more so than at present—the lesson, namely, that those who wish really to benefit the poor must have an eye not less to the remote and moral consequences of their beneficence than to its immediate effects.

THE EFFECTS OF ANÆSTHETICS ON THE CORNEA.

AT the last meeting of the Lyons Medical Society, Dr. Dubois presented for examination an interesting case of corneal opacity produced in a dog by the inhalation of chloride of ethylene. This was not produced accidentally by direct contact of the substance with the cornea during the administration, for experiments showed that chloride of ethylene injected locally had no effect, whereas injected hypodermically it always produced opacity of the cornea. When one trigeminal nerve was divided, the cornea on that side became insensible, but a hypodermic injection of chloride of ethylene still produced opacity in both eyes. In dogs with corneal opacities thus produced, Dr. Dubois succeeded in effecting a diminution of the opacity by reanæsthetising the animal with chloride of ethylene or with chloroform. Dr. Dubois thinks that anæsthetics act by removing from the anatomical elements their water. Chloroform itself acts as a dehydrant, and in this way causes the irregular astigmatism that is so often associated with its administration, but which soon clears up.

DENTAL QUACKERY.

AT the dinner of the past and present students held in connexion with the London School of Dental Surgery, Mr. James Smith Turner, the chairman, made some pertinent remarks. Referring to the past, he said that the importance of the Dental Act lay in its requiring all dentists to take the L.D.S. diploma. Consideration for vested interests required the admission of those persons who were reputed dentists before the passing of the Act, as well as apprentices; but as time went on the Register would by a natural process be freed from all names save those to which was appended the title L.D.S. (Licentiate in Dental Surgery). It was pointed out that the public had yet to learn the true significance of the title L.D.S. It implied that he who lawfully used it had passed a qualifying examination in arts similar to that which his medical brethren were obliged to undergo, and had, after five years of patient and laborious study, alike with hands and head, successfully satisfied the test of a final examination in all the subjects of his profession. This qualifying test was administered by a conjoint board of examiners, half surgical and half dental, but composed wholly of representative and picked men. The licentiates in dental surgery were not only competed with by the men who were placed upon the Dental Register by virtue of their supposed vested rights, but by a whole army of quacks

and charlatans, conspicuous amongst whom were the so-called American dentists. Science and art were cosmopolitan, and all that was legitimate and useful in dentistry was as much English as American; but because the credulous public had, by dint of the advertisements of dental cheap-jacks, got a craze that American dentistry was a superfine form of that art, a number of persons had obtained bogus degrees from disreputable American colleges, condemned alike by the American and English professions. There were some Americans who had settled in England, and there practised dentistry, and were acting like gentlemen and colleagues to their English *confreres*; of such men he had only good to speak: they neither called themselves doctors, although they held *bond-fide* and respectable American degrees, nor professed to be exponents of the so-called American dentistry. It is certainly an unfortunate fact that, as Mr. Smith Turner says, the British public are not better informed concerning the true character of English and the so-called "American" dentists. Just as the ethics of the medical profession discountenance advertising or commercial methods among its members, so does the equally high ethical code promulgated by the British Dental Association. The dental profession of England is part and parcel of the medical, and should receive its moral support; every year it is becoming more usual for dentists to take surgical and medical diplomas, and so they become still more in unison with the great healing art. Whatever may be said of individual Americans who practise dentistry in this country, there is no doubt that the system of dental education in America leaves much to be desired, and is far less thorough than that in vogue in our London schools, and the open and unblushing system of advertising pursued by the professing American dentists ought to be quite enough to condemn them in the eyes of all medical men and the thoughtful public. It has long since been decided that it is a disgraceful practice for medical men to advertise either openly or covertly; so, surely, we owe it to our dental friends to do all that is in our power to help them in suppressing that vicious practice among dentists; and supporting them in their crusade against humbug and imposition.

READING IN BED.

SOME credit is doubtless due to those who, in despair of a cure for sleeplessness, have sought to palliate the mischief done to health by reading in bed in order to procure sleep. Their position is at best that of mere necessitarians. The advice they offer may, however, have some value for those who from some cause are physically unable to fall asleep within a reasonable time, and who will insist on reading till they do. It includes various measures intended to prevent or diminish the ocular strain thus incurred. Bathing the eyes with weak salt solution, the adoption of a sitting posture, and the use of sufficiently bright light are among the means advised. They ought certainly to check the bad effects of an unhealthy practice. We should have more sympathy, however, with any attempt to deal with the true source of mischief—the habit itself. This is in a large majority of cases unjustified by any real necessity. Whatever the cause of sleeplessness, whether an idle preceding day, a midday or evening nap, an empty stomach or an over-full one, fatigue or worry, the truest wisdom consists in removing this by the needful change of custom. All rules of treatment such as those above stated maintain the reading habit while they moderate its consequences. This is our one objection to them. If sleep requires to be wooed, it should be remembered that there are available, besides the treatment of causal conditions, various direct

methods of diverting the mind from the outer world, and thus of inducing sleep. The use of one or other of these is from their nature more rational than the practice of reading in bed.

CARDIAC FAILURE IN DIPHTHERIA.

AT the meeting of the New York Academy of Medicine on Nov. 1st, Dr. J. Lewis Smith read a paper on Sudden Heart Failure in Diphtheria; its Pathology and Treatment (*Berlin Medical and Surgical Journal*, Nov. 13th). After discussing the various hypotheses advanced to explain this occurrence, such as degeneration of the muscular wall and cardiac thrombosis, Dr. Smith inclined to adopt the theory of deficient innervation, making it indeed a form of diphtheritic paralysis; the frequent association with vomiting and dyspnoea suggesting that the pneumogastric is the nerve implicated. The modern view of diphtheria is, he said, that the systemic infection is due to ptomaines produced on the surface by the microbes that are the cause of the disease; and on this view the neuritis, myelitis, &c., are produced by the same toxic influence. Dr. Loomis believed that heart failure early in the course of the disease was due to the systemic poisoning, and that when heart failure occurred in advanced stages of diphtheria it was due to peripheral neuritis. Dr. Beverly Robinson contended in favour of the cardiac failure being due to thrombosis and granulo-fatty degeneration of the walls of the heart. All the speakers agreed as to the paramount importance of disturbing the patient as little as possible. The President, Dr. A. Jacobi, pointed out that paralysis of the muscles of respiration might occasionally be mistaken for cardiac failure in the later stages of diphtheria. He said that alcohol was an invaluable agent in diphtheria, and if he were limited to one remedy he would select it.

THE "SOCIAL EVIL" IN LONDON.

QUITE apart from the recent Whitechapel murders, the attention of the new Chief Commissioner will sooner or later be drawn to the subject of prostitution in London, more especially with regard to its worst features as they come to the notice of the general public and the police. These are the assembling of prostitutes in the public streets, their loitering there and solicitation of the inhabitants and passers-by for the avowed purposes of prostitution, and the keeping of brothels or other disorderly houses. These are the worst features of the social evil, and the more so that, though all are forbidden by law, they are still not only in existence and well known to the police, but rampant. The soliciting by prostitutes is a misdemeanour, and keeping a brothel is an offence which may be punished summarily by indictment at the next sessions or assizes. Our reason for calling attention to these facts is, that it is by these breaches of the law that venereal diseases, and syphilis especially, are spread. Obviously the streets are intended for the convenience of all, but not to be monopolised by prostitutes and their dissolute male associates. Some of our correspondents have complained that we ignore the fact of men being a factor to the evils of prostitution and the spread of disease. We do not and have not ignored this, but we do contend that women are mainly the aggressive parties. We yield to none in condemning seduction; but we cannot justify the victim of seduction in retaliating by walking the streets. Besides the victims of seduction, who form a very small proportion of the total number of prostitutes, there are many who deliberately choose the life as an easy and luxurious one, much preferable to the life of drudgery they had hitherto led; and not only do they voluntarily become prostitutes, but they will often drag down their sisters, their cousins, and their friends to their own miserable level. It is rare to find a

man keeping a brothel; nearly all are kept by women, who live directly or indirectly upon the earnings of their fallen sisters. In the face of all these facts, which can be proved beyond the possibility of dispute, is it unreasonable to demand that the laws shall be enforced, and if necessary be made more stringent; that men should be able to walk to and from their business without having the social evil thrust upon them night after night and year after year; and that the odious offence of brothel-keeping or living on the wages of the prostitution of others shall be made as difficult as possible? It may be hopeless to expect that prostitution will ever be extinguished, but these its more prominent accessory evils may be greatly abated; and if they were, disease would be also much diminished.

BURIAL REFORM.

WITHIN a few days the Home Secretary will receive the deputation from the Church of England Funeral Reform Association, notice of which appeared in *THE LANCET* of last week. The object of the deputation is to ask for an inquiry by Royal Commission into the condition of cemeteries and modes of burial, with a view to further legislation, the consolidation and simplification of the existing Burial Acts, and the abolition of the power of selling the right of burial in perpetuity. So much has already appeared in our columns on the subject of burial reform that it is only necessary to indicate the principal reforms which are needed. The first is greater uniformity of practice, and more safeguards against abuse in the burial of newly-born infants, whether premature, still-born, or deceased. The second is greater simplicity as regards the burial of the wealthier classes, the total abolition of imperishable coffins, and of catacombs, vaults, or bricked graves; in short, burial in the literal sense of the word, and the resolution of the body to earth in a reasonable space of time. The third reform required is burial of the lower classes in grave plots rather than in "pits," in "common" or "public" graves, as being both more in conformity with sanitary laws and respect for the dead. There ought, in truth, to be little if any difference between the burial of peer or pauper. In the former, reform is required (with some few happy exceptions) in the reduction of excess; in the latter, more recognition of the grand principle that in death we are all equal. It is to be hoped that the deputation will not end with the usual stereotyped speeches, or even with the appointment of a Royal Commission and an elaborate report, but with "something attempted, something done." We frequently experience from time to time the disastrous results of the method of disposal of the dead in past ages; let that of the present and of the future be such as shall give offence to none.

IMPERFECT OIL LAMPS.

LAMP explosions, though probably less frequent than formerly, still continue to occur, and are, unfortunately, far from rare. The question of their prevention is by no means a simple one, nor can it be entirely settled by adopting the procedure recently suggested by a coroner's jury—namely, that lamp making should be regulated in a manner prescribed by Act of Parliament. Valuable as is the proposed remedy, and we hope it will not be overlooked, it cannot be expected to do everything in the way of prevention. It should, if applied, considerably diminish the risks now incurred by those who burn oil, but it cannot provide against the carelessness of individuals. The causes of such explosions are various. According to reliable evidence, they are not commonly due to the oil used, at least in the metropolis. The lamp or its owner, therefore, can alone be

blasted in cases of accident. This may occur when a lamp is full flame, is carried from place to place, or is blown out; when a wick fits badly or is too short, or the oil supply is burnt away. In one way or other the outer air, uniting with oil vapour to form an explosive mixture, reaches the light. The usual result is only too fatally familiar. It is clear, therefore, that no law can remove the dangers connected with this mode of lighting. If, however, it is made legally necessary that every lamp should be so constructed that neither by the tube nor by any openings about it can the air within the funnel reach the reservoir, and if at the same time the public are careful to see that wick and tube are suited to each other, the chances of accident will be reduced as far as mechanical adjustment can reduce them.

THE TEACHING OF SICK NURSING AND AMBULANCE WORK IN PUBLIC ELEMENTARY SCHOOLS.

ON Nov. 26th Dr. Tatham, in the absence of the Mayor of Salford, presided over a conference at which many school managers and most of the principal teachers in the borough were present, to consider the best means of introducing the teaching of these subjects to the older children in the public elementary schools. The conference resolved that it was both possible and desirable to introduce the teaching of certain parts of the two subjects in question, as well as the feeding of infants, into the public elementary schools, and that such teaching would be best given by the ordinary teachers, being supplemented where necessary by skilled medical help; that, with a view to fitting the teachers for the work, the Salford School Board be requested to arrange for classes to be held under competent instructors; and that steps should be taken to interest both parents and scholars in the work of sick nursing, which is now being carried on and extended in Salford by the nurses of the Salford Home. With a view to carry out these resolutions, a committee was appointed, including Dr. Tatham and Miss Burford of the Salford Home, as skilled advisers. The movement has the cordial support of the Salford School Board and of Her Majesty's Inspector of Schools, and, from the spirit in which it has been taken up, seems sure to succeed. It is certainly a most encouraging thing to find teachers, with all the heavy claims upon their energies, so ready to undertake a work of this sort.

SCAVENGING NUISANCE AT BRISTOL.

A CORRESPONDENCE has been going on in the Bristol local press which forbids us to doubt that a very great and injurious nuisance is being perpetrated there in the matter of the disposal of house refuse. According to a number of correspondents, some of whom have the courage not to shelter themselves behind anonymous titles, the refuse and filth in question is deposited in great masses in several of the poorer parts of the town, to the great discredit of the local sanitary administration. No one, we imagine, can for a moment contend that the inhalation of the emanations from such stuff tends otherwise than to the injury of health; and it is on this assumption that systems of scavenging in our towns have been devised. But, according to the complainants, such stuff is, in Bristol, only removed from individual houses in order to be piled up in so-called "mountains" in proximity to other houses, the inhabitants of which are made to suffer nuisance for the benefit of their more fortunate townspeople whose refuse has been carted away. The demand for a destructor seems to be a most reasonable and an urgent one. The fault evidently does not lie with the medical officer of health, for he has urged the purchase of one, and in his last annual

report he says significantly that the "various tips" have been approved by the committee of the authority. We may assume that he does not approve them, and we hope that the Town Council will act on his suggestion, and remove an obvious source of nuisance and of ill health.

BRITISH PRACTITIONERS IN SWITZERLAND.

THE injustice of the prohibitory law affecting British practitioners residing in Switzerland gave rise to a somewhat lengthy debate in Parliament a few days ago. The purpose of this law cannot fail to be apparent to the most ordinary unprofessional intelligence. There is not the shadow of a reason why it should be called for on the ground of any inferiority in medical education. There are doubtless practitioners of inferior qualification in England as well as in Switzerland, though it is difficult to see why even they may not attend their own countrymen while abroad if asked to do so. To adopt any other position would argue on the part of the Swiss Government a paternal interest in the children of a different national parentage, which is amusing as an instance of gratuitous goodwill. There is not, however, any question of comparative ability. The strongest and the weakest are under the same interdict. It is enough that neither holds a Swiss diploma. We must therefore look for some other explanation than one based on superior professional skill for the preference shown to the native practitioners. Nor is this difficult to discover. When we consider the central position of the country, the migratory habits of its most wealthy class—the tourist population,—and the fact that foreign practitioners from neighbouring countries are included under the prohibition referred to, it becomes evident that here we have a mere question of commercial advantage. The principle of protection is being used to benefit one special section of the trade in tourists—namely, that which is concerned with its yield in sickness. Overtures have, it appears, been made by Her Majesty's Government to that of Switzerland with a view to removal of the prohibition, and it has even been suggested that a liberty to practise among the Swiss people themselves might be allowed to duly qualified medical men holding British diplomas, in return for similar terms granted to foreign practitioners in this country by the Medical Act, 1886. Hitherto these overtures have achieved no very satisfactory result, though it is noteworthy that a more liberal spirit has been shown in the arrangements made last summer in some of the cantons. The present position is hardly more pleasant for a self-respecting people like the Swiss than for ourselves. Imposing as it does an altogether unjust restraint upon the reasonable wishes of their holiday visitors, it cannot be said to flatter either their professional ability or their hospitality. Perhaps even on financial grounds it might be wise to show a greater regard in this matter for the complaints of the remunerative sightseer.

THE LATE DR. R. G. LATHAM.

WE regret to learn from our contemporary, the *Athenæum*, that the widow and invalid daughter of the late Dr. R. G. Latham are in straitened circumstances, the Treasury being unable to continue to them the pension (£100) which he received from Government. Dr. Latham's name is better known as a philologist than as a physician, but there must be many who enjoyed his acquaintance when he was on the staff of the Middlesex Hospital, and who would like to contribute to the "Latham Fund" which has been opened for the benefit of the two ladies who were left totally unprovided for. Subscriptions will be received for the fund by the London and County Bank (Putney branch), or by the treasurer, Mr. W. J. Lancaster, Garmyowen, Putney-hill, S.W.

REPORT OF THE BOARD OF SUPERVISION FOR SCOTLAND.

FROM that portion of the recently issued annual report of the Board of Supervision, which deals with public health, we learn that during the past year recommendations for loans have been made to the Public Works Loan Commissioners to the extent of £73,925 for water works, £42,125 for sewerage and drainage works, and £12,324 for the erection of hospitals. Especial attention has been devoted to the very defective sanitary conditions which existed in the East Coast fishing villages, and which were most detrimental to the public health; and it is stated generally that a considerable number of very important sanitary measures have been carried out in Scotland generally. Owing to apprehensions of an extension of small-pox from England, representations were made to the various sanitary authorities urging them to take preventive measures against that disease; these measures to include the provision of means of isolation and such general improvement in the sanitary circumstances prevailing as were called for in each district; and, above all, it was pressed upon the responsible authorities that they should only trust in a condition of actual preparedness in advance of the possible emergency. Having regard to the recent development of the question of tuberculosis in cattle, and its possible communication to man by means of either milk or meat used as food, a special report was prepared for the Board by Dr. Littlejohn; and on the strength of the information thus acquired the central authority felt it to be their duty to point out to the local authorities how largely the origin and spread of tuberculosis appeared to be dependent on the sanitary state of byres and cow-sheds, and how needful it was that the provisions of the dairies, cow-sheds, and milk-shops order should be rigidly enforced.

POISONING FROM A LOCAL APPLICATION USED FOR TOOTH EXTRACTION.

A CASE is reported in the *Dental Cosmos* of poisoning by cocaine, used for the purpose of extracting a tooth. The symptoms presented were apparently the usual ones, but the unconsciousness lasted five hours. The peculiarity of the case consisted in a pustular rash appearing on the forearms on the following morning, and lasting several days. The method employed for the production of the local anæsthesia was freely swabbing the gums three times in five minutes with a mixture of cocaine hydrochlorate, chloral hydrate, carbolic acid, and water. As far as we can ascertain, no case of rash following the use of cocaine has been brought forward, whereas the Chloral Committee of the Clinical Society (Transactions, vol. xiii.) report both pustular and bullous rashes as having followed the exhibition of chloral hydrate. It seems therefore probable that the pustules were in this case due to the chloral, and not to the cocaine.

A VEGETARIAN v. AN ANIMAL DIET.

THE President (Mr. A. F. Hills) and Committee of the London Vegetarian Society entertained between fifty and sixty medical men and medical students at a vegetarian banquet at the Charing-cross Vegetarian Hotel on Wednesday last. Dr. B. W. Richardson presided, and during dessert he opened a "friendly discussion" upon the value of vegetarianism. He advocated its adoption on the grounds of economy, as an aid to temperance, and to promote animal happiness. He thought that it would be more generally adopted if due regard were paid to refinement in preparation and serving. He suggested that it was desirable to prepare vegetable food so as to resemble animal food in appearance as much as possible. Mr. A. F. Hills then gave

an impassioned address, which, however, went mainly along well-beaten tracks. He spoke of the scientific, philosophic, and religious aspects of the question, and maintained that the ideal of a perfect life could only be attained by observance of law. All evils were to be attributed to violation of law. This point he elaborated by numerous references, reaching the conclusion that the greatest violation of law is the indulgence in animal diet. With regard to vegetarianism, he explained a preference for fruits, grains, pulses and nuts, on account of the vital force. "There is a vital food which is possessed of the potency of life." In this connexion he enunciated some fanciful theories, which were received in ominous silence. Dr. Drysdale humorously treated the subject as the most heterodox idea that had ever entered the minds of a civilised people. Dr. Farquharson, Dr. Hare, and others continued the discussion, which lasted till a late hour.

THE LATE MAJOR A. H. ROSS, M.P.

THE Middlesex Hospital has sustained a serious loss in the sudden death on the 3rd inst. of Major Ross, M.P., chairman of the Weekly Board. The deceased gentleman had been a member of the board since the year 1861, and had held the office of chairman since 1867. During his tenure of office he was indefatigable in furthering the interests of the hospital and in initiating improvements in its working. Only four days before his death he announced at the quarterly court of governors that a scheme had been arranged whereby the services of lady probationer nurses might be retained, after they had completed their year's training, in rendering assistance to lying-in women. Amongst the many improvements originated under Major Ross's rule may be mentioned the reconstruction and enlargement of the out-patient department, the reorganisation of the system of nursing, the foundation of a Nursing Institute, &c. He also took a great interest in the welfare of the medical school, and was one of the chief promoters of the Residential College, which was opened last year. His loss will be keenly felt.

QUACKERY IN FRANCE.

DR. VICTOR AUGAGNEUR, in the current number of *La Province Médicale*, is loud in his complaints of the disgracefully lenient manner in which the French State prosecutors and magistrates deal with quacks. According to the French laws, anyone who practises medicine or pharmacy without a diploma or State permission is liable to prosecution and fine, and it is the duty of the police authorities to enforce these laws. But so lax are the police in fulfilling their duties that a quack is rarely prosecuted except on the initiation of the medical profession, and even then the fines inflicted are so trifling in amount that quackery is widespread and is on the increase. Recently a Hindoo oculist, who has been traversing the country and pretending to have marvellous cures for all eye diseases, was summoned before the justices at St. Etienne. The man called a number of witnesses to testify to the wonderful cures he had worked "by operations of marvellous rapidity and dexterity, and by the use of certain ointments and lotions." After hearing this evidence, the State Prosecutor, without attempting to test the statements of the witnesses, and in an apologetic tone, expressed his regret that he was forced to press for a conviction, and the magistrates—one of whom openly from the bench inquired the quack's address—fined this man of marvellous cures the ridiculous sum of three francs. This was not only not a punishment, but on the contrary a big advertisement for the quack. Dr. Augagneur considers such absurd and unbecoming action of the authorities a disgrace to the judicial bench and

a glaring insult to the medical profession. He thinks that, for the dignity of the profession, the law ought to be rigidly enforced or the practice of medicine thrown open to every bonesetter and quack in the country.

SANITARY NEGLIGENCE.

A CASE recently heard at the Marylebone Police-court shows the necessity for the inspection of school buildings. A benevolent gentleman, having built schools upon some land belonging to the vicar of his parish, and having endowed them, failed to appoint trustees, so the vicar came into nominal possession of the property. A visit from the sanitary inspector of St. Pancras showed that the schools were dirty and in a condition injurious to health; the lavatory arrangements were reported to be of the worst possible description. The vicar declined to comply with the vestry's order for their improvement, pleading that he was not the owner of the property, though it appeared in evidence that two years previously it had been explained to him that it was vested in him. The neglect is the more reprehensible seeing that the premises were let for day schools and Sunday schools (which 200 children attended), and for mothers' meetings, temperance meetings, &c. The defendant did not appear in court, but wrote a letter stating that he would give instructions for the work to be done. The magistrate under these circumstances inflicted a fine of 1s., and ordered the vicar to pay £4 13s. 6d. costs.

FACTORIES IN INDIA.

THE necessity for improved legislation regarding the management of factories in India continues to attract public attention in that country. From the correspondence on the subject which has appeared in the Bombay papers, it appears that the most urgent need is for improved and increased ventilation in these establishments. Another complaint is made against the smoke-consuming boilers with short chimneys which are now being extensively adopted in Bombay, many manufacturers being persuaded that it is no longer necessary to sink capital in the erection of tall chimneys. While not denying the efficacy of this innovation so far as the prevention of black smoke is concerned, one may be pardoned for being sceptical as to the prevention of the escape of the invisible but not altogether innocuous products of combustion. This particular question, however, appears on the surface to be one affecting the general population outside the mills rather than the operatives inside. Still it may be urged that if the air outside is impure, there is less possibility of freshening that inside. Moderate hours of labour and entire suspension of work daily are, it would appear, necessary if the atmosphere of the mills is to be thoroughly renewed.

PYRODINE: A NEW ANTIPYRETIC.

THIS new antipyretic has been extensively tried by Dr. Dreschfeld of Manchester on healthy persons and on patients suffering from various diseases, whilst Dr. R. Wild has investigated its physiological action in the laboratory of Owens College. It has been found to be a remedial agent of greater power than antipyrin, antifebrin, phenacetin, or any other of these chemical bodies, which have been so much recommended of late for the reduction of temperature in pyrexial cases. Pyrodine is one of the numerous derivatives of coal tar, and, as its active ingredient, contains acetyl-phenyl-hydrozin, $C_6H_5N_2H_2$ (C_6H_5O). It is a white crystalline powder, very sparingly soluble in cold water, and almost tasteless. Doses of eight or twelve grains on consecutive days produced no ill effects

on healthy persons. Similar doses of from eight to twelve grains markedly lowered the temperature in from two to four hours, in cases of pneumonia, scarlet fever, typhus and typhoid fever; but occasionally toxic effects are produced, and this seems to be more particularly the case in typhoid fever and in cases of rheumatism. These toxic effects are those observed in cases of aniline poisoning, and depend on the action of the drug on the blood, producing a hæmoglobinæmia, or even a destruction of the blood discs. The skin becomes jaundiced and aniline can be detected in the urine. Pyrodine should never be given in larger doses than twelve grains, and only once in eighteen or twenty-four hours, and it is not safe to continue its use for more than a few days. If either of these precautions is neglected, serious or even fatal symptoms may be rapidly induced. As the use of antipyrin and other products for lowering temperature and relieving pain is becoming very extensive, we have thought it especially incumbent on us to warn the profession against the dangerous character of this latest addition to our therapeutic resources, and never to exhibit it except with the greatest caution and in the most critical cases of disease.

THE MEMORIAL TO THE PRESIDENT AND COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

WE are requested to state that Sir Henry Acland and many of the leading members of the Association have during the present week signed the above memorial, a copy of which we published in our last issue. The memorial still remains for signature by members and others, who, if wishing to sign, should forward their names to one or other of the memorialists against whose names an asterisk was placed in the list printed in our last impression, p. 1088.

HÆMOGLOBINURIA IN CATTLE.

PROFESSOR BABES has found that cattle in the low marshy ground on the banks of the Lower Danube are exceedingly subject to hæmoglobinuria, which is often confounded with rinderpest. It has fortunately been much less common during the last few years, owing to the stringent police sanitary regulations which have been enforced. Still, from 30,000 to 50,000 head of cattle are even now annually destroyed by it, the bulls being by far the most numerous victims, heifers and cows appearing to have less disposition to contract the disease. A special coccus has been found which refracts light powerfully. It has a diameter of about half a millimetre, and presents very much the characters of the gonococci. It can be cultivated in agar-agar at the temperature of the body. But Professor Babes has not yet succeeded in infecting animals by its means.

CARCINOMA AND ATROPHY OF THE STOMACH.

AT a recent meeting of the Berlin Medical Society, Dr. Rosenheim, in a paper on the subject of Cancer of the Stomach, said that in fourteen out of sixteen cases of this disease free hydrochloric acid was constantly absent from the gastric secretion. In one case, however, there was an excessive amount. This was a case which had for years shown symptoms of gastric ulcer. Seven months before death there was an increase of pain and vomiting, and a tumour could be felt in the pyloric region. It was found to be an example of "cancer atrophicus," and an explanation of the presence of a large amount of hydrochloric acid was offered in the fact that the mucous membrane generally was not involved. For, as a rule, there is associated with carcinoma a marked condition of atrophy of the gastric mucosa, and it is to this that the deficiency in acid has been ascribed by Ewald and others.

ENTERIC FEVER AT THE LINCOLN COUNTY ASYLUM.

A STATEMENT concerning the late epidemic of enteric fever at this asylum has recently appeared in the daily papers, but there does not seem to have arisen anything worthy of note concerning it since we published an account in our issue of Oct. 6th, which contained full information. When the outbreak had been traced to its cause—defective drainage—energetic steps were at once taken to put it in good order, under the supervision of the medical officers, both of whom had been newly elected, and were unaware of the insanitary state of the building.

THE SANITARY CONDITION OF ROTHERHITHE.

MR. CURTIS NICHOLS and Mr. SHIRLEY MURPHY, Commissioners appointed by the Home Secretary to inquire into the sanitary condition of Rotherhithe, concluded the public inquiry on Friday of last week. Mr. Meadows White appeared for the vestry of that parish, and Mr. Reader Harris for the Mansion House Council on the Dwellings of the People. Dr. Louis Parkes gave evidence in support of the contention of the latter body; Dr. Shaw, medical officer of health, the vestry clerk, and others, gave evidence on behalf of the vestry. The report of the Commissioners will shortly be presented to the Home Secretary.

THE PHARMACY BILLS.

Sir HENRY ROSCOE has, in consequence of the persistent opposition to this Bill—and as in face of such opposition the chances of getting it through the House this session are nil,—withdrawn it from the Order Book of the House of Commons. The Irish Pharmacy Bill's chances of getting through this session are looked on as hopeless.

MEASLES IN LAMBETH.

MEASLES has for some time past been prevalent in Lambeth, and its form is sufficiently virulent to have led to complete or partial closure of schools against infants. Several deaths have already occurred, and the sanitary authorities are stated to be taking measures to prevent its spread. With such a disease isolation is the greatest safeguard, but this is not always easy of application in a community like Lambeth.

TESTIMONIAL TO MR. HENRY SMITH.

WE are asked to state that the list of subscribers to the above testimonial is about to close. Gentlemen wishing to contribute, and who have not already done so, should communicate without delay with the treasurer, Mr. W. Rose, 50, Harley-street.

FOREIGN UNIVERSITY INTELLIGENCE.

Cracow.—Dr. Pienazek, *privat-docent*, has been promoted to the Extraordinary Professorship of Laryngology.

Königsberg.—Dr. Meschede, *privat-docent*, has been granted the title of Professor.

Madrid.—At the public competition for the chair of Surgery in the College of San Carlos, vacated by the death of Señor Don Dr. Encinas, several distinguished surgeons from different parts of Spain entered the lists—Señores Morales Perez and Madrazo, now professors in Barcelona, Señor Arrimadas of Valladolid, Señor Ribero Sans, of the Children's Hospital, and Señor Isla, of the General Hospital, Madrid. The result of the competition has not yet been made known, but the discourses of the various candidates seem to have attracted a good deal of attention from the medical public, many of whom were present.

Nancy.—Professor Heydenreich has been appointed Dean for three years.

Sienna.—Professor Rummo of Naples, editor of the Italian medical journal, the *Riforma Medica*, has been appointed to the Professorship of Clinical Medicine.

Stockholm.—Dr. Hasselberg has been appointed to the chair of Physics in place of the late Professor Edlund.

Valencia.—The chair of Physiology is now vacant; some ten candidates have sent in their names. The jury, or committee of selection, has been appointed, and is to be presided over by Don Matías Nieto y Serrano, editor of *El Siglo Médico*.

Zaragoza.—Dr. Don Mariano Sancho Martin has been elected after competition to the chair of Obstetrics.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Graf, of Munich, editor of the *Aerztliches Intelligenzblatt*.—Dr. Gumbinner, Sanitary Privy Councillor, of Berlin.

FROM the report on the condition of the metropolitan water supply during the month of October by the water examiner appointed under the Metropolis Water Act, 1871, it appears that the high quality of the water referred to in September's report was well maintained during October. Moreover, the analysis of the daily samples was marked by great uniformity of excellence. Thus of the Thames-derived waters only 4 out of 130 samples examined by the oxygen process required more than 0.045 grain of oxygen per gallon to oxidise the organic matter, the average of the whole 130 samples being a little over 0.03 grain per gallon. Of the 189 samples examined, 187 were clear, bright, and well filtered.

A DESPATCH, dated the 27th ult., from Jacksonville, Florida, announces that for the first time since the outbreak of the yellow fever epidemic 112 days ago, no fresh cases and no deaths from the disease had been reported during the previous twenty-four hours. It may, therefore, be taken for granted that the epidemic is over—all the more as sharp frosts have occurred during two or three successive nights, and cold is a deadly enemy of yellow fever. In referring last week to the inaccurate statements regarding the alleged existence of the epidemic at the Canaries, we inadvertently spoke of its limitation to "the little island of Santa Cruz," instead of Palma; where the disease is still prevailing to some extent.

THE following is the syllabus of the third of the Harveian lectures, to be delivered by Dr. Cheadle at the Harveian Society on the 13th inst.:—"Endocarditis, subacute and recurrent likewise; Relation of Pericarditis and Endocarditis to the Evolution of Nodules; Morbid Changes in Nodules and Cardiac Valves analogous; Significance of this; Different forms of Valvular Disease; Early Signs of Mitral Stenosis; Hypertrophy and Dilatation; Comparative Rarity of Dropsy; The Mode of Death differs from that met with in Adults; Scarlatinal Rheumatism; Rheumatoid Arthritis; Special points in treatment." The series will be published in early numbers of the next volume of THE LANCET.

THE death is announced of Dr. Henry B. Sands, the eminent New York surgeon, from apoplexy, at the age of fifty-eight.

DR. G. B. LONGSTAFF, of Southfield Grange, is a candidate for the representation of Wandsworth on the County Council.

REPORT OF

The Lancet Special Commission

ON THE

DANGERS ATTENDING LABOUR IN THE DOCKS.

THE evidence relating to the work of dock labourers and stvedores given before the Royal Commission on Sweating has led us to push the inquiry further. We have, for many years past, heard a great deal of the distress and poverty attendant on dock labour. The fearful rush at the dock gates of half-starved men, fighting for the privilege of working for fourpence an hour, has often been described. The insufficient pay, the irregularity of employment, the long hours wasted waiting in the cold and the wet at the dock gates, are all familiar grievances. But the public does not yet fully realise the grave dangers to health, life, and limb which the dock labourer incurs when finally he does obtain employment. The more this phase of the question is studied, the more evident it becomes that human life is needlessly sacrificed. Nor is it one or two accidents here and there that testify to this indifference. Appalling though it may seem, it is nevertheless a fact that accidents are the rule, those who escape injury the exception. We asked Mr. Tillet, who gave evidence before the Royal Commission on the subject, and who is seeking to organise a union of dock labourers, how many out of a hundred dock labourers would in the course of five years' constant employment suffer from some severe accident. He replied that there were no statistics on the subject. His answer was but a guess based on long experience of dock life; but he was anxious not to exaggerate, and therefore would say that in the course of five years' work half the men at least would be wounded or otherwise injured.

With all due respect to Mr. Tillet, we considered this answer an unintentional exaggeration, and to test the matter went to the Poplar Hospital, where the largest proportion of cases of dock accidents are received. We put exactly the same question to the house surgeon, and, much to our surprise, he went even further than Mr. Tillet. In his opinion, during the course of five years' constant work, out of a hundred men the majority would suffer some accident; in fact, hardly any would escape. From the hospital we proceeded to a small meeting of dock labourers, and propounded the same question, receiving the same answer. The proportion of accidents in five years would certainly be more than 50 per cent. We then put this estimate to the test by asking all the dock labourers present who had themselves been hurt to raise their hands, defining an accident as an injury which compelled the sufferer to leave off work for at least several days. Twenty hands were immediately raised; but when we asked how many had not suffered such accidents only nine hands were shown. Thereupon one of the dock labourers sprang to his feet and ruefully explained that though he had raised but one hand he had himself suffered from six accidents; he had fallen three times into the hold of a ship. Then, on another occasion, he fell from a ship's side into a barge; for his fifth accident, he slipped, fell into the water, and was nearly drowned; and finally, a bale of cotton weighing 3 cwt. came down on his head, and he had suffered pains in the neck ever since. Other dock labourers rose and explained how they had been present when two fellow-workers were killed outright. Thus, whatever may be the exact proportion of accidents, there is not the slightest doubt as to their appalling frequency.

We now proceeded to inquire what were the principal causes of accidents. The medical evidence went to show that the cases of rupture, which are very frequent, usually occur with men whose general condition may be described as below par. It seems very obvious that if the dock labourers were in the enjoyment of the health and vigour nature intended them to possess, the cases of rupture would

be comparatively scarce. But when, after a long period of depression and distress, a man attempts, though his vital powers are impaired by insufficient food, to perform the extremely hard work of loading or unloading a ship, it is not surprising that physical efforts for which he is unfit result in rupture. But many other accidents occur from the same cause. Men who look strong, who might be strong, are weak through want; and, when at last they get work, accidents occur from sheer lack of muscular force. We found many such cases. One patient, for instance, is at the present moment under treatment at the Poplar Hospital. He is an elderly man. His knee is severely injured. He had obtained three days' work at the docks during the course of the last three months. His wife earns a shilling a day; and on this small sum the family has had to live. When at last this man got work at the docks, he had to move some barrels of apples, but he was so weak that a barrel rolled over him. He was brought to the hospital in a very emaciated condition. Often men are taken to the hospital who have fainted away at their work. They are almost pulseless. These cases are clearly the result of excessive physical effort and insufficient food. This is a phase of the subject on which the labourers are very reticent. They naturally do not like to confess that they have insufficient food and are weak, as this, if known, would render it much more difficult for them to obtain employment.

The general impression prevails that the accidents, though now so frequent, are for the most part preventable. The reckless speed at which the work is done is one of the chief causes of disaster. It seems as if no value were set upon human life. The number of men engaged is often altogether insufficient; hence an excessive strain. At the present moment, in one of the docks, gangs of two men only are employed for piling sacks of wheat weighing 2½ cwt. To make this safe, four men should be enrolled for such work. Again, in another of the docks there is some very heavy machinery to carry. The ground is often slippery from frost or mud. A man will therefore at times make a false step, slip, and be crushed by his own load. The planks also from the quay to the ship are sometimes too narrow and too flexible. The carrying of a heavy weight on a narrow and springy plank barely more than a foot wide frequently results in accidents. The planks should be not less than two feet wide, and much thicker. Many complaints were made to us concerning the "gangers," or a sort of foremen, who are always urging the men forward. The fear lest they should be discharged, and perhaps insufficient food, sometimes render the men so nervous that they make mistakes, and accidents ensue which certainly would be avoided if the work had been done calmly and without such fearful pressure.

A great number of the accidents are due to the careless or hasty slinging of the goods. A set of bags are piled, the chain placed round them, and they are then lifted from the hold of the ship by the crane. If these are not evenly balanced and firmly tied together, they will fall out of the chain and perhaps strike some of the men below. This also occurs if the goods hit the side of the hatch. A man stands at the hatch to shout when the chain should be lifted or lowered, and to warn those below when anything is falling. On this individual depends the life and safety of the workers. Yet, in spite of his responsible position, he receives no extra pay. Sometimes it is even an old man, probably not strong enough to seize the chain and prevent the goods striking the side of the hatch. Like everyone else, he is interested in hurrying the work forward; while, on the contrary, it should be his mission to check all undue haste. Much might be done to reduce the risk of dock labour if a different set of hatchway men were appointed. They should be well paid, and made to feel the responsibility of their position. The question suggests itself, therefore, whether their appointment should not be independent of the ship owners, the dock companies; and the labourers; for it should be the duty of these hatchway men to hold all three in check, and insist that the work be done slowly enough to make it safe.

At other times accidents are due to default of gearing. The chains are not greased; they rust and break. There is a man at the Poplar Hospital now whose thigh was fractured by some iron pipes, which struck him because the slings were not chained. Many dock labourers suffer from injury of the spine. They do not notice this at first. They imagine,

after some unusual efforts, that they have a "crick in the back," and attribute it to rheumatism; but in time they discover that it is the spine which is permanently injured. Thus we find a number of men who appear strong, who were strong, reduced to the necessity of seeking for only light work. Competition, the desire for cheapness, the struggle for profits, seem to have wrought their worst in the docks. Here men have been known to work for 2½d. an hour. Here men faint from over-exhaustion and want of food. Here lives are needlessly squandered; men are ruptured, their spines injured, their bones broken, and their skulls fractured, so as to get ships loaded and unloaded a little quicker and a little cheaper. In other departments of enterprise the commercial greed of this century has produced the same callous indifference for human life; but the State, sooner or later, has interfered to protect the weak and helpless. Those who frequent the docks must know that there are laws, for instance, to protect the lives of emigrants. These laws limit the competition between the lines of steamers, so that in seeking to undersell each other the ship-owners should not overcrowd and underfeed the emigrants. The question now arises whether some other law will not be necessary, dealing with ship-owners, dock companies, and the contractors or sweaters in their employ, in such a manner as to prevent the loss of life and limb that undoubtedly results from excessive competition in the rapid loading and unloading of ships.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5327 births and 3210 deaths were registered during the week ending Dec. 1st. The annual rate of mortality in these towns, which had been 19.7 and 18.2 per 1000 in the preceding two weeks, further declined last week to 17.8. During the first nine weeks of the current quarter the death-rate in these towns averaged 19.6 per 1000, and was 1.5 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 13.2 in Hull, 13.5 in Brighton, 13.8 in Nottingham, and 13.9 in Leicester. The rates ranged upwards in the other towns to 23.5 in Liverpool, 25.7 in Oldham, 26.7 in Blackburn, and 27.9 in Cardiff. The deaths referred to the principal zymotic diseases, which had been 495 and 501 in the preceding two weeks, further rose last week to 526; they included 264 from measles, 59 from scarlet fever, 56 from whooping-cough, 53 from diphtheria, 47 from "fever" (principally enteric), 44 from diarrhoea, and only 3 from small-pox. No deaths from any of these zymotic diseases were recorded last week in Brighton, Norwich, or Wolverhampton; while they caused the highest death-rates in Liverpool, Blackburn, and Cardiff. The greatest mortality from measles occurred in London, Huddersfield, Oldham, Leeds, Liverpool, Blackburn, and Cardiff; from scarlet fever in Blackburn; and from "fever" in Birkenhead, Oldham, and Halifax. The 53 deaths from diphtheria in the twenty-eight towns included 34 in London, 8 in Manchester, 3 in Liverpool, 2 in Oldham, and 2 in Nottingham. Two deaths from small-pox were registered in Cardiff and 1 in Sheffield, but not one in London or in any of the other great towns. No small-pox patients were under treatment during the week in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 946 at the end of last week, against 980 and 953 on the preceding two Saturdays; 96 cases were admitted to these hospitals during the week, against 83 and 59 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding five weeks from 522 to 287, further fell last week to 253, and were 227 below the corrected average. The causes of 64, or 2.0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Salford, Sunderland, Portsmouth, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Hull, Sheffield, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19.1 and 17.8 in the preceding two weeks, rose again to 19.1 in the week ending Dec. 1st; this rate exceeded by 1.3 the mean rate in the twenty-eight large English towns. The rates in these Scotch towns ranged from 12.6 and 16.2 in Leith and Edinburgh to 26.3 in Greenock and 32.0 in Paisley. The 483 deaths in the eight towns showed an increase of 34 upon the number in the preceding week, and included 14 which were referred to measles, 13 to scarlet fever, 11 to "fever" (principally enteric), 10 to diphtheria, 7 to whooping-cough, 5 to diarrhoea, and not one to small-pox; in all, 60 deaths resulted from these principal zymotic diseases, against 63 and 53 in the preceding two weeks. These 60 deaths were equal to an annual rate of 2.4 per 1000, which was 0.5 below the mean rate from the same diseases in the twenty-eight English towns; this rate ranged in the eight towns from 0.6 in Dundee to 7.6 in Paisley and 8.1 in Greenock. The fatal cases of measles, which had been 27, 24, and 19 in the previous three weeks, further declined last week to 14, of which 7 occurred in Paisley and 5 in Greenock. The 13 deaths from scarlet fever showed an increase upon recent weekly numbers, and included 7 in Glasgow, 2 in Greenock, and 2 in Perth. The deaths referred to "fever," which had been 6 and 4 in the two previous weeks, rose last week to 11, of which 3 occurred in Greenock, 3 in Edinburgh, and 2 in Glasgow. The 10 fatal cases of diphtheria included 5 in Glasgow, 2 in Greenock, and 2 in Leith; and 4 of the 7 deaths from whooping-cough were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 97 and 90 in the preceding two weeks, further declined last week to 86, which was 79 below the number in the corresponding week of last year. The causes of 49, or nearly 11 per cent., of the deaths registered during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 27.5, 23.5, and 25.9 per 1000 in the preceding three weeks, declined to 22.9 in the week ending Dec. 1st. During the first nine weeks of the current quarter the death-rate in the city averaged 24.1 per 1000, the mean rate during the same period being 18.7 in London and 15.4 in Edinburgh. The 155 deaths in Dublin showed a decline of 26 from the number in the previous week; they included 6 which were referred to "fever," 2 to scarlet fever, 2 to diphtheria, 1 to whooping-cough, and not one to small-pox, measles, or diarrhoea. Thus the deaths from these principal zymotic diseases, which had been 20 and 12 in the previous two weeks, further declined last week to 11; they were equal to an annual rate of 1.6 per 1000, the rate from the same diseases being 3.0 in London and 1.4 in Edinburgh. The fatal cases of "fever," scarlet fever, and diphtheria exceeded the numbers returned in recent weeks, whereas those of the other zymotic diseases showed a decline. The deaths both of infants and of elderly persons were fewer than in any recent week. Four inquest cases and three deaths from violence were registered; and 44, or more than a quarter, of the deaths occurred in public institutions. The causes of 19, or more than 12 per cent., of the deaths in the city were not certified.

THE SERVICES.

Surgeon-General J. Sinclair, M.D., has assumed the duties of Principal Medical Officer in Ireland, in succession to Surgeon-General H. B. Hassard, C.B., who will be placed on retired pay.

Deputy Surgeon-General J. Warren has taken over the duties of Principal Medical Officer at Woolwich.

WAR OFFICE. — Army Medical Staff: Surgeon-Major Henry Skey Muir, M.D., to be Brigade Surgeon, ranking as Lieutenant-Colonel; vice William Tanner, placed upon temporary half pay (dated Nov. 7th, 1888); Surgeon Samuel Arthur Crick, M.B., from half pay, has been granted retired pay (dated Nov. 27th, 1888).

ADMIRALTY. — The following appointments have been made: Surgeon Joseph A. Moon to the *Mistletoe*, and Surgeon Samuel W. Vasey to Lisbon Hospital, temporarily.

(both dated Nov. 30th, 1888); Surgeon Alexander G. Andrews to the *Partridge*, and Surgeon John D. Hughes to the *Iron Duke* (both dated Dec. 12th, 1888); Fleet Surgeon Robert H. More, M.D., to Cape of Good Hope Hospital; Fleet Surgeon John N. Stone to Plymouth Hospital; and Fleet Surgeon George A. Campbell to the *St. Vincent*.

VOLUNTEER CORPS.—*Rifle*: 1st Volunteer Battalion, the Royal Scots Fusiliers: Acting Surgeon J. Moyes, M.D., resigns his appointment (dated Dec. 5th, 1888).—1st (Dundee) Volunteer Battalion, the Black Watch (Royal Highlanders): Surgeon and Honorary Surgeon-Major A. Campbell resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated Dec. 5th, 1888).—3rd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry): Fredk. St. John Kemm, Gent., to be Acting Surgeon (dated Dec. 5th, 1888).—2nd Volunteer Battalion, the Prince of Wales's Own (Yorkshire Regiment): Jos. Francis Porter, M.D., to be Acting Surgeon (dated Dec. 5th, 1888).

Correspondence.

"Audi alteram partem."

PRACTICAL EXAMINATIONS IN OPERATIVE SURGERY.

To the Editors of THE LANCET.

SIRS,—The tenour of your leading article of Nov. 24th upon this subject should commend itself to thoughtful minds. May I add a word from the point of view of a teacher of operative surgery?

At University College every candidate for the conjoint examination is obliged to attend a course of operative surgery, in which he has at least ten operations allotted to him to perform himself; and, as six or eight subjects in all are used for this class, he has the opportunity of seeing all the operations performed several times. This opportunity is taken advantage of by many of the better students, while all except the hopelessly lazy attend with regularity. It is just the class which amuses and interests almost everyone. But even with this somewhat elaborate instruction, which I suppose is quite as elaborate as any school can be expected to give, only the best men attain anything like familiarity with the use of the knife, and the majority, I am sure, would make a very sorry show before the already much-dreaded examiners on the Embankment. I do not see, indeed, how it would be possible, with any fairness, to reject a man who proved to be incompetent at such an examination. The only use, then, I take it, of instituting such an examination would be to make it necessary for all the schools to organise thoroughly efficient classes for the teaching of operative surgery, and essential for all the candidates to attend them. But if the examination be constituted, it would defeat this object, unless some radical alteration be obtained in the working of the Anatomy Act. For if all the schools require as many subjects in proportion to their number of students as are at present used at University College, and if a large number are, in addition, wanted for the examinations, the supply will inevitably be greatly less than the demand, and the result will be that, however well the candidate be examined, he certainly will not be well taught.

One other observation on the whole question of examining in operative surgery. I do not for a moment suggest that it should cease to be one of the subjects for the Fellowship and other higher examinations; but I must say that there is no sadder occupation for a teacher of operative surgery than to go down and watch the process of examination applied to his own pupils. In the first place, nervousness of necessity comes in more in this part of the business than at any other time, and the candidate hardly ever acquits himself even approximately as well as he should do; and, in the second place, the personal element on the examiners' side can hardly fail to come somewhat prominently forward. Every man has his own method of operating—I mean one which he himself prefers; and very often he has strong objections to equally legitimate methods with which he may, perhaps, have but a slight personal acquaintance, but which may happen to be the favourites at the school from which the candidate has come. The result not unfrequently

seems to me to be that the examiner and the student—who, after all, are but human—fail to get in touch with one another, and the latter flounders deeper and deeper into the mire. And if these things be done in a green tree, what shall be done in the dry?

I am, Sirs, yours truly,

RICKMAN J. GODLEE,

Teacher of Operative Surgery at University College, London.

Wimpole-street, W., Nov. 28th, 1888.

To the Editors of THE LANCET.

SIRS,—In your leading article of Nov. 24th on the importance of operative surgery as a subject of examination at the Royal College of Surgeons, you remark that it is quite impossible that such an examination should be carried out in Scotland. If you will kindly refer to the Visitors' report on the University of Glasgow you will find that it is there most thoroughly carried out, and has been, to my personal knowledge, a subject of examination for the last twelve years. As this is, so far as I have been able to discover, the only Scotch board which has done its duty in this matter, I think it would only be in keeping with the character of THE LANCET if you looked into the report I have mentioned, and did the University of Glasgow an act of justice.

I am, Sirs, yours truly,

Salford, Nov. 28th, 1888.

WILLIAM FRASER.

REFORM AT THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—I have the honour to forward you the following copy of a letter received by me on November 29th, too late for your last issue.

"Council Office, Nov. 27th, 1888.

"SIR,—I am directed by the Lord President of the Council to acknowledge the receipt of your letter of the 15th inst., enclosing a copy of a resolution stated to have been advanced on behalf of the Association of Members of the Royal College of Surgeons at the annual meeting of the College on the 1st inst., and carried all but unanimously, and suggesting in support of such resolution that Her Majesty may be advised to grant a further Supplemental Charter embodying the claims made by 4665 Members of the College in the petition lodged at this office in May, 1887.

"The Lord President instructs me to inform you that it is not within the province of the Privy Council to advise Her Majesty to grant a Supplementary Charter, contrary to the wishes of a governing body entrusted in existing Charters with the management of the affairs of a corporation.

"I am to add that, in these circumstances, it appears to his lordship that, if the Members desire that the constitution of the College should be altered, the proper course would be to apply to Parliament for that purpose.

"I am, dear Sir, your obedient servant,

"W. Ashton Ellis, Esq.,

Joint Hon. Sec. Assoc. Mem. Roy. Coll. Surg."

"C. L. PEEL.

We have now exhausted all the less public forms of attempting to bring to pass the much-needed reform of our College, and I think you will allow that we have exercised much patience and moderation in the attempt. We shall no longer continue the hopeless task of convincing the obdurate Council of the College, but, armed with the friendly advice of the Privy Council, we shall, under the leadership of Lord Randolph Churchill, seek from Parliament the redress of our wrongs.

I am, Sirs, your obedient servant,

Grosvenor-road, S.W.,

Dec. 5th, 1888.

WILLIAM ASHTON ELLIS,

Joint Hon. Sec. Assoc. M.R.C.S.

"THE CAUSE OF CRAMP."

To the Editors of THE LANCET.

SIRS,—I am indebted to Messrs. Auld and Woodward for kindly notice of my contribution to THE LANCET on the subject of cramp. To the former I must also express my sincere thanks for a private letter, in which he goes very fully into the subject of the origin and causation of this very ordinary and, I suppose, to most, very uninteresting

ailment. My theory is "pressure." Mr. Auld's theory is leucomaines or ptomaines. He clearly admits pressure as one progenitor, but maintains that putrescent, decaying organisms are more prominent factors. I fear I am not well up in the German theory of "Botulosis." I neither admit nor deny; I am open to conviction. Let any good observer point out to me a few of these organisms in the blood or excretions of a very crampy subject. Then we are only in the first stage of the inquiry, for it may be cause and effect, or a mere coincidence. Then, if I can produce a subject teeming with these microscopic entities, and the former does not suffer from cramp, what becomes of the theory? It breaks down. To establish the theory there must be demonstrative evidence of the existence of the organisms in question, and these must occur in conjunction with well-marked crampy diathesis. In conclusion, one word as to pressure. In the act of parturition there is undeniable severe pressure, and the result urgent cramp. I am not informed that pregnant women are more subject to ptomaines than other less favoured individuals.

I am, Sirs, yours truly,

Stockland, Nov. 28th, 1888.

SAMUEL D. HINE.

ELECTROLYSIS IN OBSTRUCTION OF THE EUSTACHIAN TUBE.

To the Editors of THE LANCET.

SIRS,—I am indebted to Dr. Neale, the author of the "Medical Digest," for kindly calling my attention to several papers in which electrolysis of the Eustachian tube has before been mentioned.

In the *Gazette des Hôpitaux* (No. 31, 1884) is a paper by Mercié on the Treatment of Stricture of the Eustachian Tube by Electrolysis. The means employed and the way of performing the operation are not the same as that described in the paper by Mr. Cumberbatch and myself, which appeared in THE LANCET on the 24th ult., but the principle involved is the same.

In your issue of Sept. 20th, 1884, p. 509, reference is made to a paper by Dr. Bartonx in the *Progrès Médical* of Aug. 30th of that year, on Electrolysis of the Eustachian Tube, but no description is given of the operation. And as recently as June 18th, 1887, there appeared an annotation in THE LANCET (p. 1254) on Eustachian Obstruction in Diabetes, in which the employment of the continuous current is recommended, on the authority of M. Miot, as a mode of treatment, but the way in which it is to be employed is not given. The paper by M. Miot appeared in the *Revue Mensuelle de Laryngologie*, No. 6.

At the time of writing our paper I was not aware that electrolysis of the Eustachian tube had been previously tried, but in this I was evidently mistaken. The idea is therefore not original, but as far as practice is concerned it may still be called a new operation.

I am, Sirs, yours truly,

Dec. 1st, 1888.

W. E. STEAVENSON.

ACCUMULATIONS OF HAIR IN THE STOMACH.

To the Editors of THE LANCET.

SIRS,—In reference to accumulations of hair in the stomach, I would draw the attention of Dr. Berg and your other readers to the Clinical Society's Transactions, vol. iv., page 180.

I am, Sirs, yours truly,

Grosvenor-square, W., Nov. 29th, 1888.

WILLIAM W. GULL.

BIRMINGHAM.

(From a Correspondent.)

MEDICAL STUDENTS' ANNUAL DINNER: THE FELLOWSHIP EXAMINATION OF THE COLLEGE OF SURGEONS.

THE above annual gathering was held at the Midland Hotel on the 22nd ult., under the presidency of Mr. T. F. Chavasse. There was a large attendance, and the event passed off most successfully. The President, in referring to the proposed establishment of a Midland University at Birmingham, spoke in hopeful terms of its accomplishment at no distant date, a remark warmly endorsed by the Warden

of the College, the Rev. W. H. Poulton, and enthusiastically received by the students. Mr. Lawson Tait, in replying to the toast of "The Professors," made special reference to the papers set at the recent final examination for the Fellowship of the Royal College of Surgeons. The questions as a whole gave evidence of neither care nor attention being bestowed upon them, but there was one in particular to which he wished to direct their notice—viz., that in which the candidates were requested to explain how it was that of late years fractures of the base of the skull were less fatal than formerly. Since reading this he had frequently sought an answer from surgeons he had casually met. Not only had they been unable even to suggest a reply, but it was not until a short time prior to attending that meeting that a diligent search amongst the leading surgical text-books of the day had resulted in solving the problem, which on the authority of Mr. Erichsen was that "the practice of pouring a small quantity of antiseptic fluid into the ear had proved successful in lowering the mortality in cases of fracture of the base." Was it fair to provincial students that a small clique of metropolitan surgeons should thus ride their antiseptic hobby to such extremes, and thereby place at a great disadvantage any candidate who did not happen to have studied at a particular London school? The incident had rekindled afresh a warmer interest in the introduction of a much larger provincial representation on the Council. He was also prepared to do anything he could to hasten this end, even to fight the battle personally. Mr. Oliver Pemberton, in alluding to the same subject, said that few surgeons perhaps had had a greater experience of fractures of the base than he, and he most emphatically denied that there had been any treatment introduced or adopted in recent times which in any way lessened the mortality in these cases. Mr. Priestley Smith fully endorsed Mr. Tait's criticism, and welcomed the prospect of reform, but at the same time he wished to remind the students that, for the time being at all events, they had to pass the examinations as at present constituted, and they as teachers must do their utmost to help them. The toast list was interspersed with vocal and instrumental selections.

Birmingham, Dec. 1st.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

HUMAN BLOOD AND THE MICROSCOPE.

AT the Durham Assizes on Thursday last, during the trial of William Waddle, who was subsequently found guilty of what has been known as the Birtley Fell murder, a point of medico-legal interest was argued. Messrs. Galloway and Taylor, the experienced and intelligent surgeons, who were witnesses in the case, contended that it was generally admitted that it was impossible to differentiate with certainty human blood under the microscope from that of the lower animals, such as the pig &c.; but, on the other hand, Mr. Stock, the county analyst, said he thought it was possible to speak with certainty on the matter, as there was a difference between the size of the corpuscles of human and pig's blood. The counsel for the defendant gave up the point, so it is to be hoped that a debatable microscopic question like this did not influence the verdict of the jury when a man's life was at stake.

SUNDERLAND: THE HOMES OF THE POOR AND TYPHUS.

Mr. A. E. Harris, the medical officer of health for Sunderland, has forcibly drawn the attention of the sanitary committee to the dilapidated and insanitary state of some of the poorer dwellings in Sunderland and their connexion with typhus fever. "It is," he says, "in such places that typhus fever originates, and he was sorry to say that the disease existed still in Sunderland, although stamped out in other towns." Mr. Harris points out that the necessary powers were conferred by the Artisans and Labourers' Dwellings Act, 1868, and the Amendment Act, 1879. If the owners made default, the urban authority could order the premises to be shut up or demolished, or it might itself do the work and charge the expense to the owner. Mr. Harris allowed that the subject was a large one, and not to be handled in an offhand manner; but he suggested that they should have frequent reports on these unhealthy dwell-

ings from the borough engineer and the medical officer, after which they might be visited by the committee, and, if necessary, put in repair and maintained in a wholesome condition by the sanitary regulation bye-laws of the borough.

CUMBERLAND INFIRMARY.

At the quarterly meeting of the Cumberland Infirmary, Carlisle, held on Wednesday, Nov. 28th, it was intimated to the governors that a legacy had been received to the amount of £500 under the will of the late Mr. William Skelton Forrest Hill Westward, who died in 1885, and bequeathed that sum subject to the life interest of his wife, who has lately died.

THREE MINERS SUFFOCATED BY CARBONIC ACID GAS.

On Thursday, Nov. 29th, a fire broke out in the wood-work of a mine at Cleator Moor. All attempts to extinguish it proved ineffectual, and it was then decided to stop the pumps, so as to allow the water to rise and quench the fire. This was done, but, unfortunately, on the next day fifteen men descended into an adjoining, and it seems communicating, mine, ignorant that the gas had been forced in from the burning mine. They were immediately affected. Twelve of the party escaped, but three lost their lives, notwithstanding heroic efforts being made to rescue them.

THE GREENHOW FAMILY AND HARRIET MARTINEAU.

The *Newcastle Weekly Chronicle*, in reference to the death of Dr. E. H. Greenhow, gives some interesting details as to the connexion of the Greenhow family and Miss Martineau. The late Dr. Greenhow's uncle was related by marriage to that distinguished lady, and, as is well known, Miss Martineau when out of health resided at Tynemouth to be under the care of Dr. Greenhow, and it was there that she wrote her well-known work "Life in a Sick Room." Miss Martineau's intimate connexion with the Greenhows only ended with her life.

Newcastle-on-Tyne, Dec. 4th.

EDINBURGH.

(From our own Correspondent.)

THE ROYAL SOCIETY OF EDINBURGH.

THE first ordinary meeting of the 106th session of the Royal Society was held yesterday evening, when Sir Douglas MacLagan, vice-president, delivered the opening address from the chair. He congratulated the Society on its present prosperous condition, pointing out that its activity was manifest in many ways. On its roll there were 498 ordinary Fellows, 34 foreign honorary Fellows, and 18 British honorary Fellows; whilst financially its condition was most satisfactory. Speaking of new arrangements, he mentioned that the Proceedings and Transactions would in future be much more speedily issued, as small parts of the former and individual memoirs in the latter would be printed separately. He made reference to the activity in all branches of science represented in their Society; in the department of biological science this was specially noteworthy, the *Challenger* reports—perhaps the most valuable record of a scientific voyage ever published by any nation—afforded ample evidence of such activity. There was no reason, he said, to apprehend any scarcity of papers in the present session, such a state of affairs contrasting strongly with the earlier history of the Society, when at the regular meetings there was sometimes no other business than to read the minutes, admit Fellows, and receive donations. Dr. John Murray communicated a couple of papers, after which Professor Patrick Geddes gave a restatement of the theory of organic evolution, in which it was pointed out that the present view was that progress was determined and measured by the degree to which the merely competitive and self-preservative energies of the individual became subordinated to the species-maintaining ends. The development and relation of the sexes, the care of offspring, the development of co-operation and sociality—in a word, the survival of the truly fittest was shown to be everywhere clearly seen, from the lowest plants and animals, and increasingly upwards.

EDINBURGH HEALTH SOCIETY.

One of the best lectures of the course was given on Saturday evening by Dr. R. Milne Murray, who took for his

subject "Animal Heat in Relation to Health." It is seldom that such a complex subject is handled so thoroughly and so lucidly before a popular audience as was this by Dr. Murray. He explained and illustrated most fully the mechanism and nature of the production, radiation, and conduction of animal heat during health and in disease. He then laid down rules, based on physiological grounds, as to exercise, clothing, diet, and abutions, which could not but be most valuable to those who would carry them out in their entirety. These lectures are calculated to do an immense amount of good in a city like Edinburgh. So far they have all been founded on good common sense, and the highest science has been brought down to the level of the ordinary mind. Medicine and surgery have been avoided, but hygienic and public health topics have been freely discussed.

SECOND DIVISION, VOLUNTEER MEDICAL STAFF CORPS.

It would perhaps have been well to hold over any record of the doings of this corps to this week, as it now has to be noticed that their second annual dinner was held in the Windsor Hotel on Friday evening, when about seventy guests and members of the corps met. There were present Surgeon Cathcart (in the chair), and the officers of the 2nd division V.M.S.C.; Deputy Surgeon Irwin, the principal officer of the North British district; Surgeon Claburn, A.M.S.; Surgeon P. A. Young, M.C.A.V.; Surgeon Caverhill, E.L. and B.Y.C.; Lieut. Bannerman, Q.E.R.V.B.; Dr. Felkin, and others. During the evening, in the course of a very varied and extensive programme, Dr. Wilson gave some most amusing "lectures," and the Deputy-Surgeon General delighted his hosts with several most amusing stories; he also gave, amidst great enthusiasm, a sea song of his own composition; and Dr. Felkin related for the amusement and instruction of his medical hearers his experiences as Court Physician in the Sudan. We are glad to see that the energy of the corps can find an outlet in so many directions.

THROAT SURGERY.

A short time back Professor Annandale repeated his American operation for the removal of a retro-pharyngeal growth, and last week he removed one-half of the larynx in a case under the care of Dr. McBride. Both cases are progressing favourably, and it may be anticipated that ere long some account of the cases will be published.

Edinburgh, Dec. 4th.

BELFAST.

(From our own Correspondent.)

THE ROYAL HOSPITAL.

FROM the report submitted to the ninety-sixth annual meeting of the Belfast Royal Hospital, held on Nov. 19th, we learn that during the year ending August 31st, 1888, 2121 new cases were admitted to the wards; these, with 115 cases remaining in the wards from the previous year, make a total of 2236 in-patients treated during the year, and of these 942 were medical and 1294 were surgical. During the year 133 patients died; of these 13 were moribund on admission, and most of them died within twelve hours. Of the remaining 120 deaths, 69 were caused by medical and 51 by surgical diseases. There were 328 surgical operations performed, with a mortality of 12; this represents a death-rate after operation of 5.8 per cent. Chloroform was administered 240 times, ether 23, the A.C.E. mixture 2, methylene 15, and nitrous oxide 2. In the medical wards, excluding the moribund cases, the mortality was 7 per cent., and in the surgical wards 3.9 represents the death-rate; average mortality 5.45. In the out-door department 13,140 new cases have been treated, and of these 2852 were medical and 10,288 were surgical. The internal and external cases together number 15,376. Clinical instruction has been given in the wards to 137 students during the winter, and to 75 during the summer session. There were 93 in-patients in the Throne Children's Hospital, 34 in the consumption department, and 349 in the convalescent home. Financially, the total receipts for the year amounted to £9139 11s. 6d. and the expenditure to £9520 2s. 7d., leaving a balance due to the bank of £381 6s. 1d. Mr. R. W. Murray, who for the past seven years has acted as secretary, having resigned, a most cordial and unanimous

vote of thanks was passed to him for his very valued services to the charity. Mr. John Marsh has been appointed secretary in Mr. Murray's place. At a quarterly meeting of the life governors and board of management held on Nov. 26th Dr. J. A. Lindsay, who has for several years been assistant physician, was unanimously and cordially appointed attending physician. Dr. Lindsay is most popular as a teacher, and his promotion from the out-patient department to the wards will afford him increased opportunities for giving the students clinical instruction. Dr. Strafford Smith, a former house physician, has been appointed assistant physician.

ULSTER MEDICAL SOCIETY.

The first meeting of this Society during the present session was held on Nov. 7th, when the President, Dr. Henry Burden, delivered his opening address, the subject being "Bacteriology." The paper, which was an admirable *résumé* of our present knowledge of the relationship of bacteria to disease, was received with marked favour, and at its conclusion a hearty vote of thanks was passed to the President, on the motion of Professor Dill, seconded by Dr. Harkin, J.P. The annual dinner was held in Fisher's Restaurant on the evening of Nov. 21st. Dr. Burden presided, and there was a fair attendance of members. Through the kindness of Dr. Lindsay, Dr. MacKisack, and the Secretary of the Society (Dr. Macaw), an enjoyable programme of music was provided.

Belfast, Nov. 27th.

PARIS.

(From our own Correspondent.)

PHOSPHORUS NECROSIS.

DR. MAGITOT, who devotes himself specially to dentistry and affections of the mouth, read a note at the Academy of Medicine last week on the pathogeny and prophylaxy of phosphorus poisoning, and particularly of phosphoric necrosis, of which the following is a brief abstract:—Owing to the number of accidents that have occurred, many of which were fatal, among the workpeople engaged in the manufacture of lucifer matches, and the Prefect of Police having applied to the Council of Hygiene for its opinion and advice, Dr. Magitot was charged to report on the subject. The author reviewed the inquiries undertaken during the last forty years by divers physicians and hygienists, and cited the attempts that have been made to remove the dangers incurred by the working people in phosphorus manufactories, and particularly those of lucifer matches, but which have proved of no avail, as shown by the continuation of the accidents. In the second part of his report, Dr. Magitot studied the pathogeny of these affections, such as intoxication, action on the respiratory passages, and particularly the necrosis which mutilates or kills the workmen. According to a large number of observations in France and elsewhere, the author believes himself justified in regarding as inseparable from the production of necrosis the penetration of the irritating vapours of phosphorus through dental caries, of a kind which he designates under the significant name of "penetrating caries." It is an exclusive pathogeny, which Dr. Magitot claims to prove the value of by the facts which he had collected, and which is in contradiction with the ancient theories which he refutes—viz., that of the Germans, or the theory of the elective action of phosphorus on the bones (Lorinser), and that of the gingival and periosteal medium defended by MM. Trélat, Lailler, &c. The following prophylactic measures are proposed by Dr. Magitot in view of preventing the accidents attending the manufacture of phosphoric substances. These are the perfecting of the means of ventilation, the isolation of the different departments of the manufacture, and the suppression or the neutralisation of the phosphoric atmosphere of the workshops. For the individual hygiene of the workmen the following rules should be observed. The interdiction of the entrance to the manufactory of all individuals whose health or constitution is defective, and particularly if they are suspected of being threatened with necrosis, as may be judged by the state of the mouth, and the immediate dismissal of all persons bearing predisposing lesions. Under these conditions M. Magitot affirms that, in anticipation of the realisation of the wish, so often and so fruitlessly

expressed, for the substitution of red phosphorus for white, we may certainly and radically realise the suppression of all danger for the workmen, and, in particular, that of phosphoric necrosis.

THE MILK TEETH.

It is not an uncommon idea, even among members of the profession, that the milk teeth do not require any particular attention. Dr. Goldenstein, a well-known dentist, is, however, not of this opinion, and in a paper communicated by him to the Société Française d'Hygiène, he states that, "whatever the age of children, as soon as a milk tooth becomes carious, it is more important to attend to it than a permanent tooth." The author concludes with two practical corollaries: 1. The milk teeth should not be extracted too early. 2. They should be attended to and preserved until their physiological expulsion.

SACCHARIN.

At a recent meeting of the Société de Thérapie, Dr. Constantin Paul recalled the antiseptic properties of saccharin, particularly as regards the antiseptics of the mouth. At his request, Dr. Trousean, oculist to the Quinze-Vingts Asylum, experimented with this substance, with the view to ascertain its action in ophthalmic surgery. It appears from the experiments of the author that saccharin in a solution of 1 in 500 and 1 in 250 is an antiseptic as active as boric acid. These solutions are, moreover, well tolerated, and absolutely innocuous to the conjunctiva of the cornea.

THE DEPOPULATION OF FRANCE.

The authorities of France are becoming justly alarmed at the gradual and persistent depopulation of their country. According to a report of the last census in 1886, drawn up by Dr. Chervin for the Academy of Medicine, it appears that, of 100 French families, 20 have no children, 24 have one child, 22 have two children, 15 have three, 9 have four, 5 have five, 3 have six, and 2 have seven and more. The number of families without children has augmented to 3 per cent. within the last thirty years.

Paris, Dec. 4th.

Obituary.

DENIS CHARLES O'CONNOR, A.B., M.B., T.C.D.

THIS member of the profession, well known in the south of Ireland and highly esteemed, died last week in Cork, in his eightieth year. Dr. O'Connor was a native of Bandon, and was educated at Trinity College, Dublin, where he obtained his degree in medicine in 1834. On leaving Dublin he proceeded to Paris, where he remained for some time, and finally commenced practice in Cork in 1838. For many years he was attached as medical officer of the Cork Union, to the Mercy Hospital, and other charitable institutions. On the opening of the Queen's College in Cork he was appointed Professor of the Practice of Medicine, the duties of which post he conscientiously and faithfully discharged to the last. He was an M.D. (*hon. causâ*) of the Queen's University in Ireland, LL.D. of Cambridge (1880), and a past president of the British Medical Association and the Cork Medical, Surgical, and Pathological Association. Dr. O'Connor's contributions to medical literature included papers published in THE LANCET, Dublin Quarterly Journal, &c.

At a meeting of the Cork Medical and Surgical Society, on Nov. 28th, Professor Corby, president, in the chair, it was proposed by Dr. W. J. Cummins, seconded by Dr. Donovan, and carried unanimously, "That we, fully sensible of our own loss in the death of our veteran member and sometime president, the late Professor O'Connor, sincerely sympathise with his afflicted family, and request our hon. secretary to write and express to them our feelings of deep regret and condolence."

WILLIAM OLIVER CHALK, M.R.C.S., L.S.A.

WE regret to record the death on the 21st ult. of one of the oldest members of our profession, Mr. W. O. Chalk, of Norwood-green, Southall, and Nottingham-terrace, Marylebone, which latter house he had tenanted for upwards of fifty years. Mr. Chalk received his medical education at the famous Great Windmill-street school and at the Middlesex

Hospital, where he was a pupil of Sir Charles Bell. He became a Licentiate of the Society of Apothecaries in 1826, and a Member of the Royal College of Surgeons in 1827. Shortly after becoming qualified he was appointed surgeon to the Royal Sea-bathing Infirmary at Margate, and retained his connexion with that institution for about twenty years. He soon gained for himself a considerable reputation in the care and treatment of tubercular and strumous affections, cases of which were largely sent to Margate from the London hospitals. He was, moreover, one of the first to recognise the value of cod-liver oil, and wrote a paper on its effects on strumous and other diseases in 1833, which appeared in the *Medical Gazette*—i.e., eight years before the publication of Dr. Hughes Bennett's monograph in which he advocated the employment of cod-liver oil in phthisis in this country, having noted its utility in German hospitals (*vide Reynolds' System of Medicine*, vol. iii., p. 574). To the same journal in 1841 he contributed an article on Hip Disease and Lumbar Abscess. At a period when histology was but little studied Mr. Chalk devoted much time to the subject, and ventured even to criticise adversely the conclusions arrived at by Professor Kölliker upon the structure of the spleen. His paper on this subject was published in 1852 (*Medical Times*), with numerous microscopical drawings. He joined the Pathological Society in 1848, two years after its foundation, and some of his contributions are to be found in the earlier volumes of its Transactions. He also communicated to the Odontological Society papers on diseases of the jaws. At one time he had considerable practice in diseases of the eye, and held the office of surgeon to the St. Marylebone Eye Institute. He was enthusiastically devoted to his profession, and gained the confidence of his numerous patients, whom he continued to see till within ten days of his death. Indeed, it was not until about twelve months ago that Mr. Chalk showed any signs of failing health, but, at an advanced age, was more active and vigorous, both mentally and physically, than many men who were twenty years his junior. He will be missed by many to whom his never-failing kindness and generosity were continually being shown. In the course of his long life he was enabled to continue to children and to children's children the interest he had taken in their parents many years before. Especially will his loss be felt by the poor in the neighbourhood of Southall, where he had resided for upwards of twenty years, gaining the respect and affection of all. By his death, at the age of eighty-six, one more link with the past is severed, but it is surely rare to meet with one who retained to so advanced an age the ardour and zeal for medicine which he invariably displayed. Thus, quite lately, he was engaged in preparing a paper upon whooping-cough, and the relation of ulceration of the orifice of Wharton's duct to the affection. In him the profession has lost an upright, honest, and faithful member; one who, always genial and kindly, was singularly unassuming and devoid of self-seeking. He was content to pursue the even tenour of his way in doing good to others, oftentimes without any reward but the gratitude of those whom he benefited. In this his life will serve as a bright example to those who come after him.

WILLIAM REID, M.D.

BY cablegram of Nov. 24th was announced the death, at Sanchez, San Domingo, West Indies, of William Reid, M.D. Aberd. After graduating M.B., C.M. in 1879, Dr. Reid held for two years the post of resident medical officer to the Jersey General Dispensary. He then, after an interval of six months spent in study at the London Hospital, was appointed resident medical officer to the Kensington Dispensary. In the discharge of the duties of this office he displayed such energy along with kindness to the poor as won for him the regard and esteem of all with whom he was brought in contact. Unfortunately the strain of constant toil amongst surroundings often far from sanitary broke down his health, and the contraction of phthisis compelled him to give up active work in London. After a winter in South Africa, he went to the West Indies in 1885 as surgeon to the Sanchez and Santiago Railway Company in the island of San Domingo. Here he continued to labour to the end with indomitable courage, counting it his greatest happiness to labour in his profession whilst strength remained. In addition to his professional duties, Dr. Reid did valuable scientific work in recording the climatic and meteorological conditions of the island of San Domingo.

HENRY DALTON, M.D., C.M. EDIN.

WE regret to have to announce the death of Dr. Henry Dalton of Harrogate. His father was a medical man with a large practice in Georgetown, Demerara, British Guiana. After taking his degree the subject of the present notice entered the British Guiana medical service. He was for many years in charge of one of the chief districts in the colony; but about three years ago his health broke down, and he was compelled to retire from the service, receiving a pension. On his return to England, Dr. Dalton settled in Harrogate, where he was gradually acquiring a considerable private practice. His death, at the age of forty-three, occurred on Nov. 26th, 1888, and was absolutely sudden. He had just returned home from seeing a patient, and had gone into his dispensary with his son, when he fell, and in a few seconds was dead.

Medical News.

AN INFECTIOUS DISEASES HOSPITAL FOR SUTTON.—

The local board has decided to erect an infectious diseases hospital, to contain six wards, two beds in each. The cost is estimated at £50 a bed.

HYDROPHOBIA FROM THE BITE OF A CAT.—A

labouring man died in Dunleer last week from hydrophobia. About six weeks since a cat bit him on the hand, and after two days' illness he succumbed to the disease.

ON Oct. 17th, the resident medical officers of the Sydney Hospital entertained at dinner their late colleague, Dr. Gwynne Hughes, who had recently resigned his position as medical officer of the institution, preparatory to entering into private practice.

TYPHOID FEVER IN YORKSHIRE.—A serious outbreak of typhoid fever is reported to have occurred in the township of Idle, near Bradford, Yorkshire. As the water supply has been suspected as a cause, the public wells have been closed, and other precautionary measures taken.

STRACHAN MEDICAL BURSARY, ABERDEEN.—The

Strachan Medical Bursary, the gift of the late Mr. William Strachan of Moreseat, and which is under the control of the Aberdeen Medico-Chirurgical Society, has been divided between Mr. Daniel M. Smith and Mr. Alex. G. Johnston, of Aberdeen, these gentlemen having been found equal in merit after a written and oral examination.

EDINBURGH MEDICAL MISSIONARY SOCIETY.—

Professor A. R. Simpson, M.D., presided at the annual meeting held at the Royal Hotel, Edinburgh, last week. The accounts showed an income of £4701 16s. 9d., and an expenditure of £5127 17s. 5d. 9536 patients had been treated at the Livingstone Memorial Training Institution and Dispensary.

VACCINATION GRANTS.—The following gentlemen

have received the Government grant for efficient vaccination in their respective districts:—Mr. R. Harding, of the Radnor district of the Kington Union (third time).—Mr. Nathaniel E. Davies, L.R.C.P.L. &c. (seventh time).—Mr. J. M. Braund, public vaccinator for the north district of the Stratton Union, Cornwall (fourth time).

SAMARITAN FUND, MIDDLESEX HOSPITAL.—A

performance of Balfe's opera of "The Bohemian Girl," under the direction of Mr. A. Carli, is announced to take place on Thursday next, the 13th inst., at the Royal Avenue Theatre. The performance, which begins at 2 P.M., is in aid of the Samaritan Fund of the Middlesex Hospital, and several well-known artistes have offered their services.

GUEST HOSPITAL, DUDLEY.—From the report

presented to the annual meeting of the subscribers, held at Dudley on the 27th ult., it appears that the committee had been enabled to discharge a debit balance of £341 13s. The income of the year amounted to £3277 7s. 10d. The medical report stated that 674 patients had been under treatment, and twenty-six cases were sent to the convalescent homes of Blackpool and Rhyl by the aid of the Cochrane Memorial Fund. It was resolved, on the motion of Dr. Messiter, to erect a detached building—a pressing need—for infectious diseases. The sum of £200 has been assigned for this object, and about £600 is required.

ROYAL INSTITUTION OF GREAT BRITAIN.—At the general monthly meeting held on December 3rd, the special thanks of the members were returned for the following donation to the fund for the promotion of experimental research:—Mrs. R. J. Mann (for the late Dr. R. J. Mann, M.R.I.), £20; Mrs. Bloomfield Moore, £50; Warren de la Rue, Esq., £100. Dr. B. W. Richardson, F.R.S., was elected a member of the institution.

CARMICHAEL COLLEGE MEDICAL SCIENCE ASSOCIATION.—The first meeting for the fourth session of this Association was held last week. The president (Mr. Henston) gave an inaugural address on Recent Advances in Abdominal Surgery. A resolution was adopted, to the effect that the Association was worthy of the support not only of the students of the Carmichael College but of all medical students in Dublin. After some medals had been awarded the proceedings terminated.

BRISTOL GENERAL HOSPITAL.—The committee of this hospital a few days since passed a resolution placing on record their high appreciation of the admirable conduct of the staff on the recent explosion and fire at Bathurst basin, and especially of the readiness of resource displayed by the house surgeon, while the example of courage set by the matron and discipline of the nurses deserved all praise. The committee, moreover, recorded their thanks to the many neighbours and friends of the hospital who rendered valuable services in the emergency.

REQUESTS AND DONATIONS TO HOSPITALS.—Mrs. Thomas Randall, of Grandpont House, Oxford, has sent a donation of £100 to the funds of the Radcliffe Infirmary. The Hospital Sunday collection at Reading this year amounted to £230, against £259 last year. The Hospital Saturday collection at Wolverhampton on Saturday last, realised £1546, in aid of the South Staffordshire Hospital, and a further sum of about £700 for the Wolverhampton Eye Infirmary. The workmen's contributions from some of the large works will be forthcoming at the close of the year.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A meeting of members and visitors was held on Friday, the 30th ult., in the rooms of the Medical Society of London. The President, Dr. Richardson, made some observations on the influence of alcohol on the different races in this country, chiefly Saxons, Celts, and Jews, after which Dr. C. R. Drysdale, as chairman of a committee consisting of himself, Surgeon-Major Pringle, and Mr. H. A. W. Coryn, presented a report on Alcoholism and the Consumption of Alcohol in France from the report to the Senate. The report is to be published and a memorial presented to the Home Secretary, asking for a similar report on the same subject as it exists in this country.

THE ROYAL SOCIETY.—The anniversary meeting of this Society was held on the 30th ult., when the address was delivered by the President, Professor George Gabriel Stokes. The Copley medal was presented to Professor Thomas Henry Huxley for his investigations on the morphology and histology of vertebrate and invertebrate animals; and the Davy medal to Mr. William Crookes, for his investigations on the behaviour of substances under the influence of the electric discharge in a high vacuum. The following, amongst others, were elected office bearers for the ensuing year:—Council: Sir James Paget, Sir Henry Roscoe, and Messrs. J. Whitaker Hulke and E. E. Klein. Professor Michael Foster and Lord Rayleigh were elected secretaries.

HEREFORD GENERAL INFIRMARY. — OPENING OF THE VICTORIA JUBILEE CHILDREN'S WARD AND NURSES' WING.—The above wing was opened by Lady Elizabeth Biddulph on Nov. 29th, 1888, in commemoration of the Queen's jubilee. The building consists of two storeys. The ward is on the ground floor, being 72 ft. long, 27 ft. wide, and 13 ft. 6 in. high, is lighted with lofty windows, seven on each side, and contains sixteen cots, with nurses' sitting-room, lavatories, and bath-room adjoining. On the upper floor are six cubicals, four larger rooms, bath-rooms, lavatories for nurses, and an isolation ward of four cots. Children up to twelve or thirteen years of age will be admitted. The twenty cots were presented by as many donors, at the cost of £5 each. The expenditure on the whole building was £2880, the work being carried out by Mr. Collins, builder, Tewkesbury, under the direction of Mr. Rempson, F.R.I.B.A., Hereford. The number of beds in the infirmary is now increased to 103.

PRESENTATION.—Mr. T. Vincent Jackson, who has been Secretary to the Staffordshire Branch of the British Medical Association for upwards of fourteen years, was last week presented by the ex-president (Mr. W. D. Spanton), Mr. J. Vose Solomon, and Dr. E. T. Tylecote, Dr. Balders, the president (occupying the chair), with a massive silver punch bowl and wine cooler, and a beautifully illuminated address.

SUICIDAL MONOMANIA.—A widow, named Alice Ward, aged thirty-five, was charged, at the South Dublin Police-court last week, with having attempted to commit suicide by taking laudanum. The prisoner was found in an insensible condition lying in the street, with a bottle containing poison in her possession. She has been arrested about a dozen times for a similar offence, and since June last has been convicted thrice for taking poison for the purpose of committing suicide. While in hospital recently she tried to strangle herself, and the magistrate has sent the case for trial to the Commission.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Mr. W. Ballantine, M.P., presided at the forty-seventh annual meeting of this hospital held last week. The report, which was read by the secretary, stated that the number of in-patients had been the largest on record, and the out-patients showed a very considerable increase. The committee had decided to extend the hospital, in order to meet the growing wants of the city and neighbourhood and the increasing demand for the accommodation of in-patients. The statement of accounts showed an adverse balance of £120 8s. 2d. The medical report stated that the percentage of cured was 74.5, and the percentage of deaths 5.8.

CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.—The directors of this Society are able to render a highly satisfactory account of the business of the sixty-fourth year of the company's existence. The business of the company has grown, the assurance fund has received an accession of about £90,000, and the progress registered has been of such a character as to promise a continuance of prosperity in the future, having been of the steady and unexceptional order. Among the noteworthy features of the year's experience is a reduction of nearly £40,000 in the amount paid away for claims, as compared with the preceding twelve months. Altogether there is much ground for the congratulation of this old and flourishing institution on the vigour which characterises the seventh decade of its business career.

UNIVERSITY OF OXFORD.—The Rolleston Memorial Prize, of the value of £60, will be awarded at Oxford in the Hilary term, 1890. The prize is open to such members of the Universities of Oxford or Cambridge as will not have exceeded ten years from the date of their matriculation on March 31st, 1890, and is to be awarded for original research in any subject comprised under the following heads:—Animal and vegetable morphology, physiology and pathology, and anthropology, to be selected by the candidates themselves. Candidates wishing to compete are requested to forward their memoirs to the Registrar of the University of Oxford before March 31st, 1890. The memoirs should be inscribed "Rolleston Memorial Essay," and should each bear the name and address of the author. They may be printed or in manuscript, memoirs already published being admitted to the competition.

MEDICAL NOTES IN PARLIAMENT.

Public Health Act Amendment (Buildings in Streets) Bill.

In the House of Lords, on the 4th inst., this Bill passed through Committee.

Supply.—Votes on Pauper Lunatics and London University.

On the 30th ult., the House of Commons being in Committee of Supply on the Civil Service Estimates, on the vote of £468,000 to complete the sum required in aid of pauper lunatics in England and Wales, Dr. Farquharson complained of the association of idiots with lunatics in the asylums.—Mr. Molloy, speaking of the cases in which death had been caused by ill-treatment of pauper lunatics, no wardens having been brought to punishment, asked whether the Home Secretary could not do something by way of inquiry to cause the removal of the more inhumane of the wardens.—Mr. Matthews said the matter was one of great importance, but the Home Office could not do anything directly in regard to it. The Lord Chancellor represented this House on the Lunacy Commission, and he should be glad to draw the Lord Chancellor's attention to any case of ill-usage which might be brought to his knowledge.—Sir W. Foster remarked that while no doubt there were some cases in which these unfortunate lunatics were treated with hardship, it would be a mistake to suppose that the cases of rough treatment such as had

been referred to were of frequent occurrence in these asylums. He thought, however, that there were far too many of these lunatics aggregated together in one institution, and that a great service would be rendered to humanity if something in the nature of the Belgian system could be introduced into this country. The vote was then passed.

On the vote of £7000 to complete the sum for expenses of Universities and Colleges of England and Wales, the Chancellor of the Exchequer, in answer to Mr. Mundella, Sir J. Lubbock, and Mr. Powell, said there was a scheme prepared of grants to colleges, and he should be glad of the assistance of gentlemen in and out of the House who were interested in the matter to make the scheme as perfect as possible.

The vote of £1000 to complete the sum required for the expenses of the deep-sea exploring expedition was agreed to.

The Food and Drugs Act.

On the 1st inst., in answer to Mr. Gosham, Mr. Ritchie said that he was informed by the Board of Inland Revenue that Dr. Bell, the Principal of the Laboratory at Somerset House, is not aware that the conclusions of the local official analysts in respect of samples of lard upon which legal proceedings were taken had in any instance been contradicted by the results obtained in his department, with the exception of one instance of an alleged adulteration with water. The Government clearly have no authority to give instructions for all samples of lard to be analysed at Somerset House before any proceedings before the magistrate are instituted.

Medical Practitioners in Switzerland.

The House being in Committee of Supply, Mr. Tapling called attention to the arbitrary action taken by the Swiss authorities in regard to English medical men, with a view to prevent them practising their profession in Switzerland. Taking advantage of a law which, up to the present time, had been in abeyance, the authorities had threatened these gentlemen with expulsion, and subjected them to fines and other penalties. A great hardship was thereby inflicted on English visitors and residents who desired to have the attendance of an English medical practitioner. Dr. Farquharson supported the complaint of the hon. member, and reminded the Committee that in this country foreign doctors were freely admitted to practise. Sir J. Fergusson admitted that the subject to which attention had been drawn involved a substantial hardship; and Her Majesty's Government had for some time been endeavouring to get the prohibition removed by tendering reciprocal advantages to medical men holding foreign diplomas to practise in the United Kingdom. The Swiss Government had not been very willing to enter into these arrangements, but he did not think that unwillingness arose from any unfriendliness to this country, but from their apprehension that if the door was opened Switzerland would be so invaded by medical men from Germany and France that their own profession would be seriously injured. A special arrangement had been made with some of the cantons, and the Foreign Office was awaiting a reply from the Swiss Government to its last communication on the subject. Her Majesty's Government had omitted no endeavour to get the hardship removed.

The Mandeville Case.

On the 4th inst., the House being in Committee of Supply on the Irish Estimates, upon the vote of £12,707 for the offices of the Chief Secretary for Ireland, Mr. W. O'Brien detailed the prison treatment to which Mr. Mandeville was subjected in Tullamore Gaol, and protested against it. Mr. A. J. Balfour said that it was absolutely false to allege that he had made the slightest insinuation against the private character of Mr. Mandeville, either as regarded habits of intoxication or anything else. The statement that Mr. Mandeville was denied hospital treatment was a fiction. Mr. T. P. O'Connor denied that any injurious accusations had been made against Dr. Ridley, and his death undoubtedly lay at the door of the Chief Secretary. The vote was ultimately agreed to.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

CAMERON, JAMES, M.D., M.B. and C.M. Aberd., has been reappointed Medical Officer of Health of Hendon.
CHADWICK, CHARLES M., M.A., M.D. Oxon., M.R.C.P. Lond., has been appointed Joint Lecturer on Forensic Medicine to the Yorkshire College, Victoria University.
CROCKER, J. HEDLEY, L.R.C.P. Lond., M.R.C.S., L.S.A. Lond., has been appointed Honorary Surgeon to the Eccles and Patricroft Hospital.
FISHER, F. C., F.R.C.S. Eng., L.S.A., has been appointed Medical Officer of the Serratt District, Watford Union.
GUTHRIE, LEONARD GEORGE, M.A., M.B., B.S. Oxon., M.R.C.S., L.S.A. Lond., has been appointed Pathologist, Chloroformist, and Registrar to the Paddington-green Children's Hospital, W.
HUMPHREYS, HERBERT, M.R.C.S., L.R.C.P., has been appointed Resident Medical Superintendent of the Borough of Bradford Fever Hospital.
JOHNSON, P. P., M.B. and C.M. Edin., has been appointed Medical Officer of the Kettlewell District, Skipton Union.
LEGATE, R. L., L.R.C.P., L.R.C.S. Edin., L.A.H. Dub., has been appointed Medical Officer of the Second District and the Workhouse, Christchurch Union.
LUNLEY, CHARLES A., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Kent and Canterbury Hospital, Canterbury, vice F. K. Holman, M.R.C.S., resigned.
PAGE, T. M.B. Lond., M.R.C.S., has been appointed House Surgeon to the Royal Hants County Hospital, Winchester, vice W. H. Smart, resigned.
PALMER, W. G., L.R.C.P. Edin., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health of Loughborough.
STEPHENS, RICHARD J., M.R.C.S., L.S.A., has been appointed Assistant House Surgeon to the Blackburn and East Lancashire Infirmary.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. Assistant Physician.
MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Senior Resident Medical Officer. Salary £60 per annum, with apartments, board, and washing. Also, Junior Resident Medical Officer. Salary £30 per annum, with like accommodation.
PORTSMOUTH LUNATIC ASYLUM, Milton, near Portsmouth.—Assistant Medical Officer. Salary £120 per annum, with furnished apartments, board, fuel, lighting, and washing.
QUEEN'S COLLEGES, IRELAND.—Professorship of Medicine in Queen's College, Cork.
STAMFORD HILL, STOKE NEWINGTON, &c., DISPENSARY.—Resident Medical Officer. Salary £105 per annum, with an allowance of £50 for fuel and light.
STOCKPORT INFIRMARY.—Assistant Medical Officer, to visit patients at their homes and assist the House Surgeon. Salary £70, with board and lodging.
TOWNSHIP OF TOXTETH-PARK, Liverpool.—Assistant Medical Officer of the Workhouse and Infirmary. Salary £100 per annum, with rations of a first-class officer and separate apartments.
UNIVERSITY OF EDINBURGH.—Additional Examiner in Medical Jurisprudence. Salary £75 a year, with an allowance of £10 a year for travelling and other expenses in the case of an examiner not resident in Edinburgh or the immediate neighbourhood.
WEST LONDON HOSPITAL, Hammersmith.—House Physician and House Surgeon. Board and lodging provided.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

BASS.—On the 27th ult., at Langsett, Cranbrook-road, Ilford, the wife of Chas. Wm. Bass, M.R.C.S., of a son.
LEE-STRAITHY.—On the 26th ult., at Harborne, Birmingham, the wife of Fred. R. Lee-Strathy, M.D., of a daughter.
MACDONALD.—On the 1st inst., at the County Asylum, Dorchester, the wife of P. Wm. MacDonald, M.D., Medical Superintendent, of a son.
RAW.—On the 27th ult., at Rutland House, Oakfield-road, Anerley, the wife of William K. St. M. Raw, L.R.C.P. Lond., M.R.C.S., L.S.A., of a son (William Douglas Levin).
WATSON.—On the 5th inst., at Wood-green, N., the wife of Solomon George Watson, M.R.C.S., of a son.
WILCOX.—On the 30th ult., at 79, Herbert-road, Woolwich, the wife of Henry Wilcox, M.B., M.R.U.S., of a son.

MARRIAGES.

BINNIE-SHEPHERD.—On the 28th ult., at St. Margaret's, Margaret Roding, Danmow, Essex, Robert Muir Gilchrist Binnie, M.D., of Meadowfield House, Brandon, Durham, to Katharine Lane, eldest daughter of the Rev. F. B. Shepherd.
CLARKE-TEW.—On the 27th ult., at the Parish Church, Sutton, Surrey, George Cuthbert Clarke, L.R.C.P., &c., King's Heath, Birmingham, to Annie Edith Caroline, third daughter of the late Rev. Edmund Tew, Rector of Patching, Sussex.
JOHNSTON-POOLEY.—On the 28th ult., at the Wesleyan Chapel, Seacombe, Francis Johnston, M.B., of Birkenhead, eldest son of the late William D. Johnston, Glasgow, to Mary Sibthorpe, elder daughter of Henry Pooley, of Liscard, Cheshire.

DEATHS.

AIREY.—On the 27th ult., Joseph Airey, M.R.C.S., L.S.A., of Elgin-crescent, Kensington-park, London, W. (at Hastings, Sussex), in his 86th year.
BARFORD.—On the 5th inst., at Cambridge, through over exertion while boating, Charles Herbert Barford, undergraduate, son of J. G. Barford, surgeon, Wokingham, Berks, aged 18.
CHAPMAN.—On the 26th ult., John Chapman, F.R.C.S., L.S.A., of Clifton-road, Camden-square, aged 76.
DALTON.—On the 27th ult., suddenly, at Mayfield Grove, Harrogate, Henry Dalton, M.D. Edin.
GUTHRIE.—On the 28th ult., at the residence of his Honour Judge Greenhow, The Cottage, Esher, James Guthrie, M.D., Ashley Lodge, Esher, Surrey.
LYLE.—On the 1st inst., at Westbourne-square, W., William Vacy Lyle, M.D., aged 50.
STEWART.—On the 5th inst., at St. George's-terrace, Regent's-park, Ludovick Charles Stewart, Surgeon-General, aged 69.
TAYLOR.—On the 22nd ult., at Dublin, Alexander Taylor, M.D., of Prospect, co. Dublin, eldest surviving son of the late George Taylor, of Lissonefield, co. Dublin.
WRIGHT.—On the 29th ult., Francis James Wright, M.D., of Northumberland House, Finsbury-park, N., in his 41st year.

N.B.—A fee of 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, December 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Opera 'ons, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
 SOCIETY OF ARTS.—3 P.M. Capt. W. de W. Abney: Light and Colour. (Cantor Lecture.)
 MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. B. W. Richardson: The Absolute Proofs of Death.—Mr. Herbert Allingham: An Important Supplement to the Operation of Inguinal Colotomy.

Tuesday, December 11.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.
 Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.
 ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. Arthur E. Barker and Mr. Bilton Pollard: On Primary Union after Excision of Tubercular Hip-joints.

Wednesday, December 12.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
 EPIDEMIOLOGICAL SOCIETY OF LONDON.—3 P.M. Mr. C. H. Cooper: Scarlatina in its Relation to Cow's Milk, at Wimbledon and Merton. Mr. Shirley F. Murphy: The Sanitary Administration of Dairy Farms.
 HUNTERIAN SOCIETY.—3 P.M. Pathological Evening. Dr. Mackenzie and Dr. Davies: Report on Dr. Gilbert's specimen.—The President: Tumour of the Superior Maxilla.—Mr. Openshaw: Demonstration of some Anatomical Features distinctive of Right and Left Kidneys.—Dr. Carpenter: (1) Umbilical Polypus from an Infant; (2) Malformation of Heart.—Dr. Turner: (1) Endocarditis; (2) Malformed Fetus. And Specimens by Dr. Pitt and others.
 ROYAL MICROSCOPICAL SOCIETY.—3 P.M. Mr. J. Ratray: Revision of the Genus *Auliscus* (Ehrh.).—Dr. F. H. Bowman: Notes on the Frustate of *Surella Gemma*.
 SOCIETY OF ARTS.—3 P.M. Mr. W. H. Deering: Explosives.
 BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens and notes of cases by Dr. Edie, Dr. Granville Bantock, Dr. Bedford Fenwick, Mr. Lawson Tait, Mr. Reeves, and others.

Thursday, December 13.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
 HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. Cheadle: The various Manifestations of the Rheumatic State as exemplified in Childhood and Early Life.
 OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Dr. Rockliffe: (1) Case of Proptosis; (2) Two cases of Tumour of the Eyeball, with Microscopical Sections.—Mr. G. Hartridge: A case of Choroiditis.—Dr. Bronner: A rare case of Pulsating Exophthalmos.—Dr. Rockliffe: On Suppurating Hydatid of the Orbit.—Mr. R. W. Doyne: (1) Notes on a peculiar form of Degeneration of the Lens; (2) Notes on a case of Recurrent Transient Blindness.

Friday, December 14.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
 CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Arkle and Dr. Bradford: Case of Aortic Aneurysm rupturing into Descending Vena Cava.—Dr. Thomas Oliver: On a Cause of Speedy Death in Heart Disease, with case.—Mr. J. Hutchinson: A Summer Eruption recurring with great severity for many years, but finally getting well.—Dr. Biss: Case of Circumscribed Scleroderma. Living Specimens.—Dr. Larder: (1) Lepra Anæsthetica; (2) Lepra Tuberculosa; (3) Spondylitis Deformans; (4) Detergent Cyst of Lower Jaw in a Boy.

Saturday, December 15.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, December 6th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. in Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 A.M.
Nov. 30	29.24	S.E.	47	46	..	47	45	..	Raining
Dec. 1	29.27	S.W.	41	40	59	51	40	..	Overcast
" 2	29.39	S.W.	51	49	77	55	45	..	Cloudy
" 3	30.01	S.W.	51	50	73	54	49	..	Overcast
" 4	30.03	S.W.	54	53	67	57	51	..	Overcast
" 5	30.17	S.W.	55	53	68	59	52	..	Overcast
" 6	30.23	S.W.	53	52	..	56	52	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

ETCHINGS.

ETCHING being a branch of art cultivated to some, perhaps a considerable, extent by the medical profession, either as a pastime or as ancillary to practice, we may direct attention to the exhibition of Mr. Dunthorne, who has now on view in Vigo-street impressions of the five large etchings recently executed by Mr. R. W. Macbeth, A.R.A., at Madrid. Three of these are from the great works of Velasquez—the Surrender of Breda, the Tapestry Weavers, and the portrait of a sculptor, known as Alonso Cano. Mr. Macbeth has devoted much of his talent to reproductive etching, but never has he addressed himself to greater subjects. Probably he has never done better work, and to these five plates he may safely trust his reputation. For those who are unable or unwilling to visit Madrid, the etcher has provided an adequate interpretation of some of the treasures of one of the richest galleries of Europe.

Dr. C. S. Watson.—It would be necessary to act very cautiously, and would be better, we think, to take legal advice.

CATHETERISATION AND DIAGNOSIS BY CHEMISTS.

To the Editors of THE LANCET.

SIRS,—May I ask you to insert the following in your valuable journal, as I think it is high time such practices were put a stop to?

Some of the chemists about here are not content with prescribing for patients, but actually perform or rather attempt to perform small operations in their back parlours. The other day I saw a patient, sixty years of age, who had not micturated for forty-eight hours. His bladder was distended, reaching up to the umbilicus, and he was in great agony. One of the local chemists had seen him, and after making him stand with his back to the wall, had attempted to pass a very small-sized catheter. After causing him much pain and failing to pass the instrument, he sent the man home unrelieved, with a bottle of medicine. The patient was immediately relieved on passing a full-sized instrument, his retention being due to prostatic trouble.

A short time ago I was called to see a little boy, ten years of age, whom the chemist close by had been attending for a fortnight for biliousness. On my arrival I found the boy with an axillary temperature of 105° and his left chest full of fluid, his heart being greatly displaced, and there being much dyspnoea and faintness. Two days afterwards, I drew off more than three pints of fluid with the aspirator.

These are only two cases of many that I know of, and of course a great deal goes on of which we know nothing. I shall feel very much obliged if you will tell me what steps can be taken in the matter. Is there no society for our protection that would take the matter up? If not, I must say I do not see what use it is for a man to be qualified and registered. The profession is sufficiently overcrowded and competition quite great enough without the chemists adding to the trouble.

I am, Sirs, yours truly,

November 17th, 1888.

ENQUIRER.

MEDICAL PRACTICE IN CANADA.

A CORRESPONDENT asks for information as to the chances of success for a medical practitioner in Canada or any other British colony.

Enquirer.—A holder of the L.R.C.P. and M.R.C.S. qualifications certainly has no legal right to call himself doctor, or to place "Dr." before his name. Such a practice is objectionable, inasmuch as it implies the possession of the M.D. degree by one who has not gained it.

X. Y.—1. We have not the copy in question.—2. A notice of the book will appear shortly.

"THE PUFF OBLIQUE."

To the Editors of THE LANCET.

SIRS,—In your last issue you insert an anonymous letter with the above heading. As a matter of fact, the paragraph was not an advertisement, but an editorial notice of an item of local news. I emphatically deny that the medical gentlemen referred to had any hand in its production or insertion, or any knowledge of it whatever prior to its publication. Nor did the notice emanate from the secretary of the society. The letter is couched in such offensive terms that it carries animus and malignity on its very face. "A. B." intended it to injure, and I am surprised that you, Sirs, circulated what is manifestly a libel on two professional men, calculated as it is to inflict damage on their character and to prejudice their professional status, without making some inquiry into its bare probability. A further injustice is perpetrated in placing a finger-post whereby the surgeons can be identified, whilst their accuser remains concealed behind a couple of alphabetical letters. I ask you to disclose the name and residence of your correspondent, and to make what reparation you deem necessary.—Your obedient servant,
High Barnet, Dec. 5th, 1888. THOMAS THYNE.

To the Editors of THE LANCET.

SIRS,—In regard to the letter of your last week's correspondent, "A. B.," and the excerpt from the *Barnet Press*, I beg to state that I had no knowledge in any way of the matter.

I am, Sirs, your obedient servant,

New Barnet, Dec. 5th, 1888. W. H. ELAM.

To the Editors of THE LANCET.

SIRS,—In the letter which you published last week from "A. B.," a most unfair attack is made on the reputations of two medical men of this neighbourhood, and as I seem to have been the innocent cause of his umbrage, perhaps you will allow me a word or two on the subject. "A. B." strives to show that because Drs. — and — have not publicly objected to a paragraph of news which I inserted in my paper, and for which paragraph no one but myself is in any way responsible, they have failed to recognise the claims of professional dignity. Now, Sirs, it is as ridiculous for "A. B." to suppose that the medical men of this district can dictate to the local newspaper as it is to imagine that the animus of his letter will escape notice. If breach of medical etiquette is the thing looked for, it may surely be found in "A. B.'s" unjustifiable insinuation against his fellow-practitioners, rather than in my item of news, which he has no right to refer to as an unprofessional method of advertising "skilful services." You are perfectly right, Sirs, in assuming that Drs. — and — had no knowledge whatever of the paragraph before it was in circulation.—I am, Sirs, yours truly,
Barnet, Dec. 4th, 1888. THE EDITOR OF THE "BARNET PRESS."

* * We are glad to have this confirmation of our suggestion that neither of the medical men concerned nor the Secretary of the Society are in any way responsible for the appearance of the newspaper paragraph.—ED. L.

SMALL HOSPITALS AND LOCAL PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—Your opinion on the following questions will oblige.

In a small town there is a hospital having for its medical staff about half the local practitioners. Paying patients are admitted, but can be treated only by the staff, who may charge for medical attendance. Is such an arrangement fair either to the practitioners not connected with the institution or to their patients? Is there anything against strict medical ethics in acting as medical officer for such a hospital? Could the medical staff, with grace to themselves and advantage to the profession, agree that all registered practitioners in the neighbourhood should attend the hospital? The hospital in question with its present officers has existed six years, and many new medical men have lately settled in the district.

I am, Sirs, yours faithfully,

November, 1888.

CLIMAX.

* * We think that paying patients in such hospitals should be allowed to have their own medical men to attend them. For other patients and purposes some limitation of the staff is desirable. It is only by such limitation that sufficient cases can be got to excite interest in a hospital appointment, and without this interest patients and the institution would suffer.—ED. L.

Dr. C. S. Campbell.—Our remarks had no purpose other than that plainly shown on their surface—viz., that funds now devoted to the support of special hospitals had better be employed to relieve the urgent need of general hospitals.

Barcoo.—We have no knowledge of the person mentioned or of his system.

Mr. Peter Fife's letter arrived too late for publication this week.

CHAMBERINE COVER.

THIS appliance, which is the design and production of Mr. Henry Lewis of St. Albans, is intended to prevent the escape into the sick chamber of noxious smells from the chamber utensils. It is of neat design and attractive appearance, and will doubtless be found effectual in preventing the evil against which it is specially directed.

Mr. Palmer.—Postponement of vaccination cannot be made for more than two months under certificate. If the child's parents are not prepared to pay a fee, the certificate may be signed by the public vaccinator. If the public station is open only once every six months, the vaccination officer would doubtless be guided by this circumstance in pressing for the vaccination of the child or for a certificate of unfitness for vaccination. As to the vaccination of a child who has recently had eczema, this is a matter on which our correspondent must exercise his own judgment. We should have assumed that when a child has recovered from this disease it might be safely vaccinated.

Brain might apply to Messrs. Baillière, Tindall, & Cox, who would probably procure from Paris that which our correspondent requires.

Parents had better consult his medical attendant. We do not prescribe.

X. X. X. should consult a solicitor.

"THE METROPOLITAN HOSPITAL"

To the Editors of THE LANCET.

SIRS,—I have read with pleasure the correspondence which you have printed in reference to the above-named institution, and feel that I should be wanting in duty if I did not take my turn in keeping the subject before you and the profession. I have watched the progress of the movement from the time when, in response to a circular, I attended a meeting at the hospital called to consider a method of making the "thing pay," by gentlemen of means—and consultants. It has been wholly unfair to the general practitioner in inception and development, as might have been expected. A building, ostensibly raised upon funds collected for the benefit of the poor, to supply medical aid *free*, is used for business purposes, pure and simple. It is not limited to persons of certain income, for people who can afford to pay a medical man a reasonable fee are admitted to benefit. But the great evil of the whole thing to my mind is the depreciation of the value of medical attendance. Practitioners of standing, who before this era were supposed to be beyond stooping for patients, are reducing their brethren to "higgiers" in the matter of fees—that is, unless we will take so much our would-be patients go to the hospital. Who would employ a junior counsel if Sir Charles Russell could be had for 15s., or 6d. per month, payable just as long as the provident one thinks fit? And it is an easy step from this to applying to other hospitals for every malady under the sun. To compare the affair to a club is begging the question, for the men enjoying the services of the club doctor are mainly picked men, who have been more or less carefully examined, and I fail to observe any rule beyond payment of the fee. I am told the step is really illegal, but of that I am not prepared to speak; to me, however, there is a smack of malversation. Like Mr. Cockell, I am waiting to see what you, as oracle to the profession, have to say on the matter.—I am, Sirs, yours faithfully,
Kingsland-road, Dec. 4th, 1888. GEO. LOCKE.

VACCINATION CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—An unqualified practitioner in this neighbourhood, who is acting ostensibly under theegis of a distant (qualified) medical man, has given certificates of vaccination, writing after his signature "duly certified vaccinator," "pro ———, surgeon, &c." The vaccination officer of the district has applied to our board of guardians for instructions. In answer to a letter of inquiry from the clerk, the unqualified practitioner states that he holds a certificate of proficiency in vaccination under the authority of the Privy Council. I should be glad to know whether "public vaccinators authorised to give certificates of proficiency in vaccination" can endow persons of this class with such documents, and also whether certificates of unfitness for vaccination or of successful vaccination issued by such persons can be accepted and registered by vaccination officers.—I am, Sirs, yours obediently,
Nov. 28th, 1888. GUARDIAN.

HOME FOR EPILEPTICS.

To the Editors of THE LANCET.

SIRS,—Will any reader kindly inform me of an institution where a girl aged sixteen years suffering from epilepsy and pronounced hopeless could be received free of charge or at a small fee?

I am, Sirs, yours faithfully,

Mill-end-road, December, 1888.

M. CURHAM CORNER.

Ignoramus.—The questions put by our correspondent, whilst very multifarious, are not by any means clear. 1. Every officer of a ship must, as a matter of course, contribute to the mess.—2. No doubt the amount of pay necessitates economy, but is found sufficient by men of prudent habits.—3. The cultivation of self-respect will generally ensure the respect of brother officers.—4. Pay continues as long as the name of the recipient remains on the books. The regulations had better be consulted for further information.

Lex.—1. Colville-terrace, London, W.—2. 299, Oxford-street, W.

SIX CHILDREN AT A SINGLE BIRTH.

THE *Journal of the American Medical Association* of Nov. 17th is responsible for the following announcement.

"At Dallas, Tex., on Nov. 3rd, Mrs. Geo. Hursh of Navarro county gave birth to six children. The mother and children are doing well. There are four boys and two girls. All are perfect and fully proportioned, but very small."

L. N. R.—We are not aware of the existence of any such fund or society as that referred to.

Mr. W. J. Richardson.—We know of no work of the kind superior to those mentioned.

THE TREATMENT OF CONSUMPTION.

To the Editors of THE LANCET.

SIRS,—On Nov. 26th, 1887, notes of cases treated on this method were published in THE LANCET. I shall be obliged if you will enable me to state that those patients continue well, notwithstanding the severity of last winter, and that their remarkable increase of chest girth and range of expansion has been retained. Since then, I am sorry to say, I have only had an opportunity of applying those principles of treatment in two cases.

The first case was an acute attack, temperature over 102°, in a case of long standing and very extensive disease of both lungs. Under treatment the temperature became nearly normal, cough and expectoration nearly disappeared, breathing became easy, the chest girth increased, and in about six weeks the patient returned to work. A short time since I heard that the patient was fairly well, and still able to continue at work; and had there been a home, placed under conditions suitable for treatment, I think this case would permanently recover, notwithstanding the extent of the disease.

In the other case there was extensive disease of the right, with commencing disease of the left, lung, and hectic. The patient could not leave his business, but carried out the directions so carefully that cough and hectic disappeared; the appetite was good, weight increased, and there was no difficulty in breathing on exertion. In fact, he felt and looked so well that he spent a day at Wimbledon, got thoroughly wet through in the camp, and remained in his wet clothes. That brought on an acute attack, and his temperature rose to over 103°. Under treatment this was rapidly recovered from, and in three weeks he was fit to go, and went, to the Highlands. During the attack the patient lost 8 lb. in weight; the heart was displaced to the right, and the chest girth at ensiform cartilage was on expiration 27½ in., and on inspiration 28½ in. The patient has no trouble with cough, the colour is healthy, temperature nearly normal, weight has increased 12 lb., heart has gone back, chest girth at ensiform cartilage is on expiration 28 in., on inspiration 30½ in., and there is no difficulty in breathing or cough when the patient runs.

When these results are compared with those obtained on the present mode of treatment; when it is borne in mind that a valid objection has yet to be brought against the theory upon which this treatment is based, and that both Sydenham's cures and nature's recoveries were obtained under similar conditions, I think it must be admitted that a solid claim has been established for the adoption of this method of treatment by the profession.—I am, Sirs, yours faithfully,

Dorchester-place, November, 1888.

G. W. HAMBLETON.

THE TREATMENT OF PRURITUS.

To the Editors of THE LANCET.

SIRS,—In addition to the host of remedies the query of "M.D." re pruritus has brought forth, I would suggest that the parts irritated should be well sponged with hot water containing acid. carbol. liq., two drachms to the pint, and after being dried painted over with tinct. benzoin. co. In a recent case of pruritus for which I was consulted, and in which there was concomitant diabetes, the above acted like magic.

I am, Sirs, yours faithfully,

Hornsey, Dec. 3rd, 1888.

A. GOLDNEY CHITTY.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Morgan, Manchester; Dr. Steavenson, London; Dr. E. Paget Thurstan, Southborough; Sir W. W. Gull, London; Mr. Carrington; Mr. Lawson Tait, Birmingham; Dr. Forbes Winalow, London; Mr. T. Cutbush, London; Dr. C. M. Campbell, London; Dr. Stoker, London; Mr. P. Fyfe, Glasgow; Mr. Patterson, London; Dr. Croucher, Eastbourne; Dr. Gogarty, Canterbury; Mr. Sanders, London; Messrs. Woodhouse and Co., London; Mr. G. W. Hambleton, Bristol; Messrs. Street and Co., London; Dr. Buck, Ryde; Mr. Hine, Honiton; Messrs. Dennis and Co., London; Dr. H. R. Bigelow, Paris; Dr. T. H. Manley, New York; Mr. Bumpus, London; Mr. C. Tate, Bristol; Messrs. Wright and Co., Bristol; Mr. Millar, Salop; Dr. Taylor, Notts; Mr. Howard Marsh, London; Dr. Oliphant, Glasgow; Mr. H. G. Nicholson, Hereford; Mr. Laffan, Cushe; Mr. Becker, London; Mr. Boden; Mr. C. Corner, London; Dr. Willey, Sheffield; Dr. Watson, London; Mr. H. Rutherford, Glasgow; Mr. A. G. Chitty, London; Mr. J. M. Richards, London; Mr. W. D. Jones, Ruthin; Mr. G. Price, Paignton; Mr. J. Gilroy, Waterbeck; Mr. Barclay, Birmingham; Mr. Litchfield, Woodford; Mr. Palmer, Newbury; Mr. E. A. Snell, London; Mr. Croft, London; Mr. A. H. Huth, London; Dr. Abrath, Sunderland; Dr. G. Thompson, Fishponds; Mr. W. H. Bennett, London; Mr. G. Locke, London; Dr. Dunn, London; Mr. Norman, Dublin; Mr. Woodson, Portsmouth; Dr. L. C. Badcock, Brighton; Mr. Ridley, Newcastle-on-Tyne; Mr. Hume, Edinburgh; Mr. Walker, Aberdeen; Dr. Whittia, London; Mr. Armstrong, Newcastle-on-Tyne; Messrs. Ferguson and Son, Reading; Mr. Fellowthorpe, Hartlepool; Dr. Craster, Middlesbrough; Mr. Andrew, Stockport; Dr. Guisani, Cork; Mr. Marshall, Hastings; Mr. F. R. Fisher, London; Mr. Moles, Manchester; Dr. W. Robertson, Newcastle-on-Tyne; Mr. H. G. Noakes, London; Brain; Parents; A. B. B.; L. M. B.; G. H. H.; X. X. X.; Matron, Canterbury; Enquirer; B.A., M.B., M.Ch.; Matron, London; Assistant, Leeds; Medicus, Chesterfield; Habbie Simpson; House Surgeon.

LETTERS, each with enclosure, are also acknowledged from—Mr. Cornish, Manchester; Mr. Green, Droghda; Mr. Turner, London; Mr. Van Praagh, London; Mr. Macdonald, Dorset; Messrs. Hewlett and Son, London; Dr. Wilcox, Woolwich; Mr. C. A. Cook; Messrs. Keith and Co., Edinburgh; Dr. Morris, Tasmania; Messrs. Hooper and Co., London; Mr. Twyford, Hawley; Mr. Whiles, Newark; Mr. Pace, Newcastle; Mr. Lewis, St. Albans; Mr. Atkinson, Yorks; Mr. Pierce, Liverpool; Mr. Shattock, Devon; Dr. Prowse, Bristol; Mr. Bonsall, Hawthurst; Dr. Hewett, London; Mr. Raw, Anerley; Major Pead, Dulwich; Dr. Thompson, Dalkeith; Dr. Dowse, London; Mr. Gosford, Durham; Mr. Cockrane, Skye; Dr. Rains, Manchester; Mr. Heywood, Manchester; Mr. Hutchinson, London; Messrs. Ayrton and Sanders, Liverpool; The Holloway Sanatorium; F. J. K.; Volens, London; E., Derby; Medicus, Edinburgh; A. E. J., Strand; Forceps, Fence Houses; Bristol Royal Infirmary; General Infirmary, Leeds; Sussex County Asylum; E., Worcester; Merchant, London; Newport and County Infirmary; M.D., Crewe; Nemo, London; Express Dairy Co.; Alpha, London; M. Q., London; Dispenser, Carnarvonshire; Lady Superintendent, Maidstone; R. B., London; A., Birmingham; Bury Dispensary Hospital; W., Darwen; Rowe, London; Medicus, Hambrook; J. A., London; Surgeon, Derby; N., London; A. B., Isle of Wight; Medicus, Catford; S. J. W., London; Bonafide, Torquay; H., London; Scotland, London; G. E., London; C. H. S., London; Beta, London.

The World (New York), Sussex Daily News, Hertfordshire Mercury, East Suffolk Gazette, Surrey Advertiser, Sydney Morning Herald, Yarmouth Gazette, Kiama Independent (New South Wales), Denbighshire Free Press, Margate and Ramsgate Gazette, Herald and Weekly Free Press, Reading Mercury, Brecknockland News (Wyrbury), St. Helen's Chronicle and South-West Lancashire Advertiser, Women's Suffrage Journal, The Scots Observer, Hastings & St. Leonards Times, &c., have been received.

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Clinical Lectures

ON

DISEASES OF THE EYE.

Delivered at the Nottingham and Midland Eye Infirmary,

By C. BELL TAYLOR, F.R.C.S. AND M.D. EDIN.,
HONORARY SURGEON TO THE INFIRMARY.

LECTURE VII.

ON CERTAIN DEFECTS OF VISION WHICH ADMIT OF
REMEDY BY SPECTACLES.

GENTLEMEN,—I have here the left eye of a recently slaughtered ox. I know that it is the left eye by the position of the optic nerve, which always lies below the horizontal line and to the inner or nasal side of the posterior pole. What is the "posterior pole"? Well, the "posterior pole" is a term borrowed from the language of geography, which serves to indicate the geometric centre of the back part of the globe of the eye, just as the centre of the cornea is the anterior pole. If I transfix this eyeball from before backwards with a hairpin entered at the apex of the cornea, it emerges, as you see, at the posterior pole, which I may mention, *en passant*, is in close proximity to the yellow spot, the most sensitive part of the retina; while the track of the pin (the optic axis) is nearly, not quite, but nearly, coincident with a line (the axis of vision) drawn through the object to which the eye is directed to the fovea centralis retina, or yellow spot.¹ If I pass a thread round this eyeball transversely in the centre, an imaginary plane perpendicular to the axis, dividing the globe into two halves, that is the equator, and the segments respectively are the anterior and posterior hemispheres. Planes at right angles to the equator, vertical and horizontal, are called meridians; and the interspaces, for the purposes of description, are termed quadrants. Thus we say of the youth who has just come into the accident ward that he has been wounded by the impact of a piece of metal which has penetrated the lower and outer quadrant of the left eye—that is, a space bounded above by the horizontal and on the inner side by the vertical meridian. It is on the assumption that the eyeball is a sphere that it has been called the globe, and, in truth, in the human adult it is nearly a sphere, measuring almost, not quite, an inch in diameter, and weighing on an average a little over a drachm and a half. Slight variations in shape (normal astigmatism) are, however, universal, and I have known the eyeball so drawn out as to measure fully an inch and a quarter from pole to pole, and in another case so flattened as to present an antero-posterior diameter of only three-quarters of an inch.

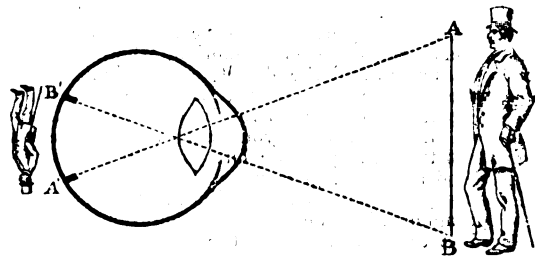
I have here another eyeball—also, I perceive, a left one,—from which the sclerotic and choroid coats in the neighbourhood of the optic nerve have been removed, in order that you may see from behind the images of the objects to which the cornea is directed focussed upon the retina. The same phenomena may be observed without dissection if you can obtain the eye of an albino or of a white rabbit, in which the pigment of the choroid is absent and the sclerotic almost translucent, or, better still, on the focussing screen of the photographic artist who is about to take a picture. In all these cases you will observe that the image is inverted, and considerable ingenuity has been expended at various times in endeavours to explain how it is that we who go about with inverted images on our retinae should see objects in the erect or real position. The most probable of these suggestions is that the cones of the retina, upper and lower, being directed respectively to a level above and below the eye, are able to accomplish a reversal of the image so far as the sensory impression on the brain is concerned. (Fig. 1.)

However that may be, it is clear that if the artist does not focus his subject accurately, if his lens is too far away from the screen or is too near, or if its outline is irregular,

his picture will be imperfect; and it is exactly the same with the living eye. If it is too long (myopic), too short (hypermetropic), or if the cornea or lens presents an irregular surface so that the refraction differs in different meridians (astigmatic), not only do these conditions occasion well understood disturbances of vision, but they also give rise to certain objective physical phenomena which are elicited on examination, and which enable us to diagnose the defect from which the patient is suffering. For instance, if with the ordinary ophthalmoscope (a concave mirror of eight inches focus) you are able to see the optic disc at eight inches or thereabouts from the eye, you may rest assured that the eyeball is much too short (hypermetropic), or much too long (myopic). If it is too short, the image of the disc, which is a real or erect image, will remain in view while you approach quite close to the patient, and will move with you on slight inclination of the mirror; but if it is too long, the image, which is an inverted one, will disappear on approach, and will move in the opposite direction. On producing the inverted image in the ordinary way, by interposing a bi-convex lens—usually of two or two and a half inches focus—you will see a large disc and relatively small retinal field if the patient is hypermetropic, and a small disc and relatively large field if he is myopic; while, on slowly withdrawing the lens, the apparent size of the disc continues the same in emmetropia or normal sight, gets larger in myopia, and smaller in hypermetropia; in either of the latter cases in exact proportion to the degree of the defect.

Not only may you diagnose the exact condition with the ophthalmoscope, but it is easy also to prescribe the remedy without asking the patient a single question. In order to do this, we must inspect the optic disc and bloodvessels simply magnified by the patient's refractive media; and as

FIG. 1.



the lens and vitreous and aqueous humours collectively constitute a magnifying medium of short focus, it is necessary to get very close to the patient, using your left eye for his left eye, and your right for his right, bringing the patient's and surgeon's cornea within an inch of each other. In this way, simply using the light reflected by the ophthalmoscope to illuminate the dark chamber of the eyeball, we obtain in the emmetropic or normal-sighted eye a good view of the optic disc and bloodvessels in their natural position, magnified about fifteen diameters by the patient's refractive media. If the picture should be blurred and indistinct, we know that the eye is either too short (hypermetropic), or too long (myopic), or irregular in shape (astigmatic). If too short, the image moves with the mirror on slight inclination of the observer's head; if too long, it moves in the opposite direction; if irregular in shape, you see the horizontal vessels well defined, while the vertical vessels are blurred and indistinct, or *vice versa*. In short, the surgeon sees into the eye under exactly the same conditions that the patient sees out of it, and the glass (placed behind the ophthalmoscopic mirror), concave, convex, or cylindrical, which best enables the surgeon to see into the eye, is also the one which will best enable the patient to see out of it.²

Owing to the close approximation of the persons concerned, the actual contact of faces, necessitated by this direct method of ophthalmoscopic examination, the surgeon is obliged to hold his breath or breathe over the patient, while the emanations from the latter are sometimes very objectionable. The inconvenience thus occasioned has led to the adoption by many surgeons of the oro-nasal veil, an

¹ The axis of vision and the axis of the globe form with one another an angle of about six degrees, which is usually increased in hypermetropia and diminished in myopia.

² It goes without saying that the surgeon must himself be normal sighted; if not, his ametropia must be corrected by spectacles while conducting the examination.

ingenious device invented by Mr. Ward Cousins of South-sea, as also to the very general substitution of another and more exact method, for which we are indebted to Dr. Cuignet, ex-professor of ophthalmology at Lille. You will, perhaps, best appreciate Cuignet's process if you will give a few minutes' study to this simple contrivance, which, like the camera of the photographic artist, may be taken fairly to represent the living eye. It is simply a convex lens (the refractive media) with a cardboard screen (the retina) fixed in a clip on a movable slide, so that they may be brought together or separated at pleasure. Now you will find, if you throw the light of a lamp upon the lens, that you will get an erect (because twice inverted) image of the flame clearly defined if the screen is accurately in the focus of the lens, and blurred and ill defined if it is out of focus. If it is out of focus from too close approximation of the lens and screen (hypermetropia), the image will move away from you on slight inclination of the mirror; if it is out of focus because the lens and screen are too far apart (myopia), it will seem to move with you; and if for the convex lens you substitute a cylinder, the motion will differ in opposite meridians (astigmatism). It is exactly the same with the living eye: If at a distance of three feet you throw the light of the ophthalmoscope upon the cornea and the image of the flame is perfect, you may conclude that the retina is in exact focus with the refractive media, and the patient emmetropic or normal sighted; if the image is imperfect, the eye is too long (myopic), or too short (hypermetropic), or the cornea or lens is irregular in outline (astigmatic). If the eye is too long, the image seems to move with you on slight inclination of the mirror; if normal, or too short, or if only very slightly myopic, it moves in the opposite direction; and if the cornea or lens is irregular in outline, the motion of the image differs in opposite meridians. In order to select glasses by this method, you must put spectacles upon your patient such as will approximately correct the defect, and then, throwing the light upon the cornea through the glass, judge by the perfected image, or its arrested, changed, or reversed motion, whether you have accurately neutralised the defect, or overdone or underdone correction. You may use a plane instead of a concave ophthalmoscopic mirror in conducting this examination, in which case you must stand at eight or twelve feet from the patient; but you will find that with the plane mirror the image moves with you in hypermetropia and against you in myopia. In alluding to this method, I have throughout, in order to avoid confusion, spoken only of the image; but, in truth, the shape and motion and blurred crescentic or well-defined edge of the dense shadow which surrounds the illuminated portion or image of the flame is more easily appreciated by the observer; hence Dr. Cuignet's method has been termed the shadow test or "skiaoporescopy," from *σκια* (shadow), *πορεσις* (march), and *σκοπεω*, (to regard or look at). Briefly we call it "skiascopy"; it has also been described as "retinoscopy" or "pupilloscopy"; and originally, from the erroneous attribution to the cornea of phenomena due to the fundus oculi, "keratoscopy." You can readily understand how very useful these objective methods of examination must be with children, with very stupid people, or with those who are attempting to deceive, and you may test them in actual practice upon any of the patients we have seen to-night.

The boy, for instance, who is eleven years of age, and who has what our French friends would term a *nez retroussé* and a generally hollowed-out set of features, is an interesting example of a common form of hypermetropia, or short eye—an affection which we frequently find associated with this cast of countenance. The lad's mother insists that he is near-sighted, because, as she says, he holds his book so close to his face; and some of you were inclined to adopt this opinion when, on glancing at the eye with the ophthalmoscope, you caught a glimpse of the fundus at twelve inches. We found, however, that we could see the optic disc as well or better on approaching quite close to the patient, and that the image, which was improved by a convex glass behind the mirror, moved with us—phenomena fatal to the mother's theory. We found, also, that with the inverted image we got a large disc and small retinal field, and that on slowly withdrawing the object lens the nerve got smaller. Skiascopy, too, with an imperfect image revealed a blurred shadow that moved against us, while convex spectacles on the patient's face cleared up the image and reversed the shadow. The conclusions thus arrived at were confirmed by the subjec-

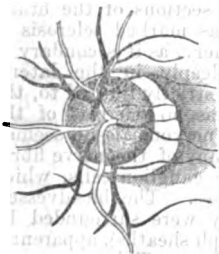
tive symptoms, for we ascertained that after reading for a time the patient's vision became indistinct, that he had been in the habit of wearing his grandmother's spectacles, and that distant vision was improved by convex glasses. Why, then, does this boy hold his book so close to his face? Definition would certainly be improved by an interval, and one would think, *a priori*, that a hypermetropia, like a presbyopia, would prefer small objects at a moderate distance; and so he would; but in this case—as sometimes happens in hypermetropia—the patient has sacrificed definition for the sake of the large retinal images which he gets by the close approach of print to his eye. In these cases the eyeball is too short—a physical defect which, as you see, is made very apparent when the eyeballs are turned forcibly inwards,—and the patient is continually making efforts to lengthen it. This, or its equivalent, he accomplishes by forcing the lens into a more convex form by the active exercise of the ciliary muscle. After a time this muscle gets tired, gives in, and small objects, such as print and stitches, fade from view. By placing a convex lens in front of the eye we practically lengthen it, thus obviating the necessity for this excessive accommodative effort, and the strongest glass with which the patient can see type an inch long at fifteen or twenty feet is the glass to prescribe. This will neutralise the whole of what is called the manifest hypermetropia, and after a time, which may be measured by months and even years, as the accustomed effort ceases and the spasm of the ciliary muscle gives way more and more, stronger and stronger glasses may be ordered, until the whole of the defect (the remaining latent hypermetropia) is neutralised. Now suppose (for it sometimes happens) that your hypermetropic patient's distant vision is embarrassed and not improved by convex lenses; nay more, suppose (for it also sometimes happens) that his distant vision is improved by concave glasses, should we infer from this that a patient with short eyeballs was near-sighted? By no means. Our course under such circumstances would be plain: we should paralyse the ciliary muscle by the frequent instillation of a 2 per cent. solution of atropine, and then test again, taking special care to order the patient to commence wearing the prescribed glasses before the effect of the atropine had quite passed away. In any case, the use of atropine will reveal the whole of the latent hypermetropia, and enable us to name the glass that will ultimately be required. Why not, then, use atropine for every case, and order such glasses as give complete correction at once? Simply because they would at first be too strong, and would only embarrass the patient, who is unable at once to relax a long-accustomed strain. In the case before us, No. 18 bi-convex is the strongest glass with which the patient can see distant objects: we shall therefore order spectacles of that strength for general use (allowing a little stronger for reading if necessary), and change them for stronger ones as soon as the symptoms return. I have already, in my remarks on Strabismus, pointed out how it is that hypermetropia causes internal squint, and therefore need not say any more on this the most common form of ametropia.³

The girl, who is twelve years of age, and who you noticed pinched her lids together when asked to read large type at twenty feet, clearly has eyes that are too long, for we found on ophthalmoscopic examination that the optic disc, which was plainly visible with the mirror alone at eight inches or thereabouts, vanished on approach to the eye, while on getting quite close, the image, which reappeared blurred, and which moved against us, was cleared up on placing

³ When rays of light from distant objects which are parallel pass through a convex lens they are made to converge, and the distance of the point at which they are brought together—that is, to a focus—from the lens is the measure of the lens. Concave glasses cause the rays of light to diverge, and the focus of the concave glass is ascertained by the number of the convex glass which is required to neutralise it, the two combined producing the effect of a piece of plane glass. A convex glass in front of a short eyeball converges the rays a little before entering the eye, so that they are brought to a focus sooner; a concave glass in front of a long eyeball causes the rays to diverge before striking the eye, so that they are brought to a focus later—in both cases, if the glasses are properly selected—on the retina. As this lecture was delivered to general practitioners, I used the terms inches and feet in preference to dioptries and metres, which would not have been so well understood. The unit of the metrical system is called a dioptic, and is equivalent to the old lens of forty inches focus, so that in order to change the inch system into the metrical system it is only necessary to multiply by forty; thus, for instance, if we wish to ascertain the equivalent of a lens, say, of seven inches focus in dioptries, we multiply one-seventh by forty— $1 \times 40 = 40 = 5.7$ in dioptries; to reduce the dioptic number to the inch system we must divide by forty—thus, four dioptries, $4 \div 4 = 1$ in inches.

a concave glass behind the mirror. Tested further, we found that with the inverted image produced in the usual way we got a small disc and a large retinal field, and that on slowly withdrawing the object lens the small disc got larger. Skiascopy, too, revealed an imperfect reflection of the flame of the lamp, and a blurred shadow which seemed to move with us; while concave glasses on the patient's face brightened the reflection and reversed the shadow. The diagnosis thus arrived at was confirmed by the subjective symptoms, for the girl's father informs us that "she pores very close over her books"; that she reads by twilight and firelight; that she cannot discern the figures on the black board at school; and we have ascertained that in order to see type an inch long at twenty feet she requires concave glasses of fifteen inches focus. In these cases the eyeball is too long; originally of normal contour, it is gradually compressed into an ovoid form by the action of the internal recti muscles in the too frequent and too persistent effort at convergence necessary for binocular vision of near objects. A moment's examination of this model will enable you to appreciate the fact that such pressure will be most felt upon the posterior segment of the eyeball, where it is least supported, and here the globe bulges. This bulging, of course, lengthens the eye; and the longer it gets, the nearer must small objects be approached in order to see, and the more must it be turned inwards, and the more it is turned inwards the longer does it become. Not only does the eye bulge, but the weakest part—which is situated just outside the optic disc—in the

FIG. 2.



great majority of cases gives way, and here the stretched choroid, no longer supported, becomes absorbed, and the sclerotic, no longer concealed, appears as a white patch—the well-known myopic crescent. (Fig. 2.)

Young and plastic and also lax and ill-nourished tissue is, of course, more likely to yield than sterner stuff and more mature fibre, and patients of weak constitution are more prone to suffer than others; hence from five to fifteen is the most dangerous age, and delicate children and those who have recently recovered from an illness are most frequently affected.⁴

Such patients, owing to their habit of nipping the lids together in order to exclude circles of diffusion, are called "myopes," from the Greek word *μύω* (to shut), and are in large proportion simply the victims of our modern system of high-pressure education, for the eyes, which are used for hours daily on small and near objects, in many cases, as we have seen, lose their normal shape and become unable to distinguish large and distant ones. The faculty which is cultivated in the growing child naturally waxes, while that which is neglected wanes; the myope can see fine print more clearly and in a dimmer light—firelight, twilight, moonlight—than an individual with normal eyes, but his horizon becomes very limited. The landscape, the seascape, the pleasant country scenery, the actors on the boards, the familiar faces, all fade, and but for the use of glasses which would blind an ordinary individual would be shut out for ever. Some of these patients get worse steadily (progressive myopia); in others the disease advances by fits and starts until puberty and sometimes afterwards (periodically progressive); and in others it is stationary, or advances very slowly, or even improves slightly with age.⁵ Progressive cases, which in both forms are serious, must be met by appropriate treatment, such as paralysis of the

⁴ It is the convergence which is necessary for the fusion of images upon the retina which is the cause of all the mischief. When one eye only is used, as in the case of watchmakers, who pore over minute objects for hours daily, it is very seldom indeed that any ill result is noticed.

⁵ The myope, who pinches his lids together in order to diminish the sight hole, of course sees better through a small aperture than a large one, and this improvement with age is entirely due to the gradual contraction of the pupil which goes hand in hand with advancing years. When a short-sighted person says, "I am not so short-sighted as I used to be," he usually means, however, that he is beginning to suffer from aged vision, and cannot see objects so near to his eyes as formerly. He does not mean that he can see print further off; but that he cannot see it so near. Such patients often require convex glasses for reading, and concave for distance. Persons with high degrees of myopia are able to read without glasses up to great age; hence short sight is commonly supposed to be strong sight; it is, nevertheless, weak sight, for such patients cannot see at a distance, and they are apt to lose the sight altogether from gradual extension of the myopic crescent, consequent increase of the blind spot, and ultimate detachment of the retina.

accommodation by atropine, blue glasses, leeches to the temple (preferably the artificial leech), followed by a period of darkness from time to time, with tonics, aperients, and mild mercurials. All such patients when studying or working—if they must work or study—should do so in a good light coming from the back, if possible over the left shoulder, and should never read when lying down, leaning forward, or travelling in a railway or other carriage.

With regard to glasses, we have seen that the cause of all the trouble is the excessive convergence necessitated by the too great devotion of such patients to near objects; and if they must continue their pursuits, even in a modified form, it is absolutely necessary that we should give them glasses that will enable them to hold print at twelve or fourteen inches from the eye, not that they may see better, be it thoroughly understood, but that they may see further off. To display the beauties of nature, to prevent moody introspection and isolation from their fellows, to enable such patients to recognise faces across the street, is no doubt of much importance, as contributing to their enjoyment of life, as well as in an educational sense; but it is altogether a secondary consideration compared to the necessity of preventing undue convergence, by giving the patient glasses that will enable him to hold his book a good distance from his face. The great danger in either case is that we shall order glasses which are too strong. Such patients can hardly avoid exerting their accommodation, and the effort enables them to see better with a glass which is too strong than with one which is exactly suited to the requirements of the case; and just as in hypermetropia we are apt to prescribe glasses which are too weak, so in myopia we run a risk of ordering them too strong; and just as atropine in hypermetropia reveals the whole of the defect, so will it in myopia enable us to get rid of this most embarrassing complication. In the case before us I shall suggest rest for some weeks, paralyse the accommodation, and keep out excess of light with blue spectacles; afterwards, as there is as yet no myopic crescent, I hope to arrest the progress of the disease by weak glasses which may be worn constantly both for near and distant objects, thus enlarging the patient's horizon, and enabling her to hold print fourteen inches from the face.⁶ Should she, in spite of glasses, insist on approaching print too close—and myopes, especially those whose visual acuity is below par, will sometimes, like the hypermetropic boy, do so for the sake of large retinal images,—we must withhold glasses, for it is better that myopes should dispense with spectacles for near work, than that they should wear them and still exert their accommodation, and still converge, and still approach small objects too close to the eye.

Of course in all these cases, the common sense and best plan of treatment would be to remove the cause, to interdict reading and fine work for all threatened individuals; and if we could do this, if we could fulfil this plainest of indications, all would doubtless be well; but, unfortunately, we are not consulted until the mischief is done. Moreover, it is seldom that such suggestions can be carried out, for the masses are coerced by the State, and the classes are competitively examined for all sorts of services, until, in some cases, their eyesight is so damaged by study that they cannot pass the visual tests required for the office for which they have striven. Short sight—unknown among savage tribes and tillers of the soil—makes its appearance first among the children at village schools, in the proportion of about 1 per cent.; in schools of higher grade, 20 per cent.; higher still, 40 per cent.; and Erismann has calculated that if the disease continues to increase in the same ratio that it has done for the last fifty years, in a few generations the whole population will have become myopic. The mere cram—for it is not education in any true sense—is of course soon forgotten, fades like the shadow on a wall; but the damaged eyesight and impaired physique remain and are transmitted, sad evidence of the folly of a great people, "who, wishing to improve, choose the worst," and for the sake of mere useless book learning are content to sacrifice the most precious of senses.

(To be concluded.)

⁶ Each case must be treated on its own merits; but when the patient can see at a distance with concave glasses of twelve inches focus and more, such glasses may usually be worn constantly for all purposes; when the patient requires stronger glasses than these to see at a distance, he must have glasses three or four numbers weaker for reading.

CASES OF
GENERAL PARALYSIS OF THE INSANE IN
HOSPITAL PRACTICE.

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NOT so long ago general paralysis was considered to be of interest only to the alienist, and even now to the majority of medical men the term conveys no definite idea of a special disease. The following cases are of interest for the remarkable absence or mildness of the mental symptoms, and the consequent difficulty and uncertainty of the diagnosis; and in one instance (Case 1) for the unusual mode of onset, apparently after myelitis. None of these cases had been in an asylum when I first saw them. I am becoming more and more convinced that a considerable number of cases indistinguishable from general paralysis except by the mildness of the mental symptoms, which tend gradually towards dementia, but without exaltation and without active delusions, run their course to a fatal termination without finding their way to the asylums, even in the case of the poorer members of the community. The difficulty of keeping under observation in a large town patients who leave the hospital, and are changing their abode every few months, will sufficiently explain the absence of post-mortem evidence of the correctness of the diagnosis.

CASE 1. *General paralysis following myelitis.*—J. P.—, aged thirty-seven, a very powerfully built labourer, weighing about 15st., was admitted under my care into the Nottingham General Hospital in February, 1887, complaining of loss of power in the lower extremities. He had been married fifteen years, and was a steady, industrious man, having worked eleven years in one place. There was no evidence of syphilis. Two years previously he was taken ill with a shivering fit while at work. On reaching home and lying down he noticed his legs jumped and twitched a great deal. He had no headache. Next day the legs were a little worse, and the arms began to twitch, but he could manage to walk. On the fifth day he lost all power in the arms and legs, and he could not turn in bed or feed himself. The speech was somewhat thick. The sphincters were not affected. In about a week he began to improve, and in four or five months returned to work, and continued to do the very heavy work of a labourer at some ironworks for a year and a quarter. Three months before his admission to the hospital he again began to experience difficulty in walking, loss of power in the arms and legs, and thickness of speech. He became emotional, subject to fits of depression, and occasionally burst out crying without apparent cause. But at the time of his admission, and for a fortnight afterwards, he showed no delusions, nor could I get a history of any from his wife. His temperature was normal, and his appetite variable; some days he would not eat any dinner. He was allowed to be up in the afternoon, and could walk about the ward and corridor slowly, but not get up or down stairs. He walked slowly and stiffly, with short tottering steps. The toes only just cleared the ground. There was some resistance on passive movement of the legs, due to muscular contraction from hypertonicity, but the contraction was only momentary. There was some loss of power. In the upper extremity the grasp registered with the dynamometer 80lb. with the right hand and 55lb. with the left—a weak grasp for a powerfully built labourer. There was no muscular atrophy. The plantar reflex was somewhat exaggerated on both sides; the cremasteric very slightly; epigastric and abdominal well marked on sufficient irritation. Knee jerk much exaggerated on both sides; the Achilles tendon reflex could also be easily obtained. A blow on the front of the lower part of the leg started the knee jerk almost as well as a blow on the ligamentum patellæ. The muscular hypertonicity was so marked that a blow on any of the muscles made them contract. There was very perfect ankle clonus, which could be kept up for a minute or more, and the rate was fairly constant at 6 per second. The deep reflexes in the arms were quite as exaggerated as in the legs. There was no loss of muscular sense so far as could be ascertained, and no incoordination. He slept well, and was not subject to headache. The sensation to touch

was normal, as were also those for pain and heat. The back was examined with a hot sponge, and no painful spot could be found. The pupils were equal and somewhat contracted. They responded to light and to accommodation, but sluggishly. There was no albumen in the urine. About a fortnight after his admission he began to sleep badly, and became restless and more emotional. He wandered away to the women's wards, and when brought back became very unmanageable, refusing to do what the nurses told him. He used to go to the lavatory and turn on all the taps. He had several delusions about money, thinking that he had had large sums left him. He quarrelled with the other patients, and threatened to murder those who restrained him. Whenever I saw him, he was quiet, promised to do as he was told, and exhibited no delusions. On March 18th he was noisy all night, and very excited, and required two attendants to sit by his bed all night to prevent him getting up. He expressed a wish to get the iron rod at the top of the bed loose, so that he might murder those restraining him. The diagnosis was general paralysis of the insane, in which sclerosis of the cord, following myelitis, was the earliest manifestation. He was removed to the Nottingham Borough Asylum, and Dr. Powell tells me he has no doubt he was suffering from general paralysis of the insane. By April 2nd, 1887, he was unable to walk without assistance, and occasionally exhibited delusions and hallucinations, but they soon disappeared. Shortly afterwards, he was removed to the Derby County Asylum, where he died in June 1888. Dr. Lindsay informs me that it was an undoubted case of general paralysis. To Dr. Lindsay and Dr. Richard Legge I am indebted for some microscopic sections of the brain, medulla, and spinal cord. There was marked sclerosis in the cord, affecting chiefly the periphery, as if secondary to meningitis, and only extending deeply in the lateral columns, and chiefly in, though not strictly limited to, the crossed pyramidal tracts. There was no sclerosis of the posterior columns. Everywhere the nervous tissue seemed to be in a low state of nutrition. Many of the nerve fibres were degenerating, as were also the ganglion cells, which had in large part lost their processes. The bloodvessels were very large and full, and they were surrounded by unusually large spaces (? dilated lymph sheaths), apparently due to the shrinking of the nerve tissue. This appearance was very striking. The walls of the vessels were much thickened. In many places the nerve fibres had disappeared, and their places were occupied by granular matter. In the brain and medulla the changes were somewhat similar, and in the cortical layer of the brain were numerous areas of cellular infiltration. The condition of the limbs while the patient was in the hospital was abundantly explained by the annular and lateral spinal sclerosis.

CASE 2. *General paralysis; abundant physical signs; no delusions; memory good.*—J. R.—, aged thirty-one, a waiter, was admitted into the Nottingham General Hospital under my care in April, 1887, complaining of general loss of power and mental depression. He was a well-developed, well-nourished man. He had been married several years, and had a healthy family. There was no evidence of syphilis, and he stated that he did not take alcohol to excess. His illness began about a year previously, when he was camping out with the Volunteers for eight days, during which it rained nearly every day. Before this time he had been quite well, and ever since he had been more or less ill. He got a severe catarrh at the time and had a cough all the following winter. Six months before admission he had a stroke and lost power in the arm and leg on the left side. He regained use in them on the following day, but ever since that side had been weak, and the arm and leg trembled if he overtaxed them. A few months afterwards he had some kind of fit, fell down, did not lose consciousness, but could not see; everything seemed dark. Since then he had had several of these attacks, and suffered more or less constantly from headache, giddiness, and tremors in the limbs. There was nothing peculiar in his gait, and he could stand with his eyes shut. There was no symptom of incoordination. The knee jerk was present on both sides, but was somewhat exaggerated on the left. The pupils were equal, but somewhat contracted; they responded to light and accommodation; the discs were normal. The common sensibility was unaltered. The patient varied very much from day to day, and sometimes seemed nearly well. He complained of his sight failing. He was sent for a few weeks to a convalescent home, and was readmitted in July, 1887. During the

interval, on several occasions his legs had suddenly failed him and he had fallen down. His speech, which before was rather thick, was now much worse. His tongue and lips trembled a good deal. The pupils were still equal, but contracted to the size of a No. 2 catheter, and scarcely reacted at all to light or accommodation. The expression of the face was now very blank. There was exaggerated plantar reflex and some ankle clonus. He slept badly, was very irritable, and was often low-spirited. He had no delusions at all. He did not complain of headache. A year later I found him much more feeble, and unable to walk without support. He spoke with much difficulty, pausing between each word. There was much tremor of the lips, and the tongue could only be put out slightly by jerks. The pupils remained equal and contracted. The memory was fairly good. There were no delusions, but otherwise it seemed a typical example of general paralysis.¹

CASE 3. *General paralysis in a woman, resembling disseminated sclerosis.*—H. D.—, aged thirty-two, single, a machinist, was admitted on Sept. 16th, 1885, complaining of numbness of the arms, trembling of the whole body, and difficulty in articulation. Her illness began about eight months before. Previously to that she had been stout and strong. She had led rather a loose life, but there was no direct evidence of syphilis. She was very thin, and had been under-fed for a long time. She was very dark, and had black hair cut like a man's, but worn rather long. Her general aspect was extremely "wild," and she looked frightened. She was very fidgety, but not distinctly choreic. She could put out her tongue, but not keep it still; it was very tremulous. The facial muscles were very tremulous, especially those that moved the lips. She had great difficulty in articulation, and it was difficult to understand what she said. She slept well. The arms when held out were tremulous, but she could grasp any small objects like a pin firmly and accurately. The superficial plantar reflex was much exaggerated. The knee jerk was quite absent on both sides. There was no distinct ankle clonus, but marked muscular hypertonicity. The legs were constantly trembling, both when she was sitting and lying, as in a person shivering with cold. No alteration of sensation could be detected. The temperature was normal; urine copious, pale, and free from albumen; no local wasting of muscles. Menstruation had been regular till four months previously; since then amenorrhœa had supervened. There was no suspicion of pregnancy. Six weeks later she had improved in some respects. The trembling of the legs had ceased, and she was able to walk, but the gait was ataxic. She could not hold a pen, though she could grasp it in the middle like a stick. There was no evident impairment of the muscular sense, though this and other investigations were rendered difficult by her low degree of intelligence. Shortly afterwards she became quarrelsome, and used to strike the other patients. Her mental faculties, too, became more impaired. She got up in the middle of the night, and told the patients near her she was dead. Three months later she was in much the same condition, but her mental symptoms were less prominent. She, however, insisted that the pictures on the walls were constantly moving. I asked Mr. Evan Powell, the superintendent of the Borough Asylum, to see her with me, and he agreed that it would probably turn out to be a case of general paralysis. She went to the workhouse, where she died in about a year. I did not hear of her death till afterwards, and no post-mortem examination was made. The resemblance to disseminated sclerosis was very close, but the absence of the knee jerks and of muscular spasm at any stage, and the extensive affection of the face and tongue, together with the mental symptoms, render it much more probable that it was general paralysis of the insane.

CASE 4. *General paralysis following an injury to the head.*—G. G.—, aged thirty-three, a coal miner, was admitted on March 31st, 1888, complaining of irregular pains. An elder sister is "queer in her head." Till two years previously the patient drank very heavily. A month before his admission some coal fell on his head and rendered him unconscious for a short time. Since the accident he had complained of pains in his head and a feeling of chilliness all over the body. He is said to have been "queer in

his talk," to have been very restless, and frequently to have shouted all night. When he was about to come into the hospital he wanted his wife to buy everything new for him. He was a well-developed, muscular man, and no trace of injury to the head could be detected. The pupils were unequal. His articulation was very thick and slurred, and his speech slow. There was very marked twitching and tremulousness of the zygomatic muscles and of the tongue. His general intelligence was certainly defective. The knee jerks and the plantar reflexes were much exaggerated. He walked fairly, and could stand with the eyes closed. He was treated with bromides. He soon lost the pains in the head, and improved somewhat in general condition. His temperature was always normal, and there was no indication of meningitis, unless of a chronic form. He complained incessantly of the food, which was good, saying it was not fit for a dog. He also complained to his wife that his clothes (which were almost new) were not worth three halfpence. The sister of the ward said that he was very odd, and sometimes childish in his behaviour. One night he dragged his bedstead into the middle of the ward without any reason. He also used to run about the garden like a little boy. One day he showed, with great glee, a small penknife his mother had given him, and enlarged greatly on the value of it, and on the fact that it was real tortoiseshell. He very soon afterwards left the hospital. The diagnosis was that it would probably turn out to be general paralysis in the early stage. About three weeks later, his wife stated that her husband had been very violent, and had assaulted her and threatened her life with a poker. She applied to the police, and he was brought before the magistrates and convicted. This case hardly comes within the same category as the rest. The onset was rapid, and he will probably very soon require removal to an asylum. He has one fixed delusion, but no grandiose ideas. The marked mental symptom is partial dementia; the physical changes are very marked.²

CASE 5. *General paralysis associated with alcoholism and resembling pseudo-tubercles.*—J. S. B.—, aged forty-eight, commercial traveller, was admitted into the General Hospital, under my care, on Aug. 1st, 1888, complaining of a general feeling of illness, pains in the legs, and loss of memory. He says the last few days are a complete blank. He knows where he is, but not how he came here. He makes most contradictory statements. He is a tall, muscular, stout, finely developed man; but his facial expression is rather blank. There is no marked trembling of the face, lips, or tongue. His speech is rather thick, but he can say such words as "British constitution." His grandfather died of "paralysis," and one of his children had infantile paralysis; but there is no history of mental or nervous affections. He has had much business worry and anxiety lately, and has been accustomed to drink a great deal. The pulse is 92, very small, and weak; and the heart's action excessively feeble. He sleeps very little. The pupils are equal, rather contracted, but react to light and accommodation. The plantar reflex is exaggerated, but the knee jerk is completely absent in both legs. He can stand with the eyes closed; his gait is unsteady and somewhat ataxic. Sensation, as tested with a feather, was found to be impaired in both legs up to the middle of the thigh; localisation was especially deficient. Sensibility to pain was very much diminished, but to heat scarcely at all. In the arms, sensibility to heat and contact good, to pain diminished. A week later the mental condition had not improved. He did not know whether he had been in the hospital a week or a month, and was not sure of the day of the week. He sleeps better, but is always depressed. Subsequently he had a delusion that the matron had ordered him out of the hospital, and persisted in this delusion for several weeks. He became despondent, and frequently wept. He is also under the delusion that his bowels are never moved. About ten days after his admission he began to have epileptiform, or rather apoplectiform, seizures—probably the so-called "congestive attacks." He became unconscious for about one or two minutes, had marked dyspnoea and inversion of the eyeballs, but no convulsions, biting of the tongue, or foaming at the mouth. He had one or two of these attacks daily for two or three weeks. He is still under

¹ Case 2 has now (Dec. 4th) been in an asylum a month; he was unable to stand on his admission, and has bedsores; he has now no persistent delusions; no grandiose or exalted ideas, but much loss of memory and dementia. He had occasional attacks of violence and excitement very shortly before his admission.

² Since writing the above I have ascertained that G. G.— (Case 4) has just been admitted (July 20th, 1888) into the Nottingham Borough Asylum, with well-marked general paralysis and most abundant grandiose ideas.

treatment, but I have no doubt that he will prove to be a general paralytic.³

The foregoing five cases, together with one of locomotor ataxia of old standing, terminating in general paralysis, published separately, form a group of much interest and importance. The scantiness of the pathological evidence detracts greatly from their value, but under the circumstances it was unavoidable. I have not ventured on a diagnosis from the clinical aspect alone without being fairly familiar with general paralysis as seen in the asylums. Case 1 is of special interest as an example of general paralysis commencing in, or following upon, an affection of the cord. And in Case 4 the influence of a cerebral injury in a man of alcoholic type, and with a neurotic or insane family history, is worthy of comment.

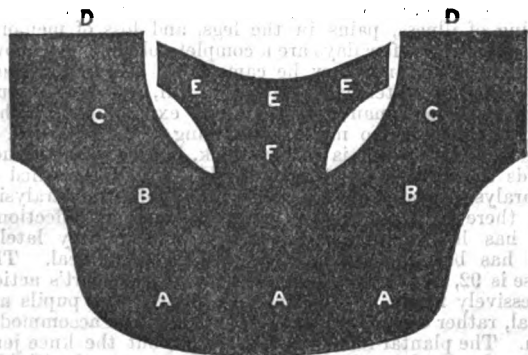
Nottingham.

ON AN INEXPENSIVE AND EFFICIENT SUPPORT FOR THE HEAD IN CARIES OF THE CERVICAL SPINE.

By RICHARD BARWELL, F.R.C.S.,
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It must have frequently happened to other consulting surgeons, as it has to me, that a child is brought to them suffering from caries of the cervical vertebræ, whether of atlas and axis or of lower bones. Often the parents of such patients cannot afford the usual *minerve* or jury-mast; or in pretty severe cases it may be advisable to prevent rotation, which those mechanisms cannot effect. Occasionally, too, the condition of the neck is such as to render it necessary, or at least highly desirable, to adapt a support that can be very quickly—indeed, immediately—applied. So it

FIG. 1.



Form of brown paper pattern, approximately given. A A A, Part that lies on the chest, the edge being a little above the line of the nipples. B B, Part that lies on the shoulders. C C, Part that lies on the scapulae. D D, Edges that nearly meet, one on each side of the spine. E E E, Part that lies under the chin, and on the ramus of the jaw. F, Part that lies in front of the neck.

occurred in my practice about twelve years ago that a child was sent to me by Dr. Tucker. It is only right that I should say the parents did not bring the child for several days, because that gentleman would not have allowed a patient in such condition to go about with the head unsupported. The girl was not only suffering from pain, but also from that undefined dread which caused her to hold her head with her hands, to fear and avoid any approach, and to wear a peculiarly anxious, watchful expression when anyone moved quickly in her immediate neighbourhood. I was strongly impressed with the danger of letting this child leave my house lest she might fall dead in the street, unless the head were supported. I therefore adopted the following mode of splinting the neck. It is one which I have often used since, and have found very advantageous, even in less acute disease, and for continuous use.

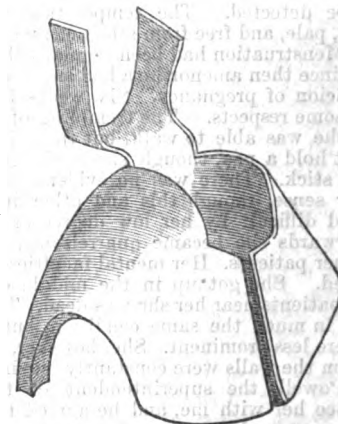
³ Case 5 has now been in the asylum about six weeks; his memory is no better, he has no grandiose ideas and no delusions, and no more "apoplectic" attacks, but is more feeble.

A pattern must first be cut in brown paper, or some such material, thus: Let us suppose the child to be about seven years old. A piece of paper, say eighteen inches by twelve, is laid, with the long axis transverse, on the neck and upper part of the chest, in such wise that when it is pressed in against the throat and under the jaw its upper anterior edge projects rather more than an inch beyond the chin. With scissors the paper is cut in a concave line from the condyle of the jaw downwards along its ramus, by the side of the throat, well outside the thyroid cartilage, to a point just above the clavicle, and about a third of its length outside its joint with the sternum. These cuts, being completed on each side, permit the flaps of paper that lie outside them to be folded back over the shoulders and scapulae in such wise that they meet on the spine between those bones. The rest is mere shaping. The part that protrudes beyond the chin and jaw can be cut away to a level with those parts. The edges of the shoulder-flap, if they press on the root of the neck, must be pared sufficiently to allow room for that part. The lappets, which on each side project beyond the shoulders, can be cut away, leaving a concave edge with the centre of the curve upon the acromion. If there be any overlapping at the spine between the scapulae, the redundancy can be pared off so that the two edges are parallel, and almost, but not quite, in contact. The pattern then assumes the shape seen in Fig. 1.

To this pattern is cut a piece of poroplastic felt, which, when softened by heat (steaming is the best), is moulded on the patient, partly by hand pressure, partly with bandage. When thus far complete the splint is of the form given in Fig. 2.

The child can wear it at once outside the shirt or chemise, and with no other precaution than placing a piece of wadding between it and the face. It will be quite a sufficient support to obviate the dangers I have mentioned, and, indeed, several of my poorer patients have used it without further addition for several months. Nevertheless, I advise that an instrument maker or bandagist be employed to

FIG. 2.



Moulded splint seen from left side and front.

arrange it thus. The chin plate should be lined with wash-leather, and may advantageously be somewhat padded; to each upper end of the fork two straps are to be sewn, the one to pass round the nape,¹ the other over the vertex; if this latter strap slip forward, the two can be tied together with a tape running in the line of the sagittal suture. Lastly, the felt should be perforated along the edges, which lie by the line of the spinous process, so that the whole appliance may be laced on.

In rather exceptional cases, the head, instead of falling forwards, has a backward inclination; such may be met by reversing the mode of cutting the pattern—that is to say, by placing the paper on the back, forming an occipital instead of a maxillary plate, and letting the edges meet and be laced over the sternum; or, if it be desirable to support the head in both directions, this can be done with very little more trouble by shaping a portion in form somewhat like a reversed L (T) at each corner, from whence in

¹ This in most cases will have to be attached a little below the top of the fork, so as to escape the ear.

the pattern the jaw-plate is cut out—that is, at the inner angles of the line marked D in Fig. 1.

As I have successfully treated many cases of cervical spondylitis with this splint, it seems to me desirable to let so inexpensive and simple a contrivance be more widely known.

Wimpole-street, W.

ON THE PRECEDENT CAUSE OF RICKETS.

BY ROBERT J. LEE, M.A., M.D. CAMB., F.R.C.P.

IN the seventeenth chapter of Dr. Glisson's treatise on Rickets¹ he discusses the question of those "precedent diseases which may be the cause of this disease..... because they leave it behind them as one of their effects." Consistently with his theory of the primary essence of rickets, Glisson admitted into his catalogue of precedent causes almost every form of disease; though it is evident that he did so, in the case of several of them, rather for theoretical than for clinical reasons. The explanation given by Glisson for the prevalence of rickets in his own time contrasts curiously with the ideas of the present day. Wealth, luxury, and idleness were, in his opinion, chiefly responsible for the malady; while we are inclined to attribute it to influences of an opposite character—to want of proper food, want of pure air, and generally to insanitary conditions more or less unpreventable in large and crowded cities. From his list of precedent causes Glisson excludes those diseases or tendencies which are transmitted from parents to their offspring—notably scrofula, tuberculosis, and syphilis. On these points his views accord with those in general acceptance at the present time. He also excludes the possible effects of peculiarities of climate and locality, and devotes separate and particular attention to them. Without denying possible influences in the causation of rickets to each of these two classes of morbid agents, we may fairly ask the question whether in every case of rickets it is possible to discover a precedent cause, which, as it were, intervenes between remote conditions and the distinct evolution of the rickety signs and symptoms. This is the question which I propose to consider. It is almost unnecessary to state that the answers to it depend entirely on clinical observation, and we must not be surprised if there are considerable differences in them.

After a careful consideration of Glisson's views on this point, I am inclined to think that if the question had been put to him, "Have you ever seen rickets develop without a precedent cause?" he would have replied that he had rarely seen such an occurrence. Possibly he might have gone so far as to say that in every case there was a precedent cause, though it might be difficult to discover it. He would certainly have denied that such influences as parental tendencies or peculiarities of locality or climate could of themselves produce the disease. Such, at least, is the conclusion one would arrive at from the arguments and statements contained in his treatise. To those who would agree with Glisson that it is generally true that rickets are the consequence of some distinct form of illness, it would be reasonable to put the question, "Is there, then, any particular form of disease which is, more frequently than others, a precedent cause?"—and this question would be the more proper as it bears directly on the subject of treatment.

Now the reason why it is difficult for us to determine this question of precedent cause is because we are not required professionally to advise in cases of rickets until the symptoms are fairly well developed. We have, then, only present conditions and the reports of parents or nurses to guide us to any conjectures we may form of the disturbing influences which have possibly been more or less active in the causation of the rickety condition. It is in such cases difficult, if not impossible, to discern clearly between causes and effects, and this the more so because the reports given of the past histories of the cases are often misleading, and we may be induced to think little of what may really have been of great importance. So far as information is afforded by the statistical method of inquiry, I think it will be found that the precedent cause which most constantly recurs in the histories of cases of rickets is some form of pulmonary disturbance, generally indicated by the term

"bronchitis," or in common language by terms suggesting a difficulty of respiration, such as "cough," "hard breathing," or such-like. And consistently with such reports we generally find that present clinical symptoms are chiefly those of some form of pulmonary disorder, indicated by rales, rhonchi, crepitation, or some other sign of morbid condition; and this, too, of such a character as to lead to the inference that it has existed for some length of time, and may therefore be fairly regarded as having played a more or less important part as a causative agent.

But the cases of most value to this inquiry are those where the children have been under observation during the period of the evolution of the rickets, and it is from the study of such cases that I have been led to think that rickets is a disease which is due principally, if not entirely, to any cause which interferes with the functions of respiration, and that the precedent cause of rickets is generally some form of pulmonary inflammation, such as bronchitis, broncho-pneumonia, or pneumonia. The occurrence of rickets after whooping-cough or measles will be found, I think, to depend chiefly, if not entirely, on the question whether there has been any pulmonary complication or not. It is also a matter of common observation that children in this country suffer from troubles of respiration after the subsidence of an acute pulmonary disorder, this chronic condition being characterised clinically by Inter-costal Retrocession, and by certain morbid signs preferentially occurring in the basic portions of the lungs. And because the examination of very young children is somewhat difficult in respect to the exact determination of the latter class of pulmonary disorders, I am inclined to think that we may judge of the extent to which proper pulmonary expansion is affected better by observation of the extent of intercostal retrocession than by the usual methods of auscultation and percussion. For if it be admitted, as probably will be the case, that the imperfect or insufficient expansion of the lungs is the determinant of intercostal retrocession, and that the one stands related to the other in direct proportion, it can be seen by a superficial examination of the thorax whether there is some pulmonary defect or not; and, speaking from personal experience, I am inclined to attach great value to this particular sign in the examination of rickety children. I have appended to these remarks a short table of fifty cases of rickets, selected from my note-books without preference, except for their being well-marked cases of the disease. It would have been easy to have given the columns containing details of parental antecedents, of the nature of the nourishment of these children, the state of dentition, and other information of more or less clinical and general interest, but I have refrained from doing so, as there was no conclusion of any importance to be drawn from them which has not already been clearly established.

Table of Fifty Cases of Rickets.

No. of case.	Age.	Present conditions.	Precedent cause.
1	2 years.	Wrists swollen; abdomen distended; spleen and liver palpable; crepitation with inspiration at right base.	Bronchitis when 6 months old, lasting 6 months; then improved, but subject to colds since.
2	11 mths.	Tenderness of body; perspiration of head; wrists enlarged; abdomen prominent; no enlargement of liver or spleen; chest constricted and full of wheezing sounds; want of resonance at both bases.	No illness till about 1 month ago, when there were "cough and bronchitis."
3	1½ years.	Large head; body tender; terminals of bones enlarged; liver and spleen natural; noisy breathing all over chest; deficient resonance at both bases, especially the left.	Mother states that the child has never had cough or bronchitis, but that 12 months ago it had a cold and "wheezing on the chest."
4	3½ years.	General tenderness; tibiae curved; terminals enlarged; liver and spleen large; noisy breathing; bubbling rales, at both bases especially.	Bronchitis when 4 months old; subject to colds since; whooping-cough 12 months ago.
5	1½ years.	General well marked rickets; noisy rales general; deficient resonance of lower two-thirds of chest.	Perfect health till 6 months ago, when there were measles and bronchitis. Respiration 62.

¹ Translation, printed by Cole, 1861.

No. of case.	Age.	Present conditions.	Precedent cause.	No. of case.	Age.	Present conditions.	Precedent cause.
6	1½ year.	Both tibiae curved; terminals enlarged; spleen and liver palpable; noisy breathing; rhonchi and râles general; deficient resonance of left base.	Bad attack of bronchitis when 8 weeks old; subject to colds since; measles and bronchitis 4 months ago.	33	2½ years.	Râles all over chest and back.	Whooping-cough when 8 to 9 months old; bronchitis followed and continued many months.
7	1½ year.	Chest transversely constricted; breath-sounds noisy, but no râles; abdomen prominent; tibiae curved; spleen not enlarged; body well nourished.	Bronchial attack about 6 months ago.	34	2½ years.	Bad rickets.	"Cough off and on for 12 months."
8	1½ year.	Tibiae curved forward; deficient resonance at both bases; chest full of coarse rhonchi and râles.	Bronchitis when 12 months old; subject to colds since; no other illness.	35	1½ year.	Well-marked rickets; general bronchitis.	Bad cough from birth; no cause except the mother having a cough.
9	1½ year.	Tibiae curved; chest full of râles; submaxillary glands large.	Bronchitis when between 3 and 4 weeks old; subject to it since.	36	9 mths.	Rhonchi and râles general.	"Bronchitis some weeks ago."
10	14 mths.	General rickets well marked.	Cough from birth, caught from the mother.	37	1½ year.	General rickets.	Bronchitis from birth.
11	18 mths.	General rickets well marked; chest transversely constricted, and full of râles and rhonchi.	Frequent attacks of bronchitis since 6 months old.	38	10 mths.	General rickets.	Bronchitis from birth.
12	20 mths.	Tibiae curved; cannot walk now; did so 3 months ago; spleen and liver not enlarged; body well nourished.	Bronchitis when 12 months old.	39	2½ years.	One of twins; the other dead; very rickety; crepitant râles general.	"Had bronchitis from time of birth (the other child died of bronchitis); the older she grew the worse she was."
13	22 mths.	Chest transversely constricted; all the curves of the bones greatly increased; no râles in chest.	Cough at birth; measles and broncho-pneumonia 6 months ago, in winter.	40	1½ year.	Legs and back bent.	Bronchitis since birth; a fit 10 days ago.
14	2½ years.	General rickets well marked.	Whooping-cough when 12 months old; began to walk early, and then "went off his feet."	41	2 years.	No decided signs of congestion or bronchitis at present.	"Nothing particular except a little bronchitis"; has never walked.
15	12 mths.	Dorsal curvature; nystagmus.	Bronchitis since 3 months old.	42	2½ years.	General rickets well marked.	Bronchitis began (in October) between 7 and 8 months ago, and continued all the winter; congestion of the lungs in February.
16	1½ year.	Râles general.	Measles 8 months ago, in January, and congestion of the lungs.	43	3 years.	Rhonchi general; well-marked rickets.	Had bronchitis last winter; mother states it was so slight as "not to deserve notice."
17	1½ year.	Legs much bent.	Last winter severe bronchitis.	44	1 year.	Back curved.	"Cough ever since birth."
18	12 mths.	Back curved.	Bronchitis when 3 months old; never well since.	45	1½ year.	Very marked rickets.	"Ill at 11 months from dentition; a little cough ever since."
19	1½ year.	Chest flat; arms and legs bent slightly; crepitation behind general.	Bronchitis from 3 months old; severely then and repeatedly since.	46	1½ year.	Five other children all rickety; all of them have had coughs; "they are born with them." The mother is phthisical.	Had bronchitis from birth.
20	2 years.	Paralysis of right leg; general rickets.	Bronchitis when 12 months old, severely.	47	12 mths.	Well-marked rickets.	"Had bronchitis from birth."
21	1½ year.	Wrists and legs &c. rickety; abdomen swollen.	"Hacking cough from birth."	48	2 years.	Joints much swollen; body wasted; thorax very small.	Been ill for 9 to 10 months from cough; had croup when 6 months old.
22	2½ years.	General and extreme rickets.	"Bronchitis from so early that he seemed born with it," and frequently since; the mother had bronchitis severely before confinement.	49	2½ years.	Fine child at birth; began to waste at 9 months; has consolidation of right lower lung; there is not much cough or sign of serious trouble.	Dentition at 9 months; said to be the cause.
23	11 mths.	General slight symptoms.	Bronchitis 2 months ago.	50	1½ year.	No distinct sign now of bronchitis.	Had acute bronchitis when 6 months old; never strong since.
24	2½ years.	"Knock-kneed."	"Little touch of bronchitis when 5 months old."	Savile-row, W.			
25	3½ years.	All over chest rhonchi and râles; convulsions; left leg curved.	Bronchitis when 12 months old very badly, and now again.	TWO CASES OF ABDOMINAL SECTION IN TUBERCULAR PERITONITIS. ¹			
26	1½ year.	Generally rickety.	Well till 10 months old, then whooping-cough badly and bronchitis; had "a kind of bronchitis" since birth.	BY A. W. MAYO ROBSON, F.R.C.S., HONORARY SURGEON, LEEDS GENERAL INFIRMARY, AND LECTURER ON PRACTICAL SURGERY AT THE YORKSHIRE COLLEGE.			
27	2 years.	Generally rickety.	Bronchitis at 3½ months old, badly.	CASE I.—E. L., aged sixteen, was admitted to the infirmary on Feb. 2nd, 1888, with tubercular salpingitis and acute peritonitis. It was stated that she had been ailing during the previous twelve months, and had suffered from constipation, for which she had taken strong aperients; she had felt languid, had lost flesh, and had suffered from a cough. On Dec. 27th, 1887, after three days' constipation, she had severe pain in the abdomen, and felt sick and ill, but did not vomit; from this date she never recovered her strength, which had rapidly failed, especially after she began to vomit on Jan. 10th. A medical man saw her on Jan. 27th, 1888, and found the abdomen much distended. There being a wave of fluctuation across the lower part, a trochar was introduced midway between the umbilicus and pubes, and four pints of fluid withdrawn. The fluid was			
28	1½ year.	A well-marked case of knock-knee and general rickets.	"Cough for several months."				
29	2½ years.	General bronchitis and rickets.	Bronchitis 4 months ago; still present.				
30	1½ year.	General rickets.	Whooping-cough 12 months ago; measles 3 months ago, and bronchitis.				
31	3½ years.	Well-marked rickets; general crepitation.	Measles at birth; bronchitis when 9 months old; has never lost it.				
32	1½ year.	Well-marked rickets.	"Bronchitis almost from birth."				

¹ Reported by Mr. Berkeley G. A. Moynihan, M.B., House Surgeon.

greenish-yellow, specific gravity 1020, highly albuminous and alkaline, and contained granular cells, but no cholesterine. Although the tapping gave relief, she continued to get weaker and thinner, and became irritable and short-tempered. She had not menstruated since December.

On admission the patient looked extremely ill, being apparently in a dying state; her face was deadly pale, with dark, well-marked rims round the eyes; pulse 144, hard, and wiry. If allowed to sit propped up in bed, she was tolerably easy, but on attempting to lie down she had acute abdominal pain. Mucous râles could be felt throughout both lungs, and there was questionable dulness at the apices. The abdomen was much distended and tympanitic, the skin being highly stretched, thin, and glistening. On percussing the abdomen, there was resonance all over; on palpation, a slight feeling of resistance was felt in the region of the umbilicus. A wave could be obtained from one side of the abdomen to the other, as if distended bowels were floating in fluid. The bowels were confined. A catheter was passed, and two ounces of perfectly normal urine withdrawn. A full consultation of the staff was held, the unanimous feeling being that unless operative measures were speedily adopted early death was inevitable, but that operation could give only a small chance of relief.

On Feb. 4th abdominal section was performed, with full antiseptic precautions. Chloroform having been administered, an incision about two inches in length was made between the umbilicus and pubes. On exposing the peritoneum, it was found to be so adherent to the bowel immediately beneath it that had it not been for the greatest caution the gut must inevitably have been opened. On raising the peritoneum with dressing forceps, a small entrance was effected, through which, by means of the director, the bowel was gently separated, the incision being then enlarged and the finger introduced. A large quantity (several pints) of yellowish serous fluid escaped. On introducing two fingers into the peritoneal cavity, there was discovered deep down on the right side of the pelvis, a soft mass of friable rough material, which, after some separation had been effected, was found to be an enlarged and adherent Fallopian tube, the ovary being felt in its normal position and apparently healthy. A pedicle was made out on the uterine side of the enlarged mass, which was ligatured by the Staffordshire knot, the tube being then cut away beyond. The intestinal coils were much matted to one another. The pelvic cavity was irrigated with several pints of salufer lotion (ten grains to the pint). A Bantock's drainage tube was introduced, the rest of the wound being closed with silk sutures and covered with a dressing of salufer wool; jaconet was applied round the drainage tube and a sponge placed over its orifice. The mass removed was found to be the Fallopian tube, including the fimbriated extremity; it was much dilated, and must have ruptured some time previously, as the edges were everted and thickened. It was lined by a smooth membrane, and was everywhere closely studded with grey granulations of miliary tubercle.

The patient slowly rallied from the operation, and was regularly fed with nutrient enemata every four hours. She had very little sickness, and the next day could take Brand's essence and champagne, after which more substantial food was taken. Free drainage occurred through the tube, necessitating several dressings a day for the first two days, morning and evening dressings for the next three days, and then only daily changes. The Bantock tube was replaced at the end of the week by a rubber tube, which was gradually shortened as the wound contracted. The distension of the intestines subsided from the time of the operation. Flatus passed within twenty-four hours, and a natural formed motion was passed on the third day. A catheter was not required. Although the cough continued and the chest symptoms were manifestly advancing, the patient felt herself so much better during the third week as to wish to sit up out of bed, which she was allowed to do. The temperature, which before operation was constantly elevated, varying from 101° to 103°, after operation became normal every morning, rising towards evening. The chest symptoms were apparently little influenced by the relief given to the abdomen, so that her life was only saved for a month.

At the necropsy, the pleuræ showed many miliary tubercles, especially at the left base, where the lung and diaphragm were firmly connected by adhesions. The diaphragm was extensively tuberculous. There was a small amount of fluid at the right base, which had been diagnosed during life. Mucopurulent matter occupied the small bronchi.

Both lungs were infiltrated with miliary tubercles, but there was little consolidation. The peritoneum was greatly and universally thickened, and infiltrated with tubercular matter, the intestines being matted by firm adhesions.

CASE 2.—A. S., aged thirty-one, married, was admitted during April, 1884, for pelvic pain and frequent micturition, which symptoms had existed for some months, rendering her a chronic invalid, although it was only lately that she had been obliged to take to her bed altogether. Her general health was much impaired, and she had lost weight considerably. She suffered from night sweats and an evening rise of temperature. The abdomen was distended. Abdominal examination revealed a pelvic swelling on the left side of the uterus, which was diagnosed to be a left pyo-salpinx.

On May 24th abdominal section was performed, but before the general abdominal cavity could be opened it was necessary to separate the great omentum from the pelvic brim, to which it was firmly attached. The small intestines were then found to be closely matted together in the pelvis, covering the whole of the tumour in such a manner as to render it impracticable to detach them, especially as the whole peritoneum was closely studded with miliary tubercle. After sponging out the cavity, the wound was closed by silk sutures. The patient made an uninterrupted recovery, the wound healing by first intention. The temperature, elevated previously to the operation, was normal for some days afterwards, and the patient expressed herself as feeling better than before, although the pelvic abscess had not been evacuated.

Twelve days after the laparotomy, aspiration through the left side of the roof of the vagina was performed, three ounces of extremely fetid pus being withdrawn. She was so much relieved, both locally and generally, that she was able to return to her home on June 13th, within three weeks of the abdominal section. Her health improved, and she was soon enabled to undertake some of her household duties. When heard of some months afterwards, she was in feeble health and subject to diarrhoea. Although inquiries have been made, no news has been received of her since.

Remarks.—At the present time the treatment of tuberculosis is engaging the attention of the profession to such an extent that the reporting of the two preceding cases will, I trust, need no apology. In the second example, the presence of miliary tubercle studding the whole surface of the peritoneum did not in any way add to the dangers of the abdominal section, which, on the contrary, seemed to be followed by a temporary arrest of the disease and a decided improvement of the patient, who recovered sufficiently to be able to resume her household duties, although when heard of six months afterwards she was still in feeble health and subject to diarrhoea. In the first case, the acute peritonitis, for which the operation was undertaken, seemed to be the result of a rupture of a cystic tubercular Fallopian tube, the removal of which, together with the irrigation and drainage of the abdominal cavity, undoubtedly prolonged the life of the patient for a month; and, as the necropsy proved, more could not have been hoped for, as the lungs and other organs were extensively tuberculous. It is interesting to note how the extreme intestinal distension subsided within twenty-four hours of the operation, and that the bowels recovered their tone sufficiently to act naturally within forty-eight hours of being acutely inflamed and distended.

Leeds.

ON A MILD FORM OF SEPTIC TOXÆMIA OCCURRING AFTER ENEMATA.

By G. H. BURFORD, M.B.,
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THE absorption into the blood and lymph streams of elements from decomposing masses in the intestine is a common result of habitual constipation. The condition is chronic, and its effects are slowly induced. I wish to call attention to a form of toxæmia, similar in origin, but suddenly induced and characterised by symptoms, at least in pronounced cases, peculiar to septic intoxication of a mild type. Inspissated but decomposing fecal masses, frequently associated with an arid, scarcely secreting mucous membrane, are innocuous so long as their dryness is maintained.

If in such case a quantity of warm bland fluid be suddenly introduced from without into the gut, solution of some of the organic products of decomposition is effected, osmosis goes on even during the short period of temporary retention, and lymph channels and blood stream are charged with a dilute diffusible septic poison. As from other parts of the alimentary canal, the effect of such general diffusion is exhibited often as a sharp attack of urticaria; but as here the diffusible poison is specially noxious, mild septic symptoms are sometimes superadded.

CASE 1.—A girl aged twenty-one, with marked gouty diathesis and intractable constipation, was under treatment for chronic endometritis. Enemata were freely administered, with the usual results, from time to time; but at length, after some days' constipation, an enema was followed by a general erythematous rash, excessively irritable, diffused over the trunk and extremities. There was also some congestion of the tonsils and fauces, but no rise in temperature was recorded. In the course of the day the rash declined, and after forty-eight hours it had quite subsided. There were no further symptoms of note.

CASE 2.—Mrs. C—, aged thirty, also under treatment for endometritis, had various mild aperients ordered for troublesome constipation; these were finally supplemented by an enema. Within a few hours a diffuse rash appeared, decidedly urticarial in type, and with considerable irritation. A sore throat with swollen tonsils further accompanied the rash. The latter gradually subsided, and in forty-eight hours was gone; but the faucial engorgement lasted some four days.

CASE 3.—Mrs. S—, aged thirty-six, convalescing from Emmet's operation, had an enema administered, and this was followed next day by a diffuse and well-marked urticaria, the wheals being very pronounced. No sore throat accompanied this eruption. In two days the skin was again quite clear, and no trace of the attack was left. Some time afterwards a second enema was necessary, and this also was followed by a similar rash, but much less pronounced and less diffused. A third enema, after a further lapse of time, had no sequelæ whatever. No pyrexia was recorded during these attacks.

CASE 4.—Mrs. A—, aged thirty-two, after dilatation of the cervix, had an enema administered, which was followed in about twelve hours by a diffuse papillary rash, with no obvious wheals, although highly irritable. In about two or three days this rash had quite subsided, and there were no further symptoms to record. The patient declared that she was never subject to rash of any kind.

CASE 5.—Miss H—, aged thirty, convalescing after operation for division of the cervix, had an enema given, subsequent to which there appeared a red rash of the urticarial type, chiefly involving the extremities and trunk. No throat symptoms or pyrexia were present. After forty-eight hours the rash had quite disappeared. Another enema, administered some time antecedently, had not produced any such effects.

CASE 6.—L. S—, aged fifty-three, after ablation of a lympho-sarcoma from the abdominal wall, made a slow recovery, during which aperients were perpetually required and enema occasionally given. After the last enema a rash rapidly developed, diffuse, irritable, erythematous, and with distinct symptoms of general malaise. The latter lasted a few days, although there was no pyrexia and no sore throat. The rash soon disappeared, being quite gone in two days, and did not recur.

CASE 7.—Mrs. G—, aged twenty-nine, convalescing from amputation of the cervix uteri. The administration of an enema in this case was followed in a few hours by a typical urticaria, diagnosed as such before the cause was discovered. This rash was diffused over the trunk and extremities, was excessively irritable, and with wheals minute but obvious. No further symptoms appeared, and the skin affection subsided in the usual time. Subsequent enemata were not followed by similar results.

CASE 8.—Mrs. D—, under treatment for cervical erosion and catarrh, had an enema administered, and a few hours afterwards a diffuse erythematous rash appeared, universal and pronounced. Coincident with this was a rise in temperature, and a sore throat sufficiently marked to require special medication. The rash soon declined; the pyrexia and sore throat abated in three or four days, with no recurrence. The temperature did not rise above 102°.

Three other cases, which were at the time diagnosed as suffering with rash after the administration of enemata,

but where the details were imperfectly recorded, I can adduce. Miss A—, suffering with chronic pelvic cellulitis, had a pronounced rash, but no other symptom, after the enema. Mrs. G—, aged twenty-two, convalescent after removal of vaginal cysts, had a similar rash, ephemeral in duration. Mrs. B—, with menorrhagia from fibroid, also showed similar symptoms, confined to the skin eruption. In each of these cases a true post-enema rash of erythematous type, ephemeral and localised, was noted, but with no further constitutional symptoms.

The foregoing cases constitute an ascending series, in which the symptoms become progressively more pronounced and extensive. Commencing with a simple erythematous rash, localised in distribution and mild in type, the next grade presents a typical urticaria, with minute but obvious wheals, diffused over the trunk and extremities, and lasting about forty-eight hours, with sometimes some concomitant malaise. Finally, the severest form has superadded to these skin symptoms such undoubted signs of mild septic intoxication as subacute pyrexia and a concurrent sore throat, the latter existing for from three to four days. These sequences presented themselves on the average after from 3 to 4 per cent. of the enemata administered. They are particularly liable to ensue if enemata be given within three or four days after the administration of ether, in cases where the intestines have not been thoroughly cleared out beforehand. They may appear indifferently after the use of any ordinary fluid as injection, provided it be used in sufficient quantity. With glycerine enemata, where very small quantities only are used, and which of late have been largely used in the Hospital for Women, no such results have accrued. I have seen cases where these post-enema appearances have been diagnosed as mild scarlatina or rotheln; and it is with a view of eliminating this from the category of doubtful eruptions that I have cited the foregoing cases as illustrative of a hitherto undescribed condition, as well as to record clinical observations regarding the influence of altered alimentary secretions on intestinal resorption.

Leicester.

PENETRATING WOUND OF ABDOMEN; RECOVERY.

By G. R. E. BONSALL, L.R.C.P., L.R.C.S.

ON Jan. 4th last I was called to see J. L—, aged sixteen years, son of a labourer living in a remote part, who had met with an accident about an hour previously by jumping from a height on to the handle of a pitchfork. He had been carried to his home, was undressed, and laid on a bed. The following account was given by the man working with him at the time. "The boy was on the top of some hay in a barn about fifteen feet high, and on being called threw down his pitchfork, fixing it in the ground, and sliding down became impaled on the handle. The man heard the boy's screams, and found him standing, leaning forward, with the handle of the pitchfork fixed firmly in his abdomen. He at once attempted to extricate him, and succeeded after using considerable force. The boy then walked about two hundred yards, but, feeling faint, was carried to his home, which was near."

The handle of the pitchfork had passed through the lad's trousers at the fork, slitting up the left side of the scrotum in the whole of its length to the abdominal ring, where it entered, taking an oblique course to the left hypochondriac region. A faint red line on the skin appeared on the second day, indicating the direction the handle had taken. When I first saw him, the countenance was flushed, and he complained of acute pain extending from the external abdominal ring as far as the sixth rib. Only slight hemorrhage took place from the wound. The edges of the serotal wound were brought together by sutures, with the exception of the abdominal opening, into which I passed my finger and did not detect any foreign body. There was hæmaturia during the first three days. The trousers were carefully examined by myself and others, but, owing to the loose texture of the cloth and frayed edges of the tear, it was not possible to make out that any piece was missing. A large fluctuating abscess formed about the seventh day in the left iliac region. Linseed poultices were applied constantly, and opium pill (half a grain was given every

four hours. A small opening appeared on the following day, discharging healthy pus copiously. The skin over a wide area threatened to break down. The poulticing was discontinued, and zinc ointment with extract of belladonna was applied on linen over the surface. The primary opening at the abdominal ring now also discharged freely. By the eleventh day (Jan. 14th) there were in all three small openings in the side, which were enlarged and drain tubes inserted. The wounds were treated with antiseptic dressings. He complained of discomfort in the bowels on the tenth day, which was relieved by enemata of gruel and castor oil. The motions were streaked with blood. On the thirteenth day (Jan. 17th) he had retention of urine, which was relieved by hot fomentations and opium pill. The symptoms passed off on the fifteenth day (Jan. 19th). From this date to Feb. 11th he continued to make satisfactory progress, the scrotal wound being almost healed. A decided relapse set in during the night of the 12th, when there was erythema over the abdomen, and the bowels were slightly relaxed. Anorexia was also present. Feb. 13th: Temperature 103.5°; pulse 108. Wounds in scrotum reopened. Fluctuating swelling and pain along the course of the spermatic cord, also in the left iliac fossa, with frontal headache. A mixture of benzoate of soda, in doses of fifteen grains, was given every four hours, and a night draught of chloral hydrate and bromide of potassium. 14th: Temperature 102.6°; pulse 120. Rigors and cold sweats. 17th: Temperature 102.6°; pulse 108. 22nd: Temperature 99°; pulse 84. A mixture of quinine was given three times a day. General appearance much improved. The appetite, which had failed since the 12th, returned. The patient was also given a wineglassful of extract of meat and wine three times a day, with light diet. The bowels have not moved during the past eleven days. He is not uneasy. Erythema of both knees and acute pain in the left, with swelling. No headache. Wounds looking healthy, and discharging; drainage tube gradually being pushed out. Urine high coloured; no albumen. 25th (3 P.M.): Temperature 102°; pulse 102. The bowels acted twice on the previous day; now constipated; no blood in motions. Urine thick; loaded with urates. 28th: Bowels acting comfortably. The cutaneous redness of knees has disappeared. Urine depositing urates. Appetite good. Much more cheerful. Sleep rather restless. No pain. Tongue clean. Wound of scrotum almost healed. Side wounds healthy; discharging slightly. Temperature normal; pulse 72. A mixture of bark and ammonia was given three times a day. March 2nd: Left his bed for the first time for an hour. None the worse. Slept well. Bowels regular. Urine clear and normal. General appearance improved. The erythema has disappeared entirely. No pain anywhere. Tongue clean. One of the three openings in the side had healed; the remaining two communicated, and were kept open by a drainage tube. 9th: Temperature 99°; pulse 90. From this date he gained strength daily. On March 16th, a small piece of the trousers was extracted from the opening in the side, speedy convalescence following. He walked to my surgery, a distance of several miles, on May 4th, and appeared to be in excellent health.

Remarks.—The following points in the case appear to be of more than ordinary interest. First, the course taken by the handle of the pitchfork, passing, as it probably did, between the transversalis muscle and the transversalis fascia; secondly, the bruising of the kidney, as shown by hæmaturia, following the injury; thirdly, the presence of the piece of cloth, which no doubt was the cause of the complications and retarded recovery.

Beckley, Sussex.

ANNUAL DINNER OF THE MANCHESTER MEDICAL STUDENTS.—On Nov. 27th was held the dinner of the Manchester medical students, to which ninety-seven sat down, and tickets in excess of this number were applied for by former students now in practice. Mr. Thomas Jones occupied the chair, and appropriate toasts were proposed and duly responded to.

COTTAGE HOSPITAL, CARNARVON.—On the 6th inst., Mrs. Assheton Smith formally opened this hospital, which has been established chiefly by the efforts of the Mayor, Mr. John Jones. It is situated in Segontium-terrace and Garnons-street. The premises were recently held by the Carnarvonshire Reform Club, and have been adapted for the present hospital at a cost of about £1000.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL AND THERAPEUTICAL.

BULLET WOUNDS OF BOTH LUNGS; RECOVERY.

By F. CHARLESWORTH, M.B. &c.

THE following case is interesting from the rarity of recovery after wounds of both lungs.

The patient, a native interpreter, of H.M.S. *Griffon*, when about to board a dhow on the night of September 29th, allowed his revolver to fall against the side of the boat, and one barrel went off and shot him in the left breast. The revolver was a naval regulation. The bullet entered one inch above and an inch and a half external to the nipple, and traversed the lung, its wound of exit being three inches to the left of the spine and one inch above the angle of the scapula. He then picked up the revolver, and whilst examining it another barrel went off and wounded him in the right chest. This bullet also traversed the lung, entering an inch above and an inch internal to the right nipple, the wound of exit being in the upper border of the trapezius, midway between the point of the shoulder and the middle line. He was brought to Zanzibar and sent to the French Hospital on the morning of Oct. 1st. On that day hæmoptysis commenced, and continued freely during the night and next day, then gradually decreased, and stopped at the end of forty-eight hours. From that time he never had a bad symptom of any kind, and was discharged nineteen days afterwards, with both exit wounds healed and those of entrance reduced to a superficial character.

Zanzibar.

IDIOPATHIC GANGRENOUS ERYSIPELAS.

By REGINALD NORMAN, M.R.C.S. ENG., L.R.C.P. EDIN.

THE following case may possibly interest the readers of THE LANCET.

I was called on the evening of Nov. 21st to see a child aged sixteen months. On examination, I found a blister on the flexor side of the left forearm, looking exactly like a burn. The next day the inflammation had extended to the shoulder, and at the starting-point of disease assumed a gangrenous appearance. The day afterwards the disease had spread over the chest, and on the following day over the greater part of the back, the patient dying on the third day from the appearance of the first symptom. I made most careful inquiries as to any traumatic origin, and could only come to the conclusion that this was a case of idiopathic gangrenous erysipelas, which, I believe, is rarely met with in this country. The progress of the disease was so rapid that no treatment was of any avail. I should be glad if any of my fellow-practitioners would report any similar cases, together with their views as to the origin and exciting causes of the same.

Skegby, Notts.

ANTE-PARTUM GANGRENE OF THE LOWER EXTREMITIES.

By T. H. E. MANLEY, M.D.

I AM induced to report this case for the reason that I am convinced it must be extremely rare, and, besides, it well illustrates how impossible it sometimes is to make a correct diagnosis.

I was called on Oct. 5th to see a woman, aged about forty years, now the mother of three children, the last three confinements having been premature. She was a fat swarthy individual, and averred that she was seven months pregnant and was sure she was in labour. Her last three deliveries were stillbirths; but this time, she said, she had "felt life" till two weeks previously, and even that day had been conscious of distinct movement. Both she and her husband were anxious to know if she were about to have a living child, as they had an impression that her health would be

much benefited by nursing one. I first listened for the fetal heart sounds, but owing to the depth of abdominal fat and her restless state it was difficult to make a very satisfactory examination. However, I was quite certain that I detected the feeble beat of the fetal heart, and accordingly assured the parents that their wish would be gratified with the birth of a living child; but imagine my disappointment and chagrin, after so confidently giving the parents such positive assurance, when, on making a vaginal examination, I found a breech presentation, with a peculiar feel, without natural warmth, and the skin peeling off on slight rubbing. I said nothing until I had brought a foot down and found it dead from the toes upwards. Then I had to admit that I was mistaken, and that the child was not only lifeless, but badly decomposed. With a sharp pain the infant was projected into the world, when, to my amazement, it commenced to cry with all the vigour of any full-time normal offspring. Here, indeed, was quite an anomalous state of affairs: a baby born, partly dead and partly alive. The upper extremities and body were quite natural and healthy-looking; but from the hip downwards the lower extremities were thoroughly gangrenous. The infant lived about twenty-four hours, and the mother made a good recovery.

New York.

AMPUTATION DURING THE PRESENCE OF ACUTE PHLEGMONOUS ERYSIPELAS.

By ALEX. H. CROUCHER, M.D.

MR. W. H. T. WINTER brings forward a case of amputation of the toe during the presence of erysipelas. The following, I think, will be of interest as bearing on that point.

On July 13th of this year I removed the middle finger of Mrs. B—, aged seventy-seven, for old-standing disease. The wound did not do well, and on July 16th there was well-marked cutaneous erysipelas spreading up the forearm. This increased, and by the 19th there was great swelling and oedema of the forearm, extending also to above the elbow; there was evidence of disintegration of the wrist joint from pus formation. As the fever was great and the agony of pain severe, and it was evident the disease would soon prove fatal to a person of her age, it was decided to remove the hand at the wrist joint; this was done. After the hand was removed, a quantity of pus was able to be squeezed downwards to the cut surface by pressure with the hand. The patient, notwithstanding her advanced age, and the fact that there was much albumen in the urine, made an excellent recovery, and that rapidly. There was a swelling on the anterior aspect of the elbow joint for a fortnight afterwards, but it disappeared without trouble. Four days after the operation the patient was able to sit in an armchair and partake of fish for dinner.

Eastbourne.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

SUPRA-PUBIC CYSTOTOMY; COMPLETE SUTURE OF THE BLADDER WOUND: PRIMARY UNION; SCARLET FEVER; RECOVERY; REMARKS.

(Under the care of Mr. JOHN CROFT.)

IN the case of this patient Mr. Croft endeavoured to obtain primary union of the wound after removal of a calculus from the bladder by the operation of supra-pubic cystotomy, which during the last few years has been so extensively practised. At the onset of the attack of scarlet fever, when it was yet doubtful as to the cause of the high temperature, it was considered advisable to remove the superficial stitches to give exit from the wound to any fluid

which might have accumulated in it. The bladder sutures were not removed, and no urine escaped between them; the incision in that viscus had healed. Although the superficial part of the wound was thus laid open, and closed later by granulation, the suturing of the bladder was of great service; the duration of the case was shortened, and the patient rendered comfortable, being able to pass urine naturally. Various methods of treatment of the wound have been employed after this operation, and many different opinions expressed on the question as to whether sutures should be used or not. Sir Henry Thompson¹ says: "I have seen no danger of infiltration if the opening is left quite free for the purpose. The only attempt I have made to limit its extent has been by introducing a large suture about an inch below the upper angle through the abdominal walls, and sometimes another an inch below that, but I have never used a single suture in the bladder." In 1750 Pallucci proposed a perineal incision for drainage, and suture of the abdominal wound. Côme, in 1758, proposed suture of the wound. Pinel Grandchamp, in 1826, proposed suture of the bladder wound. Baudens sutured it after extraction of a bullet, and Bruns practised suture of the bladder. In healthy conditions of urine and bladder there is no doubt that much can be done by suturing. Parker² records a typical case in which he obtained primary union of the entire wound after suturing without the employment of a drainage tube. Others have done the same, but in the majority of recorded cases the external wound has not been completely closed, surgeons having preferred to make provision should there be any extravasation of urine. Pilcher, who used harelip pins for the external wound and three rows of sutures in one case, says³ that suture of the bladder should be performed by Gély's method, "en piqué entrecoûpe," and not neglected as in France. By means of the suture the after-treatment may be shortened by ten days. He denies that infiltration of urine is more frequent after suture of the bladder wound. Svensson of Stockholm⁴ considers that the application of some sutures to the bladder serves to check posterior hæmorrhage, and may be requisite for the purpose; his experience is that posterior hæmorrhage occurs in an eighth of the cases if the sutures are not applied to the wound in the bladder.⁵ Primary union was obtained in eight out of eighteen cases of suture of the bladder in children under fifteen, and in adults two out of eight.⁶ Meyer collected forty-one cases, of which the wound reopened in seventeen; it is not stated what the treatment of the superficial wound was. It is said that nearly one-third of the cases of suture of the bladder have healed by first intention. The opinion is that no catheter should be employed after the operation when the bladder wound is thus united. The method of using forceps to close the urethra in case of the performance of the operation in the female, as done by Mr. Croft, is one worth remembering, as it proved efficacious, and no ill effect followed. Its employment made the use of any special apparatus unnecessary.

F. M—, aged eight, was admitted on May 16th, 1887, when he was suffering from the ordinary symptoms of stone in the bladder. The symptoms were first observed three years ago. On sounding, a small stone was struck. The urine had a specific gravity of 1020; it was alkaline, but not offensive, and did not contain any albumen.

On May 20th supra-pubic cystotomy was performed. The bladder was distended and a rectal bag used. A small lithic acid calculus was removed. The bladder was washed out with a 20 per cent. solution of boracic acid. The opening in the bladder was carefully closed by the insertion of ten sutures, which were introduced after Lembert's manner. Five sutures of fine silk were made to alternate with five of prepared gut. The bladder was again syringed out, and shown to be water-tight. The external wound was closed with the help of catgut sutures through the linea alba, and silk sutures in the more superficial parts.

On the second day after the operation a red rash came out, accompanied by sharp constitutional disturbance. This proved to be scarlet fever. In a month's time he was convalescent from this attack, but in about another three weeks

¹ Diseases of the Urinary Organs, 1888.

² THE LANCET, vol. ii., p. 9, 1886.

³ Annals of Surg., 1886, p. 357.

⁴ THE LANCET, vol. ii., p. 581, 1887.

⁵ See Case of Secondary Hæmorrhage after Suture, THE LANCET, vol. i., p. 930, 1887.

⁶ Sir W. Mac Cormac, Harvelan Oration, Feb. 1837: Statistics of ninety-one cases.

he suffered from a relapse. During this severe constitutional illness the wound in the bladder remained perfectly watertight and healed soundly. No urine escaped at any moment by the wound, and it all came naturally by the urethra from the time of the operation. The superficial part of the external wound was relieved of its sutures on the day on which the temperature ran up and the rash appeared. This part therefore healed by granulation.

Remarks by Mr. CROFT.—The case is worth recording for this reason: primary union of the wound in the bladder was obtained in spite of the very adverse circumstances of the general illness from scarlet fever and the local loss of support in consequence of the early removal of the superficial sutures. The following case did not occur in my hospital practice, but I refer to it as illustrating this operation for large calculi in the female bladder. The patient, aged twenty-five, had suffered from paraplegia for six years, with more or less incontinence of urine. The symptoms of stone had only been recently observed, and its presence ascertained. I considered that it was better to remove the concretion by the supra-pubic method, as it was a very large one. This was done early in July of this year. The rectal bag was used, and the bladder injected with about five ounces of warm boracic solution, which was retained in the bladder by a light clamp forceps placed on the orifice of the urethra. The peritoneum extended low down, but was easily held out of the way; and the stone, which consisted of mixed phosphates, and weighed a little more than three ounces, was removed after dilatation of the incision made into the bladder. In this instance, considering the character of the urine, the presence of chronic cystitis, and the nature of the wound in the bladder, I did not suture the bladder wound, but closed the external wound with four silk sutures, fixed a drainage tube in, and applied dry iodoform dressing. On the second day some oedema was observed over the right half of the sacrum. On the seventh day two sutures were removed and the wound shortened. The remaining sutures and the tube were removed on the ninth day; the wound had permanently closed on the nineteenth day. In this patient the orifice of the urethra projected in an unusual manner, and I was enabled to make use of this fact, employing the method mentioned, which proved not only effectual, but also harmless. I ascribe the condition of the urethra to the irritation of the urine constantly passing from the inflamed bladder, and to the more recent straining from the presence of the stone.

LONDON TEMPERANCE HOSPITAL.

STRANGULATED INGUINAL HERNIA; KELOTOMY; REMOVAL OF SAC; MENTAL DISTURBANCE, CULMINATING IN ACUTE MANIA ON TENTH DAY; RECOVERY.

(Under the care of Dr. W. J. COLLINS.)

THE mental derangement which followed the operation for hernia in this case presents many points for consideration, and our readers will do well to consult the paper by Dr. Savage to which Dr. Collins refers in his remarks. For the subjoined notes we are indebted to Dr. W. Winslow Hall, C.M., registrar and pathologist.

At 1 A.M. on Sept. 17th, 1888, J. S.—, a healthy-looking man of sixty-nine years, rose to micturate. For sixteen years he had suffered from a reducible left inguinal hernia, and he habitually wore a truss. On this occasion he was wearing no truss, and, as he stood and strained, the rupture came down. He found that it was larger than usual, and quite irreducible. In the course of the morning a medical man tried twice to reduce it by taxis, but failed. At 3 P.M. the patient was admitted to the London Temperance Hospital, and was seen by Dr. Collins. Taxis was tried, but without success. Fifteen minims of tincture of opium were then given, and, the patient having been laid in a warm bath, taxis was again used unsuccessfully. Then chloroform was administered, but repeated taxis was still futile. Dr. Collins therefore operated, making the usual incision. He dissected down, opened the sac, divided the stricture, returned the bowel (which was glistening and damson-coloured), ligatured the sac at the level of the internal ring, and removed its fundus. After irrigating the wound with a solution of perchloride of mercury (1 in 1000), a drainage tube was placed along its whole length, the edges were brought together by silver sutures, iodoform was puffed over the line of junction, and iodoform wool

was applied. The quantity of chloroform used during the operation was six drachms and a half. At 7 P.M. the patient took twenty minims of tincture of opium, and ice was sucked occasionally.

Sept. 18th.—The man complained of nausea, and said he had been sick four times. His tongue was dry and shaggy; he had slight epigastric tenderness, but there were no other abdominal symptoms. In the afternoon his temperature reached 99° 6', but in the evening it fell, and it never again reached that level. His mental attitude, however, attracted attention. He was garrulous and weakly amiable. He complained of headache, and was much annoyed by the noisy traffic in the street outside the ward.

20th (third day).—The wound was dressed, and was found to be uniting by first intention. The tube had been displaced, and lay altogether outside the wound. Iodoform was puffed on, and iodoform wool was again applied. Beef-tea was given. The urine had been alkaline, with a specific gravity of 1024, and free from albumen ever since the operation. Mentally, the man was in the same state as on the day after the operation.

22nd (fifth day).—The patient was free from pain and sickness, but his tongue remained dry and coated. His headache and intolerance of noise continued, and the night nurse noticed that his manner was strange. He himself complained that he was becoming deranged.

24th.—The bowels acted for the first time.

25th.—Wound dressed; there was slight separation of the edges. Fish and milk were added to the beef-tea diet. The night nurse reported that during the night he got up and walked about the ward, but seemed to have no delusion.

26th.—Retention of urine was found, and twenty ounces of urine were drawn off by a soft rubber catheter; this urine was clear, had no deposit, was acid in reaction, and contained no albumen. During the night he was very restless.

27th.—At 5 A.M. the patient took some milk-and-water. Then he became noisily delirious, and refused all food and drink. At 8.30 an enema of milk and Brand's essence, with twenty grains of bromide of potassium and fifteen of hydrate of chloral was administered. He persisted in getting out of bed to look for a policeman; consequently he was strapped down at 10 A.M. The wound was dressed, and it was found that the upper end of the incision had healed, while the lower end continued to discharge slightly. No iodoform was used. Pulse 140; temperature 99°; respiration quick; copious perspiration. At noon the fourth of a grain of morphia was given hypodermically, and he slept till 6 P.M. On waking he was noisy again, and continued to shout "Police!" and "Murder!" At 9 P.M. he was placed in a separate ward. As he had passed no urine, a catheter was introduced and twenty-eight ounces drawn off at midnight.

28th.—The patient continued in the same excited condition, shouting "Murder!" and declaring that his attendants were trying to poison or otherwise kill him. At 1 P.M. he had another hypodermic injection of a fourth of a grain of morphia. Small quantities of milk, beef-tea, Brand's essence, and veal broth were administered with difficulty.

29th.—During the day the same state of matters continued. But during the night he was less violent, though he had no sleep.

30th.—At 11 A.M. he began to shout again, and continued to do so till 5 P.M. Then he slept most of the evening, took plenty of nourishment, and passed a quiet night.

Oct. 1st.—The patient was quiet and sensible all day. He was again feebly amiable, and was quite aware that he had been mentally deranged.

2nd.—He had a quiet night, and was perfectly rational. The wound had healed completely. In spite of his violent efforts during the attack of mania there had been no bulging at the wound. During the day he was removed to his home close to the hospital.

8th.—The patient came to see Dr. Collins, sound in body and mind, and full of contrition for the trouble he had given.

It is noteworthy that there was no history of nervous disease in the family of this patient. His ancestors were all healthy, long-lived, country people. As for the patient himself, his wife is certain that for the last fifty-two years and a half he has had no nervous symptom beyond an attack of sciatica sixteen years ago. Forty years ago he had acute rheumatism. The attack of acute mania might have been due either to iodoform poisoning, or to the anxiety and worry

of the hours preceding the operation, or to the action of the anæsthetic. The theory of iodoform-poisoning may be put aside, for the total quantity used was small; there was almost no absorbing surface; the symptoms did not tally with those present in iodoform-poisoning. Probably both the anxiety and the anæsthetic contributed to the mental break down.

Remarks by Dr. COLLINS.—Here was an amiable, well-behaved old gentleman, who went through an uncomplicated operation and cure of a strangulated inguinal hernia without a single adverse traumatic or intestinal symptom, yet who, after a few days' childish imbecility, broke out on the tenth day after operation into an acute attack of mania. The search for the cause of a change as profound as it was transient in the mental arrangements of this patient must be instructive, even if futile. Was the causation simple or single, or complex and contributory? Family and previous history are silent of suggestion. The intestinal strangulation, so rapidly relieved, the operation itself, or the subsequent process of repair, alike devoid of damaging incident, must, I think, be acquitted. The restricted dietary of the first few days can hardly be allowed to have had other than weakly predisposing influence. Dr. Hall, in his note, has hinted at chloroform as the possible cause, and has referred me to Dr. Savage's valuable article upon Insanity following the use of Anæsthetics.¹ I am inclined to believe that chloroform was the exciting cause of the mental disturbance in this case. Fatalities under chloroform are unfortunately not as rare as could be desired, but records of after effects of chloroform of a serious or alarming character are very few and far between. Is it that they do not happen, or that when they happen their explanation is misapprehended; or is it that the very incalculable beneficence of chloroform itself has created an indisposition to allow occasional unpleasant results? For my own part, I believe that cases of mental disturbance following chloroform administration, though rare, are not very rare—not quite so rare as the scanty literature upon the subject would suggest. Dr. Savage's paper above referred to appears to be the only attempt to collate the evidence upon the subject. He lays down the very plausible doctrine that any cause of delirium may start insanity, either a transitory mania or a persistent dementia. When the profound changes which chloroform is known to effect in the blood, and the equally profound, though less understood, changes it presumably effects in the cerebral cells, are considered, the surprise is rather that mental disturbance consecutive to chloroform anæsthesia is so rare, than that such cases should be regarded as exceptional. The analogy with alcohol delirium and alcohol dementia is at once apparent. In many cases it is possible that the operation is accused, whereas the anæsthetic which it necessitated is guilty. Witness Mr. Barwell's case in the Clinical Society's Transactions, vol. xviii., p. 190, headed "Unusual Sequela of Ovariectomy." The particulars were almost identical with those of the case related above: uncomplicated ovariectomy in a young woman; on the seventh day hysteria; on the ninth acute mania; finally recovery, and admission that "she had been mad." Here the possibility of the anæsthetic being the cause of the excitement is so absent from the mind of those concerned that the nature of the anæsthetic employed is not mentioned; it is not enumerated in the list of five possible causes which Mr. Barwell discusses; and, moreover, chloroform was administered as an antidote, without much apparent benefit. The possibility of the iodoform employed in the dressing having been absorbed was suggested; but the quantity used was small, and owing to the almost immediate union of the wound there was practically no surface for absorption. Of course the close kinship between chloroform and iodoform should be borne in mind, both being tri-haloid derivatives of marsh gas (CH_4 —viz., CHCl_3 and CHI_3); and cases of poisoning by the latter, presenting somewhat similar symptoms to those detailed, have been recorded. Branton² says: "In slight cases iodoform causes sleeplessness, headache, irritability, and loss of memory; in severe cases, maniacal attacks, hallucinations, or melancholia." The prognosis in cases of this kind, in accordance to Dr. Savage, not always so good as the sequel to any case would suggest; presumably the gravity is in ratio to the predisposition from other cause or causes. In treatment I would insist on ample nourishment, forcibly administered if persuasion fail. Easily assimilable, unstimulating diet is here, as in so many other nervous disorders, of paramount importance.

¹ British Medical Journal, Dec. 8, 1887.

² Pharmacology, p. 729.

TIVERTON INFIRMARY.

A CASE OF MEDIASTINAL GROWTH; DEATH; NECROPSY.

(Under the care of Mr. MICHELMORE.)

THIS case is an example of rapidly-growing tumour of the mediastinum, and differs little from other instances of the disease. The nature of these growths is sometimes cancerous, but more frequently they are of lymphadenomatous or sarcomatous character.

W. D.—was admitted on Oct. 9th, 1888, and died on Nov. 9th following. The patient stated that his father and mother were alive and healthy. He had six brothers and four sisters, who were also in good health. No definite history of malignant disease could be traced in his other relatives. He had himself enjoyed good health until within three months ago, when he was taken suddenly ill one evening after bathing, with pains in the left side, some difficulty in breathing, and a general feeling of malaise. A medical man was sent for, who told the boy's parents that he was suffering from a severe chill. He ordered the side to be poulticed, and confined him to his bed for three or four days. The boy was unable to follow his occupation (he was a shoemaker) on account of increasing dyspnoea, extreme debility, and severe paroxysms of dry, hacking cough.

When admitted, the patient was a sallow-looking young fellow, seventeen years of age, somewhat emaciated. His breathing was very rapid and shallow, with continual expansive movements of the alæ nasi; and there were frequent attacks of harsh dry cough, which caused him to appear as if he was on the verge of suffocation. Pulse 120, very feeble and dicrotous, and scarcely to be felt at the wrist. His temperature was 100° on admission; but it fell to 99° on the following morning, and never went above this during the whole course of his illness. Urine acid; high coloured; no albumen; deposit of urates. Chest and abdomen: Covering the upper portion of the sternum and firmly attached to the bone was a globular swelling about the size of a Tangerine orange, the skin covering it being somewhat tense, and on palpation there was an indistinct feeling of fluctuation; no prominent superficial veins were to be seen on its surface, and there was no glandular swelling in the axilla or in the subclavicular region. Lungs: Increased resonance on percussion, loud breath sounds, and increased vocal resonance over the front of the right lung; at the base marked dulness, breath sounds very feeble, and vocal resonance much diminished. Over the front of the left lung dulness was almost complete, breath sounds could only just be distinguished, and both vocal fremitus and vocal resonance were much diminished; at the base the signs were very similar to those on the right side, but at one spot, about three inches below the inferior angle of the scapula, agophony was very marked. Heart: The heart was displaced to the right of the sternum, and its beats were heard most distinctly in the right axilla. Liver: The area of hepatic dulness was greatly increased, and the organ was enormously enlarged and irregular in shape, there being several projecting prominences.

This boy gradually went from bad to worse. The dyspnoea increased; the cough was very troublesome ("expectoration only occurred three times during his illness, and once it was of a distinctly pneumonic character"); he frequently complained of pain at the interclavicular notch, and over the liver; the left leg and thigh became very much swollen, cold, and tender to touch, especially along the course of the internal saphena vein; he suffered a good deal from nausea and vomiting, though the appetite continued good until the end; emaciation was not marked, but debility was extreme; he lost control over his bladder, and died from exhaustion a month after his admission.

Necropsy.—Only a partial post-mortem examination was allowed. On dissecting back the skin and muscles covering the chest, the globular swelling over the sternum, which had increased in size, was found to be firmly attached to the bone, and, on opening the thoracic cavity, the under surface of the sternum was seen to be much eroded, and perforated by a growth which sprang from the anterior mediastinum and was in connexion with the external tumour. There were well-marked pleuritic adhesions, and the right cavity contained an abnormal amount of fluid. The left lung was infiltrated with a soft cancerous material, which broke down readily under the finger. The heart was pushed to the right of the sternum. The liver was

enormously enlarged, and almost filled the abdominal cavity; its surface presented several raised nodular projections of a whitish colour, each about the size of a large marble; and its substance was also infiltrated with morbid material.

Remarks by Mr. MICHELMORE.—The tumour over the sternum was of a greyish-red colour and very soft in consistence, breaking down readily; and I should think from the appearance of the growths in the mediastinum, lung, and liver, and the rapid manner in which they destroyed life, that this was most likely a case of encephaloid cancer.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Primary Union after Excision of Tubercular Hip Joints.

AN ordinary meeting of this Society was held on Dec. 11th, the President, Sir Edward Sieveking, being in the chair.

Two papers were read on Primary Union after Excision of Tubercular Hip Joints: by Mr. BARKER and Mr. BILTON POLLARD, of which the following are abstracts:—

Mr. BARKER stated that the object of his paper was to emphasise certain conclusions he had put forward in his Hunterian lectures at the Royal College of Surgeons last summer. Briefly stated, these were as follows:—

1. That scrofulous, or, in other words, tubercular joint disease was a local expression of infection of the tissues with the bacillus tuberculosis, and ran, as a rule, a course beginning in hyperplasia and ending in fatty degeneration.
2. That at a certain stage of the disease the complete removal of the infected tissues ought to be possible.
3. That if complete removal of the tubercular tissue from the hip be accomplished, the resulting wound ought to heal in many instances by first intention throughout, as in the case of the knee, and often even without any necessity for drainage. The great advantage which would flow from such primary union after excision were then briefly discussed. The author then described his first case operated on after the above propositions were made last June, and showed that they were justified by the result. The patient was a boy, aged five years, who had been under careful treatment for a year for hip disease, which resulted in destruction of the head of the femur and the formation of an abscess of the usual kind. After operation on the lines indicated, primary union took place without drainage under one dressing, and the patient left the hospital on the fourteenth day, wearing a double Thomas's splint. The latter was removed in the eighth week after operation, and the child went to the seaside, when he began at once to run about, and had been quite well ever since. Other cases were alluded to in which Mr. Pollard had since obtained similar results as regards primary union by operating on the same principles. This case was exhibited to the Fellows of the Society.

Mr. POLLARD drew attention to the fact that the wounds necessary for the extirpation of tubercle from joints would heal as rapidly and as permanently as other wounds of a similar size if certain essential conditions were secured.

1. The whole of the tubercular growth must be removed.
2. Perfect asepsis must be assured.
3. Bleeding must be checked and the wound made as dry as possible.
4. Oozing must be restrained by the even elastic support of a wool dressing and a moderately tight bandage.
5. Absolute rest of the part must be maintained during the process of healing.

The hip joint was selected for illustration of the views advanced because the author thought that, of all excised joints, the hip had been found the slowest to heal. Four cases of advanced hip-joint disease with caseous abscesses were referred to. Three were operated upon by the anterior incision and the fourth by a curved incision round the upper and posterior part of the trochanter. Drainage tubes were not employed in any of the cases. The dressings were changed on the seventh day after the operations, and the wounds were found to have healed by first intention throughout. With the exception of one case in which the acetabulum was perforated, there had been no recurrence of the disease. Three of these cases were brought to the meeting for inspection and criticism.

Mr. CROFT desired to congratulate the authors of the papers on the results they had obtained; he considered the occasion marked an epoch in the surgery of the hip joint. Carrying his memory back eighteen years, he pictured the surgery of the hip joint as being then in a condition which would now be thought deplorable. Any operation considered necessary was put off till the last stage of the disease. In 1880 he brought before the Clinical Society a paper on forty-five cases of excision of the hip; the subject was then freely discussed, and the general opinion was, on the whole, very decidedly against early excision. A committee was appointed, he himself being a member, to inquire into the matter, and their conclusion was that excision was undesirable unless sinuses or dislocations were present—that is, in the last stage of the disease. But notwithstanding this adverse opinion of the committee, he continued to perform the operation in those cases that appeared to him suitable. It was quoted against him that the percentage of deaths (30 per cent.) was much too large, but since his first paper he had operated on fifty-three cases, making a total of ninety-eight. These he had been recently tabulating, and he found that this last series gave only a mortality of 15 per cent. Of the fifty-three cases ten were cured within six months, one of them being well within a month; eighteen were well within one year, and twenty-seven within two years; that was, more than half of the cases were known to be absolutely cured within two years of the operation. For an excision wound to be well in a week was astounding to those accustomed to the ordinary course of such wounds, and to have achieved such an advance was something to be proud of. In 1880 the question was whether excision should be performed at all; now it seemed to be taken for granted that the excision was to be done in an early stage of the disease. He had not operated by the anterior incision, but he could see that with antiseptic precautions, use of deep sutures, complete extirpation of all diseased tissue, and limited excision of bone there were immense advantages attaching to it.

Mr. BRYANT did not know that he could accept the conclusion that excision should, as a matter of course, be done early. The whole question was still *sub judice*. In Mr. Pollard's cases, which he had had an opportunity of examining, rapid union followed early excision. He did not like to criticise the *modus operandi*, but he should like to have seen the joints that were removed. Admirable results had no doubt been obtained by the authors of the papers, yet he felt bound to question if these joints could not have been guided to a cure by natural means had they been given the chance, and the surgeon should always have the question of the possibility of natural repair before him when contemplating operative measures of treatment. He did not wish to deny that such an amount of mischief might be present in a joint that Nature could not well by herself effect a cure; in one of Mr. Pollard's patients, for instance, a sequestrum was found, and this could not have got well alone. In cases of early inflammation of the hip joint—and whether the tubercle or the inflammation were primary he did not know—his own tendency was still in favour of expectant treatment; he believed firmly that the bulk of cases, if taken early, could be cured by such treatment alone. If early cases were excised, one would expect to get early healing, for a wound going through healthy tissues should repair quicker than an incision into what was often a mere suppurating cavity. He thought that Mr. Croft should have stated that the earlier cases which he obtained for his paper, in which the mortality was 35 per cent., were collected from various hospitals before the modern methods of treatment of wounds were in vogue; and though he had got a mortality of only 15 per cent. in his later series, yet he had not succeeded in showing that such joints could not be cured by natural means. Mr. Barker's patient was getting up and walking after eight weeks, but he considered this was bad practice, and a miserably deformed and useless limb was apt to follow. In the earlier cases that he himself operated on, he was disposed to let the limb have too much movement, but he had obtained much better results when they were kept at rest for six or twelve months after the operation.

Mr. HULKE said that much turned upon the stage when the operation should be done. He was convinced that, if properly managed in the early stage, treatment short of excision would conduct a case to a natural cure; and in a certain number of cases also in later stages results could be obtained by this method better than those after excision.

the bony synostosis which followed being better and firmer than when portions of bone had been ablated. He was surprised at the high mortality of Mr. Croft's cases; he felt sure that in his own practice and in that of his colleagues the mortality had not been 20 and was not now 15 per cent. The terms "healed" and "cured" had been used, he supposed, relatively: there had been primary union of the external parts; the deeper parts could hardly have closed, for there was a cavity present to be filled up. He had seen a not inconsiderable number of cases heal rapidly, although a drainage tube was present. It was interesting to hear that the synovial membrane could be thoroughly removed by scraping through so small an opening as the anterior incision; at a recent meeting of the Society, a surgeon, referring to the knee, had held that a large opening was essential, and nothing but careful dissection with a scalpel could thoroughly clear away the diseased tissues, but dissection through such a small orifice would be extremely difficult at the hip joint. He had never practised the anterior incision, which, if his memory served him, was introduced by the elder Hueter of Greifswald, who always combined it with a posterior perforation for purposes of drainage. If the drainage tube could be dispensed with, then a great objection to the anterior incision was removed.

Mr. HOWARD MARSH had never before seen such good results from excision of the hip. The method could scarcely be described as new, for probably all surgeons had met with instances of union by the first intention after excision of tubercular joints, and it was now usually anticipated in the case of the knee joint. He had, as a rule, operated on the hip by the posterior incision, but he was inclined now to think the anterior better. As regarded the general view that should be taken of the applicability and results of excision, we had still to contrast that treatment with the expectant, and he thought that Mr. Barker's case was a very disappointing one; the child would probably never walk with a serviceable limb; it was already flexed, adducted, and rotated inwards. He did not think it judicious to let a child walk about two months after such an operation, and the result reminded him of what was frequently seen after knee excision: a large proportion of those allowed to walk early returned later with deformed joints. He considered that the result obtained by prolonged rest in the early stage was a better one than after excision. The inoperability and intractability of tubercular disease had been much exaggerated, and the results obtainable by rest underrated. He was prepared to show cases in which, even though suppurative had taken place, yet with rest perfect restoration of the joint had followed.

Mr. CROFT desired to correct a misimpression. When he said that he had a mortality of 15 per cent. in his fifty-two cases, he did not mean deaths in consequence of the operation, for with one exception the fatal result was due in all cases to tubercular disease after the operation.

Mr. KEETLEY related a case of excision of the hip which had united by the first intention, buried sutures being used without drainage tubes. Six weeks afterwards the child died of tubercular meningitis, and he made a careful examination of the articulation; there was scarcely a trace of cicatrix, and no cavity, the end of the femur being united to the acetabulum. He felt bound to state that he had seen much better after-results from rest than from excision. He demurred to Mr. Barker's suggestion that primary union was new; it had followed in hip cases as in others to antiseptic surgeons. Referring to the drainage tube, he said it was not an essential in surgery; many cases treated with buried sutures did well without them, and so did osteotomies, but these instances did not prove that they ought to be dispensed with; they were a good safeguard against failure or mistake on the part of the surgeon, for no man, however careful, could always ensure asepsis of a wound, and strong antiseptics were themselves irritating and might excite discharge; besides, the presence of a drainage tube was not inimical to early convalescence. Pressure around a wound, if all the diseased tissues were not removed, might favour self-infection from it.

Mr. WRIGHT (Manchester) had 800 cases of hip-joint disease under his care during the last few years, and he had performed excision about 130 or 140 times. He was prepared to agree with those who said that, if early cases were taken in time, a cure would follow without operation; but, as Mr. Holmes had pointed out, not only time but the social circumstances of the case had to be taken into consideration; in many cases it was absolutely impossible to secure the

necessary prolonged rest. He had not obtained primary union in any of his cases, for he had seen no necessity for it, and therefore had not sutured the excision wound, but simply placed in a drainage tube. He preferred section of the bone through the trochanter rather than above it. Tuberculous foci appeared to him generally to be present in the bone, the ligaments, and the synovial membrane, and he had found himself hitherto, either by the anterior or posterior incision, entirely unable to completely remove those foci, and the material, he thought, required excision rather than scraping. When left behind, it was the cause of the relapses so commonly met with, and which were excited often by the slightest injury. He thought the cases related could not fairly be considered cases of early disease; the one with the sequestrum was certainly not open to the charge that natural repair could have followed if the case had been left alone. The question generally was, could the child's constitution stand the lengthened confinement required for natural repair? and this was often one great argument in favour of excision. After operating, he was in the habit of applying a Thomas's splint for six months or a year, because, if prolonged rest were not ensured, increased shortening took place from the relaxation of the soft newly-formed structures. A death after excision was often not the fault of the operation, for perhaps only one caseous focus out of many was removed.

Mr. MAKINS said he was in Germany in 1879, and visited Volkmann's clinic at Halle. Volkmann was then an ardent advocate of early excision, and his cases healed by primary union; he did not apply splints, relying only on extension. At a second visit, three years later, he found that Volkmann had abandoned the operation because of the exceedingly bad after-results. In some cases the disease had recurred, despite the more careful ablation of morbid tissue, some grew up with badly-developed limbs, and in others there was suppurative and sinuses were present, the cases being as bad as if no operation at all had been done. For no surgeon could possibly take more trouble than Volkmann did to thoroughly extirpate all the diseased structures.

Mr. BARKER, in reply, said that, in the case he had related the patient had been treated very carefully for a year by the expectant method, first by immobilisation and then by aspiration; and at the operation the head of the bone was gone, the acetabulum eroded, and large abscesses were present; such a joint could certainly not be called an early case. He strongly condemned excision until every hope of cure by natural means had been exhausted. The child's general condition at the present time was certainly very much better than it would have been if no operation had been done. His usual practice was to keep on a double Thomas's splint for months afterwards, and the apparatus had been removed in this case without his sanction. In reply to a question concerning the use of iodoform emulsion, he said that the wound was filled with it, and then as much as possible was pressed out, and very little indeed remained behind when the sutures were applied. In order to avoid irritation by antiseptics he used irrigation with boiled water during the operation as hot as could be borne by the hand, and then finally mopped out the cavity with an antiseptic solution.

Mr. POLLARD said that all his cases were progressing towards the third stage; the acetabulum was diseased; the head of the bone carious, and abscess was present beneath the skin. He disclaimed any desire to excise if the cases could be got well without, for he recognised that the results of natural cure were better than those of excision. If the wound healed by primary union many after-risks were obviated.

MEDICAL SOCIETY OF LONDON.

The Absolute Signs of Death.

AN ordinary meeting of this Society was held on Dec. 16th, Sir WILLIAM MACCORMAC, President, in the chair.

Dr. R. W. RICHARDSON read a most able paper on the Absolute Signs of Death. He commenced by saying that in the present day, owing to the discussions that were taking place on the subject of cremation and the disposal of the dead, members of the profession were more frequently being called in consultation in order to determine if life were actually extinct. He proposed, therefore, to state in a very practical form, firstly, the common circumstances under which the inquiry was demanded; secondly, the methods

for determining the absolute proofs of death; and thirdly, a summary of efficient practical details. Under the first of these heads, the author specified the reasons which led the friends of persons supposed to be dead to question the fact of death. These were: (a) Changes of colour of the dead body. He related a case in which a woman had died of what was believed to be suppressed scarlet fever. The body at the time of death was of a dark hue, but afterwards the cheeks assumed a red colour, and the body also took on a life-like red tint. He had since seen at least two similar cases, and their explanation was simple; the blood became oxidised after death, the necessary gas transpiring through the skin. (b) Retention of warmth. This was likely to occur especially in cases in which death was sudden, when rigidity developed early, and the temperature immediately after death went up a few degrees. (c) Movements of the body, or supposed movements. The former occurred only in cases of Asiatic cholera; they were often life-like in their character, and in strong people who had died rapidly they might continue for at least an hour after death. The commonest supposed movement observed by the friends was a gentle heaving of the breast. (d) Retention of life-like expression after death. This happened most frequently in children. (e) Prolonged preservation of the body from putrefactive decomposition. The post-mortem change usually set in between four and twenty-four hours after death, but it might be delayed for eight or nine days in exceptionally cold and dry seasons; in those of spare constitutions and suffering from wasting disease it might be retarded even when weather and other circumstances were favourable; copious draughts of alcohol before death might also tend remarkably to act as a preservative. (f) Suspension of the ordinary phenomena of vital action after some forms of induced narcotism. He quoted as a historical fact of interest in this connexion the use by Jewish women of a narcotic wine, which they administered to those about to die a lingering death by crucifixion at the hands of the Romans. This was called "morian," the wine of Mandragara, the "death wine" of Pliny. It had also been used in olden days to produce insensibility before applying the cautery. Dr. Richardson exhibited a sample of it to the Society. Hydrate of chloral acted in a similar way, producing such a deep narcotism in large doses that it was almost impossible to say whether the person were alive or dead. (g) The cataleptic state, idiopathic or traumatic. Dr. Richardson had observed a case of a man who became cataleptic, and almost the only sign of life was the sustenance of animal warmth. From a first attack the patient recovered completely, but a second proved fatal. Traumatic catalepsy was induced by lightning strokes, by the reception from a battery of a high tension electric discharge, and by severe blows or contusions of the head. In 1869 there occurred a case of a man who was rendered cataleptic by a lightning stroke, and who narrowly escaped living burial. One other circumstance might also give rise to the inquiry—viz., a request on the part of a person whilst living to be subjected to skilled examination after death in order to prevent the possibility of being buried alive. The author twice in his career had been called in to meet this request. The various circumstances which might lead to a doubt as to absolute death—some of them very important and singular—were next described in detail; and then followed the second part—namely, the actual or veritable proofs that had to be made in order to arrive at a satisfactory demonstration that life was extinct. These proofs were named as ten in number, and they were taken up in the following order. 1. Respiratory failure, including absence of visible movements of the chest, absence of respiratory murmur, and absence of watery vapour from the breath; this test was a fallacious one, for apparent movement and murmur might be absent, and the mirror test was useless. 2. Cardiac failure, including absence of arterial pulsation, of cardiac motion, of cardiac sounds, and absence of turgescence, or filling up of the veins on making pressure between them and the heart. The pulse as a sign was of more value than the cardiac motion or sounds, and yet even it might be undetectable, although the body were alive and capable of recovery. He had written a paper some time ago on the maintenance of life when the circulatory apparatus was working at low pressure. An animal under chloroform might pass into this condition, the heart being only partially filled and emptied at each beat, and yet this partial action was sufficient to keep the animal alive, though scarcely any of the signs of life were manifest. This cataleptic, syncopal,

or hibernating condition was seen in animals while in a state of suspended animation. The proof by pressure on the veins was one not likely to deceive. A band should be bound round the wrist, a cardboard being arranged in front so as to relieve the arteries from pressure. If life were not extinct, turgescence of the dorsal veins of the hand would soon be apparent. 3. Reduction of the temperature of the body below the natural standard. A diminution of a few degrees did not signify death, as recovery had taken place even after a falling of the temperature to as much as 7° F. below normal. A fallen temperature as a proof of death should always be considered only in combination with others. If the temperature within the mouth were found lower than that of the surrounding atmosphere, it would be a strong presumptive sign of death. 4. Presence of rigor mortis and muscular collapse. Rigor mortis might be imitated by rigidity from cold or by tetanus, but the history would distinguish, and tetanic spasm produced distortion of limbs. 5. Coagulation of blood in the veins. This, when present with rigor mortis, was an absolute sign of death, but both might be absent for even a lengthened period. 6. Presence of putrefactive decomposition. Its presence in the eyeball indicated certain dissolution; but it was not in all animals an invariable sign of death, for frogs had been kept by amyl in a state of suspended animation until the web of the foot had commenced to decompose, and yet the animal had recovered. 7. Absence of red colour in semi-transparent parts under the influence of a powerful light, such as that from a magnesium lamp. 8. Absence of muscular contraction under the stimulus of an electric or galvanic current. The handiest apparatus for this test was a small faradic battery, and needles should be thrust into the muscles of the forearm. 9. Absence of a red blotch under the skin after the subcutaneous injection of ammonia. This test the author looked on as particularly valuable. 10. Absence of signs of rust—oxidation—of a bright steel needle after plunging it deep into the tissues. This test was only of value for a short time after death, as later rust would follow from oxidation of the needle by the acid products of decomposition. In the last part of his paper Dr. Richardson indicated the precise mode in which the practice named should be directly applied, taking up the steps of the necessary examinations one by one, pointing out the relative values of each, and giving, so to speak, in a condensed form, the diagnostic formula for an absolute proof of death in every doubtful case, without any operative procedure that was itself inimical to life. He recommended the practical application of tests in the following order. 1. Apply the fillet to the wrist and examine the veins at the back of the hand. 2. Open a vein at the bend of the elbow and seek for stringy coagula; open, if necessary, two or more veins. 3. Apply the electric test. 4. Inject ammonia hypodermically. 5. Examine by strong light for absence of red colour from the transparent tissues. 6. If any doubt still remained, and rigor mortis had not developed, let the body be kept in a damp room at 84° F.; this would speedily bring about decomposition if the body were dead, and would favour recombination or restoration if life were not extinct. This last test had the great recommendation that it could be carried out in those cases where it was forbidden to touch the body.

Sir WILLIAM MACCORMAC had followed the paper with the greatest interest, and was particularly struck with the simplicity of the vein-pressure test. Dr. Richardson had mentioned in the course of his remarks that he had been obliged to abandon as uncertain the method of killing dogs by electricity. He was surprised to hear this, as in the new year in another country this method was to be used to put criminals to death.

Dr. C. H. F. ROUTH had observed in persons dying from pneumonia, especially if the disease were double, a remarkable preservation of natural colour. He referred to a case under his care in which, after death following ovariotomy, the temperature went up to 111°, two degrees higher than it was immediately before death. Speaking of post-mortem movements, he referred to the custom at Vienna of placing a bell-rope in the hand of the corpse; the bell had only been rung once, and that was after death from Asiatic cholera. In catalepsy some amount of respiration went on, and the limbs, if put in an extraordinary position, remained so; he found that a blow upon the spine brought these patients round. In deaths from lightning, he was under the impression that the electric fluid usually made a mark of entrance and of exit, and that the blood remained fluid.

Dr. ALTHAUS, referring to the repulsive idea of living burial, remarked that it had been said that from thirty to forty persons were so buried in France every year, and this probably often happened in great epidemics. He quoted several instances of narrow escape from this horrible catastrophe, and, having alluded to the value of decomposition and fall of temperature as signs of death, he concluded by advocating electricity as one of the surest tests of the extinction of the vital flame. Muscular excitability he had found was absent in all cases three hours after death.

Dr. RICHARDSON, in reply, said he could never be an advocate of the introduction of electricity for the purposes of capital punishment; it was very liable to error, sometimes producing mere scorching, at others a cataleptic state, from which recovery ensued. The present method of hanging by a long drop was barbarous, and he believed that the old method of suspension was the most humane. In nearly all cases of asphyxia a return to the natural colour took place to a greater or less degree. Sir Spencer Wells had shown him a case where, after ovariectomy, there was a high post-mortem temperature.

Sir WILLIAM MACCORMAC, in conclusion, related some remarkable cases where, after gunshot wounds on the field of battle, instantaneous cadaveric rigidity had developed. He had seen a man quite dead sitting in the act of drinking; another with his arms up holding a rifle; and Professor Longmore had written a paper giving an explanation of such cases. It was recorded that in the war of the American rebellion a man was shot dead by a long-range bullet whilst in the act of mounting his charger, and he was found rigid with one foot still in the stirrup when the firing party came up to him some time later.

Dr. RICHARDSON thought that in such cases there was a sudden resistance and copious discharge of heat, coagulation at once taking place.

ERRATUM.—In our report of the discussion on Dr. Savage's paper on Puerperal Insanity, read last week at the above Society, the remarks concerning Armstrong's use of calomel in puerperal fever were erroneously attributed to Dr. H. G. Mackenzie, instead of, as they ought to have been, to Dr. F. Lucas Benham.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Dec. 5th, Dr. John Williams, President, in the chair.

On the Effect of Glycerine on the Quantity of Secretion poured into the Vagina.—This paper, read by Dr. HERMAN, related observations made to see whether the commonly, but not universally, accepted belief, that the local use of glycerine causes a flow of fluid from the vagina, was correct or not. The observations were made with cotton-wool plugs soaked in glycerine, and with pessaries made of gelatine and glycerine. The amount of glycerine inserted into the vagina was weighed, the discharge from the vagina was weighed, and the amount of vaginal discharge from the same patient when glycerine was not used was also ascertained by weight. The result of the observations was in favour of the following conclusions: (1) That when the secretions poured into the vagina are not abundant, the local use of glycerine increases them; (2) that when the secretions poured into the vagina are already abundant, the local use of glycerine does not increase them.—Dr. CHAMPNEYS asked whether Dr. Herman had estimated the loss on the diapers from evaporation. The conditions were favourable for evaporation, and would confirm the conclusions arrived at in the paper.—Dr. GRIFFITH said that it was important to make sure whether the vaginal secretions were formed in the vagina or were merely retained in that canal. The vagina was anatomically skin, and actually became dry skin in procidentia and cystocele, and then no secretion could be found but what was evidently uterine. Glycerine would then act on the vagina as on any surface skin, irritating it, and, by absorbing the moisture in the surface cells, rendering it more dry than before. In Dr. Klein's opinion, the acidity of vaginal mucus, like that of the sweat, was due to decomposition.—After some observations by Dr. BRAXTON HICKS, Dr. HERMAN, in reply, stated that he thought the loss of weight by the diapers or pads due to evaporation was but slight. On the other hand, the perspiration from the skin with which the diaper was in contact might cause a slight increase in

weight. He had used the words "secretions poured into the vagina," which did not imply any opinion as to their source. Whether the secretion was of uterine or vaginal origin, whether it was produced by glandular activity or simple osmosis, he could not tell. He would be obliged if Dr. Griffith could suggest any method, harmless to the patient, by which the secretions of the uterus could be separated from those of the vagina. Dr. Herman believed that the vagina did secrete mucus. In cases of atresia of the vagina, at more than one place collections of mucous fluid were found between the occlusions. In cases of atresia of the os externum, the vagina was as moist as in most other patients. That under pathological conditions the vagina might pour out fluid in abundance needed no demonstration.

Obliteration of the Central Canal of the Spinal Cord in an early Human Embryo.—This paper was read by Mr. C. B. LOCKWOOD. After a description of the microscopical specimens which illustrated the author's researches, Mr. Lockwood gave reasons why he believed that the appearances were not due to decomposition or soakage. They represented a fault in the process of development. The obliteration of the central canal was confined, in this case, to the dorsal region of the cord. This obliteration appeared to be in some respects an excess of the process of development, in others a retardation of that process. Mr. Lockwood attributed most abnormalities to disease, especially inflammatory processes. The epiblast, from which the dorsal portion of the spinal cord was developed, was particularly exposed to external influences. It lay next the uterine surface for some days in early foetal life, when the cord was unprotected by the amniotic folds. Gynaecologists could imagine conditions of the uterine surface which might exercise a pernicious influence on the epiblast. Early embryonic defects and diseases of the cord may be frequent, and may account for a variety of well-known affections, such as congenital defects of joints, club-foot, and syringo-myelocele.—Mr. DORAN concluded that the same defects and diseases would account for anencephalous monsters. Acephalous or acardiac monsters were developed in quite another manner—namely, through abnormal vascular communication between twins.—Mr. LOCKWOOD thought that defects in the epiblast partly accounted for anencephalus.

Sequel to a Case of Bright's Disease during Pregnancy.—Dr. HERMAN's original report of the case was published in the twenty-ninth volume of the Society's Transactions. The patient, aged twenty-one, had labour induced at about the seventh month on April 18th, 1887. Symptoms of Bright's disease had apparently been present for about two months. She left the hospital about three weeks after delivery. Dr. Herman now reported the termination of the case. The symptoms became worse after her discharge, and she died from acute oedema of the larynx and tongue in St. George's Hospital on Jan. 26th, 1888. The report of the necropsy, prepared by Dr. Penrose, was read. There was no oedema of the feet, the superficial veins of the thorax were distended, and there was generally fullness of the neck; the local disease about the larynx was very marked. The brain tissue was firm; there was no excess of fluid in the ventricles. There were retinal hemorrhages. The great serous cavities contained a small quantity of fluid. The lungs were oedematous; the left ventricle greatly hypertrophied. The aorta was but little atheromatous. The kidneys were granular, the cortex readily peeling; their weight was 9 oz. The liver was large and fatty, weighing 4 lb. 4 oz. The spleen was large and firm, weighing 7 oz.; it contained a small infarct. Dr. Herman noted the rapid production, at a very early age, of granular kidney and the associated cardio-vascular changes.

Extra-uterine Fotation; Abdominal Section eight months after Death of Fetus; Sac formed by Left Fallopian Tube and Left Broad Ligament; Recovery.—This paper was read by Dr. CULLINGWORTH, and specimens of the foetus, placenta, and a portion of the cyst wall were exhibited in illustration. The patient was twenty-seven years old. Her last confinement happened five years ago. In April, 1887, she menstruated for the last time. In July she quickened and continued to enlarge and feel the movements of the foetus till December, when she suffered for an hour with labour pains. Then the movements ceased and the abdomen decreased in size. Seven months later she was admitted into hospital. An abdominal tumour lay behind the uterus. An eight months' foetus was found in a sac composed of the left Fallopian tube and broad ligament.

The liquor amnii and umbilical cord had disappeared. The placenta lay in front and was removed without hæmorrhage. The fœtus was firmly adherent to the sac wall. A portion of the sac was removed, the remainder being stitched to the abdominal wound and drained. The sac closed in well; a small piece near the incision sloughed. The patient made an uninterrupted and aseptic recovery, the temperature during convalescence never exceeding 100° F.—After some observations by Mr. SUTTON, Dr. GRIFFITH asked if the fœtal sac had been found in this case to be in the broad ligament or not. Mr. Tait believed that no extra-uterine pregnancy ever advanced near to term, save when the sac was sub-peritoneal. A specimen in the museum of St. Bartholomew's Hospital almost disproved this theory. Dr. Griffith further asked if Dr. Cullingworth found any advantage in the median incision and the opening of the peritoneal cavity, as it had been shown by Mr. Thornton and others that it was usually better to cut down directly on the sac, and to avoid opening the peritoneum.—Dr. HERMAN noted that in this case the placenta resembled the same structure in cases of extra-uterine gestation removed some time after the death of the child, which had been exhibited before the Society by Dr. Champneys, Dr. Aust Lawrence, Mr. Thornton, Mr. Doran, and himself. Effusion of blood, which partially organised, made it more solid. Great diminution in the activity of the circulation in contiguous maternal structures occurred, so that the placenta could be detached and removed with trifling, if any, hæmorrhage. Hence the slight risk which attended secondary operations. It would be well if we could determine the date at which the changes in the placenta occurred. Litzmann had endeavoured to find out the date at which the maternal circulation might be expected to have ceased, but concluded that it could not be ascertained with certainty. He fully believed that intra-peritoneal, as well as sub-peritoneal pregnancy, might proceed nearly or quite up to term. He had operated on one such case himself; the placenta was attached to the bladder and anterior abdominal wall.—Dr. CHAMPNEYS said that the statement that all cases of extra-uterine gestation which went quite or nearly to term were intra-ligamentous was unfounded. In his own case, described in the Society's Transactions for 1887, the fœtus was simply free, kicking about among the bowels. Furious hæmorrhage had occurred, according to Litzmann's statement, from the placental side, four months after the death of the child.—Dr. GALABIN asked for the relations of the mass felt behind the uterus. Had the peritoneum been stripped off the back of the uterus by the expanding sac? There was positive evidence that abdominal as well as intra-ligamentous pregnancy might go on to term, or nearly to term. In the case of combined extra-uterine and intra-uterine foetation in which he had operated, the fœtus was enclosed only in its own thin membranes, and the placenta was attached to the pouch of Douglas and the back of the uterus.—Dr. WILLIAM DUNCAN thought that very many cases of rupture were between the layers of the broad ligament, and not into the peritoneal cavity. He had operated on such a case.—Dr. PLAYFAIR approved of Dr. Cullingworth's practice. At the time that the patient was seen by him no other resource but secondary laparotomy was possible, and it had happily proved successful. On the other hand, Dr. Harris's tables of cases of primary operation (before the death of the child) showed a most gratifying success. With increased experience still better results would be obtained. Dr. Playfair noted the great differences in the state of the fœtus when retained after term. In Dr. Cullingworth's case it was fresh and unchanged, though retained for six months. In the case preserved in the museum of the College of Surgeons, where the fœtus had been retained about fifty years, it was also fresh. Yet he had seen a fœtus transformed, after only a few months' retention, to a mass of adipocere and bone. In older cases it sometimes became mummified or ossified, forming a "lithopædion." Rupture of the tube early in gestation, as in Dr. Cullingworth's case, was by no means necessarily fatal, and often led to the development of an abdominal gestation. He related the case of a lady who was suddenly taken very ill in the street. He was called in to see her, and diagnosed ruptured tubal pregnancy, Dr. Matthews Duncan confirming the diagnosis. Laparotomy was decided upon. The patient, however, rallied completely before the necessary preparations for the operation were made. She left England, but Dr. Playfair had learnt that an abdominal tumour had since developed, and that Dr. Breisky,

of Vienna, was about to perform laparotomy.—Dr. CULLINGWORTH, in reply, gave reasons for feeling sure that the pregnancy was originally tubal, and had become a broad ligament gestation through rupture of the tube. Operation without opening the peritoneum would have been impossible, owing to the relations of the parts. The cessation of placental circulation had proved most favourable for the operation. Irregular hæmorrhages in the early months of pregnancy, a great aid to diagnosis, had not been observed in this case; no decidua had been expelled. Since the paper was written more ligatures had come away, and the wound had closed. Dr. Playfair's observations on the fate of the fœtus were interesting. When suppuration and graver symptoms occurred, perhaps the fœtus had become adherent to the intestine, septic changes ensuing. He was glad that the President was in accord with him as to the desirability of operating without waiting for symptoms. A patient going about with a dead fœtus in her abdomen was in constant danger. An operation was most likely to be successful when performed before septic symptoms had set in.

CAMBRIDGE MEDICAL SOCIETY.

At the meeting on Nov. 2nd, Mr. Stear, M.R.C.S., President, in the chair, the following communications were made:—

Valvular Disease of the Heart resulting from Overstrain.—Professor ROY, F.R.S., and Mr. ADAMI, M.R.C.S., gave a communication upon "Valvular Disease of the Heart resulting from Overstrain." Having investigated the causes and influences of the work of the heart under physiological conditions, they produced artificial overwork and overstrain by a variety of methods. The work of the heart, they showed, can be most conveniently and accurately considered as resulting from the combined influence of two factors:—namely, the pressure against which the heart has to contract, and the quantity of blood thrown out in a given time: the value of these two factors multiplied together giving the work done, stated in the form of mechanical units. The first element—the pressure—they increased by narrowing the aorta, the increase in pressure within the heart thereby produced being measured by an accurate "pressure gauge," exhibited at this meeting. It was found that the degree to which the systolic pressure within the ventricle could be raised as the result of such aortic stenosis varied with different animals and with the nutrition of the heart at the time of the experiment. In the dog the maximum intraventricular pressure on the left side producible in this way is usually that of some 250 or 300 millimetres of mercury, the normal systolic pressure being something under 120 to 130 mm. Hg. When overstrain of the heart is thus produced, both ventricles become greatly distended; and when the narrowing becomes extreme, a wave of regurgitation may be seen running outwards from the heart at each systole along the systemic veins. On killing the animal after an experiment of this nature, the valves are found to present certain changes. These consist in either œdema or ecchymoses, with or without roughening of the surface of the flaps. In the mitral valve (which is most usually affected), these changes are most marked at, and indeed as a rule are confined to, the free margin of the flaps, which come in contact during closure of the valves. In the aorta (which next to the mitral is most frequently implicated), the change is of the nature of an œdematous thickening at the insertion of the flaps into the aortic wall. Before discussing the nature of these changes and their bearing upon valve disease in man, the authors gave an account of some of the results obtained from an investigation of the second factor which influences the work of the heart—viz., the quantity of blood passing through it. This subject has received but little attention from physiologists, owing to the want of a satisfactory method of investigating the amount of blood which enters and leaves the heart in a given time. The authors employed a new instrument, which permits the volume of blood passing through the heart being accurately and conveniently measured. By means of this "cardiometer," as the authors have named their apparatus, it was found that unexpectedly wide variations of the work done by the heart result from changes in the amount of blood entering it. It was shown that the results thus obtained are of a kind fitted to explain a variety of hitherto obscure problems of physiology and pathology of the circulation. There has been an animated discussion as to whether the

heart valves in the normal state are supplied by bloodvessels. In the healthy valves of an adult dog, the author's observations have conclusively convinced them that vessels in the form of capillary loops are present only along the line of insertion of the valves, the greater portion therefore of the flaps, as also the chordæ tendinæ, being without vascular supply. Presumably, the discrepancies in the result obtained by various investigators depend upon the fact that in cases where the valves are thickened—a much more frequent occurrence both in man and in dog than is generally supposed—bloodvessels are present. The nutrition of the valves therefore in health is largely dependent upon the lymphatics. The epithelium covering the valves is composed of two kinds of cells. By far the greater part of the cellular lining consists of the ordinary flat cells with more or less wavy outline, forming the "endothelium" of the vascular system in general. These differ in size at different parts of the valves, and between them are to be seen "pseudostomata" in various numbers, with different hearts and in different parts of the valve surface. But besides these, there are found on the surface of the normal valves a number of more granular cells, staining much more deeply with silver than the ordinary ones. These granular cells, as a rule, resemble the latter in outline, although sometimes they are smaller. They frequently show apertures, either in their substance or between their margin and the adjacent black line, marking the edge of the neighbouring cells. These cells evidently correspond to those which have been described by Ranvier and others as being situated at openings through the endothelial layer into the subjacent lymph-canalicular system. They have been called "germinating cells" by Klein, on the assumption that they are endothelial cells which are undergoing proliferation. The term "germinating cells," however applicable in the conditions under which Klein observed these cells, is not a suitable one for the granular cells described by the authors as found by them in the covering of normal valves, seeing that in this situation they show no evidence that they are undergoing proliferation. There can be no doubt, however, that in the valves, as in the case of other membranes where they have been described, they are situated at openings into the underlying lymph-canalicular network. By their power of contraction and expansion, they may be reasonably supposed to influence the quantity, and possibly the quality, of the fluid which passes them by the pseudostomata to carry on the nutrition of the valves. The authors had no hesitation in concluding that the new formation of fibrous tissue in the valves of the heart as a result of overstrain, and which is the commonest cause of stenosis of the mitral and aortic orifices, ought not to be called chronic interstitial endocarditis, and would suggest the designation "valvular pachynsis," as being a less misleading name, and one which in any case avoids expressing any theory as to the nature of the anatomical changes. In conclusion, it was pointed out how well the facts and conclusions detailed in this communication fitted in with what is known as to the etiology and morbid anatomy of so-called chronic interstitial endocarditis. As illustrations of this, they referred to Goodhart's analysis of cases of this condition occurring in the course of chronic renal disease. As might, *a priori*, be anticipated, such cases showed that overstrain of the heart in the young is much more readily the cause of great thickening of the valves, with contraction, resulting in stenosis, than is found to be the case with old people.

Perforating Ulcer of the Duodenum.—Dr. BRADBURY showed this specimen, taken from a servant girl, aged twenty, who died a few hours after admission to the hospital. The previous history showed symptoms of anaemia, and a week before death pain after food. There was vomiting on the morning of admission, and constipation, for which castor oil had been taken. Symptoms of perforation occurred in the night, and she died in the early morning. The necropsy revealed a typical punched-out ulcer on the anterior surface of the duodenum half an inch from the pylorus.

Sarcoma of the Uterus.—Mr. GRIFFITHS exhibited this specimen. It involved the uterine mucous membrane and the inner parts of the muscular wall of the body of the uterus, and had extended a short distance along the interior of the right Fallopian tube.

The authors suggest this word "pachynsis" (which implies coarseness of texture as well as thickening) as being well fitted to characterise the condition of the valves and chordæ tendinæ of the heart due to the development in them of new vessels or connective tissue, and which has resulted from overstrain.

LEEDS AND WEST-RIDING MEDICO-CHIRURGICAL SOCIETY.

ON Nov. 16th a special meeting of the Society was held for the exhibition of cases of clinical interest.

Mr. JESSOP showed the following cases:—1. A man upon whom he had performed an exploratory laparotomy for Renal Tumour, which it was found impracticable to remove. 2. A child from whom he had removed a large Malignant Tumour of the Right Kidney, by a combination of Langenbuch's incision with the transperitoneal method. 3. A man suffering from advanced Malignant Disease of the rectum, who had undergone a left lumbar colectomy for the purpose of completely arresting the passage of faecal material into the lower part of the intestine. 4. A woman who had had cholecystotomy performed for the removal of Gall Stones, which had caused severe symptoms over a number of years. Mr. Jessop remarked that the not infrequent partial failure of ordinary lumbar colotomy to afford relief usually arose from the fact that no operon or other barrier to the passage of faeces was formed, and the patient was subject to all his former distresses, plus a lumbar distal. In this case he had made a complete section of the bowel, brought the upper opening to the surface, and closed the lower by inversion and suture. The patient had previously been subjected to colotomy, which had failed in the way above described.

Mr. ATKINSON showed: 1. A case of External Urethrotomy, with immediate suture of the wound. 2. A case of Cancer of the Penis. Mr. Atkinson referred to Mr. Marmaduke Shield's method of suture in separate layers of tissue, and said that in the case shown he had stitched the urethra and the external wound by four deep sutures. A silver catheter was retained for twenty-four hours, and afterwards passed at intervals of three days. There was a little leakage at the end of the first day; none subsequently.

Mr. R. N. HARTLEY showed a case of Innominate Aneurysm for which distal ligature of the common carotid and subclavian artery was performed three years and a half ago. Mr. Hartley said that since he previously exhibited the patient (about two years ago) the tumour had shrunk and become firmer, and had almost disappeared, except for a slight prominence of the manubrium sterni and the inner end of the clavicle. About six months ago, without any very obvious exciting cause, the aneurysmal swelling began to enlarge again, at first without any symptoms except a slight cough, but latterly there had been diffuse pains about the shoulder. At present the aneurysm has extended largely upwards in front of the neck, and the sternal end of the clavicle seems amalgamated with and almost lost in the walls of the sac. There are no signs of thoracic extension. There is very marked pulsation of the enlarged anastomosing vessels about the shoulder, and the radial pulse is quite distinct. In view of the comfortable condition of the patient he invited opinions as to the value and advisability of galvano-puncture, feeling reluctant to undertake further interference.—In answer to Dr. WARDROP GRIFFITHS, who made some remarks upon the difference in the circulation through aneurysms after proximal ligature by the methods of Anel and Hunter respectively, Mr. Jessop said that, while he admitted that aneurysms occasionally undergo consolidation by the gradual deposition of laminated clot, yet he thought that the usual process was by sudden coagulation throughout the mass of contained blood. He had on one occasion observed sudden consolidation and arrest of pulsation while he was examining an aneurysm; and he mentioned another case in which amputation had been performed for gangrene after ligature, and where the sac was found to be lined by a thin layer of laminated clot of old duration, the cavity being filled by a mass of soft coagulum.—Mr. WARD mentioned a case which he had taken charge of shortly after Mr. Jessop had tied the right carotid and subclavian for aneurysm at the root of the neck. At the end of a month there was severe secondary hæmorrhage, for which he had tied the carotid at a higher point. The hæmorrhage recurred on two subsequent occasions, and was treated by galvano-puncture, the second application setting up severe inflammation of the sac, with escape of a considerable quantity of tarry blood. The aneurysm subsequently consolidated, and the patient lived for two years in comfort and comparative activity. At the end of that time he was seized with acute prostatic retention, followed by severe hæmorrhagic cystitis, with high

temperature and symptoms of septicæmia. With the super-vention of pyrexia and violent cardio-vascular disturbances, the aneurysm began to pulsate and enlarge, became diffused, and the patient died cyanotic and comatose in a few days.

Dr. WARDROP GRIFFITH showed a case of Charcot's Disease, involving both knee joints. The patient had sudden pains lasting about a minute, myosis with Argyll-Robertson pupil symptom, absence of patella jerks, and incontinence of urine. There was creaking in some of the smaller joints, and a history of effusion into the right knee, which was tapped.—Dr. CHURTON had seen a similar case in which the joint was swollen and painful. He thought the invasion of Clarke's column of the cord determined the joint affection in locomotor ataxy.—Mr. LAWFORD KNAGGS thought the involving of the other joints, the rheumatic history, and the character of the pain rendered it more probable that the joint affection was osteo-arthritis in character.

Mr. MAYO ROBSON showed: 1. A case of Goitre which had produced dyspnoea for three years, owing to pressure on the trachea. Division of the isthmus by the galvanic écraseur was performed ten months ago. The circumference of the neck had since diminished from seventeen inches and a half to fourteen inches and a half, and the breathing had become quite comfortable. 2. Ununited Fracture of the Olecranon, treated by wiring the refreshed ends of the bones. Subsequent good union. 3. Psoas Abscess, due to caries of lumbar spine, treated by aspiration and injection of a solution of iodoform in ether. There had been four aspirations—eight ounces, six ounces, three ounces, and two ounces of pus having been removed, and about two drachms of a saturated ethereal solution of iodoform injected each time. Since the last aspiration, four months ago, there had been no return of pus, and the spine was being treated by a plaster jacket. 4. Suprapubic Lithotomy in a boy aged thirteen, where the bladder had been sutured and immediately returned. Mr. Robson had had four cases where immediate suture had succeeded in young subjects. 5. Sigmoidotomy for Stricture and Ulceration of the Rectum, performed by Mr. Allingham's method. The case showed the double-barrelled arrangement of the opening, which prevented the faeces passing below the aperture.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

A MEETING of this Society was held on Thursday, Nov. 8th, Dr. James Murphey, President, in the chair.

Anterior Colotomy.—Dr. ARNISON showed two men on whom this operation had been performed. He demonstrated the upper and lower openings in the colon, and showed the copper pad by which the patient could control the escape of faeces.—Remarks were made by Drs. Drummond and Galloway, and Mr. Jessop of Leeds.

Suprapubic Lithotomy.—Mr. PAGE showed a boy, aged eight years, on whom he had operated. The unsutured wound in the bladder united by first intention, without the escape of a single drop of urine from the wound.

Closure of Jaws successfully treated by Excision of a Condyle.—Mr. PAGE's patient was a girl aged nine years. When two years old she had an attack of measles, followed by profuse and prolonged discharge from the right ear. Within six months there was gradual closure of the mouth, and for six years the jaw had been fixed. Mr. Page cut down on the right temporo-maxillary joint, and found the condyle absorbed and welded to the skull. The bone was removed by chisel and mallet. The girl now opens her mouth widely. Mr. Page also showed a boy on whom he had performed the same operation with a similar result about two years ago.

Alcoholic Paralysis.—Dr. J. DRUMMOND showed a man who had almost recovered from this affection. There had been more or less loss of power and sensation in the arms and legs, with affection of the reflexes and electrical reactions. There was a history of great alcoholic excess, and marked cardiac lesions were present.—Drs. Philpott, Gowans, D. Drummond, and Ebleton joined in the discussion which followed.

Pathological Specimens.—Dr. HUME showed: 1. Flat oxalate of lime calculus, weighing 3 oz., removed by the suprapubic method from a patient with enlarged prostate; rapid recovery. 2. Tumour of testis from a man of thirty. It was a spindle-celled sarcoma, with large nodules of carti-

lage. 3. Sarcoma, with large blood cyst, removed from Scarpa's triangle.—Mr. JESSOP showed: 1. Calculus removed from bladder by suprapubic method. Symptoms had been present for many years. 2. Uric acid calculus, which had been present eight years. 3. Thirteen small stones removed from a case by suprapubic method, a prostatic enlargement being removed at the same time. 4. Renal calculus, weighing 11 oz., removed by nephrotomy. Symptoms had been present only six months. A large abscess formed round it. The cast had the shape of the expanded pelvis and calyces. The man made an excellent recovery, but a small fistula remained. 5. Gall stones from three cases in which the gall bladder had been opened. In one case the stone was removed from a point about the commencement of the common bile duct.—Mr. Heath, Dr. Hume, Mr. Page, and the President took part in the discussion on these cases.

Dr. HEATH showed Concretions removed from the Bladder by the median incision in a case of Old-standing Cystitis; also a Periosteal Sarcoma of the Femur from a case where he had divided the femur below the trephanters and then dissected out the head of the bone.

Dr. LIMONT showed Casts from a case of Plastic Bronchitis. The patient was a sailor, aged thirty-six; acute febrile symptoms were present; numerous casts were coughed up; but the patient died of asphyxia. At the necropsy the trachea and large and small bronchi were found lined by a fibrinous deposit, slightly laminated. Dr. Limont also showed a marked example of "Button-hole" Mitral.

Mr. RUTHERFORD MORISON showed a Fibroid Tumour, removed with part of the uterus. The tumour had been regarded as a cystic ovary. It was adherent to the uterus, and the latter was secured by Keith's clamp and divided. The patient died on the sixth day. There was no peritonitis, but there were foetid purulent clots in the uterine veins, and no doubt the patient died of pyæmia.

The following papers were held as read:—Mr. Page: Operative Treatment of Closure of Jaws. Dr. Geo. Taylor: Cervical Hamatomyelia. Dr. W. Robertson: Nasal Obstruction. Dr. D. Drummond: Lessons from the Post-mortem Room.

On the motion of the President, seconded by Mr. Heath, Mr. Jessop was elected an honorary member of the Society, and was also given a cordial vote of thanks for his valuable demonstration.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

The case of Dr. Lloyd Roberts.—Vaccination.

THE quarterly meeting of the members of this Association was held at Pontefract on the 30th ult., the President, Dr. Britton, in the chair.

Dr. HIME proposed a resolution expressing warm sympathy with Dr. Lloyd Roberts, the late medical officer of health for Rotherham, on the manner in which he was deprived of his office by the local board of that district.

Dr. DEVILLE (Harrogate) seconded the motion.

The PRESIDENT thought the case was of such a character that the Association might depart from its practice of not interfering with any steps taken by sanitary authorities with regard to their officials.

After discussion the resolution was adopted.

Dr. DEVILLE proposed: "That this meeting is satisfied that the practice whereby medical officers are almost universally appointed for a limited period is contrary to the best interests of the public, and has proved a source of great hardship to the medical officers of health, and consequently respectfully urges upon the Local Government Board the importance of promoting such legislation as will ensure the medical officers of health security of tenure of their office so long as they discharge their duties satisfactorily."

Dr. WADE (Wakefield) seconded the motion.

The PRESIDENT said the Local Government Board was a myth. If they altered the resolution so as to urge the matter on the Legislature, then he should be hopeful of something being done. The Local Government Board meddled and muddled, but never did anything.

Dr. NORTH and Dr. WILSON (the secretary) disagreed with the remarks of the President, the former gentleman holding that the Local Government Board had been of great advantage to the country.

The resolution was unanimously adopted.

Dr. A. BUNCLE (Pontefract) read a paper on Vaccination, Public and Private.

Dr. BURMAN (Wath), in a paper having reference to a recent outbreak of small-pox in his district, said his forty years' experience might be summed up as follows. 1. That primary vaccination in infancy is an almost perfect protection against small-pox during the first ten or twelve years of life. 2. A second vaccination is a complete protection for the remainder of life. 3. He had not known an unvaccinated person escape the disease if in a house where it was, unless he had previously suffered from the disease, and not always then. 4. He had not known a fatal case of small-pox after vaccination, and had scarcely ever seen a permanent mark left in such a case.

Notices of Books.

A Treatise on Dislocations. By LEWIS A. STIMSON, B.A., M.D., Professor of Clinical Surgery in the University of the City of New York, Surgeon to the New York, Presbyterian, and Bellevue Hospitals, &c. With 163 Illustrations. London: J. & A. Churchill. 1888.—Dr. Stimson is well known in this country, and his work on fractures is justly held in high repute. This companion treatise on dislocations is calculated to increase his good reputation. It is obviously the outcome of much hard work, carefully carried out, and it has been made as thorough and complete as practicable. Dr. Stimson has of course had an immense mass of material to deal with, especially as he has, so far as possible, gone back to original descriptions of cases, and one of his chief difficulties has been the sifting of the wheat from the chaff, the selection of sound accurate observations from careless and incorrect descriptions. One special feature, which will render the work of great use to others engaged in researches on dislocations, is the very careful and accurate bibliography. The book cannot of course be classed among text-books—it is far too elaborate for that; but it will be greatly valued by a smaller circle of readers, and by all who desire to know thoroughly the results of a careful study of the literature on this branch of surgery.

A Criticism of the Development Hypothesis. By JULIUS H. SEELYE, D.D., LL.D., President of Amherst College.—This is a very good statement of the main objections that can be raised against the Darwinian theory in the compass of twenty pages. It is divided into two parts—Facts and Principles. The Facts succinctly given are these:—No transmutation of species has ever yet been observed; the geological record gives no evidence of transmutation of species, and, so far as it can be read, simple organisms are persistent, whilst highly complex organisms, presumably better fitted to maintain the struggle for existence, have died out; natural selection cannot account for the changes which it is assumed to produce—as, for example, the production of mammary glands; the law of hybridity contradicts the hypothesis; lastly, gradation should not be confounded with progress, and does not imply a development. The Principles discuss the Author and Ruler of nature, design in nature, and species in nature. The objections that are urged have all been admitted and discussed by Darwin himself, but it is well to have them clearly put by an able writer, for it is certain the last word has not yet been said on the "Origin of Species." The pamphlet is stated to have been specially written for "Johnson's Universal Cyclopædia" and "Johnson's Natural History."

Vorlesungen über Akiurgie. Von Dr. BERNHARD VON LANGENBECK, weiland Wirkl. Geh. Rath und Professor. Mit Benutzung Hinterlassener Manuscripte. Herausgegeben von Dr. TH. GLUCK, Professor der Chirurgie in Berlin. Berlin: Hirschwald.—If any memorial of the great German surgeon were needed to perpetuate his memory, probably none could be better than this bulky volume which now lies before us. Langenbeck was undoubtedly a great

surgeon, and he has left his mark on many departments of scientific work. But his "bent" lay especially in the direction of operative surgery, and by far the most numerous of his many publications were descriptions and criticisms of new methods of operating. As an operator he was exceedingly calm and self-possessed, and showed no agitation while performing the most hazardous operations. In early days he was a pupil of Astley Cooper; and, brought up amid the traditions of that great school of surgery, he witnessed the two great surgical revolutions—the anæsthetic and the antiseptic. The lectures which Dr. Gluck has edited are chiefly of value as being the outcome of the very large and ripe experience of a great operator.

Medical and Surgical Directory of the United States. R. L. Polk and Co., New York.—Through the courtesy of Messrs. J. B. Lippincott and Co., Philadelphia, we have been favoured with a copy of the first edition of this extensive and valuable work. The volume, which contains over 1400 pages, contains a list of physicians and surgeons arranged by States, with school practised, post-office address, population and location, date and college of graduation, all the existing and extinct medical colleges in the United States and Canada, a synopsis of the laws of registration, a descriptive sketch of each state and territory, statistics, an account of all the best known mineral springs, and full particulars of all national associations and societies relating to medicine and surgery. Considering the number of names and mass of information contained in the volume, its compilation must have been a work of immense labour. Those responsible for its appearance are, however, to be congratulated on the success they have achieved in producing a Directory which, while naturally of paramount utility in the New World, is yet of very great value in the Old.

Mediterranean Winter Resorts. A Practical Handbook to the Principal Health and Pleasure Resorts on the Shores of the Mediterranean. By E. A. REYNOLDS BALL. With 27 Illustrations. Pp. 237. London: L. Upcott Gill. 1888.—This is intended as a guide-book for the large class of persons who desire to winter in a more genial climate than we enjoy in England. It therefore does not contain much information specially adapted for professional readers, although it gives a fair general account of the climate of the various health resorts. The details respecting the means of reaching these, the accommodation to be found at them, the expense of living, and the various kinds of occupation and amusement available at them will doubtless be found useful by those who are in search of a desirable winter abode. In addition to the Mediterranean resorts a full account is given of Cairo, which enjoys the advantage of a very dry winter, with the drawbacks of a great range of temperature, and the reputation of being the most expensive Mediterranean (?) winter station for invalids.

The Perfect Clinical Chart.—Messrs. Danielsson and Co., who have done much to facilitate the graphic record of clinical notes, send us a clinical chart, which has been devised by Dr. R. G. Patteson. It does not materially differ from most similar charts in vogue, the chief additions being the introduction of columns for noting the condition of the tongue, bowels, skin, &c. The small amount of space necessarily allotted to these points will, we fear, detract from the utility of the chart, which in other respects is very well fitted for its purpose. The same firm have added to their series of clinical figures some well-executed diagrams for recording ophthalmoscopic, rhinoscopic, and laryngoscopic observations.

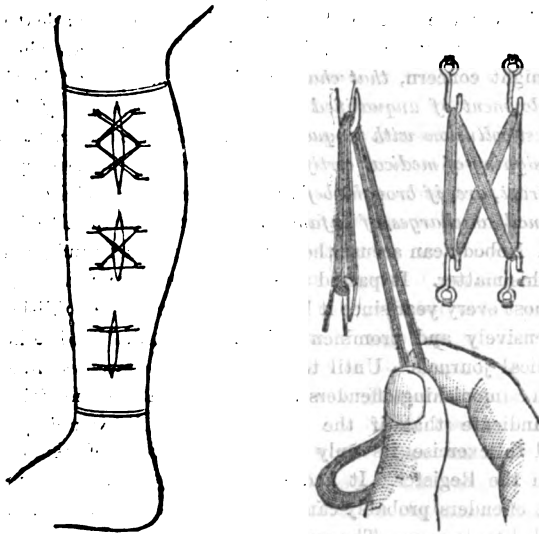
Smith's Physicians and Surgeons' Visiting List, Diary, Almanack, and Book of Engagements for 1889. Forty-third year. London: Hazell, Watson, and Viney.—This well-known and much-used Visiting List again presents itself for notice. It has served the profession for forty-three years, and seems quite likely to hold its ground. It is beautifully got up, and contains the usual list of useful tables of reference.

The A B C Medical Diary and Visiting List, with which is combined the *A B C Materia Medica*. Published by Burroughs, Wellcome & Co., Snow-hill Buildings, London.—This is a book similar in kind to the above, with the addition of brief notes of modern preparations, which cannot fail of being useful to medical men engaged in general practice.

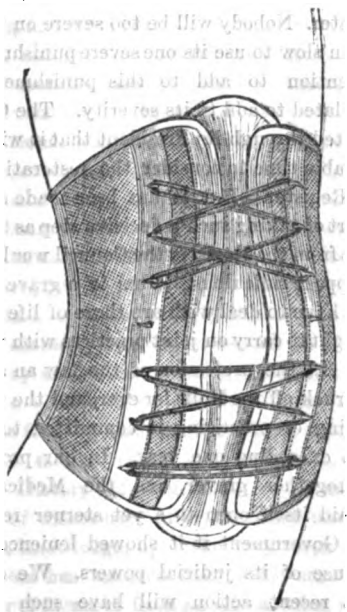
New Inventions.

MATTHEWS' PATENT IMPROVEMENTS IN SURGICAL BANDAGES.

THESE improvements suggested themselves to a patient in his endeavour to obtain a firm support for the knee joint in a case of synovitis. Their object is to enable firm pressure to be directed to a given place, and increased or decreased at will, with a certain amount of elastic resilience and flexibility, a result not thoroughly attained by the numerous knee-caps



tried. It was found that the leather knee-cap simply kept the knee stiff, and could not be bound tightly enough (with-



out interfering with the circulation and the action of the hamstrings) to give the requisite support and pressure

immediately under and by the sides of the patella. With the elastic knee-cap the pressure was equal all round the joint, and could be increased at the front or wherever required. It is considered that the knee-cap here figured meets the difficulty, combining the advantages of a stiff knee-cap with the power of applying localised elastic pressure. This is done by the arrangement of some flat blunt hooks, and a few ordinary pieces of elastic attached. By this simple contrivance many of the shortcomings inherent to the elastic knee-caps in ordinary use have been overcome. The woodcuts show how this is attained. It has been found to work well in actual practice, and will doubtless meet a long-felt want. The principle itself, of localising the pressure, is applied to other appliances besides the knee-cap, such as belts, stockings, and thigh pieces. In a case of varicose veins the pressure can be directed and limited to the vein itself, if this should be required.

"PROTECTION OF THE MEDICAL PROFESSION."

To the Editors of THE LANCET.

SIRS,—Among the many suggestions for ameliorating the condition of the general practitioner that have appeared in your columns, there is room for one which appears to have been overlooked. It is simply the compulsory registration of all who are engaged in practice. There are undoubtedly some actually qualified men who, for reasons of their own, prefer being unregistered, and this fact is in itself a grievance and an injury to the profession. In my own experience a qualified man who practises in the neighbouring town employs an unqualified assistant, at a distance of eight miles and more from his own residence. I laid the matter before the Medical Council some time ago, but they inform me that the person is not on the Register, and therefore they cannot interfere. So a signal act of wrong is perpetrated with impunity, because the perpetrator shirks the responsibility of being registered. I would suggest that the profession should get a short Act of Parliament passed to remedy this state of things. It will require funds for employing a parliamentary solicitor to draw the Act, and the interest of one or two independent members to introduce it; this need be no hindrance. A central committee in London could carry out the business, and a fund could be started, to which I, for one, should be happy to subscribe. The main point is to enforce the compulsory registration of every practising member of the profession under a penalty of £20 for each conviction, half of which might go to the informer. By this means a good deal of what is actually illegal practice would be stamped out, and a regular, registered, and therefore responsible, body of practitioners would be the result.

I am, Sirs, yours obediently,

Dec. 9th, 1888.

A DOCTOR OF MEDICINE.

TREATMENT OF FRACTURE OF THE BASE.

To the Editors of THE LANCET.

SIRS,—It is with some surprise that I have read Mr. Lawson Tait's remarks upon the last Fellowship examination so far as they apply to treatment of fracture of the base. As a house surgeon, I should imagine that by those under whose care these cases usually first come it is now fairly generally understood that the treatment of fracture of the base differs in no particular from compound fracture in any other part of the body, except in so far that from position it is somewhat harder to apply the strictly antiseptic method. I am sure that in my experience success in the result of compound fractures has been in exact proportion to the completeness with which the true antiseptic treatment has been carried out; and I certainly think that, speaking generally, septic meningitis is preventable by somewhat similar means, as by keeping the external meatus surgically clean and the nose and mouth as much so as possible, and by receiving the discharges, at least from the meatus, into some material which will prevent their decomposition.

I am, Sirs, yours truly,

HENRY TONKS, F.R.C.S. Eng.,

Senior Resident Medical Officer.

Royal Free Hospital, W.C., Dec. 9th, 1888.

THE LANCET.

LONDON: SATURDAY, DECEMBER 15, 1883.

THE decisive action taken at last by the Medical Council in the matter of registered practitioners "covering" unqualified assistants will bring the whole subject vividly and practically before the profession. It is of great moment that this matter should be thoroughly understood, especially in England and Wales. The revelations of the scale on which it is practised in England and Wales have been a source of surprise to Scotch and Irish practitioners, in whose division of the kingdom it does not seem to exist to any noticeable extent. It is difficult to obtain exact facts as to the proportions of this evil in England. Those who are interested in the question should read "A Statement in 1883, founded on Documentary Evidence which was laid before the Committee on Employment of Unqualified Assistants by Registered Practitioners, presented by the Chairman, Dr. T. KING CHAMBERS." The writer quotes from a medical contemporary to the effect that there are 8000 unqualified assistants in England and Wales. In one town (Halifax), shortly prior to this period, there had been no less than sixteen unqualified assistants, which number had been reduced to seven. In Manchester, according to this authority, "about 30 per cent. of the practitioners kept unqualified assistants of some kind; about 8 per cent. qualified. In the towns round Manchester, with large working populations, the number of unqualified assistants was greater still." So much for the scale of the evil.

Our readers are aware that the Medical Council has no control over unqualified assistants or any other unqualified practitioners; the only way in which the Council has any responsibility for the existence of such an evil is that it has responsibilities for the good conduct of registered practitioners, and power of punishment in cases where such practitioners are guilty of disgraceful or, to use the strong word of the Act, "infamous conduct in a professional respect." Nobody can accuse the Medical Council of being eager to bring accusations lightly against those on the Register. It could much more easily be maintained that the Council has been slow to discharge its duty under the penal clauses, and especially so in regard to the particular offence of "covering" unqualified assistants, with which we are now concerned. Practically it ignored the offence and connived at the offenders until 1882, and then it was only brought to a sense of its duty by a reminder from the then Home Secretary, Sir WILLIAM HARCOURT, who in June, 1882, in reply to a series of questions by Mr. H. B. SAMUELSON with regard to scandals at Dispensaries in the East-end of London, where the patients were attended chiefly by an unqualified person, and where two deaths happened without intelligent recognition of the nature of the disease, said "*the proper course would be to call the attention of the Medical Council to these cases. The Council had power to deal with them under the 21st and 22nd Victoria.*" Such an expression

of opinion from the Home Secretary amounted almost to a rebuke of the Council for its past inaction. At any rate, no time was lost in acting on the Home Secretary's view of the Council's duties. A committee was appointed in 1882 "to consider the abuses which arise from the employment of unqualified practitioners, and to report to the Council whether any means can be adopted for checking these abuses." We give elsewhere a Memorandum setting forth the final Resolutions of the Council in the year following on this subject, based on the report and recommendations of its committee. Our readers will read these carefully for themselves. Briefly, they asked for legislation to make a qualified practitioner "covering" an unqualified one liable to the same legal liabilities as a person falsely representing himself to be a legally qualified medical practitioner; they recommended communications with the Registrar-General to secure amendments of the Registration Acts to prevent evasions of the Act in the certification of causes of death; and finally they recorded, for the information of all whom it might concern, *that charges of gross misconduct in the employment of unqualified assistants, and charges of dishonest collusion with unqualified practitioners in respect of the signing of medical certificates required by law or lawful contract, are, if brought before the Council, regarded by the Council as charges of infamous conduct under the Medical Act.* Nobody can accuse the Council of any hasty judgment on this matter. It passed these resolutions five years ago. Almost every year since it has caused them to be published extensively and prominently in THE LANCET and other medical journals. Until this year it has contented itself with admonishing offenders seriously, but it has not failed to indicate that if the evil continued it would proceed to exercise its only penal power—that of removal from the Register. It had so long delayed this measure that offenders probably came to doubt whether it ever intended to do more. The consequence is that two gentlemen, who probably expected at the most to receive a severe admonition from the President, find themselves removed from the Register. Nobody will be too severe on the Council for having been slow to use its one severe punishment. Nor is it our intention to add to this punishment by any remarks calculated to add to its severity. The Council has clearly intimated through its President that it will be ready after a reasonable time to consider the restoration of these names to the Register. But it has been made abundantly clear that short of taking such a decisive step as the removal of these names from the Register the Council would only have made itself appear ridiculous. Ours is a grave profession. The issues we have to deal with are those of life and death. We have no right to carry on joint practices with unqualified practitioners. In the profession of the law an attorney so offending is struck off the Rolls for ever, and the unqualified person so acting or practising is committed to prison for any term not exceeding one year. In our profession the offence is altogether graver, and the Medical Council would have laid itself open to a yet sterner rebuke from the executive Government if it showed lenience and indecision in the use of its judicial powers. We confidently hope that its recent action will have such a salutary effect that it will not need to be often repeated. This is essentially a poor man's question. The rich can pick and

choose their advisers, and ascertain their credentials. But in populous districts there is not time or opportunity for this, and the unqualified assistant, acting under the cover of his registered principal in the gravest emergencies, is apt to be regarded as a licensed and qualified practitioner.

MEDICINE, like all other sciences, is intimately associated with and dependent upon theory. It is ever advancing as fresh facts are recognised, but its advances are indicated mostly by shifting vanguards of theories. Fresh discoveries point to fresh fields of investigation, and the appropriate lines of investigation are generally mapped out broadly by theories founded upon past work. Theories are like faith, incapable of demonstration, while they conveniently group together the grounds of that which we would fain believe. Until displaced in favour of some new thought, they stand like the stick round which we hope to train the twining plant of knowledge. They indicate the general direction along which it is assumed that growth will take place, but they are liable to removal if found to be false guides. A theory which appears fairly satisfactory is believed in and acted upon as long as possible. Facts and explanations are unconsciously made to harmonise with it. For the time being it forms the ideal standard or order into which everything of the past and present is made to fit—if possible. Some tight wedging of squares into circles may be necessary, but, provided that a general appearance of order results, the effort needed will probably soon be lost sight of. If they can be rammed together without too much obvious damage to the fact or the theory, they will be likely to hold their place with greater tenacity from being misfits. An old theory which has been generally accepted is more difficult to dislodge than one which has not rested in its place. In every science the frame of mind in which theories are approached tinges the whole work of the individual. Theories are intended to be helps and guides; they cease to be of service when they are blindly followed as truths. They leave room for speculation and observation, and from their first enunciation they should be continually subject to assaults, until they finally die out or become transformed into laws of nature. Meanwhile some observers are so constituted that they can recognise only deviations, and are prone to general scepticism of everything which is not demonstrable; while others, as the result of mood, temperament, or education, are always in search of resemblances. General experience indicates that that which is most ardently sought can always be found, whether the quest be for resemblances or differences. The world of fact is wide enough to embrace both. Every theory of necessity can be supported by resemblances or combated by differences; hence, if the natural individual bent is too closely followed, there is danger lost, while seeking one fact too assiduously, others which come across the field of mental vision should be overlooked or disregarded. History is full of examples of the strange postponement of discoveries after they had been, according to subsequent knowledge, upon the very verge of completion. Whether this has resulted from some curious obstructive association of ideas, or from an unreasoning pursuit of some fallacious theory, matters little; the fact remains that observations have been misunderstood, and progress delayed.

Unless the step in advance has been duly recognised, it may have been recorded in terms which subsequently leave room for dispute about priority. Did SHAKESPEARE really know anything about the circulation of the blood, or did he only express current ideas in poetic language? Did GALILEO forestall HARVEY's demonstration of the circulation, or does he not owe an ephemeral fame to a certain ambiguity of expression which has been eagerly seized by commentators of his own nationality? And yet, in our present light, it seems almost inconceivable that darkness should have shrouded this subject so long.

Every diagnosis is based upon theory; hence the frame of mind which deals with it becomes of immense importance. The patient has his list of symptoms ready, and usually has his own theory of explanation. Treatment can only follow the conclusions arrived at from consideration of resemblances or differences from the imagined complaint. Even in consultations there may be a habitual readiness to accept a diagnosis, a habitual tendency to differ. The frame of mind which is prone to recognise solely differences or resemblances may work incalculable mischief. In any given case absolute proof is frequently impossible, although reasonable ground for belief can be attained from a number of stray indications which present numerous points of resemblance and difference from the typical course of disease. Where the former largely predominate, the question of diagnosis is removed almost entirely from the realm of hypothesis, and rendered nearly as certain as if the whole of the pathological processes were immediately visible. When the resemblances and differences are more evenly balanced, the ingenuity and skill of the physician are severely taxed, and the mental attitude becomes still more important. He who naturally looks for variations—that is, for the unusual—will be more likely to startle with fantastic guesses at truth, in which the minor symptoms are unduly dwelt upon, until possibly an absolutely new disease is described in place of a mere variant of an old theme. For clinical teaching, attention to resemblances is more useful than recognition of differences. Students require broad, bold sketching in which the main characters are preserved and readily recognisable, rather than the highly finished picture in which the total effect is sacrificed to trivial detail. Students learn by studying resemblances; science advances by the careful consideration of differences; diagnosis and theory walk hand in hand.

THE yellow fever epidemic of 1888 in Florida has called forth a number of comments which deal with the prevention of that disease, and which are well worthy of consideration. One of these is contained in a report to the Illinois State Board of Health by their secretary, Dr. J. H. RAUCH. In this report it is shown that, notwithstanding an attempt to conceal the several circumstances, yellow fever, which was modified by reason of temperature, had existed during the past winter in the territory between Tampa and Jacksonville; and that cases of "fever" were heard of in March this year which were held by some physicians not to be typhoid, as alleged, but to be part of a "yellow-fever wave" which was passing over Jacksonville. By April 20th the prevalence of the disease was admitted, and it was stated that several of the southern and western portions of the State were to be

looked upon as suspicious. A belief is also current that the introduction of the disease took place through the port of Tampa in May, 1887, and that the gap in its history between that period and its recrudescence in the spring of 1888 was due to the policy of concealment and suppression of information by local health and quarantine authorities in Florida.

In the State of Illinois only one city was, according to Dr. RAUCH's views, liable to danger; that was the city of Cairo, and a systematic observation of its meteorological and other conditions was at once instituted, and, on the basis of the results ascertained, Dr. RAUCH undertook the responsibility for the action which in his official character he subsequently carried out. We do not know what is the particulate cause of this disease, but there are certain points about its natural history which we do know, and one is that a continuous temperature of not less than 70° F. is necessary to its maintenance and diffusion, and this even in the Gulf region of the United States. There is also, according to the evidence obtained by Dr. RAUCH, no instance of its epidemic spread in places north of 35° north latitude, unless indeed, to quote from HIRSCH, "when the heat has equalled the mean annual temperature of the tropics; and it has on no occasion become diffused in a temperature below 68° F., the winter temperature of the tropics."

Later on in the year the disease became much more prevalent; panic ensued, and with panic came its old associate quarantine, the restrictions of which spread far and near. Illinois had to be protected, and by September the quarantine craze had spread even to Cairo, which city had not only quarantined Jacksonville, but appealed to the State Board for financial and other help to maintain it. But Dr. RAUCH was convinced that the premises on which he intended to base his action were correct, and that he was not justified in giving the authority of his Board in any shape or form to a quarantine which was unnecessary, and therefore without justification. Hence he immediately declined to authorise the enforcement of the system; and later on, when he brought the matter under the notice of his Board, they passed a resolution endorsing his attitude and approving his action in "exercising the authority of the Board for the abandonment of all quarantine restrictions in the State."

Quarantine, in nearly all its applications, is the result either of ignorance or of neglect. It is resorted to by panic-stricken people, and it is distinctly injurious to the communities affected by it. In the case of this localised epidemic of yellow fever, restricted as it has been to the boundaries of one sparsely settled State, it is declared by Dr. RAUCH to have brought about the loss of millions upon millions of dollars by paralysing industries and embarrassing commerce, and to have led to cruel and vexatious interruption or suspension of travel by means of "shot-gun" restrictions, with all their attendant "barbarities and high-handed outrages," and this at times a thousand miles away from any infected locality. The proceedings are, indeed, stated to have involved "the cold-blooded murder of travellers seeking to return to their homes." With such a sequence of events in prospect, it is not to be wondered at that every effort was made in the early stages of the disease to keep all information away from those who had the power of imposing such restrictions; indeed, this secrecy, which is

fatal to any proper attempt at prevention, characterises nearly every quarantine system adopted, and very generally alone suffices to frustrate the purpose which it is intended to effect. In the case of yellow fever outside the tropics quarantine is especially useless; and yet in our own country, which professes to have abandoned such restrictions even in the case of a disease such as cholera (which occasionally assumes an epidemic form in the northern latitudes), we maintain an old and effete quarantine law, which professes to be administered by a department of State for preventing the importation of yellow fever. Dr. RAUCH's report may usefully be taken to heart by that department; for it is a story showing the utter uselessness of a system which, if carried out stringently, is properly referred to as "useless" and "inhuman," and the value of an official who, whilst he has the courage and honesty to forbid resort to quarantine, has also the knowledge necessary to give force to his recommendation that the prevention of yellow fever must essentially be sought in dealing with the presence of filth in the widest sanitary sense of the word.

ON Monday last, at the instance of the vaccination officer for Bethnal-green, the father of a child was summoned for neglecting to have this child vaccinated. The summons was heard by Mr. BUSHEY, and the defence was the defendant's conscientious objection to vaccination on the ground that other of his children had after vaccination sickened and died. The 29th section of the Vaccination Act, 1867, renders a parent liable to penalty unless he can show "a reasonable excuse for his neglect." The difficulty of the magistrate appears to be that he had to decide a medical question—viz., the fitness of the child for vaccination; he said that he had read a volume of reports and statements against vaccination put before him on the last occasion, and found the same full of points of the greatest importance, which might well be pressed on those who had the making or repeal of the law. The evidence before him was that given by a sister of the defendant, who stated that she knew her brother's children, of whom there had been four; all were born healthy; all had been vaccinated on reaching three months old, and thereafter had fallen into very bad health; the first one died when two years and four months old, and the second when sixteen months old; the third, now aged three years and a half, still lived, but was ailing and weak. The children died of broncho-pneumonia. Mr. BUSHEY said he had no doubt much was to be said on the two sides, but that he considered he had before him evidence which might be admitted to prove the effect of vaccination on a particular family. He therefore accepted this as a reasonable excuse, and dismissed the summons. The magistrate in this case appears not to have distinguished between *post hoc* and *propter hoc*. He probably would not have accepted the opinion of an unskilled woman on this point, and, so far as the published reports of the proceedings are available, the evidence of this witness related only to statement of fact; the conclusion, therefore, was his own. Not long ago a woman asserted that her child, who had been vaccinated with calf lymph, must have been strengthened by the operation, as he had grown so much more sturdy since that; "he had evidently got something of the bull in

him." Mr. BUSHBY would doubtless have laughed at the last observation, but he seriously accepted the other as sufficient for his decision. In the absence of any medical evidence, we hold that the proper course would have been to have adjourned the hearing of the case in order that some trustworthy opinion might have been given as to the fitness of the child for vaccination. This would have been but right in the interest of a helpless child, who is now permitted to remain susceptible to a loathsome and fatal disease. It may, however, be open to doubt whether the Act contemplated an excuse of this sort as being within the discretion of a magistrate. The Act fully provides for the postponement of vaccination on medical certificate, when the state of health of a child is such as to require this postponement, and we should have assumed the absence of such certificate would have had due weight with the magistrate. We trust there will be an appeal against the magistrate's decision; we gather, indeed, that notice of an appeal was given. It is certainly very desirable that children should not be vaccinated unless they are in proper condition, but it is equally undesirable that the lives of children should be imperilled by leaving them susceptible to small-pox.

Annotations.

"No quid nimis."

ROYAL COLLEGE OF SURGEONS MUSEUM OF ILLUSTRATIONS.

WE have been asked to make known that the Royal College of Surgeons, in pursuance of their intention to form a collection of pictorial illustrations of disease, will be glad to receive donations under the following heads. (a) Monographs or reprints of papers containing illustrations. If authors can spare two copies, so much the better. (b) Atlases of illustrations, whether of pathology or external appearances, and whether old or recent. (c) The Transactions of Societies—i.e., the Pathological, Medico-Chirurgical, and Clinical; of these any odd volumes will be useful. (d) Original drawings or proofs of engravings, woodcuts, &c.; and these should be accompanied by references, and, if practicable, by descriptions. All gifts should be addressed to the Conservator, Royal College of Surgeons, Lincoln's-inn-fields.

THE SUPERVISION OF POOR-LAW INSTITUTIONS.

AN evening contemporary states that 90 of the children in the school of the Strand guardians have serious ophthalmia and 102 slight ophthalmia, making a total of 192 children suffering from this form of disease. The facts came before the Strand guardians on a report of the medical officer, who stated that a large proportion of the eyelids of the children were permanently congested and ripe for disease; he attributed the cause to overcrowding, and recommended that the number of children sleeping in each room should be reduced by one-half. A member of the Board of Guardians added that there were already thirty children below the number for which the school was certified by the Local Government Board. Further, we hear of enteric fever spreading in a Northamptonshire workhouse, indicating very strongly the need for medical inspection of these institutions. Formerly the Local Government Board had a medical inspector, who devoted his time to such points as affected the

workhouses of the country generally, but at present lay officials seem to be regarded as sufficient for all such purposes. These occurrences of preventable disease reflect upon the supervision which is exercised; for the means by which they can be avoided are enough understood to enable them to be guarded against. It is now some years since THE LANCET undertook an investigation into the circumstances of Poor-law institutions, and the facts which then came to light led to large measures of reform; there is still, however, room for considerable improvement, and nothing short of the systematic medical inspection of all workhouses would provide against the prevalence of preventable disease.

DIPHTHERIA IN THE METROPOLITAN ASYLUM HOSPITALS.

RECENT returns issued by the Metropolitan Asylums Board show that there has been a considerable increase in the number of cases of diphtheria admitted to the hospitals maintained by that Board since such a course received the sanction of the Local Government Board. At the beginning of the week ending Nov. 3rd last these hospitals contained only 6 cases of this disease, all under treatment in the Eastern Hospital, and at the end of the week the number had increased to 9. At the end of each of the following four weeks the number was successively 17, 14, 19, and 30; and on Saturday last the number had further risen to 34, located in four hospitals. The number of cases admitted during the above-mentioned six weeks was 60, which, added to the 6 cases under treatment at the beginning of the period, raises the number to 66; of these, 29 have terminated fatally, 3 have been discharged recovered, and 34 remained under treatment on Saturday last. The numbers are at present too small for the calculation of a trustworthy rate of mortality; but the case-mortality of diphtheria is invariably high, and the advantage to be expected from hospital treatment of the disease is rather from reduction of cases through isolation than from a reduction of the proportion of deaths to cases.

THROMBOSIS OF THE CEREBRAL SINUSES.

WE are indebted to Dr. Douglas Powell for additional references to cases of this disease, by Drs. Wilks, Tuckwell, and Andrew. We add some others, which, with those in our editorial remarks on Dr. Powell's case of "idiopathic thrombosis of cerebral sinuses in a young woman," which we published in the "Mirror of Hospital Practice" for last week, give our readers a full index to the subject. Dr. Tuckwell, in St. Bartholomew's Hospital Reports, vol. x., records the case of a chlorotic girl aged sixteen, who died with thrombosis of the cerebral sinuses and veins; and oedematous softening of the brain with bloody extravasation. Her symptoms were those of extreme anæmia, with severe frontal headache, listlessness, paralysis of the right arm, sudden onset of coma, and rapid death. Dr. Andrew brought before the Pathological Society in 1865 (see Trans., vol. xvi., p. 27) a case somewhat similar in character—thrombosis of the cerebral sinuses, with apoplexy of the optic thalami, consequent on anæmia, in a girl aged twenty. The symptoms during life were slight headache, at first frontal, becoming very severe, vomiting, delirium, and insensibility passing into coma, the pulse being rapid and slightly irregular. Dr. Wilks refers in his lectures on Diseases of the Nervous System to the case of a lady below middle age, the subject of anæmia, who suffered from severe headache, vomiting, transient hemiplegia, became unconscious, had rigidity of limbs, followed by convulsive twitchings, and in whom, at the necropsy, thrombosis of the lateral sinuses was found. He had seen

another somewhat similar case, and says, "I have met with it two or three times in children as the main disease." Dr. Church, in the Reports of St. Bartholomew's Hospital for 1889 (p. 178), refers to a case which he had seen. This was in an anæmic girl, aged twenty; the symptoms were similar to those mentioned by Dr. Tuckwell. Dr. Crisp (vol. x., Path. Soc. Trans.) published the case of a girl, aged sixteen, who was not anæmic. She died with thrombosis of the superior longitudinal sinus and cerebral veins, and refers to Cruveilhier (livr. xxxv., pl. 1). There is also a somewhat exhaustive treatise on the subject of thrombosis of the cerebral sinuses by Dasch, published amongst selected monographs by the Sydenham Society in 1861. The majority of the patients whose histories are on record were young anæmic girls.

THE HEALTH OFFICERSHIP OF RUTHIN.

THE Town Council of Ruthin are somewhat chagrined at the remarks of a contemporary concerning their recent treatment of their late medical officer of health, Dr. Lloyd Roberts. The Mayor, at a public meeting held for the election of a medical officer of health, made certain statements which it is now said were inaccurate, and which have led to the action of Mr. Jones, the successful candidate, being criticised for having applied for a post which it was alleged was only technically vacant. The correct circumstances of the case appear to be that the Town Council of Ruthin were desirous that the medical officer of health and the inspector of nuisances should be placed under the control of the Local Government Board, and the town clerk therefore asked Dr. Roberts whether, to comply with the necessary formalities, he would resign, or the Council should serve him with six months' notice to terminate his engagement. Dr. Roberts elected to receive notice, and the Town Council therefore adopted this course and determined to advertise the vacancy. Dr. Jones, observing the advertisement, spoke to Dr. Roberts on the subject, saying he would not apply for the office if there was any understanding between him and the Council that he should be re-elected. Dr. Roberts said that he thought the Council were really almost obliged to re-elect him. Dr. Jones then discussed the matter with the Mayor, and was informed by him that there was no reason why he should not apply. It is due to Dr. Jones to state that he took these steps before making application for the office, but, so far as the resolutions of the Town Council are concerned, we should have anticipated that the Mayor would have pointed out that the vacancy was only created with a view to giving the Town Council an opportunity of placing the medical officer of health under the control of the Local Government Board. The second point upon which we desire to comment is the action of the Town Council in not re-electing Dr. Lloyd Roberts. A member of the Council has been good enough to state that "the Council were not satisfied with Dr. Lloyd Roberts, and were glad to avail themselves of the opportunity of giving him this six months' notice. He instanced the disagreement he had had as to the nuisance at the tan-pit, which, he said, Dr. Lloyd Roberts declared was no nuisance, whilst he (the town councillor) asserted that it was, for there were fifty tan-pits full of stagnant water, and it did not require a medical man to say whether it was a nuisance or not; a child could tell it was." We quote from a local journal. We have before us the statement of the Mayor that Dr. Roberts had faithfully served the authority for twelve years, and now we learn from a statement of a member of the Council that this device was resorted to in order to dispossess him of his office. We have quoted at some length the objection to Dr. Roberts, which is given because it will enable the public to understand the sort of reasons which are held to be sufficient by some local authorities for terminating the

appointment of their officers. In regard to the particular matter referred to, we have not the least reason to doubt that Dr. Roberts advised his authority properly, but the advice was not palatable to a member of the Council, and he has thought it well to use this in justification of the Town Council's proceedings. It is lamentable evidence of the circumstances under which medical officers of health have now to perform public duties.

THE PSYCHOLOGY OF DECEPTION.

AN extremely entertaining and suggestive paper by Professor J. Jastrow, dealing with the psychology of deception appears in the December number of the *Popular Science Monthly*. The simplest type of a deception occurs when, owing to an unusual disposition of external circumstances, the inference necessarily drawn leads to an incorrect conclusion. The human race labours under an inherent logical necessity to interpret a new experience by the old, the unfamiliar by the familiar. This notion affords an explanation of the types of deception experienced in conjuring tricks, where the whole psychology of the process consists in inducing the spectator to draw the natural logical inference, which will be a wrong one. The delusions of the insane, according to the author, are often misinterpretations of abnormal sensations under the guidance of a dominant idea. Of the physical phenomena of spiritualism, and of the sincerity of those who affirm the impossibility of fraud, the author writes convincingly and temperately. While admitting that these witnesses are honest, he considers their mistakes arise from the non-recognition of their liability to error, and their predisposition to see in everything the evidence of the supernatural. The concluding pages are devoted to a careful analysis of the phenomena of spiritualism, in which self-deception plays the leading rôle. Professor Jastrow speaks hopefully of the future, when "with the spread of education, with the growth of the capacity to profit by the experience of others, with the recognition of the technical requisites that alone qualify one for a judgment in such matters, with a knowledge of the possibilities of deception and of the psychological processes by which error is propagated, the soil upon which spiritualism and kindred delusions can flourish will be rendered unfit." The growth of the capacity to profit by the experiences of others largely coincides with increasing age and increasing personal experience. No amount of education short of experience is, in our opinion, likely to check the propagation of error and the misrule of deception. The marvellous is always attractive, and will always be supported by a crowd of duped votaries.

A SICK AND IMPRISONED LIGHTHOUSE-KEEPER.

THE perils of the lighthouse service have been recently illustrated by an occurrence at the Chickens Lighthouse, situated on a reef of rocks near the extreme south of the Calf islet, which is separated by a sound from the southern coast of the Isle of Man. The keepers are each in turn six weeks at the lighthouse and a fortnight on shore, three men being always in the building and a fourth ashore. Besides these, there is a fifth ready to act as occasional keeper should any of the regular keepers be taken ill while on duty. This occurred to one of the keepers named Beggs. He returned to the lighthouse during an interval of calm weather on the 1st ult., six days past his time, and was soon after taken ill with what appears to have been peritonitis, for which the principal keeper (Black) treated him with hot-water flannels and turpentine, which gave temporary relief. He subsequently became so much worse that Black hoisted the signal for relief, and repeated it more urgently, though he had only too much reason to fear that it could not be sent. This proved to be the case. On

four different days the relief boat set off, but only to be driven back without being able to approach the rocks; and on the night of the 22nd Black and his other assistant (Fraser) feared that Beggs was dying. Fortunately a landing was effected on the 27th, and with great difficulty Beggs was brought by his comrades down the building and the long iron ladder to the landing place and into the boat, which landed him and Black, who had been kept three weeks beyond his usual time, at Port Erin. Beggs was conveyed in a carriage to Port St. Mary, where the keespe live, and attended to by Dr. Rowley Jones, the medical officer to the lighthouse. On the 30th Beggs was reported to be much easier, and making satisfactory progress towards recovery.

PROGRESS IN PUBLIC HEALTH.

IN a thoughtful address on Recent Advances in State Medicine, delivered by Dr. Henry B. Baker at the last annual meeting of the American Medical Association, prominence is given to the need for legislation in three essential directions for the prevention of infectious diseases. The first need is held to be notification, the second isolation, and the third disinfection. This plan follows very closely on the lines of our own progress in this direction. We wish that we could in the same way claim that our own advance corresponded in another respect with that which has characterised the State of Michigan, where the Legislature has appropriated a large sum for the building and equipment of two laboratories, one of which is to be for the purposes of hygiene. The director of this laboratory is Dr. V. C. Vaughan, whose chemical and bacteriological researches are well known. In connexion with the subject of cholera and its prevention, reference is made to an experiment in which the salt water in New York Bay had been sterilised and inoculated with "pure cultivation of the spirilla of Asiatic cholera," whatever these may be, and also with the spirilla of Finkler and Prior, and that they had not only been kept alive, but had also greatly increased in numbers. The inference is drawn by the experimenters that if dejecta from cholera patients should be thrown in the lower bay cholera might thus gain a foothold on the contiguous shores. No information was, according to Dr. Baker, forthcoming as to the temperature at which the cultivation was maintained, nor on other matters of importance in relation to the experiments.

NEW OPERATION IN EMPYEMA.

PROFESSOR M. S. SUBBOTIN of Kharkoff describes in the *Vratch* (No. 45) a new operation he has devised for opening the thoracic cavity in empyema, with the view of obviating the danger arising in Estlander's operation and in the modifications of it practised by Schede and Sprengel from the extensive raw surface which is necessarily allowed to remain in contact with the purulent discharge. Professor Subbotin suggests that in cases where the lung itself is free from disease, the unyielding nature of the thoracic wall may be overcome without the removal of ribs by simply cutting them through; also that if a rib is divided in two places and the intermediate portion removed, the chest wall will become flexible and may be pressed inwards so as to lessen the cavity of the empyema, and in this way assist to put an end to the suppuration. After thinking out a plan based on the above considerations, he determined to apply it in operating on a case under his care in the Kharkoff clinical wards last June. The patient having been chloroformed, an incision was made along the seventh rib, which was then stripped of its periosteum and excised to the extent of seven or eight centimetres. An extensive opening was here made into the pleural cavity. After the pus had been evacuated the

cavity was carefully cleaned and the opening well covered with gauze, and a gauze compress applied. An incision was then made along the border of the pectoralis major about five centimetres in length, exposing the sixth, fifth, and fourth ribs, and these were cut away (the periosteum not being felt) with forceps until the rib became movable. Another incision was then made in the line of the posterior fold of the axilla, exposing the same ribs, which were again divided as before; the wounds were then sutured and dressed with gauze, a large thick pad of the same substance being applied outside, with a good compress bandage round the thorax. The upper wounds were kept from communication with the empyema. When after a few days the intra-thoracic wound was dressed, a drainage tube was put in. The case recovered, but three months after the operation there was still a small sinus which continued to discharge. The advantages claimed by Professor Subbotin for his operation are the small raw surface which is left in contact with the purulent matter, and the firm but movable portion of thoracic wall which can be pressed inwards by bandaging, so as to diminish to a considerable extent the size of the cavity.

ST. MARY'S HOSPITAL.

AT a recent meeting of the St. Mary's Hospital Medical School Committee, Mr. Field's resignation of the post of Dean was accepted with universal regret. Mr. Field has held the office for upwards of six years, during which time the school has more than doubled in size. The following resolution was unanimously adopted: "That a testimonial be presented to Mr. Field in recognition of his great services to the Hospital School, and that subscriptions be invited for this object from members of the staff, former and present students, and other friends." Gentlemen wishing to subscribe are requested to send their names as soon as possible to Mr. Malcolm Morris, 8, Harley-street, W. Mr. Field has been succeeded in the office of Dean by Mr. Herbert W. Page, one of the surgeons to the hospital. For the future the Dean's work will be divided, and the financial part of the duties will be managed by a treasurer, and Mr. Malcolm Morris has been selected for the post. Dr. Sidney Phillips has been reappointed Sub-Dean.

CARRYING REVOLVERS.

AMERICAN customs and methods are often highly respectable and deserving of imitation. One particular habit which has come to us with a Transatlantic introduction is, we venture to say, both useless and objectionable. We allude to the practice of carrying about a loaded revolver. This may be justifiable and even advisable in some parts of the western continent, but it is not usually a requisite in European life. We live, thanks to our paternal standing as a nation, in a land where cities and their slums do not rise and grow with magical rapidity, where our principal thoroughfares are for the most part well travelled and well lighted, and officers of order are distributed for the protection of life and property. We have still, it is true, a wide and thinly peopled rural area and lonely roads in abundance, but our country population, as a rule, is peaceable and contented, and our roads are no longer the chosen haunts of armed footpads. The modern traveller chooses the railway route, and the highwayman has lost his occupation. It is as yet exceptional, moreover, to find even his modern representatives, the burglar and the garrotter, furnished with firearms. The risk of detection should they misapply these weapons is probably too great to commend itself to the majority of prudent law breakers. We fail to see, therefore, why revolvers should be thought by many in this country

to be an almost necessary article of property. The ever possible temptation to use it at a wrong time should not be disregarded. With such a weapon in unwary hands, the consequences of an angry moment, as experience has proved too often, may be most disastrous. In view of this fact, and the absence of any ordinary need for its use, we can fully concur in Mr. Justice Mathew's opinion that it may yet be advisable to make the custom of wearing a revolver, without due reason shown, an indictable offence. As a check upon this too prevalent practice, we would again suggest that, like other firearms, like crests, and a variety of personal possessions, it should be subject to a tax, and that such tax should be of substantial amount.

THE ALLEGED INCREASE OF CANCER.

APART from the purely surgical interest attaching to the Morton Lecture on Cancer and Cancerous Diseases, delivered on the 26th ult. by Sir Spencer Wells before the Royal College of Surgeons, the lecture contained in its opening remarks some important statistical information tending to prove that such diseases are on the increase in this country. Thus in England, during the twenty-six years 1861-87, the mortality of cancer has risen from 360 per million of the population to 606—an increase which, Sir Spencer Wells truly remarked, is far more than can be attributed to improved registration. In Ireland, although the total mortality does not show so striking an increase, yet when this is corrected by reference to the diminishing population of that country, the proportional increase per million is almost as striking as that for England—viz., from 1864 to 1880 an average annual rate of 676, and from 1881 to 1887 a rate of 873. In Scotland the proportion of deaths from cancer is larger than in Ireland. A like increase in mortality from cancer during the last decade is noted in the United States. It is obvious that improved diagnosis of malignant disease and greater accuracy in making returns do not suffice to explain the rise in these figures; and Sir Spencer Wells deserves thanks for strenuously urging the importance of more detailed statistical returns, especially as to the organs primarily affected, the ages and sexes of the subjects, and the districts in which the various forms of cancer most prevail. It will be seen that a question on this subject was put in the House of Commons on Tuesday last. Mr. Ritchie's reply, that the medical officers of the Local Government Board were too much occupied to undertake the inquiry, implies the necessity for an improved system of returns made to the Registrar-General.

PHYSICAL PUNISHMENT IN SCHOOLS.

THE position of Board School teachers with regard to the corporal punishment of refractory pupils is not an easy one. School children are often very provoking, not only from childish idleness and inattention, but from deliberate wilfulness. One can hardly wonder, therefore, that a teacher, though perhaps ordinarily collected enough, is occasionally surprised into something like a show of temper, which vents itself in muscular treatment of the offender. In judging of such a case, there are to be considered the pupil's fault and its provoking accompaniments, the need of decisive, perhaps rapid, action, and the teacher's natural feeling of indignation. The resulting chastisement, whether just or excessive, will depend on his self-control, and this, after all, is only a human and imperfect quality. We can well understand how it is that a merited stroke now and then comes down more heavily than it should. The use of needless roughness is, of course, inexcusable; but the fact, that bodily punishment is required and is allowable ought to temper the vehemence of complaint with which teachers are sometimes assailed.

They, too, like our professional medical brethren in lunacy cases, are apt to be annoyed and injured by unnecessary legal proceedings, even where they have simply done their duty. Their difficulties in this respect, indeed, are sufficient to have attracted the notice both of the London School Board and the Home Secretary. The suggestion of the latter that a regular time and method should be observed in inflicting punishment is worthy of notice. As regards regularity of method it might certainly be adopted. Nothing is more objectionable than a habit of striking and cuffing at random. If, however, it is true of school punishments as of many other matters, that no time is like the present, the rest of the proposal has not the same practical value. A member of the Board advises that, in case of legal action against a teacher who had not exceeded his duty, the solicitors of the Board should act for the defendant. This arrangement might prove too costly to the ratepayer. Probably a better plan, if it could be acted on, would be to require for each case a short preliminary inquiry before a magistrate, who could summarily quash the proceedings where no real injury had been inflicted. The sifted residue of more serious cases would then alone come up for decision, and a considerable saving of time and expense would be effected.

CHRISTMAS TREES FOR HOSPITALS AND INFIRMARIES.

WITH the near approach of Christmas one already begins to feel something of that glow of holiday satisfaction and of happiness which it ushers in. At such a time the requests of charity should not be made in vain, and among these is one to which we would specially direct attention on behalf of our hospitals and workhouse infirmaries. The claims of the poor upon the rich are never more freely recognised than at this season, and those of the poor who are also sick have obviously a double hold upon our sympathy. The great majority of patients in hospital can enjoy in a very fair degree the annual novelty and the substantial benefits of the Christmas tree. It comes as a timely diversion to brighten the frequent dulness of their lot, and its kind favours cannot fail to win their appreciation. A fortnight still remains in which any who will may offer something out of their means by way of Christmas present to cheer their suffering fellows. We would therefore take occasion to remind our readers that their gifts will be welcomed at the nearest hospital or infirmary, and that in giving quickly they will give double.

WOUNDS OF THE HEART.

DR. SIMON THOMAS of Rotterdam relates two cases of wounds of the heart which are of some interest. The first is that of a girl who was stabbed by her lover in a fit of jealousy with an ordinary household knife. After receiving the wound she got up from her seat, and ran into another room, where she dropped and died in five minutes, having gone a distance of about eight yards from the spot where she was stabbed. The necropsy showed that the knife had passed in a slanting direction from the upper border of the second right costal cartilage, through the sternum at the junction of the manubrium with the corpus sterni, through the right auricle, behind the pulmonary artery, and finally through the aorta. The pericardium was full of blood, the heart firmly contracted and empty; and it was the pressure of this effused blood, unable to escape, that caused the heart to stop beating. Very little hæmorrhage had taken place externally, but the right pleural cavity was filled with blood. The main points of interest in this case, Dr. Thomas thinks, are the ease with which the knife penetrated the sternum, "like going through

butter," and the distance the girl ran after the injury. The other case was that of a labourer, who was stabbed with a sheath-knife by one of his fellow workmen, whom he was annoying. The knife entered at a spot seven centimetres to the left of the sternum, between the third and fourth ribs. It pierced the anterior edge of the lung and the pericardium, and made a great gaping wound in the left ventricle. The pericardium was full of blood, the heart not contracted, and the left pleural cavity so full of blood that the lung was collapsed. In this case death followed almost immediately after the injury. Dr. Thomas ascribes this suddenness to the fact "that so much blood emptied itself in so short a time through the great gaping ventricular wound that the further duration of life was impossible."

CHILDREN'S DISEASES IN RUSSIA.

THE report of the work done in the St. Olga Children's Hospital in Moscow in 1887 has recently been published, and shows what a large amount of good that institution is doing. The number of in-patients at a time appears to be only about 33, but the total number, including out-patients, treated during the year was more than 8000. Of these, 1113 suffered from intestinal catarrh and 805 from bronchitis. Rickets seems to be quite as common as with us, although it is generally referred to abroad as the "English disease," no less than 399 cases being recorded. Regarding this affection, Dr. Schultz, one of the physicians, appends a note giving the results of his treatment of it by phosphorus—a matter concerning which a discussion took place in the last congress of Russian medical practitioners. Dr. Schultz cites several contradictory opinions from Russian and German sources, and gives as the result of his own observation that phosphorus is very valuable in "the English disease." The mixture prescribed by him consisted of 2 parts of ol. phosph. of the strength of 1 per cent., with 40 parts of ol. amygd., 21 of gum arabic, 200 of aq. menth., and 50 of syrup. Of this, which was made up as an emulsion, a teaspoonful was given every night; that is to say, 0.0002 grammes of pure phosphorus was the daily dose. This treatment was carried out in twenty-five cases, all but two of which were decidedly improved. Instructive tables are also presented by Dr. Alexandroff, showing the results of operative and non-operative treatment of different classes of hip disease. In fungoid degeneration operative measures seem to have proved very successful, and in tubercular disease excision of the head of the femur appeared to give much better results than extension and Taylor's splints.

PATENT MEDICINES.

THE Blue Book issued by the Commissioners of Her Majesty's Inland Revenue supplies some curious facts connected with patent medicines. For the year ending March 31st, 1888, the revenue received no less than £191,475 from the issue of stamps for patent medicines, this amount being nearly twelve thousand pounds in excess of that received the previous year, and very nearly sixty thousand pounds in advance of the amount received in 1879. At the lowest computation this indicates that during the past year no less than a million and a half sterling has been expended in the purchase of patent medicines which are liable to stamp duty. Many proprietary medicinal agents are subject to penalties unless they form a component part of a medicine prepared in accordance with the prescription of a qualified medical practitioner. The peculiarities of the Stamp Act seem to be endless. Why the Board of Inland Revenue should forego their claim when a substance is prescribed, and should enforce it when it is simply purchased across the chemist's counter, surpasses comprehension. A prescription is necessarily an indication

that responsibility has been assumed by the person prescribing, but the Government stamp affords no guarantee. It merely shows that the Government is ready to profit gratefully by the faith of those who are prepared to treat themselves. An uncomplimentary term is applied to the man who is his own lawyer. We forbear to press the comparison. The increase of the revenue during the last ten years speaks for itself.

OPERATION FOR EXCISION OF EYEBALL.

DR. COPPEZ, of St. John's Hospital, Brussels, publishes in the current number of *La Clinique* the details of a method of enucleation which he considers to be easier and simpler than the methods of Bonnet and of Tillau now in use. The patient having been anaesthetised and the eyelids separated by a speculum, a thread is passed transversely through the cornea by means of a curved needle; the ends of the thread are knotted and the loop held in the left hand. By traction on this loop the eye is drawn slightly forward, and with a curved scissors the conjunctiva is divided close to the corneal edge. The subconjunctival tissue is then torn through, and the tendons of the recti muscles come into view and are divided, next the tendons of the oblique muscles, and finally the optic nerve. Dr. Coppéz claims for his operation that it may be practised with fewer instruments—a curved needle, scissors, and a speculum; that the optic nerve may be divided more directly and at a greater depth in the orbit, which in the case of malignant tumours is of great importance; and that the consequent hemorrhage is less considerable than in the ordinary operations. The only objection to it, he thinks, is that the globe might be rendered flaccid by the escape of the aqueous humour through the needle-holes; but that is of little importance.

ENTERIC FEVER AT ST. HELENS.

ENTERIC FEVER has appeared in a fatal form in St. Helens. At present the cause does not seem very obvious, but it must be remembered that "fever" has been an excessive cause of death there in former years, the average rate of fatality from that cause in the ten years 1872-81 being not far from double that which prevailed in the twenty large towns of England and Wales. In 1882 the midden system abounded, the sewage was led into a brook, and the inspectors of nuisances were largely engaged in superintending mere scavenging operations, instead of performing their more important public health duties. But Mr. Spear gave some hope that the authority were really desirous of removing from their midst the more obvious causes of preventable disease.

INDECENT "MEDICAL ADVICE."

AMONG the many known forms of indecent publication, not the least injurious or—to persons possessed of any pretensions to moral sense—disgusting are the advertisements of so-called specialists in private diseases. These handbills, which all our readers must have seen, are mere incitements to vice and lust, thinly covered by a veil of quasi-medical advice. In them the "specialist," usually under some showy title, openly thrusts forward what he takes to be an antidote with one hand while he insinuatingly offers the poison with the other. Obviously, no legitimate purpose of trade is served by these bills. On the other hand, it cannot be doubted that they sow the seeds of vicious habits and the diseases to which these give rise. Their repression would injure no one engaged in any honest calling, and it is a needful preliminary to any efforts intended to strengthen the physical and moral health of the people. We would earnestly commend the matter to the attention of the police authorities.

THE BELFAST MEDICAL STUDENTS AND THE ROYAL UNIVERSITY.

At a very large meeting of the members of the Belfast Medical Students' Association, held in the theatre of the Royal Hospital on Saturday, Dec. 8th, the President of the Association, Dr. O'Neill, in the chair, it was agreed to memorialise the Senate and Standing Committee of the Royal University on the following points:—1. That, while the students have not the slightest complaint to make in regard to the fairness of the examinations, they feel justified in protesting against the striking inadequacy of the representation of the Belfast Medical School on the Examining Board. They base their protest on the following figures, which speak for themselves. Of all the students who have graduated in Medicine in the Royal University during the past five years 51·6 per cent. have gone up from the Belfast School. Notwithstanding this large percentage, among the nine examiners at the degree examinations there is not one Belfast man. 2. That the University would consider favourably the application of the Board of Management and staff of the Belfast Hospital for Sick Children to have this hospital recognised by the Royal University and its certificates accepted. 3. That the Senate would consider favourably some suggested changes in reference to certificates &c. We cannot doubt that the Senate of the Royal University will give a fair and careful consideration to the suggestions contained in this memorial signed by 188 students attending the Belfast Medical School. In reference to the first request, there seems to be, as matters stand at present, some injustice done to Belfast. As to the question of the recognition of the Belfast Hospital for Sick Children, this matter has already come before the Senate, as in March, 1887, the Board of Management and the medical staff sent a petition to the Senate requesting them to recognise this hospital as an institution from which the Royal University will receive certificates for attendance on diseases of children. The third point, as to the certificates, we understand has already been reported upon by the Medical Committee of the University. The Belfast students, we understand, are anxious to ask for no change which would in any way detract from the high standard of education which the Royal University has so rapidly attained, and of which they are justly proud.

FREQUENCY OF DISEASE OF THE MIDDLE EAR.

DR. V. P. ZERENIN, of Moscow, has published an account of an extensive series of examinations he has made on the condition of the middle ear in stillborn children and in children who have died before they were weaned. He finds that it is best to begin the examination from the tympanic membrane, as this is usually sufficiently transparent to permit the nature of the contents of the cavity to be seen before it is destroyed. One result obtained, which is important from a medico-legal point of view, was that a portion of the liquid in which an animal was drowned, or in which the body of a child was immersed, was capable of finding its way to the middle ear. Some 400 bodies of children dying in the Moscow Foundling Hospital were examined, of which details are tabulated in 245 cases. Out of this number, it is somewhat astonishing to learn that the tympanic cavity was found to be normal in 30 only. In 20 the middle ear contained air, and, in addition, a bloody, mucous, or puriform liquid. In 57 cases dark grey mucous or mucopurulent matter was found, with tumefaction of the mucous membrane. No less than 138 cases presented the signs of purulent catarrh. The frequent occurrence of suppuration of the middle ear is accounted for by Dr. Zerenin by the fact that the children had been brought up under bad hygienic conditions, besides being insufficiently nourished, their ears thus forming suitable soil for the development of

pyogenic microbes. He suggests that more attention should be paid to ear diseases in infants, and points out that constant restlessness, especially of the legs, is very frequently an indication that disease of the middle ear is commencing.

THE PHYSIOLOGY OF THE BRAIN.

A VALUABLE contribution by Professor Schäfer is contained in the forty-third volume of the Proceedings of the Royal Society: a comparison of the periods of latency of the ocular movements on the excitation of the frontal and occipito-temporal regions of the brain. Conjugate deviation of the eyes to the opposite side is produced by excitation of entirely different regions of the cerebral cortex. Of these parts, the frontal region is distinguished from the rest by the fact that its removal produces paralysis of that movement. This fact has been regarded by Ferrier as indicating an important functional difference, the movement in the one case being probably caused by the direct action of this part of the cortex upon the centre of origin of the nerves to the ocular muscles; but in all other cases by indirect action, the movement—when, e.g., the visual or auditory region is stimulated—being the result of visual or auditory impressions, being provoked in the brain by the excitation, and these impressions producing indirectly the action in question. Professor Schäfer has found that the latent period is longer by some hundredths of a second in the case of stimulation of the occipital lobe or of the superior temporal gyrus than when the frontal area is stimulated; thus indicating that in the former case the nervous impulses must be transmitted through at least one more nerve centre than in the latter. The additional centre may be the frontal centre itself, but this point requires further investigation.

THE PASTEURIAN TREATMENT OF HYDROPHOBIA.

In a paper read before the Royal Hungarian Academy of Science at Buda-Pesth, Dr. Hőgyes (*Centralbl. f. Bakter.*, No. 23) gave the results of his prolonged studies upon the Pasteurian treatment of hydrophobia. They were wholly favourable to M. Pasteur's method, which is described as being based upon a well-proved experimental ground. The practical application of the plan, the author stated, has shown good results from the statistical standpoint; whilst the method has introduced a new principle in the employment of protective inoculation, since it permits of the latter being effectually performed after infection has occurred.

TEMPERANCE AND TOTAL ABSTINENCE

THERE is a great deal of time, and temper, and type wasted over a perfectly useless discussion—the superiority of teetotalism over temperance. Half a loaf is better than no bread, and while our teetotal friends are sighing over the refusal of some of the best men of all creeds and parties to go all lengths with them in their great and noble efforts to abate the national vice, we hail every effort of any man to increase his own sobriety and the nation's. An honest coachman who reduces his beer to proportions which leave his head and his joints clear, and induces others to do so, is to us a valuable soldier in the great army of reformers. A man who abandons "pips" and public-houses, however respectably conducted, and restricts his alcohol to mealtimes, shows a wonderful advance on the man who perseveres in such injurious modes of drinking. We confess to thinking the "well-conducted public-house" somewhat of an ideal conception. There are degrees of respectability in public-houses, and yet, with the growth of temperance there is a keener competition, which sometimes vulgarises seriously even the better class of houses. The great thing

for all to remember is that "nipping" and public-house drinking are mischievous, and contrary to all common sense and physiological teaching.

TYPHOID FEVER IN FRANCE.

A REPORT was lately presented to the Committee of Public Hygiene by Dr. Brouardel on the distribution of typhoid fever in France. From this it appears that enteric fever is endemic in many of the large towns, but that the death-rate amongst civilians is not high. It is amongst the military that this dire disease works havoc. In the twelve years previous to 1884 the total effective of the French army was 5,375,409 men. The number of typhoid fever cases were 151,319, of which 17,642 died. The total death-rate from all causes was 55,189, consequently a third of all deaths was due to typhoid fever. The civil authorities maintain that this high death-rate in the army proves that it is the military authorities who are to blame for spreading the fever amongst civilians, and not the insalubrity of the cities. To this the military authorities reply that typhoid is known to break out sporadically amongst the people of certain towns, but is not epidemic, because the towns-people are, so to speak, acclimatised to the morbid influences. An epidemic is always imminent, the fever only requiring a suitable soil to enable it to spread. This takes place when a number of young soldiers from quite different parts of the country are brought together in one of these insanitary towns. It is pointed out that in the tables of mortality the death-rate from typhoid fever amongst the civil population follows the same curve as the military death-rate, the amplitude of the latter being, however, five or six times greater. The sanitary arrangements of some of the garrison towns appear to be very bad: "They throw their sewage into the streams and rivers, and draw their drinking water from contaminated sources." The committee were so impressed with the report that they resolved:—"1. That the conditions of the propagation of typhoid fever, and the means whereby its progress can be stayed, are now so well known that by proper precautions it could be easily stamped out, and the country saved twenty thousand lives every year. 2. That the clearing of France of typhoid fever is of national interest, and ought to be at once undertaken by the State."

GERMAN MEASLES AND VACCINATION.

GERMAN measles, and possibly some scarlatina, is prevalent in Pontefract, and the guardians have in consequence suspended the work of the public vaccination stations for two months. This is sound policy, for such a lesion as is brought about by the protective operation of vaccination must necessarily run some risk in cases where an eruptive fever is following its course at the same time, and it is always important that every avoidable risk should be met in advance.

THE MEDICINAL VALUE OF COLOUR.

At a time when fog is prevalent, any mention of the remedial value of colour and brightness appears extremely tantalising, although from personal experiences of the depressing influences of darkness and gloom it is probable that everyone will rate the contrasts more highly than at any other time in the whole year. Colour treatment has been suggested for various forms of mental derangement—bright crimson surroundings for melancholia, soft blue for maniacal excitement, and so on. The report which has reached us leaves much to be desired from a scientific standpoint; meanwhile there is very little room for doubt that a prolonged period of darkness largely influences the mental attitude, and, by hope deferred, favours a general feeling of misanthropy. Pessimism flourishes in the autumnal and winter seasons,

optimism in spring and summer, even though the statistics of deaths from suicide show an increase in bright weather. To restate a belief in the remedial value of colour is merely to insist upon the therapeutic effect of change, since, in advising change of scene, brightness and interest are always the objects sought. No one would recommend a course of fogs as an alternative for sunshine. In other words, stimulants, as a rule, are more valuable than depressants.

THE WILSON FOX MEMORIAL.

THE commission to paint the memorial portrait of Dr. Wilson Fox was accepted by the late Mr. Frank Holl. On his death, which occurred before the work was commenced, the committee, after consideration, decided to offer the commission to Mr. Val Prinsep, A.R.A., by whom it was accepted. The first portrait has been completed by him, and is most satisfactory; he is now engaged upon the others. The amount subscribed will enable the original plan to be carried out; a portrait will be presented to Mrs. Wilson Fox, to the College of Physicians, and to University College. In addition, a photogravure of the portrait will be sent to each subscriber.

CALF LYMPH IN SWEDEN.

THE institutes for vaccination from calf lymph largely increased their spheres of action during the year 1886, but the results were not so favourable as in former years. Out of 2261 children vaccinated with calf lymph 5 per cent. were unsuccessful. This contrasted unfavourably with the numbers in 1885, which gave 2 per cent. The cause seemed to be that the lymph was not so good as usual at the beginning of April, owing to the fact that the first vaccinated calves had been inoculated from six months' old lymph. The increased number of vaccinations necessitated the warming of the institutes in order that the vaccinations might be continued during the winter. The leading medical men of Stockholm believe the calf lymph vaccination will prove as efficacious as before, without leaving any ill effects.

PYRODINE, THE NEW ANTIPYRETIC.

NOTWITHSTANDING the strongly worded caution which we published in our last issue against using this new drug, except in the most severe and critical cases, and even then in the smallest doses and at long intervals, we hear that it is being occasionally employed and causing grave and serious symptoms. We would again point out that doses of from eight to twelve grains sometimes gave rise to toxic effects, even when administered with every care, by Dr. Dreschfeld, as mentioned in his article, and we would reiterate our caution with regard to its employment.

DRUNKENNESS IN BELGIUM.

ACCORDING to a recent Parliamentary report drawn up by the Prince Rubempré, drunkenness is seizing with a terrible grip the working population of Belgium. Belgium is only surpassed by Bavaria in the consumption of beer, 240 litres a year being credited to each inhabitant; while Russia and Denmark alone surpass Belgium in the consumption of spirit, the average in Belgium being 13 litres a year per inhabitant, or about 50 litres a year per adult. Dr. Petithan stated at Liège in 1886 that there were 100,000 persons in Belgium who drink half a litre of gin a day, and no less than 60,000 who drink a whole litre. Such intemperance seems scarcely credible in civilised countries; but, alas! civilisation is not at all inconsistent with folly. The number of public-houses is very large. The outlook is bad for Belgium if the State can do nothing to check this degrading vice. But we are not in a position to throw stones.

MEASLES AND SCHOOL CLOSURE.

CARDIFF is suffering from a very extensive epidemic of measles, and it has practically been decided to close the elementary schools in consequence. This step will, it is said, affect no less than some 20,000 children. There is at present extremely little information to show what is the influence of school closure on measles in a large town when the closure is only adopted after the disease has gained some considerable hold upon the population, and it is very desirable that the matter should be carefully studied and reported on, such sources of error as associating the natural decline of the epidemic with the closure being avoided.

FOREIGN UNIVERSITY INTELLIGENCE.

Dorpat.—Professor Unverricht of Dorpat has accepted the chair of Internal Medicine.

Freiburg.—Dr. Ziegler, Professor of Pathology in Tübingen, has been offered the chair of Pathology.

Kiuff.—Extraordinary Professors Kuchin and Kuznetsoff have been raised to the rank of Ordinary Professors.

Lausanne.—Dr. de Cérenville is to have charge of the Medical Clinic, and Dr. Rona that of the Surgical Clinic, in the new University.

Munich.—Professor Pfeffer of Leipzig has been offered the chair of Botany.

St. Petersburg (Military Medico-Chirurgical Academy).—Professor Pashutin has been reappointed Scientific Secretary for another period of three years.

Vienna.—The appointment to the vacant chair of Medicine has not yet been made. The names mentioned in connexion with it, in addition to that of Professor Schrötter, are Professor Riegel of Giessen, Dr. Moessler of Greifswald, Dr. Quinke of Kiel, and Professor Rembold of Vienna.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Josef Lenyosseck, Professor of Anatomy in the University of Buda-Pesth, at the age of seventy.—Professor Kierulf, of Christiania.

THE first of the actions—viz. that against the *Standard*, newspaper—which the firm of Sampson Low, Marston, Searle, and Rivington have instituted with reference to the premature publication of portions of Sir Morell Mackenzie's book, entitled "The Fatal Illness of Frederick the Noble," will, we learn, shortly be ripe for trial.

AT Idle, near Bradford, some sixty persons out of a small population are stated to be suffering from enteric fever, and bad water supply with defective means of drainage are alleged to have brought the mischief about. Now that disease has been actually produced the public wells are stated to have been closed.

MR. R. S. GUTTERIDGE, L.F.P.S. Glas., is a candidate for the representation of the Strand division on the County Council, and Mr. M. C. Soutter, M.R.C.S. Eng., A.K.C. Lond., for that of the Brownwood Park District of the Middlesex County Council.

THE movement set on foot a few days ago in Woolwich to erect an ambulance memorial to the late Colonel Duncan, M.P., bids fair to be a great success. The preliminary inquiry has led to some fifty or sixty offers of support.

WE are informed that Mr. W. Scovell Savory, President of the Royal College of Surgeons, resigned his membership of the British Medical Association some weeks since.

DR. JAMES MURPHY of Sunderland has been elected a Corresponding Member of the Société de Médecine Pratique de Paris.

REPORT OF

The Lancet Special Commission

ON THE

BRITISH EMIGRATION SERVICE.

LIVERPOOL.

LIVERPOOL is undoubtedly the most important port in England so far as emigration is concerned. Yet here, as at Glasgow, we found the same conflict of authorities and the same want of unity in the sanitary services. It is true that, under the 287th section of the Public Health Act of 1875, the Corporation of Liverpool are appointed the sanitary authority for the port of Liverpool; and this implies control over all ships entering the Mersey to reach the Liverpool, Birkenhead, and Garston docks. Thus, if there should be any case of infectious disease on board a ship, the medical officer could be warned in good time. On the other hand, according to the old Quarantine Act of George III., which was re-enacted by the Public Health Act of 1875, a medical officer is appointed by the Customs. The Act states that "every vessel having on board any person affected with a dangerous or infectious disorder shall be deemed to be within the provisions of the Act of the sixth year of King Geo. IV., chapter 78, although such vessel has not commenced her voyage, or has come from, or is bound for, some place in the United Kingdom." In case of cholera, however, the ships are placed under the medical officer of health by a special order of the Local Government Board, but all other infected ships are visited by the medical officer acting for the Customs and may be placed in quarantine by him. Then, again, we have the 39 and 40 Vict., cap. 36, sec. 234, which confers on the Privy Council the power to prevent any person landing from a ship coming from a place infected with yellow fever or other infectious disease till the Customs have examined the state of health of persons on board and given permission to land. In case of disobedience a fine of £100 may be inflicted. Thus, while the local authority has, under the Public Health Act, all the necessary authority to inspect ships &c., we find that the Customs and the Privy Council may perform identically the same duty. Further, it should be noted that the local authority has the appliances necessary for disinfecting ships, for removing, isolating, and nursing patients. On the other hand, the Custom House officers have no such means. All they can do is to sign documents. They may put a ship in quarantine, but even in that case they must ultimately appeal to the medical officer of health to disinfect the ship before she can be released.

From these facts it will readily be gathered that there is a conflict of authorities; that two separate and different authorities—the local sanitary authority and the Custom House officers acting under the Privy Council—have to accomplish almost the same work or duty. It would be more simple and practical if the local sanitary authority were alone held responsible for the adoption of all necessary measures to prevent the importation of disease. At the same time it must also be acknowledged that a superior control should be exercised over local authorities. These latter are liable to be too subservient to local interests, and local interests are sometimes absolutely antagonistic to national interests. This is no reason, however, why two authorities should be appointed to do one and the same duty. In sanitary as in culinary matters "too many cooks spoil the broth."

Authority is not divided merely on land, but also at sea. The surgeons in charge of the ships are not brought into sympathy with the port sanitary authority. There is a fundamental defect in their position, for the companies themselves are allowed to appoint the surgeons in control of their ships. The interests of public health must inevitably come in conflict with the interests of the ship owners. Many ship owners, we readily recognise, have shown great liberality and willingness to do what was necessary, though at considerable pecuniary sacrifice to themselves. This, we maintain, places those companies which entertain conscientious scruples and manifest a high sense of public duty at a great disadvantage when competing with other

ship owners, who, on the contrary, are callous as to consequences so long as they can manage to avoid any supplementary outlay. If, however, the surgeon on board were quite independent of the proprietors of the ship and owed his appointment to the sanitary authorities, all ship owners would have to observe the same rules and standard of excellence. At present the surgeons are in great need of some form of protection to render them independent of the captains and owners. Such a reform would have for effect the introduction of a better class of surgeons into the service, and this would be a great advantage to the ship owners. Also it is urgent that the surgeons on board ships should be instructed to make full reports. If a member of the crew fall ill on the outward journey this is reported to the authorities at, say, New York, but at Liverpool nothing is known of the circumstance. The authorities at Liverpool are much in the same position as a person who is only allowed to read every other chapter of a book.

One of the gravest sanitary problems involved in the question of emigration relates to the injury that may arise from carrying cattle on board emigrant ships. This difficult question can best be studied at Liverpool, though it affects more or less all the other ports. The ship owners, we readily understand, are placed in a very difficult position. The tide of emigration flows exclusively in one direction. There are no emigrants to bring back from America. Yet ships cannot return with ballast. On the other hand, there is no exportation of live cattle to America, but, on the contrary, a very large importation of cattle from America. Hence, the emigrant ship on its return journey becomes a cattle ship. Diversity of opinion prevails as to the risks attending such a transformation. In Liverpool ships are detained in port for seven days, so that they may have more time to clean and purify the place occupied by the cattle. The cattle stalls are pulled down, the deck scrubbed, and disinfectants plentifully used. Thus when the ship is inspected it is free from odours. When once the ship is out at sea, the weather bad, and the side skuttles and the hatches shut down, the urine saturating the wooden deck of the ship commences to evaporate. Does the heat of the cabins under these circumstances cause the foulness that may possibly have been absorbed by the wood from the manure of the cattle to disengage itself and infect the air breathed by the emigrants? We have asked this question from several persons who have travelled on such ships, and, in general, the answers are not conclusive. If it is fine weather and every aperture is opened, then there is not much odour of any description in the emigrants' quarters. If it is bad weather, then so many emigrants are ill and so many repulsive odours arise in the steerage that it is impossible to qualify and make distinctions. Perhaps exhalations due to the recent presence of cattle add to the general unpleasantness, but potential odours of more pungent and recent date so affect the olfactory organs that anything like discrimination becomes impracticable.

To many, however, it will occur that experiments are hardly necessary to prove that wooden planks on which cattle have lived for from ten to fifteen days are hardly suitable as the flooring of human habitations. This becomes the more obvious when we take into consideration the fact, which several persons assured us was absolutely correct, that the cattle stalls are in many cases not cleaned during the whole voyage. The manure, on the contrary, is allowed to accumulate, because on reaching port it can be sold to agriculturists. For the sake, therefore, of a small pecuniary advantage a great nuisance is created. Others have argued that the boards of the decks are tarred over so that the wood loses its porosity and cannot therefore absorb any liquid. We do not, however, feel at all confident that this is done in every instance, and if this were thoroughly done the flooring of the deck would become extremely inconvenient when the passengers took the place of the cattle. Also, the cattle, with their bare hoofs, would soon kick and wear away the thin surface of coal tar that may be on the boards. From a sanitary point of view, and to be absolutely on the safe side, a rule or law should be enacted to the effect that passengers must not occupy that portion of the ship between decks which on the previous voyage was filled with living cattle. At the same time, we acknowledge that there may be very grave practical objections to any such enactment. The position of the ship owners with respect to the American carrying trade would have to be entirely revised, the cost of freight greatly increased, or the emigration and cattle service in part abandoned. Considering the commercial

disturbance that such an enactment would occasion, we should be pleased if some other way out of the difficulty could be found.

At present, the only suggestion that occurs to us is that ships with iron decks should be employed for the cattle trade. Cattle, of course, cannot stand on a bare iron deck. It would be too cold, and they would slip and fall. The iron deck must be covered with boards; but these boards could be loosely put down, and easily taken up again. The iron, in any case, is impervious, and can be thoroughly cleaned by washing. The entire fittings belonging to the cattle being completely removed, and nothing but the iron shell remaining, there is no reason why, after due cleansing, other fittings should not be introduced, so as to convert the same space into a steerage cabin. This would certainly be less expensive than running separate ships for emigrants and for cattle. The success of such measures would depend on the rigour of their application—namely, the complete removal of all wood-work and the thoroughness of the cleansing. For the latter purpose, seeing that the scrubbing-brush may be applied with more or less energy, and is therefore more or less reliable, we would suggest, both from motives of economy and to ensure efficacy, the employment of superheated steam.

With the assistance of the local authorities we were able to visit a large number of ships at Liverpool; and in some of these excursions were accompanied by Mr. J. J. Brown, the port sanitary inspector. Mr. Brown holds the certificate of master, has been in command of large steamers and sailing ships, and is therefore thoroughly familiar with all that relates to shipping. As in the course of the year he inspects rather more than four thousand vessels, it is fortunate that the Liverpool port authorities have secured the services of an officer who has all the qualities of a sailor and commander. In company with Mr. Brown, we visited a ship called the *St. Ronans*, which had iron decks such as we have indicated above as suitable for cattle ships. The wooden flooring on which the cattle stood had just been removed, but then it appeared that the ship was to carry cargo, and not passengers, for the outward voyage. A little further we came upon a ship with a wooden deck which, on the contrary, was in the course of transformation from a cattle to a passenger ship. This change was effected in a very reprehensible and careless manner. A hospital had, for instance, been constructed on deck, and the boards for the flooring were laid down before the filth left by the cattle was properly washed away. At the far end of the cabin there was one board missing, so that we were able to look underneath, and there we saw just under one of the berths some liquid manure. A little later this would have been covered over by another board, and then it would be impossible to detect the defect; for, as a rule, inspectors do not insist on having the flooring pulled up to enable them to see underneath. Another ship we inspected had carried cattle between decks, and though it had remained in dock a long time undergoing repairs, the decks were still uncleansed. The law states that ships must be cleansed before cargo is taken on board; and, as no cargo was yet put on board, no one had troubled to clean the ship. This neglect may be in keeping with the letter of the law, but is certainly opposed to its meaning and spirit. The object is to keep ships clean and pure; and here manure, in a more or less liquid state, was allowed to remain for weeks on a porous wooden deck, so that it would sink deeper and deeper into the boards and render effectual cleansing a matter almost of impossibility.

Ships, we have already mentioned, are detained much longer in port than they used to be, so as to give full time for cleaning; but this wholesome regulation is avoided by taking less than fifty passengers. We came across a ship that had brought over a large quantity of cattle and was about to return to America within three days of its arrival. There was not time to ensure proper cleansing, and yet the ship could not be detained because she was to take less than fifty emigrants. This is a clause in the Emigration Act that must be totally repealed. Why should certain sanitary regulations be necessary when there are fifty emigrants, and not when there are only forty-nine? That this exemption works mischievously we had abundant evidence to prove when in Liverpool.

At Liverpool we also visited some of the largest Atlantic liners just as they were about to sail. On board the *Sardinia* of the Allen line we saw no less than 360 children, mostly the waifs and strays of our great cities, who were

going to Canada in the hope of finding homes such as were unknown to them in the mother country. Each child had a comfortable berth, with a moose-hair pillow, and we were pleased to note the order, cleanliness, and discipline that prevailed on board. There were altogether over a thousand emigrants on this ship, together with a large number of first-class passengers. The closets were flushed with clean water at every stroke of the engine. On board the Cunard vessel *Servia* also the arrangements are admirable, and the spirit of enterprise that animates the directors of this great company is worthy of all praise. The *Servia* is one of the finest and largest ships afloat. It is an enormous shapely mass of steel, of 8500 tons burden, and no one can visit this wonderful floating city without realising that the possibilities of sanitary excellence are very different from what was contemplated when the clauses of our antedated Emigration Act were first framed.

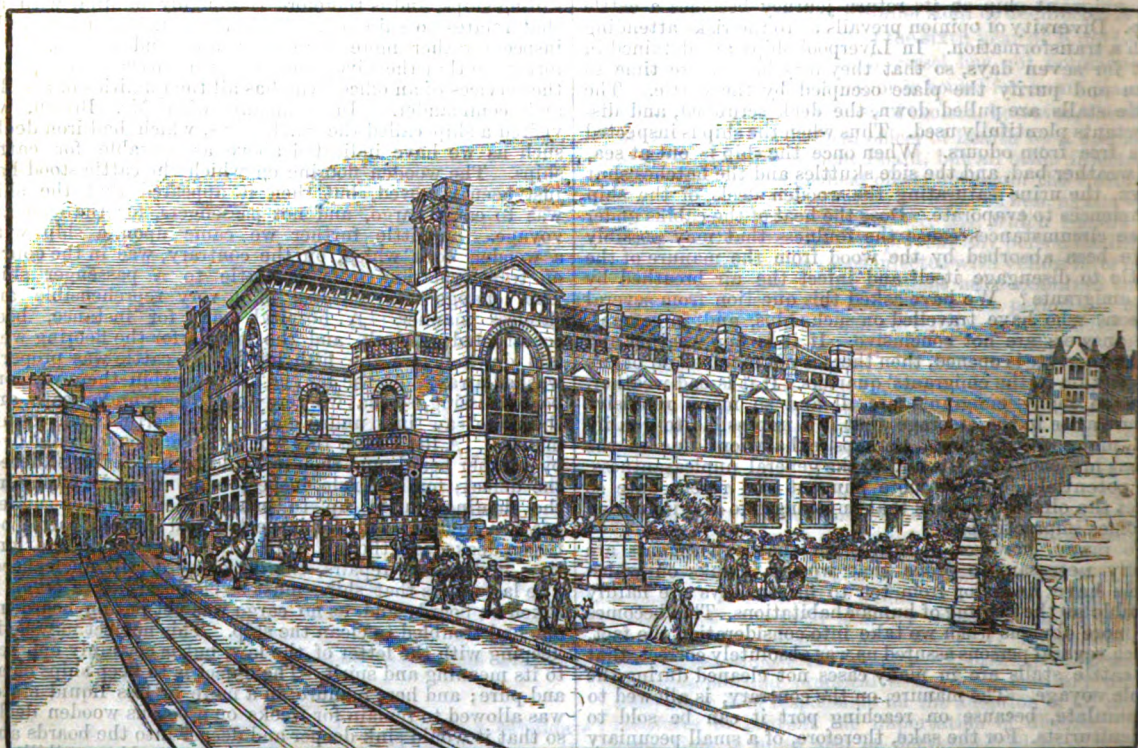
ANDERSON'S COLLEGE MEDICAL SCHOOL.

THE annexed illustration shows the new building now in course of erection for the accommodation of Anderson's College Medical School, Glasgow. Since the adoption of the scheme proposed by the Commissioners under the Educational Endowments (Scotland) Act, 1884, the old "Anderson's University" has become merged in the "Glasgow

Dr. David Livingstone and other distinguished men adorn the roll of its students, who may be found in all quarters of the globe, in positions of usefulness and honour. Its class rooms have supplied no fewer than fourteen professors for Glasgow University, of whom six are at present teaching there.

The site obtained for the new buildings is situated in Dumbarton-road, near Glasgow University, and immediately to the west of the entrance to the Western Infirmary, one of the wings of which is seen in the illustration.

The new School will, it is expected, be ready for occupation in November, 1888. It provides all the accommodation which is usual in an institution of the kind. The dissecting room is placed on the second floor, and is entirely lighted from the roof. This room is connected with the basement by a hoist, by means of which the subjects are brought to the required level. On this floor are also the bone room and a small dissecting and preparation room. On the first floor are the anatomical museum and lecture theatre, private dissecting and operative surgery rooms, surgery and materia medica museums, library, professors' room, and a smoking room for the students. On the ground floor are placed the class rooms for chemistry, physiology, medical jurisprudence, medicine, materia medica, and midwifery, with the necessary professors' rooms; also the chemical, physiological, and medical jurisprudence laboratories, and a museum and laboratory of public health. The preparation rooms, furnace room, &c., are placed on the basement floor.



and West of Scotland Technical College," while the Medical Faculty has become a separate and distinct institution, incorporated as "Anderson's College Medical School," under memorandum and articles of association. There is thus perpetuated the Medical Faculty, which dates back to the birth of Anderson's University, in the very beginning of this century. In 1800, Mr. John Burns commenced lectures on Anatomy and Surgery, which were separated into distinct lectureships in 1828; in 1819 Botany was added; and in 1828 the chairs of Midwifery, Materia Medica and Practice of Medicine were instituted, followed by Medical Jurisprudence in 1831, Theory or Institutes of Medicine in 1840, Ophthalmic Medicine and Surgery in 1869, Public Health in 1878, and Aural Surgery in 1879. As an extra-mural medical school Anderson's University has long held a foremost position, and has provided a medical education at a cost suited to the circumstances of many who would not otherwise have been able to prosecute the study of medicine.

The elevation is Italian in style, and the building is intended to be roofed with red tiles. Considerable effect is gained by the treatment of the entrance and staircase. As the library there is a projecting stone balcony and balustrade; above the window of this room there will be a sculptured panel in the circular tympanum of the window.

As subscriptions are still being collected for the building, it is hoped on the part of the governors that all old Anderson's College students and other friends interested in medical education will recognise the claims of an institution whose continued prosperous existence without patronage or privilege argues not only intrinsic merit but public utility. The building, constructed on the best modern principles, and provided with all the appliances requisite for the conduct and management of a fully equipped medical school, will cost about £9000. The secretary and treasurer is Mr. John Kidston, 50, West Regent-street, Glasgow.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of the constituents of the Hospital Sunday Fund was held at the Mansion House on the 10th inst., the Right Hon. James Whitehead, Lord Mayor, President and Treasurer, in the chair.

Mr. CUSTANCE, the Secretary, having read the notice convening the meeting, the minutes of the last annual general meeting, held at the Guildhall, on Dec. 12th, 1887, were read and signed.

The LORD MAYOR, in opening the proceedings, expressed the gratification he felt in being president for the year of such a fund as the Hospital Sunday Fund, and assured the meeting that every effort would be made by him that its funds should not suffer in his hands. Beyond all question the distribution of the income was equitable, and he hoped that in the coming year it might be even larger than in the past.

Sir SYDNEY WATERLOW proposed that "the report of the Council for the year 1888 is hereby received and approved." He said that the report this year presented certain points for congratulation. In the first place, a larger amount of money had been distributed than in the previous year; and, secondly, a larger amount had practically been collected from the public, for the income last year had included a legacy of £1000 from the late Dr. Wakley. The distribution of surgical appliances, for which 4 per cent. of the income had hitherto been applied, was a most important branch of the Distribution Committee's labours. An adequate collection had not yet been taken on Hospital Sunday, and he urged the supporters of the fund to increased efforts.

The Rev. Dr. RIGG seconded the resolution, and remarked that the cause which they had met to support was one that commended itself to their acceptance, and that in the report there was nothing to cause dissatisfaction. Compared in population &c. with certain provincial towns, London was not doing what could be expected. Certainly since the establishment of the collection there had been a great increase in the amount received, but more was wanted to bear out the metropolitan character and to meet metropolitan wants.

The resolution was carried unanimously.

The Rev. J. SIMPSON then proposed that "the laws of the Constitution, which have been in force during the past year, be continued, except Law 12, in which the words 'four per cent.' shall now read 'five per cent.'" He said that the Council of the Fund unanimously recommended this resolution to the attention of the constituents. If adopted, a larger amount would be devoted to the purchase of surgical appliances, a result which was desirable, as more than six hundred applications were refused last year.

Canon INGRAM briefly seconded the resolution.

Mr. NELSON HARDY called attention to the fact that the laws of the constitution acted prejudicially to the poor of South London, which sent up one-fourth of the entire sum collected, but received back only one-twelfth. Guy's Hospital now had hundreds of beds vacant through want of funds, and in his opinion the case called strongly for help, not, however, on the lines of laws which he ventured to say were not framed in a spirit of justice to the whole of London. He concluded by warning the Council that, unless something was done to remedy the present state of things, the clergy and laity of South London would, when they found their contributions going to the rich West-end, cease to subscribe to the fund to such an extent as heretofore.

Sir SYDNEY WATERLOW said that the Council were of opinion that the fund was raised for the benefit of the whole metropolis, and that no alteration was desirable. The £520 which had been granted to Guy's Hospital was ten or fifteen times in excess of what would be allowed if the case of that institution had been calculated on the same basis as other hospitals.

Mr. JABEZ HOGG expressed his opinion that no injustice had been done to Guy's Hospital, and condemned Mr. Hardy's views on the subject.

The resolution was then carried unanimously.

The LORD MAYOR proposed that "the Council for the year 1889 be constituted as in 1888, with the following alterations—viz., the Rev. W. G. Pascoe in the place of the Rev. John McKenny, who has left London; the Rev. James

Baillie in the place of the Rev. J. R. Wood, resigned; Sir Polydore de Keyser in the place of Mr. Alderman Whitehead, now Lord Mayor; and Mr. Samuel Hope Morley in the place of the late Major Ross, M.P.; and that the other retiring members be re-elected for 1889."

Dr. SEDGWICK SAUNDERS seconded the resolution, which was carried.

The Rev. Canon FLEMING, in the absence of the Bishop of London, proposed that "the 23rd day of June be fixed for Hospital Sunday of 1889, and that the cordial co-operation of all ministers of religion within the metropolitan area be again invited in the usual way."

This was seconded by Mr. ALLCROFT, and carried without dissent.

Mr. ALFRED COHEN then proposed that "sub-committees be formed, consisting of three leading members of the chief professions and banking and commercial firms in London, to canvass for donations among the firms, and that the result of these contributions be advertised under the respective heading of the profession or business—viz., the bankers' subscription, the Stock Exchange subscription, the Corn Exchange subscription, &c.; and that the President and the Vice-President be empowered to nominate gentlemen to serve on these sub-committees, and to carry out the objects of the resolution so as not to interfere with the objects of the Hospital Saturday Fund and donations to special hospitals."

The LORD MAYOR announced that a protest against this new departure had been received from the President and Treasurer of the Saturday Fund, but expressed the opinion that no ground of complaint existed.

Sir EDMUND HAY CURRIE seconded the resolution, which was carried unanimously.

Mr. CARR GOMM then proposed, and the Rev. Prebendary WHITTINGTON seconded, a vote of thanks to the Lord Mayor for presiding, which was briefly acknowledged, and the proceedings terminated.

PROFESSOR VON BERGMANN ON VON LANGENBECK.

THE lately-published volume of the Transactions of the German Congress of Surgery held at Berlin in April last contains the full text of Professor von Bergmann's admirable address in memory of the late Professor von Langenbeck. In that address he sketches the career of the great surgeon, who, as he said, did not belong to the discoverers and thinkers who have advanced our ideas in surgery, but whose fame rests upon the work he did for surgery in Germany, giving it a special stamp and direction. Contemporary with the great monarch whose loss they were then deploring, Langenbeck did for German surgery what Kaiser Wilhelm accomplished for the nation, and his influence would endure. For when he began life the surgeons of Germany stood far behind those of France and England; they did not originate, but simply availed themselves of the work done in other lands. That they now "take more than equal rank" with their western neighbours is largely owing to Langenbeck. Until the first decade of this century, there had been no German names which could equal those of Paré, Petit, Desault, Dupuytren, Cheselden, Pott, Cooper, or John Hunter; and even Dieffenbach gained his experience in France, and made his first important contribution on plastic surgery to a Paris society. The first independent German school of surgery was founded by von Kern in Vienna, the second by Langenbeck in Berlin. Langenbeck introduced the scientific element, owing doubtless to his early attachment to science, for his career opened as a *privat-docent* in physiology and pathological anatomy. Professor von Bergmann attributes considerable influence in determining Langenbeck's future course to a visit which he paid to England, where he became acquainted with Brodie, Lawrence, Henry Green, and Astley Cooper. He was struck with our hospital wards and with our Royal Medical and Chirurgical Society, which he subsequently took as a pattern for similar societies in his own country. This visit was also the occasion of the formation of a good understanding between German and English surgeons—a relationship evidenced in later years

in the nomination of Paget, Lister, and Spencer Wells to the honorary Fellowship of the Berlin Surgical Society, which Langenbeck founded. He always retained a cordial friendship with his English *confrères*, and was warmly welcomed on the occasion of his last visit in 1881, when the International Congress was held in London. Professor von Bergmann tells how Langenbeck, on his return from England in 1840, met Stromeyer at Erlangen, and how he definitely adopted surgery as his profession, being a few years after appointed to Kiel. He shows how his influence in the improvement of surgery was especially marked in three directions. The first was the cultivation of physiological science in its application to surgery. From his school have come many and important contributions on the histology of tumours, the development of bone, and regeneration of tissues; whilst some among his pupils—as Billroth and Hueter—have done much to pursue bacteriological studies and explain infective processes. Another new departure made by Langenbeck was in the extension of the field of operative interference. His own work upon the surgery of bones and joints, especially subperiosteal resections, was largely based upon the results of experiment; and the same is true of the wider and bolder extension to operations upon the larynx, the kidneys, intestines, stomach, and brain, in the furtherance of which his pupils have had a fair share of the credit due to the pioneer. Lastly, he reformed and reorganised military surgery. Some of his earliest experiences (in 1848-49) were in the battle-fields of Denmark, and it was during this troubled time that he was nominated to the Berlin chair in succession to Dieffenbach. He was Consulting Surgeon-General in the Danish war of 1864, and served again in 1870-71. To him is mainly owing the high state of perfection to which the care for the sick and wounded has been carried in the German army. But we must refer our readers to the address itself if they wish to read a worthy record of a noble life. Professor von Bergmann, who occupies the position vacated by von Langenbeck, was peculiarly fitted to deliver this address, which gives so clear an idea of what Germany's great surgeon was as a professor and as a man. In comparing the place formerly occupied by Germany in surgery to that it now holds, he could not, perhaps, have avoided the expression of pride at her present position in the van of scientific surgery; but he would be the last, we feel sure, to disparage the progress made in other countries. It is pleasant to find in the *éloge* a record of Langenbeck's love and admiration of British surgery, which we trust will be transmitted to his successors.

THE NEW SANITARY INSTITUTE.

THE address given by Sir Douglas Galton at the Sanitary Institute on the 6th inst. may be said to mark an epoch in the history of two institutions which have been devoted for some years past to the dissemination of sanitary knowledge. The amalgamation of the Parkes Museum with the Sanitary Institute of Great Britain has given us a new institution with the shorter title of the "Sanitary Institute." Of this institute the Parkes Museum is an integral part, just as the Hunterian Museum is a part of the College of Surgeons. This union is one of great importance, and must, we should think, vastly increase the influence for good of the two societies which henceforth are one.

By his address Sir Douglas Galton inaugurated the work of the new society, and this he did in the presence of a large and influential gathering of persons interested in the objects which the new body is intended to foster. The address dealt with the whole field of sanitation and with the work done and to be done. Certain passages of it were of very special interest. Thus on the question of education Sir Douglas Galton said:—

"It has become a burning question as to how both to compel the attendance of the poorer children at Board schools, and to ensure that they shall have received an adequate meal before they commence their brain work. This question has been solved in a sensible and practical way in Paris. In Paris primary education is free, and no fees have to be paid by the parents; but, inasmuch as it is compulsory, the authorities hold that it is directly to the

interest of the community at large that the children should not only be forced to go to school, but that they should attend in such a physical condition as to be able to take advantage of, and not be injured by, the teaching. Parents in Paris who fail to send their children to school are not summoned before a police magistrate, they are required to give an account of themselves to the Commission Scolaire, which is composed of ordinary citizens in the *arrondissement*. If it is then found that the father and mother are really too poor to provide the children with proper clothes and boots in which to go to school, then such boots and clothes are at once provided for the children gratuitously. 'Cantines scolaires'—school kitchens—have been established in connexion with some of the schools, to provide meals for the children. For these meals the sum of ten centimes each (say a penny) is paid, the food being cooked on the spot. The distribution is managed in this way. Each child goes up to the teacher in turn, and receives its ticket in return for its penny. If, however, any child is too poor to be able to pay the penny, the teacher is informed of this beforehand, and the poor children receive their tickets in precisely the same way and at the same time as those whose parents have been able to pay for them, nor is it known to their companions that they are in receipt of free meals. The education of a mental kind now being supplied will be imperfect, and may be dangerous, unless it be so combined with physical culture that a perfect, or comparatively perfect, health of body shall go with it."

On the important question of cooking, the following interesting facts were submitted:—

"Sanitary science, having taught us to select our diet, further leads us in the next place to prepare it for use. We have still much knowledge to spread respecting the science of cookery. I do not say to learn, because nearly one hundred years ago the subject of cookery was scientifically investigated by a man who began life as a poor school-master, who became a great general, a great statesman, a great scientific man, who was Dictator and Governor of Bavaria for a while. Benjamin Thompson, better known as Count Rumford, investigated cookery, and applied the science of cookery to the art; for great as he was in war, great as he was in statesmanship, that which he evidently regarded as his greatest triumph was his economical cookery—the fact that he fed the poor of Munich, the beggars, thieves, and vagabonds which abounded there to a fearful extent, for less than a penny per day with good, nutritious, and appetising hot food. The daily dinner provided by him at the House of Industry for 1200 persons, each receiving a portion weighing twenty ounces, cost altogether £1 15s. 2½d., about one-third of a penny each—¹/₃ of a penny exactly. Count Rumford was the founder of the Royal Institution of Great Britain, whose charter dates from January 13th, 1800. As a portion of this large project, the founder of that institution had in view something closely similar to what the Parkes Museum has attempted to realise. Mere descriptions, he knew, were insufficient to interest and instruct the public. The public demanded something visible and tangible, and he therefore proposed that the Royal Institution should be made a repository for models of all contrivances and inventions which are calculated to promote the health, comfort, and general well-being of rich and poor. His list embraces all the objects which we have at heart, as well as the diffusion of knowledge therein by means of appropriate lectures. As regards these technical objects, the scheme of Count Rumford did not succeed; though, thanks to the genius of the great men who have been its professors, the Royal Institution has flourished in other directions. We hope to succeed where Rumford failed: because, first, the scheme of the Council is a more manageable one; secondly, because public opinion has been acted on since Count Rumford's time by that period of latency, that process of permeation, which was wanting in Rumford's case. Public education in sanitary matters has reached a level that makes the Parkes Museum answer to a public demand. It is the direct outgrowth of public needs, and will, we trust, as such, enjoy a permanence greater than it could enjoy as a cut-and-dried institution superimposed upon the public."

Sir Douglas Galton gave a summary of the work done previously to amalgamation. This has consisted in (1) the examining of 630 candidates; (2) the giving of regular systematic courses of lectures to inspectors of nuisances, which have been attended by numbers progressively rising from 65 at the first course to 114 at the last; (3) the giving

of demonstrations to medical students and others by professors who have had the Museum freely placed at their disposal for that purpose; (4) the giving of a general course of lectures to the public; (5) the holding of congresses and exhibitions at Exeter, Newcastle, Glasgow, Dublin, Leicester, York, and Bolton; (6) the formation of the Parkes Museum, which has been much assisted by the judges of the exhibitions; (7) the formation of a library, which is already one of very considerable dimensions, and is in many respects unique; (8) the publication of a volume of Transactions every year since 1880; (9) the publication of Dr. Farr's "Vital Statistics"; and (10) the publication of Sir John Simon's "Health Reports." This summary of work done is most creditable, and augurs well for the future. Funds are needed, and, although the Institute pays its way, it cannot adequately fulfil its functions without a considerable augmentation of income. The advantages of the Sanitary Institute are sufficiently great to ensure a progressive increase in its members; but for its full development the "pious founder" is needed, and we have no hesitation in recommending the new Sanitary Institute to the consideration of large-minded philanthropists.

THE BRITISH NURSES' ASSOCIATION.

ON Friday, the 7th inst., the Grosvenor Gallery was the scene of a festivity, unique of its kind and most interesting. The British nurses celebrated the first anniversary of their Association by a *conversazione*, at which were gathered nurses from all parts of the United Kingdom, each wearing the uniform of her hospital, and with those mingled many well-known members of the medical profession, with their wives and daughters, and many of the lay public, friends of the nurses, or their invited guests. The guests were received by Mr. Savory, acting by command of H.R.H. Princess Christian in her unavoidable absence, and Miss C. J. Wood, one of the hon. secs. of the Association. Among the names announced were those of the Lord Chancellor and Lady Halsbury, the Countess of Shrewsbury, Lady Hamilton Gordon, Sir Rutherford and Lady Alcock, Sir Sydney Waterlow, Sir Edward Sieveking, Sir Alfred Garrod, the Hon. Mrs. Stuart Wortley, Mr. and Mrs. Jeune, Dr. and Mrs. Priestley, Dr. and Mrs. Robert Barnes, Mr. and Mrs. Stephen Ralli, Mr. Ford North, Mr. Thomas Smith, Mr. and Mrs. Meiggs, Dr. and Mrs. Edis, Dr. and Mrs. Bedford Fenwick, Miss Jones of Guy's Hospital, Miss Stewart of St. Bartholomew's Hospital, Miss Beachcroft of Lincoln County Hospital, Miss Cureton of Addenbrooke's Hospital, Cambridge, Miss Medill of St. Mary's Hospital, Miss Lumsden of Aberdeen Infirmary, and many other matrons from the London and provincial hospitals, with about 600 sisters and nurses, in all numbering about 1000 guests. One of the most pleasing features of the evening was the opportunity afforded to nurses trained in the same hospitals, but scattered by their work in all directions, to meet on common ground and renew old recollections; it was eminently a social evening, and was also very felicitous in bringing the two professions into unofficial intercourse. Besides the Pastel Exhibition, which was a treat in itself, a varied musical programme had been provided by the kindness of friends, in which such names as Mrs. Stanley Stubbs, Mrs. Hancock, Madame Amaury, Mr. J. Robertson, and Mr. Dykes were a guarantee as to the high order of music performed for the enjoyment of the nurses and their friends; and then Mr. Corney Grain gave one of his inimitable musical sketches, which was thoroughly appreciated by his audience. In one of the galleries there was a small exhibition of nursing appliances, sent from St. Bartholomew's, King's College, Charing-cross, Royal Free, Victoria, and Sick Children's Hospitals, also from Messrs. Maw and Son, and Messrs. Allen. Some of the splints and antiseptic dressings showed a marked advance in the neatness and finish of trained work in hospitals, and there were many evidences of the care and thought now given to the comfort of the sick in the articles exhibited on the tables. Victoria Hospital exhibited a very handy ward dressing-stand, and King's College showed an operating table that could be adjusted to any height, shape, or position; both these articles, we understand, owe their special features to the

lady superintendents of the institutions. Messrs. Maw and Son exhibited some improved medicine measures, which were marked so distinctly as to be easily read in a dim light; they also had some very good-shaped dressing trays, an improved feeding-bottle, and many other useful adjuncts for nurses. Messrs. Allen exhibited their kettles, and a serviceable little model of the arrangement of a hot-air or vapour bath in bed. There was also a model of a bed with a movable frame for raising the patient; this, we believe, was the contrivance of a lady. The Metropolitan Nurses' Association exhibited a very compact and useful nurse's bag for district work, and we also noticed some fracture splints on the Charing-cross stand, and some special dressings from the Royal Free Hospital.

The whole evening was a great success, and is a striking proof of the vigour of the Association. The programme put into the hands of the visitors, which, by the way, was a gift from the proprietors of the *Nursing Record*, states that the Association has many benevolent schemes in prospect for nurses, besides its main object of obtaining a Royal Charter; and we can only hope that they will have all the help they need in carrying these through.

MEMORIAL TO THE PRESIDENT AND COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

WE have been requested to publish the following additional and final list of signatures to the above memorial:—

Sir H. W. Acland, K.C.B.	Mr. Victor Horsley, F.R.S.
Dr. John Anderson.	Dr. Habershon.
Mr. Thomas Bell.	Dr. Francis Hawkins.
Mr. W. H. Bull.	Sir Prescott Hewett, Bart.
Dr. Brace.	Dr. Heron.
Mr. Edward Berry.	Mr. Christopher Johnson.
Mr. W. H. Bennett.	Dr. Lewis Lewis.
Sir James Crichton Browne.	Mr. Hooper May.
Mr. W. G. Burnie.	Mr. Howard Marsh.
Dr. William Bruce.	Mr. Henry Marshall.
Dr. C. A. Beevor.	Mr. C. H. Newby.
Dr. Thomas Browne.	Mr. E. Nettleship.
Mr. B. E. Brodhurst.	Dr. J. D. Powell.
Mr. John C. B. Burroughs.	Dr. Julius Pollock.
Mr. Samuel Benton.	Dr. Partington.
Mr. Howard Barrett.	Mr. Bernard Pitts.
Dr. Richard Budd.	Mr. T. Laurence Read.
Mr. Alfred Burton.	Mr. George Rice.
Dr. William Cayley.	Dr. J. Rankin.
Dr. Herbert J. Capon.	Dr. C. West Symes.
Dr. John Clarke.	Mr. James C. Sinclair.
Mr. Kiallmark.	Dr. Sharkey.
Mr. George Cowell.	Mr. George Shipman.
Mr. J. Duncan Duncan.	Dr. Gilbert Smith.
Dr. W. H. Russell Fensbrock.	Professor Thane.
Dr. J. Fitzpatrick.	Mr. W. J. Trendler.
Dr. Garrod.	Dr. McNeill Whistler.
Dr. W. S. A. Griffith.	Mr. William H. Webb.
Dr. S. Gourley.	Mr. T. H. Watson.

Public Health and Poor Labr.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Dingestow, by Mr. SPEAR.—The Dingestow registration sub-district lies north and north-west of Monmouth, and contains 4920 inhabitants, scattered somewhat widely over sixteen parishes, personal intercourse between some of them being very close. Indeed, in Dingestow, Tregar, and Penrose, where diphtheria has recently prevailed, a large portion of the inhabitants were found to be nearly related, either by birth or marriage, and often by both. This locality has been regarded as one of the

¹ Eyre and Spottiswoode, East Harding-street, E.C.; Adam and Charles Black, Edinburgh; and Hodges, Figgis, and Co., Dublin.

healthiest in the union, but in two recent years Dr. Willis, the medical officer of health, has reported the prevalence of sore-throat, the complaint being looked upon not only as erythematous or follicular tonsillitis, but as having a distinct history of phlegmonous tonsillitis and "quinsy," the affection tending especially to affect members of the same family, and being locally looked upon as subject to hereditary predilections. But in the last four months of 1887 seven cottages in Dingestow were invaded with what appeared to be true diphtheria, besides other attacks from sore-throat. Then again, early in 1888, four families in Tregare had diphtheria, as also two in Penrose, there being in these two latter groups probability of connexion with the earlier attacks. From this district there seems to have been a spread of the disease to Llanvihangel and to Ragland. As to the origin of the Dingestow diphtheria, the evidence is very meagre, and does not call for much comment. The principal defect in the cottages invaded was dampness associated with drainage defects. In all, there were 15 family invasions, 30 cases, and 7 deaths. Summarising the evidence which was forthcoming, it appears that true diphtheria of the severe croupous variety prevailed in the three parishes named. Contrary to common experience, the disease was but little associated with aggregation of children in school, adults suffering disproportionately, and under circumstances that are regarded as suggestive of some other cause for their infection than personal contact. Some considerations bearing upon this latter point are stated to have been handed in to the Medical Department of the Local Government Board; but, by reason perhaps of their being as yet unsupported by other similar experience, they are not published. Other cases of sore-throat, "croup," and some probably diphtheritic attacks were heard of in other parts of the Monmouth rural district, and in dealing with them Mr. Spear has occasion to point to the unsatisfactory sanitary state of many of the parishes visited, a state which he is inclined to think can only be remedied as the result of a large amount of detailed work, and which should call forth a much more detailed and systematic system of supervision, with a view to a more minute application of the work of improvement which is required.

Small-pox in the St. Joseph's Industrial School, Manchester.—Dr. Page has now submitted to the Local Government Board his report on the outbreak of small-pox amongst the inmates of St. Joseph's Roman Catholic Industrial School, concerning which questions were a short time since asked in the House of Commons. A large portion of the report is given to a very detailed discussion as to the relation of vaccination to the outbreak amongst the inmates, who were 172 in number. It is assumed that all these may have been exposed to the infection up to the day when the disease was detected, and when a general revaccination was instituted. Ten had never undergone vaccination, and of these 5 were attacked and 5 escaped; in 6 cases vaccination was doubtful, no scars being detected, and of these 2 contracted the disease and 4 escaped; there were 148 children and members of the staff who had been vaccinated in infancy, of whom 51 contracted the disease and 97 escaped it; and, lastly, there were 8 who are stated to have been revaccinated some months or years before, and one of these is believed to have had an attack, while 7 escaped. The severity of the disease in these several groups is also shown in tabular form, of which the following is a summary. Of those unvaccinated up to July 27th, when the disease was discovered, and who were 10 in number, 5 escaped small-pox, the other 5 suffered from the confluent form of the disease, and 3 died. Of those with doubtful vaccination at this date 4 escaped, the 2 others suffering from the disease in a semi-confluent form, but without fatal results. Of the 148 who had been vaccinated at some time or another there were 51 attacks, and amongst these no death occurred; in 40 cases the amount of eruption varied from a single spot to fifty, 8 had discrete attacks with more than fifty spots, and 3 had semi-confluent attacks. The one person out of the revaccinated who is believed to have had small-pox exhibited one single spot. The story of importation is next discussed by Dr. Page; it is somewhat obscure, and presents no features of general interest. The lessons to be learnt from the outbreak are—the need for much more medical supervision of such establishments, the extreme infectiousness of even the most trivial attacks of small-

pox, and the necessity for comprehensive measures of revaccination at about ten years of age. As to the infectiousness of small-pox, a quotation from Marson is given as follows: "Most likely it is communicable from the moment when the initiatory fever begins. It may be given by the breath of the patient before the eruption has appeared on the surface of the body," and "a mild case may, and often does, give rise to a severe one; and, on the contrary, a severe case may produce a mild one." Few passages could, in a more striking way, show the imperative necessity for resorting to revaccination at a definite period of life, and this without waiting for the imminence of infection. In the actual case before us the disease was not at first recognised, and a very large number were attacked before the eruption was definitely shown to be small-pox. It only remains to add that ample and excellent hospital accommodation was available the moment the disease was recognised, 67 patients being removed to Monsall Hospital.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Saint Pancras.—The corrected death-rate for this important metropolitan parish during 1887 was 19.98 per 1000 living, the extremes, according to sub-districts, being 18.5 in Regent's Park and 24.2 in Somers Town. The zymotic rate was slightly below that for London as a whole, and amounted to 2.95 per 1000. It is worthy of note that, with a population of 243,100, not a single death from small-pox occurred, this being the first year on record for which this can be said. During the year 504 cases of scarlet fever were notified, and of these 287 were removed to the hospitals of the Asylums Board. Sanitary work was also carried on by way of disinfection, and, in addition to dealing with 445 infected rooms, a very large number of articles of bedding, clothing, &c., were passed through the disinfecting stove. Dealing separately with the various conditions calculated to affect the health of the district, Dr. Sykes refers to the question of sewer ventilation, and he expresses the opinion that the proper solution of the difficulty is likely to be found in a system of pipes carried above the house-tops, and, in a few exceptional instances, by the use of lamp-posts and pillars as ventilating shafts.

Leicester Urban District.—Leicester had an exceptionally low death-rate in 1887—namely, 19.0 per 1000, or 2.1 below the average for the past ten years. The infectious diseases notified were 898 in number, as opposed to 1280 in the previous year. And of the 898 no less than 308 were erysipelas, mostly of a trivial character. Of the remainder, 272 were scarlet fever, 222 typhoid fever, 81 diphtheria, and 9 small-pox. As regards small-pox, isolation, quarantine of infected families, and vaccination are still resorted to; an infected family over the borough boundary, and outside Leicester, being dealt with by the urban authority as if in the borough. The unvaccinated children in each case reported were vaccinated, and revaccination, when deemed necessary, was performed on adults. In referring to this, Dr. Tomkins takes occasion to point out how recent is the local war against vaccination, and he shows that by far the majority of the Leicester children are vaccinated, no less than 1122 infants having been vaccinated there as recently as 1886. Diarrhoea is dealt with at some length in the report, and Dr. Tomkins points out that the watering of several streets twice a day with water impregnated with disinfectants was followed by a marked and undoubted diminution in mortality, although he is not yet prepared absolutely to show that the one was the effect of the other. Having regard to the difficulties met with as to sewer ventilation, some prominence is given to two inventions that have been the subject of experiment in Leicester. One is Keeling's sewer gas destructor, in which, at the base of a lamp-post for example, sewer air is conveyed to a powerful Bunsen burner, which heats a series of iron cones sufficiently to serve as a cremator to sewer air. It is reported of it that it certainly makes sewer-air odourless, and that it to a great extent, if not entirely, destroys the germs of bacterial life contained in it. The other apparatus was invented by Dr. Paulson of Mountsorrel, and is admittedly as yet only in the stage of experiment in so far as construction is concerned.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5817 births and 3359 deaths were registered during the week ending Dec. 8th. The annual rate of mortality in those towns,

² Eyre and Spottiswoode, East Harding-street, E.C.; Adam and Charles Black, Edinburgh; and Hodges, Figgis, and Co., Dublin.

which had been 19.7, 18.2, and 17.8 per 1000 in the preceding three weeks, rose again last week to 18.6. During the first ten weeks of the current quarter the death-rate in these towns averaged 19.5 per 1000, and was 1.7 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 9.2 in Derby, 13.0 in Birkenhead, 13.1 in Sunderland, and 14.7 in Bristol, Hull, and Preston. The rates ranged upwards in the other towns to 23.6 in Liverpool, 24.8 in Plymouth, 26.3 in Blackburn, and 29.8 in Cardiff. The deaths referred to the principal zymotic diseases, which had been 501 and 526 in the preceding two weeks, were again 526 last week; they included 277 from measles, 70 from scarlet fever, 50 from whooping-cough, 48 from diphtheria, 41 from diarrhoea, 40 from "fever" (principally enteric), and not one from small-pox. No deaths from any of these zymotic diseases were recorded last week in Hull, Plymouth, Wolverhampton, or Halifax; while they caused the highest death-rates in Salford, Blackburn, and Cardiff. The greatest mortality from measles occurred in London, Leicester, Portsmouth, Leeds, Oldham, Salford, Liverpool, Blackburn, and Cardiff; from scarlet fever in Liverpool, Sheffield, Derby, and Blackburn; from whooping-cough in Birmingham and Cardiff; and from "fever" in Cardiff and Salford. The 48 deaths from diphtheria in the twenty-eight towns included 35 in London, 3 in Nottingham, 2 in Birmingham, 2 in Salford, and 2 in Newcastle-upon-Tyne. No death from small-pox was registered in London or in any of the twenty-seven other great towns. No small-pox patients were under treatment during the week in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 922 at the end of last week, against 980, 853, and 946 on the preceding three Saturdays; 79 cases were admitted to these hospitals during the week, against 59 and 96 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the preceding six weeks from 522 to 258, were last week 277, and were 210 below the corrected average. The causes of 86, or 2.5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Portsmouth, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Preston, Halifax, Sheffield, and Bradford.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17.8 and 19.1 in the preceding two weeks, further rose to 19.3 in the week ending Dec. 8th; this rate exceeded by 0.7 the mean rate in the twenty-eight large English towns. The rates in these Scotch towns ranged from 13.6 and 15.4 in Dundee and Leith to 26.3 in Greenock and 32.0 in Paisley. The 487 deaths in the eight towns showed a further increase of 4 upon the numbers returned in the preceding two weeks, and included 12 which were referred to scarlet fever, 11 to diphtheria, 8 to measles, 8 to diarrhoea, 7 to whooping-cough, 3 to "fever" (principally enteric), and not one to small-pox; in all, 49 deaths resulted from these principal zymotic diseases, against 53 and 60 in the preceding two weeks. These 49 deaths were equal to an annual rate of 1.9 per 1000, which was 1.0 below the mean rate from the same diseases in the twenty-eight English towns; this rate ranged in the eight towns from 0.0 in Leith to 7.4 in Greenock. The fatal cases of scarlet fever, which had been 6 and 13 in the preceding two weeks, were last week 12, of which 10 occurred in Glasgow. The 11 deaths from diphtheria showed a further slight increase upon the numbers in the previous two weeks, and included 7 in Glasgow and 3 in Greenock. The fatal cases of measles, which had declined in the preceding four weeks from 27 to 14, further fell last week to 8, of which 4 were returned in Greenock and 3 in Glasgow. The 8 deaths attributed to diarrhoea were 5 below the number in the corresponding week of last year. The 7 fatal cases of whooping-cough corresponded with the number in the previous week, and included 5 in Glasgow and 2 in Edinburgh. The 3 deaths from "fever," of which 2 occurred in Greenock, were fewer by 8 than the number in the previous week. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 97, 90, and 86 in the preceding three weeks, rose last week to 113, but were 30 below the

number in the corresponding week of last year. The causes of 50, or rather more than 10 per cent., of the deaths registered during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 25.9 and 22.9 per 1000 in the preceding two weeks, rose to 27.0 in the week ending Dec. 8th. During the first ten weeks of the current quarter the death-rate in the city averaged 24.4 per 1000, the mean rate during the same period being 18.6 in London and 15.5 in Edinburgh. The 186 deaths in Dublin showed an increase of 28 upon the number in the previous week; they included 8 which were referred to "fever," one each to measles, scarlet fever, diphtheria, whooping-cough, and diarrhoea, and not one to small-pox. Thus the deaths from these principal zymotic diseases, which had been 20, 12, and 11 in the previous three weeks, rose again last week to 13. The deaths referred to "fever," which had been 3, 5, and 6 in the preceding three weeks, further rose last week to 8. The deaths of infants showed an increase upon the numbers returned in recent weeks, while those of elderly persons had further declined. Six inquest cases and five deaths from violence were registered; and 56, or nearly a third, of the deaths occurred in public institutions. The causes of 32, or nearly 18 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

EXAMINATIONS IN OPERATIVE SURGERY.

To the Editors of THE LANCET.

SIRS,—In the article which appeared in your issue of the 24th ult. on the question of retaining operative surgery as one of the subjects on which candidates for the joint diploma of the Royal Colleges of Physicians and Surgeons should be examined, reference is made to the views of Mr. Teale, Professor Gairdner, and myself, which were published in the report, made on behalf of the General Medical Council, on the examinations (1881-82) of the medical and surgical corporations of the United Kingdom. In that report not only is the importance of the test recognised, but also the dissatisfaction of the Visitors with the arrangements at the Royal College of Surgeons for carrying it out is sufficiently indicated. It appears that the Visitor of the present year, Professor E. H. Bennett, has also expressed, in his recently published report, dissatisfaction with this part of the examination, and apparently as a consequence of these unfavourable opinions the question has now been boldly raised as to whether this subject should form any part of the final examinations for surgical diplomas.

From the tone of Mr. Rickman Godlee's letter published in your last issue, I infer that he has ranged himself on the side of those who would abolish the test. His arguments, however, are hardly convincing. One of the statements made by him is that in courses of operative surgery "only the best men attain anything like familiarity with the use of the knife." Of this I have much doubt; but assuming that it was true, surely a similar remark might with equal justice be made as regards the progress made, as a rule, by students engaged at other practical courses, such as those of anatomy, physiology, and histology. And yet Mr. Godlee would not, I presume, advocate that the teaching and examination in these important subjects should on that account cease. Again, he considers that "nervousness" in a candidate is more conspicuous at an operative surgery examination "than at any other time." This does not coincide with my experience. When "nervousness" apparently influences injuriously the prospects of a candidate, it is, as a rule, the direct outcome of insufficient preparation. Lastly, Mr. Godlee alludes to what he has often observed to be a characteristic of some examiners—viz., that they are specially liable to be dissatisfied if candidates are not familiar with particular methods of operating which they (the examiners) prefer, although the ones the candidates select to perform may be as good as, or perhaps better than, those they are expected to adopt. In answer to this, I would say that if any examiner is found to be a faddist

he is obviously unfitted for his post, and the sooner his services are dispensed with the better.

Although I can quite understand that much difficulty may arise in efficiently carrying out an examination in operative surgery when an extremely large number of candidates have to be tested, I cannot think that it is insuperable, and it is only if it were so considered that would at all justify the question being raised as to whether it is desirable that the test should be enforced. Having regard to the importance of operative surgery, which has made such giant strides of late years, the abolition of the test at the examinations for surgical licences would, in my opinion, be calamitous to the best interests of surgical education. It is stated that the dearth of subjects is one great difficulty, and that their utilisation for this purpose may injuriously affect the teaching and study of practical anatomy. Assuming, however, that between 500 and 600 candidates presented themselves annually for the final examinations of the Conjoint Board in London—and that is probably a large estimate,—I would say, from my experience as an examiner, that for such a number twenty-four subjects would probably be found quite sufficient; and having regard to the facilities with which they can now be procured, there could hardly be much difficulty, in a city with such an exceptionally large population as London has, in getting the required number, or even a much larger one if necessary. Then I understand that the time required to conduct this part of the examination is found to be a source of trouble and difficulty to some of the examiners who are believed to be favourable to the abolition of the test. If this be the case, I would suggest one of two courses—viz., either the appointment of other but equally efficient examiners who perhaps may have more leisure at their disposal, or of assistant supplemental examiners. That it is desirable there should be a practical test in this branch of our art is a proposition which, I think, hardly admits of discussion. Examinations are, as Professor Humphry has said, “the despots of education”; and we may reasonably anticipate that the abolition of the test would be promptly followed by the cessation of systematic teaching of operative surgery, and any surgical curriculum without this would, in my opinion, be distinctly defective. I regard it as one of the most important branches of surgical education, as it gives opportunity not only for the development of manual dexterity in operating, but also for the study of the surgical indications for its many and various applications.

I have known of more than one instance in which a surgeon, a few days after obtaining his surgical qualification, was called upon and required to perform operations of the most serious kind, and without having the advantage of any skilled assistant. In these cases, if the manipulative skill and knowledge derived from the study of operative surgery had been wanting, the results would, in all probability, have been very disastrous. There is one point which I think should never be lost sight of, and that is the desirability of candidates being tested for the most part on operations of emergency. In this opinion my friend Mr. Teale, I know, coincides. It is satisfactory to note that in the recent debate on this subject in the General Medical Council, not only did Mr. Teale express himself strongly as regards the importance of the operative surgery test, but had coinciding with him surgeons of such eminence as Sir J. Simon, Sir George Maceod, and Professors Humphry, R. Macnamara, and C. Heath.

I am, Sirs, yours faithfully,

WILLIAM STOKES,

Professor of Surgery, Royal College of Surgeons, Ireland.
Merriem-square, Dublin, Dec. 10th, 1888.

MENSTRUATION AND THE OVARIES.

To the Editors of THE LANCET.

SIRS,—It is perfectly true that Dr. Aveling was the first to use the word “nidation”; but, whilst we are grateful to him for the invention of this most convenient term, we are not now inclined to follow him in the useless purpose to which he puts it. The very fact that Dr. Aveling uses the phrase “meaningless and unscientific Fallopian theory” conclusively proves, what is the fact, that he has not in the least understood my letter, and therefore I need not discuss the matter further with him. Dr. Harry Campbell, on the contrary, clearly observes the point at issue, and believes;

in connexion with it—and I agree with him entirely,—that ovulation in all probability is a necessary part of the menstrual rhythm. The only point upon which we differ is that he desires to retain the belief that ovulation and menstruation are concurrent and coincident. If this were so, we should have, in either post-mortem or ante-mortem examination of the ovaries, a definite number of ripe, ripening, and decadent follicles proportionate to the methodical order of the performance of menstruation. But everyone knows that it is not so. In a statistical account of all the available information which my operations have enabled me to tabulate, and published in the *Medical Times and Gazette* and in the *Gynaecological Journal*, it is clearly shown that the proportion of ripe ova to menstrual periods does not give more than two or three ripe ova in a year. It is, therefore, for Dr. Harry Campbell, who believes that ovulation and menstruation are coincident, to advance a single fact or observation which will support his view. It is not sufficient merely to reiterate what has been handed down from generation to generation without proof when the statement is challenged, and it is this traditional belief in the concurrence and coincidence of menstruation and ovulation which is at the bottom of all the fallacies of the physiology and pathology of the ovaries.

De Sinety and Melassez, and numerous other observers, have shown that ovulation is going on during the whole of life; menstruation occurs only over a limited part of it. There is one crux which faces the supporters of the ovular theories, but they have passed it by (as Dr. Aveling has done) without a word. Another fact quite as conclusive is that menstruation is never interfered with by any disease of the ovaries; whereas disease of the tubes and uterus (and not mere occlusion, but any disease of the tubes, or almost any disease of the uterus) will alter menstruation, may increase or diminish it, may convert it into continuous metrorrhagia, or cause it entirely to disappear. This is perfectly parallel with all the facts known to us about the influence of disease upon function. If the kidneys are diseased, they influence the function of the secretion of urine, because they are its immediate agency. If ovulation be the cause of menstruation, or the ovaries be its immediate agency, then disease of these organs should show distinct evidence of their power. Removal of one should diminish it by half, unless the remaining ovary gets hypertrophied; and removal of both should entirely suppress the function. But no such results are obtained. We are further asked to believe that the retention of a microscopical fragment of one organ will lead to the maintenance of the complete physiological function attributed to two in their entirety. It is like asking us to believe that a man could pass fifty ounces of healthy urine from a remainder of one kidney, say, weighing ten grains—an assumption too absurd for further discussion.

I am, Sirs, your obedient servant,

Birmingham, Dec. 1st, 1888.

LAWSON TAIT.

“THE BRITISH EMIGRATION SERVICE.”

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of Nov. 24th last a report by your Special Commissioner on the British emigration service. In that report he refers to an emigrant depot, and remarks that the waste-pipes from the fixed washing-stands there communicated directly with the drains, afterwards qualifying this by saying that there was no trap visible. I would like, in justice to our watchfulness and strict supervision of all those places, to inform you that the whole system has been thoroughly smoke-tested lately by the officers of this department, and no trace of smoke was discoverable on the premises. As a matter of fact, all the washing-stands referred to are trapped, and easily accessible by removing a portion of the woodwork. The other two w.c.’s, situated in the centre of the building, have two small hinged windows opening into the staircase. They are not any darker than such closets generally are when they are situated near the centre of a building or dwelling house, as unfortunately too many of them are. I would like to point out to your commissioner that every closet situated within a dwelling house is ventilated through the dwelling house, and not the dwelling house through it, unless special mechanical apparatus be employed to cause an up current, which of course, as you are aware, no one has power to enforce. Such a question as this presents “no difficulty in enforcing,” as suggested by your reporter.

The difficulty is that there is no law about it at all. The question of fresh effluvia emanating from a w.c. into a dwelling house and contaminating the air of it, to the injury of health, is a matter on which doctors widely differ, as they sometimes do on more vital questions.

I am, Sirs, yours faithfully,

PETER FYFE,

Sanitary Department, Glasgow, Dec. 5th, 1888. Sanitary Inspector.

THE NEW WAY OF RAISING THE EPIGLOTTIS ETC. BY UTMOST MANUAL EXTENSION OF HEAD AND NECK, AND THE RECENT ADJOURNED DISCUSSION.

To the Editors of THE LANCET.

SIRS,—In the accurate report in THE LANCET of the 24th ult. of the recent adjourned discussion at the Medical Society of London appears an apology from me made under false impressions, and which is so inconsistent with the title of my paper, "On a new and only way of Raising the Epiglottis," that I must beg a short space in your valuable columns for a correction.

On reference to the report of the adjourned discussion, it will be seen that, although Mr. T. C. Bryant, of Guy's Hospital, who had been kind enough to watch some of my work at the time, said "the facts submitted were supported by demonstrations upon the dead body," and that "he was quite prepared to endorse Dr. Howard's remarks, or most of them"; while Sir William Mac Cormac related a recent case of his own exactly corroborating these facts; though Mr. Lennox Browne related an experience which "supported Dr. Howard's contention"; while Mr. Knowsley Thornton said, "Dr. Howard had a perfect right to speak of his way as a new method;" and though during the entire discussion not a single point as to the facts or their alleged purport was for a moment in dispute;—notwithstanding all this, in the body of my closing remarks will be found a very complete apology from me for having apparently overlooked the claims of a prior or contemporaneous worker on similar lines, and robbed him of the credit due to him. This apology was elicited by a surprise, and was given without reflection, in consequence of an impressive speech to that effect generously made by Mr. Knowsley Thornton on behalf of a friend who had been notified of the coming discussion, but was absent. The complaint in question was based upon a "paper" in the *Edinburgh Medical Journal*—a proposed instrument in that connexion—and a case. On an examination since, I find not one of these things mentioned in the index of the journal in question, and that no such "paper" or abstract of such a "paper" is there published. As regards the case, it seems to have been reported specially to illustrate the relative superiority of my own method of artificial respiration, which, in contrast to Silvester's in another case mentioned, seems to have been employed with striking success on that occasion.

These events do not date back ten years ago as stated. The quotations made in support of supposed claims were, I find, made correctly, not from a "paper," however, but from remarks made at meetings on May 5th and on July 7th respectively in 1880. The case—the experience in which seems to have been the source of whatever followed at subsequent meetings—was described in the course of a discussion some months before, or on March 5th, 1880. On that the earliest occasion or event referred to by Mr. Thornton's friend, he is reported in the *Edinburgh Medical Journal* to have said: "He had the greatest faith in Howard's method, and related this case to show how efficient it is in urgent cases of asphyxia, however produced." A recognition of the value of head and neck extension long ago by Mr. Thornton's friend seems correct, for, in accordance with my old directions for passive extension, he said: "Two pillows were placed under the shoulders, and the head allowed to fall well back, when 'the air rushed into the chest in a manner delightful to observe.' Further: 'He mentioned this case to show the great value of a particular method of artificial respiration in a case of greatest urgency, where, as in this case, e.g., the patient could not be moved,' for 'he had no hesitation in saying that Howard's method saved the patient's life.'" I by no means wish to be understood as making a complaint myself, but as I privately promised Mr. Thornton I would make even further public correction as the facts on examina-

tion might seem to allow, I cannot excuse myself from doing so, simply because the nature of the correction is so very different from what I was so ready to think it would have to be. Between these facts and what I was led for the moment to suppose them to be the discrepancy is unfortunately great and amazing. In view of the facts, my apology is so absurdly contradictory and misleading, I have no choice but to retract it.

I hope I shall be excused for having recalled some of the forgotten statements made at the time in the account of the above case, the report of which was both new and interesting to me, and for the results in which Mr. Thornton's friend, as well as myself, cannot, I am sure, but feel grateful.

I am, Sirs, yours faithfully,

London, Dec. 6th, 1888.

BENJAMIN HOWARD.

SIR MORELL MACKENZIE AND THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE Registrar presents his compliments to the Editors of THE LANCET, and will feel obliged by their insertion in the next issue of the journal of the following letter which appeared in *The Times* of the 12th inst. (to-day):—

To the Editor of *The Times*.

Sir,—The following paragraph appeared in the second edition of the *Pall Mall Gazette* of the 8th inst.:

"George Fitz-James Darker, M.D., F.R.C.S., of St. Thomas's Hospital, who was present at the conclave at the College of Physicians when the decree to boycott Sir Morell Mackenzie was drawn up, writes as follows: 'At that meeting I (in company with five or six others) protested against the decision arrived at—namely, to advise our colleagues in Edinburgh not to recognise Sir M. Mackenzie's visit to that city.' I consider this boycotting of an eminent medical man a mean and cowardly action, and unworthy of the profession to which I have the honour to belong."

The answer to this statement is full and conclusive. 1. No question relating to Sir Morell Mackenzie has been discussed by the College of Physicians. 2. No meeting of the College has taken place since Oct. 25th last. 3. No communications have passed between this College and any other corporate body or persons on the subject. 4. Dr. Darker is quite unknown to the College, and could not have been present at any meeting whatever of that body, had such taken place; moreover, his name does not appear on the Medical Register.

There is, therefore, no foundation whatever for the paragraph quoted, which appears to have been designed for some other purpose than the furtherance of justice and truth.

I am, Sir, your obedient servant,

HENRY A. PITMAN, Registrar.

Royal College of Physicians, London, S.W., Dec. 11th.

LIVERPOOL.

(From our own Correspondent.)

THE PREVENTION OF CRUELTY TO CHILDREN.

MR. JUSTICE WILLS, in charging the Grand Jury at the Assizes now sitting here, referred to the valuable assistance afforded by the Society for the Prevention of Cruelty to Children in taking up cases where there appeared to be gross parental neglect. Although the Society has been in existence some years and its formation was followed by that of a similar society in London, the learned judge stated that he had never heard of it before. The Society acts in a double capacity, not only as public prosecutors in cases where cruelty by commission or omission has been proved, but also in deterring others from committing similar offences.

TYPHOID FEVER AT ST. HELENS.

For some time past there has been a severe epidemic of typhoid fever at St. Helens, several leading inhabitants having fallen victims to it, while others who have been infected are happily recovering. Dr. Garton, who has been in attendance on some of the patients, was himself taken ill, but this appears to have been from overwork.

DEATH OF THE MAYOR OF BIRKENHEAD.

Within a month of being elected to the office of Mayor of Birkenhead, Mr. Frederick Smith, alderman of that borough,

has died a victim to the zealous discharge of his duties. Nearly three weeks ago he went to London on civic business with every appearance of robust health. In returning home he caught cold; but instead of taking the necessary precautions to prevent further ill consequences, he continued to discharge the duties of his office until a week before his death, when he was attacked by congestion of the liver, followed by an attack of congestion of the lungs. In spite of every care and attention he sank and died, in his forty-third year.

Liverpool, Dec. 11th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE CONVICT WADDLE.

A PETITION has been forwarded to the Home Secretary on behalf of William Waddle, who is at present lying at Durham Gaol under sentence of death for the Birtley murder, and whose execution is fixed for Tuesday, the 18th inst. The petition is presented by a brother of the convict, and sets forth "That the prisoner is one of a family all of whom are more or less eccentric in manner, and he has one brother who is at present, and has been for the last seven years, confined as a lunatic in the county asylum of Bracebridge, near Lincoln." The reason for such confinement was repeated wanderings without purpose or object by the lunatic. It is stated further in the petition that the convict had also on one occasion prior to the evening of the murder departed from his home, apparently without object, and that this occurred in September, a year before the murder. It also states that it was given in evidence that the prisoner, although of a morose and quiet character, was otherwise a kind and well-behaved young man. The petition asks for an investigation of the prisoner's state of mind, and offers to give any information as to his antecedents. It is to be hoped that this petition may be favourably answered. There is much in Waddle's conduct to give rise in most minds to doubts as to his sanity, and it would be felt as a reproach to law and justice if this sentence on a supposed lunatic were allowed to be carried out without the fullest inquiry as to his state of mind.

AMBULANCE WORK IN THE COUNTY OF DURHAM.

The ambulance movement makes steady progress in the north, especially in the districts where "first aid" is likely to be most needed at our large collieries and iron works. At Consett, under the direction of Dr. George Renton, more than 200 students have joined.

THE SEASON IN THE NORTH OF ENGLAND.

The weather in the north certainly deserves a passing note, as, during the first week of this month, it has been warmer and milder than it was in any part of June last. Primroses and other spring flowers are coming into bloom. Mushrooms have been gathered, and the apple has been observed in bloom in the Tyne valley. During the past three days the temperature has fallen and frosts have set in at nights; but, if not so warm, the weather is exceptionally fine, with much sunshine for the period of the year. Our local weather prophets have been all wrong, as they predicted just the reverse.

LARGE PHOSPHATIC CALCULUS IN A HORSE.

A calculus like a cannon ball was taken from the carcass of a horse last week at Hexham. It weighed 3lb. 10oz., and was above 15 in. in circumference. The horse was twenty-five years old, and accustomed to take long journeys.

Newcastle-on-Tyne, Dec. 12th.

EDINBURGH.

(From our own Correspondent.)

SIR MORELL MACKENZIE IN EDINBURGH.

THE appearance of Sir Morell Mackenzie in Edinburgh has been followed by a pretty quarrel between the professors in the medical department on the one hand and the *Scotsman* and *Evening Dispatch* and the students on the other. Without going into detail, a short account of what has occurred may

be given. Sir Morell Mackenzie was invited to give a lecture on "Speech and Song" at the Edinburgh Philosophical Institution. This fact came to the knowledge of some of the members of the Students' Representative Council, who immediately made arrangements to ask the lecturer to give an address in aid of the building fund of the new University Union. Everything was arranged, but at the students' address none of the medical professors were present. Next day the *Scotsman* and the *Evening Dispatch* very injudiciously drew attention to the fact, and published long articles on "Medical Boycotting." This was followed by small sections of students in the various classes making it clear, by certain signs of disapprobation, that they thought they were better qualified to judge on points of medical ethics than were their seniors. Some of the professors treated the whole matter as a joke, and managed to laugh it off. Others took it more seriously, and one dismissed his class for the day. One cannot but think that the lay papers were not very wise in drawing attention to the action of the professors. They have surely a right to absent themselves from any meeting at which they do not wish to be present without being called to account either by the lay journals or by the students. They did not, surely, object to the students doing as they wished, and it is only fair that they (the professors) should be allowed to exercise a similar discretion. It must be remembered, too, that on the evening on which the address to the students was delivered there was an important meeting of the Medico-Chirurgical Society, at which many of the leading physicians and surgeons were present. It is to be hoped that the matter will now be allowed to drop, and that the former amicable relations between teachers and taught will soon be restored. In this connexion, it may be mentioned that a very large number of the students made a counter demonstration on each occasion and at each class.

A JUDGE ON MEDICAL EVIDENCE.

Lord Fraser, in addressing a jury in a case arising out of the injury to a man sustained by the fall of a gangway, used some rather remarkable language in characterising the evidence of the medical witnesses engaged. He stated that he dismissed from consideration the whole of the evidence given by one of the witnesses, and he did so "from his bearing in the witness-box. It was too intemperate and passionate. It was not the evidence of a witness, but the evidence of a partisan. He was the man who was sent on Jan. 13th, for the purpose of ascertaining—for the purpose of defence—the extent of the injury that the workman had received. He was the sleuth-hound of the company." Later his lordship remarked that "these doctors always amazed him with the confidence with which they expressed their opinions. Dr. —," naming a well known medico-legal expert, "is a man very highly respected, a friend of my own; I have often heard him as a witness, but I never heard him express a doubt about anything in his life—never." This sally was naturally followed by laughter. When did a Court fail to laugh at a judge's joke? So encouraged, his lordship went on to improve on his first effort. "He is quite clear and sure upon everything, even as to prophecy." After such a tirade, the last thing one would expect would be a prophecy from Lord Fraser. In this we are mistaken, for he immediately dons the mantle that he has so ruthlessly torn from the doctor's shoulders, and states that "the man would never, unless through a miracle, be as strong as he had been before, and be fit for heavy labour." So much for judicial consistency.

Edinburgh, Dec. 11th.

DUBLIN.

(From our own Correspondent.)

ROYAL ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Pathological Section held on the 7th inst, Mr. Kendal Franks exhibited the patient from whom he had removed five inches of colon for epithelioma. Brief details of the operation were referred to in THE LANCET of Nov. 17th (p. 984), and it may be mentioned that Gély's suture was used. Mr. Dallas Pratt described a rare accident—viz., a case of lateral luxation of the ungual phalanx of the thumb. Mr. Franks gave interesting details of a case of cholecystotomy, the first of the kind reported in Ireland. A tumour on the right side, which some thought might be

of a malignant nature, proved, when the abdomen was opened, to be an enlarged portion of the liver, which passed vertically downwards from the right lobe. The patient was greatly improved, but a fistulous opening remained, and little or none of the bile passed into the duodenum; and Mr. Franks was of opinion that this was owing to a stricture of the common bile duct.

CITY OF DUBLIN HOSPITAL.

On the 19th inst. an amateur dramatic performance will be given at the Gaiety Theatre in aid of the funds of this excellent institution. The play selected for the occasion will be Robertson's "School," and the performance will be under the patronage of the Lord-Lieutenant and the Marchioness of Londonderry and Prince and Princess Edward of Saxe-Weimar.

QUEEN'S COLLEGE, CORK.

By the lamented death of Dr. Denis O'Connor a vacancy has arisen in the chair of Practice of Medicine in this College. The candidate, who will be elected by his Excellency the Lord-Lieutenant, in whose hands the appointment lies, will hold office for a period not exceeding seven years. The emoluments of the post are about £150 per annum.

EPIDEMIC OF FEVER IN CO. CORK.

It is reported that an epidemic of typhoid fever prevails in Schull district, in the county Cork, where malignant measles recently existed and proved so fatal. Some thirty persons have been removed to hospital, and the cases which have succumbed include, among others, those of two Roman Catholic clergymen.

ADELAIDE HOSPITAL.

Miss Reynolds, who for some years past has held the post of lady superintendent to this hospital, was on Saturday last presented with an address and testimonial by the nurses and students on the occasion of her departure from the institution. The nurses gave a gold watch and chain with a suitable inscription, and the students a dressing-bag and hospital dressing-case.

DUBLIN MAIN DRAINAGE.

A member of the Town Council has given notice of motion to the effect that, as the present condition of the main sewers of Dublin is and has been for some years injurious to the health of the inhabitants, they should, without further delay, be put into proper order by the Corporation. He suggests that the subject be referred to a committee of the whole house, with powers to appoint a sub-committee to carefully inquire into the matter, and report to the Council with the least possible delay.

The epidemic of typhus fever which recently prevailed in the Strokestown Union has now disappeared, and the medical officers of the district have at present no cases of the disease under treatment.

Dublin, Dec. 11th.

PARIS.

(From our own Correspondent.)

ACTION OF CHLORIDE OF ETHYLENE.

PROFESSOR BOUCHARD, at the meeting of the Academy of Sciences last week, recalled the recent researches of M. Raphael Dubois, relative to the singular action of chloride of ethylene on the eye when inhaled as an anæsthetic. It has the unfortunate property of having a selective action on the eye, rendering the cornea opaque. Animals submitted to its action become blind. M. Dubois attributed this effect to a dehydration of the cornea. Dr. Panas, Professor of Clinical Ophthalmology, was authorised to verify the facts advanced by M. Dubois. He obtained the same results—viz., thickening and opacity of the cornea; but he differed in opinion with M. Dubois as to the cause of the phenomenon. It is not, said Dr. Panas, by the withdrawal of water that the cornea becomes opaque; it is by the distension and desquamation of its epithelium.

CAUSES OF DEPOPULATION.

Among the causes of the depopulation of France referred to in my letter of last week, I may mention the enormous mortality among nurslings. According to a report recently laid before the Chamber of Deputies, 150,000 is the number

of infants dying annually in France from improper or premature feeding and misery. Whilst the number of births does not attain 900,000, the number of deaths that occur in the first year after birth is, on an average, 230,000, including 45,000 stillborn. In this last figure are not comprised miscarriages or abortions. The author of the report remarked that the evil seems to increase in proportion to the improved circumstances of the people. For instance, from 1840 to 1870 the percentage of infantile mortality rose from 15.9 to 24.7.

INTESTINAL OBSTRUCTION BY LINSEED.

Dr. Polaillon lately brought to the notice of the Academy of Medicine a curious effect of linseed, which is frequently prescribed in grain for obstinate constipation. He had under his care a young woman in good health, but habitually constipated, who took daily for three months a tablespoonful of linseed in grain. At the end of this time she showed symptoms of intestinal occlusion, and after complete constipation, lasting for a week, it was found necessary to make an artificial anus, whereby an enormous quantity of linseed escaped. Notwithstanding this relief, the patient continued to sink, and died seven days after in a markedly typhoid state. Dr. Polaillon recalled a similar circumstance reported by Professor Verneuil, which had been produced by fig-seeds. He thinks that in his own case surgical intervention was too late, and that the woman had succumbed to stercoræmia. Apropos of this, Dr. Berger recalled what takes place in animals which ingest these same products without bruising them, and of which they easily disembarass themselves. He had seen guinea-pigs fed with Indian corn in grain; their intestines filled like a sack of wheat, and they continued ingesting until the bowel was ruptured. It is probable, says the *France Médicale*, from which I have taken this note, that these differences between man and animals depend on the nature of the secretions.

ECTOPIA CORDIS.

M. Franck lately brought to the notice of the Academy of Sciences a case of ectopia of the heart in a woman of Colmar, on which he makes the following reflections: "It is known that, according to Mosso, the jugular pulse is the result of an aspiration exercised by the heart, at the moment of the diastole, on the intra-thoracic liquids. In this patient, the heart not communicating with the thorax, there can be no aspiration, and consequently there can be no jugular pulse if the theory of Mosso is correct. This is not the case, as in this instance the jugular pulse presents in this patient its habitual characters, which proves that this pulse is due, as demonstrated by Dr. Potain, to the brusque falling in of the auricle at the moment of the systole. Another interesting peculiarity is that there exists in this woman, between the first and the second normal sound of the heart, a dull bruit which nearly coincides with the commencement of the systole. This third sound must be attributed to the brusque tension of the ventricular wall determined by the afflux of blood. There exists, moreover, at the base of the heart, a *bruit de souffle* presenting all the characters of so-called anæmic murmurs. It is alleged that these sounds had for their seat the pulmonary artery. In this patient, the position of this vessel is such that there can be no doubt as to the anæmic nature of this bruit and its seat of production at the level of the aortic orifice."

DEATH OF A PASTEURIAN PATIENT.

The *Semaine Médicale* of last week reports that a lad aged fourteen years, bitten by a rabid dog on May 29th, 1888, and treated at the Pasteur Institute from June 7th to July 1st, died from rabies on Nov. 2nd.

Paris, Dec. 11th.

ROME.

(From our own Correspondent.)

In spite of building operations not always in good taste, Rome is already proving attractive to a more than usually large number of visitors. Social reasons, with the English-speaking colony especially, combine towards this result. The new Ambassador, Lord Dufferin, is invariably a *persona grata* not in the diplomatic world alone; and Lady Dufferin, with the suavity and grace that blend so happily with her native-born tact, seems peculiarly well fitted to preside

over a community reinforced from so many various quarters as that of her Anglo-colonial compatriots. Recent events, not only in the British Islands, but in connexion with the visit of the German Emperor, have brought to the front a series of questions which must make Rome, whether at the Vatican or the Quirinal, the centre of those high political transactions which possess such a charm for the holiday-making publicist of all nationalities. Add to this the never-failing interest of treasure-trove, historic and artistic, to which the much-abused architectural innovations are constantly contributing, and you have an *ensemble* of attractions—extending or enhancing those of which nothing can rob the Eternal City—more than sufficient to explain the influx of arrivals already thronging hotel and *pension* from the Campus Martius to the Alta Semita, from the Subura to the Prætorian Camp.

Happily free from the small-pox visitation which has scared away so many foreigners from the Neapolitan and Sicilian "sun-traps," Rome is at present salubrious to a gratifying degree. At the close of the autumn, it is true, malaria continued to number sporadic cases in the environs and in the Campagna; but since the late showers these have steadily diminished, and such as still occur are mainly accountable as relapses among the victims to the "cachexia malarica." In the more densely inhabited or central quarters there have been traces of the fever; but these, again, have been due to importation from the low-lying plains or shore lands, where the febrile seeds have been contracted, only to crop up in town. "With respect to the different manifestations of the malaria infection," says the sanitary registrar of the Commune, "the pernicious and subcutaneous forms were, even in October, scarce and always on the decrease; while those complicated with local and acute inflammations were few indeed. Only in the latter third of the month was there a slight rise in malarial pleurisy and pneumonia"—due, no doubt, to the overcrowding of the city during the Emperor's visit, and the necessity imposed on so many of remaining too long in the open, or even of bivouacking *sub Jove frigido*.

Gastro-intestinal catarrh during all October was, however, rather more prevalent than usual, and this of a more or less acute and obstinate character. The explanation given above—that of overcrowding and exposure—for the increase in pleurisy and pneumonia is hardly relevant to the catarrhal manifestation, as it was as serious in the first third of the month, before the influx of foreigners for the imperial *feste*, as after the shrinkage of the population to its normal limits. On the other hand, cases of such infective maladies as typhoid fever, diphtheria, measles, and anthrax were exceptionally rare; but erysipelas marked, particularly about the middle of October, a slight rise, only, however, to subside again to its usually low dimensions. Rheumatism, muscular and articular, was almost conspicuous by its absence, the gratifying record in this class being, on the other hand, balanced by a perceptible augmentation in the bronchial catarrhs and partial pneumonias always more or less induced by the steady rains which mark the transition from summer to autumn. There again, however, the 150,000 arrivals (such is the received estimate) about the middle of the month doubtlessly imported the conditions under which these lung affections increased during the latter third.

Nervous diseases of all kinds, according to the sanitary registrar of the Commune, were very few in October, and this satisfactory report has since been more than maintained; while the same may be said of chronic maladies—such as cardiac ailment or pulmonary tuberculosis on the one hand, or chloro-anæmia, hepatic cirrhosis, or uterine cancer on the other. The vigilance with which the hygienic conditions of Rome are now watched may be taken as a measure of her anxiety to retain the attractions she has always had for the northern pilgrim, and the gratifying records of the last two months are a proof that her efforts are not put forth in vain.

Vigilant, however, she must never fail to be, if the bad traditions—the laxity, the negligence, the apathy bequeathed by the old régime—are not sometimes to assert themselves disastrously. Under the heading of "Delizie Ferroviarie" (railway delights), the *Tribuna* announces that a day or two ago, while the up-train from Naples was stopping at Cecchina, within some ten miles of Rome, five gentlemen got into a second-class compartment from which, to their horror, three peasants, all ill with small-pox, and one of them, indeed, very seriously so, had just been taken. It

was in vain that the in-coming passengers protested to the guard against such an outrage on the travelling public. Their protestations were disregarded, and they had to pursue their journey to Rome a prey to the most disquieting anticipations. On reaching the Roman terminus, they were subjected to a sanitary inspection, and, this concluded, they lodged a strongly worded remonstrance with the "Direzione generale." Certainly, such a flagrant breach of good faith with the railway-faring community would not be tolerated in England, still less if the management were vested, not in a company, but in the State.

Rome, Dec. 1st.

THE SERVICES.

WAR OFFICE.—Coldstream Guards: Surgeon-Major Ernest H. Fenn has been seconded for service on the Personal Staff of His Excellency the Marquis of Lansdowne, G.C.M.G., Viceroy and Governor-General of India (dated Nov. 8th, 1888).

ARMY MEDICAL STAFF.—Surgeon-General Henry Bolton Hassard, C.B., has been granted retired pay (dated Nov. 29th, 1888); Surgeon-Major John Alex. Campbell has retired on temporary half pay, on account of ill-health (dated Nov. 19th, 1888); Surgeon John P. Carmody, M.D., has retired on temporary half pay, on account of ill-health (dated Nov. 29th, 1888).

ADMIRALTY.—The following appointments have been made:—Deputy Inspector-General Wm. H. Lloyd, M.D., to Hongkong Hospital (dated Dec. 8th, 1888); Surgeon Alfred T. Rimell to the *Amphion* (dated Dec. 11th, 1888); Mr. Joseph F. Mannix to be Surgeon and Agent at Calcutta; Mr. Thomas G. Millerick to be Surgeon and Agent at Ballinskelligs and Waterville; Richd. B. Wrighton, M.D., to be Surgeon and Agent at Orfordness, in addition to Aldeburgh, Sizewell, and Thorpe; and Staff Surgeon H. W. D. Walsh to the *Devastation* (dated Dec. 11th, 1888).

VOLUNTEER CORPS.—Rifle: 1st Inverness-shire: Captain N. Reid resigns his commission (dated Dec. 8th, 1888).—2nd Kent: Lieutenant-Colonel and Honorary Colonel E. Hughes resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Dec. 8th, 1888).—3rd Kent (Royal Arsenal): Captain H. A. E. de Pinna, from the 2nd Kent Artillery Volunteer Corps, to be Captain (dated Dec. 8th, 1888).—2nd Volunteer Battalion, the Suffolk Regiment: J. Hodges, Gent., to be Acting Surgeon (dated Dec. 8th, 1888).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At an ordinary meeting of the Council held on Thursday, Dec. 13th, the minutes of the ordinary meeting on the 8th were read and confirmed.

On the recommendation of the Museum Committee, Mr. Burgess is to be employed as an artist and photographer for the purposes of the museum, at a salary of £3 for four days of six hours each per week for a period of three months commencing from January next.

It was also resolved that certain gentlemen, "in reply to their respective applications for permission to make use of the College work-rooms, be informed that the Council are not in a position to permit the carrying on of any investigations which may involve experiments on living animals, or the retention of living animals, on the College premises, or to defray any expenses incurred in connexion with such experiments made elsewhere, but that the Council would be ready to afford them facilities for pursuing at the College such part of their investigations as may be carried out in accordance with the regulations relating to the use of work-rooms."

The report of the Committee of Management of the two Colleges, recommending that the possessor of the Diploma in Public Health be called Diplomat in Public Health, and that certain alterations be made in the schedule of drugs relating to the examination in materia medica and pharmacy, was approved, adopted, and entered on the minutes.

The following report of the Committee on the question of

an examination in operative surgery for the Membership was approved and adopted:—The Committee have to report that, having considered the question in all its bearings, they do not think it desirable at present that candidates for the Membership of the College should be examined in Operative Surgery on the dead body.

The motion, proposed by Mr. Macnamara and seconded by Sir Spencer Wells, that the report be again referred to the committee for reconsideration, to further report to the Council, was lost, 8 being for and 14 against it. The recommendation of the committee was then carried by 14 to 2.

The President reported on behalf of himself and the Vice-presidents that the Morton and Bradshaw Lectures had been duly delivered by Sir Spencer Wells and Mr. J. Hutchinson respectively. The best thanks of the Council were given for the lectures, which the authors were requested to publish. The thanks of the Council were also given to Mr. J. Marshall for his very efficient services as representative of the College in the General Medical Council, and his report as to the proceedings of that body.

The President, Vice-Presidents, and Mr. Marshall were appointed as representatives of the College in a joint committee with four representatives of the Royal College of Physicians, with authority to act on behalf of the two Colleges in determining the necessary modifications of the original plans for the new building on the Embankment.

The following notices of motions were given:—1. By Sir Spencer Wells: That the resolution of the Council of May 8th, 1884, that an annual meeting of the Fellows and Members be called, to which a report from the Council be presented, be rescinded; and that the annual meeting of the Fellows and Members be discontinued. 2. By Sir J. Paget: That a conversation be held at the College at some convenient date during the coming summer, and that a small committee be appointed to make arrangements for such. 3. By Sir W. MacCormac: That a certificate be required from candidates for the diploma of Member of the College of having themselves performed operations on the dead subject to the satisfaction of their teachers of Practical Surgery. 4. By Mr. Macnamara: That the President be requested to communicate with the Secretary of State for War in favour of dating commissions of medical officers from the time of their joining Netley.

The following gentlemen were elected examiners under the Conjoint Scheme:—*First Examination*: Elementary Anatomy—Messrs. C. A. Ballance, W. Bruce Clarke, Arthur Hensman, W. A. Lane, and Charles Stonham. Elementary Physiology—Messrs. W. D. Halliburton and F. W. Mott. *Second Examination*: Anatomy—Messrs. W. H. Bennett, J. N. C. Davies-Colley, R. J. Godlee, and F. H. Marsh. Physiology—Messrs. C. H. Golding-Bird, B. T. Lowne, and J. M'Carthy. *Third Examination*: Midwifery—Drs. W. Duncan, W. S. Griffith, G. E. Herman, and J. B. Potter. *First Professional Examination for the Fellowship*: Anatomy—Messrs. W. Anderson, W. H. Bennett, R. J. Godlee, Henry Morris, and Frederick Traves. Physiology—Messrs. C. H. Golding-Bird, B. T. Lowne, J. M'Carthy, and G. F. Yeo.

Obituary.

JAMES GUTHRIE, M.D. QU. UNIV. IREL., L.R.C.S. EDIN.

It is with regret we have to record the death of Dr. James Guthrie, which took place at Esher, Surrey, on the 28th ult., at the early age of thirty-eight. Dr. Guthrie's medical education was commenced in Belfast, where he was a diligent and earnest student, and in 1874 he graduated M.D. in Queen's University, Ireland, having in the previous year obtained the L.R.C.S. Edin. Even at this early date he had cause to fear the great enemy which was ultimately to conquer, and with a view to building up a store of health he took several sea voyages, which proved most beneficial. In 1877 he married and settled in Esher, where his kind and amiable manner, seconded by his professional ability and keen knowledge of human nature, soon secured him a large number of friends, who up to the last had hoped against hope, and who now mourn as for a brother. Dr. Guthrie was an Irishman, and all the truest

and best traits of the Irish character were to be found in him. Kind and generous to a fault, amongst all his large circle of friends he never forgot those of his college days, who were to the last his dearest. His mind was keen as his heart was warm, and his professional knowledge was wide and sound. He took the greatest care to keep abreast of the times. Even after he had given up active work, and was awaiting his departure from the present scene of his labours, he took a lively interest in all that was going on in the world of scientific medicine. His body was interred at Esher on the 5th inst., and was followed to the grave by a large concourse of all classes, rich and poor alike desiring to do honour to the memory of one they had loved and respected.

JAMES HALL, M.B., C.M. EDIN., L.R.C.S.

THE numerous friends of the above-named gentleman will learn with much regret of his death, which took place from phthisis, at the comparatively early age of forty-three, at his residence, Bolton-le-Moors, Lancashire, on Nov. 5th. His university education he received at Edinburgh, where he distinguished himself greatly, obtaining many class prizes and honours, and graduated at the age of twenty-two, having made many friends, both amongst men of science and others. Refusing the offers made to him by some of these gentlemen, he preferred starting practice in his native town of Bolton-le-Moors, where he quickly acquired an extensive connexion, his skill and ability being very speedily recognised. His death in that town will long be deplored, especially amongst the poor, by whom he was greatly beloved, since his sympathies for them were very keen, and his generous and hospitable nature ever ready to come to their aid in times of need. Much sympathy is everywhere felt for his family, and the respect in which he was held was testified by the immense number of floral wreaths which came from different parts of England and Scotland, also by the large number of medical and Masonic brethren and other friends who attended his interment, which took place in the family vault at Walmsley. He leaves a widow and five children—one son and four daughters.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following candidates, having passed the necessary examinations on Nov. 20th, 21st, 22nd, and 23rd, were, at a meeting of the Council on the 13th inst., admitted Fellows of the College:—

Adams, John, L.R.C.P. Ed., Aldersgate-st.; Membership dated July 25th, 1872.
Brodie, C. G., L.R.C.P. Lond., Harley-street; Jan. 24th, 1888.
Codd, A. F. G., Melrose-terrace, W. Kensington-pk.; April 18th, 1882.
Coombe, R., L.R.C.P. Ed., Devon and Exeter Hospital, Exeter; July 23rd, 1886.
Deakin, James, L.S.A., Gt. Ormond-street; Jan. 20th, 1879.
Douglas, C., L.R.C.P. Lond., New Walk, Leicester; Nov. 19th, 1873.
Goodly, E. S., L.R.C.P. Lond., Lambeth Palace-rd.; Oct. 30th, 1888.
Johnson, R., M.B. Lond., Gower-street; July 31st, 1886.
Lucy, R. H., M.B. Ed., College-yard, Worcester; May 4th, 1886.
Rawes, W., M.B. Durh., Newcastle-under-Lyne; Aug. 3rd, 1886.
Spicer, W. T. H., M.B. Cantab., Bedford-square; Jan. 24th, 1884.
Stabb, E. C., L.R.C.P. Lond., Vincent-square; July 28th, 1880.
Taylor, A. E., M.B. Lond., Norwood House, Southall; July 29th, 1884.

Thirty-one candidates presented themselves for examination, of whom sixteen passed, including three candidates who have not yet attained the legal age (twenty-five), and fifteen were referred.

The following gentleman, who passed the necessary examinations on May 25th, 26th, 27th, and 28th, 1887, having attained the legal age of twenty-five years, was also admitted a Fellow of the College:—

Rowell, George, L.R.C.P. Lond., Guy's Hospital; Membership dated July 21st, 1886.

The following gentlemen having passed the necessary examinations and obtained medical qualifications, were admitted members of the College:—

Bryden, Frank Wm. Augustine, L.S.A., Trinity-square.
Cox, Wm. A. Spencer, L.S.A., Heald-place, Rusholme, Manchester.
Hayward, G. Cobden, L.S.A., Huddleston-road, Tufnell-park.
Jubb, Frank, L.K.Q.C.P.I., Akeda-road, Halifax, Yorks.
Manners, Wm. Francis, L.S.A., Fentiman-road, South Lambeth.
Potter, Paul de Cresse, L.S.A., Ringley Parsonage, Stoneclough, near Manchester.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.B. (Honours) Examination:—

MEDICINE.

First Class.

- May, W. P., B.Sc., Scholarship and Gold Medal, Univ. Coll. Fernando, H. M., B.Sc., Gold Medal, University College.
 †Dean, H. Percy, B.Sc., University College.
 Eq. { Ashworth, P., B.Sc., Owens Coll. and Manchester Roy. Infirm.
 { Parkin, Alfred, Guy's Hospital.
 Eq. { Abram, J. H., University Colleges, Liverpool and London.
 { Pierce, Bedford, St. Bartholomew's Hospital.
 Wilkie, J., B.Sc., St. Barth's and Brompton Consumption Hosp.

Second Class.

- Macevoy, H. John, B.Sc., St. Thomas's Hospital.
 Roberts, J. Lloyd, B.A., B.Sc., Guy's Hospital.
 Clarke, James Jackson, St. Mary's Hospital.
 Bradford, J. Rose, D.Sc., University College.
 Eq. { Kanthack, A. A., B.A., B.Sc., Liverpl. Roy. Infirm. & St. Barth's.
 { Starling, Ernest Henry, Guy's Hospital.

Third Class.

- O'Reilly, G. H., Northampton General Infirmary and King's.
 Willoughby, W. G., St. Bartholomew's Hospital.
 Blaxall, Frank Richardson, University College.
 Eq. { Canney, H. E. Leigh, University College.
 { Williams, H., St. Bartholomew's Hospital.
 Eq. { Mair, L. W. D., St. Bartholomew's Hospital.
 { White, G. B. Mower, University College.

OBSTETRIC MEDICINE.

First Class.

Kanthack, A. A., Gold Medal, Liverpool Roy. Infirm. & St. Barth's.

Second Class.

- Sutherland, G. W., B.A. Syd., Univ. Coll. Lond. and Univ. Edin.
 Webb, Helen, Lond. School of Med. and Royal Free Hospital.
 Eq. { Dean, H. Percy, University College.
 { Roberts, J. Lloyd, Guy's Hospital.
 Eq. { Ashworth, P., Owens Coll. and Manchester Royal Infirmary.
 { Firth, John Lacy, University College.

Third Class.

- Eq. { Ashe, Evelyn O., London Hospital.
 { Duncan, H., St. Thomas's Hospital and Cambridge.
 { Parkin, Alfred, Guy's Hospital.
 Alcock, S. King, St. Bartholomew's Hospital.

FORENSIC MEDICINE.

First Class.

- Starling, E. H., Scholarship and Gold Medal, Guy's Hospital.
 *Fernando, Hilarión M., Gold Medal, University College.
 †Parkin, Alfred, Guy's Hospital.
 †Pierce, Bedford, St. Bartholomew's Hospital.
 Canney, H. E. Leigh, University College.

Second Class.

- Wilkie, J., St. Barthol. and Brompton Consumption Hospitals.
 Gould, John Edwin, University College.
 Eq. { Dean, Henry Percy, University College.
 { Kanthack, A. A., Liverpl. Roy. Infirmary and St. Bartholomew's.
 Willoughby, W. G., St. Bartholomew's Hospital.
 Eq. { Ashe, Evelyn Oliver, London Hospital.
 { Ashworth, P., Owens Coll. and Manchester Royal Infirmary.
 Melland, Brian, Owens Coll. and Manchester Royal Infirmary.

Third Class.

- Sansom, Harry Arthur, St. Thomas's Hospital.
 Eq. { May, William Page, University College.
 { Swayne, W. C., Bristol Med. School and Guy's Hospital.
 Eq. { Lyndon, Arnold, St. Bartholomew's Hospital.
 { O'Reilly, G. H., Northampton General Infirmary and King's.
 Eq. { Duncan, Horace, St. Thomas's Hospital and Cambridge.
 { Sutherland, G. Whitefield, Univ. Coll. Lond. and Univ. Edin.
 * Obtained the number of marks qualifying for the University Scholarship.
 † Obtained the number of marks qualifying for a gold medal.

The following have passed the M.S. Examination:—

- Carless, Albert, King's College.
 Dunn, Louis A., Gold Medal, Guy's Hospital.
 Gross, Charles, M.D., Guy's Hospital.

The following have passed the B.S. Examination:—

First Division.

- Ashworth, Percy, B.Sc., Owens Coll. and Manchester Roy. Infirm.
 Brown, Arthur T., Guy's Hospital.
 Crook, Herbert Evelyn, Guy's Hospital.
 Cuff, Herbert Edmund, Guy's Hospital.
 Dean, H. Percy, B.Sc., University College.
 Goodall, E. Wilberforce, M.D., Guy's Hospital.
 Kanthack, A. A., B.A., B.Sc., Univ. Coll., Liverpool, & St. Barth's.
 Moss, Enoch, Guy's Hospital.
 Parkin, Alfred, Guy's Hospital.
 Starling, Ernest Henry, Guy's Hospital.

Second Division.

- Bird, Robert, St. Bartholomew's Hospital.
 Brock, Ernest Henry, Guy's Hospital.
 Edge, F., B.Sc., Owens Coll. and Manchester Royal Infirmary.
 Leech, Priestley, Owens College.
 Smith, Guy Bellingham, Guy's Hospital.
 Solly, Reginald Vaughan, St. Thomas's Hospital.
 Thompson, James Edwin, Owens College.
 Tremdder, William Elliot, Guy's Hospital.
 Wheeler, James Atkin, Guy's Hospital.

UNIVERSITY OF CAMBRIDGE.—At a congregation, held on the 6th inst., the following degrees were conferred:—

Doctor of Medicine.—Roland Danvers Brinton, Downing.

Bachelors of Medicine.—Herbert Elwin Harris, Edward Thornton, Christ's.

Bachelor of Surgery.—Edward Thornton, Christ's.

UNIVERSITY OF DURHAM.—At a convocation, held on Dec. 11th, the following candidates were recommended for the degrees indicated:—

Doctor in Medicine for Practitioners of Fifteen Years' standing.

Bennett, William, L.R.C.P., L.R.C.S. Edin.

Hussey, Edward, L.R.C.P., L.R.C.S. Edin.

Utting, James, M.R.C.S., L.S.A.

Webb, Charles Frere, F.R.C.P., F.R.C.S. Edin., M.R.C.S.

Doctor in Medicine.

Giddings, George Thomas, M.B., M.R.C.S.

Montague, Arthur J. Helm, M.B., L.R.C.P. Lond., M.R.C.S., L.S.A.

Packman, Alfred Charles Augustus, M.B., M.R.C.S.

Renney, Henry, M.B., B.S.

Richardson, James Nowell, M.B., M.R.C.S.

Travis, William Owen, M.B., M.R.C.S., L.S.A.

Wilding, James, M.B., L.R.C.P. Lond., M.R.C.S., L.S.A.

Williams-Freeman, John Peere, M.B., M.R.C.S., L.S.A.

Master in Surgery (Old Regulations).

Gibbon, Ernest Henry, M.B., M.R.C.S., L.S.A., College of Medicine,

Newcastle-on-Tyne.

Lingard, Alfred, M.R.C.S., L.S.A., St. Thomas's Hospital.

Bachelor in Medicine.

Coates, William Henry, L.R.C.P., L.S.A., London Hospital.

Fawcett, Henry, College of Medicine, Newcastle-on-Tyne.

Gregory, Alfred John, M.R.C.S., L.S.A., London Hospital.

Jones, Arthur Meyrick, M.R.C.S., L.S.A., Guy's Hospital, London.

Keiffenheim, Luigi Walter, Guy's Hospital, London.

Kimpster, Thomas Morland, College of Medicine, Newcastle-on-Tyne.

Lingard, Alfred, M.R.C.S., L.S.A., St. Thomas's Hospital.

Lovely, Charles Newton, London Hospital.

McLoughlin, George Somers, College of Medicine, Newcastle-on-Tyne.

McNabb, Laurence A., College of Medicine, Newcastle-on-Tyne.

Newstead, George, College of Medicine, Newcastle-on-Tyne.

Robinson, George Arbuthnot, London Hospital.

Sandoe, John Worden, M.R.C.S., Guy's Hospital, London.

Webster, Percy Samuel, M.R.C.S., L.R.C.P. Lond., London Hospital.

Bachelor in Surgery.

Baine, Laurence Augustus, College of Medicine, Newcastle-on-Tyne.

Fawcett, Henry, College of Medicine, Newcastle-on-Tyne.

Gregory, Alfred John, M.R.C.S., L.S.A., London Hospital.

Keiffenheim, Luigi Walter, Guy's Hospital, London.

Kimpster, Thomas Morland, College of Medicine, Newcastle-on-Tyne.

McNabb, Laurence A., College of Medicine, Newcastle-on-Tyne.

Newstead, George, College of Medicine, Newcastle-on-Tyne.

Robinson, George Arbuthnot, London Hospital.

Sandoe, John Worden, M.R.C.S., Guy's Hospital, London.

Thompson, Robert, M.R.C.S., L.R.C.P., Guy's Hospital, London.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates, having passed the qualifying examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society:—

Basu, Baman Das, Lahore University, Calcutta.

Cox, William Alfred Spencer, Owens College, Manchester.

Coates, William Henry, London Hospital.

De Butts, Arthur John, St. Mary's Hospital.

Dodd, Charles Edward, University College, Liverpool.

Farquharson, George Sinclair, London Hospital.

Gunn, Frank Walter, King's College, London.

Hayward, Gerald Cobden, Middlesex Hospital.

Holt, Henry Mainwaring, Yorkshire College, Leeds.

Manners, William F., Univ. Camb. and St. Thomas's Hospital.

Marshall, Charles Frederic, Owens College, Manchester.

Spratley, Ernest Richd. Woody, University College, Liverpool.

UNIVERSITY OF OXFORD.—On Dec. 7th the diploma in Preventive Medicine was granted to W. B. Williams, M.A., M.B., resident medical officer Royal Hospital, Ventnor, late St. Mary's Hospital.

THE first annual meeting of the Court of Contributors to the Victoria Infirmary of Glasgow was held on the 6th inst., when satisfactory reports were presented and adopted.

THE SUAKIM SIEGE.—The *Shibeen* is to be used as a hospital ship for the treatment of the wounded in the forthcoming engagement. She is capable of accommodating 118 British officers and men.

LITERARY INTELLIGENCE.—Messrs. Longmans and Co. announce the early publication of "The Diseases of Children, Medical and Surgical," by Henry Ashby, M.D., and George A. Wright, B.A., F.R.C.S.

VACCINATION GRANT.—Mr. John Colegrave, public vaccinator, Bloxham district of the Banbury Union, has received the Government grant for efficient vaccination (sixth time).

VICTORIA-PARK HOSPITAL ASSOCIATION.—The annual dinner in connexion with the Victoria-park Hospital Association was held on the 12th inst. in the Mile-end Vestry, under the presidency of Mr. Spencer Charrington, M.P.

THE NEW EYE AND EAR HOSPITAL, HEREFORD.—The ceremony of laying the foundation stone of this building was performed on the 6th inst., by the Countess of Chesterfield. The new structure, to be named the Victoria Eye and Ear Hospital, will cost about £2500. The accommodation will provide for twelve in-patients.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—A new western branch to this institution was opened on the 3rd inst. by Viscount Hampden. The building occupies an isolated position on the western side of Sackville-road, and is the gift of Mrs. Carr-Burton, an old inhabitant of Brighton, and erected in memory of her deceased husband.

GREAT NORTHERN CENTRAL HOSPITAL, HOLLOWAY.—On Tuesday the Baroness Burdett-Coutts opened a bazaar at Myddelton Hall, Islington, on behalf of the Ladies' Building Fund in connexion with this institution. The object is to raise for the erection of an out-patients' department the sum of £5000, of which £4000 is in hand.

BOSTON HOSPITAL.—The annual meeting of the friends of this charity was held on the 6th inst. The report stated that part of the balance due to the treasurer at the last annual meeting had been made up, and that the work of the institution during the past year had been of a satisfactory character.

GLASGOW WESTERN INFIRMARY.—The fourteenth annual report, submitted at a meeting held on the 29th ult. of qualified contributors to this institution, stated that 16,810 patients had been treated and 35,062 visits paid during the year, compared with 18,589 and 31,111 respectively in the previous year. The balance sheet showed, after payment of expenses, that £956 18s. 1d. was carried to stock account.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN.—It is announced that the tenth festival dinner, in aid of this charity, will be held at Willis's Rooms, on Thursday, the 20th inst. Mr. Charles A. Prescott, vice-chairman of the board of management, will take the chair. A novel feature of this festival occasion is that the names of ladies appear on the list of stewards, who are also invited to attend the dinner.

CAVENDISH COLLEGE, CAMBRIDGE.—A scholarship of the value of £30 a year for three years will be awarded by the results of the local examinations held in December, 1888. Candidates should communicate with the Master immediately after the publication of the class list in March, 1889. The award will be confined to senior students who are placed in the first class, or, in case of special merit in some important subject, in the second class of honours.

THE SURGICAL AID SOCIETY, LONDON.—The Lord Mayor presided, last week, at the annual meeting of this Society, held at the Cannon-street Hotel. He stated that the benefits which the charity dispensed were yearly increasing. An aggregate total of 73,933 persons had been relieved since its establishment. Such a record of good work must commend itself to the charitable public. The annual report (the twenty-sixth) was adopted, and donations were announced amounting to £370.

LEEDS INFIRMARY.—On the 5th inst. a deputation from the Leeds Infirmary waited upon the Town Council to urge the closing of a road which now divides the property of the institution. A sum of £30,000 has been raised for the alteration of the building, and unless the request be granted the extensions will be divided from the main building. Considerable discussion ensued after the withdrawal of the deputation, and eventually the matter was referred to the Highways Committee for consideration.

PRESENTATIONS.—The students of the Westminster Hospital Medical School have taken advantage of the opportunity offered on the occasion of the marriage of the Dean, Dr. H. B. Donkin, of testifying to the esteem in which he is held by them. The wedding present took the form of a handsome Corinthian pillar telescopic floor lamp, in brass, with a massive base, and chrysanthemum flower shade. Engraved on a shield attached to the capital was the following inscription: "Presented to Dr. Donkin, Dean of the Westminster Hospital Medical School, on the occasion

of his marriage, by the students, as a token of warm appreciation and regard." There were upwards of 100 subscribers, including nearly all the students at present attending the hospital.—On Tuesday evening, Dec. 4th, Dr. R. S. Wallace of Longsight was presented with an aneroid barometer by the pupils of the St. John Ambulance Class, conducted by him in the Longsight Free Christian Church Schoolroom during the spring of the present year. Sixteen pupils presented themselves for examination, all of whom passed. Dr. Edge was the examiner.

BEQUESTS AND DONATIONS TO HOSPITALS.—By the will of the late Mr. George Turner, of Devonshire, and formerly of Horton Grange, the Bradford Infirmary has received a legacy of £1000, and the Eye and Ear Hospital £250.—The late Mrs. Margaret Philip, or Walker, Victoria-street, Aberdeen, has bequeathed £10 each to the Incurable Hospital and Dispensary, Aberdeen.—Miss Emily T. Smytho, late of Royal York Crescent, Clifton, has bequeathed £100 each to the Bristol Infirmary, Bristol General Hospital, and the Bristol Blind Asylum.

MEDICAL VOLUNTEER STAFF CORPS, MANCHESTER. General Daniell inspected, on the 29th ult., the members of the 4th Division, Medical Staff Corps (Manchester). Surgeon W. H. B. Crockwell was in command, and there were also present Surgeons W. Coates, G. H. Darwin, S. McG. Boyd, and Quartermaster B. R. Howell. Fifty members of the corps were present on parade. The General paid great attention to the manner in which the men carried out experiments in the work more particularly pertaining to their department, and afterwards congratulated both officers and men on the efficiency of the corps.

BURIAL REFORM.—The Duke of Westminster introduced on Tuesday a deputation to the Home Secretary, Mr. Matthews, from the Church of England Burial Reform Association, to present a memorial, soliciting the appointment of a Royal Commission to inquire into the condition of cemeteries and other burial places, and the modes of burial adopted, with the object of further legislation. Several of the deputation followed the Duke of Westminster in addressing the Home Secretary, who replied that the subject would receive the careful consideration of the Government and himself, but added that further legislation on the question would require the strictest caution.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—At the annual meeting of the Royal College of Physicians of Edinburgh, held on Thursday, Dec. 6th, the following office-bearers were elected for the ensuing year:—President: Dr. Robert Peel Ritchie. Vice-President: Sir Douglas Maclagan. Council: Sir Douglas Maclagan, Drs. George William Balfour, Thomas Grainger Stewart, Claud Muirhead, D. J. Brakenridge, and John Batty Tuke. Examiners: Sir D. Maclagan, Sir Arthur Mitchell, Drs. Douglas, Keiller, Geo. W. Balfour, R. Peel Ritchie, Muirhead, Brakenridge, Wyllie, Andrew, Batty Tuke, Sinclair, Carmichael, Affleck, James, Gibson, Croom, Hart, Russell, Gray, Milne Murray, Noel Paton, Henry D. Littlejohn, Charles Hunter Stewart, and Mr. Wm. Lees. M.A. Treasurer: Dr. Peter A. Young. Secretary: Dr. George Alex. Gibson. Librarian: Dr. George W. Balfour. Curator of Museum: Dr. Thomas A. G. Balfour. Curator of Laboratory of Research: Dr. John Batty Tuke. Registrar of Applicants for Licence: Dr. George A. Gibson. Superintendent of Laboratory: Dr. German Sims Woodhead. Clerk: Mr. Christopher Douglas, W.S. Representatives of the College on the Committee of Triple Qualification: Dr. Peddie and Dr. George W. Balfour.

MEMORANDUM FOR THE INFORMATION OF MEDICAL PRACTITIONERS IN REGARD TO THE EMPLOYMENT OF UNQUALIFIED ASSISTANTS.

A.—On April 21st, 1883, the General Medical Council passed the following resolution: "That the Council record on its Minutes, for the information of those whom it may concern, that charges of gross misconduct in the employment of unqualified assistants, and charges of dishonest collusion with unqualified practitioners in respect of the signing of medical certificates required for the purposes of any law or lawful contract, are, if brought before the Council, regarded by the Council as charges of infamous conduct under the Medical Act."

B.—On November 20th, 1886, the attention of the Council having been directed to this resolution, it was determined that steps be taken with a

view of making it public; accordingly, on July 25th, 1887, the Executive Committee resolved that it should be inserted twice, at an interval of a month apart, as an advertisement, in the following medical journals: THE LANCET, British Medical Journal, Medical Press and Circular, Provincial Medical Journal, Edinburgh Medical Journal, Glasgow Medical Journal, Dublin Medical Journal.

C.—On November 22nd, 1887, a report was adopted by the General Council stating that, as a consequence of the publication of the foregoing advertisements, a number of letters, chiefly marked "Private," on the subject of the employment of unqualified assistants, had been received by the Registrar. This report proceeds as follows: "From these communications, from notices in the newspapers, and also from common report, it is evident that magistrates, coroners, county-court judges, and other representatives of the public sense of justice, as well as medical men themselves, are becoming alive to the professional misconduct of registered practitioners who place patients under the sole charge of unqualified assistants. The administrators of the law regard as implicit fraud any claim of payment for the service of such substitute assistants when it is represented as 'medical attendance.' This fact is encouraging, for when it is found that the owner of a 'branch practice' cannot get a claim allowed for the services of his unregistered 'substitute,' and, moreover, that the protection of a 'cover' does not enable the unregistered practitioner to recover charges, these two kinds of irregular practice will probably not long continue to exist in this country."

D.—On Nov. 24th, 1887, a case of the misemployment of an unqualified assistant was brought before the notice of the General Council and adjudicated upon; and the registered practitioner concerned, having been informed of the grave disapprobation with which the Council regarded his conduct, promised at once to discontinue the practice condemned.

E.—In the prosecution of their desire to put a stop to this wrongful practice, the following resolution was passed by the General Council on November 26th, 1887: "That it be referred to the Executive Committee to consider under what circumstances a registered medical practitioner would render himself liable to the censure of the Council in reference to the employment of unqualified assistants."

F.—On February 27th, 1888, the Executive Committee, without attempting to make a formal definition of the misconduct in question, reported to the General Council that, in its opinion, "a registered medical practitioner would render himself liable to the censure of the Medical Council in case of the employment of an unqualified assistant in the practice of medicine, surgery, or midwifery on behalf and for the benefit of such registered practitioner, either in complete substitution for his own services or under circumstances in which due personal supervision and control are not, or cannot be, exercised by the said registered practitioner." The Executive Committee also stated in reference to the procedure known as "covering" that in its view a registered practitioner covers an unregistered person when he does, or assists in doing, or is party to, any act which enables such unqualified person to practise as if he were duly qualified. The Executive Committee furthermore called attention to a resolution passed by the General Council on April 21st, 1883 (vol. xx., p. 91), which implies that, in the Council's opinion, "any registered practitioner practising for gain who knowingly and wilfully deposes a person not registered or qualified to be registered under the Medical Act to professionally treat on his behalf, in any matter requiring professional discretion or skill, any sick or injured person, 'should' be subject to the same legal liabilities as a person who falsely represents himself to be a legally qualified medical practitioner, but with special proviso that such enactment 'should' not hinder any duly regulated training of pupils in medical schools or otherwise by legally qualified practitioners, nor the use of trained pupils in partially treating the sick or injured, under the direction, supervision, and responsibility of such practitioners, nor any legitimate employment of nurses, midwives, or dispensers."

G.—On May 24th, 1888, the Council found and declared that the offence of "covering" had been proved against a practitioner brought before it; but on the defendant's admission that he had inadvertently committed that offence, his statement that he had discontinued the practice, and his promising not so to offend again, the Council passed thereon this further resolution: "That A. B. having expressed his contrition at having followed a course of conduct which the Council had declared to be most gravely wrong, and having stated that he had altogether ceased to pursue, and would pledge himself not to resume, such conduct, and having then prayed for a merciful consideration of his case by the Council, the Council, in view of all the circumstances of the case, does not see fit to proceed further in the matter beyond requesting the President to admonish him most seriously." The President communicated to A. B. the foregoing resolution, and also admonished him seriously as to the exceeding gravity of his conduct.

H.—Other cases have also been brought, from time to time, under the notice of the Executive Committee.

June 12th, 1888.

JOHN MARSHALL, President.

MEDICAL NOTES IN PARLIAMENT.

Public Health Acts Amendment (Buildings in Streets) Bill.

In the House of Lords on the 11th inst., on the motion for the third reading of this Bill, the Earl of Wemyss asked that the stage might be postponed for a week for the further consideration of what was understood to be an interference with the rights of owners to claim compensation from the local authority if they were restricted from advancing buildings to what was considered their frontage line.—Lord Basing said that, although the objection was taken rather late in the day, no practical difficulty would arise from postponement, and the order was accordingly put back.

Infectious Diseases in Towns.

In the House of Commons, on the 7th inst., in answer to Sir W. Foster, Mr. Ritchie said that the Local Government Board had received communications from several towns in which the system of compulsory notification of disease has been adopted, suggesting that the Board should undertake the collection and issue of weekly returns as to cases of infectious sickness in the towns in which that system is in force; and

he had the subject now under his consideration. The number of sanitary authorities which would undertake to furnish the returns would probably be about thirty. In answer to a further question by Sir W. Foster, Mr. Ritchie said that the Act was not yet compulsory, and it was not advisable at present to publish accounts as to the condition of infectious diseases in towns. He hoped that the Government would be able to legislate on this subject next session, and then all reasons for not publishing the returns would have ceased.

Lady Doctors in India.

In answer to Mr. W. McLaren, Sir J. Gorst said that the Secretary of State had considered the report of the Surgeon-General of Bombay on civil hospitals, which was of a most satisfactory character as regards the services of the lady doctors. It was decided in 1886 that the appointments in the Cama Hospital should be temporary only, and should be revised at the end of five years in the light of the experience gained and the progress of medical education in India. The Secretary of State did not propose to shorten the period of probation which was then decided on.

Mortality in North Staffordshire Mines

In reply to Captain Heathcote, Mr. Matthews stated that he was aware that in 1880 the death-rate per 1000 men employed in coal and ironstone mines in North Staffordshire was 6.61, the death-rate for Great Britain and Ireland being only 2.72, and that in 1887 the death-rate for North Staffordshire was reduced to 1.35, as against 1.99 for Great Britain and Ireland; also that in 1880 only 55,546 tons were raised in North Staffordshire per life lost, as against 122,509 tons raised in Great Britain and Ireland; while in 1887 238,738 tons were raised per life lost in North Staffordshire, as against 173,919 tons in Great Britain and Ireland. He, however, saw no reason to alter the arrangements he had already made respecting the vacant inspectorship of mines in that district.

The Scotch Universities Bill.

In answer to Mr. Marjoribanks, Mr. W. H. Smith thought he could not add to the suggestion he had formerly made that the Scotch Universities Bill should be discussed *pari passu* with the Appropriation Bill. In answer to Mr. Hunter, Mr. Smith stated that he had received a memorial signed by twenty-two Scotch members asking him to proceed with the Bill, and a memorial signed by twenty-one Scotch members asking him not to proceed with it.

The Sanitary Condition of Cradley Heath

On the 10th inst., in reply to Mr. Conybeare, Mr. Ritchie said that there had been several inspections of the Cradley district by Inspectors of the Local Government Board. In the absence of formal complaint the Board could only urge the sanitary authority to discharge the duties which have been entrusted to them.

On the 11th inst., in answer to Mr. Conybeare, Mr. Ritchie said that the reports of the officers of the Local Government Board are not a sufficient authority for the Board's taking action under Section 299 of the Public Health Act. If a formal complaint were made to the Board by resident ratepayers, in the terms of that section, that the sanitary authority had made default in providing the district referred to with sufficient sewers, it would receive the attention of the Board.

Haslar Hospital.

On the 11th inst., in reply to Commander Bethell, Lord G. Hamilton stated that there are at present 392 surgical cases under treatment at Haslar Hospital, of which 230 are venereal. The proportion of venereal diseases to other surgical cases has increased since the suspension of the Contagious Diseases Acts, as the following percentages show. For the four years prior to the suspension of the Acts: 1879, 44.09; 1880, 41.31; 1881, 41.34; 1882, 42.2. For the four years subsequent to the suspension of the Acts: 1884, 60.96; 1885, 55.17; 1886, 53.58; 1887, 56.56.

Mortality from Cancer.

On the 11th inst., in answer to Mr. Ambrose, Mr. Ritchie said that the staff of the medical department of the Local Government Board did not exceed that which was required for the duties which specially attach to the Board in connexion with their executive action. He did not doubt that an inquiry into the causes of the alleged increase of mortality from cancer in England and Wales would be valuable, but the demands on the department in connexion with other duties would not permit of its undertaking such an inquiry.

Sanitary Condition of Dublin Barracks

In reply to Sir W. Barttelot, Mr. E. Stanhope said that, as he had previously explained, nearly all the recommendations of the commission under Sir C. Cameron, relative to the Royal Barracks, Dublin, had been carried out, and several further works were almost completed.

Cruelty to Children (Prevention) Bill.

On the 12th inst. the Attorney-General, replying to Mr. Mundella, said that he sympathised with the object of this Bill, which, however, contained such debatable matter, and required so much amendment, that it would not be fair to the House to ask it to proceed with it this session.—Mr. Mundella postponed the motion for the second reading of the measure till the 17th inst.

Vaccination.

During the discussion of the Scotch estimates, on the vote of £2847 for the Board of Supervision, Scotland, Dr. Hunter, in consequence of an unsatisfactory answer he had received respecting the cumulative penalties under the Vaccination Acts, moved its reduction by £1000. He quoted, with approbation, Dr. Creighton's article in the "Encyclopædia Britannica."—Dr. Farquharson regretted the appearance of this article, and did not believe that it would receive the assent of the Scottish community. The vote was ultimately agreed to.

Lunacy

On the vote to complete £5990 for the Lunacy Commission (Scotland) Dr. Farquharson said the English lunacy system might be improved by borrowing from Scotland small lunacy districts, with resident commissioners making frequent visits to lunatics, and by increasing the number of commissioners in proportion to the number of lunatics; and the Scotch system might borrow from that of England the restriction that commissioners should not engage in private medical practice. The vote was then agreed to.

BOOKS ETC. RECEIVED.

- CLOWES, W., & SONS, 13, Charing-cross, London.
Guide to Stretcher and Bearer Company Drill. By Staff Sergeant W. K. Waterson. Illustrated with Plates. 1888. pp. 132.
- KEGAN PAUL, TRENCH, & CO., Paternoster-square, London, E.C.
Mental Evolution in Man: Origin of Human Faculty. By Geo. J. Romanes, M.A., LL.D., F.R.S. 1888. pp. 462. Price 14s.
- LEBROSNIER ET BABÉ, 28, Place de l'École de Médecine, Paris.
Travaux d'Obstétrique du Dr. A. Auvard. Tome I, 116 figures. Tome II, 127 figures. Tome III, 56 figures. Travaux inédits. 1889.
- SAMPSON LOW, MARSTON, & CO., St. Dunstan's House, Fetter-lane, E.C., and EDWARD STANFORD, Cockspur-street, London, S.W.
Orient Line Guide. Chapters for Travellers by Sea and by Land. Illustrated. Third Edition, rewritten, with Maps and Plans. By W. J. Loftie, B.A., F.S.A. 1888. pp. 432. Price 2s. 6d.
- SPOTTISWOODE & CO., New-street-square, London.
Inspectors' Reports and General Commentaries on the Final Examinations in Medicine, Surgery, and Midwifery, conducted by the several Medical Licensing Bodies in the United Kingdom. 1888. pp. 266.
- SPON, E. & F. N., 125, Strand, London.
Transmission of Power by Fluid Pressure—Air and Water. By Wm. Donaldson, M.A. 1888. pp. 78.
- TRUAX, CHAS., Wabash Ave., Chicago.
Intubation of the Larynx. By F. E. Waxham, M.D. 1888. pp. 110.
- TRÜBNER & CO., Ludgate-hill, London, E.C.
Papers on the Pure Oral Instruction of the Deaf and Dumb. By Wm. Van Praagh. Price 2s.

On Certain Disregarded Defects of Development, chiefly in Relation to the Curves of the Spine; by T. W. Nunn (John Bumpus, 350, Oxford-street, London, 1888). Price 1s.—Die Traumatischen Neurosen, nach den in der Nervenkrank der Charité; von Dr. Med. Herm. Oppenheim (August Hirschwald, Berlin, 1889). Report on Animal Vaccination; by H. A. Du Bois, Ph.D., M.D., California.—The Contagiousness of Phthisis (Tubercular Pulmonitis); by Lawrence F. Flick, M.D. Philadelphia (Wm. J. Dorman, Philadelphia, 1888).—Minutes of the General Medical Council and of the Executive Committee, from Nov. 20th to Dec. 3rd, 1888 (Spottiswoode & Co., 54, Gracechurch-street, London).—Magazines for December: Good Words, Sunday Magazine (with Christmas number), Leisure Hour, Sunday at Home, Boy's Own Paper, Girl's Own Paper (with Christmas number), Scribner's.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

- ALTHORP, C. F. M., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician, Bradford Infirmary, vice Vaughan, resigned.
- BEARD, F. M.B., M.R.C.S., has been appointed Medical Officer of the Fifth District, Croydon Union District.
- BODMER, RICHARD, has been appointed Analyst of the Parish of Bernoldsey.
- BRAH, H. A., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to King's College Hospital.
- BRYETT, L. T. F., M.R.C.S., L.R.C.P. Lond., L.S.A. Lond., has been appointed Assistant House Physician to King's College Hospital.
- CALLCOTT, J. T., M.D., has been appointed Medical Superintendent of the Newcastle Borough Asylum, vice R. H. B. Wickham, M.D., resigned.
- CHEATLE, A. H., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Accoucheur to King's College Hospital.
- CHEATLE, G. L., M.R.C.S., L.S.A. Lond., has been appointed House Physician to King's College Hospital.
- DOUBNEY, G. H., M.B., M.R.C.S., has been appointed Medical Officer to the Walstead District of the Spilaby Union, vice B. Reckitt, M.D., resigned.
- FOWLER, THOS. WEBB, L.R.C.P. Lond., M.R.C.S., L.S.A. Lond., has been appointed Medical Officer of No. 2 District of the Coventry Union.
- GRAYLING, ARTHUR, M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Home and Infirmary for Sick Children, Sydenham, S.E.
- HUGHES, S. HENRY, M.R.C.S., L.R.C.P. Lond., L.S.A. Lond., has been appointed House Surgeon to the Royal Westminster Ophthalmic Hospital, vice R. O'Kinealy, M.R.C.S., L.R.C.P. Lond., resigned.
- JEANSTON, FRANCIS, M.B. Glas., has been appointed Honorary Surgeon to the Wirral Hospital for Sick Children, Birkenhead, vice Dr. Geo. Barfoot, deceased.
- LINGTON, C. B. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the Long Sutton District, Holbeach Union.
- LEACHMAN, G. G., M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Sampford Peverell &c. Districts of the Tiverton Union, vice Dr. Bryden, resigned.

LYDD, JORDAN, M.B. and M.S. Dur., F.R.C.S. Eng., has been appointed Acting Surgeon of the Birmingham Children's Hospital, vice Elkington.

- PENNY, J., M.R.C.S., L.R.C.P. Lond., has been appointed House Accoucheur to King's College Hospital.
- PITT, C. W., M.R.C.S., L.S.A. Lond., has been reappointed Medical Officer of Health, Malmesbury Union District.
- READ, HENRY G., M.R.C.S., L.R.C.P. Lond., L.S.A. Lond., L.D.S. Eng., has been appointed Dental Surgeon to the National Dental Hospital, vice Thomas Gaddes, resigned.
- READ, T. G., D.M.D. Harv. Univ. U.S.A., L.D.S. Eng., has been appointed Assistant Dental Surgeon to the National Dental Hospital and College.
- THOMSON, W. SINCLAIR, M.D., M.C., F.R.C.S. Edin., late Consulting Surgeon to the General Hospital, Peterborough, has been appointed Honorary Surgeon to the Kensington Dispensary.
- WARD, H. P., M.R.C.S., L.S.A. Lond., has been appointed House Surgeon to King's College Hospital.
- WARD, J. A., M.R.C.S., L.S.A. Lond., has been appointed Assistant Medical Officer of the Renfrew-road Workhouse, and the Infirmary, parish of St. Mary, Lambeth.
- WEISS, FELIX HENRI, has been appointed Dean of the National Dental Hospital, vice Thomas Gaddes, resigned.
- WHITE, E. R., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to King's College Hospital.
- WILSON, JOHN, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health, Pudsey.
- WRIGHT, C. F., M.R.C.S., L.S.A. Lond., has been appointed Medical Officer of the Rishangles District, Harthamers Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

- BIRMINGHAM MEDICAL AID ASSOCIATION.—Several additional Medical Officers in the Borough and suburbs.
- CHORLTON-UPON-MEDLOCK.—Honorary Medical Officer.
- EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Physician to Out-patients.
- GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon. No salary, but residence, board, and washing will be provided.
- LEICESTER UNITED FRIENDLY SOCIETIES MEDICAL ASSOCIATION, High-cross-street, Leicester.—Non-resident Medical Officer. Salary £100 per annum, with unfurnished house, cab, and other fees.
- OWENS COLLEGE, MANCHESTER.—Junior Demonstrator in Zoology. Salary £100 per annum.
- STOCKPORT INFIRMARY.—Assistant Medical Officer, to visit patients at their homes and assist the House Surgeon. Salary £70, with board and lodging.
- TOWNSHIP OF TOXTETH-PARK, Liverpool.—Assistant Medical Officer of the Workhouse and Infirmary. Salary £100 per annum, with rations of a first-class officer and separate apartments.

Births, Marriages, and Deaths.

BIRTHS.

- RICE-OXLEY.—On the 8th inst., at Conisbro', Leigham-court-road, Streatham, the wife of A. J. Rice-Oxley, M.A., M.B., of a son.
- SCOTT.—On the 9th inst., at Meadow Croft, St. Margaret's, Twickenham, the wife of Charles C. Scott, M.B. Edin., of a son.
- WILLIAMS.—On the 9th inst., at James-street, Buckingham-gate, S.W., the wife of E. Lloyd Williams, M.R.C.S., L.R.C.P., L.D.S., of a son.

MARRIAGE.

- DONKIN—PALMER.—On the 8th inst., at St. George's, Hanover-square, Dr. Donkin, of Harley-street, eldest son of Bryan Donkin, Esq., of Blackheath, to Auguste Margarethe, widow of the late Professor E. H. Palmer, of Cambridge, and youngest daughter of the late Carolus, Count di Langhi, of Cracow.

DEATHS.

- BOYLE.—On the 6th inst., at Newquay, Cornwall, Thomas Boyle, M.R.C.S., L.S.A. Lond., aged 64.
- CLIBBORN.—On the 5th inst., at the Royal Naval Hospital, Lisbon, J. B. Clibborn, L.R.C.S.I., Surgeon R.N., aged 96.
- HOOPER.—On the 10th inst., at 9, Trinity-square, Borough, Sarah, wife of Dr. Daniel Hooper.
- MALLAM.—On the 5th inst., at Rose Bank, Blackall-road, Exeter, Benjamin Mallam, M.R.C.S., aged 63.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 13th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Dec. 7	30.05	S.E.	46	45	78	55	44	..	Hazy
" 8	30.10	S.E.	46	45	..	51	41	..	Foggy
" 9	30.14	S.W.	39	38	..	47	37	14	Cloudy
" 10	30.35	S.W.	32	32	..	41	31	..	Hazy
" 11	30.32	S.	33	32	..	43	31	..	Hazy
" 12	30.33	S.E.	36	33	53	41	32	..	Hazy
" 13	30.36	S.E.	34	33	53	38	32	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

HARD ON THE ENGLISH ARISTOCRACY.

THE author of the following remarkable advertisement seems to have as high an opinion of himself as he has a low one of English intelligence—at least, among the aristocracy. We trust that the aristocracy will undeceive him.

Homœopathy.—A young, talented homœopathic physician, having brilliant testimonials about successful cures at his disposal, offers his services to the English aristocracy for the tendance respectively for the complete restoration of the health of the members of their families, either at home or while travelling, and would at the same time also undertake the education of the children.—Please address to —, care of —, Advertising Agents, —, Germany.

J. S.—The case is very exceptional, and should be treated so. Medical men are not called on to countenance an unqualified practitioner, even of such standing, though in extreme cases and under such circumstances we are not prepared to say that they should decline all consultation.

Arthur.—The questions are purely legal ones. Our correspondent should consult a solicitor.

Mr. Cutbush.—We are unable to assist our correspondent.

MR. HUTH'S BOOK ON "MARRIAGE OF NEAR KIN."

To the Editors of THE LANCET.

SIRS,—May I call attention to what appears to me to be rather a flagrant case of literary piracy?

Under the title of "Huwliktusschen Bloedverwanten," a Mr. N. P. van der Stok has published a work which is merely a translation of the first edition of my "Marriage of Near Kin" (1875). It is true that he has added some padding of his own, and a few additional facts, mostly of very little importance; but he is ignorant of the appearance of my second edition last year, which, owing to the advance of knowledge during the interval, I had almost entirely to rewrite. Mr. Stok no doubt felt that some explanation was requisite, and therefore, adding insult to injury, he alludes to my book as follows (I translate from the Dutch of p. 9):—"I made acquaintance with the book when I had already collected a great deal of my material, and consequently a good many of the facts I introduce will also be found in Huth; while, on the other hand, a great number of investigations, observations, communications, or opinions, were unknown to the English writer. I need only refer to the list appended to that work of books quoted from which are in Dutch... which, of course, the Englishman was unable to read, to point out how incomplete that work of Huth's is." It is interesting to note that the Dutch references of Mr. Stok himself are all general works, (i.e., a Dutch Koran) together with references to two or three periodicals; among which only a few of the latter appear to be of any importance.

I am, Sirs, yours truly,

London, Dec. 6th, 1888.

ALFRED H. HUTH.

SPECIAL CERTIFICATES.

Viator writes asking, if the Medico-Psychological Association is allowed to issue certificates of proficiency in the knowledge of mental diseases, why should there not be instituted similar certificates for the treatment of diseases of the eye, ear, &c.? In answer to this it may be said that questions upon such diseases are invariably set in the examination papers of the licensing bodies, whereas up till quite recently there was no examination whatever in psychological medicine.

Enquirer.—1. A Poor-law medical officer is not bound to certify to a pauper's lunacy. The Poor-law medical officer, as part of his duty to the guardians, has to give notice to the relieving officer that a person is deemed to be a lunatic, and a justice of the peace, on the sworn information laid before him, directs who shall visit and report on the case, and states what fee he will allow. Furthermore, the Poor-law medical officer is not bound to obey the order of the justice of the peace to visit and examine and report, his contract being with the guardians.—2. We consider that as the medical relief book is required by the clerk for his examination, it ought to be sent for by the workhouse authorities, and returned in the same way, free of cost to the medical officer.

An Enquirer.—There is no need to dispense the drug alluded to in the form of a solution. It can with propriety be sent out in the crystalline state with directions to dissolve it in warm water, and to let it be taken at once. Most of the text-books indicate the range of solubility with varying temperatures. To attempt to exceed this range is certain to be attended with failure.

Mr R. H. S. Carpenter's communication shall receive attention.

A Constant Subscriber.—There is no authority for doing so.

"HUMAN BLOOD AND THE MICROSCOPE."

To the Editors of THE LANCET.

SIRS,—My attention has been called to a paragraph in your issue of Saturday, Dec. 8th, 1888, headed "Northern Counties Notes," where, under a sub-heading, "Human Blood and the Microscope," you refer to evidence given at the last Durham Assizes, on the trial of William Wadde for the Birtley Fell murder, and where you make it appear that there was some conflict between the statements of the surgeons and myself (the analyst). Such was certainly not the case, for the surgeons themselves did not agree. They both frankly confessed that they had not investigated the subject themselves, that they had read generally; and whilst Dr. Galloway said, with apparent doubt, that he believed the blood corpuscles of the human subject and certain other mammals had not been differentiated, Dr. Taylor averred that the problem was a soluble problem so far as his reading carried him, and he quoted authors from memory. So far "the experienced and intelligent surgeons" who disagreed (according to you) with the analyst. Now for the analyst. I said, as I say now, that by careful microscopic, micrometric, and photographic observation, using high powers, the question is capable of settlement. I do not speak of what I have read; I speak of what I have done. This is hardly a question for even the most "experienced and intelligent" of surgeons, unless he is content to give up his days and nights to uninterrupted microscopic observation, to devote himself to photo-micrography, and to learn the art of micrometry. When he has done this he will be in a position to speak with authority on the question of blood corpuscles, and not till then. With such it would be profitable to discuss this question, else it were simply a waste of time.—I am, Sirs, yours truly,

W. F. K. STOCK, F.C.S., F.I.C.

Public Analyst for the County of Durham and the Borough of Darlington, Dec. 11th, 1888. West Hartlepool.

* * The remarks in question were those of our Newcastle correspondent, and were in nowise editorial. We have, however, no desire to join issue with the writer of the above letter as to whether analytical chemists or medical men are the better qualified to pronounce upon the question of the differentiation of human from other mammalian blood corpuscles by means of microscopic, micrometric, and micro-photographic observations. It is sufficient for our purpose to say that at least one of the surgeons in question enunciated the view held by those who have made probably as long and exhaustive experiments as our correspondent. We are aware that, with the use of high powers of the microscope, say up to 750 diameters, and by other means, Richardson of Philadelphia, U.S.A., has claimed to be able to tell human blood corpuscles from those of other mammalian corpuscles most resembling them, and that he has claimed to be able to give evidence thereon "on certain trials for murder," and, further, that he is corroborated to some extent by Seiler. This, however, has reference only to fresh blood, and not to dried or partially dried stains. We believe, nevertheless, that we are in perfect agreement with nearly all English and foreign skilled microscopists when we say that it would be unsafe to testify before a jury at a criminal trial that even a sample of fresh blood was undoubtedly human, and if one cannot speak with absolute certainty, or at least with the highest degree of probability, such evidence would be dangerous, and might be fatally misleading.—Ed. L.

"THE METROPOLITAN HOSPITAL."

To the Editors of THE LANCET.

SIRS,—As one of the medical officers connected with the Provident Department of the Metropolitan Hospital, I shall be pleased if you will allow me an opportunity of replying to the reproaches levelled at my colleagues and myself by Mr. Locke in your last issue.

Mr. Locke's letter, it seems to me, contains more of statement than of proof, and I am certain that it does great injustice both to the purpose and efforts of the hospital authorities and to the feeling of general practitioners with regard to them. Mr. Locke tells us that the undertaking has been wholly unfair to the general practitioner in inception and development, that it is not limited to persons of certain income, but includes those who can afford to pay a reasonable fee to visiting medical men, and that it tends to cause depreciation of the value of medical attendance. Sirs, these are extreme and misleading statements, and it is very remarkable that Mr. Locke should offer in support of them no evidence whatever. The Provident Department is organised on lines fundamentally similar to those of the numerous medical clubs which exist for the benefit of the working classes. It differs from these, however, in one important particular—namely, that whereas, contrary to Mr. Locke's assertion, members are carefully selected with reference to a low maximum wage limit (25s. for a single man, 40s. for a family), no such general rule is observed in the case of the provident clubs. On this point I can speak with personal experience of club practice. It is not by any means a rare thing to find persons in prosperous circumstances and well able to afford payment for even a somewhat lengthy medical attendance, receiving what is practically charitable relief through the uncomplaining forbearance of their club doctor. Any such abuse is, and must be, rare, where a limit of income is fixed and insisted on, as in the case of the Metropolitan Hospital.

Mr. Locke says that patients are seen at the hospital who can pay a reasonable medical fee. This may well be, for there is no charitable institution of which it cannot be said that persons so situated are admitted to benefit, yet the charity may be none the less genuine. The poorest person can on occasion pay a small fee, but it does not follow that he can stand the cost of continued medical treatment even for a short time. I would ask you, Sirs, whether the present system, with its uncertain payments and its enforced almsgiving on the part of practitioners, is in any way superior to that provident arrangement which, while it must always remain a charity, aims at maintaining a spirit of self-help among the thrifty poor. There can be, I think, but one answer to this question. The new principle is a good one provided that it is carefully worked out, and I grant that everything turns on this practical point. Hitherto the Metropolitan Hospital, in its provident department, has loyally endeavoured to select its patients from among the labouring poor who cannot afford any continued medical attendance, and its success in the work of selection has been at least equal to that of any medical benefit club, and probably far superior to that of most.

It would be folly to suppose that under any system whatever abuses were quite impossible; but much more I can say, that the hospital committee are sincerely anxious to avoid encroaching on the practices of neighbouring medical men, and are carefully applying their system of out-patient relief with that object. Any injury which has been already inflicted must have been comparatively trifling, and less than might have been expected had a free hospital been established in the same district. Competition is inevitable. The mere establishment of any medical charity implies this; but all will allow that it is justifiable if its methods are not unfair. The method adopted by the hospital provident department is not.

I do not think it is necessary to discuss the assertion that the analogy between the hospital and the medical clubs falls through because the members of the latter are, as a rule, picked men. The rule applies to some clubs, but not to all. Moreover, the club is a medium of life insurance, and an entrance test is obviously more natural in its case than in that of a purely curative institution. I hope, Sirs, I have shown that the provident department is not that iniquity which our accusers would have you believe. It is an honest endeavour to meet at once the wants of the poor, the needs of the London hospitals, and the just rights of local practitioners. If any provident method is preferable to its present one, let our critics say what it is, and I am sure, though I have no authority for the statement, that their suggestions will receive from the hospital committee full and friendly consideration.

I am, Sirs, yours faithfully,

B. G. MORISON.

December, 1888.

Mr. Jno. Grant.—Only a few of these papers have been published. Possibly a complete set might be obtained by application to the heads of the three departments.

A Subscriber for Fifteen Years.—Chevalier published a work on Diseases at St. Domingo in 1752. We know of no later work. For the rest we must refer our correspondent to our Students' Number, issued in September last.

Medicus will find a reply to his question in the answer given to another correspondent.

"THE CAUSE OF CRAMP."

To the Editors of THE LANCET.

SIRS,—Allow me to correct a slight inadvertence in Mr. Hine's reference to my remarks on the cause of cramp. I never stated that the affliction was due to "organisms" but to toxic alkaloids.

I am, Sirs, yours truly,

Glasgow Dec. 8th, 1888.

A. G. AULD.

BONE-SETTERS.

To the Editors of THE LANCET.

SIRS,—Apropos of an annotation on the above in your issue of Nov. 17th, I think the following may be interesting, as showing one of the class of cases in which the bone-setter takes fees for doing mischief.

A woman of about thirty-five years of age came to the dispensary suffering from subacute rheumatism, the wrists being particularly swollen and painful. Keeping her in bed and giving the usual treatment gave some considerable benefit by the third day. On the fourth, however, I found on visiting her that the left wrist was bound tightly up in a calico bandage, the back of the hand was much swollen from oedema, and the fingers were like sausages. I found that in the afternoon of the previous day a local bone-setter had seen the wrist, and proclaimed it to be "out," and that the only remedy would be to have it properly reduced. So, with her consent, he gave it about five minutes' hard twisting in all directions, making her nearly faint with pain. With great assurance he then pronounced it to be "in," put on the bandage, and took half-a-crown fee. She was in great agony for some days afterwards, and could get no sleep or ease. This happened a month ago. The patient has for nearly a fortnight been able to get about; but the arm is still kept in a sling, and she cannot move the wrist. Passive movement, which is very limited, shows some grating in the joint, and, I fear, permanent stiffness will ensue.

I am glad to find that bone-setting is a "waning trade," and the sooner such charlatans fade out of existence altogether the better for the public at large.

I am, Sirs, your obedient servant,

Morpeth Dispensary, Nov. 28th, 1888.

G. G. GIDLEY.

A Surgeon.—The subject is threadbare. The degree of M.B. does not carry the title of "Dr." save by courtesy. Our correspondent draws a comparison between the education of a London student and the examinations he has passed—not that of the London colleges, but that of the Edinburgh joint corporations,—and maintains his claim to be equal to those of the graduates of the Scottish universities. He will not find the claim admitted by either Scotch graduates or Scotch professors.

J. S. B. and G. T. S.—To Parkes and Wilson should at least be added the Reports of the Medical Officer of the Local Government Board and recent special Reports, Orders, Memoranda, and Model Bye-laws.

H. A.—As our correspondent had notice—imperfect, we admit—in point of time of the wish of the patient to withdraw from the contract, we would not advise him to press the matter. His success would be doubtful.

ANOTHER "ROUGH-AND-READY MEDICAMENT."

To the Editors of THE LANCET.

SIRS,—With reference to this heading, and having exhausted all I had myself to say on it, I enclose a letter just received from Morocco, which illustrates another phase of this practice, if it does not show that "one touch of nature makes the whole world kin."

I am, Sirs, your obedient servant,

Auriol-road, W., Dec. 6th, 1888.

W. CURRAN.

"Tanger, Morocco, N. Africa, Dec. 1st, 1888.

"DEAR SIR,—I was interested, in turning over an old copy of THE LANCET, to read your letter of May 16th, 1886, and I thought if you had not had a correspondent from this country you might care to know that the treatment of placing a patient in the skin of a recently slaughtered animal is in considerable repute here. A patient of my own, suffering from meningitis, at the earnest request of a native servant, and in my absence, had a rabbit killed and then ripped open, and put on his shaved head as a cap. Here it was to remain for twenty-four hours. You can imagine better than I can describe what the odour was like at the expiration of that time. But if report goes for anything, the use of the sheepskin to envelope the whole body is often very successful.

"Pardon me for mentioning what may have passed entirely from your mind, and Believe me, faithfully yours,

"W. CURRAN, Esq." "T. GILLARD CHURCHER, M.B. Edin.

House Surgeon.—Our correspondent, in his efforts to improve the working of the institution, has certainly been placed in an unenviable position. We do not think that the medical staff should hold aloof, in matters of which they are the most competent judges; and before expressing any decided opinion we should like to know whether the house committee contains among its members of the medical staff.

Mr. F. A. O'Reilly is quite right. Medical missionaries have no claim to interfere with private practice and the patients of medical men. To do so would bring discredit on the mission, which is not supposed to pauperise.

JABORANDI IN INTERMITTENT AND REMITTENT FEVER.

To the Editors of THE LANCET.

SIRS,—I should be very glad if any of your readers who have used Jaborandi in the treatment of intermittent and remittent fevers would kindly give their experiences of its effects in reducing the duration of the "cold stage."

I am, Sirs, faithfully yours,

December 5th, 1888.

L.R.C.P.

ERRATUM.—An important typographical error occurred in our article last week on the Health of Trinidad, in the last line of which, p. 1189, the name of the Surgeon-General should have been printed Leonard Crane, not "Currie."

HOME FOR EPILEPTICS.

H. S. asks for information as to a suitable home for a girl, aged thirteen, who is subject to epileptic fits. A similar request was published in our last issue.

Mr. Rodwell (Norwich) is thanked. We can deal only with cases authenticated by the medical attendant.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Dyce Duckworth, London; Mr. Annandale, Edinburgh; Sir Wm. Stokes, Dublin; Sir Henry Pitman, London; Dr. Gowers, London; Dr. Forbes Winslow, London; Mr. Boynton-Lee, Sheffield; Messrs. Everest and Co., London; Countess of Aberdeen; Dr. Oliver; Mr. Jonathan Hutchinson, London; Mr. Malcolm Morris, London; Dr. Hadden; Dr. Auld, Glasgow; Dr. Churcher, Tangier; Mr. Sumpter, King's Lynn; Mr. Rodwell, Norwich; Mr. Patterson, London; Mr. Lawson Tait, Birmingham; Mr. Macdonogh, Twickenham; Mr. Christopher Heath, London; Mr. J. J. Day, London; Messrs. Woodhouse and Rawson, London; Dr. E. St. G. Queely, Maytown, Qu.; Mr. Arthur Arnold, Nagasaki; Mr. W. H. Bennett, London; Messrs. Street and Co., London; Mr. F. R. Humphreys, London; Mr. Lane, Manchester; Dr. J. F. Haines, London; Dr. Bell Taylor, Nottingham; Mr. Haslam, Birmingham; Mr. J. Collier, Manchester; Mr. T. F. Chavasse, Birmingham; Dr. B. Walker, Spondon; Mr. McMunn, Hornsey; Dr. Du Bois, California; Mr. C. Truax, Chicago; Messrs. Burroughs and Wellcome, London; Mr. Torrance, Newcastle-on-Tyne; Mr. Muirhead Little, London; Dr. Murrell, London; Dr. Delefosse, Paris; Mr. W. Tallack, London; Dr. H. R. Bigelow, Paris; Mr. E. A. O'Reilly, Oldham; Dr. J. B. Ball, London; Dr. Kennedy, Peterborough; Dr. J. Anderson, London; Mr. J. D. Campbell, London; Dr. Gwynne, Sheffield; Dr. B. Howard, London; Mr. Defries, London; Dr. J. F. W. Silk, London; Dr. C. S. Watson, London; Dr. A. Fox, London; Dr. J. Craig, Llandudno; Mr. Stock, Darlington; Mr. Ashworth, Halstead; Dr. Croucher, Eastbourne; Mr. Coghill, Birmingham; Mrs. Blumer, Sunderland; Mr. Hardwall, Cornwall; Mr. Buck; Messrs. Anderson and Co., London; Mr. R. C. Priestley, London; Mr. Brown, Monmouth; Mr. Macnab; Dr. W. Squire; Mr. C. R. Briggs, London; Mr. Kimpton, London; J. S.; L.B.C.P.; Inquirer; Merchant Banking Co., London; Arthur, London; Tippo, London; B., London; A Doctor of Medicine; H. A.; J. S. B.; A Surgeon; H. S., M.D.; G. T. S.

LETTERS, each with enclosure, are also acknowledged from—Mr. Hilley, Hants; Mr. Watt, London; Mr. Moring, London; Messrs. Wood and Co., New York; Mr. Hunt, Bembridge; Rev. C. G. Leger, Hereford; Mr. Tonks, Willenhall; Mr. Bowen, Scotland; Mr. Plummer, Wilts; Mr. Chate, Hyeres; Mr. Mason, Sheffield; Mr. Morris, Swansea; Dr. Woakes, London; Mr. Blyth, London; Dr. Fraenkel, South Africa; Dr. Crossman, Bristol; Mr. McLeod, Ross-shire; Messrs. Battle and Co., Paris; Dr. Richardson, Halifax; Mr. Matthews, Cleator Moor; Mr. Youle, London; Mr. Boehm, London; Messrs. Reynolds and Branson, Leeds; Dr. Thomson, Dalkeith; Miss Willett, Great Badworth; Dr. Taylor, Birmingham; Mr. Sutcliffe; Messrs. Roberts and Jones; Dr. Bramwell, Goole; Mr. Heywood, More Light, London; School of Massage; Newcastle-on-Tyne; Tutor, Newcastle; North Shields and Tynemouth Dispensary; Matron, Windsor; Kent County Asylum, Maidstone; M.B., Birmingham; M.D., London; University of Glasgow; E., Wilts; Emergency, London; G. D., London; C. C., London; M. N. B., London; Nemo, London; Medicus, Preston; X., London; Alpha, London; Tongariro, London; F. G.; Hyatt, Monmouth; Surgeon, London; Assistant, Liverpool; Medicus, Cornwall; Experientia, London; Medicus, Folkestone; Volens, London; Cuticle, London; Paletudo, London; Miss L., London; Bonâ Fide, Torquay.

Edinburgh Evening Dispatch, Surrey Advertiser, The Queen Christmas Number, Worcester Evening Gazette (Mam.), Herald and Weekly Free Press, Bath Daily Chronicle, Reading Mercury, Hertfordshire Mercury, Blackpool and Fleetwood Gazette, &c., have been received.

Medical Diary for the ensuing Week.

Monday, December 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHRISEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
SOCIETY OF ARTS.—8 P.M. Capt. W. de W. Abney: Light and Colour. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Night. Dr. J. Hughlings Jackson: Case of Paralysis of Lower Part of Trapezium.—Dr. Seymour Taylor: Injury of Brachial Plexus.—The President (Sir William Mac Cormac): Case of Osteoplastic Resection of Foot.—Mr. John H. Morgan: Peculiar Deformity of Upper Extremity.—Dr. Angel Money: Cases of Neuro-muscular Irritability in Children. Dr. Fowler: Cirroid Aneurysm.—Mr. Bernard Pitts: Slow-growing Tremors of Upper Jaw.—Dr. Acland: Acne Varioliforme.

Tuesday, December 18.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Hutchinson: Skeleton of a Short-limbed Dwarf. Adjourned Debate on the Pathology of Chronic Alcoholism. Drs. Dickinson, Buzzard, Savage, Sharkey, Finlay, Ormerod, Hadden, Pearson, and others, will take part in the discussion, or show illustrative specimens.

Wednesday, December 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 8 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
SOCIETY OF ARTS.—8 P.M. Mr. W. J. Dillid: Standards of Light.

Thursday, December 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
THE SANITARY INSTITUTE (Parker Museum, 74, Margaret-st., W.).—5 P.M. Mr. Ernest Hart: The New Local Government Bill and the County Councils, especially in relation to Sanitary Administration.
NEUROLOGICAL SOCIETY OF LONDON (National Hospital for the Paralyzed and Epileptic, Queen-square).—8.30 P.M. Discussion on Cerebral Localisation in its Practical Relations, to be introduced by Dr. David Ferrier.

Friday, December 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, December 22.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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ON

DISEASES OF THE EYE.

Delivered at the Nottingham and Midland Eye Infirmary,

By C. BELL TAYLOR, F.R.C.S. AND M.D. EDIN.,
HONORARY SURGEON TO THE INFIRMARY.

LECTURE VII.

ON CERTAIN DEFECTS OF VISION WHICH ADMIT OF
REMEDY BY SPECTACLES.

(Concluded from page 1165.)

THE man introduced to you, who is twenty-six years of age, is evidently both myopic and astigmatic, for we found, on examination with the ophthalmoscope, that the retinal vessels, which were defined in the vertical meridian, were obscure in the horizontal, and that the disc, which was perceptible at eight inches, faded on approach, reappeared as a vertical oval on close contact, and was rendered more distinct, but not perfectly visible, by a weak concave lens behind the mirror. On producing the inverted image in the usual way, you saw a comparatively small disc, which was oval in the horizontal meridian so long as the object lens was close to the eye, but which became first round and then oval in the vertical meridian as the lens was slowly withdrawn. Skiascopy, too, revealed an imperfect reflection of the flame of the lamp and a blurred fantastic shadow, which seemed

FIG. 3.

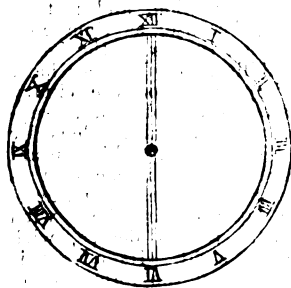
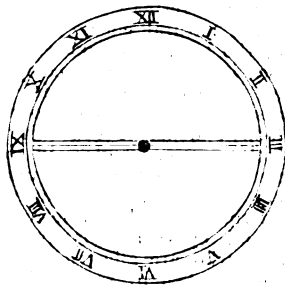


FIG. 4.



to move with us in the myopic, and did move against us in the emmetropic meridian, while a concave cylinder worn by the patient cleared up the image and reversed the shadow. On asking the patient if he could see the time by the Exchange clock, he made the following curious and characteristic reply: "No, not always; yes, sometimes." One would think that the eye that could distinguish the position of the index at one hour could do so at another. But it is not so with astigmatics; they can see when the hands are in a certain direction, but not when they are placed at right angles to the point of best vision. Hence, on testing this patient with Mr. Carter's clock, we found that he could see fairly well when the parallel lines pointed from six to twelve (Fig. 3); but that on turning them from three to nine (Fig. 4) vision became obscure, and was not brought up to the normal standard until we placed a concave lens of twenty inches focus before the eye. You will naturally conclude from this that the patient is short-sighted in the horizontal meridian, and normal-sighted in the vertical meridian; but it is not so. Paradoxical as it may seem, he is really short-sighted in the vertical meridian, and normal-sighted in the horizontal meridian. I know it is the vertical meridian which is at fault, because a line is, optically speaking, a succession of dots or points, from each of which light is reflected; each reflection is, of course, accompanied by diffusion circles, and if the line is vertical these circles overlap in the vertical plane, consequently are not seen, and thus accentuate without otherwise interfering with the retinal image in that plane. But the rays which diverge in the horizontal direction in vertical myopia are seen, and do spread out the retinal image in the horizontal meridian, and thus impair sight in that direction. Hence patients with

No. 3408.

hypermetropia in the horizontal meridian have hypermetropic vision for vertical lines, and patients with myopia in the vertical meridian myopic vision, as in the case before us—for horizontal lines. By placing a concave glass before the eye we get rid of the horizontal circles of diffusion by neutralising the vertical myopia; but the glass must be confined to the meridian at fault; otherwise, while correcting the vertical meridian, which is short-sighted, we shall render the horizontal meridian, which is normal, hypermetropic. What is to be done? It is obvious that, if we are to correct the defect, we must have a glass which will refract the rays in one meridian without interfering with the other; and such a glass you will find in the test case under the title of "cylinder"—that is, a lens which is a section of a cylinder of crown glass, flint glass, or pebble cut parallel to its axis (Fig. 5), so that rays of light passing through the cylinder, parallel to its axis are unaffected, while rays which strike the cylinder perpendicular to its axis are refracted in proportion to the strength of the glass. Now you noted in the case before us that the patient (who is suffering from simple myopic astigmatism) easily defined vertical lines at fifteen feet without any glass, but that he required a spherical concave lens of twenty inches focus in order to see horizontal lines at the same distance. If we therefore order for him, a concave cylinder of twenty inches focus, and place it so that its axis (which does not refract) corresponds with the horizontal meridian (which is not affected), we shall cure the dim vision in the horizontal meridian by neutralising the myopia in the vertical meridian, and thus enable him, like persons with normal vision, to see parallel lines all round the clock with equal facility.¹ (Fig. 6.)

These cases of simple astigmatism, where the eye is normal in one meridian and myopic or hypermetropic in the meridian at right angles to it, are by no means uncommon; but it much more frequently happens that patients are

FIG. 5.

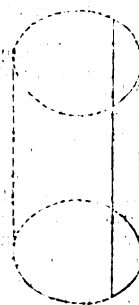
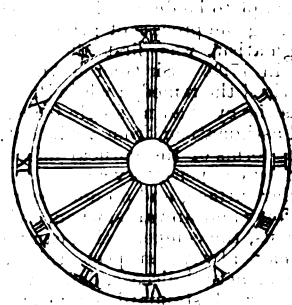


FIG. 6.



myopic in one meridian and less myopic in the other; or that they are hypermetropic in one meridian and less hypermetropic in the other. With such patients, who are suffering from what is called compound astigmatism, we must ascertain the number of the ordinary spherical glass required to correct each meridian separately, and then, either in dioptres or fractions, deduct the lesser number from the greater; the resulting figure will give us the measure of the astigmatism and the number of the cylindrical lens necessary to correct it. It does not suffice, however, to have corrected the astigmatic meridian alone; there is still a remaining or resulting defect to deal with, and this is corrected with an ordinary spherical glass after the cylinder is fixed, just as though there had been no astigmatism at all. For instance, a patient requires a concave or convex spherical glass of, say, twelve inches focus to see horizontal lines, and a concave or convex spherical glass of eight inches focus to see vertical lines: in order to ascertain the cylindrical lens necessary to correct the defect, we must deduct one-twelfth from one-eighth, and the resulting one-twenty-fourth is at once the measure of the astigmatism and the number of the cylinder required to correct it. Fix this glass with its axis coincident with the major visual defect, and you have at once reduced the case to its simplest elements, and need only to add the spherical glass—convex or concave, as the case may be—which is

¹ Persons affected with astigmatism frequently complain that they cannot see the horizontal lines of music, while the vertical are distinct, or vice versa. They also have difficulty in naming certain letters: p and f are mistaken the one for the other; e is called g, or both are mistaken for o; while such letters as i and r are discerned at once.

necessary to correct the remaining or resulting ametropia. It now and then happens, however, but not often, that the astigmatism is what is called mixed—that is, the patient is hypermetropic in one meridian and myopic in the other. When this is the case, we add the numbers of the lenses necessary to correct each meridian together, and, having thus got the degree of the astigmatism and the number of the glass required to correct it, add the spherical glass necessary to neutralise the remaining ametropia, again just as though there had been no astigmatism at all. For instance, the patient requires for vertical lines a concave glass of twenty inches focus, and for horizontal lines a convex glass of twenty-four inches focus: one-twentieth and one-twenty-fourth together give as near as may be one-eleventh; consequently, a convex cylinder of eleven inches focus will correct the astigmatism, and we must then, as in the former cases, ascertain what spherical glass is necessary in addition to secure the nearest approach to normal vision. It is simpler still if you adopt the metrical system; for instance, your patient has normal sight, say, in the horizontal meridian, and a myopia or hypermetropia of two dioptres in the vertical meridian—i.e., he has simple astigmatism of two dioptres, and will require a concave or convex cylinder (as the case may be) of two dioptres, with its axis coincident with the visual defect, to remedy his ametropia. Or he has myopia or hypermetropia of two dioptres in one meridian and three in the other; then we say the astigmatism is the difference between the two—namely, one dioptic; or he has one dioptic of hypermetropia in one meridian and one dioptic of myopia in the other, in which case the astigmatism equals the sum of both meridians—that is, two dioptres,—and may be remedied by a cylinder of two dioptres in conjunction with a spherical glass as just suggested; or by two cylinders, one for each meridian—that is, a lens with a convex cylindrical surface of one dioptic on one side and a concave cylindrical surface of one dioptic on the other; the axes of the two, however, must, in this latter case, be precisely at right angles, a requirement which is apt to be defeated by the slightest rotation of the lens during the process of grinding.

Astigmatism was first discovered by the philosopher Young in 1793. Sir George Airey rediscovered it in 1827, and devised the remedy; while Professor Whewell suggested that, as the eye had no single focus, the condition might be termed astigmatism, from *a* without, and *στιγμα*, a point.

Slight forms of the corneal affection are frequently neutralised by compensatory accommodative astigmatism of the lenticular surface, and do not become troublesome until the age of forty and upwards, when, owing to gradual hardening of the lens, the compensation can no longer be maintained.² You may always suspect this affection when, in the absence of actual disease, defective vision is not brought up to the normal standard, or near it, by ordinary glasses. Such patients, when looking at the test types, frequently hold the head on one side, and evidently see better through a slit, provided of course that the slit corresponds to the normal or least ametropic meridian. Instinctively, in order to obtain this advantage, they will make a small aperture with their fingers, or secure the same result by pulling the eyelids together and inclining the head on one side. The affection is usually symmetrical, affecting both eyes alike; but, as this rule is not invariable, it is necessary to test each eye separately, and in every case to paralyse the accommodation by the frequent instillation of a solution of atropine.³ Occasionally the astigmatism disappears under the influence of this drug, in which case you may be sure that it depended on distortion of the lens from abnormal accommodative effort; indeed, a certain amount of irregular lenticular astigmatism exists in all eyes. It was an abnormal variety of this lenticular affection from which our distinguished countryman Young suffered, and it is owing to slight degrees of the same variations of the different sectors of the lens that we all, or most of us, see luminous points, such as the fixed stars, not round but radiated.

The remaining patient, a female forty-three years of age, who, you will remark, has come here mainly on account of marginal blepharitis and a feeling as of sand in her eyes, is clearly suffering from presbyopia or old eye (*πρεσβυωπία*), for we found on ophthalmoscopic examination that the disc and bloodvessels were normal, while the image of the lamp, with the shadow test, moved against us. These negative signs, combined with the age of the patient and the reflex irritation of the lids, are characteristic of presbyopia: a diagnosis which was fully confirmed by the subjective symptoms, for she tells us that her eyes ache on prolonged use; that she has lately been obliged to hold small objects, such as print and stitches, some distance from her eyes; that she had difficulty in threading a needle; and that, by gaslight, she has lately been compelled to lay her work aside on account of pain, lachrymation, and intolerable irritation. All these symptoms are entirely due to a failure of the power of accommodation, which is as natural in advancing years as was the previous growth of the individual.

What is accommodation? and why should it fail when so many persons have so many years of fine work for the eyes before them? Well, accommodation is the term which is used to express the power which we possess (up to a certain age) of rendering the lens more convex at will (as shown by the dotted lines in Fig. 7) by the active exercise of the ciliary muscle; and, as rays of light proceeding from near objects (unlike those from distant objects, which are parallel) are divergent, we are obliged to use that power whenever we look at small objects, such as print or stitches, in order that they may be focussed upon the retina.⁴ That is accommodation, and it fails in the natural course of things, because, as time goes on, the lens, in common with other tissues of the body, loses its softness and compressibility, and becomes hard and inelastic, so that it is impossible for the ciliary muscle to affect its contour, and we are obliged to supplement deficient convexity of the crystalline lens by placing a convex glass in front of the eye. This gradual sclerosis—though long unperceived—commences at a very early age, and becomes manifest soonest in patients suffering from hypermetropia; later on in those with normal eyes; and lastly, and to a less degree, with those who are affected with short sight. Its advent is often marked by surface irritation and the formation of styes and pustules, which are of reflex origin, as in the case before us, and the styes are cured and the irritation relieved by a convex glass of sufficient power to enable the patient to read small print at a distance of ten or twelve inches. Such patients, even without glasses, see much better through a pin-hole or a small aperture; hence eserine, in quarter-grain per cent. solution, has been used to contract the pupil in the early stages in lieu of glasses, and in former times, when candles were in vogue, our fathers produced the same effect by holding the light between the face and the book, thus increasing the illumination and reducing the pupillary aperture at the same time.

It is, better, however, when presbyopia has become manifest, for the patient to commence wearing spectacles; for it has been found (contrary to popular belief) that sight fails more rapidly when glasses are withheld. In selecting them, certain arbitrary rules have been adopted which are so generally useful that you may, *ceteris paribus*, tell the age of the patient by the number of the glass he requires: thus, at forty years of age he will need a convex lens of thirty-six inches focus; at forty-five, a lens of thirty inches; at fifty, a lens of twenty inches; at fifty-five, one of fourteen; at sixty, one of ten; at sixty-five, one of nine; at seventy, one



² A slight degree of astigmatism frequently complicates presbyopia, and in such cases glasses which previously were of little use will be found to answer perfectly on the addition of a weak cylinder.

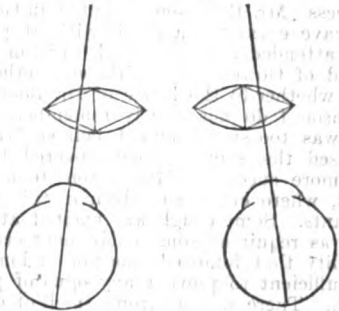
³ Glasses, which answer every purpose so long as the effect of atropine endures, are, nevertheless, occasionally found unsuitable when the power of accommodation returns. In these cases it is necessary to increase the strength of the concave and reduce the strength of the convex glasses; or we may work out the case again without the use of mydriatics; or persuade the patient to persevere with his spectacles until he is able to dispense with the accommodative effort which interferes with their use.

⁴ It is a mistake to suppose that staring at print or stitches for hours together is merely a passive process; it is, in truth, a serious muscular effort, and if unduly prolonged, or accomplished under difficulties, as in cases of hypermetropia or presbyopia, or with deficient light or defective media, is apt to be accompanied or followed by aching and fatigue, which is as natural as the aching and fatigue which are occasioned by any other excessive or unaccustomed exercise. Congenital and miner's nystagmus are caused by the muscular strain in the endeavour to see; just as writer's cramp, auctioneer's spasm, and that curious affection known as ballet dancer's leg, are produced by prolonged and unnatural effort.

of seven; at seventy-five, one of six; and at eighty, one of five inches focus. It will be seen that it is necessary to change the glasses every five years, but seldom oftener; and it is well to note this, for a more rapid loss of accommodation, necessitating a more frequent increase of strength, is one of the earliest, as it is also one of the most important, of the symptoms of glaucoma. You will note that the addition of a convex glass to the passive eye is exactly equivalent to an effort of accommodation; and if we therefore order this patient a convex glass of thirty inches focus, we shall, so far as the deficient compressibility of the lens is concerned, have fulfilled all the requirements of the case. There is another function, however, with which accommodation is always intimately associated—namely, convergence: and if your patient's work should happen to be of the finer sort, or if he should require glasses of high power, the strain upon the internal recti, in order to turn the eyes sufficiently inwards when reading or working, is oftentimes so great as to cause most unpleasant symptoms, such as weariness, discomfort, headache, myalgia, lacrymation, and surface irritation. You will find that this state of things will vanish as if by magic by the use of prisms of two or three degrees, with their bases inwards, in addition to the necessary spherical lens, either in orthoscopic combination,⁵ in simple combination, or, better still, by shifting the centre of the convex glass inwards, or by narrowing the frame of the spectacles, so that the lens acts

which is very hard, and therefore not so liable to be scratched; which is a ready conductor of heat, and therefore cooler than glass; and which is of high refractive power, and therefore, focal length for focal length, lighter than glass. On the other hand, pebble is expensive, and it is also bi-refringent, so that, unless it is cut in planes parallel to the axes of double refraction, the pencil of light is split into two portions. It is true that in spectacles of low power this defect would hardly be noticed; but it is better in all cases before purchasing to test the lens yourself by placing it between two plates of tourmaline or selenite (all opticians keep a small hand clip for this purpose), when you will find, on holding the glass to the window or sky, that if the spectacles are pebble the light will be polarised, and if they are correctly cut that the coloured zones will be circular. Tinted glasses without refractive power are very useful as shades and protectors, and of these, blue spectacles, which exclude the orange or irritating rays of the spectrum without interfering materially with definition, are the best; French grey or London smoke glasses have a similar effect, but shut out too much light; yellow glasses, which act like bright light, have proved beneficial in certain cases of amblyopia; and green spectacles, which absorb the heat rays, are necessary for furnace tenders and those who are exposed to the excessive glare of a tropical sun; while red glasses enable the colour-blind to get over their great difficulty of distinguishing between red and

FIG. 8.



like a prism itself, thus resting the convergence and the accommodation at the same time. (Fig. 8.)

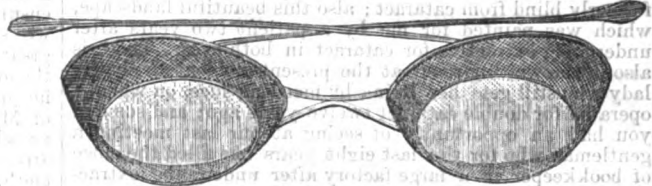
You can readily understand that, if a presbyope's fatiguing efforts at convergence are relieved by a decentred glass, having the effect of a prism with its base inwards, his troubles will be greatly increased by a decentred glass having the effect of a prism with its base outwards. Of course no one would think of adopting such an expedient as this purposely in such cases; but the same effect is not unfrequently produced from carelessness in framing the spectacles, so that the eye does not look through the centre of its corresponding lens, but is displaced outwards, or whenever the frame of the glass is too wide, so that the patient looks through the outer side of the lens—in fact, through prisms which compel increased convergence. In every case care is necessary in measuring the distance between the pupils with compasses before glasses are adopted in order to avoid these accidents; and, whenever there is any doubt, it is well to test the spectacles with a phakometer or lens measurer, an instrument devised by Dr. Snellen of Utrecht, and which you will find fully described in Mr. Carter's admirable lectures on Defects of Vision.⁶

Spectacles are usually manufactured of crown glass or flint glass. Crown glass is composed of silicate of lime and soda, with a slight admixture of boracic acid; while flint glass, which is very hard, but unnecessarily heavy, contains, in addition to silicate of lime, the same salt of lead. The best material, however, is natural rock crystal or pebble,

⁵ In orthoscopic lenses the two elements—a sphere and a prism—are so combined that they are coincident in their action; that is, the prisms produce convergence of the visual lines exactly at the focus of the lenses, and their orthoscopic character may be demonstrated by throwing the light of a lamp with two such lenses (fixed in a spectacle frame at a certain distance apart) on to a screen, when only one image of the flame will be produced. Mr. Carter recommends the following combinations: a thirty-two inch convex lens with a prism of 4½ deg.; a twenty-two inch with a prism of 6 deg.; one of twenty inches with a prism of 7½ deg.; and one of sixteen inches with a prism of 9 deg.; the centres of the glasses being in each case placed exactly sixty-two millimetres apart.

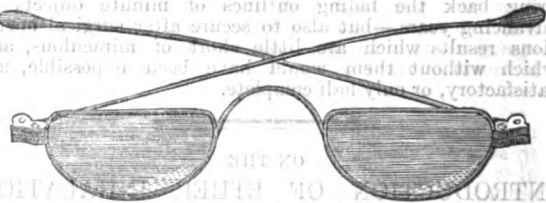
⁶ London: Macmillan and Co., 1877.

FIG. 9.



green. In order to shut out side lights these coloured glasses are curved in some instances sufficiently to give them slight magnifying power, a property specially objectionable in cases of myopia. The exclusion of light is attainable without this drawback, by sides, and also by filling up the margins with crape or wire gauze. (Fig. 9.) Shells, which shut out all light and at the same time permit

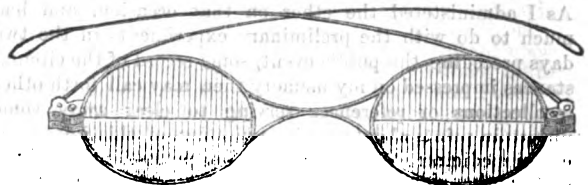
FIG. 10.



the patient to open his eyes just as he might in a dark room, have recently been devised by Dr. Wicherkiewicz, and enable patients who require to be treated in obscurity at the same time to enjoy society and take necessary exercise.⁷

Gentlemen, Voltaire used to say that the nose was made solely for the purpose of supporting spectacles, and certainly

FIG. 11.



the kind of frame is determined in each case by the shape of that organ. For instance, for flat faces the X-shaped bridge is best adapted, as in Fig. 11; while the K-shaped (Fig. 9) suits ordinary features; and the C bridge (Fig. 10)

⁷ May be obtained from Krohne and Sesemann, Duke-street, Manchester-square.

is suitable for those with prominent nasal organs. The glass itself is variously shaped, being round, oval, or semi-lunar (Fig. 10), the latter form being specially adapted for the presbyope who wishes to look over his glass; while the pantoscopic, Franklin, or "verres à double foyer," are specially suited for those who are both myopic and presbyopic, who have undergone cataract extraction, or who, for other reasons, require glasses of different powers, for distant and near objects (Fig. 11).

Glasses may be mounted on frames and nose clips of all sorts and patterns, and I have here a very ingenious contrivance by Messrs. Pickard and Curry, which may be used instead of spectacles in cases of astigmatism. I do not think I need say more on this occasion about spectacles. I must however, in conclusion, remind you that such aids to vision were practically unknown in this country until the reign of Richard II., and that until a very recent period thousands of those who became blind from cataract and other curable diseases remained in darkness for the rest of their days.

"Oh, dying years! Oh, flying years!
Oh, days of dimness, nights of sorrow!
Oh, falling sight! Oh, lessening light!
Oh, morn forlorn and sad to-morrow!"

Now, thanks to such institutions as the one in which I have the honour to address you, few escape operation; and so slight is the disability afterwards, that I am enabled to show you this small coin, within the narrow circle of which has been inscribed the Lord's Prayer by a patient who was formerly blind from cataract; also this beautiful landscape, which was painted for me by a patient two years after undergoing extraction for cataract in both eyes. There is also in the waiting-room at the present moment an elderly lady who still gets her living by mending lace, on whom I operated for double cataract twelve years ago; and some of you had an opportunity of seeing at our last meeting a gentleman who for the last eight years has filled the office of bookkeeper in a large factory after undergoing extraction in both eyes ten years ago. Such triumphs of our art would not have been possible without the added aid of spectacles, and much as we may and do regret the necessity (which comes to us all) for their use, you have only to realise how helpless we should be without them in order to appreciate the immense boon conferred upon us by those philosophers whose unselfish devotion to science has perfected the art of selecting glasses, and enabled us not only to preserve and strengthen and improve the sight in youth—not only to heighten the colour, brighten the light, and bring back the fading outlines of minute objects in advancing years,—but also to secure after surgical operations results which are little short of miraculous, and which without them would have been impossible, unsatisfactory, or only half complete.

ON THE INTRODUCTION OF ETHER INHALATION AS AN ANÆSTHETIC IN LONDON.

By WILLIAM SQUIRE, M.D., F.R.C.P., &c.

THE success of the first attempt in this country to prevent pain by the inhalation of the vapour of ether during a great surgical operation had much to do with the rapid adoption of this means of producing anæsthesia. As I administered the ether on that occasion, and had much to do with the preliminary experiments in the two days preceding the public event, some record of the circumstances impressed on my memory then may call forth other recollections or references serving to clear away some uncertain points about the inauguration of this important era in medicine. With us, as with our professional brethren on the other side of the Atlantic, the anæsthetic effects of nitrous oxide, and the known similarity of ether vapour when inhaled in the same way, led to the practical discovery of Morton in America and to the ready adoption of that discovery here. The effects of both were shown in the chemical class, when I entered, at University College, once in the course; the ether inhalations could be repeated by pouring the fluid on to a folded handkerchief, while the supply of gas was limited. To a certain extent I could

control the tendency to move and talk excited by the ether; on losing this control after a larger dose, I knocked my knuckles against the desks without feeling pain. This was in my first winter session (1846), and it came to mind on first hearing of Morton's discovery.

On Saturday, Dec. 19th, 1846, I heard from Liston of this great news from America of a painless amputation under the influence of ether, vaporised from a sponge and inhaled from a glass vessel containing it. This was in a letter to Dr. Boott, of Gower-street, from Dr. Bigelow, senior, of Boston, with an extract from a paper read by his son. (See the first number of THE LANCET for 1847, p. 5 *et seq.*) My duties at this time were chiefly at the College, but I frequently attended the surgeons' visits to the hospital, and mostly followed Liston. He was a friend of my uncle, Mr. Peter Squire, and I had other introductions to him. On these occasions Liston would often bring me through a crowd of students to the bedside of some sufferer whose case was of interest. One man I remember well, with light hair, wasted form, and pale, worn face, who had strumous disease of the knee joint, with much suppuration; ulcerated cartilage was indicated by starts at night, which prevented sleep, in spite of all soothing means and of all mechanical aids, so that amputation was imperative. But the patient felt unable to undergo this operation. He had once consented, and then at his urgent appeal it had to be deferred. On his Saturday's visit Liston mentioned to me the letter he had received, and its bearings on this particular patient, asking me to confer with my uncle as to the best way of ensuring success. Mr. Robinson, a dentist in Gower-street, was said to have extracted a tooth without pain, but no great success attended a second trial. Liston took me to the other end of Gower-street with some ether from the hospital, but whether to the house of Dr. Boott or to that of Mr. Robinson I do not clearly remember. The glass vessel used was too small, and I believe Mr. Robinson afterwards used the sponge alone, covered by a folded cloth, with more success. Mr. Liston took me on to Oxford-street, where ether was given in this way to one of the assistants. Some cough was excited at first; then more ether was required; some excitement occurred, and the insensibility that followed was not of long duration, but it was sufficient to prevent any signs of pain from a pinch or prick. There was a strong smell of ether in the room, and it seemed that with a better store of vapour and less expenditure of ether a more steady effect might be produced, and Liston said that if this could be ensured and maintained for one minute he would amputate in the case already mentioned on the following Monday. The necessity for a glass or other vessel to contain the ether was obvious. My uncle became much interested in the object to be attained, and with his energetic assistance a suitable inhaler was improvised. This is substantially the apparatus now preserved at University College Hospital. A large, broad-based, conical glass vessel, with openings at the top and at the lower part, was found; a good-sized tube was fitted to the side opening, a sponge was introduced from the upper opening to receive the ether, and a smaller glass vessel, with sponges on which ether could be poured, was fitted into the top. Before adding any ether we found that breathing could be easily carried on through the apparatus when the free end of the tube was brought near to the mouth and encircled by a folded towel held close to the face, and covering both mouth and nose. Several trials convinced me that it was better to begin with a good supply of vapour, at first holding the tube and its conical mask a little away from the mouth, then holding it close while a good breath was drawn, and again removing it slightly during expiration. In this way very little excitement was noticed. In many inhalations on myself under Liston's supervision some subjective sensation of light and increased throbbing in the ears were experienced; then all senses but that of hearing were lost, and I could hear the voices of my friends in some of the trials after I had stopped inhaling, while insensible to pain. On one occasion a puncture was made under my thumb-nail, of which I knew nothing at the time, though it was painful afterwards. Mr. Taylor, the chemist, of No. 13, Baker-street, assisted at these experiments, and was the first to undergo a more prolonged unconsciousness under my management. More than a minute from the completion of the inhalation was allowed to elapse before his sensibility to pain was put to the test; complete anæsthesia continued for two or three minutes. Liston was informed of this further success at once, and called upon Mr. (now Sir) Edwin

Saunders on Sunday morning to see if the effects could be further tested that day in tooth extraction; indeed, a volunteer, who wanted his tooth drawn, was found, but after a whiff of ether he said the toothache was lessened, and he declined to proceed further. I again took ether myself and gave it to others, while Liston observed the degree of anaesthesia produced and the duration of it. This was increased and prolonged by replacing some of the upper sponges, chilled by evaporation of the ether, with fresh sponges and ether, and by keeping the mouth and nose closely covered during the latter part of the inhalation.

Some mesmeric deceptions by the O'Keys at University College Hospital, which had been recently exposed by Mr. Wakley, were likely to cause any new attempt at avoiding pain to be regarded with suspicion. Liston, therefore, looked into every detail for himself before arranging for the operation next day under ether. His decision was soon widely known; letters were written that night, and messengers sent next morning, to those likely to be interested, and a large assembly filled the operating theatre at the appointed time. Mr. Cadge, of Norwich, tells me that Sir John Forbes, as editor of the *Medico-Chirurgical Review*, living not far from Liston, was informed by letter; I am under the impression that Mr. Wakley was also written to. Messages were sent on the Monday to Dr. Boott, of Gower-street, and to Mr. Robinson, but I believe neither was able to be present. Dr. Thomas Park—now living, since his retirement from the army, at Leamington—went himself, at Liston's request, to Mr. Robinson. Dr. Ransom, now of Nottingham, was then Liston's house surgeon. Mr. Cadge, who was acting as Liston's assistant, was present at the operation, and agrees with me as to the few remarks made by Liston at the time. In a short address he spoke of the letter from America, of the advantages to be hoped from anaesthesia, of the weak condition of the patient, hardly able to sustain the operation without this expected aid, and asking the forbearance and quietude of all present. The house surgeon then saw the patient carried in and properly placed, a handkerchief lightly covering his face. I had the ether apparatus on a small table brought close to the left side of the head, and spoke to the patient. He knew my voice, as I raised the lower part of the handkerchief to bring the end of the tube near the mouth, directing him to draw his breath deeply. In no case since have I seen ether taken more easily and quietly; the respiration soon became deep and regular; his face was flushed, instead of pale, when the handkerchief was removed and a folded cloth instead, enclosing the free end of the tube, covered the mouth and nose. When this was held closely I am inclined to think the exhaled ether was rebreathed for a time, warming the evaporating spongesurfaces, and so increasing the supply of vapour. When unconsciousness was complete (I remember no stertor) the apparatus was moved back a little, and no more ether was given. No twitch or sign of pain was made by the patient as the operation began, and in twenty-eight seconds the limb was off. Here a short pause occurred. It was intended, had the effects of the ether been soon over, to keep the main artery under pressure and to ligature the vessels in another room; but a placid sleep continuing, the vessels were all tied, and wetted lint was placed between the flaps, which were brought together and lightly covered before consciousness returned. Then the patient, rousing as if from ordinary sleep, was heard to say: "Take me away; I can't have it off; I must die as I am"; while murmurs of satisfaction passed round the theatre. When asked as to pain, he said it seemed more in the toes than the knee, and, until he was raised to see for himself, could hardly believe the limb was gone. The expressive smile of surprise and delight with which he then looked around is deeply impressed upon my memory. A marked change for the better in the patient's condition began at once, and led without interruption to a good recovery; the stimulus of the inhaled ether was directly beneficial.

It seems barely credible that an amputation of the thigh should be carefully completed, so far as the removal of the limb is concerned, in less than half a minute; yet in this case only twenty-eight seconds elapsed from the first use of the knife to the last touch of the saw. I noted this particularly, for I had intended to observe how long the insensibility would last, but was so astonished at the celerity and ease of the operator's movements that I forgot my original purpose. The problem was no longer in how short a time can an operation be performed, but for how long can anaesthesia be safely and easily maintained. There can be little doubt that the

care and precautions taken in private under Liston's observation had much to do with the success of the first public trial of anaesthesia by ether, with the wide use it soon obtained, and with the strong conviction Liston formed of its very great importance. I took the apparatus to Mr. Liston's house later in the day, having meanwhile used it both in the hospital and in my own rooms close by. I hear from Mr. Cadge that Liston got him to take ether the same evening, and that he could think and talk of nothing else. My uncle only half liked the inhalation experiments; he did not give the vapour, but said he would find glass and be responsible for the purity of the ether, which he very liberally supplied. Some of it was washed ether, any admixture of alcohol being thus removed. Christmas interrupted my too frequent use of ether. On my journey home to Bedfordshire after a week of these experiments a snowstorm near Luton obliged me to be taken inside the coach, as these inhalations had produced a sensitiveness of the bronchial surface that I had not previously experienced. On my return, I gave ether at several places for a short time, and sometimes for Liston. Dr. Snow gave it for him after the winter season was over. Mr. Clover soon followed, and continued to administer both ether and chloroform upon becoming the resident medical officer to University College Hospital.

Orchard-street, W.

APOSTOLI AND HIS WORK.

BY HORATIO R. BIGELOW, M.D.

OPINIONS are valuable and carry weight if the source originating them is of recognised intelligence. Still, fortunately for science, opinions may be only individual conceits—purely theoretical deductions, or ill-judged expressions, which are defaced by preconceived judgment. When opinions are the outcome of a logical weighing of evidence and fact, irrespective of all preconceived mental processes that imply definite personal bias, they become facts of record and facts of large-spread potentiality. Too often medical literature recounts the history of a valuable idea buried under the opprobrium which an ill-timed criticism, a sceptic laugh, or a jealous sneer has levelled at it. Far too often opinions are merely a source of ventilation for egoism. No opinion, emanating from any source whatever, can be convincing unless all the points with which it deals have been covered; and no clinician is a clever one who forgets the classic teaching that an exception proves the rule. No judge can be a fair exponent of legal justice who overweighs his charge with his own preformed conclusions to the detriment of an unbiased consideration of the argument. No scientist is worthy of credence who repudiates a new idea simply because it militates against ideas of his own which previously were in favour. The ethical test of truth must be within the observer himself. Upon this test he must bring to bear an honest subjective condition, an honest personal experience, and an honest study of evidence. The subjective status is the most difficult division, since it is almost impossible to find any scientist or professional person who can absolutely disrobe himself of all preformed judgment. Happily, if the observer be conscientious, this will be more than met by (1) his own experience with the problem in dispute; and (2) his study of the evidence adduced and offered by others in defence or condemnation of the same. When a multitude of upright men of sound judgment, of large intelligence, and reliable scientific accuracy report success resultant upon a given plan of treatment, we cannot believe them all to be victims of hallucinations, of enthusiastic and hastily-formed opinions, or of a deceit practised upon them by the originator of the plan. Objections may be raised (1) by those who argue upon theory and dilettante logic—general principles they call it; (2) by those who have tried the plan and failed. Theory pure and simple carries no weight whatever. It is a valueless, lifeless subjectivity, without form and void. As opposed to fact it is like the baby's wail. Theories deducted from facts supposed to be similar to the fact in question are of the greatest value; but who can guarantee that the facts are similar? Theories based upon supposed similar facts, which do not coincide with the facts of observation offered in evidence, presuppose either a want of similarity or a want of knowledge in building up the

theory. In regard to the objections of the second class—those who have tried the plan and failed,—we must first eliminate all source of error in order to give the objection a hearing. These errors may be: first, the plan was not carried out in all of its details *exactly* as the originator demanded; secondly, the number of cases treated was too small to form any opinion *pro* or *con.*; and thirdly, the operator was not himself sufficiently well instructed in the principles of the science directly bearing upon the plan. If the aggregate of the two classes of objections, theory and failure, after all sources of error are eliminated, should be equal to the sum of the evidence of the supporters, then further evidence will be necessary before any judgment can be rendered. I take it that this is plain reasoning, to which no one can object. It bears equally upon both sides. So much for the question at large. Granted the fact established favourably, the side issues that arise—those touching upon personal comfort, upon the proper estimate of life—must be settled each one for himself. If I assert that I have seen a given result follow the administration of a given drug, my professional brother would hardly be so impolite as to dispute me outright, although he might think me to be a dupe of my own faulty observation. Still there would be the possibility of his repeating the same experiment. But if, immediately following this one case, I should proceed to argue for a large number of cases, or to draw many general conclusions, he might more properly object to my reasoning.

All this by way of preface—a necessary one I believe it to be, since men's fancies run in strange and unwonted grooves in the art and science of medicine—to the discussion of a question which I believe to be of mighty importance, of an importance second to none in our profession, which has arisen within the last fifty years. It is fortunate that one creeps first, and walks later on. When I commenced my crusade many years ago on behalf of conservative gynecology I stood almost alone. When I argued that electricity, hygiene, and massage would do many things which the knife was called upon to do, I had not a sufficient array of facts to back my argument up, and I was somewhat mocked. But with the advance of years, as compensating perhaps for the aches and pains that fasten upon us, came riper experience, larger observation of fact, a study of the cases which other workers in a similar field had given to the public, until finally it culminated in a personal association with Dr. Apostoli, a personal investigation of his cases (reaching nearly 2500), and a personal witnessing (for four hours at a time and three times a week) of the large number of cases that came to his clinic in the Rue du Jour. I was distressed to read the address of Dr. Bantock before the British Gynecological Society, because he vainly attempted to stay the onward march of scientific fact upon unscientific grounds. What Dr. Bantock has achieved no man may gainsay. He stands out eminent among abdominal surgeons. His results are beyond all praise. I have the most profound respect for him and his work. This he knows full well. It distressed me, I repeat, because to those who have neither the time nor the patience to read between the lines, or to weigh well the factors that go into the fashioning of a coherent argument, it might carry a certain prejudice against the most valuable agent in conservative surgery. What I have seen Apostoli do, Keith has done (a very Ajax among us in brains and work); Savage is doing; Engelmann has done; Martin of Chicago has done; Sir Spencer Wells, whose name must carry reverence for the nobility of his deeds, has done himself, and seen done; W. W. Webb has seen in hundreds of cases here in Paris; and scores of observers, all the world over, are doing and repeating every week. The great, the salient objection raised by the obstructionists is that of its applicability to the treatment of uterine myoma. No honest man of ordinary intelligence who has made use of Apostoli's method, or who has seen it used, can possibly deny its absolute power to arrest the most dangerous symptom—hemorrhage; no honest man who will read his numerous cases, some published and the others always to be seen at his clinic, in which this fact is on record, but must admit it. It is beyond all dispute that galvanism rightly applied will arrest hemorrhage from uterine myoma. In all of its clinical symptomatology is there a point of greater gravity? For what purpose does the surgeon perform the operation of Mr. Lawson Tait of Birmingham (but the propriety of which operation I question seriously and with honest intent) to arrest hemorrhage? If galvanism could offer nothing

more than the entire alleviation of the salient feature in the symptomatology of uterine myoma without endangering in any degree whatever the woman's life, it should receive from us all possible honour. Why endanger a woman's life?—and history shows us that in the hands even of the most expert operator in the world women will die from opening the abdomen for any cause whatever. Is there a woman living who would run the risk of her life simply to be rid of a tumour which gave her no discomfort? But let us examine a step further. Galvanism will arrest the hemorrhage. Even Dr. Bantock must admit this, or confess that he has either not practised it, or perhaps has had no time to read up the published observations of men of unimpeachable honesty. I assert that it will diminish the size of a myoma in certain cases without endangering life. I have seen it done, and have read of others doing it. There are cases reported in which septic peritonitis has resulted from galvano-puncture. My explanation is that the puncture was carried too deep, and was not done as Apostoli does it. I am also willing to admit, and I gladly admit it, that we are as yet only upon the threshold of our knowledge in this especial line, and that we need more cases and a much riper experience. I do not yet know that it will dissipate the tumour; I have not seen such an instance; but I believe the time to be in the near future when we shall be able to do even this. I only claim now that it will arrest hemorrhage, dissipate pain, improve nutrition, and diminish size without danger to life. Is there anything known to our science which can offer so much? To arrest a uterine hemorrhage by Apostoli's method, it is *absolutely* necessary that the *entire membrane* inside the uterus should be *equally and uniformly* cauterised, and that a sufficient number of elements should be used. A current of from 100 to 300 milliamperes intensity can generally and usually be used with safety. I have seen the latter employed many hundreds of times without any discomfort to the patient. It will, perhaps, be better to quote directly from Apostoli's writings.

"It is easy to make this accommodation in regard to the uterus. We wish to produce a vigorous cauterisation, without increasing the general inter-polar intensity beyond the point easily supported: Lessen the intra-uterine electrode by a third, or fourth, or fifth of its original length, and forthwith the cauterisation or topical action at the seat of contact will be thus made four or five times more powerful. I therefore lay it down as a rule in severe hemorrhagic cases, where it is expedient that a patient should bear a high dose of electricity without much suffering, that the intra-uterine electrode be reduced to a very trifling length; though, under such circumstances, it is essential that it be passed from one extremity of the cavity to the other, so that every part of the mucous surface is successively and completely cauterised. I began my operations in 1882 with a metallic sound, bare only at the extremity. In my first essays in cauterising the mucous membrane of the uterus I had no other. Now I have improved the instrument, and my electrodes of carbon, though of different sizes, are all of the same length—two centimetres and a half. The metallic stem of this instrument is covered with caoutchouc, and on it at distances of two centimetres and a half, lengths which correspond with that of the carbon electrode, I have slight circular grooves marked. The electrodes are applied as follows. 1. After disinfection in some strong antiseptic solution, in order to secure full cauterisation the instrument is driven as far as it will go, if possible to the end of the uterine cavity. 2. When the electrode is in this position, the highest bearable intensity of current is turned on, and we judge of the necessity of augmenting by the effect of previous operations. The intensity must be increased when the electrodes of larger volume, and consequently of more surface, are taken into use. 3. The first stage of cauterisation being finished, the instrument is withdrawn just as much as the length of the carbon, and in that situation the second cauterisation is effected the same as the first, and so on, changing the position of the carbon till all the interior of the uterus is cauterised section by section. To do this methodically, the index finger is passed into the vagina, and the pulp and nail pressed on to one of the circular grooves of the stem. While in shifting the seat of action the other hand withdraws the sound, the index finger in the vagina remains immovable, and gives information as to the extent of change of position of the electrode by the touch of the following mark. 4. It is better, if possible, to cauterise the entire cavity at one sitting,

letting each sectional cauterisation last from three to five minutes, as the gravity of the case and the size of the cavity may show to be proper. 5. In continuing the treatment, the duration and force of the current must be made to depend upon the effect produced by the cauterisations at previous sittings. 6. It is well to be aware that when the cauterisation of the neck of the uterus is once made, the electrode, in passing through the internal orifice for further action, will occasion much more pain. I believe I was the first to mention the fact that the neck of the uterus, which is so little painfully affected by ordinary caustics, the hot iron, or the knife, is, on the contrary, very sensitive, and much more so than the body, to the electrical current, either induced or continued. I think, in conclusion, I may say that it will henceforth be admitted we have in electricity a most powerful means of safely treating fibroid tumours, and that it will in future be felt as a duty by the surgeon to make use of it before adopting other measures. Carrying out my method as I have directed, I am convinced it will yield to others the same new and interesting results that it has been my good fortune to witness.

For the relief of pain, localised uterine pain due to interstitial compression, or extra-uterine pain (paraeutritis, perimetritis, &c.), we try, first, faradisation (and Apostoli was certainly the first to point this out) with currents of high tension. In simple ovarian neuralgia it will always be valuable, but of no use in the suppurating form of peritoneal inflammation. Here we use a galvano-chemical caustic, or negative galvano-puncture. But I have seen cases of this kind get better, and rapidly better, under the positive galvanic electrode within the uterus, and the negative attached to its bed of potter's clay resting upon the abdomen. During the spring of this year I saw Dr. Engelmann, of St. Louis, demonstrate Apostoli's method, in Martin's and Olshausen's clinics in Berlin, in many of the commoner cases which apply for treatment, and which try the resources of the gynaecologist to the utmost—e.g., chronic cases of perimetritis with much posterior tenderness, ovarian pains, &c.,—and in almost every instance the patients experienced very great relief. There will ever be cases which can only be permanently benefited by the aid of the surgeon; and since this is inevitable, I hold it to be the clear duty of every philanthropic person to relegate to the man who by experience and intelligence is properly equipped for such work, so that this craze of abdominal surgery which has taken possession of the profession at large may be checked. There will always be room for such men as Wells, Keith, Bantock, Savage, Thornton, Tait, Goodell, and others; but if every practitioner thinks himself sufficient for this the highest rôle of surgery, it will require more than the brilliancy of these brilliant men to counterbalance criminal records of unnecessary operations and bad results.

Paris.

BACKWARD DISLOCATION OF THE FINGERS UPON THE METACARPUS.¹

By WILLIAM H. BATTLE, F.R.C.S.,

ASSISTANT SURGEON TO THE ROYAL FREE HOSPITAL AND TO THE EAST LONDON HOSPITAL FOR CHILDREN.

UNTIL the patient whose case is recorded below (Case 1) presented himself for treatment, and I learned from experience the difficulty occasionally found in the reduction of dorsal dislocations of the proximal phalanges of the fingers, my attention had not been specially drawn to the subject. Dislocation of the fingers is so frequently dismissed in the text-books with a few lines (excepting that of the thumb, which is usually discussed at length) expressive of the ease with which they can be reduced, without a word of warning as to the difficulties met with at times, that there is a general impression in the profession that nothing is easier than to reduce such dislocations. That this is occasionally an erroneous one the notes of such cases which it was my duty to treat when resident assistant surgeon at St. Thomas's Hospital will show.

CASE 1.—On Sunday, Oct. 3rd, 1886, the house surgeon asked me to see a boy who had applied in the casualty

department for a dislocated finger, which neither he nor the dresser could reduce. The patient, J. H., aged ten, said that he had been playing "leapfrog" a short time before, and whilst jumping over one boy's back placed his hands too far forwards; and, missing the back altogether, fell on his hands on the pavement. On examination, the right forefinger was found displaced upwards, backwards, and inwards on the metacarpal bone, the signs of dislocation being well marked. All attempts to reduce it by the house surgeon and myself, with and without the assistance of special apparatus, failed; so chloroform was given, but several attempts at reduction by manipulation were unsuccessful. A tenotome was introduced on the back of the hand above the base of the phalanx to the outer side of the extensor tendon, and the fibrous and tendinous structures to the outer side of the joint divided from within outwards. The dislocation was reduced after flexion, circumduction, and strong adduction, the phalanx returning to its position with an audible click. A pad of collodion on wool was applied to the puncture, and the hand bandaged to an anterior splint. No complication arose, and a fortnight afterwards the boy had perfect movement of the joint and no loss of power. This case presented many unusual features, and, as a result of it, I was led to inquire more fully into the literature on the subject. In my search I was fortunate in meeting with a paper² by Dr. Otis of Boston, U.S.A., from which I received assistance. He had unexpectedly met with difficulty and failure in attempted reduction of dislocations of the index finger in two instances, and was led to inquire into the subject. The result, with some references, was given in the reprint to which attention was directed in THE LANCET.³ The general conclusions to which he came receive additional confirmation from the success attending the treatment of the following cases, and from the more recent writings on the subject, to which I propose to refer later.

It was not long before another, but more serious case, was brought to me by Mr. R. Andrews. As this was one which had been done some considerable time, and would eventually require more serious measures to effect reduction, he was admitted under the care of Mr. Mackellar, who kindly gave me permission to treat him.

CASE 2.—J. H., aged eight, was admitted on Oct. 20th, 1886, having been unable to flex the left forefinger since a fall on the hand, when the fingers were outstretched, between seven and eight weeks before admission. Since the accident, several unsuccessful attempts had been made to reduce the displacement. On the afternoon of admission, chloroform was administered and an attempt made to reduce the dislocation, but without success. An attempt was then made to reduce it after subcutaneous section of the glenoid and internal lateral ligaments; this was also unsuccessful. A lateral incision was then made along the outer side of the joint, and another shorter one at right angles to it, and the interior of the joint exposed. Considerable changes had taken place in the joint, the head of the metacarpal presenting, instead of the usual shining cartilaginous appearance, a dull fibrous, roughened surface. This could hardly be separated, and was probably a displaced adherent glenoid ligament. With some trouble and the use of the point of the scalpel this was separated to an extent permitting the replacement of the phalanx. The wound was closed with silk sutures, and a small piece of silk introduced for drainage. The joint was opened under the spray, and iodoform and iodoform wool used for the dressing. A splint was applied. The wound was dressed next day, and again on the 23rd, when it was almost healed. He left on the 24th, with a splint still applied. In less than a week the finger was moved under chloroform, and could be fully flexed. This was repeated easily in a few days, but the parents did not like the passive movement, as the child made an outcry, and elected to have nothing further done; they were satisfied with the improved appearance of the hand. From the ease with which we could move this joint when the patient was last under chloroform, there seemed little doubt that he would regain much use in it.

CASE 3.—A satisfactory result was more easily obtained in the case of a strong, healthy stonemason, who applied at the hospital on April 26th, 1887, suffering from injury to the left hand. This had been caused by the fall of a heavy stone from a crane on the back of the hand. On examina-

¹ For permission to publish these cases I am indebted to Mr. Croft and Mr. Mackellar.

² Boston Medical and Surgical Journal, Sept. 1886, p. 203.

³ Vol. ii. 1886, p. 1120.

tion it was found that there was dorsal displacement of the left little finger, the metacarpal bone being very prominent in the palm of the hand. Both the dresser and the house surgeon had made ineffectual attempts to reduce the displacement by traction and flexion. The finger returned at once to its position after the phalanx had been fully extended, carried backwards, pressed against the metacarpal bone, and then firmly flexed, without anæsthetic. The pain, which was considerable before reduction, disappeared at once.

CASE 4.—The result in this case was equally good. On Aug. 4th, 1887, a girl aged thirteen applied in the casualty department with a swollen hand. On the previous day she had been struck on the back of the hand with a broom handle. The dorsum of the right hand was much swollen, red, very painful, and tender. Posteriorly the second metacarpophalangeal joint was much obscured by the swelling; in the palm the prominent head of the metacarpal bone could be easily felt. This was reduced in my presence by Mr. Staveley, the house surgeon, after full dorsal flexion, pressure of the phalanx on the metacarpal bone, and palmar flexion, reduction being effected, to the delight of the patient, with an audible snap. The hand was placed on a front splint, and lead lotion applied. In a short time the swelling disappeared, and the finger became quite as useful as before the injury was received.

I have considered it worth while to publish Cases 5 and 6, which were dislocations of the thumb, as they illustrate important points in these dislocations as regards treatment.

CASE 5. *Dislocation of the thumb backwards; subcutaneous division of the short flexor; reduction.* (From notes by Mr. H. Hudson, dresser.)—C. H.—, aged twelve, a paper-boy, came to the casualty department on Wednesday, Sept. 15th, 1886, stating that he had fallen down upon his hands and had hurt one of his thumbs, it being straight out at the time. The proximal phalanx was dislocated backwards so as to form an obtuse angle with the metacarpal bone. It could be brought into position again without much difficulty, but immediately returned. The head of the metacarpal bone could be seen and felt at the front of the joint. Reduction was attempted by manipulation and traction combined, without success, by those on duty. Ether was then given, and attempts were again unsuccessfully made, the American forceps being also employed. A tenotome was then inserted and the inner tendon of the flexor brevis pollicis divided, without success. It was only after division of the other head of the muscle also that the joint could be placed in position. Collodion was applied to the wound, and the thumb well bandaged into the palm; the forearm and hand placed on a splint. Four days later the wound had quite healed, and he had had very little pain. The splint was again applied after gentle movement of the joint. He was asked to come up again, but did not do so. One may, however, probably conclude that the result was satisfactory.

About nine months later a little girl was brought to the out-patient department and transferred to the care of Mr. Mackellar, who kindly allowed me to act for him. The case is as follows:—

CASE 6. *Dislocation of the right thumb at the metacarpophalangeal joint of five weeks' duration; tenotomy; passive movement; recovery.*—E. M. C.—, a girl aged six, was brought to the hospital on June 13th, 1887. Her mother complained that the girl had received an injury to the thumb through falling on her hand five weeks previously, that the "doctors" said the child had put out her thumb, but they had been unable to reduce it. Examination revealed a typical displacement at the metacarpophalangeal joint, there being no swelling or tenderness to obscure the displaced ends. Reduction under chloroform was attempted by manipulation, but without success. A tenotome was introduced to the outer side of the extensor tendon, and an attempt made to reduce the displacement after division of the outer head of the flexor brevis, and any portion of the glenoid ligament which might be lying on the dorsum of the metacarpal bone. Reduction was then effected by extension, rotation, and adduction. The wound, which was a mere prick, was closed with collodion, and the thumb flexed and bandaged into the palm. She was allowed to go home. The next day she was rather feverish, and had passed a somewhat restless night, complaining of pain in the thumb. She had also vomited; this was probably due to the anæsthetic. Two days later there was no tenderness, and she had slept well. Four days after the operation the bandage was readjusted. At the end of six days the thumb was gently flexed

and extended. There was considerable tendency to ankylous, and on the ninth, twelfth, seventeenth, and twenty-fourth days chloroform was given and the thumb vigorously moved; after each procedure there was some swelling, but no splint was applied, the mother using oil and rubbing and flexing the joint between her visits to the hospital. On the twenty-seventh and thirty-first days it was moved without chloroform, the movement being fair. A week after it was found to move easily under chloroform, and when the child was seen later she could herself flex and extend the joint. There was no tendency to lateral displacement.

(To be concluded.)

A CASE OF

ECTOPIC FETATION (ABDOMINAL);

ABDOMINAL SECTION; RECOVERY.

By H. G. PLIMMER, M.R.C.S. Eng., &c.

M. A. C.—, aged thirty-three, came under my care on Feb. 19th, 1888, with retention of urine. Her history was as follows. Her mother died of phthisis; father and two sisters living. She was married when sixteen years old, and just after she was seventeen she was confined with a female child, which lived fifteen years. During the sixteen years which have elapsed since the above-mentioned confinement she had not been pregnant, nor had she had any miscarriages. She has always had good health, and was quite regular up to October, 1887. In the early part of November, 1887, she menstruated, but very much less than usual. Towards the end of 1887 she suffered from pains in the abdomen, which became so bad that on Dec. 26th she was admitted into Guy's Hospital. She was not examined per vaginam, but was treated with sedatives, and was sufficiently relieved to be discharged in a week. On Jan. 17th, 1888, she went to the Soho Hospital, where she was attended for hemorrhage for two or three weeks, which got better.

When I saw her on Feb. 19th, she was in great pain (temperature 100° 8'; pulse 114), and had not passed urine for twenty-six hours. I drew off thirty ounces of urine, and used a catheter for the following two days, after which she was able to micturate, but with difficulty. She had for some time suffered from sickness, which, however, yielded to sedatives. She measured at this time thirty-two inches round the abdomen at the level of the iliac crest. The areolæ round the nipples were very dark, and there was a quantity of mucoid fluid in the breasts. On examining the abdomen, two tumours could be felt: one occupying the right inguinal region; the other, smaller and harder, just to the left of the middle line above the pubes, apparently about the size of an orange. There was a distinct depression between the two. Per vaginam, the os could be felt with difficulty very high up just behind the pubic bone; it was patulous, and I passed a small elastic catheter for four inches. Bimanually, the tumour on the left side was continuous with it. The posterior cul-de-sac was filled up with a firm tumour, round in shape, fixed, and painful; this was continuous with the tumour on the right side. The patient was seen also by Drs. Sidney Turner, J. H. Galton, and Deyns, and a probable diagnosis of ectopic fœtation was made. It was decided to keep her at rest, and wait. However, she would not rest, and on March 17th she again had retention of urine, and required catheterisation until March 27th. She had acute pain during this attack, and some peritonitis, with a temperature varying between 99° 8' and 102° 4'; there was also a dirty sanguineous discharge from the vagina, which ceased as she got better. Still she could not rest until May 29th, when she was seized with acute pain in the abdomen and attacks of vomiting. She then went to bed, and did not get up again until Sept. 30th, after abdominal section had been successfully performed. Opium was given continuously. The fetal limbs and movements could now be easily felt through the abdominal walls, and the heart sounds detected. On July 20th, spasmodic labour pains came on, which lasted at intervals for three days; there was also again a sanguineous discharge. After this the former pain became worse, and the opium had to be increased to thirty-minim doses every four hours. The temperature also, from this time, remained

above normal, often being 101°. The urine was scanty and of deep colour. The abdomen was very tender, and at times very distended with flatus. On Aug. 27th she had a rigor. Temperature 103°; pulse 118. She had wasted considerably the last four weeks, but the abdomen measured thirty-seven inches at the level of the iliac crest. The tumour on the right side extended upwards to the level of the seventh rib, and over the middle line; that on the left side (uterus) reached nearly to the umbilicus.

No sign of foetal life having been detected since July 20th, and the symptoms having become urgent, it was decided to perform abdominal section without further delay. Accordingly, on Aug. 28th the room was cleaned and washed with peppermint-water (one ounce to one gallon), and on the 29th, with the assistance of Drs. Sidney Turner, Dayna, and Prangley, the operation was performed. Chloroform having been administered, I made an incision three inches and a half long between the umbilicus and pubes, which I had later to enlarge upwards to the left of the umbilicus. On opening the peritoneum, the uterus was seen pushed to the left, and the sac immediately in front filling the incision. There were a few anterior and lateral adhesions, which were easily broken down. The placenta was found to be attached to the anterior wall of the sac, and as no place could be got at where the foetus was not covered by it, an incision was made into the sac through the placenta. Copious hæmorrhage followed, and I as quickly as possible separated the placenta from the sac and extracted it with the foetus. The bleeding points over the placental attachment were then seized; torsion was used to four, four were tied with catgut, and six of the largest were tied with carbolised silk, the ends of which were left long. In separating the placenta the sac was torn in three places. The omentum was adherent to the upper part of the sac, and was ligatured, separated, and returned. The sac and pelvis were then irrigated with plain water at 110°, and the sac was drawn as far as possible out of the wound, cut off to the level of the abdomen, and stitched with catgut to the edges of the wound. Three deep and four superficial silver sutures were put in, and the wound brought together, the ends of the six ligatures, controlling the most important bleeding points, being drawn outside, two at the upper and two at the lower angle of the wound, and two in the centre. A glass drainage tube was put in, and the wound dressed with sublimated wood wool. A half-grain morphia suppository was given, and the patient put to bed, the temperature being 98°6 and the pulse 80. The foetus was a male, of full size, and macerated. The placenta was very large indeed, and full of hæmorrhages and large clots. Its strongest attachment was in the retro-uterine pouch, and it extended all over the anterior surface of the sac. The tubes and ovaries on both sides looked normal, and we could detect no evidences of rupture of either of the tubes, which were nowhere adherent and had no connexion with the sac.

The patient was kept for eight days upon milk and kreochyle; after that time chicken and bread-and-butter, gradually increasing to ordinary diet. Brandy-and-egg mixture was given from the third to the tenth day; after this three ounces of port wine daily. Medically she had one grain of morphia administered hypodermically daily for nine days, then a drachm and a half of liq. opii for eight days, and two grains of quinine thrice daily. There was very little vomiting, and the bowels acted by enema on the ninth day. She passed urine on the third day, but the catheter had to be used at intervals for fourteen days. There was some cystitis, which was relieved by injections into the bladder of a saturated solution of boro-glyceride. One deep and three superficial sutures were removed on the sixth day, and two deep and one superficial on the seventh day. On the fourth day I took the glass drainage tube out, irrigated the sinus with peppermint-water, and inserted a large indiarubber tube seven inches in length to the bottom of the retro-uterine pouch; this was gradually reduced in size and length until it was removed altogether on the nineteenth day. The temperature varied between 99° and 101° for fourteen days, but was never higher than this. The pulse varied from 124 (the day after the operation) to 88, for the first week being about 100. On the eighth day a pinhole opening appeared at the upper angle of the wound, with a little pus oozing through; this I enlarged, and put in a small drainage tube. Next day there was a copious discharge from this opening, and the two ligatures, the ends of which were left out of this angle of the wound, came away. On the twelfth day a large piece of slough

was extracted through this opening, probably a piece of the sac, and some more was got away on the sixteenth day. The two openings at the upper and lower angles of the wound then communicated, and peppermint-water was daily syringed through them. The discharge soon became very much less, but a few drops continued to come away until Oct. 8th, when both the openings had closed. As the four remaining ligatures did not come away and could not be got out, on Sept. 24th I twisted the ends with a view of withdrawing them. In each case, however, only the ends came away, so the ligatures have no doubt become encysted, as nothing further has been seen of them. There was no peritonitis after the operation, nor any pelvic cellulitis, the roof of the vagina remaining perfectly natural. There was a discharge from the uterus, on the fifth and sixth days, of a dirty sanguineous fluid. The uterus regained its normal size, and the patient menstruated from Sept. 30th to Oct. 5th. She got up on Sept. 30th, and on Oct. 7th began to try to walk. She continued to gain strength, and on Oct. 20th she went to the seaside. She is now able to get about as usual, and is quite well.

Norwood, S.E.

THE AMERICAN HIP SPLINT.¹

By DR. A. B. JUDSON.

IN the present Congress, the first held in America, it will not be thought inappropriate to devote a short paper, chiefly historical, to the so-called American splint for the treatment of hip disease. This apparatus was first described by Dr. Henry G. Davis and Dr. Lewis A. Sayre in the April number of the *American Medical Monthly*, published in New York in 1860. These two surgeons wrote independently, but, by a curious coincidence, they both described a splint which was recognised as an important invention, not only in this country, but especially in Great Britain and France, where it was known as the American splint. Under this name it has been described and discussed by Edwards,² Barwell,³ Holmes,⁴ Marsh,⁵ Adams,⁶ Thomas,⁷ Bouvier,⁸ Le Fort,⁹ Velpeau,⁹ Verneuil,⁹ Giraldu,⁹ Armand,⁹ Eugene Boeckel,¹⁰ Hennequin,¹¹ Monod,¹² and Philoceaux,¹³ and doubtless by other eminent European surgeons.

It will, perhaps, be interesting to inquire whether the name "American" has been rightly given to this apparatus. As first described in 1860 it has two important features: (1) a perineal strap or ischiatic crutch-head, for the purpose of keeping the weight of the body from resting on the affected limb, the patient being thus enabled to wear the splint and at the same time to engage actively in ordinary pursuits; and (2) adhesive plaster applied with the view of making traction on the limb. In regard to these two features, ischiatic support and traction by the use of adhesive plaster, the first was not an American invention, nor was it a novelty. Support of this kind had been used for a long time in the construction of artificial limbs, and even in the treatment of hip disease the possibility of so supporting the body had occurred to M. Ferdinand Martin, a woodcut of whose splint is found in Bonnet's treatise on Diseases of the Joints, published in Paris in 1853. But when we come to consider the other remarkable feature of this splint, we recognise a real advance in mechanical surgery, and one which may rightly be called American. The use of adhesive plaster for prehension of the limb in the treatment of fracture of the long bones was an American invention, and the transfer of this device from the treatment of fracture to that of hip disease was first effected in the new splint. For many years it had been the common practice in the treat-

¹ Paper read in the Section of Diseases of Children, Ninth International Medical Congress.

² Edinburgh Medical Journal, June, 1861, p. 1718.

³ THE LANCET, Nov. 7th, 1863, p. 580. Diseases of Joints, second edition (London, 1881), p. 467.

⁴ Diseases of Infancy and Childhood, second edition (London, 1869), p. 432. ⁵ British Medical Journal, July 28th, 1877, p. 95.

⁶ Ibid., Jan. 5th, 1878, p. 10.

⁷ Review of the Treatment of Hip Disease, 1878 (preface).

⁸ Bulletin de la Société de Chirurgie, 1866, pp. 122, 126, 147, 154.

⁹ Thèse de Paris, 1878, p. 37.

¹⁰ Bulletin Générale de Thérapeutique (Paris, 1875), p. 451.

¹¹ Archives Générales, Jan. 1869, p. 62.

¹² Ibid., June, 1878, pp. 704-712.

¹³ De la Coxalgie (Paris, 1867), pp. 261, 262, 264.

ment of hip disease to make traction with the long splint for fracture of the femur, prehension of the limb being made by a gaiter, or a fillet, or handkerchief placed around the ankle. These instruments of torture were supplanted in the new hip splint by the absolutely comfortable and convenient adhesive plasters. Thus we see that the new splint was a combination of an old device (ischiatric support) with an American invention (traction by adhesive plaster); and, as the happy combination was made in America, it is not strange that the courteous attitude of European surgeons towards the surgery of a comparatively new country led them to call the new method the American method of treating hip disease, and the new splint the American splint.

Following the history of the hip splint in this country for the past twenty-seven years, one is amazed at the great number of the so-called improvements that have been made upon it. The most important has been a perfecting of that part of the apparatus which provides for ischiatic support of the body in standing and walking. The first splint did not extend to the ground, but depended on the integrity of the plaster adhesion for keeping the weight of the body from resting on the affected joint. Dr. Edmund Andrews, of Chicago, and Dr. C. Fayette Taylor, of New York, proposed and perfected an extension of the splint to the ground, and thus left but little to be desired as an ischiatic crutch. Aside from this real improvement, although a vast number of modifications and additions have been made, no essentially important changes have been made in this apparatus. Experience and increasing light have shown that certain things which it was thought that the splint accomplished are mechanically beyond its reach, and that some things supposed to be desirable and even necessary to proper mechanical treatment are of no importance whatever. The two things which the splint does to-day, and which it has done ever since the improvement above mentioned—the two functions of the splint, so to speak,—are (1) to make the affected limb a pendent member, resembling in this respect the arm when the patient is erect,¹⁴ which it does as an ischiatic crutch; and (2) to apply traction to the distal member of the joint, which it does by its rack and pinion and its adhesive plaster. Traction protects the joint from the traumatism of motion, muscular or otherwise; and the ischiatic crutch protects it from the traumatism of standing and walking, while the patient runs about and follows the ordinary pursuits of life for the months and years necessary to bring about recovery, with restoration of ability and symmetry so far as may be.

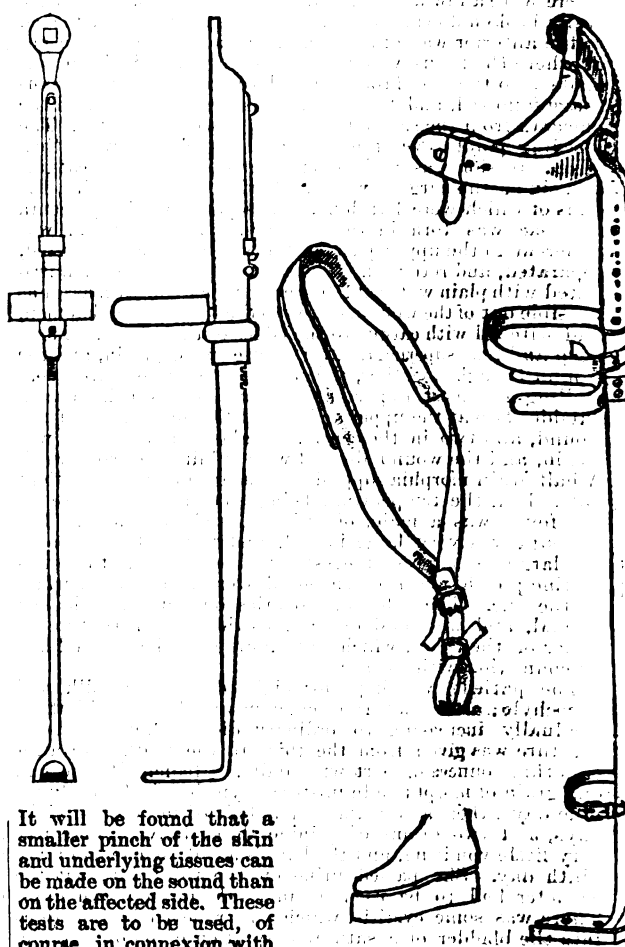
I will close by briefly referring to two points of practical utility. The first is in regard to an early diagnosis, which is especially of great importance, inasmuch as there is reason to believe that, if treatment can be begun sufficiently early, the focus of osteitis in the cancellous tissue may be resolved before the other structures of the joint are involved. Reason for this belief is found in the fact that disease of the joints is comparatively rare in the upper extremity, where a focus, being in a pendent member, may undergo resolution, protected as it is in the nature of the case from the traumatism which assails the lower extremity in standing and walking. Now, if the lower extremity can be made pendent, as can easily be done by the use of the hip splint, in the very incipency of articular osteitis of the hip, before the articular contours are changed and before the circum-articular muscles are seriously involved, we may look for resolution of the osteitic focus and recovery without lameness or impairment of motion. To assist in making an early diagnosis, a careful study should be made in a difficult and doubtful case of those limitations in the motions of the joint which become apparent only when the extremes of normal motion are approached. This may be done in various ways. I have found two methods easy in practice and certain in their revelations. The first method applies to rotation, which is a direction in which limitation of motion first takes place. Let the patient lie supine with the feet slightly apart. With the hand placed lightly on the knee of the unsuspected limb a rocking or oscillating motion is given to the whole limb, outward and inward rotation following each other while the toe sweeps through an arc of nearly 180°, the inner border of the foot

striking the table, and the outer border nearly reaching that level. This occurs in the sound limb. A similar manipulation of the suspected limb may reveal a slight limitation of rotation, the result of hip disease. The other simple procedure relates to flexion. Let the patient, still on the table, sit up and kiss the knee. By flexing the neck and back and drawing the limb up with the hands, this can easily be done with the unaffected limb, while an attempt to do it with the suspected limb may reveal a slight limitation of flexion indicative of incipient hip disease. Another diagnostic sign, too little thought of perhaps, but of importance in the very early stage, has recently been referred to by Dr. A. J. Steele, of St. Louis, as "a brawny thickening about the joint in front of the capsule or behind the trochanter."¹⁵ There will in some cases be found a condensation of the soft tissues, due apparently to the vicinity of osteitis, not visible perhaps, but recognisable by palpation or pinching with the thumb and finger, and then often not detected except by comparing the two sides.

FIG. 1.

FIG. 2.

FIG. 3.



It will be found that a smaller pinch of the skin and underlying tissues can be made on the sound than on the affected side. These tests are to be used, of course, in connexion with other diagnostic helps, and with due regard to other conditions which have the power to produce similar phenomena. Properly used, they may betray the presence of hip disease in a patient entirely free from pain and lameness at the time of the examination.

The other practical point which I would emphasize relates to the position of the limb. Adduction is most to be dreaded. It causes tilting of the pelvis and apparent shortening, which, although technically apparent, produces more disability and deformity than the shortening called real. It is due, as a general thing, to the fact that the patient uses the sound limb more than the affected one in walking, putting the former forward in less time than the latter, and unconsciously keeping the affected limb off the ground more than half of the time, and

¹⁴ It is interesting at this point to recall the words of M. Hennequin: "Mais le corps humain, peut-il conserver pendant des mois entières attitude verticale, touchant le sol par un pied seulement? Evidemment non, c'est au-dessus de ses forces." (Arch. Gén., Jan. 1886, p. 64.)

¹⁵ Transactions of the Missouri State Medical Association, 1887.

drawing up and adducting it in order to make it less of an impediment. To prevent or remedy this, the patient, during and after treatment, should be drilled in rhythmical walking, which compels the affected limb (protected by the splint during treatment) to do its full share of the work of locomotion, and leads the patient unconsciously to thrust the affected limb down and to abduct it, so that it may be in the best position to receive the weight of the body and do its share in the work of progression. It is gratifying to witness a recovery in which real shortening is more than counterbalanced by apparent lengthening. Although this may be the condition when the patient is discharged, the abduction, which is so favourable a feature, may disappear and give place to adduction, with its disability and deformity, if the gait is allowed to become habitually irregular.

Figures 1,¹⁶ 2,¹⁶ and 3²⁷ will give an idea of the modifications which I have made in the splint.

In closing, I would deprecate a tendency to complicate the mechanics of the hip splint. If its true functions, which are few in number and simple, and the limitations of its usefulness are duly recognised, it will be found a most useful and convenient appliance.

New York.

TRACHEOTOMY.

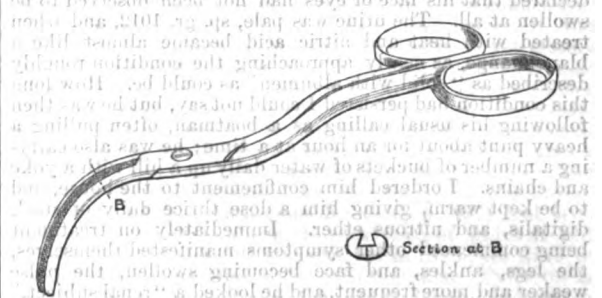
By JOSEPH COLLIER, M.B., B.S. LOND., F.R.C.S.,
ASSISTANT SURGEON TO THE HOSPITAL FOR SICK CHILDREN,
PENDLEBURY, MANCHESTER.

ALTHOUGH the operation of tracheotomy is generally looked upon as very simple, there are nevertheless few surgeons who have been called upon to perform it frequently without at times meeting with cases which presented great difficulty. Gross, who had an exceptionally large experience of the operation, says: "I know hardly an operation in all surgery that I would not rather undertake than this under such circumstances. The amputation of a limb, the extirpation of a glandular tumour, lithotomy, and even the perineal section, are trifling matters in comparison with tracheotomy in a short, thick-necked, and restive child." And even in the adult, in those cases in which the operation is called for urgently and requires rapid performance, it must always be a source of some anxiety to the surgeon. Where the operation can be performed at leisure and speed is no object, preference may rightly be given to the modification of Boze's bloodless method, described by Mr. Whitehead in THE LANCET. But, on the other hand, where it is required to open the air-passage with the greatest possible despatch, and where there is, therefore, no time to undertake the careful but somewhat tedious dissection with blunt instruments to expose fully and plainly the trachea, some more rapid method should be adopted. "Festina lente" is here a golden maxim, for too often has urgency induced the operator to make the incision into the trachea before that tube has been at all exposed. And then begins the difficulty; for though it is easy without properly clearing to open the trachea, it is not always easy to insert the tracheotomy tube. And the reason of the difficulty lies mainly in the anatomical arrangement of the layers of fascia in the region. For, besides the fascia stretching across between the sterno-mastoid muscles, and which is often divided into two layers for a considerable distance above the sternum, to the anterior and posterior lips of the upper border of whose manubrium it is attached, we have the layer extending between the sterno-hyoids and sterno-thyroids of opposite sides. Still deeper, a fascia runs upwards and downwards from the isthmus of the thyroid gland, the lower portion blending with the layer between the sterno-hyoids, and being prolonged downwards as far as the pericardium. Thus, if without clearing the trachea an incision is at once made through that tube and the layers of fascia over it, the least movement of the windpipe, as in attempted inspiration, will displace the parts so that the incisions through the trachea and its fascial coverings will no longer be exactly superimposed; hence the great difficulty of inserting either a dilator or a tube, and the

frequency with which the tube is pushed down in front of the trachea.

To meet this difficulty, I have had made for me a dilator which robs the operation of its anxiety, and makes its performance certain and rapid. The instrument (shown in the annexed engraving) differs from the ordinary dilators in the following particulars. Firstly, it has a cross or scissor action, since that is the one to which most persons are accustomed, and which is therefore desirable in such an instrument; secondly, there is no outwardly projecting lip at the extremity, since the difficulty lies in inserting the dilator, and not in keeping it in place when once inserted; thirdly, and of most importance, there is a half-groove on the inner face of each dilating limb, so that when the instrument is closed there is formed a full groove as on a director (seen at section at B in the figure).

It is advised that the operation be performed as follows. The patient's head, being thrown well back so as to expose clearly and put on stretch the parts in front of the neck, the usual incision is made and carried down between the sterno-hyoid muscles. If extreme rapidity is indicated, the knife, held perpendicularly, with its back towards the sternum and guarded from going too deeply by the index finger placed on the side of the blade, is pushed into the trachea, and an incision of the required length is made upwards through that tube and the fascial layers covering it. Then, before removing the scalpel, the groove on the



dilator is applied to the back of the blade, and, with this as a guide, the dilator is slipped down into the trachea and the scalpel withdrawn. The dilator can now be opened, when air freely enters the trachea, and a tube can be inserted with ease, as it is to some extent guided by the half-grooves.

I have lately used this instrument in some half-dozen cases, and have had no trouble in getting the tube safely into the trachea within a few seconds of making the first incision. It may be objected that the incision is made in the dark and that veins may be opened, but in only one case have I seen any bleeding, and this ceased as soon as the tube was inserted. Again, the operation is only recommended where speed is required and some slight hæmorrhage is of little importance as compared with the gain in time. The danger of wounding the posterior wall of the trachea by pushing the knife too deeply or by some sudden movement of the patient may be obviated by using a knife without curve but with a straight cutting edge, and, as soon as the trachea is opened, slanting the blade by moving the handle slightly towards the sternum. It may be urged that anyone accustomed to perform tracheotomy ought to be able to dispense with such aids, but unfortunately the operation is often suddenly and urgently required where there is no one so accustomed, and an additional aid is then of great use. Moreover, in those cases where after the tube has been left out for some days its re-insertion is indicated, there is often difficulty. Here a probe may be passed down the sinus into the trachea and the grooved dilator passed along the probe.

Manchester.

THE SANITARY INSTITUTE.—At a meeting of the Council, held on Wednesday, Dec. 12th, Sir Douglas Galton, K.C.B., F.R.S., in the chair, it was decided to hold three examinations next year—one for Surveyors in July, and two for Inspectors of Nuisances in May and November. Special courses of lectures and demonstrations for sanitary officers were decided upon, and a course of lectures on domestic hygiene for ladies to be given in Lent. Fifty-nine Members and Associates were added to the register, and forty-three applications were read for election at the next meeting.

THE VALUE OF JABORANDI AND ITS ALKALOIDS IN THE TREATMENT OF BRIGHT'S DISEASE.

By J. G. MARSHALL, B.A., M.B. CANTAB.

THE value of jaborandi and its derivatives in the treatment of the dropsy of Bright's disease cannot be over-estimated. By its use I have relieved in several cases some of the most distressing features of this complication, and prolonged or rendered less painful the termination of life in others; but in none has the drug been exhibited with such satisfactory results as in the following case.

S. D—, aged nineteen, fisherman, came under my care in September, 1887. A dropsical swelling of the loose tissue in front of the neck, giving him the appearance of having a "dew-lap," was the first symptom that excited the attention of his friends. This had existed for two or three months before the patient came to me. He had no other feeling of discomfort; gave no history of chill, lumbar pain, or noticeable disturbance of micturition. He found his breath a little short when pulling his oar—that was all, so he said. On being stripped, there was no oedema of the legs or scrotum, and his mother, a very intelligent person, declared that his face or eyes had not been observed to be swollen at all. The urine was pale, sp. gr. 1012, and when treated with heat and nitric acid became almost like a blanc-mange, as nearly approaching the condition roughly described as "solid with albumen" as could be. How long this condition had persisted I could not say, but he was then following his usual calling as a boatman, often pulling a heavy punt about for an hour at a time; he was also carrying a number of buckets of water daily up a hill with a yoke and chains. I ordered him confinement to the house, and to be kept warm, giving him a dose thrice daily of steel, digitalis, and nitrous ether. Immediately on treatment being commenced other symptoms manifested themselves, the legs, ankles, and face becoming swollen, the pulse weaker and more frequent, and he looked a "renal subject," which he did not before.

After a short time of treatment at home, during which matters mended not a bit, he was, by his friends' desire, transferred to Dover Hospital, where he remained for more than three months. While in the hospital different methods of treatment were employed, and at one time the patient seemed decidedly better, but he contracted a cold, and then became worse, and it seemed doubtful if he could live to return home. In the second week of February I was sent for by the patient's father, and found him exceedingly ill. He was propped up in bed, and dropsical from head to foot; his eyelids, which were distended with effusion, completely closed the eyes. His face was livid, and the swollen condition of the cellular tissue of the neck made it almost as broad as his shoulders. He coughed incessantly, there was copious intra-thoracic effusion, and the subcutaneous tissue all over the chest was "doughy" to the touch. His abdomen was as big as a barrel, and there was extensive oedema of the genitals. His legs and thighs were enormously swollen, and water was exuding from them. He was passing a very small quantity of urine, which was of a dirty colour, and loaded with albumen. As a last resource, but without expecting much from it, I determined to try the subcutaneous injection of hydrochlorate of pilocarpin, and the next day I gave two injections of a quarter of a grain each, one in the morning and the other late in the afternoon. After each dose I covered the patient thickly with blankets. The first effect was a flushing of the face, the saliva was secreted copiously, and within five minutes he broke out into a profuse perspiration. After the first injection he expressed himself as relieved, and he certainly coughed less. On my visiting him the next day, the lad's appearance was improved; he could see out of his eyes, he had passed a fair night, and the dyspnoea was lessened. I continued two injections daily for three or four days, and after each administration he sweated most profusely. I found he became very faint soon after the injection, and to counteract this I gave him a good dose of gin and water before the next one, and repeated this each time afterwards, when he never complained of faintness. Vomiting also occurred, once or twice severely, which induced me to lower the dose to one-fifth of a grain, which I injected

daily for nine or ten days. The improvement, which commenced early, was well maintained. At the end of a week he could sit up in bed, the cough was much less, the thoracic effusion had completely subsided, and his arms and neck were becoming less oedematous. The patient longed for my visits, and always expressed himself as feeling better after a "jolly good sweat." At the end of a fortnight his upper parts were free from effusion, but the abdomen was still much distended, and I hardly believed that we could get rid of an accumulation which at one time threatened to rupture the skin, and which it seemed that nothing but tapping could relieve. I then administered one-fifth of a grain on alternate days, and kept this up for another fortnight. He was then passing his usual quantity of urine, the albumen much diminished in quantity, he sat up daily by the fire, and there remained but a little swelling of the abdomen and legs. I continued the injections till the remaining dropsy had subsided. The improvement was maintained, and, under a diet of plenty of milk and the administration of steel and convallaria majalis, he was able to go out of doors and enjoy life with comfort.

I cannot say that the case is cured, as there is still about one-twelfth of albumen present in the urine, and the legs occasionally "pit" slightly on pressure. But the lad looks extremely well, his appetite is good, he can walk up a stiff hill without losing breath, and cannot believe that anything is wrong with him. I think that the almost miraculous improvement which followed the use of the pilocarpin is worth recording, and (when one considers the usual helplessness of a condition such as I have described, in a patient of this age and from such a cause) that jaborandi and its alkaloids must occupy the first place among known therapeutic agents in the treatment of cases of this kind. I have had good results from the use of an infusion made from the leaves of jaborandi, and drunk hot like ordinary tea; but the drawback appears to be the nausea so easily excited in these cases.

St. Margaret's, Dover.

The Mirror

HOSPITAL PRACTICE. BRITISH AND FOREIGN.

Nella autem est alia pro certo nascendi via, nisi quæpiurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORSANI De Sed. et Caus. Morb., lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

A CASE IN WHICH A CARTILAGINOUS TUMOUR WAS REMOVED FROM THE SUBCUTANEOUS TISSUE AT THE OUTER SIDE OF THE KNEE JOINT; REMARKS.

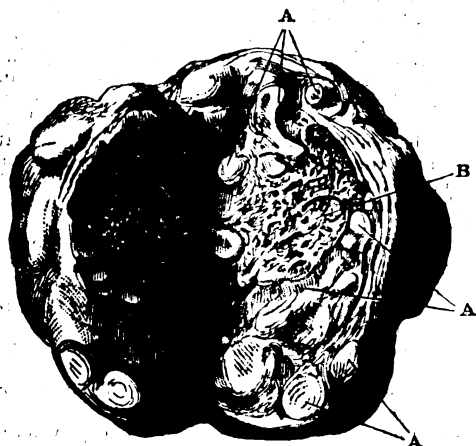
(Under the care of Mr. HOWARD MARSH.)

It is very unusual to find cartilaginous tumours growing in connexion with the soft parts, if we exclude the parotid gland and the testis, their usual seat being on the bones; they may, however, be found growing in the subcutaneous tissue, or in the intermuscular planes, and of this Mr. Marsh's case is an example. There are, however, others than those which are mentioned in the remarks to this case, and we will briefly refer to them. One, presenting characters very similar to that described below as under the care of Mr. T. Smith, has been recorded by Mr. Athol Johnson.¹ A female, aged thirty, had an enchondromatous tumour, partly calcified and the size of a walnut, removed from the front of the right arm. It was in the subcutaneous tissue, and had been noticed for seven years. Placed in a loose cellular bed, it could almost be torn out with the fingers. The patient stated that her mother had had a similar tumour removed from her leg. Mr. Godlee describes small loose ossifying enchondromata removed from the neighbourhood of a pedunculated exostosis of the tibia from a boy aged eleven years. Mr. Heath² records a case of recurrent enchondroma of the upper jaw in a man, which commenced in the skin by the side of the nose. A tumour of the same character was removed from the front of the carotid

¹ Path. Soc. Trans., vol. vi., p. 336, 1864, and vol. xix., p. 322.

sheath.³ One, which had undergone osteoid change, was removed from amongst the muscles in the posterior femoral region; the patient, a female, had noticed it for two years and three months; a delicate envelope of fibrine tissue surrounded it.⁴ A tumour of much larger size but similar in character to the last has been recorded by Mr. Croft.⁵ The patient, a stableman aged twenty-five, had only noticed it for about three months, and ascribed it to the kick of a horse. It was growing in a cellular bed situated in front of the left thigh under the deep fascia between the sartorius and tensor vaginae femoris muscles. After removal it required a saw to divide it. The varying consistency of growths of this kind is pointed out in the remarks, and Sir James Paget draws special attention to it in his lectures.

A. W., aged fifty-seven, sent by Dr. Dixon, was admitted on May 23rd, 1888, with a swelling at the front and outer side of the left knee, which had been slowly increasing for two years. This was about the size of a small hen's egg, and, except that it was not in the middle line, had the appearance of being an enlarged bursa patellæ, whose walls had become thickened and condensed, and its cavity almost obliterated by the organisation of fibrous tissue. The skin over it was natural, and not adherent. It was irregularly prominent, and its surface showed three low-crowned lobes, which were to a certain extent movable on each other. When the tumour was closely examined, its exact nature seemed to become more and more doubtful.



Cartilaginous tumour removed from the subcutaneous tissue at the outer side of the knee joint. A A A, Nodules of hyaline cartilage. B, Calcified central portion.

In the first place, it was not situated over either the patella or its ligament. It was below the former, and external to and apparently slightly overlapped on the outer edge of the latter. Secondly, its centre felt as hard as bone, while in its more superficial portions it seemed here and there as firm and dense as cartilage. Thirdly, though not attached to the head of the tibia (this was clear, for it was freely movable), its outer portion was close down upon it, while its base was so deeply embedded that it lay fully an inch and a half below the surface, and so placed that it evidently encroached considerably on the cavity of the joint. The case was shown at the Thursday's consultation, and the majority of those who saw it, though recognising its unusual characters, regarded it as most probably a bursa. During the operation for its removal, Mr. Marsh found the outer edge of the ligamentum patellæ passing like a strap over its inner borders. When the surrounding structures had been detached from its anterior and lateral surfaces, he was fortunately able to shell it out from the deeper parts as a fatty tumour may often be shelled out from its bed. When this had been done, a deep cavity was exposed, which passed under the outer edge of the ligamentum patellæ, and which, over a considerable area, was separated from the cavity of the knee joint merely by very thin and translucent synovial membrane. It seemed evident, however, that the tumour had no structural connexion with the synovial membrane itself. It had, merely from its position, indented and displaced it. The limb was fixed on a back splint, and the wound healed by first intention.

Mr. D'Arcy Power gives the following description of the tumour:—"The tumour is oval in shape, and has a rough irregular contour. In parts it is densely hard. It measures an inch and three-quarters in length by an inch in breadth at its widest part, and is covered by a layer of connective tissue. A pad of fat is situated at the back of the tumour, to which it is attached by the connective tissue covering. A section made through the mass shows it to consist of several nodules of hyaline cartilage (see A in figure), united together by connective tissue. The central nodule of cartilage is the largest, and it is calcified except at its most external portions." (See B in figure.)

Remarks by Mr. HOWARD MARSH.—This case seems worthy of notice from its rarity, and on account of the obscurity in which the exact nature of the tumour was involved before the operation. I cannot claim to have searched very widely, but as far as I have gone I have met with only two other instances of cartilaginous tumours in the subcutaneous tissue. One of these is recorded by Sir James Paget in his "Surgical Pathology." A woman, aged forty-five (a patient of Mr. E. Bickerath), had two tumours, one on the eminence of the right frontal bone, the other about half an inch below the right clavicle. The latter was about twice the size of a walnut, subcutaneous, and freely movable; it felt like a fatty tumour, except that it was not distinctly lobed, and was less firm and consistent than such tumours generally are. This tumour was removed, and was found to be "an oval mass, invested by a thin connective-tissue capsule, partitions from which intersected it and divided it into lobes of unequal size, distinct, yet closely packed. They all consisted of a soft flickering substance, widely intersected by opaque-white lines. The substance was extremely viscid, and could be drawn out in strings, sticking to one's fingers like tenacious gum." The second case is one in which Mr. T. Smith removed a cartilaginous tumour from a healthy woman aged twenty-eight. The growth (which is described by Mr. Cripps in the Pathological Society's Transactions for 1890, p. 287) had been noticed for six years, during the last two of which it had not increased in size. It was situated in the upper third of the right arm immediately beneath the skin. Pyriform in shape, it was three and a half inches in length, and two in diameter at its widest part. In the axilla there were three or four nodules of the size of small nuts. The tumour was found, after removal, to consist of a nodular mass of cartilage, enclosed in a capsule. Besides the main tumour, there were a dozen or more completely detached lobulated bits of cartilage from a quarter to half an inch in diameter. These portions were enclosed in the capsule, but fell out when the capsule was opened. The detached nodules in the axilla were also cartilaginous. In the centre of some of the nodules was some hard calcareous matter. When first seen, the tumour which I have described above appeared—whatever its exact nature might, prove to be—to belong to the knee joint. If not a bursa, it was thought to be probably a mass of partially calcified cartilage, developed in connexion with the fringes of the synovial membrane, and now by its bulk protruded outwards; or possibly it was an exostosis detached from the head of the tibia. In removing it, however, I found that it clearly had no connexion with the joint. It was near the joint only because it had been developed in the subcutaneous tissue in that situation. Yet the position, which it occupied added considerably to the difficulty of forming anything like an accurate diagnosis. The tumour much resembled the specimen removed by Mr. Smith, in being lobulated and partially calcified and extremely hard. The tumour described by Sir James Paget, on the other hand, was like a fatty tumour, except that it was not distinctly lobed, and was less firm than such tumours usually are. In all the cases the tumours were movable on the subjacent structures, and the skin covering them was healthy. They were of slow growth. One had existed for two years, one for six, and one for eight; all were painless. Mr. Smith's case and the case I have related combine to show that when a tumour is met with in the subcutaneous tissue, freely movable, covered by healthy skin, of slow and painless growth, lobulated and very firm, dense and hard, the suspicion may be entertained that it is formed of cartilage partially calcified. The nature of the case described by Sir James Paget was probably entirely masked by the soft and diffident condition of the tumours.

³ Ibid., vol. i., p. 158.

⁴ Ibid., vol. ix., p. 308.

⁵ Ibid., vol. for 1886, p. 474.

• Third edition, p. 511.

7 St. Bartholomew's Hospital Museum, specimen 3261.

ST. GEORGE-IN-THE-EAST INFIRMARY.

CASE OF CHARBON; EXCISION; RECOVERY.

(Under the care of Mr. J. W. SANDERS.)

THIS is a typical example of charbon or malignant pustule, and is a short, complete account of a case of the disease and its treatment. It is interesting to look at the earlier history of the disease as known in this country. In 1862 Dr. Budd of Bristol read a paper on this subject, and gave a summary of nine cases which he had seen, and of seventeen which he had collected; he referred to the treatment by excision as practised abroad, and added that the disease was only mentioned in two of the medical works of the day. This statement, which was denied by some who quoted cases which had appeared in the medical papers of the time (some of them from St. Bartholomew's Hospital), is confirmed on examination, for they were probably malignant carbuncle with pyæmia; and by Mr. Morrant Baker, who, in 1884, published what he called the first case seen at that hospital. Much confusion has, however, arisen in the past from the use of the word "pustule." Bourgeois's work in 1863 on Malignant Pustule and Malignant Oedema did much to advance a knowledge of the disease, and the investigations into the life history of the bacillus discovered by Pollender in 1852 carried us much further. Many things have been tried as local applications to the part, from walnut leaves to pure carbolic acid, applied after incision, and the actual cautery; but the method adopted in Mr. Sanders' case is the one generally acknowledged as the best—that is, free excision and the application of a powerful caustic; some using a strong solution of iodine, chloride of zinc paste, or pure carbolic acid, as an application to the raw surface.

A. M., aged fifty, was admitted into the infirmary on Oct. 22nd, 1888, with the following history. He had been a free liver, and had worked on and off at the docks for years. Three weeks previously he was engaged in moving bales of wool, since which he had been engaged in ordinary labouring work. On the 19th (three days before admission) he noticed a pimple on his face; he scratched it and made it bleed. On the next day he noticed that it was black in the centre, and that it was swollen and surrounded by a red ring. Being much worse the next day, he applied for admission.

When seen the man presented the following symptoms. He appeared to be very ill; was trembling and could scarcely stand. Temperature 101° 6'; pulse 110. On the left cheek was a black patch about three-quarters of an inch in diameter, dry and anæsthetic; surrounding this was a zone of imperfectly formed vesicles, which was again surrounded by a ring of red brawny oedema (three and a half by two inches); no sign of pus. He complained of no pain whatever; there was oedema of the eyelid and also of the sub-maxillary region, and the glands in this region could be felt to be enlarged.

The A.C.E. mixture having been administered by Mr. Pollard, the whole patch on the face was excised, the incisions being made through healthy skin. One small vessel was twisted, and the surface of the wound mopped with nitric acid. Dry dressing was applied. Bacteria were distinctly seen in the blood which was scraped from the surface of the excised mass.

On Oct. 24th the wound was dressed for the first time, the oedema of the eyelid had disappeared, that of the neck was much less, but the glands still felt enlarged; the wound looked healthy; iodoform and dry dressing were applied. Temperature 99°; pulse 80. From this point the patient never had a bad symptom; the wound continued to be dressed with iodoform and wool-wool; it granulated up and healed till very little scar remained. He was discharged on Nov. 17th, twenty-six days after admission, quite well.

BURTON-ON-TRENT INFIRMARY.

COMPOUND COMMUNICATED FRACTURE OF THE SKULL,
WITH EXTENSIVE INJURY TO THE BRAIN;
OPERATION; RECOVERY.

(Under the care of Mr. MASON.)

WE have seldom recorded instances of fracture of the skull in which more extensive injury than was present in this case terminated in recovery. The success attained must be

largely attributed to careful antiseptic treatment. For the following notes we are indebted to Mr. M. W. Oldham, house surgeon.

J. C., aged forty-three, signalman, was admitted on Oct. 18th, 1888, at 8.45 A.M., suffering from compound comminuted fracture of the skull. The man gave the following history. He left the signal-box at 7.10 A.M., and remembered two trains passing him. The atmosphere was very foggy, and he was walking in the six-foot way. He was picked up unconscious by some workmen, having been knocked down by another train, and they brought him to the infirmary. On the way he regained consciousness, and vomited once.

When admitted, the man was rather dazed, but not suffering much from shock. Pulse 72, full and compressible; pupils slightly dilated and reacting to light. There was a V-shaped lacerated wound of the scalp, commencing half an inch behind and an inch and a half above the right external auditory meatus, extending for about two inches and a half upwards and forwards. The skull was comminuted and driven into the brain. The brain was much lacerated, and portions of two convolutions were detached, lying at the edge of the wound. There was no paralysis or loss of sensation. Chloroform was administered, and after a few inspirations the breathing became stertorous, the pupils widely dilated, and he vomited. Eight pieces of bone were removed with the elevator and forceps, varying in size from a pea to a shilling. After removing the largest piece, which was embedded in the brain, the breathing became normal, and the pupils regained their natural size. The wound and surface of the brain were freely irrigated with carbolic lotion (1 in 40), much brain debris coming away; a good-sized drainage tube was introduced, and the edges of the wound brought together with eleven wire sutures, and dressed with iodoform and carbolised gauze. At 11.30 P.M. the temperature was 98° 4' and the pulse 70. The patient had taken nothing but a few lumps of ice, and had vomited three times. Two minims of liquor morphiae were given subcutaneously.

Oct. 19th.—Temperature 98° 4'; pulse 72. Slept two hours last night. Vomited again this morning. Head dressed. There had been a good deal of serous and bloody discharge. Ice was ordered, and half a pint of milk to be taken during the twenty-four hours.

20th.—Temperature 99°; pulse 70. Temperature 99° in the evening. Ordered a pint of milk.

22nd.—Temperature 98° 4'; pulse 64. Tube removed. Wound healing; dressed with wet boracic lint.

25th.—Wound dressed; it has healed except where the drainage tube was taken from; all the sutures removed. To have three pints of milk.

27th.—Wound completely healed. Half a pint of beef-tea ordered.

After this the diet was gradually increased, he was not allowed to get out of bed for three weeks, and he left the infirmary a fortnight later, not having had a symptom beyond the slight attack of vomiting, and the temperature never rose above 99°.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Skeleton of a Dwarf; Adjourned Debate on Chronic Alcoholism.

AN ordinary meeting of the above Society was held on Dec. 18th, Mr. Morrant Baker, Vice-President, in the chair.

Mr. JONATHAN HUTCHINSON exhibited the Skeleton of a Short-limbed Dwarf, aged thirty-five, from the Norfolk and Norwich Museum, which he believed was unique so far as England was concerned. All the limbs were affected, but the cranium and trunk had developed normally. The clavicles, instead of articulating in the usual way, had a sliding joint on the upper aspect of the manubrium sterni. He showed photographs of the limbs and of the individual bones, and also copies of two skeletons in the Musée Dupuytren at Paris; one being a fetus which had died at birth, the other a short-limbed dwarf, a woman, who died, aged twenty-two, after Cæsarean section. All these specimens were labelled "rickets," but Mr. Hutchinson objected to this, as the usual signs of that condition were not present. In Mr. Cadge's

specimen from Norwich the clavicle was short and thick, and the bones resembled those of a brute, the humeri being like those of a bear, the femora like those of a horse. The pelvis was small, but the diminution was not due to rickety distortion. The three cases he had referred to were similar, and were the only specimens he knew of. He did not think they were cases of simple arrest of development; the largeness of the bones and the prominences of the muscular markings were against this. He thought them instances of a retrogression in type involving only the limbs. The Norwich man had peculiarities also in his moral history; he was hanged for the murder of his wife and child, and expressed no contrition after the commission of the crime.—Mr. SHATTOCK said that whilst Mr. Hutchinson was President of the Society a discussion took place on this subject in connexion with rickets. He referred to four specimens illustrating this lesion, one being at King's College, two in the College of Surgeons, one at St. Bartholomew's, and one at Middlesex Hospital. He thought the condition present was that described by Parrot as "achondroplasia." Horsley had shown that excision of the thyroid gland in animals produced dwarfing of the bones of the limbs.—Mr. PARKER said the condition exhibited differed from the cases Mr. Shattock had spoken of, the latter occurring in infants prematurely born, and who were usually incapable of independent life. He thought the case from Norwich was a case of ordinary rickets; it was not uncommon, and occurred in both upper and lower extremities, and pointed to changes at the epiphyseal junction. Rickets was not only characterised by curvature, but by arrest of development of the tissues generally.—Mr. HUTCHINSON, in reply, thought the skeleton presented peculiarities which separated it entirely from the majority of cases of rickets, for the bones were straight and strong, and not curved.—A committee was nominated to examine and report upon the specimen, consisting of Messrs. Hutchinson, R. W. Parker, Shattock, and Bland Sutton.

The debate on Chronic Alcoholism was then resumed.

Dr. DICKINSON insisted on the overgrowth of fibrous tissues as the essential part of cirrhosis of the liver and of granular degeneration of the kidney. He had often seen what appeared to him to be irresistible evidence of the new growths in the cirrhotic liver and granular kidney of childhood, where it was very prolific and highly nucleated; he had satisfied himself that new vessels were developed in this new tissue. Whatever might be the minute anatomy of cirrhosis of the liver, there could be no doubt as to the effect of alcohol in causing it. In the course of the circulation alcohol reached the liver first and the kidneys only after distance and dilution. In a comparison between 149 persons whose occupation made them conversant with drink—potmen, brewers, &c.—and the same number of persons not so conversant, cirrhosis of the liver presented itself in twenty-two of the traders in drink and in eight only of the others. Thus the evidence as regarded the liver was clear enough, and might be taken to imply also that the class regarded as the more intemperate were not suspected without reason. With regard to the kidney there was no such evidence. The total of renal diseases was not greater in the drink class than in the others, while granular degeneration in particular was only slightly increased—thirty-one against twenty-seven. A similar conclusion was reached by examining persons dead of delirium tremens, with whom renal disease was not more frequent than in persons taken by chance who had died from accident. The effect of alcohol on the kidney was not to be entirely ignored, but had been overrated. The fact appeared to be that the liver was acted on chiefly by alcohol, the kidney by a variety of causes, of which alcohol might be one, the others being heredity, climate, gout, lead, &c., upon which it would be foreign to the present purpose to dwell. A point of interest as between the liver and kidney was the fact that the two seldom became fibrotic together. Only one-seventh of persons with granular kidneys had cirrhotic livers, showing that the two diseases were probably due to different causes. Next, as to tubercle as a result of alcoholism, the observation already referred to showed a greater frequency of tubercle in every organ liable to it in persons trading in drink as compared with others. In this way they amounted to a proportion of three to two. In other organs the preponderance of tubercle with drink was still greater, so that no doubt could be entertained that drink promoted tubercle, instead of, as had been thought by some, preventing it. In conclusion, another point of view was proposed to the Society: alcohol undoubtedly caused many diseases—

were there none or no morbid conditions which it tended to prevent? Good health was a medium state, neither too little nor too much of anything: the brain not active to mania or sluggish to melancholy, the heart not over-stimulated or over-inhibited, the bowels moving, but not excessively, the urine sufficient, but not profuse, and so on. Thus, if alcohol caused a departure from health in one direction, might it not prevent departure in an opposite direction? If alcohol prevented oxidation, it should be good where oxidation was in relative excess. In short, as alcohol produced some disorders, might it not prevent their contraries if such there were? In the cases spoken of, if drink appeared to retard adhesive and plastic processes and replace them by suppurative, it was conceivable that this, though generally injurious, might in certain circumstances be beneficial. The facts indicated that endocarditis was less frequent in the drink-traders than in others. Without pretending to speak otherwise than doubtfully on these points, they were suggested for the consideration of the Society.

Dr. BUZZARD would not discuss the clinical aspects of alcoholic neuritis, which were now very generally recognised, except to draw attention to the fact that alongside of the complete immunity of the functions of the bladder and rectum usually observed in these cases, there was in females an almost constant suppression of the catamenia during the many months of illness usually involved. He had not seen any reference to the circumstance, which had forced itself upon his attention in numerous instances. Agreeing with Dr. Payne that the acceleration of the heart's action was probably due to lesion of the vagus, he suggested that he pneumonia which occasionally terminated cases of this kind might probably be due to a similar cause. Dr. Payne had referred to the two kinds of microscopical changes in the peripheral nerves, and had remarked that, although very generally the changes were found together, sometimes the signs of parenchymatous degeneration, at others those of interstitial, predominated. Both, however, he had gone on to say he believed to be produced by the direct action of alcohol, but Dr. Buzzard could not acquiesce in this view. He pointed out that we had not to do with universal or even very widely spread changes in the nerve fibres; as a rule, where death had given the opportunity of observation, it was found that the spinal cord, the roots of nerves, the plexuses, and the proximal portions of the nerve trunks to the extremities were perfectly free from pathological changes, which were confined to a greater or less extent of the periphery of the nerves. This, surely, was not what might be expected as a result of alcohol in the current of the blood, permeating equally all tissues of the body. Moreover, although, as Dr. Payne had justly remarked, the parenchymatous or interstitial changes usually went together, they did not always do so. The exceptions, indeed, pointed out by Dr. Strümpell and others were so striking that it had been seriously suggested by Erb that we had to do with two distinct diseases—a degenerative atrophy of peripheral nerve fibres, and an interstitial neuritis having no connexion with the former. Were the action of alcohol direct, the exclusive affection of one structure was hardly conceivable, especially as the fatal issue showed that the cases in which this occurred were of severe, not slight, character. Dr. Buzzard had long felt that, notwithstanding the absence of observable lesion, there was probably some change in the cord which brought about the coincident and limited affection of the periphery of so many nerves, and some years ago (Harveian Lectures, 1885) he had suggested that it was upon the vaso-motor centres in the bulb and cord that the toxic action of the alcohol was primarily exerted. It was of common observation that the commencement of alcoholic inebriation was flushing of the face, indicating that the cervical sympathetic was becoming paralysed. This was a temporary and passing influence, yet one would conceive that the effect of repeated and, so to speak, permanent toxic action of the same kind would be to cause more or less enduring alteration in the calibre of minute arteries—those in which the muscular element was relatively most developed. These belonged to the periphery of the arterial system, and corresponded generally with the periphery of nerve fibres. It was conceivable that the supply of blood to the periphery of nerves might in this way be modified by an irritative influence excited by alcohol on the vaso-motor centres in the bulb and cord, and according as certain sets of vaso-motor or vaso-dilator fibres were affected,

the tone of a vascular area would be changed in the direction of constriction or dilation. Notable diminution of blood supply long continued would occasion starvation and degeneration of the elements of nerve fibre, whilst arterial dilation would cause blood stasis and inflammation. The limited oedema so often observed in cases of alcoholic neuritis bore concurrent testimony in favour of this view. He then criticised the etymology of the termination "itis" as signifying inflammation, its true signification being adjectival—as nephritis, concerning the kidney &c.

Dr. SAVAGE approached the subject with some diffidence when addressing the Pathological Society, as his experience was chiefly clinical. Yet he presumed that there was a pathology beyond mere rags and tatters of humanity, and he addressed himself to the more general side of the pathological effects of alcohol on the nervous system, more especially on the higher or mental centres. During the past seventeen years, out of 4000 patients admitted into Bethlem, of whom he had records, only 133 had drink given as the cause of their insanity; this was a very small proportion, and was not to be considered as at all representing the proportion of insanity produced by excess of stimulants; for in Bethlem, the patients being specially selected from the more deserving classes, many drunkards were thus excluded. The cases admitted provided good examples of the various nervous disorders produced by alcoholic poisoning, both acute and chronic. He was surprised to find that of these 133, less than one-fifth had any insane relations, so that the persons so affected did not come from the nervously unstable; thus drink produced insanity in many who were otherwise fairly stable. Drink, on the other hand, could be shown to be the starting point of neuroses in the individual and also in the family. Again, of those becoming insane as the result of alcohol, only a very small proportion were suffering from general paralysis. To return more in detail to the subject of Dr. Payne's paper, he agreed with his divisions, and had for years been in the habit of teaching that there might, first of all, be simple disorder of function; next, malnutrition; and, lastly, there might be disease or degeneration of the tissues, and with each of these stages special symptoms were to be met with. First, then, alcohol might produce confusion of ideas, gradually becoming delirium; these states of confusion or delirium might be repetition, become more or less habitual, or might lead to still greater nervous instability, which was recognised as mania or partial weakness of mind. In these cases, the delirious aspect might be retained from the first and remain for weeks or months. If such cases died, little or nothing was found to account for the mental state beyond changes in the brain cells, which were similar to those met with in old age, or in states of exhaustion such as seen after typhoid fever. In the next group of cases, we had to recognise alteration in the general nutrition, which was more lasting in its effects, and also more widespread in its evidences. In some, the milder cases, the alcohol seemed to loosen the nervous fibre, so that the more human moral and social relationships were disregarded, and there was emotional instability, loss of memory, want of energy, will-power, and lack of judgment, so that domestic troubles frequently resulted, leading to further distress of mind and body; and sleep, the brain food, was wanting or unrefreshing. In another group of cases, falling, he believed, under this heading of malnutrition (with, or frequently without, any of the social disorders), were the patients who were annoyed by sensory troubles of one kind or another. Thus there might be uneasy skin sensations, giving rise to ideas that electricity was being used to injure or annoy the patient, or that some unknown "influence" was exerted from without by some evil-minded persons for their own objects; hallucinations of smell might lead to ideas of poisoning, and visions of insects or of devils might give rise to other fancies of persecution; whilst hallucinations of hearing might start the thought that there were watchers about, anxious to injure or annoy; from one or more of these being present a whole fabric of delusion might arise, generally anti-social and dangerous. It might happen that these or similar symptoms might be quite acute in their onset, and might pass off rapidly, pointing to their production by an ephemeral cause. In these cases, he fancied, the changes in the tissues were more marked than in the first group, though he never had the opportunity of examining any such case in its earlier stages. There might be other evidences of malnutrition depending on disease of some of the nerves;

he was inclined to think that a fairly large group of persons suffering from hallucinational and delusional insanity owe this in great part to peripheral neuritis of alcoholic origin and he could, if time permitted, have given very good clinical examples. Such changes in nutrition led very gradually into those in which there was distinct tissue waste and disease, and he would first state that wasting seemed to him to be the chief characteristic of these cases. He did not know of any stage of hypertrophy preceding the wasting, but it might occur in cases in their earlier stages. In these cases there was progressive loss of power of one or all the faculties, and with it general wasting of the brain, so that the convolutions appeared to be numerous and separate, and distinctly narrow at their edges, the calvaria often marked by Pacchionian bodies, the dura mater often rather thick and adherent, the arachnoid thickened with milky spots, excess of fluid, at times haematomata, and he had several times met with a clear filmy membrane lining the middle fossa at the base of the brain, evidently allied to the above membrane. It was interesting to note that pachymeningitic membranes were proved now to depend on wasting, and not on inflammation, and they occurred under these conditions in general paralysis and in alcoholic dementia. It was well to remember that towards the end of life an acute inflammatory process, associated with maniacal excitement, might come on and rapidly kill the patient. Having briefly considered in no novel way he feared, the pathology of general insanity and alcoholic excess, he passed to the most important and most debated question as to the relationship between alcoholic excess and the production of general paralysis. Many authors considered that it was the chief cause, and Dr. Mickle, from his experience, which was chiefly drawn from old soldiers, took it to be the great exciting cause, while Dr. Maudsley did not speak so definitely, but believed it to be associated with the disease; and most writers English and foreign, traced a connexion between intemperance and the increase in this disease which had been so marked of late. He rather agreed with Dr. Payne that strain—that was, wear and tear under conditions in which repair could not be effected—was the real cause of general paralysis, and that drink might in some cases directly and in more indirectly, have a causative effect. General paralysis was a disease of those who led active lives; it was more common in those who ate meat and took stimulants such as alcohol; it occurred in city dwellers, whether working with the highest or only the ordinary mental faculties. He found that of the last 103 general paralytics admitted under him at Bethlem only seven had distinct histories of alcoholic excesses before the onset of the disease. These numbers were smaller than he expected, and at first sight were puzzling. The symptoms of drunkenness had been compared to those of an attack of insanity, but he would rather, with Wilks, say that in early alcoholism you saw all the possible symptoms met with in early general paralysis; the same functions were disordered in the same way, and yet the functional disorder did not so frequently lead to organic change along the same lines as one would have expected. The reason seemed to be that alcohol was very unstable and easily got rid of, so that the highly vascular organ, the brain, had a power of self-repair which was astonishing. It was seen that with more stable causes of disorder similarly happy results did not follow; thus lead-poisoning was not uncommon as a cause of general paralysis, and local syphilitic lesions were still more potent in leading to permanent degeneration. It was interesting to him that not only were the mental symptoms met with in alcoholism and general paralysis parallel, but there were, further, bodily likenesses. Thus there was a group of general paralytics who had a very beery aspect, while another group had all the looks of the spirit-drinker even to the capillary stasis about the face. To sum up this part, he would say that though alcoholic excess was common in general paralysis, and might be in some cases the predisposing, and in others a larger number the exciting, cause of the mental symptoms first noticed in general paralysis, yet he did not find that more than 7 per cent. depended on alcohol alone as a cause. Neuroses in parents might appear as intemperance in the children, but drink in the parent very often appeared as one of the forms of mental weakness or instability in the offspring; thus idiocy and moral defect and tendency to break down at critical periods of life were noticeable in the children of parents who had been given to alcoholic excess. He had not time to discuss the relative

frequency with which the various signs of mental disorder occurred in alcoholic insanity, but he was bound to say that poisonings, persecutions, tabetic weakness, and local or general nerve-pains, and false interpretation of these, were specially common, and that the changes varied from slight malnutrition to wasting allied to senile decay.

Dr. G. N. PITT had searched the records of Guy's Hospital for facts bearing on the subject of debate. Dr. Hilton Fagge had published statistics of cases of hepatic cirrhosis down to 1875, and more recently Dr. Price had brought the record to 1884. He himself had analysed the cases dying during 1885 and 1886, and had found certain interesting facts. Cirrhotic livers were essentially large, the increase in size being due to the concomitant fatty change. Only one-third were below the average weight. Granular kidneys were generally associated with the small liver. In twelve cases of hard drinkers large kidneys had been found weighing together from twelve to fifteen ounces, cases of lardaceous and cardiac disease had been excluded. Most of them were normal microscopically. It was worthy of note that in diabetes the usual weight of these organs was fifteen ounces, and the cause of the hypertrophy was probably similar in both. Discussing the relation of tubercle to alcoholism, of eight consecutive cases he had found acute tubercle in six and fibroid in two; but this was not the average, for, taking the cases for eleven years only, 22½ per cent. had tubercle. Frequently phthisical symptoms were not marked, and this probably explained the non-agreement of his results with the conclusions arrived at by a study of the Registrar-General's returns. Thirty-three cases under forty years of age were examined, and two-thirds of them had tubercular disease. At Guy's, in twenty years three cases of acute yellow atrophy had occurred in drunkards, one of these being classed as "acute red atrophy" by the Morbid Growths Committee. Seven cases of cirrhotic liver which had become cancerous were met with, and among rarer lesions three cases of acute cerebral meningitis and three of pachymeningitis were observed in fifteen years.

Dr. FINLAY said the appearances presented by the microscopical sections he had shown bore out in detail much that had been said by Dr. Payne as to the pathological changes found in certain parts of the nervous system in alcoholic paralysis. The specimens were furnished by patients who died in the Middlesex Hospital, one being a female aged twenty-eight, the other a male aged fifty-one. They were typical cases of the disease, both as regarded history and symptoms. Dr. Finlay then described in detail the character of the changes seen—thickening of the perineurium, infiltration with leucocytes, and breaking up of myelin in the nerves; wasting of the muscle fibres, and crowding of the interstitial spaces with nuclei. Sections of the cord from one of these cases were quite normal, though he had observed changes similar to those described by Sharkey in one case. He referred to the interesting fact of changes being found in the vagus; the great acceleration of pulse from 72 to 160 in a few days in one case bring the pathological changes into line with the symptoms in an instructive way. The same remark applied to the phrenic nerve. With regard to the order of the changes in different parts of a nerve, he submitted that on the whole he was in favour of the parenchymatous change being the first and the inflammation of the perineurium secondary. This was suggested to him by the fact that of the cases he had observed the one of longest standing was the only one which showed marked inflammatory appearances in the surroundings of the nerve and in the muscle. The parenchymatous changes were equally well marked in all. He thought that the connexion between alcoholic paralysis and tubercular disease was a causal one, for the excess in alcoholic indulgence led to both. It was quite true that persons suffering from phthisis might be benefited by a certain amount of alcohol, but this was regulated use of alcohol, and was a very different thing from the Bacchanalian bouts of drinking indulged in by the patients whose organs were being discussed. The latter kind of drinking might be the cause of other lapses from morality and hygienic conditions of life which might reduce vital power and determine the access of phthisis, especially in persons predisposed to the disease. He had been brought into contact with five severe cases of alcoholic paralysis, four of which had died, and one recovered. Of the fatal cases two had phthisis and two had not; the liver was fatty and cirrhotic in all; the nerve roots were unaffected. It

was impossible to generalise upon small groups of cases, but the aggregate of experience brought forward on this occasion would help towards some valuable practical conclusions.

Dr. SHARKEY said that Dr. Payne, in his introduction to this debate, raised the difficult question—Was the poisonous action of alcohol first exerted upon the specialised parenchymatous tissues of the organs or upon the connective tissue which formed their framework, or upon both concurrently? If this question were taken as referring only to such anatomical alterations as we could appreciate by means of the microscope, he thought it could be shown that in the case of the liver, at any rate, the poison acted upon the portal vein and upon the connective tissue which surrounded it in the first instance, and that the liver cells in its immediate neighbourhood might for a long time remain healthy. He had tried to demonstrate this by means of two sections, the first showing the dilatation of the portal vessels and development of young connective tissue in the early stage of cirrhosis, and the second showing healthy liver cells lying alongside enormous strands of firm connective tissue in the advanced stage of the disease. In other organs—the spinal cord, for instance—he had seen the vascular and parenchymatous changes side by side. But it was probable that owing to inheritance and acquired peculiarities individuals might differ in this respect, and that one person's connective tissue and vessels might fall a more easy prey to the destructive action of alcohol than those of another; while in others the parenchymatous elements might be more vulnerable. But it was an undoubted fact that death of the liver cells might occur even over very wide areas in cirrhosis. It seemed to him, however, to be very uncertain what the deadly agent was in such cases, for this necrosis might certainly take place after patients had remained for long periods in hospital without drinking any alcohol. Might not some other poison, either organic or inorganic, have gained access to and killed the cells? He showed a specimen where many colonies of micrococci were to be seen amongst the necrotic cells, and in the connective tissue strands, in order to draw attention to this point and to suggest further investigation of such cases. Observers still differed as to the effects of alcohol on the kidney, some holding that it was not a frequent cause of their disease. His experience in the post-mortem room for the last ten or twelve years had left him strongly imbued with the opinion that it was a potent factor in the production of chronic renal disease, though its injurious effects were far more frequently exemplified in cirrhosis of the liver. With regard to the action of alcohol on the nervous system, it seemed probable from the observations hitherto published that it fell most intensely upon peripheral nerves and muscles, and much less, though to a certain extent, upon the central nervous system. Of course he was speaking of the palpable anatomical alterations, for the functional disturbances of centres, which left no trace behind, were often very severe. So widespread might be the effects of alcohol on nerves, that it was a question whether any nerve was beyond its reach. In the last volume of the *Transactions*, he reported a case in which, in addition to the nerves and muscles of the limbs, the phrenic and pneumogastric nerves, together with the muscles they supplied, were affected. But it was probable that even nerves of special sense might not escape. Some authorities supposed that certain cases of tobacco amblyopia were of alcoholic origin, though he was not aware that any cases of this axial change of the optic nerve in alcoholism had been published. He then mentioned a case which came under his care of what he believed to be alcoholic retinitis; Dr. Ord had published it in *THE LANCET* for Feb. 11th, 1888. It was the most severe case of alcoholic paralysis which he had seen recover. Though at one period of her illness she had a trace of albumen, it became quite clear before she left St. Thomas's Hospital, where she remained for sixteen months, that she had no chronic renal disease. Dr. Ord remarked in his account of the case (she was under his care during the greater part of her illness): "The question arises whether the retinal changes are due to renal mischief, or possibly to a peripheral neuritis of alcoholic origin." Dr. Ord had not then seen the note which Mr. Nettleship was good enough to make just before the patient left the hospital. It was as follows: "Much better in health. Says vision is quite good. Ophthalmoscopic examination of right eye (atropised) showed two kinds of changes: (a) Scat-

tered, usually oval, dirty white spots in neighbourhood of optic disc, more above than below; all were beneath vessels; pigment around them was rather intensified, but there was no definite collection; surface of some of them was a little granular or glistening. Their exact nature could not be decided by the ophthalmoscope, but they might be deposits between retina and choroid. (b) Ordinary bright white (frosted silver) confluent dots, grouped chiefly along large vessels above and below yellow spots, but scattered in other parts. Optic disc of healthy colour and transparency; vessels normal; retina round disc slightly thickened and filmy (parallactic movements). None of the pigment spots so commonly seen after renal retinitis, except one at the periphery. Though the silver white spots (c) were near to large vessels, they were never in front of them, nor were they arranged about the yellow spot at all, as was usual in renal cases. Left eye similar changes, but less abundant. If seen now for the first time, the changes would hardly suggest albuminuric retinitis, nor did they agree with any common type." Dr. Mott reported at the last meeting of the Society a case of fatty degeneration of the heart and sudden death in a drunkard. As he had demonstrated that inflammation of the pneumogastric and of the heart's muscle occurred in alcoholism, he would suggest that the cardiac degeneration might be the result of alcoholic neuritis, just as the muscle of the limbs degenerated as a consequence of disease of their nerves. Phthisis was frequent in cases of alcoholic poisoning, and, as Dr. Payne said, it was almost the rule in alcoholic paralysis. Two factors were required to produce phthisis: firstly, the bacillus tuberculosis; and, secondly, a soil rendered suitable by lessened vitality and nutrition. Might the second factor be supplied in alcoholic paralysis cases by the inflammation of branches of the vagus or other nerves going to the lung? This would only be another instance of the effect of nerves on nutrition.

The debate was then adjourned till Jan. 15th.

The following microscopical specimens were shown:—

Dr. FINLAY: (1) Transverse Section of Plantar Nerve, showing degenerative and inflammatory changes; (2) Longitudinal Section of Plantar Nerve, showing increase of nuclei and infiltration with leucocytes; (3) Longitudinal Section of Phrenic Nerve where it passed into the substance of the diaphragm, showing exactly similar changes to those seen in the nerves of the extremities; (4) Longitudinal Section of Phrenic Nerve higher up, showing degeneration of nerve fibres with segmentation of the myelin; (5) Transverse Section of Extensor Carpi Radialis Longior Muscle, showing increase of nuclei of sarcolemma and infiltration with leucocytes; (6) Section of Spinal Cord in Lumbar Region from a case of Alcoholic Neuritis, showing no abnormal changes; (7) Longitudinal Section of Musculo-spiral Nerve, with well-marked segmentation of myelin; (8) Longitudinal Section of Phrenic Nerve, with slighter similar changes.

Dr. HADDEN: (1) Section of Muscle, showing rounded interstitial growth; (2) Teased Preparation of Anterior Tibial Nerve, showing the nerve fibres in various stages of degeneration.

Dr. OMEROD: (1) Longitudinal Sections of Nerve stained with Osmic Acid, showing breaking up of the myelin; (2) A series of Sections of Spinal Cord, showing no changes; (3) Section of Muscle, showing increase of nuclei; (4) Transverse Section of Nerve, showing interstitial thickening of endoneurium.

Dr. PITT: (1) Hypertrophic Cirrhosis of Liver, showing changes similar to acute yellow atrophy; (2) Section of Peripheral Nerve, showing interstitial inflammatory changes.

Dr. SHARKEY: (1) Early Dilatation of Portal Vein; (2) Advanced Cirrhosis, showing healthy liver cells alongside thick strands of connective tissue; (3) Puckered Capsule in Advanced Cirrhosis; (4) Kidney from a case of Severe Alcoholism, showing extreme congestion; (5) Popliteal Nerve, with marked inflammatory changes; (6) Phrenic Nerve as it enters the Diaphragm, showing similar changes.

Mr. D'ARCY POWER: Cast of Right Leg from a case of Alcoholic Neuritis.

Drawings of Microscopical Sections by Dr. FINLAY and Dr. SHARKEY.

Drawing of Cirrhosis of Liver by Dr. DICKINSON.

Mr. JONATHAN HUTCHINSON: Skeleton of Short-limbed Dwarf from the Norwich Museum, and several drawings of other similar cases.

CLINICAL SOCIETY OF LONDON.

Aneurysm opening into Descending Vena Cava.—Cause of Speedy Death in Heart Disease.—"Summer Eruption."—Scleroderma and Rheumatism.

AN ordinary meeting of this Society was held on the 14th inst., Dr. W. H. Broadbent, F.R.C.P., President, in the chair. The prevalence of fog accounted for the absence of the living specimens.

Dr. C. ARKLE and Dr. ROSE BRADFORD communicated a case of Aortic Aneurysm rupturing into the Descending Vena Cava. J. W.—, aged sixty-one, shoemaker, was admitted into University College Hospital, under Dr. Ringer, on Oct. 20th, 1887, complaining of pain in the chest and difficulty in breathing. He had had good health up to February 1887, when he began to have attacks of pain in the right mammary region; this was also accompanied with dyspnoea or exertion. There was no history of syphilis or rheumatism. He had had winter cough for six years. State on admission Great cyanosis of face. Collar of oedema round neck, with great oedema of right arm, and slightly of chest on right side. Abdomen and legs quite natural. Dilated veins at border of sternum and lower margin of the thorax. Respiration 40 laboured; pulse 106. Chest: Rigid and barrel-shaped. Visible pulsation in second and third right interspaces. Heart's apex beat in sixth space, just outside nipple line. A systolic thrill was felt over the area of visible pulsation, and on auscultation over the same area a loud murmur was heard. The murmur was harsh in character, occupied both systolic and diastolic periods, but had an exacerbation in its intensity during the systole. It never became inaudible but existed during the whole of the cardiac cycle. The urine contained a trace of albumen. The day after admission the patient suddenly got out of bed, and on the nurse reaching him he was found to be moribund. Post mortem: A large aneurysm of the ascending and transverse portions of the arch of the aorta was found communicating with the vena cava superior about an inch and a half from its commencement by a small opening, evidently of some age. A second aneurysm was found at the junction of the thoracic and abdominal aorta. The collateral venous circulation, arising from obstruction in the vena cava superior was dissected out and described. *Remarks.*—1. *The rarity of the occurrence.*—Seven cases are mentioned by Dr. Peacock in vol. xix. of the Pathological Society's Transactions. Dr. F. C. Turner reported a case occurring at the London Hospital in 1885; and in 1887 Dr. Gulliver showed a similar case at the Pathological Society. These two cases are to be found in vols. xxxvi. and xxxviii. of the Society's Transactions. 2. *The question as to when the rupture occurred.*—This probably took place ten days before death, when the patient was seized with sudden pain in the neck, and rapidly became very cyanotic, with extreme oedema of the neck and right arm. The characters of the opening with its rounded edges do not agree with the hypothesis that it occurred at the time of death, and would fit in much better with the view that it occurred some ten days previously. 3. *The significance of the murmur heard over the aneurysm during life.*—The murmur was continuous, but diminished in intensity during the last part of the diastolic period, and increased during the systole. It had a peculiarly harsh quality, resembling the bruits described in the case of arterio-venous aneurysms occurring elsewhere.—The PRESIDENT asked whether the vena cava was occluded to any extent below the point of rupture. It looked as if the main force of the arterial blood stream had been into the veins of the right side of the head and neck.—Dr. HADDEN said he had seen two cases under Dr. Bristowe. In both there were the same continuous murmurs as described by Dr. Arkle. He had performed the post-mortem in the first case and found the connexion between the superior vena cava and the aneurysm. It was important to remember that this was a diagnosable condition, for the only theory that could be mistaken for it would be a ver vascular growth.—Dr. CHARLEWOOD TURNER said that in the case brought forward by him the vena cava was entirely obstructed by the aneurysm. It looked as if the aneurysm had gone right through the superior vena cava and cut off the trunk vessels from its tributaries.—Dr. OLIVER said that a large number of cases of aneurysm of the aorta were met with in his part of the country. He had not seen them burst into the vena cava, but into the right auricle. H

agreed with speakers as to the peculiar character of the murmur heard during systole. Where there was regurgitation there might be a difficulty in arriving at a diagnosis. Referring to the inequality of the pupils, he said he had noticed this condition in cases of serious regurgitation, and he was inclined to attribute it to stretching of sympathetic fibres over the heart itself. He called attention to the difference in the contents of the two sacs: near the heart there was no lamination; but lower down, where the current of blood was slower, lamination was well marked.—Dr. FINLAY asked whether there was not a diastolic murmur at the heart's apex in these and similar cases. He said he had never met with a diastolic murmur at the base in thoracic aneurysm, unless the valves were incompetent.—Dr. BRADFORD, in reply, said the vena cava was not occluded below the sac of the aneurysm, and was quite normal. The murmur heard was systolic, and not diastolic.

Dr. OLIVER (Newcastle-upon-Tyne) read a paper on a cause of Speedy Death in Heart Disease, in which he drew attention to gastro-enteritis as a not infrequent cause of the rapidly fatal termination of cardiac disease. He gave a brief record of three cases out of seven or eight which had come under his notice within the last few years. The patients were all upwards of thirty years of age, were all men, and in none of them, either from the previous history or during the course of the illness, could anything be found likely to lead one to suspect that death would be induced by the setting up of a rapidly fatal form of gastro-enteritis. In all, the symptoms were of an acute character; they were frequently very quickly developed, and death preceded by collapse occurred either in a few hours or within a few days. The first symptoms complained of were pains over the region of the stomach and vomiting. Although aortic and mitral regurgitation were the forms of cardiac disease present in all of his cases, Dr. Oliver was not inclined to exempt other forms of heart disease from the tendency to end thus. Convallaria had been the drug taken during life by most of the patients, but several considerations made it clear that the drugs were not responsible for the gastritis. The writer thought that heart disease and gastro-enteritis stood in some obscure causal relationship to each other.—Dr. ANGEL MONEY had observed the mucous membrane of the stomach to be frequently covered with slime, congested, and hæmorrhagic in cases of death from chronic heart and chronic liver disease. He had been struck with the remarkable cleanness of the tongue in some cases of chronic heart disease, in which there was severe epigastric pain, vomiting, and sometimes diarrhoea.—Dr. BARLOW corroborated the previous speaker. He thought that not all cases of the kind described in the paper would be found to be ascribable to the state of the gastric mucosa. At the same time he recognised fully the importance of the changes mentioned, and of the clinical symptoms. He showed a specimen removed from a lad aged eleven, in which the congested and hæmorrhagic states of the stomach were well marked.—Dr. PERCY KIDD corroborated the two previous speakers. He had known severe stomach symptoms to be relieved by cardiac drugs—digitalis and strophanthus.—Dr. A. MORISON thought the vomiting reflex and the congestion secondary. He did not think death was due to the gastric disease.—Dr. K. FOWLER referred to Dr. Mott's paper on Disease of the Heart Muscle published in the *Practitioner*. He asked on what grounds acute gastritis was diagnosed.—The PRESIDENT was much interested in the paper. In aortic disease there was no great mechanical tendency to venous congestion and stasis.—Dr. OLIVER, in reply, said the gastritis met with in his cases was not due to chronic heart disease at all. Only part of the stomach was acutely congested; sometimes it occurred in patches. He observed that acute gastritis was rare, and yet he had met with seven or eight cases within four years. He could see no difficulty in accepting his explanation.

Mr. JONATHAN HUTCHINSON read a paper on a form of Eruption allied to Kaposi's Disease and to Prurigo Æstivalis Adolescentium. The case upon which chiefly this paper was based was that of a lad who had been under the observation of the author from the age of eight to that of twenty. It was illustrated by a portrait taken at the former age, which showed the face covered with vesications, which ulcerated and left scars. The eruption was especially severe in the ears; but it affected, in addition to the whole face, the backs of the hands, and at times sparingly the whole body. It had begun at the age of two by vesications on the face and hands, and it had been remarkable through-

out its course for a tendency to relapse in summer. In winter it usually got well. During six years, under Mr. Hutchinson's observation, it had never been wholly cured, excepting in cold weather; but its attacks, quite independently of treatment, became less and less severe, and finally ceased. The lad has now for more than a year been nearly well, but his face is scarred all over as if from severe small-pox, and his ears are reduced to gristle, covered by thin scar. Through the whole of this long liability to skin diseases the lad remained in good health. He never suffered from ordinary chilblains, but the spots in his hands ulcerated and left small scars. There were in the family other brothers and sisters, but none of them suffered in a similar manner. Mr. Hutchinson said that he brought the case before the Society partly because after a very long duration it was now complete, while the excellent portrait by Burgess enabled all to realise its original condition, but chiefly because it showed, he thought, a connecting link between Kaposi's disease and certain other maladies. Essentially it was an example of a vesicating inflammation of exposed parts produced by exposure to the sun. The essential feature of Kaposi's disease was the same liability, but the morbid changes proceeded to yet greater lengths. It was, however, unwise to isolate extreme forms of disease and disassociate them wholly from those of lesser severity which led up to them. Another alliance which the present case had, and one perhaps more close, was with what he (Mr. Hutchinson) had many years ago described as prurigo adolescentium, or prurigo æstivalis. Although it seemed somewhat absurd to call a condition attended by large vesications, as in the present instance, a prurigo, yet he felt sure that all gradations might be found between the two maladies. As an illustration of this latter affection, he referred to a portrait published by the New Sydenham Society. In that case, as in this, a young boy was attacked by an erythematous papular eruption on the face and hands, which was always worse in summer, which troubled him from the age of infancy till the age of twenty, and finally left him covered with scars. He had seen many similar, but less severe, examples of the same. One which he believed to be similar had been shown by Dr. Perry at a meeting of the Dermatological Society. In it also the patient had got rid of the disease on completing adult age, but with the ears much damaged and the face covered with little scars. The cases differed from Kaposi's disease in that there was no tendency to freckles or stigmata. He did not by any means contend that they were identical with that malady, but that they were interesting and important examples of an allied condition, or, in other words, of a disorder of the same regions induced by similar causes. He believed that the condition had not yet been described excepting in connexion with the New Sydenham Society's portrait, which, although similar, was not an exact parallel.—Dr. MONEY mentioned a case which had stopped at vesiculation and had not gone on to ulceration. He said there was a markedly neurotic history in this case, and asked whether anything of the kind had been noted by Mr. Hutchinson.—Dr. GEORGE EASTES pointed out that the eruptions appeared mostly on the covered parts of the body, a fact which hardly pointed to the sun as the direct cause.—The PRESIDENT said that the cases were interesting as examples of special tissue idiosyncrasy.—Mr. HUTCHINSON, in reply, admitted that the rash was seen on covered parts of the body. He thought it was associated with the summer heat as well as to exposure to the sun; hence he had called it a "summer" eruption. The same remarks applied to Kaposi's disease, which undoubtedly extended from exposed parts on to the covered parts. He had not found any neurotic history.

Dr. BISS read a case of Circumscribed Scleroderma (Addison's Keloid), with remarks upon the etiology of the disease. The patient, a girl aged fifteen, was also the subject of congenital stenosis of the pulmonary artery. She had never suffered from any illness except whooping-cough, until four years ago, when a whitish indurated patch appeared on the outer side of the right arm a little above the elbow, which had gradually extended up to the shoulder, following, roughly speaking, the course of the musculo-spiral nerve. Vascular mottling was observable around the indurated patch, and pigmentation like that of a fading bruise, especially at the upper (newest) part. Occasional itching had been felt in the affected region, with frequent cramp-like pain running down to the fingers, and on a few occasions flexor spasms of the index finger and thumb. The muscles adjacent to

the skin lesion were much wasted, especially the deltoid and triceps; and some wasting, though to a much less degree, had taken place in the extensor muscles of the forearm. No other portion of the skin in any situation was altered. Tactile sensibility was preserved in the affected area, all the motions of the limb were easily and perfectly performed, but the grasp of the hand appeared to be somewhat weaker when compared with that of its fellow. The faradaic excitability of all the muscles was unaffected, as also were their galvanic reactions. A loud rough systolic bruit was heard all over the præcordia, most intense at the second left cartilage, but not conducted into the carotids; and there was a definite impulse at the lower sternum. The second sound was clear in every situation, and free from bruit. Nothing abnormal was found in any other organ. The treatment was the administration of liquor arsenicalis, with daily galvanism and massage of the whole limb; but no improvement was noted. The possible etiological relations of the disease with rheumatism were briefly discussed, it being supposed that intra-uterine endocarditis of rheumatic origin was the cause of the pulmonary stenosis found in this patient. The coincidence of rheumatism and of valvular lesions, noted by other observers, was alluded to; as also of cold and wet having been in some cases noted as the apparently exciting cause of scleroderma. The fibrotic indurative character of the lesions was compared with those characteristic of rheumatism, and the influence of that disease upon the lower layers of the integument, as in erythema nodosum; and the subcutaneous nodules noted by Dr. Barlow and other observers were spoken of. The neurotic theory of causation was briefly examined; the asymmetry of the lesion; its correspondence with the course of the musculo-spiral nerve, the wasted muscles being those supplied by that nerve and its branches; and the sensory and motor symptoms connected with the area of distribution of those nerves were pointed out as links of evidence possibly indicating neurotic influence. The cause of the muscular atrophy was then discussed, and after central and peripheral nerve causes had been reviewed and set aside, it was contended that the contraction of the sclerotic tissue formed upon and between muscles, nerves, &c., and the pressure thus brought to bear upon the nerves, bloodvessels, and lymph channels of the affected parts, was the true explanation of this atrophy.—Mr. JONATHAN HUTCHINSON said that his experience would not bear out the idea that any connexion existed between the disease and rheumatism. He did not think it began in connexion with any special exposure. Diffuse scleroderma often occurred after cold, but not that limited form of the disease. No hypothesis whatever had been suggested to him by the friends of his patients. The only remarkable feature worth mentioning was the manner in which the disease was always limited to the area first attacked, with only the very rarest exceptions. He thought the atrophy in the subjacent muscles was due to something more than the pressure of the skin. Some nerve influence was present to cause the defect, and this was proved by the concomitant existence of atrophy of nerves, bones, &c. The atrophy was only absent in slight superficial cases, occurring in elderly people. The severer cases occurred early in life. He mentioned that he had never met with a perfectly symmetrical case of the local disease; it might be bilateral, but even then was far from symmetrical. The diffuse form was often symmetrical. He ascribed the lesion to some central influence brought to bear on the vaso-motor nerves, just as in herpes zoster the sensory nerves were attacked.—Dr. BISS, in reply, explained that he did not wish to convey that the atrophy was caused by skin pressure alone, but by extension of the process deeper. In support of the hypothetical association with rheumatism, he quoted a case from Addison's recorded cases, in one of which the outbreak of the disease followed closely on exposure.

MEDICAL SOCIETY OF LONDON.

Paralysis of Trapezius.—Osteo-plastic Resection of Foot.—Congenital Abnormality of Upper Extremity.—Tracheal Murmurs in Cardiac Disease.—Tumour of Upper Jaw.—Erythema Multiforme.

AN ordinary meeting of this Society, the last of the present year, was held on Dec. 17th, Sir Wm. MacCormac, President, being in the chair. It was a "clinical evening," and was devoted to discussion of the numerous interesting cases exhibited.

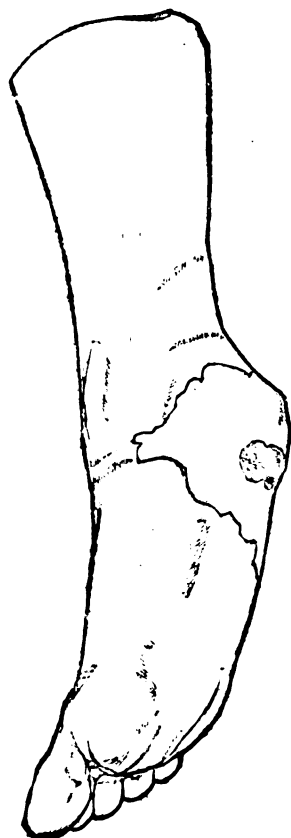
Dr. HUGHLINGS JACKSON showed a girl aged twelve who had a Malposition of the Left Scapula consequent on paralysis of the inferior part of the trapezius, that part of the muscle supplied, or mainly supplied, by the spinous accessory nerve escaping. The paralysed portion did not act to faradisation. He had never observed a case of the kind before, but had not rarely seen paralysis and wasting of the upper division of the trapezius (along with paralysis of the sterno-mastoid, larynx, and palate) from intra-cranial disease. The lower angle of the child's scapula was raised to about the level of the fourth dorsal vertebra, three vertebrae higher than the right one; it was nearer the middle line and was "cocked out." The left supra-clavicular space was deeper than the right. The latissimus dorsi acted to faradisation, but was supposed to have slipped off the inferior scapular angle; the serratus magnus acted too, but probably being at a disadvantage in the abnormal circumstances, its action was not so easily obtained as that of it fellow. To be mentioned as contributing to the deformity were the action of the levator anguli scapulae, which muscle was in great relief, and the weight of the arm. A full account of the peculiarities of such a case was to be found in Duchenne's "Physiologie des Mouvements," chap. 1. The patient had no other symptoms. She had a fall on her back in October, 1887, which did not hurt her at the time, though she had pain in the middle of the back a few days later, and her mother then noticed that the left shoulder "stuck out," but said that the child had been "on one side" about two years before. Mr. Wainwright had produced in the dead subject a deformity like that presented by cutting away the portion of the trapezius extending from the root of the spine of the scapula to the twelfth dorsal vertebra, together with the lower strands of the serratus magnus.—Dr. C. E. BREVET commented on the exceeding rarity of the condition. He had tested the muscles; the serratus magnus acted to the faradic current, though weakly. The scapula was drawn up in a remarkable way, and this condition could occur only in partial paralysis of the trapezius.—Dr. C. Y. BISS asked what was the cause of the lesion.—Dr. JACKSON, in reply, said it had followed a fall, but whether the latter was the cause or the consequence he could not say.

Sir WILLIAM MAC CORMAC showed a second example of the operation of Osteo-plastic Resection of the Foot named after Wladimiroff and Mikulicz. In the former instance the operation was performed for disease of the astragalus and os calcis and the soft parts covering them, the result being rapid and complete recovery, the patient walking long distances without difficulty.¹ In the present instance the operation was undertaken on account of a severe injury to the heel, which had caused extensive sloughing of the soft parts and rendered the foot useless. The steps of the operation were similar to those in the former case, and the result, as in that one, was a bony ankylosis of the divided surfaces of the tibia and fibula on the one hand, with the cuboid and cuneiform bones on the other. In January, 1887, the patient, a youth aged twenty, sustained a severe injury to his right foot in a planing machine. The whole of the soft parts covering the heel were crushed and torn, and separated from the bone underneath, and for this he was admitted to the Stockton-on-Tees Hospital. The flap was not completely detached, so an attempt was made to preserve it by replacing and suturing it, but eventually it sloughed off, leaving the tuberosity and under surface of the os calcis exposed. The skin on the outer side of the foot also sloughed, and the extent of the damage could be estimated by the outline shown in the annexed engraving of the subsequent cicatrix. (Fig. 1.) At one place, however, over the most prominent part of the os calcis, the ulcer refused to heal, and remained open until he came under the care of Sir W. MacCormac in St. Thomas's Hospital, in June of the following year. On admission, the foot of the patient was found in extreme extension, and the heel, covered by a thin cicatrix, adherent to the bone. Hyperesthesia was well marked over the whole surface of the scar, and very intense at certain points, as if nerve filaments were embedded in it. It was evident that no apparatus to bring the foot into better position would be tolerated, and were the malposition rectified the patient would be quite unable to wear any kind of boot; the sensitive scar would not bear the smallest pressure, and, as the bone was unprotected, fresh ulceration would certainly occur. Mikulicz's operation was therefore determined upon, as offering the best means of

¹ For details see THE LANCET, vol. i. 1888, p. 886.

remedying the lad's condition. It was performed in the manner before described, and the limb put upon a straight splint with plaster-of-Paris bandages. The patient made a good recovery (see Fig. 2), but somewhat slower than in the former case as regarded the union of the cut surfaces of bone. Eventually, however, all became soundly healed, and the patient went to a convalescent home on Oct. 31st, with firm but not bony union. At present he is able to walk,

FIG. 1.



Extensive injury to heel, for which Mikulicz's osteo-plastic operation was performed.

FIG. 2.



Stump following the operation.

with the cut surface of bone soundly ankylosed and with every prospect of a useful foot. The power of progression is not far advanced, as only three weeks have elapsed since he first commenced to walk on the stump.

Mr. J. H. MORGAN showed a child which had been brought to the Hospital for Sick Children on account of an Arrested Development of the Right Upper Extremity. The parents had three other children, all of whom were normally formed. The child was born at full term. The scapula appeared to be of normal size and development, but at the apex of the spine was a deep pucker of skin attaching it at this point to the bone. There was a very abbreviated humerus, articulating normally with a glenoid cavity; a very short forearm, in which the two bones were represented, was joined to this rudimentary humerus, and the whole extremity was covered by healthy skin, with an excessive amount of subcutaneous fat. The hand was represented by four digits, the thumb being present, but occupying the position of the index finger, the remaining digits representing apparently the second, third, and fourth respectively, the index being absent. The child was healthy and well formed in other respects. He referred to another case, in which, though the left leg was of normal shape, the femur was much shortened, and on the outer side of the limb the skin was puckered. It had been suggested that these puckers were scars of intra-uterine suppurations; but in neither of the cases he had related was there any foundation for such a hypothesis.—Dr. HADDEN had a case under observation which showed symmetrical dimpling over the shoulder, a similar condition being pre-

sent in another member of the same family. There was no history to account for it.—Mr. PITTS referred to a case he had previously shown at the Society of double congenital subcoracoid dislocation associated with puckering of the skin. In St. Thomas's Hospital Museum was a cast of a condition similar to that of Mr. Morgan's case, but occurring in an adult.—Dr. BEYVOR remarked on the fact that the hand appeared, pathologically speaking, to be nearer the head than the rest of the extremity, and in deformities was usually preserved at the expense of the remainder of the limb.—Dr. HARRIS related two cases of malformation in infants, both being associated with a history of maternal fright during pregnancy.—Mr. MORGAN, in reply, said that a history of fright was usually forthcoming in these cases, and much reliance could not be placed on it.

Dr. KINGSTON FOWLER showed two cases of Heart Disease associated with Tracheal Murmur. The first was a man aged forty-seven, who had had two attacks of acute rheumatism, in the second of which, occurring eight years ago, the aortic valves were affected. At the base there was a double murmur, the diastolic portion being conducted downwards to the apex, where also during normal respiration a faint systolic murmur was audible. When the breath was held, a loud, short, high-pitched systolic bruit became evident, and a murmur of similar character appeared in the trachea at the episternal notch, the aortic systolic being also audible there. The second case was that of a man aged twenty-nine, who gave a history of cough in the winter for four years, but none of rheumatism. Three years ago, after running, he was seized with syncope, and lost consciousness for ten minutes, and ever since had been short of breath on exertion. There was a loud, rough systolic basic bruit, conducted upwards and audible in the trachea. Dr. Fowler remarked that, although both these patients had valvular disease, the cause of the tracheal murmur differed. In the latter the murmur of aortic stenosis, as was commonly the case, could be heard on auscultation over the trachea. In the former, however, the murmur was respiratory. At each systole of the hypertrophied left ventricle air was displaced from the overlying lung and bronchi, and the sudden puff thus produced was audible in the trachea. In reviewing the literature of the subject, Dr. Fowler referred to his own paper in the Society's Proceedings on Functional and False Murmurs, in which he had drawn attention to the frequent occurrence of tracheal bruits; to a paper by Dr. Drummond on Auscultation of the Trachea and Mouth in Thoracic Disease, in which it was stated that such a murmur was found in seventeen out of twenty-three cases of aortic aneurysm; and to Dr. Moxon's suggestion that in young nervous athletes in whom this bruit was present it was due to the encroachment of a distended left auricle on the left bronchial tube, though the fact that it was systolic in time was against this view. Other causes were temporary excited action of the heart, phthisis with consolidation or excavation of the left lung, and contraction of the left chest after pleural effusion. Tracheal auscultation was of practical utility, because the discovery of a systolic murmur there often confirmed a suspicion that an apex murmur was of "respiratory" origin. The "air puff" in the trachea differed from a murmur conducted there from elsewhere, in being very sudden, short, and sharp, and in usually ceasing when the mouth was closed and the nose held.—Dr. BISS could not agree with the explanation given, for if it were correct such a bruit ought to be present in every case of hypertrophied left ventricle.—Dr. HADDEN said that if it were aural it ought to be heard as loudly behind as in front.—Dr. ORMERON had heard murmurs of this kind on inspiration only.—Dr. FOWLER replied that often many abnormal conditions combined to produce the bruit.

Mr. PITTS showed a case of slowly growing Tumour of the Upper Jaw. The patient, a woman, aged forty-two, first noticed the swelling about twelve years ago. It was preceded by a good deal of toothache, and she had a number of stumps extracted, and soon after had an artificial plate with teeth adapted. She had since on several occasions had to have fresh plates made on account of the increase of the swelling. At present the growth affected the whole of the alveolar portion of the left side of the jaw and also the hard palate; it was apparently bony in character, and without pain or tenderness. It would appear to be of the nature of a hyperostosis of the alveolus. The growth, though progressive, was so very slow that it would have been very doubtful whether operative interference was desirable, and

it was for the purpose of obtaining opinions on this point that the case was brought forward. Mr. Pitts was of opinion himself that it would be better to keep the case under observation, and to be guided by the rate of growth and the amount of inconvenience to the patient.

Dr. CECIL Y. BISS exhibited a case of Erythema Multiforme, occurring in a man aged seventy-four, who was apparently otherwise in perfect health. There was a history of rheumatism thirty years ago, and severe attacks of gout during the last fifteen years. He became unwell on the 4th inst., and, after three days of malaise, an eruption came out, accompanied by sore throat, and much tingling and itching of the affected parts. The rash first appeared on the backs of the hands, and spread rapidly over the extensor surfaces of the limbs, the lower part of the back and abdomen, the nates, posterior aspect of thighs, and arms. The face, neck, and upper parts of the trunk had escaped. Aching and stiffness were felt in the thighs. The eruption consisted of maculæ from the size of a hemp-seed to a half-crown, rapidly increasing in size, and with a tendency to coalesce. They were dark chocolate red, with violet-coloured centres, distinctly raised above the skin. Over the anterior aspect of the thighs the maculæ had coalesced into an enormous patch as large as the whole thigh. The colour could not be wholly displaced by pressure from any of the patches, and over the thigh pressure made no difference at all. It was clear that much subcutaneous hæmorrhage had taken place. In four days the patches had changed to a lilac colour, bordered with raised red edges, and, the patches being rounded, the aspect of the eruption was that of a number of rings intersecting in a gyrate manner. Newer patches had come out principally over the lower part of the legs. The noteworthy points of the case were: 1. The age of the patient and his previous freedom from like eruptions. 2. The severity and amount of the eruption. 3. The abundance of subcutaneous hæmorrhage. 4. The production of two at least of the typical forms (maculæ and gyrate rings) which had given this disease its polymorphic character. 5. The analogies suggested with purpura rheumatica.

Mr. HERBERT ALLINGHAM then demonstrated a case of Resection of the Condyle of the Inferior Maxilla. The particulars of the case were related at the last clinical meeting of the Society (*vide* page 1071).—Mr. PITTS said the case showed the value of early operation in young subjects. He had seen atrophy of the jaw follow fixation for cervical spinal disease.—Mr. MORGAN asked if the amount of alteration in the chin had been noticed; had it preceded or followed the operation?—Mr. ALLINGHAM, in reply, said the jaw, which was atrophied before the operation, had since grown *pari passu* with the boy.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Action of certain Drugs on the Utero-ovarian System.—Accidental Rashes in Typhoid Fever.

THE opening meeting of the Section of Medicine was held on Nov. 16th, the President (Dr. Atthill) in the chair.

Dr. LOMBE ATTHILL said, in discussing the Action of certain Drugs on the Utero-ovarian System, that much obscurity existed as to the action which medicines exercise on the utero-ovarian system, and consequently the greatest empiricism prevailed in prescribing for cases in which the organs referred to were engaged. The great majority of females were under the impression that no medicine of any kind should be taken during the continuance of the menstrual flow, and that to take even a mild purgative would be injurious, and many practitioners shared in this unfounded prejudice. He was perfectly satisfied that none of the ordinary medicines, taken in moderate doses, produced any effect on the function. To this statement one exception must be made; drastic purgatives, taken in large doses, seemed in many women to increase the menstrual flow. When we come to consider the action of drugs in cases in which menstruation (*a*) does not appear at all, or very irregularly, (*b*) in insufficient quantity, or (*c*) is unduly profuse, the first question is, does ergot, savin, quinine, or even strychnine, in medicinal doses, produce any appreciable effect on the muscular fibres of the normal uterus? To him it seemed that writers and practitioners assume that these drugs have this effect, without sufficient grounds to justify their belief. For his part he doubted it. Quinine he had administered daily in doses

from two to ten grains during the menstrual period, and never observed it to produce any pain or discomfort, which it might be expected to do if it induced contraction of the uterine fibre; nor had it ever once among his patients exercised any influence on the amount or duration of the period. His experience of the effects of strychnine was the same. Again, he had given ergot alone, or combined with other drugs, as an emmenagogue, and had never known it to have any effect as such. With reference to the action of drugs in cases in which menstruation is too profuse, or in which actual uterine hæmorrhage occurs, putting aside those cases which depend for their origin on abortion, pregnancy, or parturition, the medicines known as astringents might at once be discarded as useless in cases of uterine hæmorrhage. He did not believe that tannin, tannic, or gallic acid, or any other astringent, had any effect whatever in these cases; indeed, their administration was worse than useless—he believed it to be injurious; and the mineral acids seemed to him to be of no greater value. Full doses of the tincture of the perchloride of iron had, in his hands, sometimes been of great use in checking the loss, but it was always in anæmic women, and its beneficial effects were probably due to the iron it contains, but at best it was a very unreliable agent. Ergot was the only one on which he placed any reliance. With respect to the action of medicines in arresting hæmorrhage where malignant disease of the uterus existed, he had little to say; none could be relied on. He had sometimes thought that the exhibition of Chian turpentine, as recommended by Dr. Clay, did good in this respect, but further experience had lessened his faith in it. Tincture of the perchloride of iron, in full doses, was also sometimes useful, but at best any good done was but transitory.—Dr. J. A. BYRNE said it was an established fact, though difficult of explanation, that certain medicines—e.g., savin, rue, and aloes—have peculiar effects on the female generative organs. This effect was not due to purgation; for it was not found that a good dose of Epsom salts brought on menstruation. No doubt active purgation had occasionally produced it; but a medical practitioner who wanted to produce an emmenagogue effect would not order sulphate of magnesia. It was difficult to explain exactly how the medicines produced the effect. At the same time, it was abundantly clear that savin, rue, and ergot stimulated uterine action. Hence the necessity of careful examination. He considered it a dangerous doctrine to broach that in the early months of pregnancy ergot might be given with perfect indifference as to the result. Such a procedure did not accord with his experience. In threatened abortion he would feel it his duty not to stimulate but to pacify the nervous system; and no matter how the action of ergot might be explained, it acted as a stimulus to the uterine fibres. Electricity, too, instead of retarding, would probably expedite the expulsion of the fœtus. As regarded the question of nomenclature, he did not see why the word “emmenagogue” should be discarded; it was as good a name as could be suggested.—The PRESIDENT, replying, said he had never experimented medicinally with an impregnated uterus, and he had never given ergot except in cases of threatened abortion. He believed that ergot had no effect in producing abortion, though given with the intent of producing criminal abortion; and his belief was founded on extensive experience in administering ergot as a preventive of post-partum hæmorrhage. Ergot was much more likely to prevent than to produce abortion, and he had prescribed it hundreds of times. He had never given Epsom salts as an emmenagogue.

Dr. J. W. MOORE read a communication on Accidental Rashes in Typhoid Fever. In his paper the author explained that it was not his intention to allude to the essential rose-spot rash of typhoid fever; or to the more common epiphenomena of the disease connected with the skin, such as *taches blândres*, purpura spots, vibices, and sudamina, or sweat vesicles; or, lastly, to the coexistence with typhoid fever of other specific diseases showing characteristic eruptions—such as scarlatina, measles, variola, and, above all, typhus. He desired rather to draw attention to certain other accidental or adventitious appearances of the skin, which were of somewhat rare occurrence and, from a diagnostic point of view, of considerable importance. These were—(1) simple hyperæmia; (2) miliary eruptions; (3) erythematous rashes; and (4) urticaria. Dr. Moore then detailed a series of cases which exemplified the occurrence of these accidental rashes, and summed up as follows:—1. Not infrequently, in the course of typhoid fever, an adventitious eruption occurs, either miliary, urticarious, or

erythematous. 2. When this happens, a wrong diagnosis of typhus, measles, or scarlatina respectively may be made, if account is not taken of the absence of the other objective and subjective symptoms of these diseases. 3. The erythematous rash is the most puzzling of all; but the prodromata of scarlet fever are absent, nor is the typical course of that disease observed. 4. This erythema scarlatiniforme is most likely to show itself at the end of the first, or in the third week of typhoid fever. 5. In the former case, it probably depends on a reactive inhibition of the vaso-motor system of nerves; in the latter, on septicæmia, or secondary blood poisoning; or both these causes may be present together. 6. The cases in which this rash appears are often severe; but its development is important rather from a diagnostic than from a prognostic point of view. 7. Hence no special line of treatment is required beyond that already employed for the safe conduct of the patient through the fever.—Dr. DAUFFEY asked whether there had been eliminated the possibility of the rash being due to drugs administered during the course of the disease.—Dr. POLLOCK pointed out as remarkable that, while among the writers on erythematous rash some did not allude to it at all as occurring under similar conditions of fever, others only in a slight degree, and the rest observed that the rash occurred in the first week or early stage of the fever, in his case the rash did not appear until the third week, although the rose-colour spots had been out for a fortnight before. The pulse was never very high, but on the night of the eighteenth day it suddenly rose to 108°, and the rash was then noticed coming over the back, chest, and abdomen. Next day there was a sudden collapse—the temperature fell to 96° and the pulse was low and very weak. On the following day Dr. Moore saw the patient, and on the day after the rash came over the extremities.—Dr. DOYLE did not think Dr. Moore was justified in generalising from particular cases. Instead of reviewing the authorities on the subject of rashes, he thought it would have been better to have given full and particular details of what was observed and done in the cases.—Dr. BEWLEY remarked that, in his experience, in recent outbreaks of typhoid fever, rashes were more common in the third and fourth weeks of the fever than in the early stages, contrary to what was mentioned in the text-books.—Dr. WILLIAM MOORE remarked that, looking for many years at enteric fever, he had seen erythematous eruption, as a rule, early in the disease, not late; and in scarlatina there was an unmistakable temperature, which, in his view, was the key to a differential diagnosis.—Dr. J. W. MOORE, in reply, said that in Case 1 no medicine had been administered for some days, and the only possible cause of the efflorescence was the extreme rise of temperature, followed by sweating. It was not true erythema, but an efflorescence on the skin. In Case 2, he understood from Mr. Foy that the patient had been taking morphia to produce sleep, but only in small quantities; and that drug could scarcely have had anything to do with the development of the military eruption. In Dr. Pollock's case only quinine in two-grain doses had been given several days before the rash appeared, but it disagreed and was stopped. As regards Mr. Doyle's criticism, so far from generalising, the cases in question were brought forward as typical ones, with the object of drawing attention to a rash which occasionally occurred in typhoid fever resembling scarlet fever, and the object of the paper was to indicate how to distinguish between erythema and true scarlet fever.

Reviews and Notices of Books.

On Cancer of the Uterus. Being the Harveian Lectures for 1886. By JOHN WILLIAMS, M.D., F.R.C.P., Professor of Midwifery, University College, London, &c. Pp. 119, with 18 Plates. London: H. K. Lewis. 1888.

THESE lectures originally appeared in the pages of THE LANCET shortly after their delivery before the Harveian Society. They are now published in collected form and illustrated profusely. It has rarely been our lot to examine critically a clinical monograph of such excellence. The value of the work lies in the threefold manner in which it has been constructed—facts gained from clinical and from pathological observation, and reasoning from these

facts in order to gain an insight into the natural history of the disease and the rational methods of its treatment.

We heartily commend the author's advocacy of laboratory research in aid of bedside investigation, for, as he insists, the microscope gives valuable information as to the nature of the malady whilst yet in its earliest phases—long, perhaps, before the clinical features are sufficiently pronounced to enable a positive diagnosis to be made; and here, be it noted, the microscopical examination must not be limited to the debris derived from scrapings, but must include sections of portions of the morbid tissue.

The work is divided into sections, as the cancerous disease affects respectively the portio vaginalis, the cervix, and the fundus uteri. For the sake of differential diagnosis there is also included a concise account of the anatomy and development of so-called erosion, ulceration, or abrasion of the os uteri. As Dr. Williams contends, the condition is neither an ulcer, an abrasion, nor an erosion, for "there is no loss of tissue, and the surface is covered by epithelium, but it is epithelium of the columnar kind. The columnar epithelium has encroached upon the territory of the squamous and displaced it," and "a so-called 'erosion' differs from cancer in that the epithelium consists of a single layer and assumes no aberrant forms, and from adenoma of the cervix in that the glands are comparatively superficial." As regards the origin of the "glands of erosion," the author considers Ruge and Veit's theory, that they are developed from the deeper layer of the surface stratified epithelium, as an improbable one, and contends that they are either formed from a downward growth of the glands of the lower part of the cervix, or by a direct extension from the cervix to the os of the columnar epithelium of the former. We meet with the important assertion that erosion and cancer of the cervix are much alike in their early stages. As regards cancer of the portio vaginalis, it is shown that this is always of the squamous variety, that it has little tendency to infiltrate deeply, but is disposed rather to extend laterally. Dr. Williams describes two forms of malignant disease of the cervix—malignant adenoma and cancer proper. In the former, he asserts, the epithelium retains its normal arrangement and form, whilst in the latter there is aberration from the healthy type in each of the above-mentioned particulars. We would, however, emphasise the author's prefix "malignant" to these adenomata. They are what are commonly known as adenoid or glandular cancers. They differ anatomically from the glands of erosion in that they extend deeply into the tissues of the cervix, and grow continuously unless extirpated by operation. True cancer of the cervix is demonstrated to start from the cervical glands, and not from the surface epithelium of the canal. It has a preference for the posterior lip. We give the following quotation as having an important bearing on the question of operative procedure for removal of the disease: "The lines of growth of cancer of the cervix are mainly outwards and downwards, in such a direction as to involve the portio vaginalis and the vesico-vaginal and recto-vaginal septa, but respecting the mucous membrane of the vagina." The author, in a closely reasoned argument, shows that laceration of the cervix is not a common cause of cancer, and that it is undesirable to resort to Emmet's operation for the repair of such lacerations. Cancer of the cervix is proved statistically to select the decade of life covering the menopause; whereas, on the other hand, cancer of the fundus is rarely seen under fifty years of age. Cancer of the fundus is usually of the diffuse variety, although examples of the nodular variety are occasionally met with. The disease which originates in the glands is sometimes associated with a villous outgrowth, although as regards origin it is uncertain which has precedence in point of time. When coexistent and amal-

gamated with uterine myomata, the cancerous element does not originate in the former, but invades it in the continuity of its growth.

The concluding pages of the work are occupied by a discussion of the relative values of the two methods of operation—supra-vaginal partial extirpation, and complete removal of the uterus. Total excision of the organ is the only procedure which offers a reasonable hope of cure when the body is affected, and this is better done through the vagina than by abdominal section. Where the disease is limited to the cervix or to the cervix and the adjacent part of the mucous membrane of the body, the partial operation is considered preferable to complete removal, as being less dangerous in itself whilst equally valuable as a means of relief and possible cure.

The book is a perfect example of what a clinical monograph should be. There is no appeal to transcendental pathology, no resorting to exploded and current theories save for the purpose of giving point to the author's convictions as formed from years of study both at the bedside and in the laboratory. The rules of practice laid down are fully warranted by the careful and complete details of facts observed and recorded.

We cannot too strongly recommend these lectures to members of the profession as worthy alike of their careful study and of the reputation of the author. The naked-eye and microscopical characters of cancer of the uterus are admirably delineated. The letterpress is all that can be desired.

The Carmichael Essays for 1887.—1. *The Medical Profession of the United Kingdom.* Being the Essay to which was awarded the First Carmichael Prize of £200 by the Council of the Royal College of Surgeons in Ireland, 1887. By WALTER RIVINGTON, B.A., M.B., M.S. Univ. Lond., F.R.C.S. Eng., Surgeon to the London Hospital, Lecturer on Surgery at the London Hospital Medical College.—2. *The Medical Profession in the Three Kingdoms.* The Essay to which was awarded the Carmichael Prize of £100 by the Council of the Royal College of Surgeons in Ireland, 1887. By THOMAS LAFFAN, M.C.P.I., Cashel.—Dublin: Fannin and Co. London: Longmans and Co.; Baillière, Tindall, and Cox. Edinburgh: MacLachlan and Stewart. 1888.

THE Carmichael Essays are becoming quite valuable as books of reference for all matters of fact and of opinion respecting the organisation and condition of the profession. We owe a debt of gratitude to Mr. Richard Carmichael for his generous bequest of £3000 to the College of Surgeons in Ireland, out of which two prizes of £200 and £100 respectively were to be adjudged every four years to the authors of the best essays on—(1) the State of the Medical Profession in its different departments of Physic, Surgery, and Pharmacy; (2) the State of the Hospitals and Schools of Medicine, Surgery, and Pharmacy; and (3) the State and Mode of the Examinations of the different Licensing Colleges or Corporations. Mr. Carmichael during his life was a thoughtful medical reformer. He anticipated and urged much that has since been effected in legislation; he did much to improve and liberalise the College of which he was a distinguished member; and his bequest does much to secure a large and enlightened view of the questions which agitate and affect the profession. It is now twenty years since the first Carmichael Prize Essay was written by Dr. Mapother. It was less pretentious in form and size than its latest successors, but it may yet be read with much pleasure and instruction, and is a link in the chain of continuity between the profession under the early influence of the legislation of 1858 and the present state of things brought about by the Act of 1886. The first Carmichael Prize for 1887 was awarded to Mr. Walter Rivington, surgeon of the London Hospital; the second to Mr. Thomas Laffan of Cashel. The essays are well worth the prizes they have respectively received, and may be

warmly commended to all those who are interested in the organisation of the profession and of its various bodies, in its social and economic aspects, and in medical education and the various schools whose function it is to carry it out, and the numerous bodies, universities, or corporations whose duty it is to bestow medical qualifications on those thought worthy.

Mr. Rivington's essay is a large volume of 1200 pages, giving with wonderful fulness a history of the profession from the Druids down to the admission of the dentists, and, later still, to the reconstruction of the Medical Council in 1886. It is difficult to find anything omitted, and the statistics of examining bodies, of the General Medical Council, of the Army and Navy Medical Services, of Dr. Ogle on the mortality of medical men, of hospitals in England, Ireland, and Wales, of cottage hospitals, of medical students and their strange migrations, make the book a most indispensable one for reference. Ours is a wonderful profession, from the days when archbishops were the apothecaries of kings, or Erasmus was studying Greek under Linacre, to the present day, when Greek in the profession is conspicuous by its absence, but, according to Sir Walter Foster, nearly every man in a provincial town can operate for hernia. And the history of it all is given with much detail and much intelligent criticism by Mr. Rivington.

Mr. Laffan is too well known as a redoubtable reformer to need any introduction to our readers. He does not go so far back with the history of the profession as Mr. Rivington, and his book is a modest volume of under 400 pages. But he, too, gives much valuable statistical information, and he discusses burning questions of present medical politics in a fearless and independent style. He begins his book with a lament that the Act of 1886 should have placed the profession in an increased degree under the rule of the Privy Council, and he does not spare either the Medical Council or the examining bodies for what he considers their shortcomings. One of the most interesting parts of his book is the description of the Irish dispensary system, though his account of the committees which elect the medical officers does not reconcile us to his suggestion that such a system should be introduced into England. His strictures on the Irish workhouses are very severe, and should receive attention. Mr. Laffan displays great interest in the principles of medical education, and would oblige every student to take a degree in Arts before beginning medical work. He strongly supports the apprenticeship system, and will admit no substitute for it; he would place it in the middle of medical education. And he sighs for the time when the Medical Council will carry out its plan for visiting medical schools, of which he says—and many will agree with him—we have too many.

NORTH-WESTERN BRANCH OF THE SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting of this branch held on the 13th inst. a discussion took place upon a paper read at a previous meeting by Dr. Jordan on House Drains, in which all present took part, and the following resolution was passed: "That it is expedient (1) that every local sanitary authority shall have a complete plan of the sewers and drains of the district, a copy of which shall be kept for inspection at reasonable hours by any ratepayer; (2) that no change shall be made in the drainage of any premises, or any addition made thereto, without permission being first obtained by the local sanitary authority, the plans of the same being deposited at the office of the local sanitary authority."

OPEN SPACES.—At a meeting of the Kyrle Society, on Saturday last, to promote the scheme for acquiring the Lawn, Lambeth, as a public park, at which Lord Hobhouse presided, it was announced that the vendor would accept £43,000 for the land, provided the balance of the purchase money was raised by the 31st prox.

THE LANCET.

LONDON: SATURDAY, DECEMBER 22, 1888.

SOME of our contemporaries, who never seem happy unless they have a sensation for their readers, amounting almost to a scandal, have been greatly excited over a paper by Mr. MICHELLI, the secretary of the Seamen's Hospital Society, and late secretary of St. Mary's Hospital, entitled "Hospital Extravagance and Expenditure." We regret that Mr. MICHELLI in his paper should have said many of the things that he has said, that he should have said them in the way he has said them, and finally that he should have chosen this particular moment to say them. We are in the very atmosphere of Christmas, and the hospitals sorely need the benefit of the unstinted benevolence of Christmas-time. Men and women and children with disabling diseases fill our hospitals, or rather do not fill them, as Canon FAREAR has lately reminded us. Dives feeds more sumptuously than ever, with all the disadvantages of plethora to himself; and Lazarus—to the number of hundreds—shivers outside even the hospital doors, because the rich hold back their subscriptions. This is the time when Lazarus's case has the chance of a generous consideration, and unfortunately it is chosen for something like a wholesale charge of extravagance against hospital administration by one who ought to know. The London hospitals are more particularly aimed at in the charges made. We entirely approve of criticism, but it should be well timed, well based, and kindly administered. His criticism was probably not meant to be otherwise. But it lends itself to sensationalism, it is ill timed, and we venture to think that in regard to the great hospitals of London it is very infirmly based. Mr. MICHELLI as good as admits the last point, for his greatest complaints refer to small and special hospitals, whose administration, he says, costs from 50 to 75 per cent. more per bed than that of the large hospitals. Mr. MICHELLI distributes the blame of this alleged extravagance very impartially, and widely, from the house surgeons and physicians, who administer an extra egg or glass of port wine to a patient, and the members of the medical staff, who, he says, use much more expensive and showy instruments in hospitals than they do for their private patients, up to the committees of management, who must be ultimately responsible for the greatest, and what he calls the indirect extravagance—the enormous sums spent in raising money—ranging "in many instances from 25 to 50 per cent. of the sums received from subscribers, who are in utter ignorance that only ten shillings of the sovereign they give reach the poor for whom it is intended." Here a charge of something like positive fraud is made, which should have been substantiated by the most particular data. He goes on to state that "in some instances the cost of collection, printing, stationery, commission, and advertising," which in such instances "eats up half of the money, is, in the accounts, deducted from the total amount collected, and only the balance is placed to the credit of the charity." Such vague expressions as "in some instances" is not enough. Let us have the

instances. Again, as an example of infirm basis for the suggestions of serious charges, we complain of a statement, that "a collector" to several charities had told Mr. MICHELLI that "he had been offered 40 per cent. on new money if he would canvass for a particular small special hospital." We think it unfair to our great hospitals, on such a flimsy ground, to associate them in the same paper with such methods. Before trying to show that the general suggestions of this paper are unjust, and at this moment particularly ungenerous, to those who are conducting our great hospitals in spite of enormous difficulties, let us say one word in defence of the resident medical officers and their superior honorary colleagues. Can anybody imagine that the extra egg, or even the extra sole, or "grapes for that child" ordered by the house surgeon at the instance of a sister or nurse counts for much in the expenditure of hospitals? As to the display of more costly instruments by the surgeons than any private surgeon might be able to take out of his bag, the charge is still more unreasonable. A hospital having hundreds of the most difficult cases to treat should have the latest and the best appliances at hand, and the charity that would withhold such perfection of instruments for surgeons giving their services gratuitously is not worth the name.

But do our great hospitals justify this charge of extravagance? Let it be remembered that the claims on benevolence have multiplied with the growth of the press, that advertisement is indispensable, and that the competition of far less meritorious objects is intense. We do not care to justify all details of expenditure. We willingly admit that subscribers need to look more closely into these details. What is most wanted is that they themselves find, not subscriptions only, but other subscribers, so as to save commissions and advertising expenses. But do our great hospitals deserve to be held up in sensational newspapers, by a hospital secretary and the member of an Association meant to promote the welfare of hospitals, as extravagant? We think not. Let us apply some test. The Hospital Sunday Fund has had this question under its eye very keenly for years, and judges hospitals very much by this test: the relation of cost of management—i.e., incidental expenses of all sorts—to that of maintenance. We acquit our great unendowed hospitals of extravagance. And this answer is given not on the hearsay of a stray collector or a scattered instance or two, but the well-considered statistics of well-known London hospitals. We shall do Mr. MICHELLI the compliment of taking his hospital—the Hospital for Seamen—as a model one. Seamen are the most popular of men, and it may be supposed that the expenses of management in his hospital fairly represent indispensable expenses. Well, what do we find?—that the expenses of management in his own hospital are 13·019 per cent. But taking twenty-four of the hospitals of London—viz., Charing Cross Hospital, the French Hospital, the German Hospital, the Great Northern Central Hospital, Guy's Hospital, the Italian Hospital, the Metropolitan Free Hospital, the Miller Hospital and Royal Kent Dispensary, the North-West London Hospital, the Poplar Hospital, the Royal Free Hospital, St. George's Hospital, St. John and Elizabeth Hospital, St. Mary's Hospital, Seamen's Hospital Society, the Middlesex Hospital, the Training Hospital

(Tottenham), University College Hospital, West London Hospital, Westminster Hospital, the City of London Hospital for Diseases of the Chest, Hospital for Consumption (Brompton),—and taking the average of their cost of management, we find it to be only 13·097 per cent.; while some, such as the London Hospital, are as low as 6·894, and St. George's Hospital is 6·269 per cent. We regard this as a sufficient answer for the moment to Mr. MICHELLI's paper. We are certain the Hospital Sunday Fund is most attentive to extravagance of administration, though it might do more to help the public to choose its hospitals. In conclusion, we must repeat our conviction that great loss will be suffered by the hospitals this Christmas tide through the ill-timed publication of this paper; whilst the amount of harm likely to accrue to the next Metropolitan Hospital Sunday collection is incalculable. And this under the auspices of the Hospitals Association!

WE commented recently upon the returns obtained through the agency of the Collective Investigation Committee of the British Medical Association regarding the effect upon longevity of the use of, and abstinence from, alcohol; and we advised our readers to suspend judgment upon statistics which were obviously insufficient to warrant any positive conclusion upon a great social and moral question. Dr. OWEN's figures have certainly been a severe blow to the teetotal party, who never tire of assuring us that alcohol is a poison, and that even in the strictest moderation its use is in the long run wholly pernicious; but they seem to us to prove too much. If they had shown that the temperate use of alcohol was, for the average man or woman, the safest course as regards health and the prospects of longevity, that conclusion would have commanded wide and influential professional support; but when they go a great step further, and appear to show that systematic intemperance is less injurious to the individual than total abstinence, we feel sure there must be some fallacy in an argument leading to a conclusion so opposed to common observation and experience. We wish to-day to point out that the alcohol question is for many reasons one of extreme difficulty, and that any hasty dogmatism regarding its issues is on every ground to be strongly deprecated. Scientific workers, whose conclusions sooner or later dominate opinion and practice, must above all things avoid both the spirit and the tactics of fanaticism.

What do we know positively and definitely about the effects of alcohol upon the human frame? Very little, it must be owned, if no conclusion be valid which is the object of cavil and assault; but certain deductions command such a preponderance of support from all those whose opinion is of most value, that they may be fairly accepted as true. We need not waste time over the controversy whether alcohol be a stimulant or a narcotic—a useless bit of logomachy, of which the fruitlessness would be immediately evident if disputants could be always compelled strictly to define the terms which they employ with so much freedom; but let us look at the broad facts of the question. Two facts stand out in strong relief—viz., that alcohol in some form is part of the daily diet of the vast majority of the individuals comprised in the most vigorous, progressive, and enlightened races in

the world; and, secondly, that beyond doubt it is a fertile source of disease.

As regards the former point, if the effect of alcohol in every case and in all degrees of moderation were inevitably injurious, we should expect to find that the most vigorous workers and the best thinkers would be compelled to forego an indulgence which *ex hypothesi* would cripple their powers and give their abstaining competitors an immense advantage in the struggle of life. As a matter of fact we find nothing of the kind. The men who do the best work of the day in all the departments of human activity find, as a rule, that strict temperance is absolutely essential if they are to keep in the front rank, but only an insignificant minority of them become total abstainers. Not a few, desirous of making the very utmost of their powers, try total abstinence as an experiment, and deliberately return to the prudent use of alcohol as the better way. These facts are surely incompatible with the theory that alcohol is always necessarily injurious.

On the other hand, it is abundantly clear that alcohol is one of the most fertile sources of disease, and there is immense difficulty in ascertaining where its beneficial effect ends and its injurious effect begins. The physiological amount of alcohol defined as constituting the limit of moderation is obviously quite an arbitrary standard: true, perhaps, for many; untrue, certainly, for some. If all men possessed scientific knowledge, capacity for self-observation, and self-control, we might safely say that each man should find out for himself what quantity of alcohol was a help, and adhere to that as being moderation for him; but it is obvious that these conditions do not exist, and their absence constitutes one of the most fundamental difficulties of the subject. Much would be accomplished if we had satisfactory data to show whether total abstinence is on the average helpful or hurtful to health. We may look for some help towards the elucidation of this problem from the returns of the insurance companies, many of whom now register abstainers and non-abstainers in separate sections. The returns on this subject, if *very* decisive, would possess great value, but they are open to much fallacy. A man becomes an abstainer often from some definite reason, and this reason may affect his prospect of longevity. He may renounce alcohol for the same reason as that which may make him renounce tobacco—viz., that he is of an excitable, nervous constitution, and finds all stimulants injurious; or, on the other hand, as recently pointed out by Sir WILLIAM ROBERTS, a man may abstain because he is of robust physique and feels no craving for any form of stimulation. In fact, in many lives the use or disuse of alcohol is altogether a minor factor in the prospect of longevity, and this fact deprives statistics of much of their apparent value.

Again, the non-abstaining section will include a certain proportion of men who shorten their lives by intemperance, and hence the average of the whole class is reduced by the frailty of a few. This fact tends to give total abstinence an apparent advantage over moderation, and serves to obscure the main issue, which must ever be, Is total abstinence or the prudent use of alcohol the wisest course for those who wish to do the largest amount of good work

in the world, and to prolong their lives as far as may be possible?

We have looked only at the physical side of this question, but we cannot forget that it has also a moral side. The fact that alcohol, apart from its effects upon the body, is a great source of pauperism and crime, should certainly lead us to scrutinise with anxiety statistics which would seem to encourage men in the probably mistaken idea that they can indulge freely without fear of physical injury.

THE inquiry into the alleged lunacy of Major SAMUEL OWEN, held at the beginning of the present month by Mr. NICHOLSON, one of the Chancery Masters in Lunacy, presents us with many features of peculiar, if not uncommon, interest. The investigation was held at the instance of the Major's two sons who petitioned on the ground that their father was of unsound mind and incapable of managing his affairs. The counsel for the petitioners stated that Major OWEN, after serving with distinction in India, retired from the army and took to the study of spiritualistic literature. There was no doubt, he said, that the Major was at present firmly convinced that he was constantly in communication with the unseen world, his theory of life being that he must obey the behests of persons who were neither tangible nor visible to mortal hands or eyes. Every action of his life was governed accordingly, even to the most trivial points. In the house at Ventnor, called Mount Zion, there was one room fitted up in a most gorgeous way, and described as the "Holy of Holies," and into which profane persons were not allowed to enter, but where the most serious communications were alleged to take place between the supernatural and those persons who were allowed by the Major to be present. In this apartment a young married lady, a very strong medium and helper of the Major in his spirit work, was confined of a female child. Major OWEN was stated to be under the belief that the infant was miraculously and immaculately conceived, and expressed great disappointment at the sex of the child, as he thought it would have represented the Second Person of the Trinity. Besides this statement, as reported in the public press, evidence was given of strange and, to say the least, eccentric ceremonies and functions in the "Holy of Holies." According to the evidence of his sons, Major OWEN held that he received commands to go to Egypt to the spirits named "Jesu," "The Eternal," and "Melchisedek," and that the lady whose immaculate conception has been referred to was "not a woman, but an angel, who spent more of her time in heaven than upon earth." Much evidence was also adduced as to the strange mystic beliefs of the Major. On the other hand, evidence was given by a bank accountant that Major OWEN showed himself to be very keen as to his banking account, and had never said anything to lead him to suppose that he was of unsound mind or unable to manage his own affairs; and a retired tradesman, whose tenant Major OWEN was, had never noticed anything unusual either about his conversation or conduct. Major OWEN himself is reported to have shown great acumen and calmness in replying to the questions of the Master; and he asked the jury not to believe the evidence against him. It is stated that the only time the Major appeared at all excited was when he replied to a question as to the origin

of the proceedings against him, his answer being "Money." His counsel, further, read a letter from one of the sons asking his father to lend him £600.

As regards the medical evidence, several witnesses bore testimony on both sides. One Fellow of the College of Physicians stated that, from an interview he had with Major OWEN, he had come to the conclusion that he was not only of unsound mind, but dangerous; and that when he asked him if he would do anything he was told to do by God, the Major said, "Yes, even to stabbing my own son." Another Fellow of the College said he had not the smallest doubt as to the Major's sanity. "He is as rationally sane as man can be, though, in consequence of the abstruse nature of Major OWEN's studies, his views are not easily comprehended by everyone." Mr. NICHOLSON having summed up, the jury, after an absence of thirty-five minutes, intimated their finding that Major OWEN was of sound mind and capable of managing his own affairs. Twelve jurymen were for and eleven against this verdict.

Upon the issues submitted to the jury, and in face of the whole evidence, it is impossible for us to say that the verdict of the jury was a wrong one; and yet the fact that the jury were as nearly as possible evenly divided in their opinion cannot be overlooked as an indication of the estimate in which the Major's sanity and capacity for managing his affairs was held by them. It is the twofold nature of the issue in cases of this sort that gives rise to difficulty and conflict in the minds of a jury, and which naturally leads them to give an alleged, if not an undoubted, lunatic the benefit of a wholesome elasticity of opinion in the matter of his capability to manage his affairs.

Insanity is but a relative term after all, and even when we get the requisite amount of eccentricity of belief and conduct to constitute what we choose to call insanity, it by no means necessarily follows that the individual is unable to manage his affairs. Mere belief in spiritualism or in supernatural agency and influence cannot be held of itself to constitute insanity, any more than a fit of "the blues" can be construed into melancholia, or an outburst of unreasoning fury into mania. It is only when the conduct or the eccentricity arising from any of these states of mind becomes persistently and extravagantly outrageous or indecent, or when it becomes a source of danger, that the sense of social order existing in the public mind comes to demand that the ordinary civil rights and responsibilities of a person so committing himself shall be suspended under the provisions of the laws relating to lunatics. No matter how desirable it may be for the individual's sake to have early recourse to effective supervision and to curative treatment, and no matter how often and how clearly the necessity for this is demonstrated by reliable medical authorities, the public have a perfect right to resist any premature labelling of individual members of the community as irresponsible and incapable lunatics. The public have an equal right—which, to their cost, they often persist in overlooking till too late—of demanding the removal into safe care and keeping those members of the community who, by reason of their mental derangement, are unfit to take proper care of themselves, or are either threatening in their attitude or show more active signs of ultimately proving dangerous. If such persons are per-

mitted to be at large, it must only be on sufferance, and the risk incurred must rest upon the public themselves.

In Major OWEN'S case there was no evidence whatever reported of incapacity to manage his affairs; in fact, the evidence was all the other way. Day by day persons whose sanity is unquestioned show themselves totally incapable of managing their own affairs, pecuniary or otherwise; and it appears not only hard, but unjust, to declare that because a man is more or less eccentric on some points, he is therefore to be debarred from the privilege of spending his money in his own way, more especially if he shows shrewd business habits and a keen general appreciation of the state of his banking account. To elaborate a "Holy of Holies," to parade in a "long white hat trimmed with gold fringe," to visit "Jesu" and "Melchisedek" in Egypt, are, after all, innocent and comparatively inexpensive indulgences, and not to be treated on the same footing as are the squanderings of a lunatic who, having his divining rod over a barren moor, forthwith proceeds to spend his all and mortgage his property in purchasing a supposititious gold mine which gives out nothing but a rubbishy marl. The jury, as we have above intimated, ultimately found that Major OWEN was of sound mind and capable of managing his own affairs.

THE debate which took place at the Medical Society of London on Dr. B. W. RICHARDSON'S paper on the absolute signs of death reopened discussion of a subject which never seems to weary either the medical or the public attention. There is something so appalling, even to the strongest mind and the bravest heart, in the idea of being buried alive, that so long as such a thing is possible there will be a continuous debate on the topic in all circles of the educated community. Dr. RICHARDSON'S essay differed from what has usually been said on the matter in the fact that it enumerated from a long experience the circumstances under which the practitioner may be called to determine whether or not life is extinct, as well as described the immediate tests that ought to be brought into play in order to prove that death is absolute. No less than ten distinct circumstances were assigned as being advanced by relatives of deceased persons on the question of suspended life, to which was added the expressed wish or direction of a person during his or her own life that a skilled examination should be carried out after assumed death, in order to prevent the possibility of interment while yet a spark of life should remain. With most of these circumstances calling for inquiry the profession is more or less familiar, but two were specified that are not generally recognised—namely, simulated death from narcotism caused by chloral, and the same simulation from what the author designated traumatic catalepsy, and the cataleptic insensibility from the shock of an electric discharge, or from lightning stroke, or from concussion. Two cases were cited illustrative of these conditions, both of which might be rendered in the textbooks as new additions to the list of doubtful evidences of actual dissolution. Of the many tests or proofs of death enumerated by the author, there are also two that should be recorded not only as new, but as being exceedingly simple and at the same time strictly physiological in character. The first of these, which has originated with the

reader of the paper, and which Sir WILLIAM MAC CORMAC, the President, commented on so favourably, is the wrist test, or that of putting a splint on the fore part of the wrist so as not to impede any current of blood which may be making its way through the radial and ulnar arteries, and then tying a fillet firmly round the wrist so as to compress the veins firmly on the back of the wrist. If the veins of the hand, under this test, show no sign of filling, the absence of any vital circulation may be declared certain; while, if they fill, the fact of a certain "low-pressure" circulation may be assumed to be present, and therewith an indication of mere suspended life. The second test, new probably to most readers, is that to which the name of MONTIVERDI was attached as its discoverer, and which is called the ammonia hypodermic test. In using this test the operator injects one hypodermic syringe of strong solution of ammonia under the skin of the arm or some other convenient portion of the body. If the body be not dead, if there be the faintest circulation, the ammonia will produce on the skin, over the point where it was injected, a bright-red patch, on the surface of which raised red spots will appear; but if there be absolute death, there will be produced a brown dark blotch, which is definitely conclusive against any possible vitality. One addendum to the indication of putrefaction as a proof of death is also worthy of note. Putrefaction may be delayed by two causes: by coldness of the surrounding air, and by the introduction into the body before death of an antiseptic substance like alcohol; or by a combination of these two causes. In such instances it is the proper practice to force on, so to speak, the putrefactive change by raising the temperature of the room in which the body lies to summer heat, and by adding moisture to the air. This proceeding plays a double function: it affords the body the best chance of restoration if by chance the life is not extinct; and it gives the strongest evidence of death in the quick putrefaction it excites if death has veritably occurred. We noticed in the discussion which followed the paper that Dr. ALTHAUS—whose account of the numbers of persons believed to be buried alive created a very serious impression—gave valuable testimony on the electrical tests of death, a point to which he thought the author had not paid sufficient attention. We noticed also that a question raised by Dr. ROUTH, whether the nearest relative of a dead person or the executor had the legal control over the remains, was not satisfactorily settled. But this anomaly all were agreed upon—namely, that the dead person himself was left out of the disposition, not simply because he was dead and helpless, but because the law would give no effect to anything he might have desired before death as to what should become of his remains.

It has long been known that Birmingham and America have common sympathies, and a recent event will doubtless tend to increase the admiration which the one feels for the other. We can therefore understand the desire of the Birmingham guardians to do everything on an American scale, and to be able to boast of having an infirmary which, as their clerk announces, is "one of the largest in the world." The new workhouse infirmary for the parish of Birmingham is now completed, and will be opened, of course with much rejoicing, on Jan. 9th and 10th, "when the

guardians hope to be favoured with the presence of a large number of those who are in sympathy with their work." If the word sympathy is to be used as an alternative for approval, it is to be hoped that the visitors will consider that size and excellence are not synonymous. The appliances, fittings, machinery, and the planning of the building may be good, but it is possible to have too much of a good thing. This, indeed, is the complaint, and the very serious complaint, we have to make against the new Workhouse Infirmary for Birmingham. This infirmary is actually to contain as many as 1700 beds; lock cases and bedridden cases not or but seldom requiring medicine, will not be treated in the infirmary, but will be retained in the workhouse. The 1700 beds will therefore be occupied by sick persons requiring active medical supervision and treatment.

For this number of persons there is to be a medical staff consisting of a visiting physician and a visiting surgeon, and two resident assistant medical officers. Each of the visiting staff, aided by his assistant medical officer, will have under his care 850 patients; that is to say, if they began work at 8 o'clock in the morning and left off at 10 o'clock at night, and devoted the lengthened period of one minute to each patient, they would not, even if there were no interval for food or rest, succeed in looking at in this way every patient every day. For the proper medical examination of a patient, for a surgical operation or dressing of a single case, no time would, of course, be permitted. We are reminded of an absurd out-patient room story of patients being divided into two broad classes, those who suffered from diarrhoea and those who had coughs; and to these were given tickets, the colour of which indicated which of two medicines they were to have. We could almost imagine that the medical treatment of the Birmingham sick poor is to be conducted on some similar principle, and justification will doubtless be found for proceedings at Birmingham which would meet with severe disapproval elsewhere.

Indeed, we are compelled to believe that Birmingham is a very exceptional city, and the requirements of its poor inhabitants are not the same as for those of the rest of the kingdom, otherwise we should be unable to comprehend how the Local Government Board have given sanction to the construction of an institution which is in direct defiance of one of their most important rules. Among "the points to be attended to in the construction of workhouse buildings," states a memorandum issued by the Local Government Board, are the following: "No single infirmary should, as a rule, be arranged for more than from 500 to 600 patients"; yet Birmingham is permitted to place under one management an infirmary for 1700 people. The vast size of this institution might be held to warrant a claim for special medical control, but there is to be no one with the position of medical superintendent; the visiting physician and surgeon and the two assistant medical officers will, we presume, have no administrative functions; they will, we imagine, merely prescribe and operate, the whole charge of the management devolving upon the master and matron. We have no hesitation in saying that it is impossible the sick can be properly cared for under these circumstances. The varying wants of sick people needing personal attention requires a detailed supervision, of which there can be none in the Birmingham Infirmary. It would

be interesting to know how an institution, which fails in these important medical respects has been approved. Only last week we commented on the apparent abandonment by the Local Government Board of the medical inspection of Poor-law institutions, and we referred to the preventable disease with which some were now visited; it would appear as if both the local and central boards had proceeded in reference to the new infirmary without any medical guidance, and this can be the only explanation of the erection of a building which is thought to be worthy of admiration because it is one of the largest in the world!

Annotations.

"No quid nimis."

OPERATIVE SURGERY AT FINAL EXAMINATIONS.

THE Committee appointed by the Council of the Royal College of Surgeons to consider whether an examination in operative surgery should be instituted as a part of the test for the Membership of the College have reported against its desirability at present, and this report has been approved and adopted by a majority of the Council. Their opinion, and we think the opinion of the majority of the teachers in London, is that, however desirable such an examination may be, it cannot be carried out with advantage under the existing circumstances at examinations where a very large number of candidates present themselves. At the examinations held by the Conjoint Board in England every three months, 200 or more students are tested in surgery, and if operations of emergency only are performed by every candidate on the dead subject, at least twelve bodies must be forthcoming at each examination. If a thoroughly fair and appreciably searching test be demanded in operative surgery, twice this number must be provided. We are quite sure that, unless minor operations be mainly confined to amputations of fingers and toes, a much larger number than twenty-four annually, as suggested by Sir William Stokes in his letter to us last week, would be required by the Conjoint Board in England, and he omits altogether the increased supply required by teachers of operative surgery in giving a thorough course to their individual students which this change would involve. We do not see how the supply for the London schools can be materially increased, for it is well known that every effort has been made by the Anatomical Committee to secure unclaimed subjects in London and the neighbourhood; and some of the provincial schools, even now, have many difficulties to contend against in order to obtain a due number of parts for every student to adequately dissect for himself the entire subject. These are English difficulties, and we think that the Conjoint Board in Scotland and the University of Edinburgh, with their large number of candidates, will find as great difficulty in carrying out the recommendation of the General Medical Council as the English Examining Board. It is clear, from his depreciatory remarks on the operative surgery at the Cambridge examination in December, 1887, that the requirements of the Inspector of Surgery are not limited to minor or emergency operations. "The majority of the candidates were occupied, so far as amputations were concerned, with the removal of parts of the fingers and toes; and until no more of these remained no other amputation was named.....Of some twenty amputations of fingers and toes, very few could be called good; indeed,

after a few had been done, the incisions so encroached on each other that it became difficult to distinguish between the effects of the several operations." The material required for full examination is further shown by his report. At the Conjoint Board in Ireland in April 1888, two subjects were used for eighteen candidates; and in July at Glasgow, with three subjects, twenty-seven candidates were examined. It seems to us, on reading these detailed reports, that, whilst more attention is given in Ireland to ophthalmic surgery and the performance of operations on the cadaver, greater attention is given in England and Scotland to the more systematic parts of the examination in surgery, and in many cases, notably at the English College of Surgeons, to the diagnosis of cases, and to surgical anatomy and pathology. In Ireland individual sections of a surgical examination may be passed at different examinations, and this seems to us a questionable arrangement, and makes the ordeal easier than it appears at first sight to be. There can be no doubt as to the necessity of equalising as far as possible the minimum pass examinations of the Conjoint Boards, and as this cannot be done without alterations in England and Scotland as well as in Ireland, we may expect a slight levelling up in all three divisions of the kingdom, and, in the process of levelling up, operations on the dead subject and ophthalmological and aural examination of patients must take a due share. Such tests will be demanded by public opinion now that attention has been called to them, and attempts will have to be made by the examining authorities to overcome the difficulties which at present beset their path.

THE SANITARY CONDITION OF WESTMINSTER.

IF the Mansion House Council on the Dwellings of the People were desirous of evidence as to their usefulness, they might refer to the account given by an evening contemporary of a meeting of the Westminster vestry which was held last week. The medical officer of health reported at that meeting the results of an inspection he had made in consequence of the representations of the Mansion House Council concerning the deplorable condition of many houses in the district. He stated that the report of the Council, with one or two trifling exceptions, was mainly true. The premises in one street were filthily dirty and in a disgraceful condition; in others the yards were badly paved, and other sanitary defects existed. He concurred with the view expressed by the Council as to another set of houses that they should be dealt with under Torrens' Act, as they were not fit for human habitation and needed demolition. The medical officer of health further said that his inspection brought to light grave want of attention. He complained that he could not get any report from the sanitary inspectors, who were therefore "utterly useless." The report has been referred to the Sanitary Committee of the Westminster vestry, whose action will, no doubt, be carefully watched by the Mansion House Council; and it may be hoped that this knowledge will stimulate the vestry to inquire into the circumstances of this neglect, and provide the remedies for conditions which seriously reflect on their administration. It is certainly a curious feature of local government in London that until a few earnest people undertook to bring to light the neglect of its sanitary administration, and to demand the interference of sanitary authorities, in many districts the enforcement of the law was practically unknown. If the Westminster vestry proceed to put their house in order without delay, we presume the Mansion House Council will gladly assist them in the improvement of their district, but the Council is so warmly supported in its efforts by Lord Salisbury's Government that the mere pretence to administer the law will not be held to be sufficient. The question, however, remains whether

the Government itself has not a responsibility in this matter, whether in leaving to a few philanthropic individuals the inquiry as to the home conditions of the people ministers are doing all that could be expected of those who are in power. Local government has not proved a complete success, and even the operations of County Councils may not be unattended by failure. If we may judge of the London Council by the prospects of the moment, there is not much evidence that its constitution will differ very widely from that of the Metropolitan Board of Works, and if this be found to be the case we may be thankful that the Government has not entrusted it with wider powers. It does not yet appear that London will be able to remain without the watchfulness of a body like the Mansion House Council or the intervention of a department of the State.

PROFESSOR VON PETTENKOFER'S JUBILEE.

THE Father of Scientific Hygiene, as his compatriots delight to consider and to call him celebrated, on the 3rd inst. his seventieth birthday, amid demonstrations honourable to their promoters no less than to their object. First to salute the hero of the day were the civic dignitaries of Munich, who, in the name of the citizenship of all classes, crowned their congratulatory address by consigning to him on an artistically designed and richly illuminated parchment a copy of the deed whereby they founded a scholarship of ten thousand marks for the study of the science indissolubly associated with his life and work. Then came an eloquent missive from the National Liberal party of the Bavarian capital, wishing him continued years and energy to further the cause of which in darker days he had been the enlightened and intrepid champion. And this in turn was succeeded by congratulatory messages from every quarter and through every channel, telegraphic, postal, and personal, from his Royal Highness the Prince Regent to the humblest scientific association in the Fatherland. As illustrating the many and various interests on which von Pettenkofer has left his impress may be cited the "Glückwunsch" (felicitation) he received from the central branch of the German Society for Promoting Rational Painting, of which body he had been made honorary member on account of his services "in the conservation of oil pictures and in the technique of the pictorial art." All throughout the day deputations, more or less formal, were arriving at his house, most of them from Munich herself, and representing the professoriate of the University, the State Medical Department, and the Medical-Chirurgical Society, to say nothing of delegations of old pupils from Mainz, from Amsterdam, from Würzburg, from Göttingen, from Prague, and from Berlin, to present him with a finely-executed marble bust of himself. Telegrams and letters innumerable bore testimony to the honour in which he is held all the world over, representatives of the Royal Family abroad being among the most cordial of their transmitters. At the banquet at which he was entertained in the evening—regarded as the most impressive ever given by Munich to a distinguished citizen—despatches by telegraph were announced from the Prussian Minister of Education, von Gossler; from the Universities of Kasan, Stockholm, Christiania, Bucharest, Breslau, Strasburg, Brunswick, and Erlangen; from the assembly of Swiss physicians; from the Imperial Sanitary Office of Germany; and from Professor Böhm, Director of the General Hospital for the Sick in Vienna. On the evening of the 5th the students of Munich organised a torchlight procession in his honour, which nothing but the denseness of the fog prevented from proving a brilliant success. As it was, the long files of torch-bearers, 700 strong, as they patrolled the principal streets to the music of several effective bands, were exceedingly impressive; and when the

drew up under the windows of von Pettenkofer's residence their triple "Hoch" called out the hero of the occasion himself. "Gentlemen," he said, "my dear academic brethren, you are celebrating my seventieth birthday. It is a beautiful and beneficent impulse that makes youth honour old age. May you in turn reach the happy goal I have attained to. I give you my fatherly blessing in the various careers on which you are entering. I wish you success in them from the bottom of my heart. On this solemn occasion I will not keep back from you what has led me in safety on my path: work and alacrity, enthusiasm for ideal aims—such were my lode-stars. Do you also keep your eye, in this materialistic age of ours, on those heavenly guides, which will lead you by unerring paths. I, too, once belonged as a student to the 'Alma Mater Ludovico-Maximiliana,' and I belong to her as a teacher to this day. I give you therefore from the fulness of my heart: 'Die Münchener Studentenschaft lebe hoch, hoch, hoch!'" The enthusiasm which these noble yet simple words evoked was indescribable. and the procession, with military precision, wheeled round, and performed the home journey in the reverse order to that in which it had advanced. Again it traversed the main streets till it arrived at the Karlaplatz, where with a "Hoch" for academic freedom, followed by the strains of "Gaudeamus igitur," it flung the remnant of the torches into a mighty bonfire, and then dispersed.

TRINIDAD LEPER ASYLUM.

THE report of Dr. Beaven Rake, the medical superintendent of the Trinidad Leper Asylum, for 1887, seems worthy of a more extended notice than it received in our impression of the 8th inst. Under the head of "Administration" he states that during the year there had been cases of disorderly conduct among the inmates, necessitating the discharge of some of the worst offenders. As far as possible expulsion is avoided, as the patients so dismissed often remain in Cocorite village and incite their late companions to breach of rules. It appears that the asylum grounds are not enclosed, but steps are being taken to effect this. The statistics for the year show that there have been more applications for admission than vacancies on the male side, and the female ward has often been full. Eleven cases of acute leprosy—i.e., fever accompanied with tubercle—were noted. Systematic examination of viscera and tissues has been made for the leprosy-bacillus, which has been found in 32 internal viscera and in 41 other parts. The most frequent situation appears to be the femoral glands; next in order, the larynx, liver, and spleen. So far as observation has gone, the bacillus is found to be fairly equally distributed in various stages of the disease. In anæsthetic cases the bacillus was found in the viscera in only 3 out of 32 occurrences, whereas it was found in the median nerve in 5 out of 8 occurrences. On the question of contagion, Dr. Rake says it must first be proved that the bacillus is the cause of leprosy, and that it can be communicated; but what are the conditions determining its transference are not known, since the presence or growth of the bacillus outside the body has not yet been satisfactorily demonstrated. It would seem rather that there must be direct transmission from one individual to another, and that certain subsidiary factors (such as bad food, want of ventilation, and filth) and wasting diseases (such as phthisis and syphilis) may co-operate. Dr. Rake then records the results of his examination of the blood of lepers, in which he confirms the conclusion of Danielssen and Boeck as to the high percentage of fibrin. In 16 tuberculated cases the mean percentage was 0.78, in 21 anæsthetic 0.79, and in 13 mixed 0.72. In only 2 cases (out of 50) was the percentage below 0.2, the average quantity in healthy human blood. In the treatment of the cases nerve-

stretching was carried on largely. The sciatic was stretched 26 times, the external popliteal 11, the median 40, the ulnar at elbow 18, the ulnar above wrist 4 times, and the supra-orbital once. The operation was undertaken in cases of ulceration, pain, anæsthesia, tuberculation, and necrosis. More or less relief was given in about one-half of the cases, and Dr. Rake sums up his experience under the following two heads:—1. The great sciatic is the most satisfactory nerve to stretch, for it is nearest the spinal ganglia, and commands the supply of the whole leg and foot and the back of the thigh. 2. The chief indications for the operation are perforating ulcer, some cases of necrosis, and pain, whether associated with perforating ulcer or with peripheral neuritis. As to new remedies, ichthyol has been found useful in eczematous conditions, but not more so than vaseline. Resorcin has been applied to tubercles in a 20 per cent. glycerine solution without marked effect. Cocaine in an 8 per cent. solution was very useful in cases of ophthalmia or corneal ulceration. Ammonium picrate was valuable in the relief of malarial headache, but produced no marked effect in intermittent fever. Reference is also made to two interesting cases of ankylostomiasis, and the value of santonin in relief of symptoms due to the parasite in this disease, to the value of turpentine in dysentery, and to a case of chronic hernia associated with ulceration of the large intestine. The appendix to the report contains many valuable statistical tables.

PROFESSOR LEBER ON INFLAMMATION.

PROFESSOR TH. LEBER, of Göttingen, has lately been engaged in some investigations having for their aim the solution of the question whether suppurative inflammation is exclusively produced by micro-organisms, or whether it may also be set up by purely chemical substances. By means of injections of completely sterilised cultures of staphylococcus pyogenes aureus into the anterior chamber of the eyes of rabbits, he was able to induce intense suppurative inflammation. This, however, differed from similar inflammation produced by living staphylococci, inasmuch as it showed no disposition to spread; and even when the local appearances were of a very severe nature, the morbid process rapidly came to an end. From staphylococcus cultures different chemical crystallised substances were obtained, which were shown by their reactions not to be identical with the ptomaine obtained by Brieger from staphylococcus cultures, and which lie, in consequence of its property of setting up suppurative keratitis, denominated "phlogosin." Besides, Professor Leber was able by means of his investigations to show that when suppuration was set up the pus corpuscles make their way in a centripetal manner towards the spot where the inflammatory stimulus exists. He found that capillary tubes containing a small quantity of a substance capable of inducing inflammation when introduced into the anterior chamber of the eye became filled after a time with pus, while no pus at all could be detected in the eye itself. Professor Leber considers this attraction of leucocytes by chemical substances as analogous to the attractive influence of certain chemical substances in vegetable cells which has already been observed, and which has received the name of "chemo-tactical action." Finally, Professor Leber finds that in suppurative inflammation fibrin and the tissues become dissolved by means of leucocytes; for example, pieces of cornea impregnated with sterilised staphylococcus culture, when introduced into the anterior chamber of the eye, became rapidly dissolved. It was found, moreover, that pus, when free from bacteria, enjoys the property of causing a local liquefaction of nutritive gelatine. Professor Leber recognises in these properties of leucocytes (their ability to absorb foreign bodies and to dissolve fibrin and tissues) a valuable defensive arrangement which tends to shield the organism

against external injuries. He would therefore look upon inflammation as an "important process, which consists in rendering the organism obnoxious to external injurious influences."

ISOLATION AND SCHOOL CLOSURE FOR MEASLES.

THE epidemic of measles is becoming a source of anxiety in several of the districts where it is prevalent. In Liverpool it has raised a question which has long been slumbering as to the use by the corporation of the Poor-law hospitals for municipal purposes. The Town Council now possess two excellent hospitals for infectious diseases, in addition to their small-pox hospital, but the accommodation at their disposal is so obviously insufficient that they are desirous of using Poor-law hospitals for measles. The ground on which the workhouse committee of the select vestry have once again sanctioned this as a provisional arrangement is the expense to which the city would be put if the corporation made the provision which is demanded for such a population as Liverpool. There is, unfortunately, another aspect of the question, and that is the pauperising effect of admission to the workhouse hospital, and such an effect should not be permitted where the isolation carried out is done in the interests of public health. At Cardiff the difficulty seems to lie in the limited power as to school closure. The power of the sanitary authority is confined to those elementary schools which come within the provisions of the Education Code, and although many sensible schoolmasters and mistresses are found to close their schools voluntarily with a view to the protection of their scholars, there remain a number who decline to be guided by the sanitary authority, and it may need an amendment of the law to bring these within the scope of the needed sanitary provisions. If the law is altered, Sunday schools should also be dealt with, for instances are well known in which the mischief is maintained by bringing children together on Sunday who are for reasons of public health not allowed to meet on week-days. We trust the school owners at Cardiff will not oppose the sanitary authority in this matter, for although measles is not an easy disease to control, yet school closure thoroughly carried out has succeeded in staying its spread.

THE LESSONS OF A COLLISION.

THE report on the Bewdley railway collision last November explains the cause of that accident to have been an act of apparently deliberate carelessness, which to any sober-minded person seems hardly credible. The engine-driver of a passenger train, after stopping in obedience to signals against him, again moved forward directly in the course of an advancing train of goods waggons. On receiving a second warning from the signalman advancing on foot, he began to retire, but could not do so in time to avoid a crash between the two engines. A desire to save time appears to have had something to do with this unfortunate forward movement, which it was said was made in the hope that the signalman would allow precedence to the passenger train. In ordinary circumstances behaviour of this kind is clearly inexcusable. In the present instance it is in some degree palliated, as far as the engine-driver is concerned, by the fact that he had been on duty for fourteen hours before the accident, and was therefore by no means fresh for work. Most persons, in assigning the responsibility for this occurrence, will probably divide the blame between the railway company and its injudicious or impatient servant. What is now of chief importance, however, is the possibility of avoiding similar mistakes in future. The engine-driver's expectation that the signalman would, in disobedience to his own signals, allow one train to cross the path of another, affords some

ground for uneasy reflection. Railway companies would relieve a natural tension in the public mind by inquiring into this aspect of the case. On the other hand, they can hardly themselves escape a merited censure for this fresh exposure of their old offence,—that of overworking their employees at the prompting of a false and dangerous economy.

RICKETS AND SANITATION.

OUR contemporary the *Glasgow Herald* has lately opened its columns to the subject of rickets from the point of view of sanitation. The question was raised in an able letter from Mr. James Thomson, who pointed out that rickets was of great prevalence in Glasgow, and who drew attention to what he considered the cause of the disease. He rejected, and wisely, the old notion that the soft waters of Loch Katrine were responsible for the deficiency in lime salts in the bones of the Glasgow infants, an idea which one would have imagined could hardly ever have been seriously put forward; and he went to the root of the matter by showing how the stress of the disease is chiefly on the poor, who suffer from it five times as much as the well-to-do, and that in all classes it is mainly attributable to dietetic mismanagement in early life, and the unwholesome surroundings in which so many children are brought up. The writer of the editorial, commenting upon Mr. Thomson's letter, owns, with much truth, that the dietary of the poor has considerably changed in modern times, particularly in the replacement of such wholesome articles as milk and butter and fresh meat, by tea and coffee, sugars, jams, tinned meats, and vegetables. It would almost seem as if the population of large towns has far outgrown the supplies of natural and necessary foods, which have become, therefore, more or less luxuries, and which have to be replaced by cheaper and less wholesome substitutes. But rickets is not a mere question of diet, great as is the influence of this upon the disease. It is influenced by the whole environment of the growing organism, and therefore we think that our contemporary is doing good service by making the prevalence of this disease the text of an appeal to the citizens of Glasgow for renewed efforts to improve the conditions under which so many thousands dwell.

EMIGRATION SERVICE TO SOUTH AMERICA.

DR. J. M. CABEZON contributes to *La Revista Argentina de Ciencias Medicas* an article on the accommodation provided for emigrants during the ocean voyage from Genoa to Buenos Ayres. The emigrant ships are usually large Transatlantic cargo steamers, which are fitted up temporarily for their human freight. "The ship-owners content themselves by running up a series of divisions in the hold according to the number of passengers, and in these wretched holes the unfortunate emigrants are packed like dry figs in a box. The bunks are, as a rule, not large enough for an adult to occupy." The Argentine Republic has tried to remedy this state of affairs, and its emigration laws might well be copied in some respects by European natives. It appears that the Italian laws on the subject are just as bad as they well could be, and consequently the only means the Argentine Government has of effecting changes for the better is to place an official surgeon in each of the ships. How much remains to be done may be inferred from the recommendations Dr. Cabezon thinks it necessary to make. "The ships," he says, "ought to be fitted in a permanent manner, and the number of emigrants should be in proportion to the registered tonnage. They should be provided with lavatories, baths, and closets, in accordance with modern hygienic principles. The bedding of the emigrants and their personal cleanliness should be inspected. They should be supplied with a proper amount of clean linen, and in the tropics they should

oe obliged to bathe themselves twice a week." If the reforms initiated by the Argentine Republic are carried out, Dr. Cabezón thinks that before long the present wretched system under which the unfortunate emigrants are huddled together in the ship's hold, badly lodged and badly fed, and placed almost in the same conditions as the slaves heretofore transported their cargoes of human flesh, will be swept away.

THE STRUCTURE OF DENTINE.

MR. F. J. BENNETT, M.R.C.S., L.D.S., read a paper recently at the Odontological Society on "Certain Points connected with the Structure of Dentine." Mr. Bennett employed a new, and what may in future prove a valuable, method of decalcification—namely, by glycerine. The idea was suggested by some papers by Dr. Ord, in which it was shown that glass, mother of pearl, ivory, and other substances became slowly etched by immersing them in a solution of subcarbonate of potash in glycerine. Mr. Bennett applied this solution to the dental tissues, and in the course of experimentation was surprised to find that precisely the same results could be obtained by using glycerine alone, and thenceforward confined himself to the use of this reagent. His method of procedure was as follows. 1. Freshly extracted teeth were ground and polished sufficiently thin to allow of microscopical examination; these were suspended in glycerine for periods of from one to six months, washed, and mounted in glycerine for examination. 2. Freshly ground teeth were immersed whole in pure glycerine for similar periods, then ground, polished, and mounted as before. 3. Whole teeth were placed in extremely dilute solutions of glycerine, the strength of which was daily increased until pure glycerine was used; the specimens were then kept in this for one or two months. It is interesting to note that cementum which is poorest in inorganic matter is most readily acted on by glycerine. Thus treated, dentine, especially that portion nearest the pulp and that newly formed, shows very distinctly the outlines of the dentinal tubules, and the matrix, which is generally stated to be absolutely structureless, is apparently made up of superimposed layers of membranes, with a number of stellate cells. The tubules perforate these layers, and can be seen in some sections to communicate with or arise from the cells. In the discussion which ensued, Dr. Ord, referring to the cells, said he could not express an opinion until the specimens had been examined by polarised light to see whether the cells were organic spheroids or inorganic matter, suggesting that the appearances might be due to a rearrangement of the earthy matter.

BARBAROUS AMUSEMENTS.

As Europeans we are apt to picture ourselves in the van of modern culture. Let us grant that, on the whole, this position is deserved, and there still remains occasion for discontent. If we look at some of our amusements, we must admit that they are little, if at all, more civilised than the cruel barbarities which marked the decline of ancient Rome. Take, as an instance, what happened lately in Vienna. A young woman is allowed to perform on a trapeze holding a child in her teeth, and falls to the ground, with the result that both are dreadfully injured. In such a case it is difficult to say whether the reckless performer or those who countenance her feat are the most culpable. However we view the matter, humanity is a loser. We are slowly learning in some things, happily for ourselves, that violence and brutality do not constitute the rule of manhood. Cock-fights, bull-baitings, and prize-rings are not now in fashion, yet we hear no impeachment either of our national courage or of the quality of our live stock. It is high time we were seeking a further stage of improvement in the matter of

show performances. It is time for us to admit that strength, courage, and skill, in their most healthy development, are compatible with an absence of foolhardiness. In order that acrobats or boxers may justify their existence it is not needful that they should nearly kill themselves or others. A section of public opinion, indeed, still is tolerably indifferent to these excesses; but the tide is turning, and there are many others who will agree that money spent on shows of this kind is little better than a bribe to do mischief.

THE CENTRAL BOARD OF HEALTH, VICTORIA.

In the last annual report of the Central Board of Health for Victoria attention is drawn to the success of the quarantine restrictions which were imposed on the occurrence of small-pox in Tasmania in the autumn of last year, and some of the criticisms to which the system has been subjected in neighbouring colonies and elsewhere are adverted to. Apart from quarantined passengers brought to the colony by sea, Victoria is stated to have had no case of small-pox since 1885; and it is urged that those who recommend the alternative English system of medical inspection should remember that small-pox is always existent in England; that medical inspection fails much more frequently than quarantine; and that this latter system will doubtless come into operation when the circumstances of the colony approach those of England, but not till then. In England we, of course, know nothing of medical inspection as applied to small-pox; we resort to it for the purposes of cholera—a disease which in its rarity corresponds fairly with small-pox in Victoria. And we should never suggest that any particular trust should be put in medical inspection for small-pox. It is to vaccination that we must look for this, and Victoria makes out some case for its action not only by its success in dealing with the late emergency, but by referring to the absence of any compulsory vaccination in New South Wales and to the neglect to enforce such a law in Tasmania. Incidentally it is mentioned that the Central Board issued during the year 2648 tubes of humanised lymph, and that, exclusive of calf lymph used for vaccination at the depot, 14,601 points of calf lymph were sent out, the demand for such lymph largely exceeding that for humanised lymph.

FACTORY INSPECTION.

THE evidence which Mr. Lakeman gave last week before the Lords' Committee upon sweating is even more interesting for the side light which it casts upon the conditions under which factory inspection has to be conducted in London than for the facts as to the condition of the toilers themselves. Sanitation can no more be enforced than the observance of public order without an efficient police; and the report which Mr. Lakeman was able to give of his own work was not more creditable to himself than suggestive of a great deficiency in the *personnel* of the department over which he presides. With the help of one assistant he has to satisfy himself as to the sanitation, ventilation, hours of labour, and time of meals in 4000 factories, distributed over about one-third of the whole area of London. It needs no proof to show that, even if his assistant be as devoted as himself to the duties that he is called upon to discharge—and more than this it is hardly possible to say,—it is inconceivable that two pairs of hands can overtake such an enormous mass of work. Even the small assistance which might be afforded by sanitary authorities in the way of directing the inspector's attention to quarters where it might be usefully bestowed does not appear to be ordinarily forthcoming. "It is a curious thing," said he, in answer to a question put by Lord Dunraven, "that since your lordships have had

your sittings here I have had six notifications from sanitary authorities of workshops which should come under our supervision; but previously we had none." The work of the inspector under such conditions is a thankless and almost a hopeless task. If it has not proved utterly abortive, the credit is due to an excellent public servant, and in no measure to the system which he has had to administer or the support which he has received from the central authorities. We are not disposed to undervalue the advantage of having our factory inspection or any other public work done by whole-souled officials, but we do say that there is here a proved case of defective machinery which stands in need of prompt and thorough repair.

ICTERUS NEONATORUM.

PROFESSOR NEUMANN of Königsberg (*Virch. Arch.*, cxiv., 3), in endeavouring to throw light upon the vexed question of the true nature of icterus neonatorum, whether it is hæmatogenous or hepatogenous, has availed himself of the fact that in fatal cases of jaundice free crystals and granules of bilirubin are to be found in the various tissues, especially in the fat cells of the omentum and elsewhere. Some years ago he detected such precipitates in the case of an infant who died from congenital heart disease four hours and a half after birth, without showing any sign of jaundice. He has during the past year examined the bodies of twelve stillborn children, and in no fewer than eight found this precipitation of bilirubin—not indeed to the wide extent prevalent in icterus neonatorum, but limited to the fat cells of omentum and subserous fat in various parts of the body. He rejects the idea that its occurrence is due to decomposition of blood pigment, such as occurs in the dead fœtus long retained in utero, since in no case examined was there any evidence of death having occurred long before delivery. He also excludes the possibility of post-mortem transudation of bile, since the tissues in which the bilirubin mostly occurred were remote from the gall bladder and intestine. Indeed, he is forced to believe that the bile is already present in the blood, and that after death it crystallises out in the fatty tissues. Hitherto, however, attempts to determine the presence of bile in the blood of the newborn have failed, but the experiments have been insufficient. The fact he has noted suggests that icterus neonatorum may be due to an exaggeration of certain processes natural to fetal life, and not dependent upon the circulatory changes taking place at birth. On this view, it would be a true hæmatogenous icterus.

PULMONARY ACTINOMYCOSIS.

DR. MATSCHINSKI relates in *La Gazette Clinique Hebdomadaire de Botkin* a curious case of this disease which he diagnosed during life. The patient was a man suffering from typhoid fever and croupous pneumonia, whose expectoration Dr. Matschinski was examining microscopically, when he found it contained the stellate and filiform fungus of actinomycosis. The filaments of the fungus were of an extreme fineness, dichotomous or roseaceous, from which slender thread-like processes were given off like the branches of a tree, but which were interlaced at the periphery. Fuchsin coloured these filaments a dark red, the ground-work being coloured blue with methylene blue. The necropsy confirmed the diagnosis made. At the base of the right lung was a cavity as large as an orange, filled with pus, in which were found fungi of the same kind as appeared in the sputa. Dr. Matschinski suggests that Ehrlich's method would be more useful in making a differential diagnosis between actinomycosis and tuberculosis—two diseases which, he thinks, might easily be confounded.

ROYAL COLLEGE OF SURGEONS.

WE would remind those of our readers who are interested in the question of reform at the Royal College of Surgeons that at the Council meeting held last week notice of the following motion was given by Sir Spencer Wells:—"That the resolution of the Council of May 8th, 1884—that an annual meeting of the Fellows and Members be called, to which a report from the Council be presented—be rescinded; and that the annual meeting of the Fellows and Members be discontinued." This motion will come before the Council at their next meeting in January. Meanwhile it is well that such a retrograde proposal should not escape the notice of the profession.

ALBUMINURIA IN RELATION TO LIFE INSURANCE.

AT the recent annual meeting of the Association of American Physicians, held at Washington, the subject of renal disease was dealt with by several members from various points of view. One of the most practically interesting papers was read by Dr. James Tyson of Philadelphia, and referred to the significance of albuminuria in respect to life insurance. The writer pointed out that in certain cases candidates presenting this symptom might be accepted, although he would draw the line rigidly at those who, in their general health, in the fact that no casts accompany the albumen, in the small quantity of the latter, and the high specific gravity of the urine, present no evidence of structural kidney disease. When the specific gravity is above 1020, the assumption is that the albuminuria is functional; if it be 1010, it would be hazardous to accept such a case, however good his health may be, even in the absence of casts. Of course, evidence of cardiac hypertrophy with albuminuria would suffice to exclude the candidate; nor if a patient suffering from albuminuria were over forty years of age should he be accepted unless he has long been under observation. The subjects of true gout were also recommended as unfit, seeing their liability to renal disease.

HOW SMALL-POX SPREADS.

A MAIDSTONE journal gives an account of a girl suffering from small-pox, who was allowed to leave the house and journey from Maidstone to Yalding in an ordinary railway carriage. The railway officials, it is stated, knew nothing of her illness, and therefore no steps were taken to prevent other people from entering the compartment, or to disinfect it. We may hope the Maidstone authority will institute a prosecution, with a view to preventing similar occurrences in future; but the event is interesting, because it shows the ease with which persons may contract this disease if they remain susceptible to its influence. A local authority may enforce the compulsory notification of infectious disease and the removal of the infectious sick to hospital, but if vaccination and revaccination be omitted, the carelessness of one individual may imperil a whole community.

PYLORECTOMY.

A SUCCESSFUL case of excision of the pylorus is recorded by Drs. E. Goldenhorn and S. Kolatschewsky of Odessa (*Berl. klin. Woch.*, No. 51). The patient was a lad fifteen years of age, who was admitted under Dr. Goldenhorn for extreme dilatation of the stomach following an attack of pain and vomiting eight years previously. The diagnosis was simple stricture of the pylorus, an unusual event in so young a subject; and after due preparation Dr. Kolatschewsky performed the operation of excision. The patient made a good recovery, slightly prolonged by the formation

of an abscess at the seat of suture. The portion of the stomach removed included 2.5 centimetres of the lesser and 4.5 centimetres of the greater curvature; the mucous membrane was thickened and thrown into folds, which at the pylorus itself formed polypoid masses, completely blocking the orifice. This condition doubtless resulted from the cicatrization of an ulcer seated at the pylorus, and not from any congenital defect.

GUY'S HOSPITAL

WE understand that the governors at their last meeting decided to establish a complete dental school as a special department of the hospital. Should the scheme receive the recognition of the Royal College of Surgeons, the dental student will be able to obtain his whole professional education at Guy's Hospital, including the special and general lectures and practice required for the diploma of L.D.S. Eng.

STRUCTURE OF STRIPED MUSCLE.

AT the last meeting of the Paris Society of Biology, M. Babiniski stated that in a paper by Professor Eichorst on alcoholic paralysis, appearances had been regarded as pathological which were undoubtedly normal—viz., fasciculi of muscle fibres below the average diameter, and enclosed in a lamellated sheath of connective tissue; and also medullated nerve fibres. M. Babiniski said he had reported this discovery to the Society in 1886, and found subsequently that M. Roth had noted the same facts to the Society of Medicine of Moscow so long since as 1880. This corroborative evidence combated Eichorst's suggestion that the conditions were characteristic of alcoholic neuritis.

THE PATHOLOGICAL SOCIETY.

THE attention of members of the Pathological Society is particularly called to the fact that the Council have decided not to hold a meeting of the Society on Jan. 1st, the day advertised on the notice-cards, but that the annual meeting is fixed for Jan. 15th, and that after the election of officers the adjourned debate on the pathology of chronic alcoholism will be proceeded with.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin and other Prussian Universities.—During the *annus medicus* 1887-88, 243 doctors and candidates in medicine presented themselves for the State Examination for a licence to practise. Of these 175 passed, 98 obtaining the mark "sufficient," and 82 that of "good." No one succeeded in obtaining "very good." In Bonn, which passed 62 out of 70, 5 obtained "very good." Breslau passed 48 out of 59, with 1 "very good." Göttingen passed 29 out of 33, with no "very good." Greifswald passed 66 out of 81, with 2 "very good." Halle passed 68 out of 103, with 2 "very good." Kiel passed 44 out of 52, with 4 "very good," all the rest except 6 obtaining "good." Königsberg passed 35 out of 42, with 3 "very good," and Marburg passed 35 out of 44, with 2 "very good." In looking through the figures it would seem that Bonn and Kiel have the most reason to be proud of their success. The total number of candidates was 727. Of these 526 passed, 234 obtaining "sufficient," 309 "good," and 19 "very good."

Madrid.—The competition for the Professorship of Clinical Surgery, vacant by the death of Dr. Entinas, has terminated in favour of Dr. Don José Kibera, principal medical officer of the Hospital del Niño Jesús.

Odessa.—Professor Mechnikoff has resigned the charge of the Bacteriological Station.

Valladolid, Santiago, and Cadix.—The chairs of Histology, normal and pathological, in these universities, have been obtained, after competition, by Señores Don Leopoldo Lopez Garcia, Don Juan Bartual, and Don Luciano Clemente Guerra respectively.

Vienna.—It has been decided by the Professorial Senate that Balneology shall be recognised as a special "disciplin" or subject of instruction, a report favourable to its admission into the category of recognised subjects having been presented by Dr. Seegen, who was deputed to inquire into the matter. Dr. Clar, *privat-docent* in Balneology in Graz, has been admitted to a similar position in Vienna.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Carl Zeiss of Jena, the maker of the well-known Zeiss microscopes, at the age of seventy-three; Dr. Hollander of Riga; Dr. Nadejdin, prosecutor in the University of Moscow; Dr. F. A. von Haken, a well-known surgeon of Dorpat; Dr. von Schmid, Director of the Odessa Ophthalmic Hospital.

PROFESSOR ZEHENDER of Rostock has presented to the library of the Ophthalmological Society a very handsome volume ("Die Neuen Universitäts-Augenheil-Anstalten in Deutschland," von Wilhelm von Zehender; Engelmann, Leipzig, 1888), containing carefully drawn plans and a full description of the Eye Hospitals in connexion with German universities that have been opened since 1876. These are eight in number, and situated in Freiburg, Breslau, Königsberg, Heidelberg, Leipzig, Halle, Marburg, and Greifswald. The book will prove of the greatest service to all who are interested in the construction and management of ophthalmic hospitals. The internal arrangement of all the institutions described appear to be excellent; we doubt, however, whether the out-patient departments in some would be found sufficient for the large number of patients that flock to the eye hospitals in the large towns in this country. No pains appear to have been spared in collecting all details, and the letterpress and illustrations are of a high order.

THE tribute of valuable lives paid to the insalubrity of the Panama isthmus (says *Engineering*) has been very heavy. M. A. Nicholas, who had the organisation of the sanitary measures for the protection of the workmen, states that amongst the European element there have been 5200 deaths during a period of two years and three months, the burials averaging about seven per day, and the death-rate being 98 per 1000. In one station, amongst 159 young men specially selected for their physical vigour, 23 have died within twenty-two months. Amongst the coloured workmen the loss has not been anything like so heavy, only 51 having died out of 2100 during the period considered.

THERE was a dinner of the Glasgow University Club on the 17th ult., at the Holborn Restaurant. Lord Watson presided. After dinner short speeches were made in connexion with toasts by Lord Watson, the Lord Advocate, Mr. Justice Stirling; Sir Wm. Thomson, F.R.S., Mr. Craik, C.B., Mr. J. A. Campbell, M.P., the Rev. H. C. Wilson, and Mr. Maclymont. Some of the members of the Club contributed songs and recitations to the evening's entertainment. Dr. Heron and Mr. MacIlraith are the honorary secretaries of the Club.

SMALL-POX is still prevalent in Eastern Sicily. From the 13th to the 16th inst. there were ninety cases in the province of Messina alone, thirty of which occurred in Barcellona.

THE death is announced of Professor Roser, the eminent surgeon, at the age of seventy-one, from the effects of an apoplectic seizure. The deceased had been for many years one of the leading members of the medical faculty at Marburg University, and was the author of several important works, among which may be mentioned "Handbuch der anatomischen Chirurgie" and "Éléments de Pathologie chirurgicale spéciale et de Médecine opératoire," translated by Culmann and Sengel.

A PORTRAIT of Professor Williamson, late Professor of Chemistry in University College, London, was presented on the 12th inst. to the College on behalf of the subscribers. Mr. John Erichsen was in the chair, and a large number of the professors and students occupied the Lecture Hall, in which the presentation took place. Sir Henry Roscoe, as an old pupil and attached friend of Dr. Williamson, presented the portrait, which is by the Hon. John Collier.

THE Manx Legislative Council has passed a Bill enacting, amongst other things, that the future issue of grocers' licences shall be stopped.

Pharmacology and Therapeutics.

SOUTHALL'S "STANDARD" TINCTURES.

It has long been evident that the activity of various vegetable drugs varies largely with the conditions under which the plant has been cultivated; hence tinctures prepared according to Pharmacopœial directions by percolating a definite weight of the crude drug must necessarily differ considerably in strength. A pint of a tincture prepared in the orthodox method represents the soluble material obtainable from the drug, but as the amount of alkaloid or other active ingredient is liable to considerable variation, so the tinctures obtained are by no means of constant strength or efficacy. The resulting uncertainty cannot always be met by the employment of the pure alkaloids &c., since in some cases—e.g., morphine or quinine—the crude drug possesses desirable qualities which are absent or reduced in using the chief active ingredient. These difficulties have been largely met by the process of "standardising" employed by Messrs. Southall Brothers and Barclay, of Birmingham, every tincture being adjusted to the same strength after preparation by the use of a larger proportion of drug or menstruum according to the ascertained requirements. The "standard" tinctures are supplied in two forms, the one closely corresponding with the supposed or intended strength of the Pharmacopœial tinctures, the other concentrated so as to require dilution in the proportion of one part of the concentrated tincture to three of menstruum. At present between fifty and sixty official tinctures are supplied standardised, the label in every case indicating the percentage composition. We understand that non-official tinctures will be introduced as occasion requires.

"THE LEICESTER" PATENT OINTMENT AND LOTION COVERS.

These consist of a sheet of linen, one side of which is covered with waterproof material, whilst round the margin of the other or inner side is a self-adhesive border at or near the edge. They are adapted for the application of ointments, blisters, or plasters to the skin. The adhesive material does not run in any temperature, and will prevent the application from spreading beyond it. These sheets are made of all shapes and sizes, and sold in boxes. A similar arrangement, with a pad of absorbent cotton-wool in the centre, is devised for application as a dressing to wounds, ulcers, &c., and for shielding diseased surfaces from friction. They are prepared by Mr. A. de St. Dalmas, Leicester.

NAPHTHALIN IN INTESTINAL CATARRH.

Dr. Holsti (whose work is mentioned in the *Nordiskt Medicinskt Archiv*) has tried naphthalin for intestinal catarrh with foul-smelling secretions. The dose for adults was 0.5 gramme four or five times a day, but it should not be given for a longer time than from ten to fourteen days. For children of from one to two years old he gave 0.12 to 0.18 gramme four times a day. In all cases, both in adults and children, there was an improvement at the commencement. Sometimes there was a relapse, notwithstanding the renewed use of the naphthalin. Dr. Holsti specially recommends it in severe chronic enteritis where other drugs have been employed without effect. He found no injurious effects from its use in adults; in one case—that of a child of a year and a half old—the use of naphthalin in doses of 0.12 gramme four times a day was followed by great anemia, although the intestinal catarrh was much benefited. Hence Dr. Holsti advises care in the administration of naphthalin to children, especially when given for a lengthened period. He found it fail in two cases.

ERYTHRIN, A NEW ALKALOID.

Dr. Fernando Altamirano has communicated to the Academy of Medicine of Mexico some researches he has made upon an alkaloid obtained from the Mexican plant *Erythrina coralloides*, or colorin, as it is there called. The toxic effects of the plant in question were brought before the notice of the Academy by Professor Dominguez and Dr. Altamirano as long ago as 1877, and since that time a thesis on the subject has been published by Señor Rio de la Loza, but until lately no attempts seem to have been made to isolate any alkaloid or alkaloids which the plant may contain. According to Dr. Altamirano, the principle with which he has been experimenting, and which he calls erythrin, is a white, spongy, greasy solid, crystallising in various forms, melting at a low temperature, a dark-yellow liquid with a disagreeable and characteristic odour being formed. It is soluble in water, ether, and in benzol, still more so in chloroform, and very freely in alcohol. From the solution in this last only can it be crystallised; from its alcoholic solution it is precipitated by alkalis, especially by ammonia, as an amorphous substance, resembling resin. Concentrated nitric acid dissolves it, colouring it slightly yellow. It is precipitated by bichloride of mercury, by the double iodide of bismuth and potassium, by bichloride of platinum, and by bichromate of potash. It contains nitrogen. Regarding the properties of erythrin, it may be stated that, generally speaking, they present considerable resemblance to those of curare. It acts on the motor nerves, the vitality of which it arrests. It leaves, however, the brain and medulla, the sympathetic, and both classes of muscles unaffected. The action of the heart is not interfered with, or the peristaltic movements of the intestines. Sensation also is unaffected. When administered hypodermically, it rapidly proves fatal, even in very small doses. It is much less active when administered by the stomach, and when injected into the rectum it appears to have little or no effect. Dr. Altamirano has been able to show that erythrin has great power in counteracting strychnine poisoning. The only attempt which seems to have been made to observe the therapeutic effects of erythrin on the human subject was a case of very severe epilepsy, and was by no means successful, the patient succumbing to the disease. It was, however, proved to Dr. Altamirano's satisfaction that doses of 0.6 gramme can be borne without danger by the human subject.

HEDWIGIA BALSAMIFERA.

An alkaloid and a resin have been extracted from this tree; the former has convulsant, the latter paralytic and antithermic properties.—*Pharm. Journal*.

LABOURERS' DWELLINGS AND THE LIVERPOOL CORPORATION.—The Insanitary Property and Artisans' Dwellings Committee of the Corporation have resolved to recommend that the Corporation place £7000 at their disposal for the erection of labourers' dwellings, and £14,000 for the purchase of insanitary property, under the authority of the city's Sanitary Amendment Act.

CARDIFF INFIRMARY.—Mr. Charles Thompson, chairman of the infirmity committee, has generously offered £500 towards the cost of erecting a new wing to the hospital building.

MR. HENRY FITZGIBBON ON SYPHILIS.

As President of the Royal College of Surgeons in Ireland, Mr. Henry Fitzgibbon was called upon to preside in the Surgical Section of the Royal Academy of Medicine, and to deliver the address at the opening meeting of the present session. He selected the subject of syphilis, observing truly that it must be of interest to every member of our profession, whether he practises in medicine or surgery. Moreover, his experience as one of the surgeons to the Westminster Lock Hospital has given him an exceptionally wide field for observing this disease in all its forms. Mr. Fitzgibbon commenced by observing the remarkable fact that "although the origin of syphilis is lost for ever in the obscurity of time, it has been transmitted through countless generations and races of men unaltered in its main features, although somewhat mitigated in severity." Then follows a quotation from Lancereaux's work on "Syphilis in Ancient Times and in the Middle Ages," found in Chinese medieval writings so far back as 2637 B.C. This describes what one cannot fail to recognise as a hard chancre, followed by all the phenomena which mark the course of a neglected case of syphilis. After alluding to the writings of Celsus, Mr. Fitzgibbon passes on to the "terrible and widespread European epidemic of 1495, which forced both the medical faculty and the victims of this disease to throw aside the reserve by which its nature had been obscured." Then only was the venereal origin of syphilis frankly acknowledged. Passing on to more recent times, the confirmation of the accuracy of these ancient writers by the labours of Ambrose Paré, Astruc, Bell, Ricord, Carmichael, and other syphilographers was noticed, and Mr. Fitzgibbon asks, "What is the nature of this disease which has resisted all time and spread over the whole habitable globe, until it has become endemic in every country in the world?" He answers it himself thus: "First, that it is a specific disease produced by the presence of a morbid virus transmissible by contact; secondly, that there is a period of incubation during which the virus is latent, and gives no external manifestation of its presence in the system; thirdly, it is characterised by periods of eruption of varying severity, in the evolution of which there is a degree of order and regularity; fourthly, one attack of the disease generally confers immunity against a second." The constitutional disturbance and abnormally high temperature preceding and accompanying the first eruption is next noticed, and Mr. Fitzgibbon's opinion is that syphilis belongs to the major exanthemata, however it may subsequently change from its original type. He also points out a striking difference between them in the fact that the other zymotic diseases are eliminated by the spontaneous efforts of nature, while, as a rule, syphilis is only imperfectly thrown off during the first period of febrile disturbance and eruption.

In discussing the transmission and manner of invasion of syphilis, Mr. Fitzgibbon expresses his conviction of the duality of venereal poisons, and holds the poison of syphilis to be distinct from that which produces either chancre or gonorrhœa; adding the observation that syphilis often coexists in the same individual with chancre and gonorrhœa. This, in his opinion, explains the phenomena that different individuals may contract—one syphilis, another gonorrhœa, and a third chancre from the same source of infection without upsetting the dual theory. Cases are next detailed of what may be called syphilitic gonorrhœa and also of *bubon d'embûée*, and two cases where syphilis was acquired in an extraordinary manner. The first of these was that of a banker who contracted a Hunterian chancre on his lower lip by fingering bank-notes which had been recovered from a prostitute who had stolen them from one of his clerks and secreted them in her vagina. The other and even more painful case was that of a young lady only fourteen years of age who infected an abrasion on the thigh with syphilitic virus from the seat of a closet at a railway station. In conclusion, Mr. Fitzgibbon expresses his approval of legislation to prevent syphilis, and of the repealed Contagious Diseases Acts, giving statistics confirmatory of their beneficent action. Arguing from the fact that the source of all syphilis is prostitution, he urges that "if it is cut off at the source the stream will cease to flow." In the interest of humanity, and

of the fallen women themselves, some protective measures are, he contends, urgently demanded.

Mr. Fitzgibbon concludes a most able and interesting address by expressing a hope that the day will come "when the British Government will have the courage to take the responsibility of restricting the spread of a disease from the ravages of which countless innocent victims suffer."

VACCINATION IN SAMOA, AND ALLIED QUESTIONS.

THE islands of the Samoan archipelago have enjoyed complete immunity from small-pox for the last forty years. Persons suffering from the disease have been frequently landed, and infected clothing has been sent ashore to wash. But these dangers have been successfully resisted by the simple precaution of universal vaccination, which is carefully practised by the missionaries and their native helpers. Such statements having been made to us, we thought it well to obtain a verification of them by two gentlemen whose authority will not be disputed. It will be gathered that we did not confine our inquiries merely to the efficacy of vaccination, but to the charges sometimes brought against it by those who ought to know better of being a common medium for conveying other disease. The writers of the following letters are, respectively, Mr. George Turner, a greatly respected Baptist missionary for forty years in Samoa; and his son, Dr. George A. Turner of Glasgow, formerly medical missionary in Samoa, an eminent authority on the diseases of Samoa, and author of a paper on "Amputation of the Scrotum for Elephantiasis Arabum in 138 cases." It is refreshing, when theoretical pathologists and injudicious editors are suggesting disparagement of vaccination in civilised countries, to be supplied with such facts from Polynesia, and to find that practical British sense is still so beneficent among backward races.

"Alton-road, Birkenhead, July 19th, 1888.

"Vaccination was commenced in Samoa in 1843, and continued at intervals, as we got vaccine lymph, up to the time I left, about five years ago. I have no doubt it is carried on still by the missionaries now there. To that as a means I believe it is to be traced that small-pox never appeared in the group. Vessels have touched at the principal port there with the disease on board, and on one occasion we discovered, after a vessel from California left, that six or seven convalescent patients had been sent on shore for hours daily. It has been a fearful scourge, as you are aware, on some islands where the natives had not been vaccinated, in some instances laying in the grave a third of the population. The vaccine lymph we had principally from Sydney in tubes. If you address a note to my son, Dr. G. A. Turner, 1, Clifton-place, Glasgow, he will be able to speak more correctly, perhaps, on the other point mentioned in your note as to 'transmission of other diseases, &c.' He was medical missionary for twelve years at the port of Apia in Samoa. I never met with the 'phenomenon' (an anti-vaccinationist) you name in Samoa; pity that there should be such a thing anywhere at this time of the day.

"Very truly yours,

"GEORGE TURNER."

"Clifton-place, Glasgow, Oct. 8th, 1888.

"I can fully confirm all my father has said in his note. The Samoans have all been thoroughly vaccinated over and over again, and to that no doubt is due their having entirely escaped small-pox so far. As to the other question about the transmission of other disease (syphilis especially) through the vaccine, I am happy to be able to say that I have never known any disease to be transmitted through vaccination, and I am still more happy to be able to tell you that up till the time I left Samoa—Dec. 1879—syphilis was unknown there. During the whole twelve years that I was in practice there I only saw one case of syphilis—an English sailor who had contracted it in one of the Australian or New Zealand (I forget which) ports. Gonorrhœa was known, and I every now and then had a case of it among the natives. 'Ma'i afi' (fire disease) or 'ma'i papalagi' (foreigners' disease) was what they used to call it, and I believe it also had not been very long known among them

before I went there in 1868. Of this I am certain, syphilis could not have existed among the Samoans without my knowing it and seeing cases of it, and up till Dec. 1879 I had heard of no cases of it, nor have I heard of it since, though it may have been introduced since I left. Long may it remain unknown there! If there is any further point on which I can give you information I shall be very glad.

Yours truly,
"GEO. W. TURNER."

HONG KONG.

THE report of the colonial surgeon of Hong Kong for 1887 shows the admissions into hospital of the white troops to have been 1173, the deaths 8·22, and the mean daily sick 47·28 per 1000 of the strength in a force of 1217 non-commissioned officers and men. Among the black troops, who were only 177 strong, the admissions were 1842, the deaths 22·60, and the mean daily sick 36·89 per 1000. The police force averaged 636 men, of whom 116 were Europeans, 201 Indians, and 319 Chinese. Among the Europeans the cases were 1198 and the deaths 34·5, among the Indians 1458 and 4·9, and among the Chinese 586 and 12·5 respectively per 1000 of strength. The small numbers from which these ratios are derived deprive them of much of their value, especially as regards the mortality. The Chinese appear to enjoy a marked exemption from sickness compared with the other portions of the force; while that of the Europeans corresponds closely with the ratio of the white troops. In an average of 584 prisoners in the Victoria gaol, the cases of sickness were 572 and the deaths 10·27 per 1000, results differing very slightly from those of the Chinese in the police. The statistics of the Tung Wa Hospital show a fearfully high rate of mortality; 1213 deaths having occurred in 2231 cases, or 544 per 1000. It is stated that 376 of these were brought to hospital in a moribund condition, but deducting these the deaths are still in the ratio of 168·5 per 1000. Mr. Ayres, the colonial surgeon, states that "the great majority admitted into this institution are incurables in a destitute condition." An epidemic of small-pox prevailed during the last two months of the year, when 310 cases were admitted into the Tung Wa Hospital, of which 221 died. The majority of the cases were children under four years of age, and nearly all unvaccinated.

The mortality among the European and American residents in Hong Kong, in number 3040, was in the ratio of 35·5 per 1000, being higher than in any of the nine preceding years. As no information is given as to the ages of the population, it is impossible to draw any deductions regarding it. The medical superintendent of the Government Civil Hospital appears to have experienced great difficulty in carrying on the duties from the insufficiency of the nursing staff. A scheme for its reorganisation was drawn up by Mr. Atkinson, and is stated to be still under consideration. The difficulty appears to be the result of a combination of overwork and insufficient pay.

Mr. Crow, the Government analyst, reports that he examined 328 waters derived from wells and springs, and placed 233, or 71 per cent., of them in "the category of waters that were evidently much polluted," and he recommended "that when an abundant water supply was available the Government would do well to order the closing of all wells in the city of Victoria." Of nine samples of milk obtained by the nuisance inspectors, three were returned as adulterated, one of them having at least 50 per cent. of added water. The milk supplied morning and evening to the Civil Hospital is analysed at least once a month; in all, thirty-six samples were analysed during the year.

An interesting account is given of a substance called "ch'i tsai ping," being the refuse matter of the seeds of the *camellia oleifera* after the tea oil has been expressed. It appears to be used for poisoning fish; the fish so killed do not seem to act injuriously when used as food. It is used in gardens for eradicating earthworms, the cake being crushed and boiled and the decoction poured on the grass. The worms come to the surface; the smaller die, but the larger recover after a time. The worms are eaten greedily by the fowls and ducks, which experience no inconvenience, but appear to thrive on them.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE report of the Committee of Management of the two Colleges, which was adopted at the meeting of the Council on the 13th inst., included amongst its recommendations a revised schedule of drugs. This is similar to the old schedule, but combines various alterations in and additions to it, suggested by the examiners in materia medica and pharmacy. This revised schedule will be used on and after Oct. 1st, 1889. Those drugs of which the candidates are required to show a practical knowledge are printed in italics. The only drug expunged from the list is cinchonine; the new ones added are—acetic acid, zinc chloride, citrate of iron and quinine, butyl-chloral hydrate, collodion, apomorphine, codeine, ammoniacum, myrrh, guaiacum, senega, croton oil, cascara sagrada, copaiba, cubeba, and santonin. The following is the complete list:—

Chlorine; chlorinated lime; chlorinated soda. Bromine; bromides. *Iodine*; iodides. *Sulphur*; sulphurous acid; sulphides. Phosphorus; phosphates; hypophosphites. Acids—Hydrochloric, nitric, sulphuric, boric, acetic, citric, tartaric, hydrocyanic (*dilute*). Alkalies—Ammonia, potash, soda. Ammonium carbonate, chloride, acetate. Potassium bicarbonate, sulphate, chlorate, permanganate, acid tartrate. Sodium bicarbonate, sulphate; borax. Calcium oxide, carbonate. Magnesia, magnesium carbonate, *magnesium sulphate*. Alum. Zinc oxide, chloride, zinc sulphate. Copper sulphate. Silver nitrate. Mercury, oxides, chlorides, iodides. Lead oxide, acetate, subacetate. Tartarated antimony. Arsenious acid; arseniates. Bismuth subnitrate, carbonate, citrate. Iron carbonate, *sulphate*, perchloride, *ammonio-citrate*. Citrate of iron and quinine. Dialysed solution of iron. Alcohol, ether, *chloroform*, *iodoform*. Chloral hydrate. Butyl-chloral hydrate. Nitrite of amyl. Nitrous ether. Nitro-glycerin. Collodion. Carbolic acid. Salicylic acid. Salicylate of soda. Aconite; aconitine. Opium; morphine; apomorphine; codeine. Coca; cocaine. Jaborandi; pilocarpine. Quassia. Calumba. Gentian. Calabar bean; physostigmine. Caffeine. Conium. Asafoetida. Ammoniacum. Myrrh. Guaiacum. Cinchona; *sulphate of quinine*. Salicine. Ipecacuanha. Senega. Glycerine. Nux vomica; strychnine. Belladonna; atropine. Hyoscyamus. Stramonium. Cannabis Indica. Digitalis. Castor oil; croton oil; *aloes and aloin*; cascara sagrada; *colocynth*; elaterium and elaterin; *jalap*; podophyllin; *rhubarb*; *senna*. Camphor. Turpentine. Tannic acid. Gallic acid. Kino. Catechu. Benzoic acid. Copaiba. Cubeba. Colchicum. Squill. Male fern. Santonin. Ergot. Cod-liver oil. *Cantharides*.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Ashbourne.—An interesting report has been submitted to the Local Government Board on diphtheria at Ashbourne by Dr. BRUCE LOW. Ashbourne is a small centre for agricultural purposes and for visitors who in summer travel about Dovedale; there are also some manufactures in the district. Diphtheria, as in so many cases, was formerly wont to attack the rural area around the small town; indeed, the last recorded diphtheria death in the urban district prior to the outbreak under consideration seems to have taken place as far back as 1883. Then the town began to suffer slightly, two non-fatal attacks taking place in a yard which has been associated with the present attack. Again there was a lull, until in September, 1887, there began a prevalence of throat disease, which was maintained epidemically and continuously month by month until the end of April, 1888. In all twenty-six houses were invaded, the attacks numbering fifty-six and the deaths eighteen. For a while the disease was not fully understood. The real signi-

ficance seems to have been masked behind a widespread and general prevalence of sore-throat, and even fatal attacks grew from "croup" to "diphtheritic croup" and "croupous diphtheria" on to diphtheria itself. The cause was also somewhat involved. Thus at first sight school attendance seemed very intimately associated with the diffusion of the infection; indeed, after examining into the circumstances, Dr. Low found that only two out of fourteen families invaded in November and December, 1887, had no apparent connexion with the National Infants' School, the school itself being situated near the Market-place, where the sanitary conditions were especially defective, and where there was overcrowding of houses on area. As confirming the suspicion of school influence, there was also the general knowledge, now very generally accepted, that at the autumn season schools—and especially infant schools, as containing children at ages most susceptible to diphtheria—are apt to afford facilities for a minor form of illness, essentially diphtheritic in its nature, to rapidly extend itself among children, with a concurrent development and intensification of the grave phenomena of unmistakable diphtheria. But another consideration had to be taken account of, and this suggested an altogether different cause. Ashbourne is divided into two parts by the Henmore brook. Two-thirds of a population numbering in all 3845 live north of the brook, in Ashbourne proper; the remaining third, which comprises essentially the artisan class, live to the south of it, in Compton. Now just before the commencement of the epidemic seventy-three children from the Ashbourne side and forty-two from the Compton side attended the infant school; and yet the diphtheria was limited to such of them as resided in Ashbourne, to the north of the stream. The majority of the sufferers also came from the proximity of the Market-place, where diphtheria had occurred four years previously, and where the special local circumstances are described to have been much as follows:—General prevalence of dirt, overcrowding of dwellings, foul privies emptied and not emptied, pig-keeping, emanations from slaughterhouses, slaughterhouse blood in the sewers, congregation of human beings and animals, along with a haunting of public-houses by strangers to the town, and the promiscuous using by all comers of the back-yard open privies. Unfortunately the circumstances were so involved, and the commencement of the epidemic was so remote, that, notwithstanding what was evidently a painstaking inquiry, no distinct conclusion could be come to as to the actual cause of the diphtheria or of the special circumstances governing its diffusion. But this is not the first time that significant evidence has been forthcoming as to a possible connexion between diphtheria and conditions involving animal refuse, and especially slaughterhouse refuse; and hence Dr. Low does well to urge that in future inquiries attention should be devoted to slaughterhouses and their sewer connexions, as possibly having some relation to the origin of this disease. As a rule, it must necessarily be to medical officers of health that we must look for such precise information on this point as can only be acquired by those who are on the spot when the evidence is recent; for whether it be a necessity or not of the method adopted by the central department, it seems to be a very general practice to postpone official inquiries until the epidemics inquired into are either nearing their end or altogether over, and until the causes to which they owe their origin are so long past as to be wellnigh forgotten.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5304 births and 3397 deaths were registered during the week ending Dec. 15th. The annual rate of mortality in these towns, which had been 17·8 and 18·6 per 1000 in the preceding two weeks, further rose last week to 18·9. During the first eleven weeks of the current quarter the death-rate in these towns averaged 19·4 per 1000, and was 2·0 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 11·7 in Halifax, 13·9 in Brighton, 14·2 in Hull, and 15·2 in Bristol. The rates ranged upwards in the other towns to 24·0 in Liverpool, 24·1 in Manchester, 25·0 in Cardiff, and 32·4 in Blackburn. The deaths referred to the principal zymotic diseases, which had been 526 in each of the previous two weeks, rose last week to 539; they included 274 from measles,

73 from whooping-cough, 53 from scarlet fever, 53 from diphtheria, 47 from "fever" (principally enteric), 37 from diarrhoea, and only 2 from small-pox. The deaths from these zymotic diseases last week caused the lowest death-rates in Hull and Brighton, and the highest rates in Salford, Cardiff, and Blackburn. The greatest mortality from measles occurred in London, Salford, Leeds, Portsmouth, Oldham, Liverpool, Cardiff, and Blackburn; from whooping-cough in Bradford, Birmingham, Leeds, Blackburn, and Cardiff; from scarlet fever in Derby and Blackburn; and from "fever" in Salford. Of the 53 deaths from diphtheria in the twenty-eight towns, 39 occurred in London, 6 in Manchester, 3 in Liverpool, 2 in Salford, and 2 in Portsmouth. Small-pox caused one death in Hull and one in Cardiff, but not one in London or in any of the twenty-five other great towns. No small-pox patients were under treatment during the week in the Metropolitan Asylum Hospitals, and only one in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 880, against numbers declining in the four preceding weeks from 980 to 922; 76 cases were admitted to these hospitals during the week, against 96 and 79 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 258 and 277 in the preceding two weeks, further rose last week to 330, but were 211 below the corrected average. The causes of 70, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Newcastle-upon-Tyne, Sunderland, Portsmouth, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Preston, Hull, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·8, 19·1, and 19·3 in the preceding three weeks, was again 19·3 in the week ending Dec. 15th; this rate exceeded by 0·4 the mean rate in the twenty-eight large English towns. The rates in these Scotch towns ranged from 13·3 and 14·1 in Leith and Edinburgh to 23·5 in Aberdeen and 33·7 in Paisley. The 448 deaths in the eight towns showed a further increase of one upon the numbers returned in recent weeks, and included 14 which were referred to measles, 13 to diarrhoea, 8 to diphtheria, 7 to scarlet fever, 4 to whooping-cough, 3 to "fever" (principally enteric), and not one to small-pox; in all, 49 deaths resulted from these principal zymotic diseases, against 60 and 49 in the preceding two weeks. These 49 deaths were equal to an annual rate of 1·9 per 1000, which was 1·1 below the mean rate from the same diseases in the twenty-eight English towns; this rate ranged in the eight towns from 0·0 in Perth to 4·7 in Greenock and 8·4 in Paisley. The fatal cases of measles, which had declined in the preceding five weeks from 27 to 8, rose again last week to 14, of which 6 occurred in Paisley, 4 in Glasgow, and 4 in Greenock. The 13 deaths attributed to diarrhoea showed a marked increase upon the numbers in recent weeks, and exceeded the number in the corresponding week of last year by 4. The deaths from diphtheria, scarlet fever, and whooping-cough, however, showed a decline; 4 of the 8 deaths from diphtheria occurred in Glasgow, and the 7 deaths from scarlet fever included 3 in Glasgow and 2 in Greenock. The 3 deaths from "fever" corresponded with the number in the previous week; 2 occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 86 and 113 in the preceding two weeks, declined again last week to 97, and were 66 below the number in the corresponding week of last year. The causes of 59, or more than 13 per cent., of the deaths registered during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 22·9 and 27·0 per 1000 in the preceding two weeks, was 26·6 in the week ending Dec. 15th. During the first eleven weeks of the current quarter the death-rate in the city averaged 24·6 per 1000, the mean rate during the same period being 18·5 in London and 15·3 in Edinburgh. The 180 deaths in Dublin showed a decline of 3 from the number in the previous week; they included 8 which were referred to "fever" (typhus, enteric, or ill-defined), 4 to measles,

3 to scarlet fever, 2 to whooping-cough, 1 to diphtheria, 1 to diarrhoea, and not one to small-pox. Thus the deaths from these principal zymotic diseases, which had been 11 and 13 in the previous two weeks, further rose last week to 19; they were equal to an annual rate of 2.8 per 1000, the rate from the same disease last week being 3.1 in London and 0.8 in Edinburgh. The fatal cases of measles and scarlet fever in Dublin exceeded the numbers in recent weeks, while the deaths from the other zymotic diseases scarcely varied from the numbers in the previous week. Five inquest cases and 4 deaths from violence were registered; and 54, or nearly a third, of the deaths occurred in public institutions. The causes of 24, or more than 13 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

RAYNAUD'S DISEASE.

To the Editors of THE LANCET.

SIRS,—At the meeting of the Hunterian Society, on the 28th ult., Mr. Hutchinson read a paper on Affections allied to Reynaud's Disease, which it is to be hoped he will publish. The literature of the subject has lately been enriched by the appearance, in one of the last volumes of the New Sydenham Society's issue, of Dr. Barlow's translation of Raynaud's two treatises, with important additions by the translator. In addition to the references therein to numerous cases and reports, allusion may be made to several recent records. Dr. Seymour Taylor has described in detail in THE LANCET a well-marked case of Raynaud's disease in a very stout woman of fifty-six. Dr. Clifford Beale¹ has noted one case in an intemperate man, and a second in connexion with ague. Other cases have been brought forward by Dr. Ernest Jacob,² of Leeds, Dr. Suckling,³ of Birmingham, and Mr. J. R. Lunn,⁴ besides two very characteristic cases just published by Dr. Affleck.⁵ Dr. Smith Shand, of Aberdeen, has narrated in a contemporary,⁶ under the same designation, a case of pyrexial erythema with nephritis, in which large gangrenous patches appeared on all the limbs, but none on the fingers or feet. It may be questioned whether this interesting case, with that brought before the clinical Society last year by Mr. Bellamy,⁷ have any real connexion with Raynaud's disease; the phenomena seem more suggestive of capillary embolism than of arterial spasm. Cases occupying a doubtful or half-way position are met with, such as those recorded in the last two volumes of the Clinical Society's Transactions by Dr. Coupland and by Mr. Treves.

Mr. Hutchinson's paper, with remarks made by Dr. Barlow upon the same occasion, threw much light upon the group of disorders of the circulation in the fingers and toes. Raynaud's designation, "symmetrical gangrene of the extremities," is objected to, as limiting unduly the scope of the malady, and it is better to call the disease at present by the name of its describer. One of the most important facts (and one on which Dr. S. Taylor also has laid stress) is the originally paroxysmal nature of the symptoms—a "local vascular storm," as it has been termed,—although after repeated attacks the changes may become permanent. The development of scleroderma in some of the permanent cases is very remarkable. Dr. Barlow says that this only occurs in the pale (dead hand) form of the disease. I have, however, in a different affection, watched scleroderma developing on the face as a sequel to long-continued congestion (not pallor).

Raynaud's two stages of "local syncope" or ischæmia, and "local asphyxia" or cyanosis (not to mention a third stage, of erythema), are now said to constitute rather varieties or types of the disease than stages in its course:

some cases have pale, shrunken fingers, others purplish and swollen. The explanations offered by writers for these phenomena are various, and not altogether consistent. Raynaud, in his first paper, attributed the ischæmia to "spasm of the capillary vessels"; in his second paper this is modified, and he speaks of contraction of the smallest arteries and veins as the condition present. In the cyanotic state he considers that the venules are open, the arterioles remaining contracted, and the capillaries fill by venous reflux. Some observers, on the other hand (as Dr. Starr in "Pepper's System" and Dr. Affleck), have conjectured that venous as well as arterial spasm was present in the latter condition, and arterial spasm alone in the former. I understood Mr. Hutchinson to intimate that, granting the ischæmia to be due to arterial spasm, there was as yet no satisfactory explanation of the cyanosis. The anatomical structure of the capillaries, properly so called, surely excludes the idea of spasm in their case. Nor does spasm of the comparatively lax venous channels seem a very probable efficient cause. Now I submit that the natural result of spasm of a "terminal" artery may be inferred from the well-known consequences which follow obstruction of such an artery by other means; for instance, by an embolus. In this case we know that, the *vis a tergo* being withdrawn, the blood pressure falls to zero in the capillaries, and these latter fill by reflux from the veins (as is commonly supposed), being distended with dark blood. If the stasis be complete, blood exudes through the capillary walls, which no longer maintain their nutrition, and, the part becoming infiltrated with dark decomposing blood, necrosis or gangrene results. Spasmodic contraction of small terminal arteries (and those of the fingers and toes are for all practical intents "terminal"), uncomplicated by other conditions, must have a similar effect, differing only according to the degree of the obstruction, whether partial or complete. I would therefore submit that the state of local asphyxia or cyanosis, passing on in some cases to gangrene, is adequately accounted for by spasm of the small arteries alone. It is to my mind much more difficult to explain the blanched, shrunken condition of so-called local syncope or ischæmia. We have here, I submit, something more than arterial spasm at work; the capillaries are emptied, and, as they have no strictly contractile tissue, one would look for some cause exerting pressure upon them. Can it be that a gradual chilling of the entire thickness of the member (cf. frost-bite) induces a shrinking of the skin and other tissues, such as would exercise this pressure?

The occurrence of peripheral neuritis in Raynaud's disease is now well known, having been demonstrated by Dr. Wiglesworth and by Dr. Affleck in this country, besides prior observers abroad. But recent investigation, as shown by Dr. Barlow and by Mr. Hutchinson, makes it probable that the neuritis is a result rather than a cause, occurring in certain cases when the disease has become permanent and severe, and being sometimes followed by scleroderma. This view would relieve the pathology of the disease of one possible theory, and one which is rendered improbable by the paroxysmal nature of the symptoms. The analogy between Raynaud's disease and paroxysmal hæmoglobinuria and other vaso-motor spasms is very interesting, and may be said now to rest on a firm basis of clinical records.

I am, Sirs, yours truly,

Finbury-circus, E.C., Dec. 11th, 1888.

R. HINGSTON FOX.

EXAMINATION FOR THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

"Who shall examine the examiners?"—*Franklin*

SIRS,—One of your Birmingham correspondents was kind enough to allude to some remarks of mine at the medical students' dinner, but he did not convey a quite sufficiently extended nor an altogether accurate idea of my complaint. Of late it has become part of my duty to look into the matter of the College examinations and their results, and I must say that my impression of them is most unfavourable. In the last paper for the pass examination of the Fellowship there are four questions, all of which had to be answered, and of these the first and third are questions so simple that they ought only to have been recorded as questions for the Membership. The second question asks the candidate to state the life-history of the hydatid echinococcus

¹ Vol. I. 1887, p. 208.

² Brit. Med. Journ., vol. I. 1887, p. 730.

³ Ibid., p. 780. ⁴ THE LANCET, vol. II. 1887, p. 904.

⁵ Trans. Clin. Soc., vol. XX., p. 259.

⁶ Brit. Med. Journ., vol. II. 1888, p. 1200.

⁷ Ibid., vol. I., p. 348.

⁸ Trans. Clin. Soc., vol. XX., p. 196. See THE LANCET, vol. I. 1888, p. 730.

hominis, giving all the stages of its development. This is a question which, in the light of recent researches, throwing doubt altogether upon the text-book descriptions, I say, cannot at present be accurately answered. The question further goes on to ask how the candidate would diagnose this disease when present in the abdomen, and to describe the methods of surgical treatment which he would employ for it in this situation. No clue is given as to whether this is meant to include the separate diagnosis and treatment of hydatid disease of liver, kidney, spleen, broad ligament, Fallopian tube, &c., and the peritoneum; or whether it means the peritoneum only. If the latter is meant, then I say no diagnosis is at all possible. I have seen and operated upon as many cases of this kind, I am perfectly certain, as any living surgeon, and the only position within the abdomen in which I have ever seen a diagnosis even guessed at by practitioners of all shades of opinion, rank, and experience, from the President of the Royal College of Physicians downwards, has been the liver. The text-book statement that hydatid disease of the peritoneum may be diagnosed by hydatid *frenulus* is one which is totally irreconcilable with my own experience, and my views upon this question have received a remarkable confirmation by the fact that one of the members of the Court of Examiners responsible for it was called into consultation to a case of hydatid disease of the abdomen, and signally failed to make any diagnosis whatever. The fact is recorded in a recent number of your own journal, and I now ask this particular examiner specifically how he would have answered his own question. Again, if this question is to mean that surgical treatment is to be described for hydatid disease of all the organs in which it might occur within the abdomen, the candidate would have needed the whole time allowed for the whole four questions in which to give descriptions of eight or ten totally different operations. On the other hand, if it meant only hydatid disease of the peritoneum, then I confess that, with an exceptional experience, the question would have floored me, and therefore I am reasonably complaining of the gross injustice of it to less experienced candidates. The fourth question contains the extraordinary clause which asks the candidate to indicate the cause of the great mortality formerly prevailing after fracture of the base of the skull. I have discussed this point with twelve hospital surgeons of large experience, with one exception all Fellows of the College of Surgeons by examination. With one accord they deny that there is any diminution within their experience of the mortality of this injury. They say that it is as fatal as it has ever been, and no amount of research which we have been able to give to the subject has unearthed any statistical proof to the contrary. We have an uneasy feeling that this question is an antiseptic riddle, and we have discovered a passage in Erichsen (9th edition, vol. i., page 737), which seems to be the only solution to the conundrum. There it is inferred that the employment of antiseptic measures (syringing out the external ear with a solution of carbolic acid, and plugging it with iodoform) will contribute to the recovery of a fracture of the base of the skull, which is compound when the membrane is torn. But no precautions are recommended for the Eustachian tube. Some curious facts indicate that this extraordinary question was put for the purpose of getting this still more extraordinary reply. If it be so, then I say that, if a single candidate has failed by a single mark on this account, the examiners need to be hauled over the coals; for it is simply intolerable that, while we in the provinces are teaching our students to laugh at all such crotchety nonsense as this, the examiners in London should be enabled to pluck our students for want of belief. The alternative is that, if this question was not put for the purpose of getting this crotchety answer, it is altogether meaningless.

I am, Sirs, yours, &c.,

Birmingham, Dec. 17th, 1888.

LAWSON TAIT.

"ARE WE DEGENERATING PHYSICALLY?"

To the Editors of THE LANCET.

SIRS,—In a leading article of Dec. 1st, you seem to attach considerable importance to the opinions of many members of the profession on the above subject, elicited by an energetic "northern lay contemporary." The subject is no doubt of vast importance, and therefore all the more is it necessary to receive with much caution and scepticism

the opinions of medical men, no matter of what eminence, unless they are based on patient and accurate observations, and not merely on personal impression formed more or less haphazardly. Before receiving their opinions, I would like to know what methods they adopted in order to honestly come at the facts. I have before me the carefully drawn up report of the Anthropometric Committee of the British Association. The author, Charles Roberts, F.R.C.S., has devoted long and careful consideration to the subject, and his statistics have been methodically and laboriously worked out, and are therefore worthy of the highest regard. From this report I see that the physique of the inhabitants of these islands varies very considerably according to social standing and environment, the professional classes being the highest in the scale, and the artisans in the towns being the lowest, the intermediate position being occupied by the country labourers, farmers, &c. I also find that living in towns exercises a deleterious effect, especially upon the poorer populations in the crowded districts. In the case of London the ill-effects have naturally been more widespread, and the physical standard of the home counties has sensibly depreciated, owing to the constant drain of all the best manhood to supply the ever-increasing demand for stout artisans and labourers for the heavy trades in the metropolis. Granted, then, that town life does exercise a prejudicial effect upon the physique, how are we warranted in indulging in optimistic views of the future of the physique of the inhabitants of these islands, when we see year by year the exodus from the country and the crowding into large towns in a continuous ever-increasing stream? Civilisation has a general tendency to improve the physique, and the question should not be, "Are we degenerating?" but "Are we improving?" The physique of the town populations probably is better than it was thirty years ago owing to improved sanitary surroundings, and still more to the immigration from the country; but I ask, are we to be content and indulge in optimistic felicitations while the social changes going on around us are gradually attracting the country populations into the vortex of the big towns, and as surely reducing the physical type to the dead level of the artisan classes?

I am, Sirs, your obedient servant,

Sheffield, Dec. 10th, 1888.

C. N. GWYNNE, B.A., M.D.

"THE ALLEGED INCREASE OF CANCER."

To the Editors of THE LANCET.

SIRS,—In the annotation in your issue of Dec. 15th upon the above subject you remark that improved diagnosis of malignant disease and greater accuracy in making returns do not suffice to explain the rise in the death-rate from cancer, but that more detailed statistical returns, especially as to the organs primarily affected, the ages and sexes of the subjects, and the districts in which the various forms of cancer most prevail, are required. Herewith I enclose a copy of a paper read by me at the Royal Medical and Chirurgical Society on April 29th, 1884, by which you will see I drew attention to this subject and produced detailed accounts. I compared the number of deaths which occurred in England and Wales in the years 1850, 1861, 1872, and 1881, by which I showed that mortality had increased from 4966 in 1850 to 13,542 in 1881; and that the death-rate in the 1,000,000 had increased from 320 in the former year to 520 in the year 1881. I further contrasted the increase in the mortality from cancer in each division and county in England and Wales, and then analysed the death-rate of each county separately, and finally drew attention to certain factors existing in the different counties to which might be attributed to a greater or less extent the increase observed. I analysed the deaths at different ages and of different sexes. As you remark, a careful study of this is very suggestive. In one of the concluding passages I said: "I do not wish to be an alarmist, but because it is incontestably proved that cancer is becoming more and more common, is it a reason that we should shirk the subject? On the contrary, I contend it is all the more reason why we should face the fact boldly, and endeavour, if possible to discover the cause of the increase, and, having discovered the cause, to apply ourselves to find a remedy."

I am, Sirs, your obedient servant,

FREDK. BOWREMAN JESSETT.

Upper Wimpole-street, W., Dec. 17th, 1888.

NATIONAL PENSION FUND FOR NURSES.

To the Editors of THE LANCET.

SIRS,—A short time ago you passed some unfavourable criticisms on the above fund. I have for some time past been engaged during my leisure hours in the preparation of tables for the sole benefit of the working classes of this town, which I propose shortly to publish. The object I have in view is to show the working classes that the investment of their small savings at a low rate of interest in a savings bank, building society, or other similar institution is far preferable, as an *investment*, to an insurance on their lives, or an investment in an annuity office, even though that annuity office be the National Pension Fund for Nurses.

It has occurred to me that a few remarks on the advantages or otherwise of nurses in hospitals &c. investing their savings in the National Pension Fund may be interesting to your readers. I am quite aware that the actuaries of life insurance and annuity companies will consider it presumptuous on the part of a person from the country daring to write on such a subject. I had, however, better be candid at the commencement of my remarks, and inform them that, so long as they cannot make either more or less than sixty-four of eight times eight, I defy the combined wisdom of all the London actuaries to disprove my conclusions.

Permit me to put a few very simple questions to the promoters, patrons, &c., of "The National Pension Fund for Women." 1. Are the tables of the death-rates of females constructed by Dr. W. Ogle (1871-80), published in 1885, showing the number of survivors at the end of every year out of one million born, reliable? 2. When women at thirty, thirty-five, or forty years of age enter the occupation of nurses at hospitals, infirmaries, &c., has such an occupation a tendency to increase the expectation of life over the general population of female life as ascertained by Dr. W. Ogle? 3. Are women who are devoting the best portion of their lives to such dangerous occupations deserving of the low rate of $2\frac{1}{2}$ per cent. interest on their savings, without deductions? 4. Does "The National Pension Fund," independent of charitable gifts, offer a return of $2\frac{1}{2}$ per cent. interest on the contributions of nurses?

I will assume that Dr. Ogle's tables are reliable, and that women engaged as nurses &c. in hospitals will have the same expectation of life as the general population of women, and I will prove that the National Pension Fund does not propose to pay these women even $2\frac{1}{2}$ per cent. interest on their savings. For this purpose allow me to ask and answer the following question:—

A woman, aged forty, who is a nurse in an infirmary, wants to provide herself with an annuity of £10 per annum after attaining fifty-five years of age. What is the value of such an annuity in one sum paid down at $2\frac{1}{2}$ per cent. interest, and also what is the value in annual payments till she attains to the said age of forty—that is, in annual payments for fifteen years, according to Dr. W. Ogle's tables of decrements of female life (1871-80)?

The following is the correct mathematical solution; and the value of deferred annuities can be fixed with the same accuracy as the values of immediate annuities:—

Value in number of years' purchase of an annuity upon the life of a female aged fifty-five, based upon Dr. Ogle's tables of decrements of female life, and taking interest at $2\frac{1}{2}$ per cent. ... 12-8863

Out of 596,113 women living at forty years of age, there will be 477,440 living at fifty-five years of age, and as the present value of £1, to be received fifteen years hence at $2\frac{1}{2}$ per cent., = 690,465, and the probability of a woman aged forty living fifteen years is $\frac{477,440}{596,113}$ the amount payable at forty years of age is $12-8863 \times 690,465 \times \frac{477,440}{596,113}$

= 7-1262 years' purchase of the annuity = £71 7s. 3d., the amount which ought to be paid in one sum at forty years of age to secure £10 per annum for life after attaining fifty-five years of age. Rate of interest $2\frac{1}{2}$ per cent. If 3 per cent. interest were allowed to the nurses on their savings, the price to be paid should be £61 12s. 4d. The amount a

woman has to pay to the National Pension Fund is £82 12s. 6d. (See Table D, page 21 of Prospectus.)

The annual payments for fifteen years, from forty to fifty-five, at $2\frac{1}{2}$ per cent. interest, subject to failure on extinction of life, is arrived at as follows:—

Value of a female's life at forty, from Dr. Ogle's tables of decrements, and calculated at $2\frac{1}{2}$ per cent. interest	18-3284
Deduct value of an annuity for fifteen years, subject to failure as found above	7-1262
Number of years' purchase which ought to be given for an annual payment from forty to fifty-five at $2\frac{1}{2}$ per cent. interest	11-2022
and $\frac{71-262}{11-202} =$	£6 7s. 3d. annual payments at the end of each year.
and $\frac{71-262}{12-202} =$	£5 16s. 10d. annual payments at the beginning of each year.

The annual payment to the National Pension Fund for fifteen years for a pension of £15 at fifty-five is 18s. 9d. per month, which payment is equal to £7 10s. per annum (by monthly payments) for a pension of £10 per annum (see Table A, page 14, of prospectus). Comment on the above figures is quite unnecessary, as the annual payments are 25 per cent. in excess of what they ought to be.

I have selected the age of forty in consequence of the following paragraph in the Company's prospectus in reference to this wonderful Table A.

"The contributions under this table are reduced to a minimum, and therefore they are not returnable under any circumstances. On account of the low rate of contribution for the pension secured, this table is suitable for nurses of forty and upwards, or for those who do not intend to change from nursing to any other occupation, or who have not and are not likely to have others dependent upon them at the time of death. Anyone may enter for a higher or lower rate of pension under this table by making known her special requirements to the Secretary."

In conclusion, I will just remark that carefully prepared annuity and insurance tables, on strict mathematical principles, convince me that a great many so-called actuaries in this country are mere copyists. I shall probably at a future day have some interesting comparisons to make about insurances and annuities.

I am, Sirs, yours faithfully,

THOMAS FATKIN.

Leeds, Dec. 11th, 1888.

P.S.—It must be remembered that nurses in hospitals are not "selected lives," and the difference between $2\frac{1}{2}$ per cent. and the rate at which the company can lend ought to pay all expenses of loading, &c.

* * We give Mr. Fatkin's figures publicity because they appear to us to be correct, at the same time adding, however, in our own behalf that the criticisms which we have passed upon the fund do not depend upon the adoption of any particular table of mortality, or indeed upon any assumptions which it is even possible for the actuary to the fund to call in question. We have shown by his own representations that he reckons and expects to have a *very large surplus* to distribute eventually, and Mr. Fatkin's elaborate figures serve to show what ground there is for this expectation. We object that a large surplus is a direct temptation to extravagant expenditure upon the mere machinery of advertising and management, and that sound policy requires that the tables should give from the first the full benefit that can be safely reckoned to arise with thrifty management, and that so much surplus only should be shown by the mathematical budget as is necessary to make the undertaking reasonably safe. The creation of illusory bonus by demanding needlessly heavy premiums is certainly to be deprecated, and ought to have been scrupulously avoided in connexion with this institution. The facts on which this objection rests are not in dispute, and cannot come into dispute; and thus it will be seen that our criticism, though parallel to that which Mr. Fatkin makes, is perfectly independent of his, notwithstanding that it is strongly corroborated by his figures. Another ground of complaint which we find in the prospectus is the exceedingly bad

adaptation of the benefits offered to the actual needs of nurses. An arbitrary interdict upon sick benefits, unless in conjunction with pension benefits, is one instance of this lack of appreciation; and the absurd provisions under which nurses are invited to propose for policies subject to premiums of £30, £50, and even hundreds of pounds a year, is another example of the same kind. These are the flaws that we want to see corrected in the scheme; and although we are glad to allow Mr. Fatkin to make any well-founded criticism in our columns, it must not be assumed that we have changed our ground, or have in the least abated our demand for a revision of the kind which we have heretofore indicated.—ED. L.

THE CAUSATION OF DISEASES IN CHILDREN.

To the Editors of THE LANCET.

SIRS,—The tables published by Dr. Robert Lee, in your last issue, enable us to construct an aphorism—viz., "Rickets never occurs without lung disease." But we may, I think, go even further, and say, "Rickets never occurs without bronchitis." It is equally true, however, that "Rickets never occurs without enteritis," so that in studying the causation of this disorder the latter should occupy an equal share of our attention. Bronchitis interferes with respiration, enteritis with alimentation. Each, therefore, leads to profound changes in the blood; and since the composition of the blood determines, in large measure, the environment of each cell of the body, it follows that development must be largely interfered with if an individual suffers from either of these disorders for any length of time during the early years of life. We have at present, however, no logical grounds for assuming that either bronchitis or enteritis is a cause of rickets. With equal justice they may be regarded as complications of the disease, but even then they might, by their secondary effects, furnish many characteristic features.

My chief object in writing this letter is to call attention to what I believe to be by far the most important disease in children—i.e., chronic enteritis. This disorder, in its well-developed form, is popularly termed "consumption of the bowels." Its main features are large abdomen, foul-smelling, abnormally coloured, slimy, and (in severe cases) bloody motions. Of these several symptoms, the foul smell of the motions is by far the most important. Healthy motions have an unpleasant odour, but there is a vast difference between this physiological odour and the insupportable stench of the motions in question. I say it is the most important symptom because, in the first place, it is always present; and secondly, because it appeals most readily to the senses, and can be but seldom overlooked. We should never neglect to inquire after this particular. The character of the motions affords a most important index of the general health of the child, and if the mother can succeed in keeping these healthy the child will grow up strong and vigorous. Be it noted that children are very seldom carried off by disease due to hereditary morbid taint. I have no hesitation in saying that, practically, all cases of bronchitis, "consumption of the bowels," and so-called "struma" (all of which cause an enormous number of deaths) are due to neglect—neglect as to food, ventilation, and the simplest common-sense precautions.

It has been to me, for several years, a very interesting task to compare the health of brothers and sisters, and I have come to the conclusion that when one or two of a family are delicate, while the others are healthy, the delicacy has always had such an accidental beginning, as we may call it; and, further, that in most cases where the majority, or all, the children are sickly, the cause is not an inherited weakness, but the faulty system of bringing up to which all the children had been subjected. It would, of course, be absurd to disregard altogether the influence of hereditary weakness, but I am convinced that, so far as diseases of children are concerned, this plays a very subordinate part, and that whatever weakness belongs to the new-born infant is rather the result of ante-partum con-

ditions of environment. I have tested the truth of these statements by a large number of observations, and I could cite numerous cases where weakly infants have, with judicious management, grown up strong and vigorous, just as, on the other hand, I could give a dismal list (as who indeed could not?) of strong and vigorous infants who, through faulty management, have grown up into sickly, miserable specimens of humanity, if indeed they have not been actually destroyed in their infancy or childhood.

I am, Sirs, yours faithfully,
Dec. 16th, 1888. HARRY CAMPBELL, M.D.

SIR MORELL MACKENZIE AND THE ROYAL COLLEGE OF PHYSICIANS.

To the Editors of THE LANCET.

SIRS,—I beg to enclose you a copy of the correspondence which I have sent to the daily papers, and shall be obliged by your publishing it in your next issue.

I am, Sirs, yours faithfully,
MORELL MACKENZIE.
19, Harley-street, Cavendish-square, W., Dec. 17th, 1888.

No. 1.

Letter from Sir Henry Pitman, M.D., Registrar of the Royal College of Physicians, London, to Sir Morell Mackenzie, M.D.

Royal College of Physicians, London, S.W., Nov. 20th, 1888.

DEAR SIR,—It has been said in my hearing that you are no longer a member of this College. As I have not received any official notice that you have surrendered your membership, I should feel obliged by your informing me whether there is or not any ground for the statement.

I am, yours faithfully,
(Signed) HENRY A. PITMAN, Registrar.
Sir Morell Mackenzie, M.D.

No. 2.

Royal College of Physicians, London, S.W., Nov. 22nd, 1888.

DEAR SIR,—On the 20th inst. I addressed a letter to you, and, fearing it may have miscarried, I enclose a copy. As it is important that I should be accurately informed of the question put in that letter, may I request the favour of an early answer?

I am, yours faithfully,
(Signed) HENRY A. PITMAN, Registrar.
Sir Morell Mackenzie, M.D.

No. 3.

19, Harley-street, Cavendish-square, W., Nov. 23rd, 1888.

DEAR SIR,—I received your letter dated Nov. 20th, and also your second letter, dated Nov. 22nd, enclosing a copy of the previous one. I am sorry to have given you the trouble of writing twice, but I did not recognise the agency of your first note, and at present I am so busy that my correspondence occasionally gets behindhand. I am not surprised at it having been said in your hearing that I am "no longer a member of" the College, as for the last fifteen years I have as far as possible suppressed my connexion with your institution. I only became a member because that qualification is necessary for the medical staff of the London Hospital, and I should have resigned my connexion with the College, when my private engagements necessitated my giving up my hospital appointment, had I known that I could do so by a simple notice. As I gather from your letter, however, that this method is recognised, I shall be much obliged if you will be good enough to omit my name from future lists of members.

I am, yours faithfully,
(Signed) MORELL MACKENZIE.
Sir Henry Pitman, M.D., Registrar, Royal College of Physicians, London.

No. 4.

Royal College of Physicians, London, S.W., Nov. 26th, 1888.

DEAR SIR,—Let me thank you for your reply of the 23rd inst. to my letters of the 20th and 22nd, and to express my regret that you should have been put to any trouble in the matter. Let me add that it is the custom, when a member resigns his membership, to return his diploma to the College. Believe me, yours faithfully,

(Signed) HENRY A. PITMAN, Registrar.
Sir Morell Mackenzie, M.D.

No. 5.

19, Harley-street, Cavendish-square, Nov. 28th, 1888.

DEAR SIR,—I regret to say that I do not recollect having seen my diploma since I sent it to the secretary of the London Hospital twenty-two years ago. I suppose that he forgot to return it to me after my election. I have written to the registrar of the General Medical Council requesting him to remove my name, if, indeed, the title was ever registered, of which I am by no means sure. Perhaps, however, if it would not be troubling you too much, you would be good enough to give notice yourself to the registrar of my resignation. I am, yours faithfully,

(Signed) MORELL MACKENZIE.
Sir Henry Pitman, M.D., Registrar.

No. 6.

Royal College of Physicians, London, S.W., Nov. 30th, 1888.

DEAR SIR,—I thank you for your letter of the 28th. I have notified, in accordance with your wish, your resignation as a member of this College to the registrar of the General Medical Council.

Yours faithfully,
(Signed) HENRY A. PITMAN, Registrar.
Sir Morell Mackenzie, M.D.

MANCHESTER.

(From our own Correspondent.)

MANCHESTER DEATH-RATE.

PUBLIC attention still continues to be called to the excessively high death-rate of the city, the Sanitary Association taking an active part in the agitation. At the first of the public conferences, held a fortnight ago in Ancoats, in addition to the leaders of the movement, a large proportion of the working classes were present in the audience. Dr. Ransome opened the discussion, and laid stress upon the unhealthy condition of large numbers of the dwellings of our poor, and the impure state of the atmosphere around them. The corporate authorities came in for severe criticism at the hands of most of the speakers, though Mr. Alderman W. Smith showed that the corporation was beginning to be aroused, and that the Unhealthy Dwellings Committee were making headway, if slowly, in the herculean task that lay before them. They have lately taken a practical step, which it is hoped may bear fruit, by inviting the owners of old cottage property in the worst districts of the city to come forward and offer such property to the corporation at a reasonable price. The second conference will be held to-morrow in another part of the city, when the special subject for discussion will be the smoke nuisance; this will be opened by Mr. Herbert Fletcher of Bolton, who is himself the owner of large works, and who has done so much to demonstrate beyond dispute the possibility of works and factories being carried on without producing any nuisance by smoke from boiler fires &c. On several occasions deputations have visited his works to have ocular demonstration of this fact, and about ten days ago a large party, organised by the Manchester and Salford Noxious Vapours Abatement Association, paid them a visit with this object in view. The time would appear to have now arrived when some more stringent measures should be enforced to purify the murky atmosphere of our manufacturing towns.

OWENS COLLEGE.

On Saturday night the annual *soirée* of the College Union was most successfully given. For many years this pleasant reunion of past and present students and their friends has been exceedingly popular, but owing to the favourable conditions under which Saturday's gathering took place this must be counted the most successful. For the first time, the whole of the new buildings were at the disposal of the committee, and the various museums and galleries form delightful promenades on occasions such as this. Science in all its branches, literature, and music were all laid under contribution for the amusement as well as the instruction of the visitors, and the secretaries are to be congratulated upon the success attending their labours. The medical students' dinner was held at the Grand Hotel, under the presidency of Mr. Thomas Jones, and lacked nothing either in numbers or conviviality.

SMALL-POX.

Dr. Page's report to the Local Government Board upon the outbreak of small-pox which occurred here in the summer at an industrial school throws but little additional light upon it. The origin is somewhat obscure, but there appears to be but little doubt that it was imported by a child from York, though the authorities of the latter place were apparently free from blame. At present Manchester is free from small-pox, but in the neighbouring borough of Salford there exists what almost amounts to an epidemic of typhoid fever, nearly 100 cases a month having been reported since September, with a corresponding ratio of deaths.

THE ASSIZES.

At the recent assizes a policeman was put upon his trial for having caused the death of a man whom he had arrested, and towards whom he appears to have used an excessive amount of violence. After being locked up one night in the police cells, the prisoner was liberated without anything very serious being noticed; but after a few hours symptoms of cerebral hæmorrhage came on. He was removed to the infirmary, and there died. At the trial, no less than ten medical men were called to give evidence for and against the accused, five of whom were of opinion that the hæmorrhage was due to disease, whilst the others were equally convinced that it was the result of the violence to which the deceased man had been subjected. Owing to this conflict of opinion, the prisoner escaped with eighteen months' hard labour.

rhage was due to disease, whilst the others were equally convinced that it was the result of the violence to which the deceased man had been subjected. Owing to this conflict of opinion, the prisoner escaped with eighteen months' hard labour.

PERILS OF FOOTBALL.

The football season has, as usual, brought with it a crop of casualties of a more or less serious nature. Mr. Southam has recently published an account of hæmorrhages into the tissues of the scalp and ear caused by rough play. On Wednesday last, a death took place in the infirmary of a youth from injuries received in the football field. The popularity of the game in the north of England at least remains undiminished, but some steps ought to be taken by the leaders and supporters of it to diminish the risks which attend it as now carried on.

December 18th.

NORTHERN COUNTIES NOTES.—PART

(From our own Correspondent.)

THE HEALTH OF CARLISLE.

MR. MCKIE, the city surveyor of Carlisle, has prepared a report for the health committee and council relative to a scheme for sewer extension in the city. Mr. McKie's report contains some interesting vital statistics. He remarks that the increase in the population during the last third of a century has been 48½ per cent., or an average yearly increase of 1½ per cent. In 1855 there was one inhabitant to 49½ square yards of building and open space; at the present time there is one inhabitant to 70½ square yards of buildings and open space; so that the inhabitants of the city enjoy 42½ per cent. more of open area and buildings than in 1855. The inhabitants of the new part of the city built since 1835 enjoy an average 114½ square yards of buildings and open space, being 131½ per cent. more than the city enjoyed in 1855. The average death-rate before the city was sewered was about 28 per 1000, and it is now about 20 per 1000. Mr. McKie says that before the sewers were made the ground water in the winter months was almost the same level as the surface, and it was noticed that almost all the furrows in the agricultural land through which the main sewers passed in 1854-5 had water standing in them, but now the level of the ground water varies from 6 ft. to 10 ft. below the surface of the ground, which must have considerably decreased the humidity of the atmosphere. A considerable part of these lands is now built up, and forms important residential parts of the city.

WORKINGTON AND ITS SANITARY CONDITION.

Judged by the statements made at a public meeting last week, the sanitary condition of Workington is not satisfactory. Most complaints are heard as to the Clay Flats district, and it is stated that there are at present six cases of typhoid fever in the town. One of the speakers said that the district, or at least some of its streets, might be described in two words, "damp and dirty." It appears it is now nine months since the medical officer of health had called the attention of the local board to the insanitary conditions which existed, and urged the board to take prompt action to remedy the evils.

WINDFALLS FOR WORKHOUSE INMATES.

At the last meeting of the Weardale guardians, Stanhope, Dr. Livingstone, the chairman, announced that he had just opened a letter addressed to himself, as chairman, and enclosing one £10 Bank of England note and two notes of £5, with a request from the anonymous donor that it might be expended on the regalement of the workhouse inmates during the Christmas season.

The late Miss Bell, of Quarry-hill, Cumberland, has left £100 to the Cumberland Infirmary, Carlisle, and £100 each to the Silloth Convalescent Institution and the Bell Memorial Hall, at Bolton-gate.

Newcastle-on-Tyne, Dec. 17th.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for efficient vaccination in their respective districts:—Dr. Farrar, of the fourth district of North Welchford Union (second time); Mr. W. J. Merlin, of Setton, Isle of Ely (fifth time).

EDINBURGH.

(From our own Correspondent.)

THE ROYAL SOCIETY OF EDINBURGH.

A SOMEWHAT interesting discussion on the etiology of cholera was initiated at the Royal Society last night, when Dr. Woodhead communicated a paper by Neil Macleod, M.D., and Walter J. Milles, F.R.C.S. Eng., both of Shanghai: "On an Inquiry into the Causation of Asiatic Cholera." The investigators began by pointing out that they had been led to the conclusion that Koch was, at the time they commenced their experiments, almost the only worker in the bacteriological field of whom it could be said that he had not published anything subsequently upset, and that consequently special attention was directed at once to the comma bacillus. The results of a number of most careful experiments were detailed, as a result of which they join issue with Klein and Gibbes and with the Spanish Cholera Commission, and arrive at the following conclusions.

1. The comma bacillus of Koch is invariably present, and associated with certain changes, in the small intestine, in cases of Asiatic cholera.
2. There is no evidence to show that it is a normal inhabitant of the human alimentary canal, and therefore no proof for the assertion that it is a result of the disease.
3. The means used to introduce the comma bacillus into, and those used to lessen the peristalsis of, the small intestine of the guinea-pig, cannot be regarded as causing appearances like those of Asiatic cholera, or as causing the death of the animal, far less a mortality of over 60 per cent.
4. Pure cultivations of the comma bacillus, introduced into the stomach under the precautions described, are pathogenic to the guinea-pig.
5. Injected with similar precautions, the contents of the ileum from those animals killed by injections of pure cultivations of the bacillus act in the same manner as pure cultivations of that organism.
6. The organism multiplies in the small intestine of the animal, and there are associated therewith changes similar to those in man in Asiatic cholera.
7. As there are conditions which favour the passage alive of the bacillus through the stomach of the guinea-pig, and also conditions which favour its multiplication in the small intestine of that animal, so in man, as there cannot be a doubt that the organism finds conditions favourable to its multiplication in his small intestine, it must have found conditions favourable to its entrance alive through, in all probability, the mouth and stomach.
8. There is strong evidence, therefore, for regarding the comma bacillus of Koch as the cause of Asiatic cholera.

EDINBURGH UNIVERSITY COURT.

At the meeting of the Edinburgh University Court held yesterday, the committee on the class returns of the University professors and the recognised medical lecturers for 1887-88 reported that they called for no special remarks. The Court decided that in the case of lecturers on science in Edinburgh recognition should be made of the individual lecturers as well as of institutions. Mr. Readman, D.Sc., was recognised as a teacher of practical chemistry whose course of instruction should qualify for graduation in medicine in the University. It was decided to approve of the opening by the Professor of Engineering of a class on sanitary engineering in connexion with graduation in science in the department of Public Health, and the fee was fixed at £3 3s., as recommended by the Senatus.

ST. ANDREWS AMBULANCE ASSOCIATION.

Last Thursday evening the members of this Association, assisted by the Queen's Rifle Volunteer Brigade and the Volunteer Medical Staff Corps, gave a demonstration in the Waverley Market before several thousand spectators. The Chairman (Lord Provost Boyd) gave some most interesting statistics. During the last year, 700 new pupils belonging to all the different trades and occupations entailing danger had completed their annual training. Many ladies have also received instruction in ambulance work. The total number last year was 970. This year the ambulance waggon has been out 244 times, whilst last year it had been requisitioned in only 142 cases. Accidents such as are most frequently met with in civil life were dealt with, and the manner in which to treat certain emergency cases was most

admirably demonstrated. So great was the interest excited that the barricades were broken down by the enthusiastic crowd, and it was thought advisable not to go on with the second part of the programme, which consisted of military ambulance work.

THE CHRISTMAS VACATION.

The University and Extra-mural Medical classes will rise for the Christmas vacation on Friday, Dec. 21st, to meet again on Jan. 7th, 1889.

Edinburgh, Dec. 18th.

DUBLIN.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS.

THE revised scheme of examination for the Fellowship of the College will come into operation on Jan. 1st, 1889, and will be obligatory upon all candidates whose applications will be admitted to examination are lodged after that date. There will be two grades of examination, one for licentiates or graduates in surgery of less than ten years' standing, and the other for licentiates or graduates of more than ten years. The Fellowship of the College is accepted by the Royal College of Surgeons of England for admission of Fellows *ad eundem*, and without further examination to the Fellowship of that College; it is also accepted by the Army Medical Department as an equivalent substitute for the examination required to be passed by surgeons of the Army Medical Staff previously to promotion to higher rank.

The opening meeting of the Scientific Association for the present session was held on Monday evening, the 17th inst., in the Albert Hall of the College, when an admirable address was given by the incoming President, Mr. Fraser, Professor of Anatomy in the Medical School of the College. The Association has now entered on its third year, and has been a considerable success. Its numbers at present seventy members, and if its advantages were better known its membership would be more eagerly sought after. It may be added that all medical students are eligible to join, and that the subscription is only half-a-crown a year.

THE MEATH HOSPITAL.

The late Mr. Mathew O'Reilly Dease, D.L., had paid two sums of £100 each towards the cost of a memorial in this hospital to the memory of his father and grandfather, who were both members of the surgical staff. Mr. Dease, however, left by will all his property, amounting to about £50,000, to the State, and application has been made to the Chancellor of the Exchequer to obtain the balance of the cost of the memorial from the assets of the deceased. It would be a subject of regret if the comparatively small sum required could not be obtained from the desired source.

DUBLIN ORTHOPÆDIC HOSPITAL.

A Cinderella Dance in aid of the funds of this hospital was given on Monday evening in the Leinster Hall. During the past year an outbreak of measles hindered to some extent the work of the hospital, and the lowness of the funds required several of the beds to be closed. From the annual report I learn that 80 per cent. of those treated were either wholly or partially cured, 50 per cent. were absolutely cured, and that the death-rate was exceedingly low; while for 100 patients treated the entire expenses did not amount to more than £9 per head. These returns show that the institution is deserving of support, and it is to be hoped that the deficiency of £300 on last year's income will be made up next year.

QUEEN'S COLLEGE, DORK.

In view of the present vacancy in the professorial staff of this institution, certain of the graduates have thought it advisable to state their views for the advantage of the authorities. They held a meeting on last Saturday, and, although the chairman disclaimed any intention of dictating to those who are empowered to fill the vacant chairs and offices of the College, a resolution was adopted in which they dwelt upon the justice and importance of giving the preference, *ceteris paribus*, to candidates who have passed their studies at the College.

Dublin, Dec. 18th.

PARIS.

(From our own Correspondent.)

SEWAGE DISPOSAL.

THE much-vexed question concerning the disposal of the sewage of Paris has just passed the Chamber of Deputies, and, by a feeble majority, a project of law, authorising the city of Paris to divert the foul stream to a portion of the Forest of St. Germain, was voted. The report was drawn up by Dr. Cornil, who submitted it to the Senate on the 13th inst., and recommended its adoption pure and simple. The system of *tout à l'égout* has many opponents, as being liable to establish at the gates of Paris a permanent focus of epidemics. Among the most determined adversaries is M. Pasteur, who, on March 16th last, at a meeting of the Council of Hygiene, expressed himself in these terms: "We must by all the means in our power endeavour to destroy the germs of contagious maladies which decimate the Parisian population, or annihilate their baneful influence. It is proposed, not to convey the sewage to the sea, where it cannot do harm, but to accumulate it each year, more and more, on the plains situated at the gates of the great city, and these plains will be cultivated. If the plains were allowed to remain sterile, there would be no danger of bringing back the germs to Paris." M. Cornil thinks that the action of the sun will render the pathogenic microbes inoffensive. To this M. Roux observes, in the "Annales de l'Institut Pasteur," that "the germs of charbon are not destroyed by their being exposed to the sun; it is sufficient to withdraw them from an insulated medium where they cannot thrive, and to throw them into the same liquid which has not been exposed to the light, for them to be cultivated." M. Pasteur contends that the land in the neighbourhood of Paris would be unfit to furnish edible vegetables, and M. Cornil had himself written that "the hygienists should be careful in regard to vegetables and fruits which are eaten raw, such as salads and strawberries, these aliments being liable to carry with them into the digestive tube not only micro-organisms, but also the eggs and parasites of animals." At Berlin, where this mode of irrigation is in practice, the inhabitants will not even give to their domestic animals any fodder that has been in contact with the liquid. M. Pasteur remarks that the condemnation of the system may be found in M. Cornil's own report, in which he says that "the *tout à l'égout* is not that which is supposed to be the best. It is better not to empty into the sewers the dejections of patients affected with typhoid fever or cholera, or the sputa of phthisical subjects." M. Pasteur asks the Senate to adopt a closed culvert, conveying the fecal dejections to a building, where they might be submitted to a temperature of 120°C., which temperature is fatal to the infectious germs; but they should not be mixed with the water destined to be dispersed over the land. Moreover, instead of pouring out from 12,000 to 15,000 cubic metres per year and per hectare, only 9000 should be employed, as this is the quantity strictly absorbable. Besides which, the surfaces of Gennevilliers and of St. Germain, which have been the fields of experiment for some five or six years, will soon become insufficient, and the city of Paris will be compelled, as the consequence of *tout à l'égout*, to adopt the *tout à la mer* as suggested by a critical writer on the subject, and, he adds, it would then be found that M. Pasteur was right. It may be interesting to give here some of the arguments in favour of the system of *tout à l'égout*. The late M. Durand-Claye, the well-known engineer, had, a short time before his death, made a communication to the Société Française Hygiène on the above subject. He greatly distinguished himself by his advocacy of the above system, and he complained that his projects, which were so much opposed in France, notwithstanding that their utility was daily becoming more evident, met in foreign countries with more favour. "It is five or six years ago that the Prussian engineers came to Paris, studied our installation and our procedures, and made themselves acquainted with the advantages; and eighteen months afterwards, Berlin was, on our plans, endowed with a vast field of purification, whence the sewage escaped clear and limpid, after having fertilised the soil; and here I am still struggling with my projects carried into effect." The *Journal d'Hygiène* contains a note of Dr. Proust on the plains of Berlin. On the occasion of the discussion in Parliament of

the project of law on the land at Achères (one of the places for experiment), Dr. Proust related what he had seen on a visit to Berlin. "The impression which one feels when he passes over the fields of purification of the city of Berlin cannot be more favourable in a hygienic point of view." After having recalled that the engineers charged with the sanitation of Berlin, before deciding on their programme, came to Paris to ascertain the first results obtained at Gennevilliers, Dr. Proust concluded his note in the following terms: "While we are still discussing these results, and in our Parliament a violent struggle has been going on for several years for permission to extend the same results to some hundred hectares more, the city of Berlin has already irrigated 3182 hectares and nearly terminated its work of sanitation, with the greatest benefit to the health of their co-citizens." Dr. Bertillon, the Director of Statistics at the Prefecture of the Seine, writes, with reference to Gennevilliers, that "the sanitary condition of the localities watered by sewage has not been for three years either notably better or worse than that of the other localities of the north and west of Paris. Epidemic maladies, notably, have not been more prevalent, and the employment of sewage as manure does not exercise on the public health any injurious influence whatever."

PARIS ACADEMY OF MEDICINE.

At the annual public meeting of the Paris Academy of Medicine, on Dec. 11th, M. Hérard presiding, the following awards were made of prizes for the year 1888:—*Prix de l'Académie* (1000 fr.): Not given, but an award made of 400 fr. to M. Sarda (of Vincennes), 400 fr. to M. Friot (Nancy), and 200 fr. to M. Jacquemart (Paris). *Prix Amussat* (900 fr.): Not awarded, but M. Rodet (Paris) received honourable mention (with 500 fr.). *Prix Barbier* (2000 fr.): Not awarded, but M. F. Roux (Paris) received 1000 fr., and M. E. Goubert (Paris) 500 fr. *Prix Buignet* (1500 fr.): MM. Hardy and Calmels (Paris). *Prix Capuron* (1000 fr.): M. Duhoureaux (Canterets). *Prix Cuvier* (800 fr.): M. Descourts (Paris). *Prix Daudet* (1000 fr.): Divided between M. H. Feulard (Paris), 600 fr., and MM. Marfan and Toupet (Paris), 400 fr. *Prix Desportes* (1300 fr.): M. Dupuy (Mauriac), 800 fr.; M. Bottey (Paris), 500 fr.; honourable mention, M. Duroziez (Paris). *Prix Falret* (1500 fr.): M. Raoul Reynier (interne of Paris hospitals), 1000 fr.; honourable mention with 250 fr. to MM. Morel, Lavallée and Bélières (Paris); honourable mention with 250 fr. to M. Mabile. *Concours Vulfranc-Gerdy*: Award of 500 fr. to MM. Boutarel and Lamarque. *Prix Ernest Godard* (1000 fr.): MM. Lécorché and Talamon (Paris); honourable mention, MM. Bertrand and Fontan (Toulon), Kelsch and Vaillard (Paris), Marfan (Paris), Pichon (Paris). *Prix de l'Hygiène de l'Enfance*: An award of 400 fr. to M. Dauchez (Paris). *Prix Harard* (2700 fr.): A prize of 1700 fr. to M. Louis Jullien (Paris); honourable mention with 500 fr. to M. Duflocq (Paris); honourable mention with 500 fr. to MM. Saint-Germain and Valude (Paris). *Prix Laval* (1000 fr.): M. Foveau (stud. med.). *Prix Meynot* (2600 fr.): A prize of 2000 fr. to M. Châtellier (Paris); and one of 600 fr. to M. Ricard (Paris). *Prix A. Montbigne* (1500 fr.): M. Lenoir (Lille); very honourable mention to MM. Fillean and Léon Petit (Paris); honourable mention, MM. Bournevi (Amplepuis) and Bordas (Paris). *Prix Orfila* (4000 fr.): M. Maurice Kaufmann (Alfort); honourable mention, M. Barbancey (Montpon sur l'Isle). *Prix Oulmont* (1000 fr.): M. Girede (Paris). *Prix Pourat* (900 fr.): Divided between M. Gley (Paris), 600 fr.; and M. Albert René (Nancy), 300 fr. *Prix Saint-Paul* (25,000 fr.): Three "prix d'encouragement" of 1000 fr. each awarded to M. Cousot (Brussels), Renou (Saumur), Thoinot (Paris); honourable mentions MM. Cozzolino (Naples), E. Gaucher (Paris), Lancry (Dunkerque), Roulin (Paris), and Robert William Parker (London). *Prix Hanski* (1800 fr.): A prize of 1200 fr. to M. Arnold Netter (Paris), and one of 600 fr. to M. Thoinot (Paris). *Prix Vernois* (800 fr.): MM. L. Villain, Bascon, Lafourcade, Moule, and Merame. Paris, Dec. 18th.

PRESENTATION.—At a conversation held in the University College, Dundee, on the 12th inst., on the occasion of the students taking a formal leave of Dr. Carnelley on his removing to Aberdeen, Dr. Andrew Thomson, as a past student in University College, presented Dr. and Mrs. Carnelley, as a token of respect and esteem of his students, with a silver tea and coffee service.

THE SERVICES.

Surgeon-General J. Sinclair, M.D., has succeeded Surgeon-General Hassard, C.B., as Principal Medical Officer in Ireland.

Deputy Surgeon-General E. M. Sinclair is about to retire from the Service, his health not permitting him to proceed in India.

Surgeon-General W. Marshall Webb will embark at the end of this month to take up the appointment of Principal Medical Officer in Bombay.

Surgeon-Major R. C. Eaton has been appointed Senior Medical Officer in West Africa.

Brigade Surgeon J. A. Scott has been appointed Sanitary Officer of the Aldershot Division.

Surgeon H. S. McGill, Assistant Professor of Pathology at the Army Medical School, Netley, has been placed under orders for service in India.

ARMY MEDICAL STAFF.—Deputy Surgeon-General Edward Malcolm Sinclair, M.D., is granted retired pay (dated Dec. 19th, 1888).

BOMBAY MEDICAL STAFF CORPS.—The Queen has approved of the retirement of the following:—Brigade Surgeon James McDonald Houston, M.D., Madras Medical Establishment (dated Oct. 12th, 1888), and Surgeon-Major William Coleridge Kiernander, Bombay Medical Establishment (dated Dec. 15th, 1888).

ADMIRALTY.—The following appointments have been made:—Deputy Inspector-General Alexander Turnbull, D.M., to the Admiralty, for temporary service (dated Jan. 1st, 1889); Fleet Surgeon Edward Meade to the *Asia*, for charge of medical duties of Portsmouth Dockyard, of *Asia*, and ships of Steam Reserve; Fleet Surgeon Thomas Bolster to the *Nankin*, for charge of medical duties of Pembroke Dockyard, of *Nankin*, and ships of Steam Reserve; Fleet Surgeon Wm. B. Fletcher to the *Duncan*, for charge of medical duties of Sheerness Yard, Naval Barracks, *Duncan*, and ships of Steam Reserve; Fleet Surgeon H. S. Lander to the *Indus*, for charge of medical duties of Devonport and Keyham Yards, *Indus*, and ships of Steam Reserve (all dated Dec. 17th, 1888); Surgeon Charles S. Woodwright to the *Asia*, for duty in Portsmouth Yard, &c. (dated Jan. 1st, 1889); Fleet Surgeon Richard S. P. Griffiths to the *Pembroke*, for charge of medical duties of Chatham Dockyard and *Pembroke*, and ships of the Steam Reserve; Fleet Surgeon Samuel Bamfield to the *Scrapis*; Surgeon George Wilson, to the *Pembroke*; Surgeon James M. France to the *Raleigh*, additional; and Surgeon Paul W. Fraser to the *Shannon* (dated Dec. 15th, 1888).

VOLUNTEER CORPS.—*Artillery*: 1st Volunteer (Sussex) Brigade, Cinque Ports Division, Royal Artillery: Acting Surgeon H. A. Hodson resigns his appointment (dated Dec. 15th, 1888).—*Rifle*: 1st Volunteer Battalion, the Royal Fusiliers (City of London Regiment): Surgeon R. P. Frazer resigns his commission; also is granted the honorary rank of Surgeon-Major, and is permitted to continue to wear the uniform of the Battalion, on his retirement (dated Dec. 15th, 1888).

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent M.D. Examination:—

Alexander, Sidney Robert, Guy's Hospital.
 Bailey, Chas. Frederic, St. Bartholomew's Hospital.
 Basend, F. H., Roy. Infirmary and Univ. College, Liverpool.
 Blane, Isaac, Owens College.
 Brown, Herbert Henry, B.S., University College.
 Deane, Edward, B.Sc., University College.
 De Chama, Edmond Lucien, University College.
 Dobson, Leonard C. Talbot, St. Bartholomew's Hospital.
 Elliott, John, B.S., B.Sc., St. Bartholomew's Hospital.
 Evans, W. A., Owens Coll. and Manchester Royal Infirmary.
 Flemming, Percy, B.S., University College.
 Gardner, Henry Willoughby, St. Bartholomew's Hospital.
 Goodall, Edwin, B.S., Guy's Hospital.
 Holder, Sydney Ernest, B.S., University College.
 Jacka, Cyril William, University College.
 Jones, Samuel Cromwell, B.S., University College.
 Kauffmann, O. J., Owens, Manch. Roy. Infirmary and St. Mary's.
 Kelsall, Henry Truman, B.S., London Hospital.
 Pennewan, William, University College.
 Rennie, G. E., B.A.Syd., Gold Medal, University College.

Rivers, Wm. Halse Rivers, St. Bartholomew's Hospital.
 South, Charles Frederic, B.S., Guy's Hospital.
 Rushworth, Frank, St. Bartholomew's Hospital.
 Scharlieb, Mary Ann D., B.S., Lond. Sch. of Med. for Women.
 Sisley, Richard, St. George's Hospital.
 Slater, Bruce John, St. Bartholomew's Hospital.
 Smith, John Anderson, St. Bartholomew's Hospital.
 Stedman, Frederic O., B.S., Charing-cross Hospital.
 Tait, Edward Sabine, St. Bartholomew's Hospital.
 Taylor, Frederick Howard, B.S., London Hospital.
 Thomson, St. Clair, King's College.
 Toogood, Frederick Sherman, University College.
 Tunstall, John Ogle, University College.
 Vincent, Herbert Edmund, B.S., Guy's Hospital.
 Voelcker, Arthur Francis, B.S., University College.
 Waugh, Henry Dunn, B.A., B.Sc., University College.
 Wethered, Frank Joseph, London Hospital.
 Wheaton, Samuel Walton, St. Thomas's Hospital.
 Williams, Reginald Muzio, St. Thomas's Hospital.
 Wynter, W. E., B.S., Middlesex and St. Bartholomew's Hosps.
 Young, Chas. Wheeler Forrest, St. Bartholomew's Hospital.

* Obtained the number of marks qualifying for the gold medal.

The following has passed the recent examination in subjects relating to Public Health:—

Brock, Jas. H. Ernest, M.D., B.S., University College.

UNIVERSITY OF CAMBRIDGE.—The following gentleman has been examined and approved for the degree of Bachelor of Surgery:—

Niven, M. A., Queen's.

A NEW INFIRMARY FOR COVENTRY.—The Coventry Board of Guardians are contemplating erecting a new infirmary to accommodate 145 patients.

AN EXAMPLE WORTHY OF IMITATION.—Recently, says an evening contemporary, the Empress of Japan paid a visit to the hospital at Neno in course of erection by the Red Cross Society, and was moved to contribute 80,000 yen towards the funds of the Society. This represents in English money the sum of £16,000.

THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.—On the 17th inst. the Empress Frederick visited the above hospital. A bouquet of flowers was presented to Her Majesty by a little child held in the arms of a nurse. The Empress visited each ward, and after speaking a few sympathetic words to the little sufferers, expressed the satisfaction her visit had afforded her.

LITERARY INTELLIGENCE.—The series of clinical manuals published by Messrs. Cassell are about to be published in Spanish, being translated by Dr. D. Alfredo Ojiso y Pifas, of Barcelona.—Dr. Leopold Wittelschöfer is about to retire, on account of his health, from the editorship of the *Wiener Medicinische Wochenschrift*. He will be succeeded by Dr. Heinrich Adler.

ASSOCIATION OF BRUSSELS MEDICAL GRADUATES.—A meeting of the Association was held at the Holborn Restaurant on Dec. 18th, Dr. H. Lewis, of Folkestone, the president for this year, occupying the chair. Dr. Barraclough, of Dalwich, read a paper on the subject of diphtheria. Afterwards the members dined together. The gathering was, we are informed, the largest that had yet assembled under the auspices of this Association.

WE understand that the tenth annual dinner of the students (past and present) of the medical department of the Yorkshire College will be held at the Queen's Hotel, Leeds, on Friday, January 18th, 1889, under the presidency of Dr. C. J. Cullingworth, obstetric physician to St. Thomas's Hospital. The hon. secretaries (Messrs. C. Forsyth and E. M. Nelson) will be pleased if old Leeds students will endeavour to be present and assist in making the occasion a success.

BURIAL REFORM.—The Duke of Westminster last week introduced to the Home Secretary a large and influential deputation under the auspices of the Church of England Funeral Reform Association, asking for an inquiry into the condition of cemeteries and modes of burial, with a view to the consolidation and amendment of the Burial Laws, and the abolition of the power of selling the right of burial in perpetuity. The Rev. F. Lawrence, hon. sec., pointed out that the question was one which pre-eminently concerned the poor, and that it was in a high degree the duty of the Legislature to provide for the poor means of proper interment for their dead.—The Home Secretary replied that the subject should receive very careful consideration.

PROVINCIAL SUNDAY AND SATURDAY HOSPITAL COLLECTIONS.—The Wolverhampton Hospital Sunday collections this year have amounted to £636, of which £52 has been contributed to the Eye Infirmary, and the balance to the General Hospital. The Radcliffe Infirmary, Oxford, has received from the Hospital Sunday Fund £93 9s. 11d.

HOSPITAL FOR SICK CHILDREN, DERBYSHIRE.—The annual report, just issued, of this institution shows that the receipts on revenue account were £579 11s. 2d., and the expenditure amounted to £588 15s. 8d. The erection of an isolation ward had been completed during the year, which, with other structural work, had cost £802 9s. 11d. Towards this sum, £694 5s. 6d. had been given or promised.

ARBROATH CONVALESCENT HOME.—The Directors of Arbroath Infirmary, to give effect to the recent gift of £1500 by Mr. Alexander Duncan, of Rhode Island, and his brother, Mr. John Duncan, of Parkhill, Arbroath, for building a Convalescent Home, have decided to purchase the property of Park Cottage, which comprises about four acres of land, and to erect the Home on that site, which is to be a constituent part of the infirmary establishment.

UNIVERSITY OF DURHAM.—At the final examinations for the degrees in Medicine and Surgery at the University of Durham, held during the week commencing Dec. 3rd, Alfred John Gregory, M.B., B.S., M.R.C.S., L.S.A., of the London Hospital, was awarded second-class honours, being the only candidate placed in the honours list. John Peere Williams-Freeman, M.D., M.B., M.R.C.S., L.S.A., was awarded the gold medal for the best essay presented during the year 1888 for the degree of Doctor in Medicine.

VICTORIA-PARK HOSPITAL ASSOCIATION.—The annual dinner took place in the Vestry Hall, Mile-end, on the 12th instant. Mr. Spencer Charrington, M.P., occupied the chair, and there was a large attendance of members of the association and others. The object of the institution is to assist the funds of the Victoria-ark Hospital, by the purchase of life governorships, of which twenty-three have now been acquired, and by which the funds of the hospital have been benefited about £100.

BUDLEIGH SALTERTON COTTAGE HOSPITAL.—On the 11th inst. an inaugural dinner took place at Budleigh Salterton to celebrate the opening of this hospital, and was attended by a large company. Dr. T. N. Brushfield presided. In proposing the toast of the evening, "Success to the Budleigh Salterton Cottage Hospital," the chairman remarked that he believed that a cottage hospital for the town was first mentioned in his own house. It was greatly needed. The scheme had been liberally supported, and everything promised it would be a great success. The hospital was a well-constructed building, erected on a most eligible site. Dr. Walker and Mr. Evans had generously undertaken its medical superintendence.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Dundee Royal Infirmary has lately received £1000 from Mr. John Sharp, merchant of that city, for the endowment fund of the Convalescent Home, and from the Dundee Trades Council £500, being a portion of the surplus of the Industrial Exhibition held last year in Dundee. The sum of £147 4s. 9d. has been handed over to the Sussex County Hospital, as the result of the Fancy Ball, held at the Pavilion, Brighton, on the 6th instant. The late Mr. John Robertson, of Lanchope, near Holytown, has bequeathed £200 to the Royal Infirmary, Glasgow, and £100 each to the Glasgow Eye Infirmary, Lock Hospital, and Western Infirmary. The Royal Infirmary, Aberdeen, has received a donation of £50 from the employees of the Great North of Scotland Railway. The managers of the Broadford Works Charitable Fund, Aberdeen, have forwarded to the Royal Infirmary £35, to the Dispensary £5, and to the Sick Children's Hospital £2 10s., total £50.

ROYAL HOSPITAL FOR INCURABLES, PUTNEY.—The thirty-fourth annual meeting of the subscribers was held at the Cannon-street Hotel last week. The report stated that, whilst the ordinary income of the past year was about the average, the legacies were again considerably above the average. The election rate last year was raised in honour of the Queen's Jubilee, and, in consideration of improved resources, from fifty to seventy. The donations received at the annual dinner held in May amounted to

£4202, and the annual sale of inmates' work held in June realised £373 1s. 11d. The seaside house at St. Leonards was satisfactorily realising the hopes of the board. The out-door pension list reached the highest point in June, showing a total of 534, or an annual rate of £10,680.

MEDICAL NOTES IN PARLIAMENT.

Public Health Acts Amendment (Buildings in Streets) Bill.

In the House of Lords on the 18th inst., this Bill was read a third time and passed.

Infant Life Protection.

In the House of Commons on the 14th inst., Mr. Stuart Wortley, in reply to Mr. C. S. Kenny, stated that the attention of the Secretary of State had been called to the practice of baby-farming; that he had now under consideration proposals for remedying defects in the existing law; and that he had invited the local authorities of certain large towns of England, Scotland, and of Dublin to favour him with suggestions on the subject.

Carbolic Acid Poisoning.

In reference to the question whether, in view of the large number of deaths from the poison, carbolic acid ought to be scheduled among poisons under the Pharmacy Act, Mr. Stuart Wortley, in reply to Mr. Pictou, said the resolution passed by the Pharmaceutical Society had been submitted to the Privy Council for approval, and was being considered; but, he said, skilled opinion was not unanimously in favour of the view expressed by the Society, and the subject was surrounded with difficulty.

Insuring Infant Lives.

Mr. W. H. Smith said, in answer to Mr. Baumann, that this matter was receiving the serious consideration of the Government.

Universities (Scotland) Bill.

On the 15th inst., in reply to several members asking for a definite answer in reference to the probable fate of this measure, the Chancellor of the Exchequer stated that if the Bill were abandoned this session, it was the intention of the Government to reintroduce and proceed with it at the earliest possible moment in the next session. The Bill, however, was withdrawn on the 18th.

Medical Officers of Prisons.

In Supply on the Scotch Estimates, on the vote to complete the sum of £109,538 for prisons, Mr. J. A. Campbell hoped the Government would take into consideration the grievances of medical officers of prisons, and Dr. Farquharson called attention to the unsatisfactory arrangements prevailing in Brixton Prison, and suggested the appointment of a committee to consider the whole question of prison management. To this the Lord Advocate objected that to appoint such a committee would be to discredit a system which had been barely started. At the discussion of the Irish estimates on the 18th, a long conversation took place with reference to the vacancy in the post of medical officer in Belfast Gaol, in the course of which the method of treating prisoners under the Crimes Act was brought under notice.

Sanitary Condition of Cradley.

On the 17th inst., in answer to a question by Sir L. Playfair as to the powers of the Local Government Board to enforce statutory obligations for securing the health of communities when it was endangered by the ignorance or apathy of the local authorities, Mr. Ritchie said the Board had always held that Section 299 of the Public Health Act contemplates that complaint of inactivity of local authorities should be from an independent source, and the Board, if satisfied after due inquiry that the authority had been guilty of alleged default, might make an order limiting a time for the performance of their duty, and in case of disobedience the order might be enforced by mandamus.

M. Pasteur's Treatment of Hydrophobia.

Sir H. Roscoe inquired, if the Government would consider the propriety of affording, as other Governments had done, some pecuniary assistance to the Pasteur Institute, where English patients were treated free of charge. The Chancellor of the Exchequer replied that before any steps were taken in the direction suggested, it would be necessary to ascertain the circumstances of those treated, as if they were persons of adequate means it would be their duty to contribute to the institute from which they had derived benefit.

Medical Officers on Foreign Service.

On the 18th inst., Colonel Nolan asked the Secretary of State for War whether, under the recent regulations extending the time of foreign service for medical officers, those men who were serving abroad would come under those altered rules; and whether those ordered abroad before April 1st, 1888, would come under such rules. Mr. E. Stanhope said that all medical officers of the executive grades who may be serving abroad on April 1st next, or who may be subsequently ordered abroad, will come under the new rules as to foreign service, subject to possible modifications in regard to officers required to accompany troops returning home.

Enteric Fever in Gibraltar.

Mr. Murdoch asked the Secretary of State for War whether he would order an inquiry to be made into the cause of the number of fatal cases of enteric fever at Gibraltar. Mr. E. Stanhope said steps were being taken to ascertain the cause; but the difficulty of the case was increased by the presence of a crowded civil population under somewhat unfavourable sanitary conditions.

The Queen's Colleges.

On the 19th inst., on the vote for the Queen's Colleges, Ireland, Mr. Clancy called attention to the hardship suffered by Dr. Pye and Dr. Redfern, whose incomes had been diminished by the establishment of the Royal University. The Solicitor-General said the Government would inquire into the cases, and do their best to remedy any injustice inflicted by the change referred to.

Labour in the Docks.

On Thursday, the 20th inst., Mr. Pickersgill asked the President of the Board of Trade, whether his attention had been called to the report, published in THE LANCET, of THE LANCET Special Commission on the dangers attending Labour in the Docks, and especially to the following passages:—"Men are ruptured, their spines injured, their bones broken, and their skulls fractured, so as to get ships loaded and unloaded a little quicker and a little cheaper"; and whether he will direct that inquiry shall be made forthwith into the truth of these statements.—Sir Michael Hicks-Beach: The report referred to by the hon. member appears to have been circulated by some committee outside this House, but I have no means of ascertaining whether or not it is accurate. I also doubt whether any inquiry into it is necessary pending the report of the Lords' Committee on Sweating, but I will consider whether it is possible to have any legislation on it in connexion with the laws relating to our merchant shipping.

Recognition of Sanitary Services.

Sir Guyer Hunter asked the First Lord of the Treasury whether any acceptance will be accorded to the memorial of the Congress of Sanitary Inspectors in June last, submitting the expediency of the adoption of one presented from the late Earl of Shaftesbury, K.G., and the heads of sanitary institutions, praying that the like recognition may be given to distinguished sanitary service in saving life that is given to distinguished naval and military service.—The Chancellor of the Exchequer: I am not acquainted with the nature of the memorial in question, but if the hon. member will give me or the First Lord of the Treasury some further particulars we will inquire into the matter.

Army Medical Officers.

Dr. Tanner asked the Secretary of State for War whether he could state how many retired army medical officers are now employed, and what saving on the pension list is effected thereby; whether, in order still further to reduce the charges for non-effective services, any increased number will be employed; and whether the practice will be extended to other departments.—Mr. Stanhope: Fifty-nine retired medical officers are now employed. The saving on the pension list is rather nominal than real, as the officer still draws the full amount of his retired pay. The real saving is on the effective list, where the payment is only £150 per year, instead of the full pay and allowances of an officer on the active list. This for fifty-nine officers cannot be less than £8100 a year. In the future there will be a non-effective saving consequent on the smaller number of officers passing through the effective list. An increase in the number of these appointments in the medical and other departments is about to be carried out.

The Irish Pharmacy Bill.

This measure has, we are informed, been dropped for this session. The Irish members had practically (after many consultations) come to an agreement which would have allowed it to pass into law, but at the last moment a Conservative member started a new proposal fatal to the principle of the Bill, which was consequently wrecked.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

- BERNARD, C. J., L.A.H. Dub., has been reappointed Medical Officer of Skegness.
- BROCK, ERNEST H., M.R.C.S., L.R.C.P., M.B., B.S. Lond., has been appointed Junior House Surgeon to the North-Eastern Hospital for Children, vice Mr. Blake.
- GUTHRIE, LEONARD GEORGE, M.A., M.B., B.S. Magd. Coll., Oxon., M.R.C.S., has been appointed Physician to Out-patients at the Hospital for Epilepsy and Paralysis, Regent's-park, London, N.W.
- HERRINGHAM, W. P., M.D., M.R.C.P., has been appointed Honorary Physician to Out-patients at the Paddington-green Children's Hospital, W., vice G. L. Laycock, resigned.
- JOHNSTON, R., F.R.C.S., has been appointed Medical Officer of Health for the Wisbech Port.
- JONES, H. T., L.K.Q.C.P., L.M. Irel., M.R.C.S., has been reappointed Medical Officer of the Hucknall-Torkard Union District.
- KEOUGH, T. H., L.R.C.S. Irel., has been appointed Medical Officer of the Dogdyke District of Boston Union.
- KIDD, H. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health, Bromsgrove Town and Country Union Districts, vice Carey.
- LESLIE, W. MURRAY, M.B. Edin. and C.M., has been appointed Medical Officer to the Poplar Union, vice Dr. McDonald, M.P., resigned.
- MACRELL, ALFRED S., M.R.C.S., L.D.S. Eng., has been appointed Dental Surgeon to St. Bartholomew's Hospital.
- NEWSHOLME, ARTHUR, M.D. Lond., has been appointed Medical Officer to the Borough Hospital, Brighton, at £150 per annum.
- POWELL, J. J., M.R.C.S., L.S.A. Lond., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator to the Second District of the Chertsey Union, vice G. J. Sealy, M.D., resigned.
- RAW, NATIAN, M.B., B.S. (Dunelm), Assistant Medical Officer to the Kent County Asylum, Maidstone, has been appointed Assistant Medical Officer to the Portsmouth Borough Asylum.
- READ, HENRY G., M.R.C.S., L.R.C.P., L.S.A. Lond., L.D.S. Eng., has been appointed Assistant Dental Surgeon to St. Bartholomew's Hospital.
- SPOKES, SIDNEY, M.R.C.S., L.D.S., has been appointed Lecturer on Dental Anatomy and Physiology to the National Dental College.
- STATHAM, R. W., M.R.C.S., L.S.A. Lond., has been appointed Medical Officer to the Eighth District of the Axbridge Union.
- WIGLESWORTH, JOSEPH, M.D. Lond., M.R.C.P., has been appointed Medical Superintendent of the Rainhill County Asylum, vice T. L. Rogers, M.D., M.R.C.P., resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, N.E.—Resident Clinical Assistant.
- DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House Surgeon. Board and washing provided. No salary, but a bonus of £10 is given.
- EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Physician to Out-patients.—Registrar and Chloroformist. Non-resident. Salary £30 per annum. Additional £20 if the post is held for twelve months.
- GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon. No salary, but residence, board, and washing will be provided.
- GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer. Salary £80 per annum, with apartments and board.
- HOLLOWAY AND NORTH ISLINGTON DISPENSARY.—Honorary Surgeonship to the Rupert-road Branch.
- HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physicians.
- HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Resident Medical Officer as House Surgeon. Salary £50 per annum with board and residence in the hospital.
- LEICESTER UNITED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION, High cross-street, Leicester.—Non-resident Medical Officer. Salary £100 per annum, with unfurnished house, cab, and other fees.
- LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £80 per annum with apartments, board, and attendance.
- NOTTINGHAM GENERAL DISPENSARY.—Senior Resident Surgeon. Salary £180 per annum, with furnished apartments in the institution and coal and gas provided.
- ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Resident Medical Officer. Salary £70 per annum, with board, residence, and laundry.
- SALFORD ROYAL HOSPITAL.—Honorary Medical Officer for the Pendleton Branch Dispensary.

Births, Marriages, and Deaths.

BIRTHS.

- ARLIDGE.—On Advent Sunday, the 2nd inst., at Bridge House, Harworth, the wife of J. F. Arlidge, L.R.C.P., I.R.C.S. Edin., of a daughter.
- CASLEY.—On the 15th inst., at The Old House, Ipswich, the wife of R. Kennedy Casley, M.D., of a daughter.
- GILKES.—On the 12th inst., at Linden House, Walthamstow, the wife of Norton Gilbert Gilkes, M.R.C.S., L.S.A. Lond., of a son, Eric Norton, who survived his birth only two hours.

MARRIAGES.

- EXLEY—GOZNEY.—On the 17th inst., at the Parish Church, Hunslet, by the Rev. J. Thompson, Vicar, John Exley, M.R.C.S. Eng., Grove House, New Wortley, Leeds, eldest son of Henry Exley, Hunslet, to Sarah Hannah, second daughter of James Gozney, Hunslet.
- MARTIN—PHILLIPS.—On the 18th inst., Sidney Harris Cox Martin, M.D., M.R.C.P., second son of John Ewers Martin, LL.D., of Jamaica, to Frances, only daughter of Mrs. Barnett Phillips, of 18, York-terrace.
- PEDLEY—BOWDAGE.—On the 19th Nov., at the pro-Cathedral, Rangoon, by the Rev. Dr. Marks, George Aston Pedley, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., of Mandalay, Upper Burma, son of George Pedley, of Railway Approach, London Bridge, and Camberwell, to Emily Sophia, daughter of Henry Bowdage, of Camberwell.
- WALKER—CHEVES.—On the 12th inst., at St. John's Episcopal Church, Longside, James Hutchison Walker, M.A., M.D., Sandakau, British North Borneo, to Beatrice, elder daughter of Robt. Cheves, banker, Longside.

DEATHS.

- BARLOW.—On the 16th inst., suddenly, at Archer's Lodge, Harpurhey, Manchester, William Henry Barlow, M.D., aged 51.
- BLACKMAN.—On the 19th inst., from pleuro-pneumonia, Charles Thomas Blackman, M.R.C.S., of North Holme, Willesden-lane, in his 65th year.
- HORAN.—On the 18th inst., at Bridge-street, Sunderland, John Horan, L.R.C.P. Edin., M.R.C.S.
- MACLACHLAN.—On the 12th inst., at Milford, James MacLachlan, M.D. Glas., of Walsall.
- NANKIVELL.—On the 12th inst., at Fernhurst, Sussex, John Hicks Nankivell, M.R.C.S., late of Pennellyn, S. Columb, Cornwall, aged 79.
- REID.—On the 4th inst., at Samana Bay, West Indies, William Reid, M.D., aged 30.
- WILSON.—On the 16th inst., at Paddock, Huddersfield, Emma, the beloved wife of David Wilson, M.D. (Friends will please accept of this the only intimation.)
- WOOD.—On the 14th inst., at Lynch House, West Meon, Petersfield, Hants, John Edward Wood, M.R.C.S., aged 68.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by *Siapay's* Instruments.)

THE LANCET Office, December 20th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Relative Humidity.	Remarks at 8.30 A.M.
Dec. 14	30.23	S.E.	88	37	..	41	32	..	Foggy
" 15	30.41	S.W.	34	38	..	41	32	..	Foggy
" 16	30.50	S.W.	39	37	..	40	32	..	Overcast
" 17	30.38	W.	37	36	..	38	35	..	Overcast
" 18	30.22	S.W.	33	38	..	37	30	..	Foggy
" 19	29.98	S.W.	47	46	..	49	32	..	Overcast
" 20	29.68	S.W.	64	48	69	49	43	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication. We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

THE LITERATURE OF CEREBRO-SPINAL MENINGITIS.

J. C. R.—Donders, on graduating at Leyden on Oct. 13th, 1840, produced his "Dissertatio inauguralis sistens Observationes Anatomico-Pathologicae de Centro Nervoso." In this he describes a case of cerebro-spinal meningitis—a disease suspected rather than recognised at that time, and not fully appreciated in all its physiological and pathological significance till many years afterwards, when it became epidemic. According to his biographer, Moleschott, his thesis is singularly complete for its time of publication, and greatly to be commended for the post-mortem examination which preceded the author's conclusions regarding the disease. Its only defect was that of a microscopical analysis—natural enough when it is remembered that but a short time before (in 1837) Hensle had brought himself into notice for his researches on the epithelium, while Johann von Müller's work on Tumours bears the date of 1838. Virchow was still a student, and the "Physiologie Pathologique" of Lebert did not appear till 1845, five years after Donders had produced his inaugural dissertation. And yet, says Moleschott, Donders' anatomical observations are so just, the physiological views so judicious and comprehensive, that this his first effort would even now confer honour on any journal of medicine that published it. The germs of its author's subsequent researches on the cerebral circulation are to be found in it, while the judgment with which he kept the facts separate from their physiological discussion might be followed with advantage by other labourers in the same field.

J. H. Williams, M.R.C.S., &c.—We regret we cannot assist our correspondent.

James Daglish, M.B., C.M. is thanked for his letter.

ODDFELLOWS' CLUBS.—EXTRA CHARGES.

To the Editors of THE LANCET.

SIRS.—Will some of your readers who are surgeons to Oddfellows' clubs kindly state in your columns their scale of charges, if any, for fractures, dislocations, &c.? The reason of this appeal for information is that the club to which I have been medical officer for the last eight years, having always paid £2 2s. for each case of fracture or dislocation, now demur to pay, on the ground that the custom of paying such extra fees is unknown among other clubs of the M.U.O.F.

I am, Sirs, yours faithfully,

December, 1888.

ENQUIRER.

G. H. H.—1. The evidence at our command does not afford ground for a definite reply.—2. There is a medical examining board in Cape Town unconnected with the University. Persons with British qualifications are not required to undergo examination.

"COVERING."

Junior.—We think not. It would be a somewhat strained application of the doctrine of covering, though our correspondent must hold himself aloof from all questionable uses and views of the galvanic treatment.

J. S.—We are obliged to our correspondent for arguing a point of undoubted difficulty. The very length of standing is an element in the question which has often been recognised in legislation. But we by no means wish to convey the impression that the public are to expect regular medical men to buttress any unqualified practitioner, even of twenty-five years' standing. If such men are entitled to consideration, it is at the hands of the examining bodies. It is not for private practitioners to give a licence to unqualified practice. All that we meant by our previous remark, that seems to have slightly perplexed our correspondent, is that the standing of the men and the practical recognition of them for so long a period by registered practitioners make it proper to give some special consideration to such cases, which we had hoped were not so numerous as our correspondent seems to think. They should at least have notification of the determination of regular practitioners to discontinue meeting them. Such notification should be made by the medical men collectively, who might well explain that, in view of the action of the Medical Council, they cannot co-operate with unqualified practitioners without risk to themselves.

IMPERFECT OIL LAMPS.

To the Editors of THE LANCET.

SIRS.—With reference to the article under this heading in your issue of Dec. 8th, will you permit me to point out that accidents with mineral oil lamps are more frequent now than formerly, and that legislation could easily and effectively suppress the danger by simply making it illegal to sell any lamp that is not constructed in accordance with a system that is proved by Government officials appointed for the purpose to be incapable of exploding under any conditions. A very simple test will suffice; pass into a lamp (under a determined pressure) that is partly filled with oil, and while burning, a gas of proved explosiveness; if the lamp will stand this test, it may be considered as safe. In the meantime, the public have the remedy in their own hands. Let anyone buying a lamp insist on having a guarantee from the vendor that it cannot explode; if this be refused, the lamp had best be left alone. There is no need to run any risk in using lamps, for absolutely safe lamps are to be had by all classes if they will only take the trouble to insist on such a guarantee.

I am, Sirs, your obedient servant,

Holborn-viaduct, E.C., Dec. 10th, 1888.

D. C. DEFRIES.

Ethic.—C seems to have acted with perfect propriety. It was right to offer to act for A. But in the circumstances he could not refuse to take the case. He cannot be held responsible for the unfortunate impression produced on the patient or her husband by A's absence, or rather by the want of readiness of his partner or locum tenens to fulfil his engagement. We assume that he has told A all the particulars he gives to us.

Emigrant should apply at the office of the Crown Agent for the Colonies, Downing-st., S.W., or to the Emigrants' Information Office, 31, Broadway, Westminster.

"TREATMENT BY CHEMISTS."

To the Editors of THE LANCET.

SIRS.—In reference to the above, allow me to say that it was my lot, immediately after reading "Enquirer's" letter in your issue of Dec. 8th (p. 1160), to have experience of the same thing.

A friend and patient, who had had albuminuria for six or seven years, suffered much from insomnia and cramp. I had always found bromides to disagree, and as the albumen was fully one-half, morphine was inadmissible. On Sunday, the 9th inst., he said to me that he had had a beautiful night, that he had been talking to —, the chemist, who had recommended bromide. On his replying that bromide of potassium disagreed, the chemist prescribed bromide of ammonium. On the following Tuesday hæmorrhage came on from the neck of the bladder (decidedly not from the kidneys), and this continued in spite of treatment till the Thursday. On the Saturday, at 3 A.M., he died of syncope, a cardiac murmur having become audible in this attack. I am inclined to ascribe the hæmorrhage to a piece of calculus or to a growth in the bladder; to the former perhaps, as there had been dorsal pain and twittings of the legs for many months, and the father had died of renal colic. I would not have ventured to give the drug, but I think it may be acquitted.

I am, Sirs, yours truly,

Dec. 13th, 1888.

ENQUIRER No. 2.

THE CASE OF MEDIASTINAL GROWTH AT THE TIVERTON INFIRMARY.

To the Editors of THE LANCET.

SIRS.—With regard to the case of mediastinal growth which you kindly inserted in your issue of the 15th inst., will you allow me to state that the patient was under the care of Dr. Haydon.

I am, Sirs, yours faithfully,

G. MICHELMORE, House Surgeon

The Infirmary, Tiverton, Dec. 15th, 1888.

THE METROPOLITAN HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Dr. Morison requires proofs of my statements, and I send the following cases.

1. Two lads have been attending the provident department on and off since June last, and what have they paid for medicine and advice? Merely the charge of a 1d. for "making up the prescription." It has been found by them that to take out a card of membership is superfluous itself—supervision is slight; confusion great." 2. Four persons just recently have done the "higgling" with local practitioners to induce them to take a lower fee than usual, because Dr. So-and-so can be had for 15s. by joining the hospital. 3. A tradesman, making a fortune, sends his servant to the provident department, and by this medium occasionally adds a child to the list of "thrifty poor." 4. A patient of a local practitioner had a considerable attendance last year, paid cheerfully an account of £5; on advice went into the hospital, paying 10s. 6d. per week. Whilst there she was induced to join the provident department, and can now be visited for 1d. per week by the practitioner longest established in the neighbourhood. In the bed adjoining hers was the wife of a public-house manager, who also joined. This patient testifies that there is practically no restriction placed upon candidates for admission, the only apparent desire being to get the largest possible number of members. 5. This patient was engaged in the city. Parents both living, in good circumstances, occupying the whole of a house rented till recently at £43 per annum. Has enjoyed Dr. Morison's "charity aimed at maintaining a spirit of self-help among the thrifty poor," but is now paying 1s. 6d. for advice and medicine at the house of her medical adviser.

Let Dr. Morison make no mistake; I do not question the *bona fides* of himself and his colleagues, consulting and general. They have placed themselves, in return for the honorarium they receive, in the hands of the officials of an institution of which the philanthropy is centripetal, now that it has departed from its intended procedure. They cannot gauge the amount of damage they do to the profession and to their own practices. They cannot shut their eyes to the fact that the course adopted has called out and is provoking hostile criticism from amongst the personal friends of the medical staff, and this ought to be sufficient to indicate to them that the thing is radically wrong. They must not pose as the guardians of the "just rights of local practitioners," and they cannot claim that they "meet the wants of the poor" by taking payment. Dr. Morison's letter, whilst one great excuse for, is also one great accusation of, the institution in question. Let it be free, as it should be, or cease to exist; at present it is a dreary blot on the landscape of Kingsland.

I am, Sirs, yours truly,

GEO. LOCKE.

J. A. H.—We should advise our correspondent to accept the fee offered, which is double the amount usually paid for the same duties in the metropolis. Of course, he can refuse to act on a future occasion. We may remind "J. A. H." that it is the magistrate who fixes the fee, and is responsible for the same, not the relieving officer, and it is to the magistrate he must apply if he is dissatisfied.

No. 9.—We think our correspondent is liable for something; but if the matter went into the county court, the amount payable by him would be subject to the personal opinion of the judge, which cannot be predicated.

INTOLERANCE TO QUININE.

To the Editors of THE LANCET.

SIRS,—Urticaria following the administration of quinine is so unusual that the following case should, I think, be recorded.

A lady consulted me for neuralgia, and I prescribed three-grain doses of quinine. Immediately on taking the first dose she felt faint and experienced intense itching all over the body, but especially on the face and hands; this was accompanied by a rash, which, from her description, was evidently urticaria. On seeing her an hour after the administration of the medicine, I found her face immensely swollen, eyes watery and injected; her gums appeared to be swollen also, but from the difficulty she had in opening her mouth I could not get a good view of them. The rash had nearly disappeared; there was no increase of pulse or rise of temperature. The patient informed me that the last time she took quinine, about a year ago, she had very much the same symptoms. The curious part of the case, however, is that when living in India a year or two ago, she was accustomed to take quinine in both large and small doses without any untoward effect.—Yours faithfully,

Dec. 7th, 1888.

E. G. HUNT.

HOME FOR EPILEPTICS.

To the Editors of THE LANCET.

SIRS,—In the last two issues of THE LANCET, correspondents have asked for information respecting a home for epileptics. St. Luke's, a small private home for all nervous diseases, was started in 1883, and is worked by a doctor's widow, a trained lady nurse. The terms depend on the supervision needed. The girl of thirteen referred to by "H. S." could be received on application.—Yours faithfully,

Croydon, Dec. 15th, 1888.

E. M. R.

Alan Bell, M.B. We are not aware that salicylate of soda produces anemia of the larynx and tonsils. Its value in certain cases of tonsillitis is possibly attributable to its anti-rheumatic properties. We should doubt its efficacy in diphtheria.

THE TREATMENT OF SEA SICKNESS.

REGARDING the myosis, constipation, and lowered arterial tension in sea sickness as indicative of the abeyance in function of the sympathetic nerve, due probably to reflex excitation of the abdominal nerves, and regarding further the nausea and vomiting to depend on the anamia of the medulla produced by the lowered blood pressure. Dr. N. S. Giberson (*Sacramento Medical Times*) advocates the use of remedies directed to increase arterial tension. Such drugs are atropine, strychnine, and caffeine, and should be administered hypodermically. In cases where there is no vomiting, but severe headache, flushed face, and tendency to mental aberration, caffeine is to be preferred; but in ordinary cases atropine ($\frac{1}{16}$ gr.) and strychnine ($\frac{1}{4}$ gr.) may, says Dr. Giberson, be injected with marked relief. He gives two cases, out of many, where this treatment—repeated, if necessary, after an interval—was strikingly successful. Moreover, unlike morphia or cocaine and other sedatives, these remedies do not impair the appetite, but rather the reverse.

G. K.—1. The original of Dr. Sangrado in "Gil Blas" is said to be (*vide* Voltaire's "Ecrivains Français du Siècle de Louis XIV.") Dr. Philippe Hecquet, who strenuously advocated fasting and venesection in diseases of nearly every class. Dr. Hecquet published a book of some note at the time on "Trituration" as the chief factor in digestion.—2. Sangrado is not derived from *sans* (without) and *grade* (degree), as meaning an unqualified practitioner, but from *sangrador* (bleeder, in Spanish), in allusion to his favourite practice of depletion.

M. Wold.—We cannot undertake the task. Neale's Digest might be of service.

PALM REFLEX (?).

To the Editors of THE LANCET.

SIRS,—I wish to draw your attention, and, if you think it worthy, that of your readers, to a "reflex" which can be obtained in the palm, by pressing firmly upon the pisiform bone with the thumb of the disengaged hand. It appears to be a reflex contraction of the palmaris brevis, for you can get it in some cases by pinching the skin in the same locality. Two years ago I struck a wall violently with the ulnar side of my right hand, and as a result had traumatic synovitis in the joint between the pisiform and cuneiform bones; and it was in tapping the joint surfaces together, when the effusion was disappearing, that I first noticed this contraction of the palmaris brevis. Since then I have tested the palms of a great number of people, and have only very exceptionally failed to get this "reflex," if I may so call it. This I account for in some cases by the fact that the palmaris brevis is not always present, and is sometimes found in only a very rudimentary condition. The high position of this "reflex," and its being so conveniently situated for testing, make me hope that a knowledge of its presence may be of use in diagnosis.

I am, Sirs, yours faithfully,

Sheffield, Dec. 12th, 1888.

H. B. BOYNTON-LEE,
Medical Tutor.

THE NEXT CENSUS.

To the Editors of THE LANCET.

SIRS,—It seems to me very desirable that when the next census of the population is taken data should be collected as to the physique of the people; and I therefore suggest the following plan, in the hope that you will help me in bringing it before the profession and in urging its adoption by the Government. To determine the physique, I believe it will be sufficient if the height and chest measurement of every man between the ages of twenty and thirty be recorded. These two facts could be easily ascertained if men were appointed to take the measurement and deliver a formal certificate to each man at any time during the two months preceding the census day. The certificates would be collected with the census paper. If the Government should refuse to incur the expense, then I propose that the medical men should organise associations of gentlemen who would volunteer to do the work. In ten years we should be able to answer the vexed question, whether we are, as a nation, deteriorating or improving in physique.

I am, Sirs, yours truly,

Birmingham, Dec. 19th, 1888.

E. WYNNE-THOMAS, M.D.

THE DURHAM DEGREE.

To the Editors of THE LANCET.

SIRS,—As one of the candidates who recently presented themselves for the M.D. degree of the University of Durham (practitioners of fifteen years' standing), I wish to point out an error into which many medical men and others fall concerning it. There is an opinion prevailing that the enormous fee charged for the examination assists them in obtaining the degree, and that on account of it the examination is modified in its severity. Let all who think so at once dispel it from their minds. The examination is essentially a fair one, conducted with the utmost courtesy and kindness, but with rigid exactness and the most searching clinical severity, no favour of any kind shown, either on account of age, fee, or any other circumstance. Anyone wishing to obtain the degree must be most thoroughly conversant with each and every subject, and be prepared for an exhaustive examination, clinically, theoretically, microscopically, and *visu voce*, success being only obtained on reaching a high standard of marks. I am, Sirs, yours faithfully,

December, 1888.

A CANDIDATE.

THE USE OF ALCOHOL IN WORKHOUSES.

MR. RICHARD S. ALLEN, the medical officer of the Belper workhouse, having been asked to explain an increased use of alcohol, has defended his prescription of it with vigour. He quotes several instances where he considered it saved life. He hopes it will never fall to his lot in old age, when heart and bloodvessels are failing and friends are few, to get into a workhouse where the comforts and blessings so considerably sanctioned by the Local Government Board are denied. He points out that only the sick have received the alcohol.

An Inquiring Nurse might consult "Antiseptics, a Handbook for Nurses," by Annie M. Hewer (Crosby Lockwood and Son, Stationers' Hall-court).

SKIN GRAFTING IN ECTROPIUM.

To the Editors of THE LANCET.

SIRS,—In ectropium will some of your readers give me the result of treatment by skin grafting?—I am, Sirs, yours faithfully,
Newhaven, Dec. 19th, 1888. FRED. DALTON.

ERRATUM.—In the list of signatories to the Memorial to the President and Council of the British Medical Association published in our last number, the name "Mr. W. J. Trentler" should read Dr. W. J. Treutler.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Heron, London; Prof. Schüller, Berlin; Dr. Boobyer, Nottingham; Sir M. Mackenzie, London; Mr. Haywood, Nottingham; Messrs. Read and Bailey, London; Mrs. Wold, Naples; Mr. C. W. Chapman, Tunbridge Wells; Dr. H. Tanner, Andlem; Dr. Hovent, Brussels; Mr. Noble Smith, London; Mr. Tyrrell Brooks, Oxford; Dr. E. W. Thomas, Birmingham; Mr. G. N. Pitt, London; Dr. Lediard, Carlisle; Mr. J. J. Clarke, London; Mr. W. H. A. Jacob, Sheffield; Mr. G. W. B. Stevens; Mr. C. Siewers, London; Mr. Tapp, Bristol; Dr. Treutler, Fletching Uckfield; Dr. Silk, London; Mr. W. T. Colman, Brighton; Mr. Adams Frost, London; Dr. T. Oliver, Newcastle-on-Tyne; Dr. Adam, West Malling; Mr. J. T. Hosker, Boscombe; Mr. Clifford, London; Dr. H. Campbell, London; Mrs. Llewellyn, Somersetshire; Dr. McMordie, Belfast; Mr. E. Gibb, Nottingham; Mr. F. E. Cane, Leeds; Dr. J. R. Lee, London; Dr. G. Kidd, Bromsgrove; Mr. Tratman, London; Dr. J. Davidson, Uxbridge; Mr. Dawson, Huddersfield; Messrs. Brady and Martin, Newcastle; Mr. Stock, Darlington; Messrs. Maythorne and Son, Biggleswade; Mr. Hope, London; Mr. Hay; Messrs. Van Houten and Son, Holland; Mr. H. Fox, Newcastle-on-Tyne; Messrs. Benson and Co., London; Mr. W. J. Blakeney, Brisbane; Messrs. Hawkes and Co., London; Mr. Buck, Clapton; Dr. Lord, London; Dr. A. Bell, Colerhill; Dr. Roche; Mr. Jessett, London; Dr. J. F. Sutherland, Glasgow; Mr. W. C. Steele; Mr. Gaylor, Belper; Mr. J. H. Williams, Llanybythier; Mr. C. Forsyth, Leeds; Mr. T. B. Dundas; Mr. G. Locke; Mr. Birchall, Liverpool; Mr. Donkin, London; Dr. Bander, Paris; Mr. Arrowsmith, Bristol; Mr. Ellis, London; Mr. Whittle, Belfast; Mr. Monka, Marseilles; Mr. Barrow, Surrey; Mr. Southern, Derby; Mr. Armstrong, Newcastle; Mr. Denman, Bucks; Mr. Davies, Kent; Mr. Oliver, Manchester; Mr. Potter, Liverpool; Dr. Williams, London; Mr. Hodgson, London; Mr. Chisholm, London; Mr. Casson, Ulverston; Sigmund Stern, Meran; Dr. Wetherell, Barnsley; Mr. F. Dalton, Newhaven; Enquirer; Sybil, London; An Inquiring Nurse; Enquirer No. 2; M.D.; J. S.; Junior; Seedy; Ethic; Ruby; Sanitas Co., London; F. F. P. S., Salop; N. Ghosh, Bombay; Royal Baking Co., New York; Fides, London; No. 9; R. B.

LETTERS, each with enclosure, are also acknowledged from—Mr. Exley, Leeds; Mr. Crassweller, Highbury; Mr. Clarke, Sheffield; Mr. Ellis, Leicester; Mr. Kamakhya, India; Dr. Peacock, India; Messrs. Lee and Martin, Liverpool; Mr. Hardwick, Cornwall; Mr. Nutman, Great

Yarmouth; Mr. Padley, London; Mr. Petter, Liverpool; Mr. Wilson, Huddersfield; Mr. Kelvin, Manchester; Mr. Heywood, Manchester; Mr. Hewett, London; Mr. Hornbrook; Dr. Allwright, Maidenhead; Pax, London; Alpha, Bristol; Spes, London; Liverpool Northern Hospital; Medica, Southampton; Foulds, Darwen; D., Essex; Lady Superintendent, Bedford; P. T., Durham; Alpha, Leeds; Borough of Leeds; Edinburgh, London; Antiphon, London; Surgeon, Okesha; Medica, Newcastle; Medica, Croydon; K. L., London; Bran, London; M.A., Birmingham; F.R.C.S., Sheffield; D. M., London.

Devon and Exeter Daily Gazette, The Naples Observer, Surrey Advertiser, Manchester Guardian, Sunderland Herald and Daily Post, Herald and Weekly Free Press, Derby Express, Hertfordshire Mercury, Keele's Bath Journal, Iron, &c., have been received.

Medical Diary for the ensuing Week.

Monday, December 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, December 25.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.

OPHTHALMIC OPERATIONS on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.

Wednesday, December 26.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M.

Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M.

Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.

Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.

Thursday, December 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Clouds and Cloudland.

(Adapted to a juvenile auditory.)

Friday, December 28.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, December 29.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Clouds and Cloudland.

(Adapted to a juvenile auditory.)

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Clinical Remarks

ON THE

TREATMENT OF TIGHT URETHRAL STRICTURES.

BY REGINALD HARRISON, F.R.C.S.,

SURGEON TO THE LIVERPOOL ROYAL INFIRMARY, AND LECTURER ON CLINICAL SURGERY IN THE VICTORIA UNIVERSITY.

THE circumstances under which retention of urine occurs in the male are so varying that it is impossible to lay down general rules for its management, other than, where practicable, the employment of the catheter with as little delay as possible. In the majority of instances where retention happens in connexion with a urethral stricture the relief thus afforded is not only sufficient for the emergency, but serves as the starting-point for the local treatment which in due course is to follow. Hence in those cases where, from a variety of causes, retention of urine supervenes upon the slighter forms of urethral stricture, the introduction of the catheter followed by the appropriate local treatment—such, for instance, as gradual dilatation—generally suffices. The cases now under notice differ importantly from these, both in the conditions under which retention presents itself and in the treatment to be employed. I refer to the severest forms of organic stricture, where, by the conversion of more or less of the urethral wall into a mass of tissue in every respect resembling the worst kind of cicatrix, not only has the urethra been reduced to the smallest dimensions compatible with the escape of urine from the bladder in drops, but the bladder and associated parts are also in a condition of active inflammation. The processes to which I have thus referred are of a gradual kind, and, as a rule, the result of months, or even years, of continued neglect. It is remarkable how often we meet with instances of this kind, where persons have gone on, hoping, I suppose, against hope, and quite regardless of the increasing difficulty with which their urine was obviously voided. The conditions here are very different from those where retention supervenes upon spasms of a more or less transient kind. Taking the cases I am now passing under review, in the course of time one of two things happens: either abscess in immediate relation with the stricture, which may open either with or without extravasation of urine, or complete retention of urine. It is with the latter contingency I am now dealing. The best that can be hoped for under the condition thus sketched out is that the surgeon will be able to pass a small catheter through the contraction, and thus relieve the urgency of the retention. Let us now take a case where the operator has succeeded, probably under an anæsthetic, in passing a No. 1 metallic English catheter through a densely contracted stricture of half an inch or more in length, and that he has verified his position (1) by the escape of urine in drops by the catheter, and (2) by his finger in the rectum. The instrument is firmly grasped by the stricture, and there can be no doubt as to the correctness of its position. Will this expedient serve to meet all the exigencies of the case, even supposing that the urine can be slowly drained off in this way? To tie such an instrument in the bladder, and to leave the urine to drain away indefinitely, is, I am sure, a most hazardous proceeding, though it may be accepted as an alternative. In all these cases more or less acute cystitis has been in existence for some days, and the urine is high-coloured, offensive, and loaded with deposits, and what could thus be done would be to drain off the most fluid and least harmful of the contents of the bladder, leaving the more poisonous remainder to add to the mischief already going on in the bladder, ureters, and kidneys. Such a plan usually ends with the death of the patient in a few days of what may with truth be called a catheter fever.

A considerable experience in the class of cases coming under this category has taught me very forcibly that the introduction of the small catheter must here be regarded only in the light of the initial proceeding. In addition, the bladder must be put in a position for thoroughly draining itself; otherwise the patient's chances of recovery are

extremely small. Where there is a perineal tumefaction indicating that suppuration is occurring, no question can then be entertained as to the immediate necessity for perineal section. The small catheter will serve as a guide, and upon it the stricture can be completely divided, though the proceeding is easier when a grooved staff, however small, can be substituted. Where there is a fear as to the possibility of being able to make this change, the catheter should be utilised as a guide for the incision. I have often used a small metal catheter under such circumstances, and have never had much difficulty in completing the operation of perineal section, with division of the stricture, to my satisfaction. When the perineum is opened in the median line, far more can be done with the index finger as a guide than is generally supposed, so long as we have the means of ascertaining the precise line the urethra takes. When, however, there is no perineal tumefaction, and the catheter is merely persistently grasped within a hard fibrous stricture, other means must be taken at once to bring up the calibre of the urethra to something like its natural dimensions, so that the bladder may be kept thoroughly drained of all its contents. The mode of doing this will be best illustrated by the narration of the following selected cases, where the same object was aimed at, but in different ways. I have very little preference for any one way of bringing the contracted urethra up to its normal dimensions so long as thorough urine drainage and cleanliness can be obtained. These are the most important factors in the antiseptic surgery of the urinary organs.

The first case I will relate is that of a gentleman who had been suffering for some years from a traumatic stricture of the urethra following an injury to the perineum. He had had many attacks of retention when abroad. Catheterism was always difficult. He had been aspirated several times above the pubes, and on one occasion before I saw him had perineal section performed. The last operation had not been a success. When I first visited him he was not suffering from retention, but only a No. 1 English metallic bougie could be passed through an extremely hard stricture. I then advised that perineal section should again be practised, but upon somewhat different lines from the proceeding he described to me. However, nothing was then done, and I heard no further about him for some months, when I was asked to see him for urgent retention of urine, where catheterism had been attempted, but without avail. Under chloroform, and with difficulty, I passed a No. 1 metallic catheter, and this, with much patience, was gradually increased up to a No. 4 English. This, with some misgivings on my part, was tied in. The stricture, however, was so tight that I feared the catheter might give way in my attempt to increase the size. In the early morning the instrument became plugged, and was eventually withdrawn. Further attempts were made at catheterism, but without avail, and I was again summoned. Returning, I took with me a fine stricture stretcher (elsewhere described¹), by means of which I succeeded in dilating the stricture up to a No. 13 English. A full-sized catheter was then passed, and the bladder emptied of its most offensive contents. As the patient lived in a rather inaccessible position, the catheter was tied in and retained for three days. This process of division was the course of proceeding which in the first instance ought to have been practised; as I had no instrument of this kind with me sufficiently fine for this purpose, I reluctantly contented myself with retaining the small catheter. I saw this patient a month afterwards. His urine was voided in a full stream, and was healthy. I passed a No. 12 bougie for him, and taught him how to do this for himself.

The next case is that of a man aged about twenty, who presented himself at the infirmary a few months ago with a very tight stricture of some years' duration, for which he had received no previous treatment whatever, in spite of the gradual diminution in the size of the stream. He appeared to have been drinking heavily. His stricture was very fibrous and contracted, and I could not pass even the smallest metal catheter. However, I succeeded in getting through with the fine filiform bougie of a Maisonneuve's methrotome. In this way I was able to perform an internal urethrotomy, and then to empty his bladder of a quantity of most offensive urine with a large catheter. The patient would not remain in hospital; he was, however, brought back in forty-eight

¹ Lectures on Urinary Diseases, third edition.

hours in a state of delirium tremens, but passing his urine freely. He remained in the hospital for ten days until this complication was over, when he was discharged, passing urine normally and able to introduce a full-sized bougie for himself.

The third and last case I shall introduce was also recently admitted into the Royal Infirmary. It was that of a man aged thirty-two years, who had long suffered from stricture, and had undergone some operation for it in hospital seven years previously. The meatus of the urethra was involved in a cicatricial mass connected with the foreskin, and in addition there was a long fibrous subpubic contraction. He had extreme retention of urine, which had evidently been only very partially relieved by the introduction of a small catheter prior to his admission. With much difficulty, owing to the double nature of the obstruction, I could only succeed in passing a No. 1 metal Lister's bougie. This was most firmly grasped. Under an anæsthetic I managed to introduce the entire series. The bladder was then emptied of much offensive urine by a large catheter. The stricture at the orifice was freely divided with a probe-pointed bistoury. This patient convalesced rapidly, and was able to leave the infirmary in the course of ten days, passing a full-sized instrument.

In connexion with these cases there are some details to which I could refer, as I am satisfied that much of the success attending them, as well as of others of a like kind which have come under notice, is due to their recognition. Every care was taken to prevent the occurrence of any form of urethral septiciæmia, as indicated by the occurrence of rigors and fever following the performance of the operation that was selected. This consisted in the employment of local and general measures. As soon as the bladder was emptied with a large catheter, it was thoroughly washed out with a perchloride solution of 1 in 5000; three or four ounces of this fluid were left behind, so that the first urine which was spontaneously passed was largely impregnated with this antiseptic. As a rule, no catheter is tied in, nor can I remember an instance where its subsequent introduction became necessary. Before the patient is sent to bed the urethra is distended with carbolic oil (1 in 20), which is well rubbed into the part where section or division may have taken place. Five-grain doses of quinine are given every four hours; in some instances boracic acid appears to have answered equally well. They seem, by sterilising the urine, to prevent rigors and fever.

For rapidly dilating very fine tight strictures, I have found Banks's filiform bougie of great service. It is an instrument that is well known in America, but not in this country. It is made of highly polished whalebone, on the principle of the wedge, and can be used with great safety. When completely passed through the stricture, a much larger-sized ordinary catheter or bougie can usually be made to follow easily. These instruments, of which there are several sizes, have been supplied to me by Messrs. Tiemann of New York.

It is not to be assumed that the treatment this class of cases immediately received, as illustrated in the three cases selected, represents in each instance that which was considered best so far as the future of the stricture was concerned. On the contrary, I feel sure that in two of the illustrations perineal section with complete external division of the stricture would have given far more reliable permanent results, and may yet have to be brought under consideration. Retention of urine, however, sometimes happens where the surrounding conditions render the performance of such an operation, on an emergency, quite out of the question. It is in view of this that I have ventured to illustrate how in my own practice it has been found possible to tide over the difficulties which attend this complication when it occurs in connexion with the worst forms of organic urethral stricture.

Liverpool.

THE CONVALESCENT HOME AT GILMERTON.—This new home for children was formally opened by the Rev. Dean Montgomery on the 18th inst. It appears that it was not exactly the opening of a new institution, but simply the transference to another and more favourable site of the home, which had been in existence for some time. The new building provides enlarged and improved accommodation, and has cost £1330, of which £200 remained to be paid.

A CASE FOR DIAGNOSIS.

BY FRED. J. SMITH, M.B., M.R.C.P.,
MEDICAL REGISTRAR TO THE LONDON HOSPITAL.

By the kind permission of Dr. Warner, under whose care the patient was in hospital, and with the ready assistance of Mr. H. A. Debenham, the house physician, I am enabled to publish the following case, which I watched with the greatest interest, not unmixed with stronger feelings of baffled curiosity.

L. W—, aged twenty-three, a female fancy worker, was admitted to the London Hospital complaining of a dull pain in the back and abdomen. The family history was without bearing on the case, except that the father was said to have died from a tumour of the lungs. The personal history showed an entire absence of any previous illness of sufficient severity to cause her to lie up. The history of her present illness was that the pain began somewhat suddenly in the lumbar region about three weeks only before admission, and was of such severity as to cause her to faint; for this she was treated by a general practitioner. On admission the patient was seen to be a well-nourished girl; slightly anæmic; very restless in bed; complaining of severe pain, which appeared to shift from place to place, at one time being in the middle of the back, and again appearing at the sides of the abdomen; it was increased by lying on either side, and by sitting or standing; the pain was of a throbbing character, likened by the patient to a "gathering." General superficial examination and palpation revealed absolutely nothing to account for the pain. An examination of the alimentary tract showed some slight digestive disturbance, with a furred tongue, discomfort after eating, with slight nausea and obstinate constipation. The heart and lungs yielded entirely negative results on examination, except for occasional dyspnoea and slight pain on taking a deep breath. The patient was treated with a saline mixture, and morphia was administered hypodermically. For the next fortnight no change took place practically in her condition; the pains were occasionally a little easier, but generally got much worse at night. On May 25th a thorough vaginal examination was made by the assistant obstetric physician, who reported that the uterus was freely movable, and, in fact, that there was no abnormal or pathological condition to be detected, either per vaginam or on bimanual abdomino-vaginal examination; but, at the same time, he advised that a surgical opinion should be obtained as to the condition of the spine, inasmuch as the patient seemed to refer the pain pretty consistently to that region. For some days after this she seemed and expressed herself as being much better, though the notes state that she was very hysterical. On June 5th the patient was again most thoroughly overhauled in an attempt to arrive at some definite grounds on which to base a diagnosis. The reflexes appeared entirely normal; the bladder and rectum were performing their functions in a perfectly healthy manner; passive movements of all kinds were borne without the slightest alteration in the severity of the pain; and, in fact, nothing whatever could be detected in the nature of a clue to the origin of the pain; and about this time it was almost definitely decided that the case was one of hysteria. During June and July this diagnosis seemed to be confirmed, in that the patient improved under disciplinary measures, though her physical condition was such as to cause considerable uneasiness, as the dyspeptic troubles, especially the constipation and the anorexia, still continued, and the patient lost strength and flesh very rapidly, notwithstanding the improvement in her habits and manners. Towards the end of August it became evident that the patient was dying, though the cause was still as mysterious as ever. On the 25th a loud mitral systolic bruit was heard, evidently due to a failing heart; and on the 28th she died, apparently from exhaustion.

The post-mortem examination revealed the following condition. On the inner side of the lower ribs, one inch to the right of the sternum, was a small mass of a soft, melanotic growth; all the lumbar and several of the lower dorsal vertebrae were affected with a similar growth and were very carious. The glands along the bodies of the vertebrae and those of the anterior mediastinum were enlarged, and some of them were blackened, as were also the pelvic and inguinal glands. The heart was dilated and fatty. The liver was fatty and anæmic; the lungs were oedematous. The intestines

tines were full of scybala. There was no spinal meningitis, and the base of the skull was not affected. No deposits of the growth (which, on microscopical examination, was evidently sarcomatous) could be found in any visceral organ.

Remarks.—Cases presenting such diagnostic difficulties must be, I think, always worthy of publication, if it were only to give isolated practitioners the comfort of knowing that the collective acumen of hospital teachers is not always equal to finding the clue to obscure symptoms. The diagnosis of hysteria was based chiefly on the following grounds. First, and perhaps foremost, the absolute failure of the most thorough examination to detect by physical examination any morbid changes which could give rise to the pain complained of. Secondly, the manners and general behaviour of the patient, which, though difficult to describe, were precisely those usually ascribed to hysterical females. Thirdly, the great inconsistency in the patient's answers as to the seat of the pain; e.g., she would one day say that percussion of the spine caused pain in the cervical region only, and next day, while this region was free from pain, she would complain of the slightest touch in the dorsal region. On the other hand, the persistent dyspeptic symptoms (of which the exceedingly obstinate constipation was a very marked feature), the extreme severity of the alleged pain (causing the patient sometimes to scream and shout all night), and the progressive loss of flesh and strength were certainly suggestive of some gross anatomical lesion. After weighing all these considerations, it has to be admitted that no less than four physicians of recognised position and ability, after a most thorough examination, entirely failed to diagnose the case. The nervous system of the patient was examined frequently, and, though found normal in most respects, the examination revealed an interesting condition of the patellar reflexes; these were at first considerably exaggerated on either side, but about six weeks before death the left disappeared entirely, the right disappearing about a month later. This, very likely, on reviewing the case, depended on implication of the efferent nerves in the pelvic cavity, though during life it was looked upon as supporting a possible diagnosis of spinal meningitis which was at one time thought of, though afterwards entirely abandoned. The temperature was somewhat irregular, occasionally rising to 102° and sometimes to 103°, while the evening temperature was usually 100° or a little more. The chart is of course not by any means typical of any disease, and might easily enough be read as that of a hysterical case; but it certainly acquires great interest when looked at from the point of view of the post-mortem evidence, as it is an illustration of one side of a fact that must be recognised—viz., that in suppurative diseases the temperature may be normal, and that in malignant disease it may be raised. During the patient's stay in hospital it was stated that two months or so before the pain came on she was thrown across a bedstead and injured in the back. After-events lend considerable interest to this fact, but at the time it was deemed of little importance, as, in the first place, its actual occurrence seemed almost doubtful; and, secondly, the patient's statements as to the transitory effects of the accident were such as to entirely remove any suspicions that might have arisen that it was the cause of the pain. It is now, however, well known that bruises can in some way so affect the tissues that at the spot bruised a sarcoma begins, probably due either to a morbid development of the fixed tissue cells or to the activity of an included foetal remnant on Cohnheim's theory; and we must, I think, conclude that with her accident she received what was practically her death blow. One question arises which is of the greatest interest. Was the case distinctly organic from the commencement, or could it be an illustration of hysteria or functional disturbance running on in the course of time into organic mischief? I have seen in consultation one or two cases of the latter sequence of events, in which the after-history has been reported to me as death from malignant trouble; but the course and symptoms of those illnesses could hardly be said to be comparable with this one, and I think the question must be left still undecided.

West-street, Finsbury-circus.

SMALL-POX IN DUNDEE.—Cases of small-pox are said to have been imported into this city by the arrival of vessels from Oran, in Algeria, where the disease is prevalent. A ship's mate has died in the Dundee Hospital, and several sufferers are under treatment.

BACKWARD DISLOCATION OF THE FINGERS UPON THE METACARPUS.

By WILLIAM H. BATTLE, F.R.C.S.,

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(Concluded from p. 1224.)

As I have already mentioned, much attention has been given in the past to dislocations of the first phalanx of the thumb on account of the difficulty so frequently met with in the reduction of the backward dislocation of that bone, the reasons for which vary according to different authors. I do not, however, propose to enter fully into a consideration of these, the arguments for and against them being many and the literature on the subject voluminous.¹ As they have received so much consideration at the hands of surgeons, it may be as well to briefly enumerate them in order to see if there are any likely to cause a similar difficulty in the case of the other metacarpo-phalangeal joints. In England the action of the two heads of the flexor brevis pollicis in their altered relationship to the head of the metacarpal bone, which they embrace as a button-hole the button, has received and still receives the commonest acceptance as the cause for difficulty in reduction, the bone being said to tear its way through the fibrous tissue uniting the two heads of the muscle and remain fixed in its new position.² Other causes may be constriction of the neck of the bone between the lateral ligaments of the joint³ (the writer in Heath's Dictionary says they are nearly always ruptured). Folding in of the anterior ligament of the joint and the interposition of a sesamoid bone has also been suggested,⁴ and this view has numerous supporters.⁵ Farabeuf, in his paper on backward displacement of the thumb, says: "La phalange n'est rien; les os sesamoides sont tout." Sir Astley Cooper ascribed it to the contraction of the six muscles inserted into the phalanges of the thumb. The long flexor tendon was found causing the difficulty in reposition by Lisfranc, Esmarch, Deville, Wadsworth, and Bryant. Others may be mentioned: the cuneiform or clubbed head of the metacarpal bone;⁶ the interposition of the sesamoid bones;⁷ the constriction of the metacarpal bone by the boundaries of the button-hole slit;⁸ and the difficulty of applying sufficient force to the thumb;⁹ These numerous suggested conditions, to one or more of which the difficulty in reducing these dislocations has been ascribed, indicate the rare opportunities afforded for fully investigating cases, it being very unusual for a patient to die whilst suffering from this injury. They also express wide divergence of opinion as to the real obstacle or obstacles amongst those who have given to them serious attention. Those who have had opportunity of examining the exact pathology of the displacement after arthrotomy, in unreduced dislocations found in the post-mortem room, or in dislocations produced in the cadaver, lay great stress on the resistance of the anterior ligament to the reduction, and there is no doubt that in a large majority of instances this, with its contained sesamoid bones, is the offending structure. As long ago as 1837, Mr. J. Adair Laurie, writing on the subject,¹⁰ said that "the anterior ligament is completely torn from the metacarpal bone, and remains attached to the phalanx and sesamoid bones in such a manner that the torn ligament and sesamoid bones are carried backwards by the phalanx and placed between it and the metacarpal bone. This state of parts is aggravated and rendered permanent by the contraction of the muscles attached to the sesamoid bones and anterior ligament, which muscles, together with the tendon of the

¹ See also Kelley, Dublin Journal of Med. Science, May, 1883.

² The more probable explanation (Erichsen). Generally accepted (Heath's "Dictionary of Practical Surgery," vol. i., p. 674). Confirmed by observations of Vidal, Malgaigne, Ballinghall (Gant, "Science and Practice of Surgery"), and by Fabbri and Hamilton (Heath, *op. cit.*). The occasional failure of division of the short flexor (to ensure reduction), due to a difficulty in dividing all the opposing fibres (Holmes, "System of Surgery," vol. i., p. 868).

³ Hey, Dupuytren, Erichsen, Gant.

⁴ See Erichsen, vol. i., p. 589.

⁵ Paillox, Deville, Wadsworth (Gant), Michel, Laurie, Roser, B. Anger (Heath), Hueter, Michel, Léva, Blochy, Farabeuf, Poinçon, Jalguler, Keetley, Walsam, Bryant, and Drutt.

⁶ Hey, Syme.

⁷ Humphry.

⁸ Waitz.

⁹ Liston.

¹⁰ London Medical Gazette, vol. i., p. 95.

the metacarpal bone; after division of this, he readily effected reduction. Mr. Croft has found a similar band present in a case of his own; Mr. Davies-Colley also.²⁰ Many have not recognised its importance.

The diagnosis of these dislocations is usually easy; if careful examination be made and the hands compared, there ought to be no mistake, the deformity, shortening, and loss of function being so marked in most cases. Agnew states that he has seen instances where this dislocation had not been diagnosed. It is true that the injury which causes the displacement may be followed by considerable swelling before the patient applies for treatment, especially when it is applied directly to the part; this, however, is usually on the dorsum of the hand, obscuring the backward projection of the phalanx; the head of the metacarpal bone can be felt projecting boldly in the palm, and there is shortening. Perhaps I may be excused if I mention here two conditions which have presented themselves for diagnosis resembling forward dislocation at the metacarpo-phalangeal joints, which I have recently seen. These were union of the epiphysis of the second metacarpal in its new position after displacement towards the palm, and union after fracture of the first phalanges of the fourth and fifth fingers at an oblique angle. The fracture was caused by a sharp weight falling across the hand immediately below the articular surface of the phalanges, and the usefulness of the hand was impaired. The phalanges were strongly flexed at their articular extremities, whilst the fingers were in extension, so that the flexor tendons could not draw them into the palm.

Assuming that the anterior ligament with its sesamoid bone forms the impediment to reduction, what methods are likely to lead to a satisfactory replacement of the bones? Manipulation can be employed with the best results if the pathology of the dislocation be borne in mind. This must be employed in a certain definite manner, as it is in dislocations of the larger and more important joints, where it has superseded the cumbersome and dangerous pulleys. Simple violent extension has been employed with disastrous results, and jerky irregular movements are liable to produce the worst or complex form, where the displacement is at first of the simple variety. The surgeon should in the first instance endeavour to reduce the dislocation by gentle but firm manipulation, without the administration of an anæsthetic, and that in the manner known as the dorsi-flexion method.²¹ An account of this is given as follows: "I tilt the displaced phalanx up until it stands upon its articular end, place both forefingers so as to hold it in that position, and at the same time press against the distal extremity of the metacarpal bone. Under firm pressure, with the thumbs against the base of the dislocated phalanx, I slide it into place, which can generally be accomplished with ease."²² In complex cases it is advisable to carry the base of the phalanx backwards along the dorsal surface of the metacarpal bone, with traction on the digit, in order to try to get the ligament and its sesamoid bone more fully in front of the anterior margin of the articular surface of the phalanx before flexion. Should this method fail, which it rarely does, consent to operation may be obtained, and the manipulation repeated under chloroform, when, if it again fails, recourse can be had to operative measures without unnecessary delay. Various mechanical means have been recommended to enable the surgeon to apply greater power to the displaced member, but I would advise that faith be placed more in skilled manipulation than in mere strength. Amongst these contrivances are the American forceps, Levis's apparatus, the Indian puzzle, and the clove hitch, applied over a layer of moistened washleather. Mr. Holmes recommends that the surgeon should wait and apply cold to the joint for a time, but I am convinced that in the thumb as in the finger the best method of procedure now will be to endeavour to divide the anterior ligament as it lies on the head of the metacarpal. In both thumb and finger reduction has been effected after division of the lateral structures, which keep the bones in apposition,²³ but pro-

bably this has acted in many instances by freeing the anterior ligament from its side attachments, and so rendering the opening through which the head has passed larger. The impression given me by the manner in which the phalanx returned to its position in Case 1 is that this is the explanation of the success of the operation done for that patient. In order to divide the glenoid ligament, say, in the case of a dislocation of the index finger, it is best to take a strong sharp tenotome with a small blade, and make the puncture from the dorsum and to the outer side of the extensor tendon. Enter the point of the tenotome about a quarter of an inch behind the articular surface of the phalanx, the bones being in the same axis; pass it onwards to the head of the metacarpal, and withdraw, pressing it firmly against the bone, for the ligament is dense. This section should be made along the centre of the ligament, to avoid the sesamoid bone. Mr. Hulke, in his article on Dislocation in "Holmes' System," to which I have already referred, says he has found in the dead subject that a division of the fascia which connects together the sesamoid bones, by allowing the tendons to separate from each other quite up to their insertion, naturally facilitates reduction, without resorting to section of the muscle itself. He had not tried it in the living. Should this method fail in aiding reduction, the surgeon had better proceed to open the joint with antiseptic precautions, as was done in Case 2, for a good movable joint may be obtained if the dislocation is of recent origin; and care be taken with the after-treatment to prevent ankylosis. When failure to reduce the dislocation has possibly been met with, or in old dislocations not deemed advisable, the question of excision of the head of the metacarpal bone must be considered, and there is no doubt that this is indicated sometimes, especially in the case of ankylosis of the thumb, where a movable joint is so important. I have seen more than one instance of useful thumb with unreduced dislocation.

Similar methods of procedure should be tried in the dislocation of the thumb on failure of manipulation (practically the method recommended by Farabeuf and Jalaguier). But the surgeon, remembering the flexor brevis muscle and the greater mobility of the first metacarpal bone will do well to follow the method of Fabbri,²⁴ and flex the metacarpal towards the centre of the hand to relax that muscle, and also the ligament. The tendency of the day is to divide the tendon or tendons of the flexor brevis either by subcutaneous section or by Humphry's method (incision of the joint sufficiently large to admit a small blunt hook, with which I should endeavour to pull forward, the sesamoid bones).²⁵ Batchelder²⁶ said: "Methods failed unless the lateral ligaments were divided by the method suggested by Sir Charles Bell."²⁷ These sections in all probability divided the free margin of the glenoid ligament (thus freeing the head) and the flexor brevis pollicis tendon, the good result being wrongfully ascribed to the division of the lateral ligaments, which are so frequently already torn. In all cases after reduction early resort should be had to passive movement of the joint.

In compound dislocations of these joints the metacarpal bone has been forced through a wound in the palm, and the question of removing this projecting head of bone presents itself to the surgeon. With our present efficient antiseptics, however, an attempt should usually be made to save the joint, as a most successful result may sometimes be obtained. An unusual complication, reported by Mr. Symonds to the Clinical Society, was a fracture of the metacarpal bones, a spicule being found detached in each of his cases; this did not in any way interfere with a good result. Occasionally some difficulty is experienced in reducing dislocations of the phalanges; in all probability this is due to the displaced anterior ligament of these joints. I recently saw Mr. Willett of St. Bartholomew's reduce such a dislocation under ether after the failure of attempts made by others some days before the patient, a young man, presented himself at the hospital.

To recapitulate the methods of treatment recommended, these are in the order in which they should be tried: 1. Manipulation by the "dorsi-flexion" method, without violence, and without (or on failure with) anæsthetic. 2. Subcutaneous section of the glenoid ligament from the back of

²⁰ See also Ballingrill, *Edinburgh Medical Journal*, 1815.

²¹ Recommended by Crosby of Hanover, N.H., 1826; employed by Boser, Sir Charles Bell, and Gerdy. Older did flexion after extension successfully (*THE LANCET*, 1873).

²² Report of Standing Committee on Surgery, *Transactions of American Medical Association*, vol. III., 1886.

²³ Ranke (*Berliner Klinische Wochenschrift*, 1877, p. 524) opened a thumb and also a finger from the palmar aspect, and in both found the glenoid ligament separating the bones.

²⁴ *Memoire dell Acad. della Scienze dell Instituto di Bologna*. Referred to by Holmes, who gives illustrations from him.

²⁵ Humphry on the Skeleton, p. 435.

²⁶ *New York Journal of Medicine*, 1856, p. 339.

²⁷ He refers to a similar method of reduction by Doz, 1853 (*American Quarterly Journal of Medicine*). This method appears to have been used by Syme, Lizars, Reinhardt, Gibson, and Parker.

the joint. 3. In the case of the thumb, subcutaneous division of one or both heads of the flexor brevis musc. 4. Incision into joint under antiseptic precautions, with replacement of ligament or the long flexor tendon. 5. Excision of the head of the metacarpal bone after severe compound fracture or ankylosis of joint (especially of the thumb).

Harley-street, W.

THE FUNCTIONS OF THE AMNION.

By FRANCIS EDWD. CANE, L.R.C.P. & L.R.C.S. ED.

THE amnion is a vesicular or sac-like covering of the embryo. It does not exist in amphibia or fishes. In the human ovum the amnion is formed at a very early period. In reptiles, birds, and mammals—the three classes of animals in which it exists—its structure is essentially the same. It possesses the property of muscular contractility in a high degree. These contractions are rhythmic, and may be seen in the incubated egg from the seventh day or earlier. Soon after the amnion is formed it becomes distended with fluid, in which the embryo is suspended. Speaking of the amniotic functions, most authorities tell us that the amnion is the receptacle for the fluid in which the fetus floats. This fluid protects the embryo from shocks and jars, and from undue pressure from the uterine walls; by distending the uterus it saves that organ from injury, which otherwise might be inflicted by the movements of the fetus; it prevents the fetus from forming adhesions to the amnion; it protects the umbilical cord and placenta from pressure; it affords equable temperature; and, finally, it assists in the dilatation of the os uteri and the lubrication of the passages during labour. A defective amount of liquor amnii is said to favour malformations by allowing the uterus to compress the fetus unduly.

So far what I have put down is the ordinary matter of the text-books. I shall now set forth what I consider to be the essential functions of the amnion and its fluid. Everything that man does, either voluntarily or automatically, is due to muscular action. In the earliest stages of his being a muscular heart is propelling fluid through muscular tubes. The force developed by the muscular heart is propagated by fluid, which distributes the pressure equally on all sides; but the muscular tubes convey and modify that pressure, which is also acted upon by all the other muscles as they become developed. Thus we see that muscular action is the great and primary mechanical agency by which the embryo is elaborated and grows. But, from the nature of the case, it is necessary to supply a surrounding medium wherein the delicate embryo will be supported equally on all sides, and so allow the heart and muscles to continue their work without being subjected to unequal pressure and the undue effects of gravity. A gaseous or atmospheric medium, owing to elasticity and lesser density, would subject the embryo to unequal pressure, and so cause inequality of muscular action and blood pressure. This in varying conditions would cause numberless deformities. The embryo must have some surrounding medium distributing pressure equally on all sides. This is supplied in the first place by the amnion itself, which is muscular and possessed of rhythmic contractility. It grasps the embryo on all sides, supports it, and assists in moulding it. Then almost immediately, as the embryo grows and is subjected to greater effects of gravity from its own increasing weight, the amnion secretes the watery fluid, which allows the muscular action and blood pressure to continue their work symmetrically, and protects the weak embryo from being crushed by the increasing uterine contractions. As the embryo is now not sufficiently light, the lungs at first are developed as a so-called rudimentary swim-bladder, which ensures the requisite protective buoyancy. But up to this time the umbilical vessels have not formed their placental connexion for the purpose of oxygenating the fetal blood. The embryo, however, must have oxygen for the purposes of its life, growth, and circulation. This is secured because of the amniotic water dissolving oxygen by osmosis through the delicate membranes of the amnion and chorion. This oxygen is taken up and breathed first by transpiration through the fine embryonic integument, and later by the loops of vessels in the so-called rudimentary branchiae of the fetus then coming into existence, and which are finally

obliterated when the placental circulation is established. It is therefore evident that the so-called rudimentary gills, swim-bladder, and fish kidney or Wolffian body are vestiges of embryonic function when they were needed by the embryo existing in similar conditions to a fish. The fishes, because they exist in water, need gills and swim-bladders and Wolffian-like kidneys; and man in the earlier stages of his being lives also in water, and so requires organs similar to a fish.

To sum up, I consider the chief primary function of the amnion is to support and assist in moulding the embryo by muscular contraction. Its next function is to secrete the liquor amnii. The first use of this fluid is to afford equal pressure and support on all sides to an embryo growing by blood pressure, developed and modified by muscular action. The next essential use of the liquor amnii is to convey oxygen for the purpose of keeping the embryo alive until the time when the new being obtains another means of getting that oxygen for its system. Following these primary essential functions come all those enumerated in the various text-books. Fishes and amphibians have no need of an amnion and amniotic fluid, because the sea and the rivers and the lakes are their amniotic cavities and liquor.

Ledsa.

A CASE OF GUMMA IN THE RIGHT SUPERIOR TEMPORO-SPHENOIDAL CONVOLUTION.

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THIS case is briefly alluded to by Dr. Gowers in his work on "Diseases of the Nervous System" (vol. ii., page 21), and I have to thank him for permission to publish the detailed account.

Edith H—, married, aged thirty-three, was admitted into the National Hospital for the Paralyzed and Epileptic, under the care of Dr. Gowers, on Oct. 25th, 1886. Six weeks previously, three weeks after her confinement, she was standing looking out of a window, when she suddenly heard a dreadful noise "like the clicking of machinery"; then objects in the street seemed to move to and fro and became blurred, and the patient fell, losing consciousness and becoming convulsed, the face being drawn to the left. She did not bite her tongue or pass urine during the fit; there was no headache or sleeplessness afterwards, nor was it followed by any localised paralysis. After this attack she remained fairly well for a fortnight, when she had five other exactly similar attacks in two days. These headaches, described as a heavy feeling, chiefly in the right frontal region, but also at the nape of the neck and in the right occipital region, began and continued till admission; the headache was worse at night, and interfered with sleep. For a week before admission the patient had vomited everything she had taken, and there had been constipation for the last few days. The woman was married at the age of twenty, and contracted syphilis from her husband, having sores, sore throat, and rash; and her first pregnancy resulted in a seven-months' child, born dead. After this she lived apart from her husband for several years, and then resumed cohabitation and bore three full-term children, who are all now living and well, the eldest being six years of age, and none of them, as far as can be ascertained, presenting any symptom of congenital syphilis, and there is no family history of fits, insanity, paralysis, phthisis, cancer, or tumour.

On admission there was no sign of paralysis discoverable on careful examination. All the reflexes, both superficial and deep, were normal. There was continuous severe pain of an aching character, with shooting exacerbations, over the vertex of the head, rather more on the right than the left side, extending forwards to the frontal region, and also down the right side of the neck, where it was very severe. Deep pressure elicited some tenderness over the right superciliary ridge, but nowhere else on the head. The patient felt continually sick, and vomited after everything she took. The heart and lungs were normal. The urine contained no sugar

or albumen. The ophthalmoscope showed very slight wooliness of the edges of both optic discs. The right pupil was smaller than the left; both reacted readily to light, and with convergence.

The patient was ordered five grains of iodide of potassium with five minims of tincture of cannabis indica three times a day. By Oct. 30th the margins of the disc on each side were decidedly hazy, the right more than the left; the headache was not so severe; there was still occasional vomiting; the dose of iodide was increased to ten grains, three times a day, and in addition a drachm of mercurial ointment was ordered to be rubbed in every evening. On Nov. 5th, the dose of iodide was increased to twenty grains, the inunction being continued until the 10th, when the patient's gums became tender, and it was stopped. On the 9th there was great swelling and tortuosity of the veins in either fundus; the margins of the optic discs were obscured all round; there was swelling of each disc, requiring +1.5 D to focus the summit on the right side, and +1 D on the left; and there were two hæmorrhages on the right disc. The headache and vomiting had ceased entirely for several days before Nov. 19th, and the optic neuritis was rapidly subsiding. On the 23rd a mixture containing ten grains of iodide of potassium, half a drachm of liquor hydrarg. perchlor., and ten minims of tincture of gel-seminum was ordered to be taken three times a day. By Dec. 4th the optic neuritis had almost entirely disappeared in the left eye, and the edges of the right disc were becoming clear; the veins in this eye, however, still remaining large and tortuous. The patient still complained of occasional darting pains about the head, and had had a good deal of buzzing in the ears. Examination of the ears showed that the tympanic membranes were rather thick and opaque and cupped, and the woman said she had often had earache when young. A watch was heard at a foot on either side, and equally well through the bones in each ear. On Dec. 22nd the appearance of the left disc was quite normal; the edges of the right disc remained a little woolly, but the swelling and tortuosity of the veins had almost disappeared. There had been no headache or other symptom since the note on Dec. 4th, and the patient was discharged much improved, and ordered to continue the iodide in ten-grain doses. There had been no fit of any kind during her stay in the hospital.

The woman was next seen in the out-patient room on January 12th, 1887, when it appeared that two days after leaving the hospital she had a fit, which began with tingling in the hands and fingers for ten minutes, followed by noises in the head as in the previous attacks; then loss of consciousness and general convulsion. On Jan. 7th pain in the right frontal and temporal regions and sickness had recommenced and continued. The edges of both optic discs were again a little woolly, but no sign of paralysis was discoverable anywhere. When the patient went home, the vomiting increased and the headache became very intense, and on the 15th she died, having, as far as could be ascertained, remained conscious to the last. There had been no more fits, and no twitchings or spasms of any kind.

Permission was obtained to examine the brain five days after death. The body was in good preservation, there being no sign of putrefaction. On removing the brain, nothing abnormal was observed about the bones or sinuses. On opening the dura mater, it was found adherent over an area an inch and a quarter by three quarters of an inch in extent on the surface of a tumour in the right temporo-sphenoidal lobe. The convolutions over the entire surface of both hemispheres were extremely flattened, and the sulci almost obliterated, the surface of the brain being very dry. The vessels at the base were mostly thickened and opaque in patches. The pons, medulla, and cerebellum showed no unnatural appearance. The tumour mentioned above occupied on the surface of the brain a roundish area about an inch and a half in diameter, situated chiefly in the right superior temporo-sphenoidal convolution, of which it occupied about the second and third fifths from before backwards. Above, it extended across and obliterated the Sylvian fissure, and slightly encroached on the ascending parietal and frontal convolutions in their lowest parts. Below, it involved the middle temporo-sphenoidal convolution to a greater extent. A vertical transverse section through the upper extremity of the fissure of Rolando passed through about the middle of the tumour, and showed that this extended about an inch and a quarter into the substance of the brain in its deepest part. Above,

the outer half of the fissure of Sylvius was obliterated by the tumour, the inner half remaining distinct. A horizontal section across the middle of the tumour showed that the anterior and inner part just reached and involved the claustrum; the basal ganglia were not affected. The border of the tumour was fairly distinct; its substance was firm, and was sharply divided into two distinct portions: one hard, opaque, white in colour, attached to the dura mater by a distinct coat formed of thickened arachnoid and pia mater; the other larger, not so firm, surrounding and spreading from the first, of a greyish colour, and presenting several small irregular hæmorrhages. Under the microscope, the latter described portion of the tumour was seen to be composed of cells of varying shape, chiefly round and oval; between these fibrous tissue was present, in some places in fair quantity, in others in small quantity or absent; numerous blood-vessels were scattered through the growth. This portion was sharply marked off from the hard, opaque white part of the growth, the boundary being formed by cells and fibrous tissue, the latter preponderating in one or two places, so as almost to form a capsule. The white portion took stains badly, and had a granular appearance, with here and there indication of cell structure; a great number of bloodvessels were present in this part also, many having undergone thrombosis.

Remarks.—This case is of great interest owing to the position of the tumour in the superior temporo-sphenoidal convolution. The auditory centre has been placed by experiment in the posterior half of this convolution, and the present case supports that localisation, the tumour involving the anterior part of the centre to a small extent. That the aura was not referred to the left—i.e., the opposite—ear, as no doubt it should have been, is a matter for little surprise, considering the difficulty one finds in getting aural patients generally to refer sounds correctly to one ear or the other, and bearing in mind also the volume of the noise “like that of machinery.” That there was no difference of hearing on the two sides apparent on rough examination is easily explained by the small amount of destruction of the centre, and by the fact that, even when one centre is destroyed, hearing in the opposite ear is soon recovered. Unfortunately none of the fits which the patient had occurred during her stay in hospital, so that the immediate after-effects of these attacks upon the hearing could not be investigated. That the tumour was situated on the right side was indicated by the following:—1. The headache, which, though widespread and general, was consistently described by the woman as being always worse on the right side. 2. Tenderness to percussion was observed on the right side, but at a distance from the seat of tumour, as afterwards ascertained. This localised tenderness is often a very misleading symptom, and can only be relied upon when it agrees with the other localising symptoms in a case; in the present patient, more stress was of course laid upon the character of the aura, and correctly, as appeared at the necropsy. 3. The optic neuritis was distinctly more marked and longer in subsiding on the right side. 4. In the fits, the head was said to have been drawn to the left; to this observation very little importance could be attached, none of the attacks being seen by a competent observer.

The relation of this case to syphilis is also of the very greatest interest and importance. The patient married and contracts undoubted primary syphilis from her husband, and has a seven months' miscarriage; she then lives apart from her husband for some years, and gets so far cured that she bears three healthy children showing no sign of congenital disease; and finally, in spite of this, which one would be inclined to look upon as unassailable evidence of the syphilis being eradicated from her system, a gumma develops in the brain, and apparently yields readily to energetic treatment by mercury and iodide of potassium, but again bursts into activity and rapidly destroys life, notwithstanding that the patient continues to take fair doses of the iodide.

Cannock, Staffs.

THE SWEATING SYSTEM.—Mr. Sprague Oram, who, we understand, has been appointed by the Committee on the Sweating System to inquire into the condition of the distressed chain and nail makers at Cradley Heath, proposes to ascertain what wages the operatives receive, what are their hours of labour, and, on what system the middlemen conduct their business.

CASE OF COMPLETE INVERSION OF THE UTERUS.

By ARTHUR JEFFERSON, M.D., B.S. LOND.

THE patient, a primipara, aged twenty, was delivered by a midwife of a male child. Labour up to the end of second stage apparently proceeded normally, pains commencing at 7 P.M., and the child being born at 11.30 P.M. Shortly before midnight, I, as honorary surgeon to the Wallasey Ladies' Charity, was sent for. On reaching the patient's house I found her completely collapsed, the radial pulse being scarcely perceptible. On further examination, there was seen protruding from the vulva a fleshy mass, consisting of placenta partially adherent to a pyriform tumour, rather larger than a Florence flask, and quite as hard and as solid to the touch as a dense fibroid; this projected somewhat forward, the upper surface of its neck being pressed up closely against the pubes; per vaginam uninterrupted continuity between its surface and the vaginal wall was made out, the finger being inserted about two inches and a half from the labia majora; no ridge corresponding to the os could be detected; there had been no abnormal amount of hæmorrhage. Meanwhile the patient was continually moaning, "Oh, my back!" "Oh, I'm dying!" There being no brandy in the house, and my other bottle having upset, I, without further delay, proceeded to reduce the evident inversion. First, the placenta was stripped off; this was adherent over nearly the whole of the frontal zone. No hæmorrhage resulted, the uterus being too firmly contracted. Having swabbed the inversion with carbolic water, I grasped it with my left hand and pushed steadily upwards, the fingers of the right, applied just beneath the pubes, giving it also a direction backwards, while the body of the organ was squeezed between the two palms. Soon the inversion was found to be retreating into the vulva, through which and into the vagina it was followed by the left hand, until reposition was effected, no hæmorrhage ensuing; and the interior of the replaced uterus feeling fairly firm and resistant, we returned our attention to the other extremity of the patient, who, after a few feeble struggles and faint cries about the pain in her back as the hand was entering the vagina, had now become quite still. Brandy and ether having been fetched, a drachm of the latter was injected, and teaspoonful doses of the former, with hot water, given by the mouth; hot bricks were also applied. The first few doses of the brandy had to be coaxed into her œsophagus, but soon she swallowed naturally; some colour returned to her lips, and her pulse became more perceptible; she no longer complained of pain in her back, but still persisted in the statement that she was dying. After administering about two ounces of the brandy, fearing to excite vomiting, I directed the midwife to prepare some in an enema; just then the patient began to retch, and finally vomited twice, both times there being a sound as of a lower evacuation. On examination, however, it proved not to be feces, but blood; having by palpation ascertained that the uterus was normal, I injected three grains of ergotin, and applied a firm binder. Almost immediately the patient exclaimed that she now felt better, and in a short time I was able to leave her. Four-hourly enemata containing brandy were ordered, and an ammonia and morphia mixture prescribed.

The patient made a rapid and continuous recovery; her temperature was on only two occasions above normal, and she had no bladder trouble whatever. By the seventh day she had so far improved that she was allowed to suckle her child, and on the seventeenth she could no longer be kept in bed. She was directed, however, to continue for a month a mixture of perchloride of iron and nuxvomica, which she had already been taking for ten days. She was not again seen until a month after her labour, when she came to consult me about a sore on her forearm at the seat of the ether injection. At this spot was a thin, hard slough about the size of a five-shilling piece. This separated after ten days' poulticing, but the resulting ulcer did not heal until ten weeks after her confinement.

Remarks.—The cause of the inversion is not very clear, the midwife stated—and her statement was independently corroborated by the patient's mother—that the cord was twice round the child's neck, but not so tightly as she had

seen it in some cases; she released the loops, and, the child being born, was surprised to see the placenta and inversion follow it, before she had time to tie the cord. From the account of the patient herself, it appeared that directly after the nurse had told her of the birth of her child she felt "something come down"; this caused little or no vaginal pain, but was accompanied by excruciating pain in the lumbar region and left breast, together with a terrible feeling of faintness. Reviewing this evidence, it seems probable that the midwife, in pulling on the slack of the cord to release it from the child's neck, may have started an intro-ception of the uterine wall, this passing on into inversion in the usual manner. It should be added that no vomiting occurred during labour, also that the patient was in bed for some time before delivery. The prolapse (inversion) of the vagina, which also to a certain extent was present, may have been due partly to its own contractility, partly to the pyriform shape of the inversion, which caused it to be squeezed out, as it were, through the vaginal orifice, bringing down the upper end with it. The existence of such firm contraction of the uterus, notwithstanding the extreme collapse of the patient, was not altogether to be expected; nor the ease with which, although so rigid, it yielded and was replaced. Again, one rather anticipated retention of urine; none, however, occurred; on the other hand, the disastrous local effect of the ether injection was quite unlooked for. Finally, with regard to the treatment immediately after reduction, it seemed evident that too much stress was laid on the value of the ether and brandy; a firm binder applied at once would have been much more to the purpose—by emptying the abdominal veins—in bringing the patient out of her stage of collapse; the retching and vomiting probably acted in the like direction.

New Hampton, Middlesex.

TREATMENT OF ASCITES AND GENERAL DROPSY WITH MILK DIET.

By K. P. CHOWDHURY,

ASSISTANT SURGEON; MEDICAL OFFICER IN CHARGE OF THE BURDWAN MUNICIPAL HOSPITAL.

THAT ascites and general dropsy very often yield to the milk diet treatment is a fact which had been recognised by the native physicians of India from a very remote age. Even in modern times many of the native physicians and quacks treat their dropsy cases in the same way, with at least partial success. They prohibit solid food of every kind, and all articles containing salt. They also prohibit the drinking of water, and make their patients take milk or curd in abundance. But there are a few particulars in connexion with this treatment which they do not carefully attend to, and it is for this reason that they do not succeed in many cases. This plan of treating cases of ascites and general dropsy has not, so far as I am aware, received much attention from European physicians. The ordinary textbooks say nothing on the subject. The treatment generally recommended is that by watery purgatives, diuretics, and diaphoretics. Paracentesis abdominis is recommended as a last resource in cases of enormous distension, interfering with breathing &c. The introduction of Dr. Southey's small trocar and cannula through the skin into the subcutaneous cellular tissue is advised in cases of general anasarca with much tension in the extremities. As for purgatives, we find them injurious in most cases in India. They seem to irritate the stomach and intestines of the patients, and to very much interfere with their digestion. Though an occasional purgative, by removing the accumulated feces from the intestines and by inducing secretions from the intestinal glands, gives great relief to the general system during the course of treatment, we are inclined to think that a systematic use of purgative medicines, with a view to remove the dropsical effusions, does more harm than good. In most cases thus treated, we find that dysentery supervenes; this, in India, we look upon as a fatal symptom in connexion with ascites or general dropsy.

The idea of treating ascites and general dropsy by the exclusive use of milk diet was first suggested to my mind by perusing an article on this subject, with illustrative

cases, by Dr. Richards, published in the *Medical Times and Gazette* in November, 1872. From that time I have adopted this course of treatment in a considerable number of cases, with almost uniform success. The very few failures that I met with occurred in cases where organic mischief had proceeded too far to be consistent with the maintenance of life. In such cases, I believe, no treatment of any kind is likely to do good. To avoid tiring my readers with unprofitable repetitions, I shall be satisfied with giving details of only two cases of dropsy, which completely recovered under this plan of treatment.

CASE 1.—M—, a Mohamedan male, aged about forty years, and a cultivator by profession, had been suffering for a long time from repeated attacks of malarious fever. His spleen also was enormously enlarged. Later on he had ascites, and was in this state admitted into the Burdwan Charitable Hospital on Aug. 7th, 1886. His abdomen measured at midway between the umbilicus and ensiform cartilage 3 ft. 4 in., and at the umbilicus 2 ft. 10 in. His urine was acid in reaction and its specific gravity was 1015; no albumen or phosphates were discovered. He was ordered tincture of iron (fifteen minims), infusion of quassia (one ounce), digitalis powder (one grain), squills in powder (one grain), and oil of juniper (one minim), three times a day. Three pounds of milk were ordered as diet, which on the 11th was increased to four pounds and a half. On the 14th the abdomen measured at midway 3 ft., and at umbilicus 2 ft. 9 in.; on the 27th 2 ft. 10 in. and 2 ft. 6 in.; on Sept. 1st 2 ft. 8 in. and 2 ft. 4 in.; and on the 6th 2 ft. 5 in. and 2 ft. 4 in. At this time his abdomen attained almost the natural girth, and no more measurements were taken. His spleen, which was considerably enlarged, could now be felt very distinctly. After his dropsy was cured, he was kept in hospital for a few days longer to improve his general health, and red iodide of mercury ointment was rubbed over the spleen, which diminished its size very much. The same medicine was continued throughout, except that the digitalis and squill powder were not given after the disappearance of dropsy. He was discharged completely cured on Sept. 30th, 1886.

CASE 2.—S. B—, a Mohamedan female, aged about forty-five, and a labourer by profession, was admitted into the Burdwan Charity Hospital on Dec. 27th, 1887. She had been suffering from attacks of fever, off and on, for two years. She also had enlargement of spleen, and had ascites some three months before her admission. The spleen could not be perceived for the enormous distension of the peritoneal cavity. On Dec. 28th the abdomen measured at midway 3 ft. 2 in., and at umbilicus 3 ft. 3 in. A drachm of compound jalap powder was ordered to start with, and two pounds and a half of milk were ordered as diet. The ordinary spleen mixture, containing a grain of cinchona febrifuge, five minims of dilute sulphuric acid, and half a grain of sulphate of iron, in an ounce of water, was ordered to be taken three times a day. The jalap powder was repeated on the 30th, and on the 31st the abdomen measured at midway 3 ft. 2 in., and at umbilicus 3 ft. 1 in. On Jan. 7th, 1888, the measurements were 2 ft. 8 in. and 2 ft. 9 in. The digitalis, squill, and juniper powders were also ordered from the beginning, and on the 13th her abdomen measured at midway 2 ft. 4 in., and at umbilicus 2 ft. 5 in. As the abdomen had now attained its natural size, no more measurements were taken. On the 14th she was discharged from hospital as cured of her ascites. The same iron and quinine mixture was given to her to be taken for some time longer, with a view to get rid of the splenic enlargement.

Remarks.—The rationale of this treatment, as it appears to me, is founded mainly on the well-known principle of endosmosis and exosmosis. The exclusive ingestion of milk brings a very large quantity of nitrogenous material, in a safe and convenient form, to the blood. It is well known that milk contains all the necessary elements of nutrition in the most easily digestible form and in proper proportion. This diet very quickly enriches the blood and thickens it in its consistence. The iron used in medicine also increases the number of red globules of the blood. The improvement of the consistence of the blood causes the greater portion of the fluid, already thrown out into the serous cavity of the peritoneum and into the cellular tissues of the body generally, to be reabsorbed and excreted by the various excretories of the body. The kidneys, if not diseased, take the largest share in this work, and the sweat glands and intestinal glands also largely contribute

to relieve the system of the excess of fluid. To help the kidneys in their action we generally prescribe digitalis, squill, and juniper powders; to help the sweat glands we prescribe warm clothing, hot bottles, &c.; and to help the intestinal glands we prescribe an occasional purgative. The main treatment is directed to the improvement of blood by the use of very mild preparations of iron; but all these methods will fail to effect a cure if the milk diet is not given. Trials had been made with ferruginous tonics, diuretics, and diaphoretics, but with no great success unless the milk diet had been strictly adhered to. I have seen many cases in hospital which do not improve, though we have been giving all the remedies enumerated; and in these cases I have often found out by investigation that the milk diet has not been strictly adhered to. The patients had stealthily taken some other solid food in lieu of the milk ordered. I admit it is difficult to induce patients to be confined entirely to milk diet; but it is the only safe course which brings on quick recovery. Another point to be carefully attended to with regard to this treatment is that the milk is to be given in very small quantities. Eight ounces of milk is generally the highest quantity I allow to the patients at a time. The dose may be repeated every three or four hours. If the digestive power is pretty strong, a little more may be allowed on each occasion. From four to six pounds of milk may be consumed during the twenty-four hours by most of the patients. The result is a quick recovery. I have seen most hopeless cases of dropsy, which have arrived at the last stage of anæmia, quickly recover under this treatment. No doubt the iron and other remedies mentioned are also required to bring about the cure, but the exclusive milk diet being at the foundation, other required remedies will be suggested to the mind of every intelligent physician according to the circumstances of the case. I have found difficulty and delay in cases of renal dropsy, because in these we cannot make the kidneys work and drain much of the fluid. The work is done slowly by the skin and the intestinal mucous surface. Yet I have in many cases succeeded in bringing round the patients.

Burdwan.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WEST LONDON HOSPITAL.

TWO CASES OF SUPPURATIVE PERITONITIS FOR WHICH LAPARATOMY WAS PERFORMED; ONE DEATH, ONE RECOVERY; REMARKS.

(Under the care of Mr. C. B. KEETLEY.)

THE surgical treatment of peritonitis is one possessing the utmost interest for the profession, and has been a good deal under discussion during the last two or three years. Mr. Keetley's cases are contributions to the literature on the subject. Inflammation of the peritoneum accompanied by suppuration varies greatly as to its cause, mode of onset, and extent, and prognosis will depend upon the view taken of these in each particular case, and in many instances (as in those in which the inflammation follows perforation of the appendix vermiformis) upon the duration of the symptoms before surgical assistance is requested. We cannot, however, enter upon a discussion of the question as to operation in these conditions of the peritoneum. The subject is too large for the space at our disposal, and we must refer our readers to special articles on the subject.¹ In these cases of suppurative peritonitis it

¹ Abdominal Operations, chapter on Peritonitis; International Journal of the Medical Sciences, 1886, p. 288; Edinburgh Medical Journal, May, 1886; THE LANCET, Oct. 1886, March, Nov., and Dec. 1887, Feb. and Dec. 1888; Transactions of the Clinical Society, 1888; and recent text-books.

is usually advisable to wash out the peritoneum, or at all events the suppurating cavity, treating it as the cavity of an ordinary abscess is frequently treated. Warm distilled water or warm water which has been recently boiled will answer well, and it is generally agreed that much diluted solutions of antiseptic substances are comparatively useless. Flushing of the peritoneum is not, however, without risk. On more than one occasion we have seen considerable acceleration of the pulse-rate and faintness follow its employment, and the surgeon will do well to employ it with caution, especially after exhausting operations. M. Polaillon brought two cases before the Obstetrical Society of Paris on July 12th of this year,² in both of which most serious symptoms (in one case followed by death) ensued on the employment of warm distilled water for the purpose of flushing the peritoneum after operation. He was inclined to ascribe the arrest of the heart's action and respiration to a reflex action through the solar plexus or diaphragm. M. Guérin mentions a case where similar symptoms followed the passage of his hand into the upper part of the abdomen during the course of an abdominal section, and ascribed the effect to a mechanical action of the water.

CASE 1. (For the notes of this case we are indebted to Mr. C. H. Taylor, late house-surgeon.)—Lilian S—, aged eleven years, was admitted to the West London Hospital on May 14th, 1887. She had always been a healthy child. Three days before admission she was suddenly taken with vomiting and headache, the vomiting occurring about every half-hour, irrespective of food, during that day and night, the vomit being frothy and yellow. The bowels were opened twice after castor oil. She complained of a great deal of pain in the stomach, but no distension was noticed. On the 12th she was seen by a medical man, who ordered poultices to be applied and gave her some medicine, after which she seemed better, the vomiting ceasing from 11 A.M. on this day to 10 P.M. on the next day (the 13th), when she became much worse, the pain being very intense, but vomiting only occurred once and the bowels acted twice, solid motions in good quantity being passed. Defecation and micturition were both very painful; the urine was rather thick. She took only beef-tea and milk, the latter very badly. On admission poultices and fomentations were applied to the abdomen and tincture of opium administered rather freely. She slept at intervals only.

May 15th.—A severe attack of pain came on in the morning, during which she threw herself about in bed and kept up a continual scream. At 8 P.M. she had another paroxysm of pain. A powder of one-fifth of a grain of opium was given. At 10 P.M. she vomited. At 11 P.M. the opium powder was repeated, and again at 3 A.M. the next morning. The bowels were opened very slightly.

16th.—No severe pain since the powders were given. Bowels opened six times, but only a very little formed motion passed. Defecation no longer painful.

17th.—Vomited four times during the night. The bowels acted after an enema of oil. No urine passed during the night; micturition painless; urine still thick; no albumen. The face was flushed; tongue dry and furred; lips dry and cracked. The lower half of the abdomen is motionless during respiration, swollen, hard, and tender to the touch; a slight thrill communicable from one flank to the other. The part of the abdomen above the umbilicus slightly retracted and resonant. When seen in the evening she had been crying with pain for three hours. She lay upon her back with her legs drawn up, but when there was an exacerbation of pain she rolled and twisted about, and could not bear the abdomen to be touched.

18th.—Pain constant to-day; vomiting incessant; thirst very great. Temperature 100°. At 5 P.M. the abdomen was more swollen and harder, the child screaming with pain for the last two hours. Four leeches were applied to the abdomen, and appeared to give a good deal of relief.

Operation.—At night, or rather at 1 A.M. on the 19th, the patient was anaesthetised, and Mr. Keetley made an incision midway between the umbilicus and the pubes, about two inches long, through the abdominal wall and peritoneum; he then introduced his finger into the abdominal cavity and examined the intestines; they appeared empty and certainly did not suggest any idea of obstruction. In the right iliac fossa was felt a hardish mass, which during manipulation burst, some very fetid pus escaping; the abdominal incision was then enlarged to

allow a freer exit, there apparently being several small isolated collections of pus, and the intestines were kept back by an assistant and the abdominal cavity freely washed out with hot weak boracic lotion. Two large drainage tubes were inserted, one being passed into the pelvis and the other into the right iliac fossa; the peritoneum was closed as far as possible with catgut sutures, and then the skin with silver. A dressing of iodoform gauze covered with wood-wool pads was applied, and the child put to bed on her back with the legs raised over a pillow, eight minims of tincture of opium being given. After the operation the patient appeared very restless and screamed a great deal; the pain continued severe, but was better; she did not sleep at all. At 8 A.M. the wound was dressed; there was much discharge, which was still fetid. The abdomen was very distended, and did not move with respiration. Tongue clean, and rather dry. Complained of intense thirst. Had only had a little weak tea by mouth. Temperature subnormal. The wound was again dressed in the afternoon, and syringed out through the tubes with about two quarts of hot boracic lotion, considerable force being used. She did not take well, so two ounces of peptonised beef-tea were given every two hours in the form of enemata. At midnight the wound was again dressed. She appeared a good deal better, had much less pain, and the pulse was stronger. Thirst still very distressing.

20th (the day after the operation and the tenth day of illness).—The wound was again dressed three times as before. She appeared much improved, having no pain whatever, but was still very thirsty. Temperature normal; pulse stronger. Abdomen less distended, and not so tender. No vomiting. Bowels opened once during the night; motion rather liquid. In the evening the pain suddenly returned, and the wound was dressed at midnight.

21st (the second day after the operation).—At 5 A.M. diarrhoea commenced, and was continuous until 9 A.M., when the patient died.

The post-mortem examination showed the intestines to be extensively matted together, especially in and about the right iliac fossa, so much so that the appendix vermiformis and the right uterine appendages were enclosed by coils of adherent intestine. On examining the vermiform appendix, there was found to be a small concretion within it, which escaped through its wall on very gentle pressure, leaving little doubt that there had been a perforation as the primary cause of the peritonitis.

CASE 2. (For the notes of this case we are indebted to Mr. Sydney A. Bontor, house surgeon.)—Jessie T—, aged eleven, was admitted on July 14th, 1888. She had scarlet fever nine months ago, since which time she said she had a "big belly"; except for this she had never been ill. There was a very strong family history of phthisis. A fortnight before admission she was kicked in the right loin and front of abdomen, without, however, feeling much pain at the time; but in the evening she had very severe pain in the right side, and was delirious at night. A medical man was called in, and ordered rest in bed with liquid diet. Under this treatment she improved until two days before her admission, when she got out of bed and sat by the window, this being followed in the evening by severe pain, which continued from that time until her admission. During the first few days of her illness she vomited a great deal, but had no diarrhoea. After this diarrhoea commenced and the vomiting subsided, her motions on admission being frequent, loose, and slimy.

When admitted the patient did not seem much distressed. Her face was flushed and eyes bright. The lower part of the abdomen was swollen, hard, and tender. She could move about into any position without pain or even discomfort. The tongue was coated and brown. Temperature 102°. The abdominal swelling was confined to that part below the umbilicus extending from one iliac spine to the other, and being a little more prominent on the right side; it was tense, tender to the touch, with the superficial veins on the surface and on the flanks distended; a well marked fluctuation wave could be elicited; and there was slight oedema over the middle line in front, none behind. The swelling was fairly defined, the part of the abdomen above the umbilicus being quite natural; the whole of the enlargement was dull, absolutely so on either side, but slightly resonant over the central portion. There was no oedema of the legs. Urine was passed freely and without pain; it was acid, of specific gravity 1018, and without albumen or sugar. The bowels were frequently opened, the motions being very fluid, with

² Annales de Gynécologie et d'Obstétrique.

pale hard masses, the fluid portion being of a dark brownish colour. Patient was confined to bed, and her diet limited to liquids, while three minims of laudanum were given every three hours to check the diarrhoea.

July 15th.—She slept pretty well, her temperature next morning being 99°. The condition was about the same, with slight increase of the oedema. In the evening Mr. Keetley decided to explore the abdomen. Chloroform was administered, and an incision about two inches long made in the median line, about midway between the pubes and umbilicus; dissection was carried down to the peritoneum, considerable inflammatory thickening being encountered. A small opening was made through the peritoneum, when a jet of pus spurted out, rising about six inches. The peritoneal opening was then enlarged, the pus flowing out freely, about a pint and a half being evacuated. After this the abdominal incision was increased to a little more than three inches in length, and the cavity well douched with a warm 1 in 5000 solution of perchloride of mercury. The intestines were then seen to be firmly matted together, and adherent to the abdominal wall. They were illuminated with a laryngoscopic mirror, and a search made for the appendix vermiformis. This could not be found, however, without breaking down some of the adhesions, a proceeding Mr. Keetley did not deem advisable. The cavity was again well douched with warm perchloride of mercury solution, and a large indiarubber drainage tube inserted, with two long pieces of iodoform gauze, soaked in perchloride of mercury (1 in 5000), to act as capillary syphon drains, one passing into Douglas's pouch and the other into the neighbourhood of the cæcum, both extending thence through the lower angle of the wound across the abdomen and over the right flank. The edges of the wound were brought together with four silk sutures, the two lower ones being fastened with an ordinary bow, so that they might be refastened after the removal of the gauze. A dressing of iodoform gauze covered with wood-wool pad was applied, and the patient put to bed on her back with a pillow beneath the knees. She did not sleep very well, and complained of some pain at the site of operation. To take two minims of tincture of opium every three hours, and for diet only milk and fluids.

16th.—Patient quite comfortable and free from pain. Temperature 99.4°; pulse good. Tongue furred. In the afternoon she was turned on her right side for a short time. She slept well.

17th (second day after operation).—She vomited twice, the vomit being yellow in colour. The bowels were opened once. Temperature 98.8°; pulse 98, of good volume and tension. She slept well. Sick once during the night.

18th.—All that patient noticed was that she was hungry. Temperature 99.6°, but at 10.30 A.M. 100.4°. In the afternoon the wound was dressed for the first time since the operation. The cavity was well douched with 1 in 5000 perchloride of mercury solution, some flakes of pus being washed away; a glass drainage tube was introduced in place of the indiarubber one, with a piece of iodoform gauze in it; there was not much pus in the old dressing. She was allowed a little more food—i.e., some bread as well as the fluids. Moves quite easily into any position; encouraged to lie upon her side occasionally.

19th.—Temperature normal in the morning, but rose to 100.2° in the evening. Patient quite comfortable.

20th.—Wound again dressed as before, the end of the glass tube this time being filled, and the outside of it freely sprinkled with iodoform powder.

On the 21st the temperature rose to 101°, on the 22nd to 102°, and on the 23rd to 102.4° each afternoon, falling, however, to 100° each night. During this time the patient remained perfectly comfortable, tongue clean and moist, bowels open daily, no vomiting, and still very hungry, although on the 20th she was allowed arrowroot and raw meat scraped very fine and taken between thin slices of bread-and-butter. On the 23rd hot boracic lotion was substituted for the perchloride of mercury douche, and the wound was dressed daily.

24th.—The glass tube was replaced by two small indiarubber ones, one of them passed in Douglas's pouch and the other towards the cæcum; over these was a rather thick layer of iodoform gauze wrung out of boracic lotion, and covered with gutta-percha tissue, this again being covered with a layer of cotton wool.

The temperature still kept high, so an ice-bag was applied

to the head, and by the 28th the temperature had sunk to normal, the patient being quite comfortable but very fretful, and her mind occasionally wandering.

On the 29th (fourteen days after operation) the temperature rose from 97.8° in the morning to 103.2° at night, sinking again to 97.8° the next morning, but for the next four days it gradually rose both morning and evening until Aug. 2nd, when it was 101.2° in the morning and 103.2° in the afternoon. On this day the cavity was douched with water which had been boiled and allowed to cool in a closed vessel, and the temperature next morning was 97°. During this time the patient had been comfortable, and her appetite good; bowels open twice daily; the pus had been just sufficient to soak the dressing, and several flakes came away during the douching. Since July 27th, when it was noted that the patient was very irritable, an indefinite kind of delirium had gradually come on, possibly due to the iodoform.

Aug. 3rd.—Boiled water was again used, but for the next two days perchloride of mercury (1 in 5000) was used once more; as, however, the temperature rose to 99.8° after the second day, it was discontinued, and boiled water once more resorted to, and continued up to the end, the temperature keeping normal except for two occasions, when it rose to just over 99°.

From Aug. 2nd, when the boiled water was substituted for medicated douches, the patient made an uninterrupted recovery; the delirious condition passed off in a few days; the tubes were gradually shortened, and finally removed entirely on Sept. 1st; and on Sept. 18th the patient was discharged, with the abdominal wound entirely healed. For about a month after her discharge from the hospital, she wore a pad firmly fixed over the cicatrix, but since then has worn nothing. She was last seen on Nov. 2nd, in perfect health and able to run about and play as well as any other child of her age.

Remarks by Mr. KEETLEY.—Important points of resemblance between these two cases strike one immediately. Both patients were girls eleven years old. In both cases, vomiting and abdominal pain were prominent early symptoms. In neither was there constipation. In fact, diarrhoea complicated each case for a short time, in the fatal case immediately preceding death. In both cases the epigastric and hypochondriac regions were absolutely or comparatively free from peritonitis, while the umbilical and lower regions contained pus. On the other hand, while Lillian S.—had, it was stated, always been a healthy child until the illness we are describing, Jessie K.—had had scarlatina nine months before her admission into hospital, and described herself as having had “a big belly” ever since. Again, while Lillian's illness began apparently spontaneously, Jessie's is said to have commenced immediately after being kicked in the abdomen by a big brother. Again, the pain and tenderness were occasionally more acute in Lillian's case than in Jessie's, although her temperature was not so high. As the latter was operated on the day after admission, her temperature was only taken twice before—viz., in the evening (102°) and in the morning (99°). The temperature of the more acute and ultimately fatal case varied between normal and 100° throughout, except that, after operation it twice sank below normal. The post-mortem examination made it almost certain that Lillian S.—'s illness began with the escape of gas, and perhaps a minute quantity of faecal matter through a perforation in the end of the vermiform appendix. But it must not be forgotten that the peritonitis was quite as active, and the adhesions as strong around the right uterine appendage, which also appeared intensely congested. In Jessie K.—'s case, it is possible that some degree of ascites had been left by the scarlatina, although against that hypothesis is the fact that no albumen was found in the urine when she came into hospital. Yet she herself said that she had had “a big belly” ever since the scarlatina. Now, ascitic fluid in the peritoneal cavity would predispose to peritonitis, and the kick might have been the exciting cause. The presence of stagnant putrescible fluid in the peritoneal cavity in conjunction with a wound of the peritoneal surface, is a state of things particularly favourable to the production of peritonitis. This is proved both by clinical experience and by Crawitz's experiments (*Charité Annalen*, xi., Jahrb. 770; and *Annals of Surgery*, vol. v., p. 120). As regards the question of operation, the cases, so far as they go, illustrate the advantages of prompt action and the evils of delay; though it must be remembered that, one

case being more acute than the other, the two are not strictly parallel; valuable time was lost in the case of Lillian S., whereas Jessie K. was operated on without avoidable delay, on the first day after admission. I would venture to urge that in all such cases the sooner the surgeon is called in for purposes of consultation the better. This does not necessarily mean immediate operation. But it should mean immediate decision as to the line of treatment, and the precise choice of a time for operation should indications for surgical interference arise. The old-fashioned plan of never calling in the surgeon until the case looks as if it would be hopeless without recourse to surgery must, and actually does, to the certain knowledge of many of us, tend to cause persevering and zealous officers on the medical side to repeatedly try their remedies until the simple indication for surgical treatment remains that the patient must die unless it is used. It is then resorted to, the patient dies all the same, and the officers on the medical side may be further confirmed in their official reluctance to summon surgical aid. On the other hand, I think it is only fair that these cases should not be transferred from the physician to the surgeon, but that they should be attended in consultation to the last as well as from the first, and the credit of any good results evenly shared. For reasons beyond my control this cannot be done in these two cases, but in the case of Jessie K. I have to thank Dr. DREWITT for seeing her with me from the beginning to the successful termination of the case, and it would be very unfair of me not to share with him any credit that may be due on account of it. The temperature chart, the peculiar delirium, resembling insanity (she used to sing songs all day and a great part of the night), of Jessie K. made me suspect iodoform or sublimate poisoning, and I changed those drugs for boracic. But it was not until Mr. BONTOR, the house surgeon, on his own responsibility, substituted plain boiled water that the temperature dropped to normal. The result was immediate. The practice of placing moist iodoform gauze between the inflamed intestines in positions where pus is likely to collect was introduced by Mikulicz of Königsberg. I have not yet seen any account of its employment in this country. The gauze should extend far outside the wound, the external end should reach to as low a level as possible to obtain syphon action, and the gauze and dressings near it must be kept moist. Three days is long enough to leave the sawn piece *in situ*. If a fresh piece is inserted, it should be smaller than that removed. The question of separating adherent intestines and of excising the vermiform appendix are referred to in the body of the cases. While both are good practices in the abstract, it is possibly easy to do too much.

WEST NORFOLK AND LYNN HOSPITAL.

A CASE OF SUPRA-PUBIC LITHOTOMY.

(Under the care of Mr. H. CALTHROP ALLINSON.)

WE are indebted for the notes of the following case to Mr. Sumpter, house surgeon.

J. H.—, aged four, was admitted on Sept. 22nd with severe symptoms of stone in the bladder of several months' duration. The stone could easily be felt both by the finger in the rectum and with a sound.

On Oct. 10th chloroform was administered, and supra-pubic lithotomy performed in the usual way, a two-ounce rectal bag being employed, and four ounces of warm boracic lotion retained in the bladder. The operation presented no difficulty, the bladder being easily reached, hooked forward, and incised, with practically no hæmorrhage. With the forefinger of the right hand the stone was then raised up to the opening and removed. A good-sized drainage tube was passed into the bladder and secured, and a carbolic catgut suture placed above and below it. Union by first intention took place at the seat of the sutures, and on the fifth day after the operation the drainage tube was removed. The urine was then passed in gradually increasing quantities through the wound up to the eighteenth day, when it was passed totally through the urethra, the wound being quite healed. The stone measured a little more than three-quarters of an inch in its largest diameter, and weighed seventy-five grains. The temperature rose to 100° 4' on the day after the operation, then gradually fell, reaching normal on the fourth day and remaining there. The operation in every way commended itself.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Pulsating Exophthalmos. — Suppurating Orbital Hydatid Cyst. — Degeneration of Lens. — Recurrent Traumatic Blindness.

AN ordinary meeting of this Society was held on the 13th inst., the President, Mr. HULKE, F.R.S., in the chair.

Dr. A. BRONNER read the notes of a case of Pulsating Exophthalmos. The patient was a farmer, aged sixty-six, who, at the age of one year, had sustained an injury to his head through a fall, which resulted in protrusion of the right eye immediately. Pulsation and protrusion of it had been noticed ever since to such an extent that he could never quite close the lids, but it had never caused him any trouble; his general health had always been good, and he had led an active life. The right orbit was larger than the left, and the right globe was dislocated downwards, forwards, and outwards, but could easily be replaced; it pulsated synchronously with the pulse. The movements of the globe were very limited in all directions, but there was no strabismus, and the sight was good; the cornea, iris, media, and fundus were practically normal, except for a few striæ in the lens. On auscultation of the eyeball a continuous bruit could be heard, increased during the systole, and almost stopped by pressure on the carotid in the neck. A short time after these observations were made he had an obscure illness, in consequence of which the eye receded a good deal, and the bruit became much less marked. The case was clearly one of arterio-venous communication between the internal carotid artery and the cavernous sinus, of traumatic origin. The distinctly continuous bruit, the fact that the eye could fall back into the socket so readily, and the absence of past or recent papillitis, were proof against any other diagnosis. The case was of great importance, as showing that such a condition might become and remain stationary during so long a period as sixty-five years.—Mr. HULKE said that the diagnosis of aneurysmal varix must be correct; it could not be a neoplasm, an arterial aneurysm, or a varicose aneurysm; for in the latter cases it would certainly have become larger. It was interesting to see that it had gone on so many years without giving trouble, and it agreed in this with the similar lesions seen in the limbs. The patient was not conscious of a sound, and yet on stethoscopy a loud roaring was heard. He referred to one of the first cases of the kind he had seen, in a woman, and the common carotid was tied. In that instance the roaring was so loud that the husband could not sleep with his head on the same pillow. In Dr. Bronner's case the patient had probably become quite habituated to the sound, owing to its extremely long duration.—Mr. LAW-FORD inquired if the nature of the illness had been ascertained during which the proptosis receded, and he asked Dr. Bronner what he supposed to have been the cause of that recession.—Mr. DOYNE thought that the absence of any sign of papillitis was not of much value, as he had certainly witnessed so complete recovery from that condition that no trace of its existence could be detected.—Dr. JAMES ANDERSON mentioned the case of a girl who had recurrent optic neuritis. She had had three attacks of perfect vision after them. Between the first and second attacks a very loud murmur was heard on auscultation over the eyeball, and it was audible to the patient; before disappearing the murmur changed its character, and became rough. There was no aneurysm in this case, but there was some spinal cord disease, as the patient subsequently developed paraplegia and paralysis of one shoulder.—Dr. BRONNER, in reply, stated that the illness from which the patient had previously suffered was of hepatic and not cranial, nature. If papillitis had been present, it ought not to have subsided, for it could only have been due to arterial obstruction.

Dr. ROCKLIFF brought forward a case of Suppurating Hydatid Cyst of the Orbit. The patient, a labourer, aged thirty-three, had first noticed an affection of the right eye in 1882. He had several attacks of inflammation in it, and the vision gradually deteriorated. In April, 1887, he was quite blind with it. There was marked protrusion, some ptosis, and the action of all the

ocular muscles, except the external rectus, was very limited; nothing definite was made out as to the condition of the orbit. Eighteen months later, having had more attacks of pain, the patient consented to an operation. An exploratory puncture with a scalpel having given no results, the orbit was more freely opened up, and the eye being removed, a suppurating hydatid cyst was found at the apex of the orbit. The rarity of the affection and the difficulties of diagnosis were briefly alluded to.—Mr. BRAILEY asked if there were hydatids in other parts of the body. In one case he had seen it would have been impossible to have made the diagnosis if the bosses caused by the development of hepatic hydatids could not have been felt. He thought that in Dr. Rockcliffe's case the hydatid had developed in the substance of one of the ocular muscles.—Mr. HULKE had only seen three or four cases, and he thought an absolutely certain diagnosis could not be made. In one of these cases there had been suppuration. He did not see how suppuration could be caused by rupture of a daughter cyst.—Dr. ROCKCLIFFE, in reply, said that the patient attributed the suppuration to a blow with a piece of iron. No hydatids could be found elsewhere. He thought it had developed behind the eye, and not attached to the muscles, for the patient had free movement in every direction.

Mr. DOYNE gave a brief account of a case of a peculiar form of Degeneration of the Lens, there being a difference in refraction of eleven dioptries between its periphery and its centre. This produced an appearance of nuclear opacity, which, however, was only apparent, due to the reflection of some of the light rays as they entered a denser medium. The lens was everywhere perfectly transparent. The patient was seventy years of age, and the condition had been developing for some years.

Mr. DOYNE then read notes of a case of Recurrent Transient Blindness. The patient had been invalided home from India after malarial fever; before his return he had a sudden attack of blindness, which completely cleared in five minutes. Another attack came on suddenly soon after his arrival in England, while drying himself after his morning bath, which had not quite passed off three weeks later. When he first came under notice, two days after the attack, the upper half of the field of vision was restored. There was a dense white fog in the upper half of the fundus, completely veiling the choroid, but in which the retinal vessels stood out brilliantly. There was no plugging of any of the retinal vessels, and the cause of the attack seemed doubtful.—Mr. HARTRIDGE, referring to the first case, asked if the condition could not have been congenital. He referred to a case in a girl, aged seventeen, in whom there was an obvious difference of refraction between the centre and periphery of the lens, the former looking like a globe of oil.—Dr. BRONNER thought that many cases were ascribed to conical cornea and astigmatism which were really due to irregularities in the lens. The keratoscope, an instrument not used sufficiently, would show the cornea to be normal, proving that the error of refraction was in the lens.—Mr. DOYNE replied that he did not think the case was congenital, for the patient certainly saw very much better when she was young, and he had positive evidence that the defect had much increased of late.—Dr. ANDERSON, alluding to the second case, had recorded a case of almost symmetrical loss of the lower half of both fields of vision. The patient was the subject of ague, and the trouble came on after a long ride. The patient also had hemianesthesia, and undoubtedly had a lesion, probably vascular, affecting the visual area in the brain.—Dr. BERRY said these cases were often diagnosed as embolism, whereas they were cases of spasmodic constriction of the arteries of the retina, producing either blindness or scotomata. In one case he had actually seen the condition of constriction shortly after it had developed, and there was an oedema corresponding precisely to the scotoma. He believed that there was a very intimate connexion between some of these cases and glaucoma. Certainly embolism could not disappear so quickly.—Mr. HULKE said it seemed difficult to believe that arterial spasm could last for several months.—Mr. LAWFORD asked if the patient had taken large doses of quinine, as that might cause spasm.—Mr. DOYNE thought that Dr. Berry's explanation was more plausible than that of embolism, but his case was exactly analogous to one reported by Dr. Miles last session. The patient had taken quinine, but he did not know in what doses; as a rule quinine produced a long-continued narrowing of the vessel.

The following patients and card specimens were shown:—Dr. ROCKCLIFFE: 1. Case of Proptosis. 2. Two cases of Tumour of the Eyeball, with Microscopical Sections.

Mr. G. HARTRIDGE: A case of Choroiditis.

Messrs. CRITCHETT and JULER: Case of Double Pseudo-glioma.

Mr. JULER: Reuss's Diaphanoscope.

The PRESIDENT announced that Professor von Zehender, an honorary member of the Society and a former Bowman lecturer, had kindly presented to the library a work containing the details of construction of the various German ophthalmic hospitals.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Exhibitions.—Sloughing Fibrous Polypus of the Uterus.—Mammary Inflammation and its Treatment by Elastic Pressure.

THE opening meeting of the Section of Obstetrics was held on Nov. 23rd.

Dr. MASON exhibited two Ovarian Cysts. One was almost unilocular, and had a solid mass on one side. It was not adherent to any of the structures, and was removed without difficulty, and the woman made an uninterrupted recovery. The other cyst was removed from a woman forty-seven years of age, and was very much larger. There was a large amount of ascitic fluid, and the tumour was practically solid. No fluid came from it when it was tapped, and it had to be broken down and removed almost piecemeal. The case went on very well for eight days after the operation. On the night of the tenth day, however, bronchitis supervened; her lungs seemed to fill up, and she died in twelve hours after being attacked. At the necropsy the abdomen was found to be healthy, but there were signs of gradually organising lymph in it. Dr. Mason also exhibited an anencephalic foetus. The upper part of the skull was totally deficient. The child presented by the lower extremities, and was delivered without difficulty. After its birth the heart pulsed for a few minutes, but no respiration was established.

Dr. LANE read notes of a case of Sloughing Fibrous Polypus of the Uterus. The patient, aged thirty-two, married three and a half years, never pregnant, had had menorrhagia since January, lasting three weeks at a time, and accompanied by great fetor. Slight difficulty in passing urine was experienced on June 10th, followed by complete retention next morning. On vaginal examination the tumour was found projecting through the os. Torsion was first tried, but the tumour breaking down, a wire écraseur was then applied and the pedicle cut through; a short straight midwifery forceps was then put on and the polypus delivered without the slightest injury to perineum.

Dr. ANDREW HORNE read a paper on Mammary Inflammation and its Treatment by Elastic Pressure. He believes the methods usually recommended and taught were gravely defective. Suppuration ought to be a very rare occurrence. Inflammation of the breast was almost always the result of infectious material gaining entrance through fissures and cracks of the nipple, and too much attention could not be paid by the attending physician when such a condition exists in the nursing mother. The method of treatment advocated was to envelop the breast in a layer of absorbent cotton. Having first painted the breast with a 5 per-cent. solution of oleate of mercury and morphia, then having procured an elastic web bandage, five yards long by three inches wide, he made a equable and gradual pressure over the inflamed gland, thereby securing the most perfect rest possible.—Dr. MACAN said he had long used compression of the breast in certain cases, although he did not regard it as suitable where there was suppuration; but he felt that he could recommend Dr. Horne's plan, even where there was suppuration, as strongly as in other cases. It gave great relief to the patient, and was, he thought, a great step forward, especially as they had now stopped poisoning their patients for affections of the breast.—Dr. MASON said the plan recommended would greatly extend the treatment of sore breasts by pressure. Pressure was a very old mode of treatment; but the graduated mode of applying it which Dr. Horne put forward was comparatively recent, and seemed to have had most successful results. Varieties of plasters had for long been before them. Belladonna plaster he believed to be one of the best. In this kind of treatment

it was most important to give the breast perfect rest. It was remarkable that women who did not attempt to nurse their children did not suffer from sore breasts.—Dr. HORNE, in reply, said the bandage he used was an ordinary web elastic. One of the reasons why he had adopted this bandage instead of elastic plasters was that it was most difficult to put on elastic plasters in such a way as to get even pressure. Another reason was that elastic plasters were apt to produce an eczematous eruption on sensitive skins. That would never happen with his bandages. The belladonna and cere cloth plasters, which for a long time used to be applied in the Rotunda, no doubt used to give a great deal of relief; one reason for that being that they prevented the breast from being rubbed or used, or anything from happening to it which would lead to suppuration. As to Martin's bandage, patients to whom he had applied it complained that it caused uncomfortable heat; whereas his bandage, being more porous, allowed a freer circulation of air.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

THE third meeting of the thirty-third session, 1888-89, was held at the Royal West Kent Dispensary, Greenwich-road, on Friday evening, Dec. 7th.

Dr. PITT, assistant physician, Guy's Hospital, showed a case of a child, aged sixteen months, with Facial Paralysis after Otorrhœa.

Mr. JOHN POLAND showed an infant, nine months old, upon whom he had operated twelve hours after birth for Imperforate Anus. The rectum opened into the membranous portion of the urethra, and fæces had passed through an opening immediately in front of the scrotum. Hypospadias was also present. The rectum was easily found, brought down, and united to the skin. The motions now passed through the anus.

Mr. POLAND showed a severe Comminuted Fracture of the Patella treated by Wiring. A drayman, aged thirty-two, had fallen a height of thirty feet, breaking his fall by striking his knee. The patella, broken into pieces, was brought together by pure silver wire, and the joint syringed out with strong carbolic lotion. The patient made a rapid recovery, and he was now able, at the end of five months, to walk without the aid of a stick or support, and to flex his knee to some extent. The wire still remained *in situ*.

Mr. POLAND also showed a girl, aged sixteen, with a Supernumerary Nipple on the left side in the usual position. The areola and nipple were well formed, but there was no sign as yet of gland tissue. The patient had been operated on three years previously for a large hæmatoma, situated over the right costo-coracoid membrane.

Dr. HORROCKS gave clinical notes of a Difficult case of labour, with specimen. He also showed a Dicephalous Monster.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on Nov. 28th, Mr. E. B. Whitcombe in the chair.

Mercurial Tremor.—Dr. SUCKLING exhibited a man aged forty-four, who had been occupied as a barometer maker for twenty-two years, and who now suffers from well-marked mercurial tremor. The patient first noticed trembling in the hands twelve years ago. The tremor would cease whenever his hands were at rest, and was always exaggerated by effort. The tremor gradually became worse and extended to the legs, so that walking became very awkward and difficult. About four years ago his speech became slurred, and the tremor affected the head. In his work he is constantly handling mercury, and he has had to go into hospital several times, and, after a few weeks' treatment, would return to his work again. The tremor was rhythmical and fine; it affected the head and trunk, the upper and lower extremities, and the facial muscles. It was very slightly perceptible when the muscles were at rest, but became violent on effort, the patient being unable to lift a glass of water to his mouth without scattering it all about. There was no nystagmus, no paralysis, no anaesthesia, and no alteration of the reflexes. The intellect was unaffected.

Intra-cranial Growth.—Dr. SUCKLING showed a boy aged six who had received a blow on the head three years ago,

and who early this year began to complain of headache. This gradually increased in intensity and was paroxysmal, being followed by vomiting and giddiness. Two months after the onset of headache the right side was found to be stiff and weak, and when the boy was admitted into the hospital contracture of the right arm and leg was well marked, there being decided ankle clonus and exaggeration of the deep reflexes. The right sixth nerve was paralysed, and there was also paresis of the lower part of the face on the right side. Dr. Suckling considered that the growth was probably started by the injury to the head, that it was probably a glioma, and that it was probably sealed in or near the cortical motor centres, the paralysis of the sixth nerve being a distinct symptom. The percussion note over the temples was almost tympanitic in character. Dr. Suckling had noticed the same note in another case in which there was a cerebellar growth with distension of the ventricles.

Congenital Cataract.—Mr. EALES exhibited a man aged sixty-two on whose right eye he had recently operated for the removal of cataract. The patient had been affected with double cataract from his birth, and had never in his memory had more than perception of shadows, being for all practical purposes blind. The cataract was hard and of a dirty canary colour. Surgically, the success of the operation was complete. The visual result was also very gratifying, for the patient was found to have excellent perception of colours and large objects, while the perimeter showed a full field for white, but central vision was very imperfect ($V = \frac{2}{3}$ Sn), and the temporal side of the optic disc was pale and atrophic, showing a condition like that often seen in tobacco amblyopia, only much more marked. He had slight nystagmus from birth.

Gall Stones.—Dr. RICKARDS showed a woman aged thirty-seven who had passed five gall stones by the bowel. The gall bladder still contained some.

Arrest of Growth of Radius.—Mr. HASLAM showed a girl aged seventeen who three years ago had sustained a fracture at the lower end of the radius. This had arrested the growth of the bone, and the hand was being gradually pushed to the radial side by the increase in length of the ulna.

Tumours of the Breast.—Mr. JORDAN LLOYD read a paper on Fifty Operations for the Relief of Breast Tumours.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.

A MEETING of the above Society was held on Thursday, Nov. 29th, Mr. W. G. Black, President, in the chair.

Hydatiform Mole.—Dr. A. CAMPBELL showed a specimen of a Hydatiform Mole, which had occurred in a married woman aged twenty-seven, the mother of three children. There was a history of a fall, followed by hæmorrhage, rigors, vomiting, and severe labour-like pains. On examination, the uterus was found reaching nearly to the umbilicus, with a rigid os, which was dilated with difficulty and the mass removed.

Perforating Ulcer of Intestine.—Dr. H. BRAMWELL showed a specimen of a Perforating Ulcer of the Intestine, due to the presence of a concretion in the vermiform appendix. The patient was a boy who had recently been treated for scarlet fever. Symptoms commenced with severe pain in the right iliac region, followed by the formation of a phlegmon and subsequent general peritonitis. The boy survived for thirty-eight days, and died suddenly from acute pain and collapse.

Gall Stones.—Mr. RUTHERFORD MORRISON exhibited several specimens of gall stones: 1. Removed, with a fecal accumulation, from the rectum of an old lady suffering from obstruction. The stone was of large size, and had evidently ulcerated through the hepatic flexure of the colon. It was interesting in being faceted, showing that it must have had a companion. 2. A collection of small stones removed by cholecystotomy, with successful result. 3. Large stone removed from sigmoid flexure by abdominal section in a case of intestinal obstruction; death in two days.—Dr. MEARNS advocated treatment by olive oil, and mentioned cases which had been successfully treated.—Mr. A. Wilson, Mr. T. A. Dodd, and the President made remarks.

Uterine Douche.—Dr. H. S. BAUMGARTNER showed a very useful and simple uterine douche.

Dr. C. L. LIGHTFOOT read a paper on Cataract Extraction,

illustrated by drawings and patients. He strongly advocated the performance of a preliminary iridectomy, and quoted the results of his own practice in support of his argument. A discussion followed, in which the President, Mr. Dodd, Mr. Morrison, Dr. Bramwell, Dr. Ridley, and others, took part.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

A MEETING of this Society was held on Thursday, Dec. 6th, the President (Dr. Murphy) in the chair.

Cases of Trephining.—Dr. ARNISON exhibited a boy trephined for injury. He had made a good recovery, but has since the accident remained blind in the right eye. He also exhibited a young policeman who, as the result of a blow on the head from a stick, had an acutely depressed fracture. A disc of bone had been removed and the fragments raised.—Dr. HUME exhibited a lad upon whom "secondary trephining" had been performed. A short time after the operation paralysis of the right arm supervened. The lad ultimately recovered.—Dr. DRUMMOND raised the question as to advisability of trephining in epilepsy when there were no signs of organic disease and yet with a well-defined and localised aura.—Dr. CHARLTON BASTIAN, in reviewing the various causes of epilepsy, said he would not recommend trephining unless there was evidence of the epilepsy being due to organic disease of the brain, the symptoms and localisation of which were perfectly unmistakable. He then discussed the subject of the physiology of the cortical motor areas, showing how he regarded them as being sensory as well as motor.—Dr. OLIVER, partly supporting Dr. Bastian's views as to the sensori-motor function of the so-called cortical motor areas, alluded to the continued good health of a boy previously under his care who had been trephined two years ago by Dr. Hume.

Subclavian Aneurysm.—Dr. OLIVER exhibited a man the subject of subclavian aneurysm, in whom, as the result of pressure of the sac, the right arm was completely paralysed and rapidly emaciating. The usual signs of aneurysm were present. Iodide of potassium had relieved pain. He considered amputation at the shoulder joint out of the question, and said that he was inclined to try galvano-puncture.—Professor ANNANDALE recommended amputation, division of the clavicle, and tying the two ends of the vessel.—Mr. WILLIAMSON discouraged such a severe surgical procedure.

Hysterical Pyrexia.—Dr. DRUMMOND, in the absence of the patient, presented charts which showed a temperature of 108° on one side of the body, and at the same time 98° on the opposite side.—Professor PHILLIPSON remarked upon a case he exhibited, where the highest temperature was 117°.—Dr. GIBSON discussed and offered an explanation of the relationship of high temperature to hysteria. Remarks were also contributed by Drs. Mantle and Murphy.

The following specimens were exhibited:—

Professor PHILLIPSON: Heart, Spleen, Brain, and Kidneys, from a case of Multiple Embolism. They had been removed from a woman aged thirty-four, who four months previously had aborted. Endocarditis of a rapidly advancing character had been detected during life, as also infarctions. There was left hemiplegia. The Sylvian artery on the right side was found blocked.

Dr. MURPHY: Tumours removed from a young girl aged sixteen, in a case of Sarcoma of Ovaries. Both ovaries were affected.—Removal of the Stomach and Oesophagus in a case of Gastrostomy. The man had lived 402 days.

Dr. GOWANS: Scirrhus of Breast, removed from a girl aged thirteen; and a Fibrous Tumour of the Lower Jaw.

Dr. DUGGAN: Aneurysm of Thoracic Aorta. During life the whistling systolic murmur was audible before the patient was closely approached.

Professor ANNANDALE read a paper on "Intubation of the Larynx and Air Passages," alluded to the advantages claimed for the operation as well as its disadvantages. He exhibited O'Dwyer's apparatus, and spoke hopefully of the operation. Drs. Murphy, Lyon, Hume, Anderson, Gibson, and Messrs. Morgan and Page contributed remarks. A cordial vote of thanks was awarded to Professor Annandale for his paper.

Dr. MANTLE afterwards read a paper entitled, "Is Urticaria a Symptom or a Disease?"

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

THIS Society met on Nov. 28th, Mr. Stuart Nairne, President, in the chair.

Dr. W. L. REID showed a Myomatous Polypus recently removed with the galvanic écraseur. The cervix had about a month earlier been split and the os internum dilated. The myoma then became polypoid spontaneously.

Dr. M. CAMERON exhibited an Umbilical Cord with a tight knot, which was supposed to have caused the death of the fetus.

Dr. G. A. TURNER showed a Cord knotted in two places, one of the knots being very complicated.

Dr. LAWRENCE OLIPHANT exhibited Twin Cords knotted together in two places. A small committee was appointed to investigate this curious case, as the children were born in the street, on the patient's way to hospital, where the placenta was delivered.—Some discussion followed, and most members of the society thought that true knots on the cord were very much less common than they are said to be in the text books.

Dr. G. A. TURNER described a Child born with Flail-like Knee Joint. No surgical injury could be detected, and the condition had now, six weeks after birth, almost entirely disappeared.

The PRESIDENT then delivered an address on "Lessons in Oophorectomy." He gave an abstract of the results of fifty consecutive cases, and described several cases and his *modus operandi* in detail. He removed only the diseased ovary, and in some cases merely punctured small cysts with the knife, and dropped the ovary back into the abdomen. He promised full details of all his cases on an early occasion.

Reviews and Notices of Books.

A Text-book of Biology. By J. R. AINSWORTH DAVIS, B.A., Lecturer on Biology in the University College of Wales, Aberystwyth. Pp. 462. London: Charles Griffin and Co. 1888.

THIS is one of the best of the numerous text-books of biology that have been published since the modern school of zoologists have come to occupy distinguished posts as examiners in the different universities, and, as examiners, require evidence that the candidate has actually engaged in dissection, is familiar with the principal types of the vegetable and animal kingdoms so far as regards their general morphology, has actually seen their several organs (as demonstrable by the scalpel and forceps, scissors and blow-pipe), has examined them under the microscope, and has seen himself, or is capable of demonstrating, some at least of their functions, and could finally give some account of their development. All this may be acquired by the purchase of a few typical specimens and their careful examination with the aid of such a book as the volume before us. It is divided into two parts, the first dealing with Vegetable Morphology and Physiology, the second with Animal Morphology and Physiology. The types given are—amongst Fungi, yeast, bacteria, white and green mould; amongst Algae, the *Protococcus nivalis*, *Spirogyra*, *Fucus*, *Chara*, and *Nitella*; amongst Mosses, *Funaria* and *Polytrichum*; amongst Ferns, *Pteris* and *Filix mas*; amongst Gymnosperms, the fir; and lastly, there is a general account of flowering plants. The section ends with a chapter on Comparative Vegetable Morphology and Physiology, and with an outline of the classification of plants. In the second part the animal kingdom is considered under the heads of Protozoa, the Amoeba and *Vorticella* being taken as examples; Coelenterata, with an account of *Hydra*; Vermes, illustrated by *Distoma* and *Lumbricus*; Arthropoda, by *Astacus*; Mollusca, by *Anodonta*, *Unio*, and *Helix*; Amphibia, by the frog; Aves, by the pigeon; and Mammals, by

the rabbit. The descriptions of the several organs in these animals are concise, but clear; and many of the illustrations are original, and are deserving of a better style of wood engraving or zincography than that in which they have been executed. At the close of the book are some examination questions that may be useful to the student preparing for examination, and a good index glossary.

OUR LIBRARY TABLE.

The Frog: an Introduction to Anatomy, Histology, and Embryology. By A. MILNES MARSHALL, M.D., D.Sc., M.A., F.R.S., late Fellow of St. John's College, Cambridge, Beyer Professor of Zoology in Owens College. Third Edition, revised and illustrated 1888.—The fact that this book has reached a third edition is a sufficient test of its merits. It is much enhanced in value by the interesting and lucid account of the development of the frog, with illustrations. The diagrams are numerous and helpful, and, with very few exceptions, original. The book presupposes that the student will be induced to dissect and observe for himself; and, as the frog is the *corpus vile*, there need not be that difficulty of scanty supply which has been made so much of in other anatomical discussions.

The Records of the Woolwich District, comprising Woolwich, Charlton, Kidbrook, Eltham, Plumstead, Wickham, Erith, and Beale. By W. T. VINCENT. Woolwich: T. P. Jackson. London: J. S. Virtue and Co., Limited.—This work, which is now being issued in monthly parts, though of course not in any sense a medical work, is not without interest even from a sanitary point of view, as an account is given of the inquiry held in 1849 after the passing of the Public Health Act of 1848, which showed the wretched condition of Woolwich at that time, and which was followed by the construction of a complete system of sewerage ultimately connected with the main drainage system of the south of London. During the inquiry Dr. F. Bossey gave evidence that, deducting the convict establishment, the death-rate was 22 per 1000, and in some of the low parts of the town 26 per 1000. Ague, fevers, jaundice, neuralgia, and diseases of the liver and spleen were, he said, very prevalent, the causes being the filth exposed in ditches and gutters, an overfilled churchyard, defective water supply, and especially the great tract of marsh land at Plumstead, which presented many acres of stagnant water and undrained bog. The water was bad and very expensive, one gentleman saying that he had to pay a penny for three pails from a cart in the street. The completion of the drainage works was celebrated by a banquet in the great sewer, which is eleven feet in diameter as it passes through the town.

Chats at St. Ampelio. By JOHN A. GOODCHILD, Author of "Somnia Medici," &c. Pp. 233. London: Kegan Paul, Trench, and Co. 1888.—This is a pleasant enough little book, *de omnibus rebus et quibusdam aliis*, in the form of conversations between half a dozen friends staying in the same house in one of the smaller towns of the Riviera. The *dramatis personæ* are entitled the Hostess and her Sister, the Socialist, the Poet, the Chaplain, and the Doctor himself, who reports their sayings. There is no pretence of a story, and no event beyond the earthquake; but the topics are cleverly handled and varied, so that they do not become wearisome. If the book is somewhat lacking in style and deep originality of thought, its tone is perhaps all the more easy and natural in consequence. Whoever may have entertained the author must have found in him a shrewd, ready, and genial-hearted guest, with much of that knowledge and experience of the world which supply the material for the best conversation.

Illustrated Lectures on Ambulance Work. By R. LAWTON ROBERTS, M.D. Third Edition, with Illustrations. Pp. 206. London: Lewis. 1888. This is a third edition of Dr. Roberts'

excellent lectures on ambulance work. He has in an appendix added a considerable amount of information respecting the formation of local ambulance corps and nursing guilds. Of these he specially notices the St. Andrews Ambulance Association, justly described as a "useful and benevolent institution," which "bids fair before long to embrace within its folds the whole of Scotland." The Leicester, Northampton, and Derby Corps are also mentioned with high commendation. We notice in the article on "Intoxication—Drunkness—Poisoning by Alcohol" that Dr. Roberts has not given a caution against the danger which may be incurred by placing a man who is "dead drunk" on his back. If he should become sick he runs a great risk of being asphyxiated. A word of warning on this point is highly necessary. We are still of opinion that the fourteen pages on military ambulance organisation might be advantageously omitted. A cheap reprint of the book, for the use of the working classes, omitting some of the less practical portions, would, we think, be a public benefit.

Dressed Game and Poultry à la Mode. By Mrs. DE SALIS. Pp. 79. London: Longmans, Green, and Co. 1888.—This little book contains above 170 receipts for cooking all sorts of game and poultry in the most tempting manner. The only fault we can find with it is that very many of the recipes seem to have been drawn up regardless of expense, and would require an accomplished *chef* to do them justice.

ARE WE DEGENERATING PHYSICALLY?

To the Editors of THE LANCET.

SIRS,—Having made a part of this subject a matter of experiment and observation for some years, and as a member of the Occupations Committee of the British Association, I shall be much obliged if you will afford me a little space to make some observations on this important question. I agree with Dr. Gwynne that at this period of our civilisation we ought to have been in a position to discuss a very different question; but then, unfortunately, to do this we should have to substitute the state I hold to be in the near future for the existing facts. To answer this question of physical degeneration in the negative or to have any doubt upon the matter is to ignore the facts with which we have to deal. What are these facts? The progress of civilisation has, with the exception of the brain, been obtained at the expense of the body. Compare the physique, the state of health, the power of recuperation, and the sense of smell and hearing of the uncivilised with that of the natives of the centres of civilisation, and this fact is obvious. When we measure the tendency of the conditions to which men are subjected in the civilised and uncivilised states we know why that must be so. And if in addition we note the serious import of the double process that is now taking place of the rapid concentration of our population in towns and the invasion of the country districts by the conditions of civilisation, there can be no doubt of the physical degeneration. But, Sirs, I confidently look to the near future—to this generation if we will—to put an end to this process of degeneration. Hitherto the attention of man has naturally been directed to the investigation of the conditions that surround him, and the result of that has been to give him a great and increasing power over them, to apply as he has thought fit. Whilst he has been obtaining these great victories over nature he has practically ignored the effects of the great changes he has been making upon himself. Now it is precisely to this point that the attention of biologists, anthropologists, and physicians (when will the latter necessarily include both the former?) should be earnestly and continuously directed, for when that has been accomplished we shall know how to make men able to resist the injurious conditions of their surroundings, and consequently we shall be able to successfully deal with disease, which is the effect of these injurious conditions upon man.

I am, Sirs, yours faithfully,

Dorchester-place, Blandford-square. G. W. HAMELTON

THE LANCET.

LONDON: SATURDAY, DECEMBER 29, 1888.

THE ANNUS MEDICUS 1888.

Introductory.

As there is much of interest in the medical history of the year, we shall not detain our readers by any lengthy introduction. The relations of the profession in Germany with that of England have been somewhat strained by professional differences in regard to the prolonged illness of the late and most lamented Emperor FREDERICK. His case was one of gravity and difficulty, and was eminently one for the co-operation of a number of the best men of various countries, and one in which differences of opinion should have been absolutely consistent with the welfare of the patient and consideration for the views of others. We shall not stay here to decide where and how the discord began, which has grown to such discreditable proportions. But we may be assured that between two such countries as England and Germany, in which medical science and art progress on sound lines and with rapid strides, there can be no permanent misunderstanding.

Anatomy and Physiology.

The year that is passing away, though prolific in papers and memoirs, does not seem to be marked by any great or notable advance in anatomical or physiological knowledge. If the number and magnitude of the treatises on physiology that have appeared may be taken in evidence of the number of students of this science, many must have their attention turned to it, for besides a new edition of FOSTER's Physiology, of which the first part has just appeared, those of MCKENDRICK, GAMGEE, KIRKES, and LANDOIS may be mentioned as appearing in new editions; whilst the works of BEAUNIS in France, and of GRUENHAGEN in Germany, are prominent as text-books on this subject. HOFMANN-SCHWALBE, GEGENBAUR, and HEITZMANN have published good works on Anatomy; Professor SCHÄFER has edited a very creditable volume entitled "Collected Papers from the Physiological Laboratory of University College, London," which contains no less than twenty memoirs by different professors or students connected with the College, and represents much good work. VIERORDT is the author of a valuable work in German, entitled "Anatomical and Physiological Dates and Tables," which gives the numbers, weights, and measurements of all the organs and parts of organs in the body, and should be in the possession of every worker in biology; it is worthy of translation. The new departure of the Council of the College of Surgeons in breaking up the Hunterian course of lectures into several short courses has proved a great success. Many of the younger men have done enough original work to occupy two or three lectures, and an opportunity is thus afforded them of making their results known, whilst the heavy and wearisome duty of delivering a whole set of twenty-four lectures is removed from the shoulders of the curator, who

ought, in fact, to be better engaged than in repeating well known facts to half a dozen sleepy auditors. The Bradshawe Lecture at the College of Surgeons was given by Mr. HUTCHINSON, who ably discussed the value of museums and suggested various improvements that might be made in the Hunterian Museum, some of which will probably be adopted. Dr. WOOLDRIDGE has continued his researches on the Coagulation of the Blood, in which he endeavours to show that the antecedents of fibrin are not pure albumens but fibrinogens, consisting of albumen and lecithin, and he attributes great importance to lecithin in the process of coagulation. A valuable paper on the same subject has been published by Professor HAYCRAFT and Dr. CARLIER, whose experiments tend to show that the white corpuscles play, as has been generally supposed, an important part in the process. The practical point of the distribution of bloodvessels in the valves of the heart has been investigated with care by M. DARIER, who finds that in the fetus as in the adult, in health, there are no vessels in the purely fibro-elastic portion of the auriculo-ventricular valves, and that there are none in the chordæ tendinæ attached to these valves. The aortic segment of the mitral valve, however, presents at its upper part a vascular area of small extent, not exceeding one-sixth of the whole height of the valve; and in the fetus a few muscular fibres accompanied by vessels penetrate the auriculo-ventricular valves, but never extend to the lower fourth of these valves. The semilunar valves of the aorta and pulmonary arteries are always destitute of vessels. When vessels are found, therefore, in the above-mentioned non-vascular parts they may always be regarded as pathological. Several essays have been published on the causes of the Respiratory Movements, notably those of Dr. MARCKWALD and of STEFANI and SIGHICELLI, without any very positive results being attained, probably on account of the great complexity of the relations subsisting between the respiratory movements and the nervous system. MARCKWALD has, however, brought forward evidence to show that, although the respiratory centres in the medulla oblongata are automatically active as well as excitable by reflex action, yet the automatically active centre can only liberate respiratory spasms, but no regular rhythmic respiratory movements. A considerable number of observations made by KUNKEL on the Temperature of the Skin of Man under different conditions support the statements made long ago by Dr. JOHN DAVY, that differences in the external conditions cause little variation in the quantity that is generated. The experiments of RALLIERE and RICHEL on dogs show, however, that in these animals the higher temperatures must be within certain limits, for although exposure to 112° C. for a short time produced no ill effect, yet, if prolonged for an hour or more death took place, with considerable reduction of the temperature of the internal parts of the body. CARL ROSENTHAL, from a long series of researches on the generation and loss of heat in the arm, has arrived at the important practical conclusion that the exaltation of temperature in fever depends essentially on reduction of loss, and only secondarily and to a lesser degree on increased production of heat. The true method of treatment for fever should therefore, he thinks, consist in the

adoption of appropriate means to promote the loss of heat from the body, and this he believes to be the action of such antipyretics as antipyrin and antifebrin. The question of the nature of the Acid of the Gastric Juice, which appeared to be quite settled by the experiments of Dr. BEAUMONT and of SCHMIDT, has been once more opened by Dr. POULET, who brings strong evidence to show that the acid in man, as ascertained by the process of dialysis during the first period of digestion, is exclusively the hippuric, whilst during the close of digestion there is a mixture of hippuric and tartaric acids. In the fasting state tartaric acid is alone present. ZEEHNISEN has shown that starch undergoes some, though an undetermined, change in the stomach, whilst PFLÜGER furnishes evidence that the glycogen molecule pre-exists in the molecule of albumen. The outcome of the education of the Japanese in the Western world appears in the form of a Journal of the College of Science of the Imperial University of Japan, and contains many interesting articles in its ample pages. Some interest attaches to the investigations of Dr. O. KELLNER and Y. MORI on the Diet of the Japanese. It is often stated that the Japanese are exclusively vegetarian in their diet, and that they consume nothing but rice. This is apparently supported by the fact that in 1882 only 36,298 oxen and but few other animals were slaughtered in the whole kingdom. But closer inquiry has shown that, if little meat is eaten, the consumption of fresh and salt-water fish is very large, and that, besides rice, various kinds of grain and pulses always form a part of the daily dietary, so that the proportions of proteids, fats, and carbohydrates differs from that of Europeans only in so far that the diet is relatively richer in carbohydrates; the balance of the economy is, as might have been anticipated, well preserved.

✓ The Histology of the Nervous System has been the subject of careful research by Dr. JOSEPH, who, by special methods of staining, demonstrates a plexus of fine fibres in the axial space, or axis cylinder, in the meshes of which the nerve fibrils lie. The fibres of the plexus are infinitely more delicate than the neuro-keratin network in the white substance of SCHWANN, and he has proposed for it the name of axial framework. ✓ The details of a remarkable case from a physiological point of view, and likely to be still more important as bearing on practice, was read before the Royal Medical and Chirurgical Society by Mr. SUTTON, in which the divided ends of a median nerve which had been severed ten weeks previously were dissected out, revived, and after five days began to recover its function. Mr. BARWELL, in the discussion on the subject which followed, mentioned a case in which recovery of function occurred after division six months previously, when the parts were brought together. The valuable memoirs of Professors VICTOR HORSLEY and SCHÄFER, on the Localisation of the Centres for Voluntary Action and for Sensation, appeared early in the year in the Philosophical Transactions, and show that, as the result both of excitation and of ablation, the motor region of the brain cortex may be mapped out into a series of main areas, each being connected with the movements of a particular part, such as the head, trunk, leg, arm, and face areas, and these, again, present subdivisions concerned with more specialised movements, though they are careful

to add that there are no sharp lines of demarcation between the several areas, each overlapping the surrounding ones. Their experiments on the occipital, temporo-sphenoidal, and other lobes of the brain, whilst they are all of value in the direction of assisting the physician and the surgeon in localising—and therefore in treating—cerebral lesions, show that much still remains to be done, both by experimental investigation and by accumulation of pathological cases, before anything more than the broadest statements can be advanced; and this is borne out by the fact that the veteran BROWN-SÉQUARD, who is still actively engaged in the endeavour to elucidate the functions of the nervous system, has, in an important memoir read before the French Society of Biology, advanced certain novel pleas in regard to the localisation of the functions of the brain to certain definite areas. Each function, each property of the central nerve system, he suggests, is strongly localised in certain nerve cells, but these cells are not localised in restricted areas or macroscopic centres, but are distributed through many parts of the central nervous system. This dissemination, he considers, explains the fact that there is no single spot or region in the whole of the central nervous system the destruction of which is followed with absolute certainty by either paralysis or anaesthesia. Surely a very suggestive notion. BECHTEREW finds that the optic thalami are aggregates of several centres, some of which, acting as reflex centres for tactile sensations, regulate the complicated movements of the individual, and that apart from this they play an important part in the expression of the feelings. The motor function of the fifth, seventh, and of the ninth to the twelfth cranial nerves has been specially investigated by HORSLEY and BEEVOR. Good memoirs on the laws of Muscular Stimulation and Contraction by GEORGE KEMP, and on Tetanus by JOHN CAMPBELL, have proceeded from the Johns Hopkins University, the latter observer showing that the rate of the wave of contraction in the muscle of the "terrapin" is from 2 to 2.6 metres per second, heavy loads increasing the rapidity of the wave, whilst at a temperature of 25.5° C. thirty-seven stimuli per second were found insufficient to give uniform tetanus; and he has arrived at the conclusion that we can graphically analyse a tetanus much farther than has been supposed if the recording apparatus is sufficiently sensitive. CAMPBELL finds that when curarised muscles are moderately weighted and stimulated with electricity, the stimulus starts from only one electrode—viz., the cathode on closing and the anode on opening the current; whilst with insignificant weights the muscle is stimulated at both anode and cathode, the stimuli being equal and simultaneous. The importance of tension of muscle in determining the duration of the latent period, and the response of the muscle to anodic and cathodic stimulation respectively, has been well worked out by GEORGE KEMP, of Baltimore, who, by selecting the muscles of the terrapin turtle, has been able to obtain tracings of the same muscles for many hours consecutively, which is a point of great importance in determining the effects of various stimuli. Though hardly to be included in any account of the advances of physiology, mention may just be made of the marvellous reproduction of the human voice that has been accomplished. And reference may also be made to an electro-

magnet of extraordinary power, made in the United States by Major KING, who employed two disused cannons surrounded by a coil of wire 9660 metres in length, the electrical current being supplied by an engine of thirty-horse power. A ball weighing upwards of 300 lb. could be made to oscillate like a sheet of paper in the wind under the immense power that thus could be developed. The Hereditability of Acquired Defects has been discussed by numerous writers. SCHIESS, looking at the subject from an ophthalmological point of view, maintains the heredity or strong predisposition to heredity of myopia. SCHILLER TIETZ, living in a locality where it has been long customary to dock the tails of cats, finds that the present generation of cats have shorter tails than usual, and adduces further the instance of short-horned cattle producing progeny, which have short horns. ZACHARIAS has given several instances of the transmission of scars. RICHTER, however, supports the opposite view.

Pathology.

The subject of tuberculosis continues to receive a great deal of attention. In the summer the first of a projected series of congresses on this subject took place in Paris under the presidency of M. CHAUBEAU, and a large number of contributions to the etiology and pathology of tubercular disease was made. The Congress, before separating, passed resolutions advocating restrictions on the sale of the milk and flesh of tubercular animals, being apparently convinced that a certain amount of the disease is disseminated through the food supply. Dr. SIMS WOODHEAD also took the subject of Tuberculosis for his able lectures delivered before the Grocers' Company. An interesting history of the rise and progress of pathological doctrines upon tuberculosis has been published by Dr. PREDÖHL of Hamburg, and Professor METSCHNIKOFF has written upon the phagocyte rôle of the once famous "giant cells" of tubercle. Much attention, too, has been devoted to the subject of Cancer, and Sir SPENCER WELLS, in his Morton Lecture, delivered before the College of Surgeons, adduced facts in support of the increase of this disease in this country, to which Mr. JESSETT drew attention four years ago. Professor VIRCHOW has published his views on the diagnosis and prognosis of cancer; whilst the possibility of cancer being due to a micro-organism, as alleged by SCHEUERLEN, has been further disproved by SENER in Germany and BALLANCE and SHATTOCK in this country. ALBERTS, in a monograph on carcinoma, related several attempts to inoculate animals, with a negative result. Drs. VANDYKE CARTER and COUNCILMAN have made important contributions upon the presence of organisms in the blood in malarial fevers, the results obtained by the former harmonising with those previously arrived at by LAFERAN and OSLER. At the beginning of the year a most important contribution to the pathology of Diphtheria was made by Professor OERTEL, which was fully abstracted in our columns. By careful histological studies OERTEL arrives at the conclusion that the diphtheritic virus is at first local in its operation, but that it speedily becomes absorbed, and then produces lesions in remote parts similar to those that accompany the formation of false membrane on mucous surfaces. Professor CROOKSHANK's report on Disease in Cows in relation to

Scarlet Fever has been published by the Agricultural Department of the Privy Council, and reproduced in the Transactions of the Pathological Society. It is one of the most important contributions to bacterial pathology made during the year. Nor should reference be omitted to Dr. W. HUNTER's valuable researches upon Pernicious Anæmia and allied conditions, which embody anatomical and experimental proof of pernicious anæmia being an independent disease apparently due to the action on the blood of some poison absorbed from the alimentary tract. Dr. MIURA of Tokio has contributed to *Virchow's Archiv* papers upon Kakké-kakké, a disease apparently allied to pernicious anæmia, and has arrived at conclusions pointing to this affection also being dependent upon a toxic agency. Amongst other subjects that have been studied may be mentioned Relapsing Fever by Dr. PASCHKAREFF, Aneurysm by Professor THOMA, Myxœdema by Drs. HUN and PRUDDEN (as well as in the exhaustive report of the Clinical Society's Committee), Suppuration by FEHLEISEN, Peritonitis by PAULOWSKY, and the forms of Hepatitis due to arsenical and phosphorus poisoning by ZIEGLER and others. The Pathological Society is still engaged in discussing the subject of the morbid anatomy and pathology of Chronic Alcoholism, which was introduced by Dr. PAYNE. Mr. BLAND SUTTON continued his lectures at the Royal College of Surgeons on Evolution in Pathology, and made several communications on Comparative Pathology to the Pathological Society. Lastly, amongst the publications of the year may be especially mentioned the posthumous work of the late Dr. WILSON FOX, entitled an "Atlas of the Pathological Anatomy of the Lungs," and the useful "Manual of General Pathology" published by Dr. J. F. PAYNE.

Therapeutics.

While the past year has brought with it no great discovery in therapeutics, it has been marked by continuous study of the claims of many new remedies of the last few years, and by re-investigation of the properties possessed by many drugs which have long been before the public. Every period of activity is likely to be followed by reaction, and the extravagant praises so freely lavished upon the novelties of a recent past are bearing fruit in comparative neglect, while attention is concentrated upon newly recognised virtues of older remedies. The characteristic of the therapeutics of the year is an increase in precision affecting our knowledge of many of the older drugs, rather than any startling novelty. The limits of usefulness of many drugs recently introduced are becoming more sharply defined, while in very many instances we are learning the necessity of modifying the audacity of the generalisations first connected with them.

Antipyretics and hypnotics continue to attract the greater share of attention, but the therapeutic literature of the year indicates a growing tendency towards the employment of massage, electricity, and hygienic measures. The position of saccharin has recently been the subject of assault; but the ventilation of the question has produced statements calculated to allay public anxiety needlessly aroused by random assertions. Of the new hypnotics, hydrate of amylene and sulphonal, the reports

are so far encouraging; neither of them appears to have produced unpleasant symptoms; the latter certainly seems not to derange digestion or circulation. Further observations are, however, needed before their therapeutic action can be compared with that of chloral, opium, or paraldehyde. Of the cerebral sedatives, the salts of hyoscyne continue to attract attention, minute doses of the hydrobromate or hydriodate having been employed with excellent results in many cases of sleeplessness, restlessness, and acute mania. Occasionally hyoscyne has produced interesting physiological effects, which bear marked resemblance to the symptoms following toxic doses of belladonna. Curiously enough, recent investigations tend to cast considerable doubts upon the validity of the current views of the relationship between atropine, hyoscyamine, and hyoscyne, but this question can hardly be said to have reached its final expression. Methyloal, another of the new cerebral sedatives, has been spoken of favourably in the treatment of delirium tremens, on account of the absence of any depressant action when employed internally. Of the local anæsthetics, cocaine still justifies the high opinion it gained some few years since; but from time to time some mention of toxic symptoms occurs, and it has even been asserted that its unauthorised employment by the public is on the increase. When applied to the fauces, pharynx, &c., in conjunction with iodine, it is said to be successful in the treatment of whooping-cough. Many of the antipyretics have been recently finding new spheres of work; antipyrin, antifebrin, and phenacetin have been growing in favour as nervine sedatives, antipyrin, in particular, having gained a reputation for the treatment of neuralgic headache, while it is losing ground as an antipyretic. For the reduction of high temperatures phenacetin, which is analogous to antifebrin, is still on probation; while pyrodine, although credited with considerable power, has already been shown to be a remedy demanding extreme caution. Very little has been added to our knowledge of cardiac therapeutics. Strophanthus has been used largely, but appears to be of value mainly as an alternative for digitalis, the preference being still given to the older drug under ordinary circumstances. The salts of caffeine have been less spoken of during the year, but they have apparently been generally adopted for use as nervine tonic, cardiac tonic, and diuretic. Mention of adonidine has ceased from the opposite cause; while ulexin, although strong diuretic properties are claimed for it, has scarcely as yet established its position.

Important papers have appeared upon respiratory therapeutics, although they must be regarded as suggestive rather than conclusive. Aniline continues to find some favour in the treatment of phthisis, but, as it has been generally used in the form of inhalation together with eucalyptus oil or some other volatile aromatic, there is still room for doubt to which the beneficial effects are to be attributed. Some of the aromatics certainly appear to have been employed alone with good results. Phthisis has also been treated by injecting creasote into the lung tissue, while for bronchio-pneumonia iodide of potassium has been well spoken of. Constipation appears still to cause therapeutic difficulty, in spite of the long official list of purgatives. The number of preparations containing cascara sagrada has greatly increased during the past year; elixirs, syrups, capsules, lozenges, and con-

fections give sufficient variety of choice, and indicate a belief in the drug, though protests have been raised against its taste. Glycerine enemata and glycerine suppositories have also been further investigated, the former having been satisfactorily employed. For the treatment of gonorrhœa, antrophores or medicated soluble bougies have been suggested; from 2½ to 5 per cent. of thalline with gelatine has been recommended as a coating for a fine spiral spring bougie. With the intention of diminishing the conversion of starch into sugar in cases of diabetes, jambul has been used, while with the same object morphine has been rivaling the claims of codeine.

The year has produced many new claimants for notice, indeed too many for mention, but the activity of the manufacturing chemist must always stand in advance of the slower methods of the practical therapist. Possible dangers are continually rendering the advance of therapeutic research an anxious labour, and in no field has the need for constant anxiety and caution been more largely shown than in the investigations of the properties of the endless coal-tar derivatives. The readiness with which so many of these derivatives affect the respiratory capacity of the blood is, in itself, perhaps the explanation of the caution characteristic of the therapeutics of the past year.

Surgery.

In any review of the progress of surgery, whether during a year, a generation, or a century, the foremost place must of right be given to the question of Wound Treatment. Another year's experience has only deepened the faith of surgeons in LISTER'S great discovery, and the voice of those who once set themselves in opposition to this "new thing" is now silent, or only heard in feeble protestations that their life-long faith and practice have been in substance, if not in form, "antiseptic." But while this is true, the early details of the antiseptic treatment are more and more departed from. The spray is very little employed, the old carbolic gauze dressings are generally given up, and irrigation with a solution of mercury bichloride or some other antiseptic, and dry wool dressings, are the most widely used. Some surgeons are also ceasing to employ drains of all kinds in recent wounds, using "buried" sutures for the deep parts, not tightly closing the skin, and applying firm compression outside a very thick dressing, which is left in place until healing is complete. Even such wounds as those caused by excision of the hip are thus dealt with. One of the most interesting surgical events of the year was the successful removal by Mr. HORSLEY of a Myxoma within the Spinal Canal. The tumour pressed upon the cord and produced serious paralytic symptoms, which passed off after the operation. Such an operation is far more formidable than the removal of a cortical cerebral tumour, and we believe that a repetition of the operation has been attended with fatal results. From America a very important contribution to the surgery of the Abdomen has been made by Dr. SENN, who has written an elaborate paper on enterectomy and intestinal suture. He has also advocated the employment of a new test to demonstrate perforation of the intestine in cases of stab and gunshot wounds of the abdomen. This consists in the introduction of hydrogen gas into the rectum; if there is

an intestinal perforation, the gas escapes into the peritoneal cavity and can be ignited at the superficial wound. Hydrogen is chosen because it is innocuous and very light. Quite recently Dr. SENN has recorded two cases in which he used this test, and by its means detected intestinal lesions which would not otherwise have been discovered. In one of his patients he found and sutured twelve bullet wounds of the intestine, and the man made a perfect recovery. No more astonishing instance of the brilliant success of modern surgery has ever been reported. To turn from such matters to questions of what some would call "surgical fashion," we must mention the growing popularity of Inguinal Colotomy. The mode of operating has been improved, and to open the peritoneal cavity is not now dreaded as it was in AMUSSAT'S day. The artificial anus is in a more convenient situation than in the lumbar operation, and the surgeon is not exposed to the same risk of not finding the bowel as in the other situation. Indeed, the necessity for dividing the operation into two stages is the strongest objection to the new method. The teaching of Indian surgeons in reference to Lithotomy in Children is influencing European and American practice, and already a goodly number of cases in which it has been employed have been published. The necessity for a change in the views generally held five years ago has been demonstrated, and the range of lithotomy has been shown to be wider than was thought. But no clear rule of practice has yet been established. Among other details of surgical procedure which have recently been widely practised is the resort to a preliminary laryngotomy and plugging the pharynx with a sponge, in cases of Excision of either Jaw and of difficult operations upon the Tongue and Mouth. Tracheotomy and the use of a sponge cannula—as that of HAHN—or of TRENDLENBERG'S cannula have been practised for some time. But it is now known that such an operation is a very unnecessary addition to the difficulty and danger of the procedure. Laryngotomy, on the other hand, is a simple and safe operation, and a sponge placed in the lower part of the pharynx very effectually stops any blood getting into the trachea and lungs. Such a procedure is an enormous help to the surgeon, as it removes one of the chief embarrassments in these operations. It is of equal value to the patient, for it removes a special danger attending them. Well worthy of mention in this short review of the year's surgical work is an operation performed by Professor OUSTON for Congenital Dislocation of the Hip. He first excised the head of the femur, then perforated the hip bone close to the acetabulum, and into this perforation fixed the end of the femur. The result was fibrous union of the femur to the hip bone, and his patient obtained a thoroughly serviceable limb.

Ophthalmology.

The chief event of the year in ophthalmology has been the retirement of Professor DONDEERS, full of years and honours from the active duties of the office he has so long held, and rendered so well known throughout Europe, of Professor of Ophthalmology in the University of Utrecht. He received a well-merited ovation, not only from the members of his own university, but from many foreign universities and societies, who sent representatives to felicitate him, and from the whole population of Holland,

to whom his name is familiar as a household word. It may truly be said that no one has contributed more to the remarkable advance that has been made during the last thirty years in ophthalmic science, and that a larger number of persons have more reason to be grateful to him for the application of physiological science to actual practice than to any other practitioner now living, and he is as good a physiologist as an ophthalmologist. The Bowman Lecture was delivered by Dr. SWANZY of Dublin, to a large meeting of the Ophthalmological Society of Great Britain, and was an able exposition of the mutual aid that medicine and ophthalmology may receive from a careful study of eye affections in cases of cerebral disease. Ophthalmology has sustained a great loss in the death of Dr. R. G. LORING at the early age of fifty-one, who was one of the ablest ophthalmic surgeons of New York, and whose excellent ophthalmoscope is in the hands of many practitioners, whilst his numerous memoirs show the most patient and minute observations in the branch of surgery he practised. A new local anæsthetic, erythrophlein, has been tried and found wanting. It is painful, irritant, and ineffective, and is not likely to take the place of cocaine. The practice of operating for cataract without iridectomy is becoming more general and presents decided advantages on the æsthetic side, though it perhaps renders resort to subsequent needling rather more frequent. The practice of irrigation to remove the cortical substance of the lens after its extraction has not as yet been generally adopted, though the results are stated to be good by PANAS and others who employ it. It is requisite, of course, that the water injected should be sterilised by boiling, or by the addition of a small percentage of corrosive sublimate, biniodide of mercury, or of boracic acid, which does not appear to irritate the iris, or to do harm to the cornea. The chief objection that suggests itself is that it is not advisable to practise too many manœuvres in the interior of the eye after the removal of the lens. The experiments of STROOKER on the effects of atropine, cocaine, eserine, and pilocarpine on the tension of the globe of the eye are not quite in accord with those of previous observers. He finds, for example, that in the cat, under healthy conditions, the instillation of atropine sulphate slowly but steadily diminishes the intraocular pressure, taken with an improved manometer—falling in the course of two hours from its normal, 30 mm. of mercury, to 22 mm. In the case of cocaine the pressure rises slightly at first, and then slowly falls to 26 mm. In the case of eserine the same effects are observed as with cocaine. The instillation of pilocarpine causes great oscillation of tension, followed by gradual diminution. It must be remembered, however, that the fall in the tension of the eye in the cat after the instillation of atropine in no way invalidates the rule that atropine is not to be instilled into a human eye presenting the prodromata of glaucoma, since it then certainly augments the tension—with what disastrous results only too many sufferers know.

Obstetric Medicine.

Among the most valuable contributions to this department may be mentioned a series of seven papers on *Scarlatina during Pregnancy and the Puerperal State*, by Dr. BOXALL, read before the Obstetrical Society of London—(1) The liability

of pregnant and parturient women to scarlatinal infection, and the duration of the incubation period; (2) the relation of scarlatina to menstruation; (3) clinical course of scarlatina during pregnancy and in the puerperal state; (4) effect of the scarlatinal poison on the course of labour; (5) effect of the scarlatinal poison on the puerperium; (6) clinical relation of scarlatina to puerperal septicæmia; (7) treatment. The observations of the author had reference to a series of sixteen cases treated in the General Lying-in Hospital during an epidemic of undoubted scarlatina in South London. These papers are, in our opinion, the most valuable contribution yet made to the subject, and gave rise to an interesting discussion, which naturally centred round the sixth paper. It appears evident that septicæmia in the puerperium has nothing directly to do with scarlatina. Three papers by Drs. STEAVENSON, GIBBONS, and DRAGE, on Electrolysis in Gynæcological Practice, are chiefly valuable for an animated and prolonged discussion at the same Society, the sense of the meeting being that its advantages had been much over-rated, and, at any rate, that the claims made for it were altogether premature. A paper by Dr. ROBERT DOXALL, on "The Conditions which favour Mercurialism in Lying-in Women, with Suggestions for its Prevention," is a valuable contribution to an important subject, and is founded on a series of direct observations. The subject of Extra-uterine Pregnancy has received a number of contributions: from Drs. HERMAN, CHAMPNEYS, and CULLINGWORTH in the *Obstetrical Transactions*; and from Mr. LAWSON TAIT in a pamphlet. The subject is by no means exhausted, either as regards its pathology or its treatment, and still requires much patient and thoughtful research. Its diagnosis is apt to be extremely difficult, or even impossible, and that not only during life, but even after death, and during abdominal section. The evidence of its occurrence in any particular case during the first twelve weeks (within which time the tube generally bursts) requires substantiation, and cannot be accepted without proof. Mr. TAIT'S paper also concerns hæmatocele, both intra-uterine and extra-uterine. In the *Edinburgh Obstetrical Transactions* the most valuable papers are a discussion of three recent papers on the Third Stage of Labour (by COHN, CHAMPNEYS, and HART) by Dr. BARBOUR; a collection of early passages relating to the Anatomy of Midwifery, translated, with remarks, by the same author; a very valuable paper on Alcoholism in Gynæcology and Obstetrics, by Dr. MATTHEWS DUNCAN; an interesting discussion of the Obstetric Histories of CATHARINE of Arragon and ANNE BOLEYN, by Dr. A. S. CURRIE; and a short but instructive paper on the Effects of Compression of the Fœtal Skull, by Dr. MILNE MURRAY.

Public Health.

Speaking generally of England and Wales, there is every prospect that the year which is now closing will turn out to have been a somewhat exceptionally healthy one. Notwithstanding the fact that the first quarter of the year included a portion of a metropolitan scarlet fever epidemic, nearly all the so-called zymotic diseases, including scarlet fever, exhibited a death-rate below the average, and the general death-rate was 1.0 per 1000 below the mean for the previous ten years. Small-pox was, however, somewhat in

excess, the excess being due to the epidemic in Sheffield, where 318 small-pox deaths, out of a total of 583 for the country at large, were registered. We have been from time to time informed that a most exhaustive investigation has been made as to the relation of vaccination to small-pox during this epidemic, and we have already sufficient evidence to show that the incidence of the disease on the town was in one sense trivial when compared with like occurrences in pre-vaccination days; but the full official report has not yet been issued. Whilst referring to this subject, we cannot avoid again expressing our regret that those who are responsible for selecting contributors to the "Encyclopædia Britannica" should, as regards their article on Vaccination, have departed from the accepted practice of selecting for their authors persons of conspicuous repute in the special matter with which they deal. The choice of Dr. CREIGHTON for this purpose was the choice of a physician who had just contributed on the subject a book which embodies notions not generally accepted. The result is that, whilst one portion of the article in the newly-issued *Encyclopædia* is taken up with Dr. CREIGHTON'S views, the rest is so worded as to afford support to the anti-vaccinators in their altogether untenable position, that the great diminution in the fatality of small-pox in this country since the introduction of JENNER'S discovery has been due to other causes than vaccination. Almost anywhere else such views might properly have found a place; but the "Encyclopædia Britannica" has not heretofore sought to make itself the mouthpiece of views which were in direct opposition to those of the great body of observers having the means to form a mature and intelligent judgment of the subject dealt with, and the public cannot be too widely informed that the views set forth are not those of the medical profession. During the second quarter of the year the general death-rate was again exceptionally low, and the rate for the zymotic diseases was lower than in any corresponding quarter on record. The third quarter, too, with its exceptionally low temperature and unusual amount of gloomy weather and rainfall, was accompanied by an extremely low general death-rate. Whilst scarlet fever had a less fatality by one-half of that during this quarter in the preceding ten years, the continued fevers caused fewer deaths than in any corresponding quarter for eighteen years; and diarrhoea, which, as a rule, causes so great a fatality during this quarter, exhibited a death-rate less than half the average rate in the ten preceding third quarters. Indeed, the zymotic rate, as a whole, was 1.56 per 1000 below the average. The last quarter of the year is unfortunately being marked by a large fatality from measles. In London the deaths from this cause were under thirty a week in the middle of September, and the number has now risen to about 140; there are also some large local prevalences of the disease in a number of provincial towns. Unfortunately, whilst compulsion in the matter of elementary school attendances clearly tends to the diffusion of such contagia as affect young children, the extreme infectiousness of the disease in a stage before it can be properly recognised largely stands in the way of measures for its prevention; and sanitary authorities are thus to a large extent helpless in the face of a mortality of some 10,000 annually. Amongst the local outbreaks which have been investigated

both by medical inspectors of the Local Government Board and by medical officers of health, diphtheria has very commonly been the principal cause of death; and it is to be regretted that it is so rarely possible to trace back the history of the attacks to a preventable cause. The difficulty of discriminating between what are believed to be ordinary sore-throats and true diphtheria in a mild but infectious state is very great; and whilst sanitary science is still largely at a loss as to the advice to be given for its prevention, diphtheria, heretofore essentially a rural as opposed to an urban disease, is effecting a hold upon a number of our town populations. Both as to diphtheria and scarlet fever, we may hope for early help from pending bacteriological investigations, those which have as yet been carried out being admittedly but of a preliminary nature. Cholera has, for the first year since the close of 1884, been absent from Europe, and it is to be hoped that the significant failure of quarantine restrictions adopted by those countries which were attacked will have taught the lesson that this ever-failing attempt at protection needs to be substituted by a rational system of sanitation. The Local Government Act, 1888, is the only noteworthy piece of legislation that calls for notice. The effect of this Act cannot fail in time to have an important influence on the sanitary administration of the country, and on the status of medical officers of health. So far, the proposed transfer to County Councils of the power to determine a large number of questions affecting these officers has been suspended, and it remains to be seen whether the schedule bearing upon this subject, which was temporarily dropped out of this year's Bill, will be again submitted to Parliament. But, in the meantime, the requirement of a diploma in public health for officers who are to be hereafter appointed to all the most important districts of England and Wales indicates that evidence of special knowledge in this matter will, from the present time forward, be taken into account, in making such appointments, to an extent that has hitherto not been observed. In connexion with the question of legislation, we may call attention to the fact that the appointment of a Royal Commission to inquire into the operation of the Vaccination Acts has not, as some expected, been carried into effect. But the President of the Local Government Board has promised in the House of Commons that allegations as to injury from vaccination shall be carefully inquired into. All intelligent men will welcome such inquiry, and we trust that, whilst it will succeed in exposing the methods of agitators, it will also have the effect of increasing, if possible, the amount of care bestowed by medical practitioners in the choice and care of lymph, and in the maintenance of every obtainable form of cleanliness both during and subsequently to an operation on which, notwithstanding its apparent simplicity, the lives and happiness of vast numbers of our fellow-creatures so largely depend.

Medical Jurisprudence.

The year just closing has, in addition to the usual tale of medico-legal experiences, been marked by a series of crimes (the Whitechapel murders) of unexampled barbarity — crimes rendered all the more notable by their repetition, and that, too, in a crowded part of the metropolis,

and by the failure hitherto to detect their diabolical perpetrator. Even yet the public mind has not recovered from the terror which they occasioned. We have had on several occasions to revert to the unsatisfactory state of the law as regards the question of criminal responsibility of the insane. In several instances point was given to our advocacy for amendment of the law as it now stands, and notably by the case of ERNEST WILLIAM VERNON HITCHINS, an epileptic youth, who was tried for the wilful murder of his sister by shooting her. At the trial, Mr. Justice FIELD, in his direction to the jury, adhered to the recognised reading of the statute when he held that delusions, though they might be a test of insanity, did not constitute grounds for finding the prisoner irresponsible for his act. Fortunately, a verdict of "wilful murder whilst in a state of unsound mind" was returned. It was on this occasion that we felt compelled to take exception to his lordship's dictum that the question of insanity was one for the jury, and not for the doctors, to determine. In the Monk Bretton tragedy, Dr. BURKE, a confirmed inebriate, who had previously threatened his own life, sacrificed that of his daughter, to whom he was deeply attached, by shooting her. The murderer, though sentenced to death, was reprieved by the Home Secretary on petition. HENRY BOWLES of Camberley had his sentence of death commuted. It will be remembered that the convict was found guilty of poisoning his mistress and son by strychnine. The most curious incident in the trial was that although the judge's charge to the jury leaned towards acquittal, the latter, after being unable to agree, being equally divided in opinion, eventually convicted the prisoner. The commutation met with our entire approval, for no adequate motive for the crime was proved in evidence, nor was the poison indisputably traced to the possession of the prisoner. We are glad to be able to record that fewer instances have been brought to our notice of defects in the administration of "Crown's quest law" than in previous years through want of sufficient and reliable medical testimony and evidence derived from post-mortem examinations. Not a few instances have occurred in which medical men have had to answer charges in the criminal and civil courts. Dr. DAVY of Terenure, co. Dublin, was accused by a man for having had criminal connexion with his wife. At the trial, three witnesses called by the prosecutor, including his own daughter, testified to the innocence of Dr. DAVY, whereupon the prosecutor's counsel threw up the case, and the presiding judge, whilst animadverting on the wickedness of the accusation, ruled that the prosecutor should be indicted for perjury. Fortunately for the cause of justice, another medical man—Dr. GLOSTER—who was put on his trial for murder on the grounds of having, as alleged, caused the death of a woman by procuring criminal abortion, escaped conviction. Unfortunately, however, owing to the method of legal procedure, by which evidence proposed to be tendered by the prosecution was ruled as inadmissible, the prisoner, although he regained his liberty, and could claim the benefit of the legal maxim that "a man is held to be innocent until he is proved guilty," was yet denied the moral right of establishing his innocence by full, complete, and overwhelming proof of which he was possessed. We sincerely trust the Legislature will enact an amendment of the law in the direction indicated.

There have been several actions for damages brought against medical men by persons whom they had certified as insane, and on account of such certification. Happily, in each case verdicts have been obtained by the defendants, although necessarily at considerable cost and loss of time. We may give as an instance the cause *MASON v. MARSHALL, SHAW, and GAUCHARD*. The judgment recently delivered by the Court for consideration of Crown Cases Reserved, in the case of the *QUEEN v. CLARENCE*, says that a man cannot be indicted for a common assault or for causing grievous bodily harm for having communicated to his wife venereal disease. The defendant *CLARENCE* was convicted upon the above-named charge at the Central Criminal Court, but, as will be seen, the conviction was quashed. An important alteration in the law relative to the election of coroners has been made by the passing of the County Councils Act. The bodies newly constituted will, in the future, discharge the office formerly vested in the freeholders. This will save considerable expense and trouble to candidates for the office of coroner, but it remains to be seen whether an equitable working of the Act will obtain. The medical profession will await the result with anxious and jealous care. Under the head of poisoning we may note a few examples of considerable interest. The Sheffield water supply has been again the subject of serious complaint by reason of the occurrence of lead poisoning. The medical officer of health gave, as we believe, the correct explanation of the event when he alleged that the moorland water, whilst percolating through vegetable matter, became impregnated with ulmic and humic acids, and that these acids acted on the lead of the pipes through which the water was conveyed. Whether his hypothesis be correct or not, there seems little room for doubt that the water gets adulterated by a soluble salt of lead derived from the supply pipes. In addition to the Camberley poisoning case, we may notice an accidental death from strychnia which happened at Lewisham. An unqualified man prescribed five grains of the alkaline constituent of a seidlitz powder and five drops of liquor strychniæ. The chemist who dispensed the medicine put in five grains of strychnia. The mishap proved fatal. *THE LANCET* has published in detail an interesting case of suicidal poisoning by phosphorus. A woman took a quantity of rat paste and died on the eleventh day. After symptoms of irritant poisoning there ensued "the treacherous pause," which was succeeded by jaundice and widely distributed hæmorrhages. The most notable fact was that the liver presented all the naked-eye appearances of acute yellow atrophy and weighed only 26 oz., thus disproving the theory held by some that in phosphorus poisoning the liver is enlarged in contradistinction to its wasted condition in "yellow atrophy." Carbolic acid has been responsible for numerous deaths, both accidental and suicidal. For the better protection of life it is advisable that the acid should be included in the schedule of the Pharmacy Act of 1868. At Southsea a medical man died from an overdose of morphia. He had contracted the habit of opium-taking, which he originally resorted to for procuring sleep. *DR. PEARBODY* of New York has published an account of two cases of poisoning by chlorate of potash. In one, two ounces of the salt were taken in mistake for Rochelle salts. The symptoms were—

cyanosis with anæmia, hæmoglobinuria, albuminuria, and a peculiar discolouration of the true skin; coma preceded death. At Consett, Durham, two boys were poisoned by sucking the stems of hemlock—whether conium maculatum or cicuta velosa is uncertain. A romantic case of double suicide of two lovers occurred at Fisherton Delamere. The almost discarded record of *felo-de-se* was returned by the coroner's jury. Two remarkable trials for murder have taken place within the present month. On the 14th, at Maidstone, *WILLIAM GOWER* and *CHARLES JOSEPH DOBELL*, each about the same age, were convicted and sentenced to death for the murder of *BENSLEY CYRUS LAWRENCE*. They were recommended to mercy on account of their youth. Mr. Justice *MATHEW*, who tried the case, remarked there was not one extenuating circumstance. The lads drew lots as to who should fire the shot. The only alleged motive—a totally inadequate one—was that *LAWRENCE* had caused one of the prisoners to be fined for being late at his work. On the 20th, before Mr. Justice *STEPHEN*, at the Winchester assizes, *ROBERT HUSBAND*, aged eleven years, was tried for the murder of another boy by stabbing him in the neck. The prisoner was acquitted.

Royal College of Physicians.

The most notable event of the year in the College of Physicians was the election of *SIR ANDREW CLARK* to succeed *SIR WILLIAM JENNER*, who had been President for seven years. There had been much speculation as to the Fellow most likely to be chosen to fill the vacancy: and at the election *DR. QUAIN* received nearly as many votes as the successful competitor. Early in the year the College took marked action in expressing its disapproval of what was apparently becoming a common practice—viz., the contribution to lay journals of articles on professional matters by medical men. The College passed a resolution affirming the undesirability "of any Fellow, Member, or Licentiate of the College" contributing such articles to any journal "professing to supply medical knowledge to the general public," or that he "should in any way advertise himself or sanction his being advertised in such journals." Otherwise there has not been much visible activity at the College; although it is currently reported that the Censors' Board have been more occupied than usual with questions of professional ethics. The Moxon Memorial Medal has been established, and regulations issued for its triennial award for distinction in clinical medicine, the award not to be limited to British subjects. The erection of the new buildings for scientific purposes, which the conjoined Colleges are undertaking, is being proceeded with. This year saw the revival of the annual Harveian Dinner, which took place on St. Luke's Day in the College Library, and proved very successful. *SIR ALFRED GARROD* and *DR. MUNK* have been appointed Vice-Presidents of the College; and the following lectureships were held during the year:—The Milroy Lectures were given, for the first time, by Inspector-General *LAWSON*, who took the Epidemiology of Yellow Fever and Cholera for his subject; *DR. MICKLE* gave the Gulstonian Lectures on Insanity in relation to Cardiac Disease and Phthisis; *DR. W. H. DICKINSON*, the Lumleian, on the Tongue as an Indication of Disease; *DR. MACALISTER*, the Croonian, on Antipyretics. The Bradshawe Lecture was given by

Dr. W. CARTER, his subject being Uremia; and Dr. LATHAM delivered the Harveian Oration.

Royal College of Surgeons.

During the past year there has been great activity at the College, the meetings of the Council have exceeded the usual number, and the sittings have been frequently prolonged, some having been more than three hours in duration. The year has been an important one in its history, for a Supplemental Charter has been granted by the Privy Council, and that without granting to the Fellows and Members those privileges which we hoped would have been given to them after the earnest representations made on available occasions alike by the associations representing them to so large an extent, and ourselves. At the first meeting of the Council, and again at an adjourned meeting, a reply to a letter from the Privy Council and the statement presented to the Lord President on behalf of the Association of Fellows was considered and agreed upon. After this was made public, the Association of Fellows met the statement contained therein by a further memorandum, which was forwarded to the College by the Privy Council. The Council then requested an interview, which was not granted; but not long afterwards willingness on behalf of the Privy Council was expressed to grant the Charter provided the College Council would agree to omit the disputed clauses. This they did without much hesitation. It then received the Royal assent. Put briefly, the Charter has conferred on the College the power to hold lands to the annual value of £20,000, to dissolve a non-existent midwifery board; to increase the number of examiners in Dental Surgery; the privilege to Fellows of voting in person or by means of voting papers; any Fellow of ten years' standing to be eligible for the Council; the simplification of these nominations by Fellows for the Council. The three points in the petition to which the Association of Fellows objected were the conditions of admission to the Fellowship by examination, the Council wished these to be determined by resolution, and not by bye-laws as hitherto; the proposal to elect ten instead of two Members of twenty years' standing to the Fellowship; the creation of a class of Honorary Fellows. The Association of Fellows wished the Charter to embrace a larger scheme of reform, but the College Council refused this, and it will be necessary for that Association and the Association of Members to apply again through Parliament for the privileges and rights which were asked in a spirit of moderation and simply with an earnest desire to advance the interests of the College. Both Dr. FARQUHARSON and Lord RANDOLPH CHURCHILL have already asked questions in the House as to the neglect by the Privy Council of the important petition signed by some 6000 Members. A remarkable attempt was made at the meeting of Fellows and Members in November to induce the Council to give further consideration to the claims of the Fellows and Members, to which the reply was given: "That it seems to the Council best in the interests of the College that the discussion on the subjects which have been in dispute should cease with the grant of a Supplemental Charter"; and they refused to reopen the questions. It is not likely that the Fellows and Members will be satisfied with this reply; the new year will see renewed activity and a deter-

mination to obtain their rights not likely to be diminished by the proposal of Sir SPENCER WELLS to do away with the annual meeting of Fellows and Members. Although much time has been occupied over these questions, enough has remained to permit of the authorisation of considerable expenditure for building purposes and alterations at the College or Examination Hall; and a Finance Committee has been appointed, as well as a professional auditor of accounts. At the election of members of Council in July, Messrs BRYANT, CADGE, and PICK were appointed, the two former for a second period. Mr. SAVORY was elected President for the fourth time, a circumstance which occasioned no surprise. A proposal was made to grant the President an income of £300 yearly, but this was not carried. In regard to the Court of Examiners, each examiner must now be elected by a majority of the members of the Council. Alteration has been made in the second examination, candidates being obliged to present themselves in Anatomy and Physiology at the same examination. It was also proposed, on the suggestion of the General Medical Council, that Operative Surgery should form a part of the final examination for the Membership, but this was negatived by the Council on the adverse report of a committee which carefully inquired as to its feasibility. It is evident that the Council recognise the importance of this, as there is a proposal to be brought forward at their next meeting that candidates shall possess certificates from their teachers in practical surgery of having themselves performed operations on the dead subject. The number of candidates for the final Fellowship in May (fifty-six) exceeded that at any previous examination for that diploma, and necessitated great alterations in the conduct of the examination. Examiners in Public Health were for the first time appointed by the Colleges in conjunction, the successful candidates to have the title of "Diplomate in Public Health." Certain proposals were before the Council of the College from the General Medical Council on the disciplinary or penal powers of the qualifying medical bodies, but the Council of the Colleges refused to place their responsibility in these matters on the shoulders of others, considering that the College possessed in the bye-laws sufficient power to act on occasion. The time for delivery of the College lectures was altered from 4 to 5 o'clock, and the attendance on these lectures has improved. Sir SPENCER WELLS and Mr. HUTCHINSON respectively delivered the Morton and Bradshawe Lectures. The award for the Jacksonian Prize Essay was made to Mr. E. H. FENWICK.

Army, Navy, and Indian Medical Services.

In the course of the year some important changes have been made, and others foreshadowed, in the organisation of the Army Medical Service, the practical effects of which cannot but be regarded with anxiety by all who take an interest in the wellbeing of the department. In the beginning of February the Medical Service was transferred from the War Office, of which it formed a distinct branch under the control of the Secretary of State, to the Home Guards, where it is apparently to be incorporated with the Adjutant-General's branch, through whom all recommendations must be made to the Commander-in-Chief. By this arrangement the Director-General is no longer in direct communication

with the War Minister, nor even, so far as the regulations show, with the Commander-in-Chief. How far this subordination to the Adjutant-General may affect the service remains to be seen, but, considering the feeling which has too often been shown to the Medical Department by the military authorities, we are disposed to think the working of the system will need careful watching. We should be better pleased had some distinct regulation been framed by which the Director-General would have the right of a direct appeal to the War Minister in all cases on which he considered it necessary to make one, in the interests of the service. Under the new system the Quartermaster-General "will deal with sanitary questions relating to the army." What his peculiar qualifications are for such supervision may be questioned, and it is by no means clear in what manner it is to be exercised. Much has been done for the improved sanitation of the army under the late system; we can only hope there may be no falling off in this respect under that now inaugurated. But, in addition to this important modification in the organisation of the department, several other changes have been foreshadowed. A question has been raised as to the expediency of granting to medical officers a right of retirement from the service at twenty years. It appears to us that this cannot be withdrawn from those who entered under the Warrant which guaranteed them the privilege. It may possibly be altered for those entering after this date; but we doubt the expediency of so doing. It might probably create a difficulty in obtaining an adequate supply of well-qualified candidates. At all events, before any such step is taken a careful inquiry should be made as to the proportion of officers who have hitherto availed themselves of this right. Another important subject which has been mooted is that of requiring an officer to serve a given time after promotion before he becomes entitled to the retirement of his new rank. There is much to be said in favour of some regulation of this kind in those grades in which promotion is made by selection. It is presumed that the selection is made on the ground of the officer being well qualified for the duties. To make such a selection, and immediately thereafter to allow the retirement of the officer before he has done any of the work for which he was thus specially chosen, seems to involve an absurdity. A fair period of service in the grade is, we think, no unreasonable requirement on the part of the public, except in those cases in which an officer's health breaks down in and by the service. But yet another point has been raised by the Secretary of State, that of increasing the period of continuous foreign service by a year. To this we see great objection. The proportion of foreign to home service for medical officers is already a just cause of complaint, and an increase of it will tend to make the department unpopular, and again bring about a difficulty of obtaining candidates. It may also in some instances impair the efficiency of the service by its effect on the health of the officers. An alteration, which we cannot but think injudicious, was made in the regulations affecting the Medical Staff Corps, the period of service having been altered to three years in the Army and nine in the Reserve. The effect of this cannot fail to be injurious to the efficiency of the corps by removing men from the active list just when they have become conversant with their duties and really

useful as nurses of the sick. It appears to be a very retrograde step, and likely to be detrimental to the interests of the sick and wounded.

There has been no change of importance in the Indian Medical Service, but we regret that there appears a disposition on the part of the authorities to deprive those who shall in future join it of the important benefits of the course of instruction at Netley, and that nothing has yet been done to remove the injustice attaching to the treatment of brigade surgeons in India. We sincerely trust that the remonstrances which have been made against such a step may prove successful in preventing it.

During the year Sir J. W. REID, K.C.B., retired from the post of Director-General of the Navy Medical Department, and was succeeded by Inspector-General JAMES N. DICK, C.B. There does not appear to have been any change of importance in the regulations affecting this branch of the public service.

The General Medical Council.

The General Medical Council has held two meetings during the year 1888, one of five working days' duration, the other of six. The first from May 22nd to May 26th, the second from Nov. 27th to Dec. 3rd. It seems as if the addition of direct representatives to the Council had rather shortened its sittings than otherwise, and it has probably not lessened the amount of business done or lowered its character. Two other great features of the Act of 1886 were those creating inspectors of examinations, and making provision, under certain conditions, for the registration of foreign and colonial practitioners. There is as yet no separate register of foreign and colonial degrees, though New Zealand and Ceylon have been notified by the Privy Council as fulfilling the conditions which, in their lordships' view, entitle them to the benefit of the Act. The Act of 1886 further provided for the addition of foreign medical titles to the names of those already registered in the home Register. The number of foreign degrees so registered up to November was 214. At both meetings of the Council much time was occupied with charges against registered practitioners, and several names were erased. At the November meeting two practitioners had their names erased for acting as "covers" to unqualified practitioners. This action of the Council has been long deferred; but it seems likely to be the rule in all cases in which unqualified assistants are protected by men on the Register. The reports of the medical inspectors were not complete in May, and were deferred for consideration till November. But the November meeting appears to be not favourable to the discussion of such matters, and they received very inadequate attention. One point absorbed almost the whole attention of the Council—viz., the "absence of the test of operations on the dead body in the examinations in surgery." The Council passed a resolution in favour of the requirement of such a test, the absence of which made Mr. BENNETT hesitate to pronounce many of the examinations in surgery sufficient. The profession generally will approve of this resolution of the Council being enforced as far as practicable. But it will share our surprise and regret that no other questions arising out of the inspectors' reports have been handled by the Council, though those of Dr. FINLAY and Dr. BARBOUR abound in important information, and

suggest many serious defects in education and examination. It is to be hoped that either the Education Committee or some members of the Council will see that these reports are duly considered in May.

Higher Medical Education and Medical Degrees for London Students.

The year 1888 is of special interest to everyone who has been actively concerned in or looking with favour on any of the different movements for the formation of a teaching University in London, the consolidation of the various bodies engaged in the higher general education of London, or the granting of degrees to London medical students on equitable terms, as in the other centres of medical education, for the agitation of the preceding two years has at last led to the appointment of a Royal Commission to take evidence and to report thereon. Most important evidence has been taken during the sittings of the Commission, but the report is not yet ready for publication. We are sorry to understand that the delay in its production was due to the indisposition in the autumn of Lord SELBORNE, the chairman, but his health has now greatly improved, and the report may be expected very shortly. On or before Jan. 16th all the applications for a hearing by the Privy Council in support of or against the schemes of the Royal Colleges of Physicians and Surgeons to obtain power to grant medical degrees, on the one hand, and of University and King's Colleges to form, in combination with the Royal Colleges or the medical schools of London, a Teaching University, on the other, were lodged by the various institutions and persons interested in the movement. These petitions were extremely numerous, and showed alike how complex a question had arisen, and how many interests were involved in any mode of solving the problem. The University of London opposed the formation of a Teaching University in London, but did not object to the Royal Colleges of Physicians and Surgeons giving degrees in medicine. The other Universities throughout the kingdom did not oppose the establishing of a Teaching University in London, whilst they were unanimous in protesting against the proposal to grant a degree conferring a degree-granting power on the two Royal corporations, as they considered it a breach of the privileges now solely possessed by the Universities. The Scotch corporations asked for similar powers, should such be granted to the English bodies, and the Apothecaries' Society claimed a like extension of its privileges. The provincial schools and the medical schools of London, not connected with King's and University Colleges, petitioned for a due consideration of their rights, and the Association of General Practitioners embraced an opportunity for demanding some intrinsic reforms in the corporations. Sir HENRY PITMAN made a personal application for a hearing, whilst the Bishop of LONDON, as an educationist and in charge of the educational interests of his diocese, and Mr. MARSHALL as the representative of the Association for promoting a Teaching University in London, also sent in petitions praying that they might be heard in support of their views. The multiplicity of the petitions and the importance of the question to so many institutions, determined Her Majesty's Ministers to advise the appointing of a Royal Commission

instead of an inquiry before the Privy Council, and this decision was at once acknowledged as a wise and acceptable one. Several weeks, however, were allowed to pass before the Commission was formed and the names of its members made public. Towards the end of May it was announced that Lord SELBORNE would be its chairman, and that the other members were Sir JAMES HANNEN, Mr. BRODRICK, the Warden of Merton College, Oxford, Sir WM. THOMSON, Professor STOKES, Vice-Chancellor BALL, and Dr. WELLDON, with Mr. J. L. GODDARD as secretary. We at once pointed out that, although this was a very satisfactory Commission from a general standpoint—representatives from the universities of Oxford, Cambridge, Scotland, and Ireland being included,—it contained no member who belonged to the medical profession, or who was acquainted with the special grievance under which the medical student of London was suffering; and that, although it might be competent to report on the higher educational interests of the metropolis, it was most unlikely to make any satisfactory suggestions towards the removal of the inequalities by which the medical student in London was hindered in obtaining his degrees. A thoroughly representative medical man, independent of the universities or the corporations, might have been nominated from the public services, and would have materially strengthened the Commission. The first sitting took place on June 2nd, after which the Warden of Merton College resigned on a question of procedure as to the limitation of the proposed evidence. The Chairman was anxious to hear all that could reasonably be considered germane to the question, but this seemed to Mr. BRODRICK to promise so long an inquiry that he withdrew from the Commission. The sittings were continued on Saturdays through June and July, and were concluded on Aug. 4th. Nine meetings were sufficient for an exhaustive statement by all interested to be laid before the Commission, and the report cannot fail to be of great importance both to the profession and to those interested in university education in London. In addition to the official representatives of the teaching Colleges and of the University of London, several educationists appeared on behalf of the university extension scheme, and some eminent legal authorities, such as Lord HERSCHELL, Sir H. JAMES, Mr. LAKE, and Professor BRYCE, expressed their views as to the possibility of a Legal University, and the position of a Faculty of Laws in any new university that might be contemplated. The medical witnesses, who gave evidence from very various points of view, included Sir A. CLARK, Sir J. LISTER, Sir H. PITMAN, Sir J. PAGET, Messrs. SAVORY, ERICHSEN, BRYANT, MARSHALL, and others. Whilst the Commission was sitting, the Senate of the University of London adopted several recommendations made by a committee appointed to inquire into the possibility of increasing the facilities for obtaining medical degrees in the University; and when these come into effect during the next year it will be found that its medical curriculum will have undergone some most important modifications. The Preliminary Scientific M.B. Examination will be divided into two sections—(a) Chemistry and Physics, (b) Biology; and either or both sections may be taken at the same or different examinations. The M.B. Pass Examination will be held twice a year, and a thesis may be submitted in lieu of the

written and clinical examinations in Medicine, Surgery, Obstetrics, or Psychological Medicine for the M.D. or M.S. degree. Further, registered medical practitioners of three years' standing and twenty-five years of age, who have passed the Matriculation and Preliminary Scientific Examinations, will be admitted to the subsequent examinations on producing certificates that they have at any time gone through the required curriculum. The reforms in the constitution of the University proposed by the committees of Sir E. FRY and Sir P. MAGNUS as adopted by the Senate have not yet been put before Convocation, and there seems to be no immediate prospect of their being pushed forward or for a definite vote to be taken thereon.

The Conjoint Boards in England, Scotland, and Ireland, and the Apothecaries' Society of London, have now planned their examinations so as to require the passing of every candidate in Medicine, Surgery, and Midwifery, and the Universities have also made arrangements for the same object. The various examinations for the final pass qualifications have been visited and reported on by Drs. FINLAY and BARBOUR and Professor BENNETT, as official inspectors for the General Medical Council. The examinations in Medicine and Midwifery are considered to be efficient and, except in some minor details, satisfactory; but the Inspector of Surgery has declined to report any examination in Surgery as efficient in which operations on the dead body are not included. The General Medical Council has accepted this view, and has urged on the various examining bodies the necessity of making such alterations as will meet this objection. The Council of the Royal College of Surgeons has pointed out that at present there are great practical difficulties in the way of adopting this recommendation; and the profession will await with great interest the views of the other examining bodies in England and Scotland. In Ireland, Operative Surgery has long been a leading feature in the surgical examinations, but there the want of an adequate supply of subjects in proportion to candidates is not felt.

Medical Societies.

The year has been characterised by, if anything, more than the usual amount of activity in the various Societies, and an abundance of material of all kinds has been brought forward and has been attacked with avidity. We have still, however, to point out the paucity of papers on Therapeutics, though we must not omit to mention in this connexion the thoughtful work of Dr. ALEXANDER HAIG on the Influence of Salicylic Acid and its Salts on the Excretion of Uric Acid, and the Effects in Health and Disease of some Drugs which cause Retention of Uric Acid; the able paper by Mr. JONATHAN HUTCHINSON on the Abortive Treatment of Syphilis; and the careful statistical compilation by Dr. DONALD HOOD on the Treatment of Acute Rheumatism. It would be not only an invidious task, but one perhaps beyond the critic of the present generation to attempt, to arrange the fruition of cerebration, the Society's work of the past year, in anything like an order of merit, but it is with pleasure that we indicate a few of the more prominent contributions as they occur to us. The Marshal Hall Prize Essay on the Relations between

the Function, Structure, Origin, and Distribution of the Nerve-fibres which compose the Spinal and Cranial Nerves, by Dr. W. H. GASKELL; the Oration on the Natural History and Epidemiology of Cholera, by Sir JOSEPH FAYRER; the Lettsomian Lectures on some Points in the Surgery of the Urinary Organs, by Mr. REGINALD HARRISON; Dr. BRUL of Neuchatel on the Extirpation of Goitre; Typhlitis from the Surgical Point of View, by Mr. TREVES and Dr. BRUL of New York; the Results of Treatment of Consumption at High Altitudes, by Dr. THEODORE WILLIAMS; the Diagnostic Value of the Tubercle Bacillus, by Dr. PERCY KIDD and Mr. H. TAYLOR; Mr. EDMUND OWEN on Arthrectomy; Mr. BARKER and Mr. POLLARD on Primary Union after Excision of Tubercular Hip Joints; Dr. CHEADLE and Mr. T. SMITH on Occlusion of the Left Bronchus by a Foreign Body; Mr. W. H. BENNETT on Tubercular Disease of the Testis; Mr. WALSHAM on Intra-peritoneal Rupture of the Bladder; Mr. HENRY MORRIS on the Radical Cure of Hydrocele; Mr. M. SHEILD on Excision of the Head of the Humerus for Old Dislocation; on the Naked-eye and Microscopical Variations of the Thyroid Gland, by Dr. HALE WHITE; Mr. B. JESSETT on Duodenostomy and Gastro-enterostomy; Dr. CHURTON on Empyema; Mr. PEARCE GOULD on Estlander's Operation; Dr. SAVAGE on Septic Puerperal Insanity; Friedreich's Disease, by Dr. ORMEROD; Osteo-arthritis, by Dr. SPENDER and Dr. A. GARROD; Dr. JAMES ANDERSON on Subretinal Effusion in Chronic Nephritis; Dr. MILES on Ciliary Tumours; the discussion at the Epidemiological Society on Dr. KLEIN's paper on some of the Infectious Diseases common to Man and the Lower Animals; Cerebral Abscess, by Dr. FERRIER and Mr. HORSLEY, and by Mr. DAMER HARRISSON; Cerebral Tumour, by Mr. KENDAL FRANKS; Dr. ORD on the Relations of Gastric Ulcer; Dr. BROADBENT on the Prognostic Significance of Blood Pressure in Renal Disease; Dr. MILES MILEY on the Prognosis of Neuro-retinitis in Bright's Disease; Mr. BLAND SUTTON on Glands of the Fallopian Tubes and their Function; Cystic Squamous Epithelioma of the Neck, by Mr. CHARTERS SYMONDS; Mr. LEOPOLD HUDSON on Tubercular Ulceration of the Intestine associated with the Presence of Fruit Stones; Dr. SHARKEY on Alcoholic Paralysis; Mr. MAKINS on Extroversion of the Bladder; Mr. H. W. PAGE on Double Nephrolithotomy; Sir WILLIAM DALBY and Mr. MARMA DUKE SHEILD on the Removal of Bony Growths from the External Auditory Canal; Mr. W. A. MEREDITH on the Mortality of Abdominal Section; Hepatic Surgery, by Mr. KNOWSLEY THORNTON; Dr. FITZGERALD on Congenital Microphthalmos; Mr. WYNTER BLYTH on the Contagion of Cancer; Mr. BALLANCE and Mr. SHATTOCK on the Histology of Cancer and Normal Tissues after Sterile Incubation; Mr. ALBAN DORAN on Myoma and Fibro-Myoma of the Uterus and Ovary; Mr. W. K. SIBLEY on Cerebral Abscess in a Ewe; Mr. SUTTON on Comparative Osteitis and Arthritis; Experimental Observations on Lupus, by Mr. F. S. EVE; Mr. R. W. PARKER on Bone Disease in Children; Congenital Lipoma, by Mr. D'ARCY POWER; Mr. JONATHAN HUTCHINSON jun. on Dupuytren's Fracture; Mr. SILCOCK on Syngo-myelocoele; Dr. NORMAN MOORE on Primary Carcinoma of the Common Bile Duct; Mr.

W. G. SPENCER on Varicocele, a Spontaneous Variation in the Spermatic Veins; Dr. HERBERT HABERSHON on Aortic Aneurysm rupturing into the Pericardium; Dr. GOWERS and Mr. HORSLEY on Removal of Tumour of the Spinal Cord; Dr. SANGSTER and Dr. MOTT on Pemphigoid Eruption; Dr. LEWERS on the Post-mortem Appearances of a Phlegmon of the Broad Ligament; Dr. W. R. SMITH on the Etiology of Puerperal Fever; Dr. HERMAN and Dr. FOWLER on the Effects of Ergot on Uterine Involution; Dr. JOHN PHILLIPS on the Value of Pilocarpine in Obstetrics; Mr. LOCKWOOD on Peculiar Hernial Sacs; Dr. H. W. MACKENZIE on Concretions in the Ovaries; Dr. W. M. WRIGHT on Lymphadenoma; Dr. STEPHEN MACKENZIE and Dr. H. B. HOVELL on Hysteria; Dr. SAMUEL WEST on Acetonuria; Mr. MANSELL-MOULLIN on the Surgical Treatment of Empyema; Dr. BAMPTON on Peripheral Paralysis; Mr. SNELL on Sarcoma after Sclerotomy for Glaucoma; Dr. FLETCHER BEACH on Lacerated Wound of the Brain; Sir WILLIAM MACCORMAC on Osteoplastic Resection of the Foot; Mr. SWANZY on the Value of Eye Symptoms in Localising Cerebral Disease; Dr. T. D. SAVILL on Tetanus treated by Chloral Hydrate; Mr. BERNARD PITTS on Partial Arthrectomy of the Elbow Joint; Dr. VON MILLINGEN on Toxic Amblyopia; Dr. E. BROWNE on Optic Atrophy in Smokers; Dr. CHAMPNETS on a New Operation for Vesico-uterine Fistula; Trephining for Hæmorrhage between the Skull and Dura Mater, by Mr. DAVIES-COLLEY; Dr. B. W. RICHARDSON on the Absolute Signs of Death; Mr. STONHAM on Complex Hermaphroditism; Dr. GOODHART and Mr. H. H. CLUTTON on Osteitis Deformans; Dr. WILKS on Transverse Furrows on the Nails; Dr. J. GRIFFITHS on a Tumour of the Neck invading the Jugular Veins; on Intra-muscular Injections of Mercury in Syphilis, by Mr. ASTLEY BLOXAM; Dr. ANGEL MONEY and Dr. HADDEN on Neuro-muscular irritability; Mr. BOWLEY on Gangrene from Embolism and Thrombosis; Dr. JOSEPH COATS on Primary Cancer of Brain; Dr. HANDFORD on Albuminuria in Enteric Fever; Mr. PURCELL on Removal of the Penis; Mr. J. H. MORGAN on Meningocele; Dr. SYMES THOMPSON on the Climate of South Africa; Dr. MONTAGUE MURRAY on Cardiac Abnormalities; Dr. CHARLEWOOD TURNER on Coronary Stenosis; Paget's Disease of the Scrotum, by Dr. RADCLIFFE CROCKER; Dr. RALFE on Galvano-puncture for Aortic Aneurysm. The principal feature of the work of the Clinical Society during the past year has been the production of the voluminous report of the committee appointed to investigate the subject of Myxœdema. An attempt has been made to group together at the meetings cases bearing on similar subjects with a view to getting through more work, and also to improve the character of the discussions; this has been partly successful, but the work of organising the scheme is difficult for many reasons. Mr. JONATHAN HUTCHINSON, Dr. HADDEN, and Mr. BUTLIN have added to our knowledge of the condition variously known as Dry Mouth or Aptyalism. The subject of Acromegaly came under discussion, and cases were described by Messrs. GODLEE and BALLANCE and Dr. HADDEN. The cases read by Dr. SAMUEL WEST of Acute Periosteal Swellings in several young Infants of the same Family

were of considerable interest. Mr. MAYO ROBSON, Mr. W. H. BENNETT, and Mr. WALSHAM contributed papers of much interest in Abdominal Surgery. Other valuable cases were: Dr. MACLAGAN and Mr. CLUTTON, Obstruction of the Bowels by Gall-stones; Dr. ANGEL MONEY and Mr. S. PAGET, Idiopathic Dilatation of the Colon; Dr. BURNEY YEO, Embolism of Right Axillary Artery; Sir DYCE DUCKWORTH, Pulmonary Regurgitation; Dr. KINGSTON FOWLER, Organic Heart Disease lasting Sixty Years; Mr. HOLMES, Laceration of the Axillary Artery; Mr. BERNARD PITTS, Amputation at the Hip Joint for Sarcoma of the Femur; Mr. J. R. LUNN, a case bearing on the Mechanism of the Ligature of Arteries in their continuity; Mr. CROFT, Operative Treatment of Dislocated Semilunar Cartilage of the Knee Joint; Mr. SYMONDS, Dislocation of Index Finger; Mr. SUTTON, Adenoma of the Pinna; Dr. ORD and Dr. ARKLE, Hyperpyrexia cured by the Cold Bath; Mr. WAINWRIGHT, Early Incision with Drainage of Joints; Dr. HALE WHITE, Perihepatitis; Mr. CLEMENT LUCAS, Ovarian Tumour and Precocious Puberty; Mr. SYMONDS, Suture of Urinary Bladder; Dr. de HAVILLAND HALL; Quinsy treated by Cocaine; Dr. PERCY KIDD, Laryngeal Paralysis; Mr. R. W. PARKER, Acute Intussusception in Infants; Mr. PAGE, Rupture of Intestine; Dr. DICKINSON and Mr. R. W. PARKER, Pyo-pericardium; Mr. HURRY FENWICK and Mr. BUCKSTON BROWNE, Urinary Calculi; Mr. VICTOR HORSLEY and Dr. BRISTOWE, Paralytic Rabies; Dr. HANDFORD, Cerebral Softening illustrating Localisation of Visual Centres; Dr. PASTEUR, Pulmonary Surgery; Dr. STEPHEN MACKENZIE, Peculiar form of Lupus; Dr. MORISON, Ankylosing Rheumatism. The debate on the Pathology of Chronic Alcoholism, which has already occupied two meetings of the Pathological Society and will extend to a third, has provoked great interest, and with its mention we must conclude our retrospect of this division of medical work, regretting to be obliged to content ourselves with a mere cursory glance at a minority of the valuable communications recorded in our pages during the year.

British Medical Association.

The British Medical Association met at Glasgow under the presidency of Professor GAIRDNER, whose address was a dignified and eloquent exposition of the office of the physician, not as a medicine man, but as a servant of nature, in the sense of being a student of natural science generally, and of the science of life and health in particular. Dr. GAIRDNER is not the man to despise learning, but he insists that the business of the physician is to be above all things scientific, and then, if he has leisure, he may be learned. Half the ridicule that has come on the profession from the wits is due to the fact that for ages many of its leading professors forgot the study of nature in the worship of man and his books. Dr. MACEWEN'S Address was a very remarkable feature of the meeting. There has seldom been such an outburst of genuine admiration as was excited by his discourse on the Surgery of the Brain and Spinal Cord, showing how he had used, with such splendid results as the recovery of eighteen out of twenty-one cases, the discoveries of BROCA, JACKSON, FERRIER, FITSCH, HITZIG, and others. Such surgery clinches the highest physiological

teaching, and is enough to raise the whole estimate of Medicine. Sir GEORGE MACLEOD very ably and with much knowledge and discrimination reviewed the Progress of Surgery in the Victorian reign. It is no slight credit to the Glasgow School to have produced three such Addresses, to say nothing of many others in the Sections, as that by Dr. McCALL ANDERSON on the Diagnosis and Treatment of Syphilitic Disease of the Nervous System, in which he vigorously combated the notion that syphilis was becoming mild and bland in the present day. We must not leave the subject of the Glasgow meeting without recalling the Address on Medicine by Dr. CLIFFORD ALLBUTT, in which he described the chief methods of inquiry by which we may attain to a true Nosology. The Association is to meet in Leeds next year.

Other Associations.

We spare no effort to keep our readers informed of the proceedings of congresses and conferences of medical character or interest in other countries, and our columns have contained various reports of such meetings. The Third Annual French Congress of Surgeons took place in March, and was signalled by a warm defence of French Surgery by the President, M. VERNEUIL, against a somewhat ungenerous and unexpected attack by M. BILLROTH, as halting far behind that of England and Germany. We have elsewhere noticed perhaps the most important Congress of the year—that in Paris on Tuberculosis. This enemy of the human race is destined to be attacked by preventive medicine in a more determined manner than heretofore. And if the Congress of Paris did nothing else, it accentuated the fact that tuberculosis is one of those questions which link men and animals in common suffering and in common danger, and shiver to fragments the fanaticism of those who think that man has no right to use animals in the elucidation of disease. The proceedings of the Italian Medical Association were reported at length, and show that Italy is abreast of other countries in our science. A Congress of Physicians and Surgeons took place at Washington, and many of our best physicians and surgeons found themselves there, attracted either by the growing and irresistible charm of American hospitality or the more professional and scientific attractions of such a meeting. The Congress was constructed on a new principle, being a kind of composite of all the special societies of the States, where specialism threatens to run riot. This tendency is likely to be checked chiefly by its own absurdity. The Americans have constructed a Genito-Urinary specialty, but perhaps the most amusing incident in this direction is the evolution of the Société de Stomatologie in Paris. Specialty has hitherto had its stronghold in hidden cavities, where it could not be contradicted. It is becoming bold in taking under its protection the open mouth.

Hospital Mirror.

In the year which is now closing we have adhered to the rules which have always guided us in the Mirror of Hospital Practice. The cases recorded have, as heretofore, been selected more from the general than from the special departments of medical work, and have illustrated the practice of hospitals in Great Britain and various parts of the world. Some of them are of interest from their rarity, the presence of

unusual symptoms, complications, or post-mortem appearances; others show the effects of treatment by drugs or the experience of surgeons in various methods of operating. We have not space to mention all of them, but a brief review of the more important will be advantageous. In the department of toxicology the most interesting cases were those of poisoning by red oxide of mercury, corrosive sublimate, and dinitrotoluene (the symptoms produced by this drug are worthy of special attention, as they were practically unknown before the publication of this case). Amongst medical cases, we published one of infective typhoid fever, and two instances in which measles developed in patients suffering from typhoid; also two of pyæmia, in one of which it followed suppuration in the middle ear without thrombosis of the lateral sinus, in the other an attack of ulcerative tonsillitis. A case of hydrophobia, fatal at the end of a month, although inoculation was performed by M. PASTEUR, who commenced his treatment a week after the infliction of the bites; another in which recovery ensued after excision of malignant pustule or charbon. Amongst diseases of the skin and its appendages, cheiropompholyx, bullous dermatitis, xanthelasma, and a rare condition—onychogryphosis. In diseases of the respiratory organs, tracheotomy for tubercular laryngitis, performed with cocaine as the local anæsthetic. Apical pneumonia; recovery after operation, for empyema associated with phthisis, for pleuro-pneumonia with gangrene of the lung, for pyo-pneumothorax with secondary traumatic gangrene of lung; recovery also after paracentesis thoracis for empyema; and operations for double empyema, the right side being treated by resection of rib, and the left by incision and drainage. Amongst diseases and injuries of the circulatory system we have published: extensive hæmorrhage into the subcutaneous tissues in leucocythæmia and into the peritoneum in a subject of adherent pericardium; phlegmasia dolens; obliteration of internal jugular vein (death from pleurisy); a rare form of "aneurysm" of vein; varicose aneurysm; hæmorrhage from the ear, for which ligature of the common carotid was required; chronic general arteritis; aneurysmal swellings of the vessels at the base of the brain; ligature of the carotid and subclavian arteries for innominate aneurysm; wound of the posterior tibial artery; traumatic aneurysm of the internal plantar artery; and recovery after intravenous injection of a saline solution for excessive hæmorrhage after wound of the neck. A case of congenital defect of the recto-vaginal septum is recorded in the diseases of the digestive system, also one of imperforate rectum; removal of foreign bodies from the rectum and œsophagus, in the latter instance by œsophagotomy; acute glossitis; perforating ulcer of the stomach in a man aged twenty-one; the passage of gas and feces through the urethra; successful suture of intestine for fecal fistula; three cases of gastrostomy for the relief of malignant stricture of the œsophagus; several of colotomy, both inguinal and lumbar, for malignant disease of the rectum; the successful treatment of intestinal obstructions by abdominal section, after failure of an operation for hernia; for obstruction due to (?) obturator hernia; intussusception; and hæmorrhage into the peritoneum from slipping of ligature after operation for femoral hernia. Also abdominal section in cases of suppurative peritonitis. The cases of hernia have been fewer than usual, so much had

been previously recorded on the subject of radical cure. We have, however, noted cases of herniotomy: as for suppurating bubonocoele; the unusual presence of an extra sac, and the occurrence of mania after the operation when it was performed for strangulation; instances of perforation of the gall bladder, and primary malignant disease of it. The cases recorded of disease of the urethra, bladder, and especially the kidney, with their treatment, have been both numerous and important; a case of retention due to stricture treated by supra-pubic aspiration, rectal puncture, by dilatation of the stricture, and suture of urethra after division of stricture; the removal of stones from the bladder by lithotripsy in very young children, lateral lithotomy in a special case, and by supra-pubic cystotomy in Hindoos, where there was a very narrow supra-pubic interval; in a boy where primary union was obtained, although scarlet fever developed soon after operation; in a female for large stone. This operation was also employed for the removal of a villous tumour. Catarrhal nephritis, in which great benefit was afforded by venesection; tubercle of the kidney simulating malignant disease; nephrorraphy for floating kidney; nephrotomy followed by nephrectomy; nephrectomy for hydronephrosis; retro-peritoneal nephrectomy; nephrolithotomy for calculous pyelitis, followed in one case by general tuberculosis, in another by amyloid disease of the viscera. The successful removal of uterine appendages for chronic inflammatory mischief, tubercular pyosalpinx, ovarian tumours, and of the uterus in three instances of fibroid tumour. With diseases of the nervous system we have included so-called "idiopathic" thrombosis of the cerebral sinuses, a rare case to which we drew special attention in the editorial remarks. Other cases are: hysterical aphonia in a woman of seventy-one; cerebral hæmorrhage in a child; alcoholic paralysis with contractions, greatly benefited by surgical treatment; cerebro-spinal meningitis; intra-cranial suppuration; trephining for abscess secondary to middle ear disease; the successful removal of a tumour of the brain; and two instances of recovery after traumatic brachial paraplegia. Some tumours remarkable for their position; general infection of the lymphatic system by secondary carcinoma; multiple sarcomata; cartilaginous tumour in the subcutaneous tissue; their course; rupture of gumma of liver into peritoneum, causing death; cure of sarcoma of the upper jaw after five operations in nineteen months; cheloid of abdominal wall becoming sarcomatous in character, and causing death by general dissemination after thirteen years; for size, venous angioma of upper extremity, mixed cartilaginous tumour of parotid, fibro-sarcoma of thigh, requiring amputation through trochanter major, and rapid growth of mediastinum; for the operations required for their removal, as in extensive epitheliomata of tongue and glands, and malignant growths of the jaws. Two examples of STEPHEN SMITH'S amputation at the knee joint for malignant disease of the leg, and a case of sarcoma of the clavicle. Congenital cyst of urachus; hydatids of lung, liver, and transverse meso-colon, the last successfully removed by abdominal section. Suppurating hydatid and abscess of liver cured by antiseptic incision and drainage. Wounds of the chest, one penetrating the lung proving fatal, another caused by the passage of a shred of glass through the chest on the right side from front to back,

followed by recovery; wound of the spinal membranes by a fall on a spike, fatal from septic cerebro-spinal meningitis; fatal gunshot wound of the chest and abdomen. Fractures: of the larynx, proving fatal; of the cervical spine, in which the fatal symptoms were delayed; wiring the patella for recent fracture; compound fractures of the skull, trephining for symptoms of depressed fragments, in a child, with recovery after escape of cerebral substance and hernia cerebri; death from suppurative meningitis after wrongly supposed fracture of the base. Unusual ulceration of anus and surrounding parts, with spinal abscess; examples of caries and chronic inflammation of bone; the cure of amyloid disease of the viscera by amputation of a diseased limb. Some cases of arthrectomy of the knee joint; plastic operation for deformity; disease of thyroid gland. Painless removal of eyes after intra-orbital injections of cocaine (4 per cent. and 10 per cent.). Septic meningitis, secondary to suppuration in the middle ear, proving rapidly fatal after the introduction of a slate pencil into the ear; and other cases.

Special Commissions.

At the commencement of the year, the House of Lords Commission of Inquiry into the Sweating System commenced its investigations. The action of this Commission was limited to the East-end of London, to the district where, four years previously, we drew attention to the new development of the sweating system arising from the constant arrival of Polish-Russian Jew refugees. The fact that the agitation we initiated was likely to bear fruit was very gratifying; but the scope of the inquiry was too limited to deal radically with so complex and far-reaching a difficulty. We therefore at once organised a series of investigations throughout the provinces. These commenced with a report on the sweating system as practised at Liverpool, and were quickly followed by another and more extensive report on Manchester. In both these towns, though rents are not so high, and the streets are wider and of more modern construction than in London, our Commissioner discovered many instances of deplorable overcrowding, of insufficient sanitary accommodation and bad ventilation, which, combined with a starvation rate of wages, wrecked the health of the workers and helped to spread disease throughout the community. We followed this up by a report on Birmingham and on the Black Country. At Birmingham, we found that some of the best tailors in the town had workshops which were more overcrowded and generally in a more deplorable condition than some of the worst sweating dens; and in the Black Country it was clearly shown that the victims of the sweating system were not foreign Jews, but English work-girls. These latter toiled during the whole week making moleskin trousers, and rarely earned more than 2s. 6d. for the six days' continuous and heavy labour. A great strike among the Jewish tailors at Leeds attracted our attention to that town; and the report we published on sweating at Leeds caused a profound sensation, resulting in several local improvements; notably the appointment of an extra sanitary inspector, whose special duty it is to visit and watch over tailors' workshops, and the bringing together of the authorities acting under the Factory Act and the Sanitary Act. The medical officer of health and the factory inspector of

Leeds will in future work together and assist each other. We then crossed the border and published reports on sweating at Edinburgh and Glasgow. Our description of the latter town perhaps surpassed in its terrible details anything yet published; and here also the principal and the more numerous victims were Irish and Scotch girls, not Jews. Not only the victims but the sweaters themselves were in many instances Scotch or Irish. Our endeavours were not, however, limited to mere denunciations and revelations; in the course of the year we have also issued a very comprehensive scheme of reform, which, if adopted, would in a great measure do away with the evils of the sweating system. The proposals have been well received, and, at Glasgow especially, became the subject of resolutions passed at large and enthusiastic public meetings. The Town Councils of both Edinburgh and Glasgow have now determined that for all work done on their behalf the contractors must have the clothes made up on their own premises. This will prevent police uniforms &c. being given out to sweaters. Other towns will not fail to follow this example. Another phase of the sweating question was dealt with in a special report on accidents among dock labourers. These, it was shown, could in most instances have been avoided if the men employed were not overworked and underfed. For months they may be left without work or means of existence, and then, when at last they secure employment, there is so much hurry and eagerness to do work quickly and cheaply that accidents become, not the exception, but the rule. This is, in a great measure, due to the system of sub-contracting, or sweating, which prevails in dock as in so many other phases of labour. During the latter part of the year we opened a very elaborate inquiry into the working of the Emigration Acts, and the question of emigration generally. For this purpose our Commissioners have visited the ports of London, Hull, Glasgow, and Liverpool, and were able to prove that the existing law is antiquated and not in keeping with modern requirements and modern possibilities, having been framed at a time when shipbuilding was not so fully developed or hygiene so well understood. We trust that these reports will lead to some further legislation on the subject. Closely akin to our Commission reports, we should mention a certain number of special articles from our Sanitary Commissioner, such as the descriptions of the drainage of Florence and Cannes, published at the commencement of the year, and which may still be referred to with advantage by persons intending to visit these winter stations. The contamination of the Thames by the house boats gathered together for the Henley Regatta was again this year the subject of special notice on our part, when we were able to record that our past endeavours had brought about a considerable improvement. We had the satisfaction of showing that not only was the drainage of house boats into the Thames almost entirely abolished, but that the town of Henley itself was now satisfactorily drained by a thorough application of the Shone system. In the early autumn we published a long description of the state of affairs at Margate, where no system of drainage has yet been applied and noisome cesspools still exist. In other respects, we had the pleasure of noticing some improvement

at that popular seaside resort, and notably in respect to the water supply—a reform which some years previously we had energetically pressed on the authorities. The death-rate at Madrid having increased to so alarming an extent that the Spanish Minister of the Interior was compelled to deal with the question in the Cortes, we published a full and detailed account of the defective drainage and general sanitary condition of the Spanish capital. Thus it will be seen that, in respect to sanitary reform, our efforts have extended over a wide area, and that in several instances these endeavours have been followed by practical improvements. In October our Analytical Sanitary Commissioners undertook an investigation into the constituents of Egyptian Cigarettes, principally in reference to the statement that some samples of them contained opium, and that deleterious results were likely to arise from the paper in which the tobacco was enclosed. The results of our experiments were such as to clear the tobacco from the suspicion which had been attached to it, whilst in the paper only a minute trace of copper was found, the injurious effects of which must be practically nil.

Honours.

Our profession, especially at home, is not greatly distinguished by such honours as can be conferred by the State, which reserves its favours rather for those that kill than for those that heal, and for those professions whose work is more noisy than ours. It will not always be so. A truer estimate of public justice will come ere long, and in its own interest our country will follow the example of others in calling to its highest councils, and to receive its highest titles of honour, the men who understand life, and discover the means of protecting and prolonging it. Amongst other honours conferred on members of our profession during the year are the following:—At the beginning of the year the honour of knighthood was conferred upon Dr. WILLIAM TINDAL ROBERTSON, M.P. About the same time Sir EDWARD HENRY SIEVEKING, M.D., LL.D., Physician Extraordinary to Her Majesty, was appointed to be one of Her Majesty's Physicians in Ordinary, in the room of Sir GEORGE BURROWS, Bart., M.D., deceased; and RICHARD DOUGLAS POWELL, M.D., to be one of Her Majesty's Physicians Extraordinary. In March, Dr. FRITZ BRAMANN received the Commander's Cross of the Hohenzollern House Order bestowed by the Emperor. In April Sir MORELL MACKENZIE was decorated by the Emperor of Germany with the Grand Cross of the Hohenzollern Order, with the Star of the same Order; also Mr. HOVELL, with the Second Class of the Kronen Order. In May, knighthood was conferred on Dr. JOHN WILLIAM TYLER, C.I.E., of the Central Gaol, Agra. In the same month, WILLIAM RAYMOND KYNSEY, Esq., Principal Civil Medical Officer and Inspector-General of Hospitals and Fleets, and ANTHONY COLLING BROWNLESS, M.D., F.R.C.S., Chancellor of the University of Melbourne, were appointed Ordinary Members of the Third Class or Companions of the Order of St. Michael and St. George. In June, Surgeon-General WM. JAMES MOORE, C.I.E., Hon. Surgeon to the Viceroy of India, was appointed a Knight Commander of the Indian Empire. In August, Inspector-General DAVID

L. MORGAN, C.B., M.D., was appointed an Honorary Physician to the Queen, in place of Inspector-General DOMVILLE, deceased.

Obituary.

The history of any year is incomplete without an allusion to those who have "finished their course" and come to the end of their labours. The record of their virtues is not the least part of our duty as medical journalists. They are not all in the first rank; there must necessarily always be rank and file as well as leaders. Some have been cut off after years of honourable repose, some on the very threshold of practice, some just when they were about to taste the fruits of long practice and faithful work. But, with all allowances and differences, there is a richness in medical biography which makes us regret at the end of our summary that we cannot particularise many of its elements—its laboriousness, its unselfishness, its various culture, its manifest usefulness in communities, and on the whole its religious and reverent quality. We can only refer to our separate notices from week to week. Here we can only recall a few names in all ranks and branches of practice and from various countries, which will speak to us for many days yet to come, and encourage us to labour as they did in the practice of the profession and in those studies which tend to increase its efficiency and the honour in which it is held. Our obituary columns have included notices of ARTHUR FARRE, M.D.; THOMAS BLIZZARD CURLING, F.R.S.; SAMUEL HEY, F.R.C.S. Eng.; Dr. TAAFE; ALEX. DICKSON, M.D., LL.D.; W. M. HOLLIS, J.P.; WALTER BENONI HOUGHTON, M.B., B.S.; JOHN W. CONYERS MERRITMAN, M.R.C.S., L.R.C.P.; FRANCIS DE CHAUMONT; WALTER J. BRYANT; W. CAREY COLES, M.D.; MATTHEW BAILLIE GARDNER; T. HARRINGTON TUKE; ISAAC HARRISON (Reading); J. MILNER FOTHERGILL; JOHN THOMAS GREAM; EDMUND JOHN BARKER of Aldershot; LUKE ARMSTRONG of Newcastle-on-Tyne; F. S. HAWKINS, B.A., M.B. Oxon. (house surgeon of Guy's); SAMUEL ELLIOTT HOSKINS of Guernsey; R. N. ROBSON of Durham; GEORGE BORLASE CHILD, F.R.C.S.; J. ALEX. AITKENS of Coventry; HEADLAM GREENHOW; ROBERT CORBETT, M.D., of Glasgow; Dr. O'CONNOR of Cork; and, among foreign colleagues, SALVATORE TOMMASI of Naples, FRANK VON GIETL of Munich (called the SYDENHAM of Germany), JOHANN DLAHY (the veteran hygienist of Vienna), SIMONE DE BELLO of Apulia, HEINRICH VON BAMBERGER of Vienna, WILHELM ROSER of Marburg, and others.

Conclusion.

Here we must leave the year with no unkindly recollections, and with much in it to stimulate those that survive to intense diligence in investigating medical problems that promise to yield fame to those who solve them and benefit to the human race. In this belief we part company with our readers, thanking them for all their contributions to the success and usefulness of THE LANCET.

ALFRED THOMAS BRETT, M.D., is a candidate for the representation of the Watford Urban Division on the Herts County Council. Dr. Gutteridge, one of the County Council candidates for the Strand Division, is stated to have had to withdraw, having through inadvertence contravened one of the clauses of the Corrupt Practices Act, which is very stringent in its provisions.

Annotations.

"No quid nimis."

FEVER IN LONDON.

AT the last meeting of the Metropolitan Asylums Board the question of closing the North-Western District Hospital came under consideration, on the presentation of a report from the Ambulance Committee, which stated that until further orders all cases of scarlet fever and diphtheria arising in the parishes at present allocated to the North-Western Hospital would be sent to the Western Hospital. Objection was taken on several grounds to the intention to close the former institution. The Rev. C. P. Read pointed out that in regard to the South-Western Hospital, which was closed, the staff was maintained there because the Local Government Board did not approve of the closing, and therefore an unnecessary expenditure was being incurred. The desire to close these hospitals is, doubtless, based upon the wish of the managers to reduce as far as possible the demands which the Board makes upon the rates; but it would be unfortunate if, within a short period of the dismissal of the staff, an increase of fever in London should give rise to the engagement of a number of persons less able to administer and take charge of the sick than those already in the managers' service. At present there is no great demand for hospital accommodation, the total number of patients under treatment being 936 at the time of the meeting, and the fortnightly admissions of patients being some thirty-five less than those who in the last fortnight were discharged or died. Probably the Local Government Board feel that there is not sufficient promise that this diminution, which, indeed, usually takes place at this time of year, will be continued, and undoubtedly the managers would be acting wisely if they waited to see what the year would produce before they took a step which would render them less well able to meet an increase of fever than they are at the present time. They have evidently taken this view, for the report of the Ambulance Committee has not been adopted, but has been referred back so as to enable them to reconsider their decision.

A DANGER PECULIAR TO RESIDENCE IN FLATS.

A CASE was heard last week before Mr. Justice Hawkins which is instructive from several points of view. The defendant took a flat on a term of seven years, and subsequently, finding that the premises were unwholesome, the basement becoming flooded from the sewers, refused to pay his rent. From the legal point of view, it appears that the defendant placed himself in the wrong by not having a definite understanding that the plaintiff guaranteed the premises as healthy, and also in paying his rent between December, 1886, when he first found reason to complain of the premises, and Michaelmas, 1887, when he left them on account of the alleged stench from the refuse water and because of illness in his family. Speaking generally, we believe a tenant may repudiate his contract if his landlord has made a stipulation which he has not kept, or if the bargain has been entered into by reason of a false statement. But if he allows the matter in complaint to go on without taking action his opportunity is lost, and in this way the defendant in the case in question failed to secure a judgment. But there is another point of even greater interest in the case, and this quite apart from the condition of the actual premises in dispute. It has to do with a risk involved in residence in flats. An ordinary householder has access to every portion of the building in which he lives, and should be

suspect a defect, he can ascertain how far his suspicion is correct and remedy it. But in the case of flats, whilst the actual apartments rented may be free from all risk of evil, the tenant is, in point of health, almost entirely at the mercy of his landlord and of the occupiers of the basement in so far as the main drainage of the premises is concerned. If this latter be wrong, the whole mansion is apt to be filled with foul air from below upwards. A number of cases have come under our notice in which very serious ill health has been thus induced, and in which tenants have only been too glad to pay what was demanded of them in order to get out of the premises with the least possible delay. Whilst no one should take a residence without skilled advice as to its sanitary state, this precaution is more than ever necessary in the case of flats, where the entire premises, including, above all things, the basement, should be thoroughly overhauled. And if the main drain is not both water-tight and so disconnected from the sewer as to admit of a free current of fresh air through its entire length, we have no hesitation in asserting that the risk of living on the premises is a substantial one, and that it is increased by reason of the multiple occupation which always occurs in the case of flats.

THE DUTIES OF MEDICAL OFFICERS OF HEALTH.

WE drew attention a short time since to a very unfortunate resolution which was submitted to the Rawmarsh Local Board, requesting the medical officer of health not to enter any house merely because of the existence in it of an infectious case attended by another medical man. We find that the Local Government Board have informed the authority that the terms of the resolution are inconsistent with the performance by the medical officer of health of some important duties which he is required to discharge under their order. This is the view which we took when we first referred to the subject; and we cannot but think that if the small majority of the Local Board who just managed to pass the resolution had taken the trouble in the first instance to acquaint themselves with the duties which their officer is bound under order to perform, they would not have placed themselves and the Local Board in the awkward position in which they are now found.

PRISON DISCIPLINE AS A MEANS OF EDUCATION.

AN American contemporary furnishes some interesting items concerning the system pursued at the Elmira Reformatory, in which the experiment has been in progress for some years of using prison confinement as an opportunity of conferring educational advantages on the inmates. The little book of some hundred pages which sets forth the results of the system is printed by the prisoners themselves. Only such convicts are sent to the institution as have never been in a State prison before. They are sentenced to an indefinite term subject to the discretion of the board of managers, but cannot be detained beyond the maximum period for which they might have been incarcerated under the law. For burglary, e.g., a man may be kept in Elmira for ten years, but not longer; but if the superintendent believes that a prisoner, from his record, will lead an honest life on discharge, he may be allowed to go free at any time after one year. To obtain his release he must get a perfect record in three branches—for good conduct, zeal and efficiency as a workman, and proficiency and diligence as a scholar. In this latter field is found the distinguishing characteristic of the Elmira system. It is, in fact, a school for convicts, and the results are surprising. On the average, it is said, 60 per cent. of convicts released from other prisons find their way back, but thus far 80 per cent. of the discharges from

the Elmira Reformatory during the eight years the experiment has been continued are believed to be permanent reformations. Every improvement has been introduced, not inconsistent with proper discipline, looking to the health and well-being of convicts. The experience of those engaged in this humanitarian work is opposed to the view that intellectual development increases the capacity for wrong-doing. By enforced study the energies formerly employed in criminality seem diverted towards more praiseworthy pursuits. It is found, however, that even the so-called intelligent criminal appears mentally deficient as soon as he passes out of the groove in which he has been accustomed to exercise his cunning, so that it is no easy task to broaden his views of the aims and duties of life, and thus qualify him for occupying a useful place in society. The experiment appears to us to be well worthy of consideration by social reformers, and by all who desire that penal inflictions should be made subservient to reformatory results in our criminal population.

ENTERTAINMENTS ON BEHALF OF HOSPITALS.

PLEASURE is never so satisfying as when one feels that its enjoyment furthers a useful purpose. To a limited extent we may say that almost any form of amusement does this, but it is true in an especial sense of such entertainments as one lately given by private benevolence in aid of a Children's Hospital. On this occasion the fairy play of "Cinderella" was rendered with skill, care, and considerable success, and was thoroughly appreciated by the numerous gathering of old and young who witnessed it. The financial result should prove a most satisfactory addition to the resources of the hospital. In the interests of other hospitals, whose available funds are often sorely taxed by the demands upon them, we would venture a suggestion that such an example of liberality should be allowed in full measure the praise of imitation. A variety of entertainments might thus by degrees be added to the attractions of the holiday season, and there are many who could afford to devote to this work a share of their ability and the leisure of a vacant afternoon or evening. Who will help? Let us make another suggestion, and ask why some who possess vocal or other gifts do not occasionally find their way within the walls of our hospitals to organise a quiet form of Christmas festivity for the inmates. Any effort of this kind would be highly esteemed, and it might also, by the judicious issue of invitation cards, be made a source of pleasure to some outsiders and of profit to the hospital.

ALCOHOL IN DIPHTHERIA.

THE free use of alcohol in diphtheria has many advocates, and there is no doubt of its value. The whole subject of diphtheria and its treatment has been lately under discussion by the King's County Medical Association, in which the members offered their opinion upon each of thirteen questions propounded by the opener of the debate, Dr. Avery Segur. We must, however, here limit our notice to No. 7, which ran, "What is the evidence that very large quantities (over one or two pints a day) of brandy or whisky are necessary in severe cases, and what is the limit of alcoholic tolerance?" To this Dr. Rushmore replied (*Gaillard's Med. Journal*, Dec., p. 570) that "the effect on the throat and the nervous prostration should be the guide in the use of alcohol, and not to see how little the patient can get on with or how much he can tolerate. A pint in the twenty-four hours has been in a few cases apparently the life-saving remedy." Dr. Thayer said that the free use of alcohol is necessary in some cases, and its tolerance is very great. He treated a child of eighteen months exclu-

sively with whisky, six ounces daily for several days, without any exciting effects. The child recovered. He added that the late Dr. E. N. Chapman advocated the treatment of diphtheria by alcohol and quinine alone, and had remarkably good results. In seventeen years (1861 to 1878) that physician had treated 125 cases with only one death, his plan being to give alcohol from the outset in hourly doses. Dr. Thayer also says that such results can hardly be reported by any other practitioner, and quotes Dr. Chapman's view that alcohol neutralises the diphtheritic poison, but it should be given promptly at the outset, or otherwise it may be useless. Dr. McCollom would place alcohol first in the list of remedial agents and advise its use in all cases. In view of the character of this disease and the hopelessness with which so many agents are tried to "neutralise the poison," it might be worth while to more freely resort to the administration of alcohol, even in an early stage. Apart from its action on the nervous and vascular systems, alcohol is, it must be remembered, a valuable antiseptic agent, and its diffusibility as well as the apparent impunity with which it can be given in specific disease without producing its usual physiological effects, ought to lead to its more liberal use at other periods of the disease than those when the diphtheritic poison has gained so firm a hold that death from cardiac failure is imminent.

SCARLET FEVER AND HOSPITALS FOR CHILDREN.

SCARLET FEVER having made its appearance amongst the patients of the Derbyshire Hospital for Sick Children, the committee have erected a separate isolation ward for the reception of any cases that may arise in their institution. It appears that the public have looked upon the new building as available for outside cases of scarlet fever, but the authorities responsible have wisely limited it to the reception of cases accidentally arising in their own wards. This is a wise limitation, for it is most difficult, if not impossible, to maintain under the same management a general hospital for children and a scarlet fever hospital, without subjecting the non-infectious sick to a risk they ought not to incur.

AMERICAN PUBLIC HEALTH ASSOCIATION.

THE sixteenth annual meeting of this Association was held at Milwaukee on November 21st, 23rd, and 24th, Dr. C. N. Hewitt, of Red Wing, Minnesota, presiding. Major Charles Smart, of the United States Army, presented a report of a committee on the pollution of water supplies, in which it was pointed out that, whereas the pollution of smaller sources of water supply was recognised and remedied, the larger sources were overlooked or disregarded—instancing the contamination of the waters by the sewage of the city of Chicago. Although aeration promotes oxidation of organic matter, yet it was held that malarial, typhoid, and other poisons might be propagated through the contamination of rivers. Dr. Benjamin Lee, of Philadelphia, attacked the inadequacy of many of the quarantine stations on the Atlantic seaboard as to site, management, want of uniformity, conflict of authority, and neglect of local legislatures to properly supervise and furnish them. Dr. Kauch, of the State Board of Health, Illinois, read a paper on the inutility of quarantine in yellow fever, which he considered was controlled by temperature. He would, however, maintain coast quarantines to prevent the importation of the disease. He also dwelt on the harmfulness of panic. Dr. Cochrane, of Alabama, also contributed a paper on yellow fever, in which he noted the fact that the disease had not obtained a permanent foothold in the United States, although there was danger that it might do so in that part

of Florida south of the frost line. Other papers were read by Drs. Crosby Gray, H. B. Baker, Montizambér, and Kilvington, the last-named speaker advocating crematories for the destruction of filth in cities.

TESTIMONIAL TO MR. TIMOTHY HOLMES.

ON Saturday last a number of gentlemen met at the residence of Mr. Holmes, in Great Cumberland-place, in order to offer to him, on the occasion of his retirement from the surgeoncy to St. George's Hospital, a token of esteem. Mr. F. C. Fisher and Mr. John H. Morgan, who have acted respectively as treasurer and secretary, and to whose initiative this tribute owes its origin, were present, and the latter, acting as spokesman, presented Mr. Holmes with a very handsome silver bowl, and an illuminated address in elegant morocco binding, which contained a list of all those who had combined to offer this tribute of respect to one for whom they entertained so sincere a regard. Mr. Morgan, in explaining the nature of the offering, said that when former pupils and friends were asked to join in a testimonial which had been promoted by the students of the hospital, they gladly acquiesced; but it was felt by many of those who had enjoyed the more intimate association with Mr. Holmes which of necessity existed between a house surgeon and his chief, that they had not done sufficient to mark the great value that each and all had derived from such a position, and therefore they had united together to offer a substantial mark of the high esteem in which they regarded him as a surgeon, a teacher, and a friend. These words were to be found in the address, but it would please the recipient to learn that, of the forty or so who had acted as his house surgeons during the twenty years that he had held office, all had been written to whose addresses could be ascertained, and that no less than thirty had gladly responded, all of whose names were inscribed in the address which formed part of the gift. Of the absentees, many were accounted for by absence from the country, and some by death. In reply, Mr. Holmes said that nothing in the whole course of his professional career had given him so much pleasure as this tribute of affection from the very large proportion of those who had worked with him as house-surgeon. He should value the bowl as a kindly mark of their esteem, but he should treasure with as much, if not with more, pride the volume which contained the names of those who had united to render him this exceptional honour.

THE OPIUM HABIT.

AT the twelfth annual meeting of the American Academy of Medicine, held at New York on Nov. 13th and 14th, a paper was read by Dr. J. C. Wilson, of Philadelphia, on the Causes and Prevention of the Opium Habit and Kindred Affections. He referred the habit to one of three causes—viz., (1) the example of friends; (2) suggestion as gained by reading of the effects of the drug, or familiarity with it, as in the case of physicians, students of medicine, druggists, and nurses; and (3) medical prescriptions. The greater number of the victims to the habitual use of opium become such through abuse of opiates originally prescribed for the relief of pain. Dr. Wilson suggested as measures of prevention the dissemination of proper knowledge of the methods by which the opium habit is acquired and the great dangers of this habit; a reasonable presentation of the facts in popular works upon hygiene, and proper protection on the part of physicians in prescribing narcotics; that prescriptions for narcotics should not be renewed by druggists without the written order of the physician, and only in most exceptional cases should the patient be allowed to use the hypodermic syringe himself. To this may be added, by way of con-

mentary, the following, taken from the *Journal of the American Medical Association* for December 1st:—"The son of a late prominent Chicago lawyer was recently picked up unconscious in the street from the effects of morphine. He said at the station house the next day that his life had been wrecked by following his physician's advice. Six years ago he was recommended to take morphine as an antidote for his appetite for drink. The habit grew upon him until he became wholly a slave to it. He has spent one year in the Washingtonian Home without being cured of the appetite. It is possible that the unfortunate man told the truth, but it is probable that he did not. One can scarcely imagine a physician so ignorant of therapeutics or so devoid of moral sense as to substitute the morphine for the alcohol habit, unless he were a charlatan of the most disgraceful type."

TEMPERANCE DRINKS AND TYPHOID FEVER.

TRAVELLERS, and especially sailors, in Eastern ports are apt to find themselves placed at a disadvantage in choosing a suitable beverage for daily use. If, as often happens, they avoid stimulants—usually a wise precaution in the absence of active exertion—they must fall back upon water in some form, either simple or medicated. Here, too, unfortunately, dangers of another kind await them. The water itself is frequently contaminated with sewage, and is used in this state in the manufacture of the various temperance drinks which ought really to form the staple of consumption in hot climates. According to recent accounts, the utter carelessness as to its purity displayed by native makers of such drinks calls for very strict corrective measures. Led, it would seem, by the example of their poorer neighbours, they are credited with using even water from drains and gullies in the preparation of what ought to be the most innocent beverages. It is not therefore surprising that cases of enteric fever are said to have arisen among those very temperate seamen who should have remained the healthiest of their class. It is more easy to point out the fault than to find a remedy. In the way of prevention, however, one or two possible courses suggest themselves. For example, the civic governments would render excellent service by requiring every manufacturer to maintain on his premises a sufficient supply of pure water, and by enforcing its demand by adequate supervision. Again, our home producers and the shipping firms concerned might come to terms with a view to the export of a supply of non-intoxicant drinks of reliable quality. Lastly, it is very advisable that until some such needful arrangements are in operation a timely warning should be issued as required by ship's officers to those under their charge.

"FIT FOR HUMAN CONSUMPTION."

WHAT constitutes diseased meat? One would think there could be but one answer to this question, and that included under the phrase would be not only obviously decomposed or parasitically infected flesh, but also all flesh coming from diseased animals. It is just on this latter point, however, that difficulties arise, of which an example has lately occurred at Kidderminster. It appears that a cow belonging to the Corporation Sewage Farm had been sold to a butcher, the animal having been slaughtered when suffering from pleurisy, although whether its destruction were anticipatory of its disease proving fatal or not is uncertain. Mr. Stretton, a medical practitioner, who strenuously urged at the Town Council that an animal so diseased was unfit for food, said that he had been told at the farm that this cow would have died from its disease had it not been killed; but other members were not so clear on this point, and held that the certificate granted by the veterinary surgeon to the effect that the beast was suffering from pleurisy, but was not

thereby rendered unfit for human consumption, exonerated the corporation from the charge of dealing in bad meat. Mr. Stretton's resolution, that in future the authorities be instructed not to sell diseased animals for food, was rejected by the majority of the Council, although obviously such a resolution could have no retrospective effect, and its passage would have shown that the Corporation, whilst acting in good faith in this case, were determined not to be liable to imputations on future occasions. We fear that it is only too true that many diseased animals are disposed of to the butcher, although theoretically no flesh is fit for consumption but that of perfectly sound animals. A good deal has been said lately about tubercular infection through meat derived from tubercular animals, showing that tuberculosis at least is not generally regarded as prohibitive. It is not pleasant, to say the least, to know that the flesh of animals suffering from such diseases finds its way into the market. Is it not time that more rigid supervision were exercised, and that some common principle were established in certifying the wholesomeness of meat?

THE LEGAL RIGHT TO A DEAD BODY.

A QUESTION was raised but could not be disposed of at the last meeting of the Medical Society of London as to whether the executors or the nearest relative were entitled to the possession and disposal of a dead body, and, as the question is one that is always liable to give rise to burning controversy, it is perhaps desirable that the law of the land should be made as widely known as possible. And the point is one about which there does not seem to be room for any real doubt. It was discussed in a well-known cremation case which came before Mr. Justice Kay in the year 1882, and the learned judge's ruling was perfectly distinct, and, moreover, founded upon old and unquestioned precedent. In that case, a lady brought an action against the executors of a gentleman deceased, for a sum expended by her in the cremation of their testator's body. The lady had acted upon directions of a testamentary character given to her before his death by the deceased, and she claimed to be indemnified under a clause in his will. The claim was resisted, and in its discussion, among other questions, this, "What are the rights of an executor with respect to burial?" came under consideration. Mr. Justice Kay said on this point: "First he must bury the deceased in a manner suitable to the estate that he leaves behind him. It has been argued that that only means the expense of burial; it seems to me to mean more. It means, as I understand it, that the persons who are responsible for the actual burial of a dead body are *prima facie* the executors, and if any further authority is wanted for that, it is to be found in the case of the Queen v. Fox. That cases hows not merely that a gaoler may not detain a dead body, but that, although there is no property in a dead body, the executors have such a right of possession that they may obtain a peremptory *mandamus* against a gaoler, who is lawfully in possession of the body while alive, to have the body delivered up to them. Accordingly the law in this country is clear that after the death of a man his executors have a right to the custody and possession of his body (although they have no property whatever in it) until it is properly buried. It follows from that that a man cannot dispose by will of his dead body. If there be no property in a dead body, it is impossible that by will or any other instrument the body can be disposed of—that is a legal conclusion." Thus it seems that the paramount right of executors to dispose of a dead body is quite beyond dispute, and that the only way in which a testator can, if at all, compel obedience to his wishes in this matter is by making their fulfilment the object of a trust or the condition of a gift.

A NEW DANGER FROM OVERHEAD WIRES.

SOME years ago, when the electric telegraph was not in so common use as it is to-day, a busy member of our profession, who had set up a telegraphic communication between his private residence and his surgery, a mile or so away, was troubled at receiving in the early hours of the morning a remptory message by the wire to "send a dozen horse pills immediately to the Great Eastern Railway Station." Thinking his assistant at the surgery had lost his senses, he fired back a rather sharp inquiry, asking what was meant by such an absurd order, and in return got a reply to the effect that he might accept his *congé* for being drunk and solvent to his superior. Later on in the day the mystery was cleared up by the discovery that the wire leading to the surgery had got into contact, by accident, with another wire which led from the factory of a harness manufacturer to his suburban residence, and that the interesting telegraphic conversation had taken place between the heads of the establishments of physic and leather. In this case no real harm was done by the mixing up of the circumambient wires, but if the letter of a firm of solicitors to an evening contemporary of the 18th inst. states correctly, a much more dangerous accidental combination has now occurred—namely, a combination, from contact, between the gentle current of a telephonic wire and the active one of an electric lighting wire, by which a current was conducted of sufficient tension to char the baize of the telephone box, fuse the springs and metal rings, and burn the fingers of the man who was sent by the telephonic company to repair the damage done by the diverted discharge. There may be some little exaggeration in the alarm which has been excited by this report, but if there is the slightest danger from the accidental contact of a telephonic wire with the wire of an arc of light, not a moment ought to be lost in rendering such contact impossible in the future; and we agree with our contemporary that in this danger there is another and urgent reason for doing away with overhead wires altogether, and letting every wire find its course protected by an underground route.

ALLEGED INJURY FROM VACCINATION.

ON Nov. 10th we commented on an account given in the *Portsmouth Times*, under the heading of "a painful story" of the prosecution of a man who refused to have his youngest child vaccinated. The defence of the father was that his eldest child had been attacked with syphilis shortly after vaccination, and that Dr. Ward Cousins, who had treated it as an out-patient at the Royal Portsmouth Hospital, was of opinion that it was a sad case of impure vaccine having been put into the system. This evidence so far appealed to the sympathy of the magistrates that the father was made to pay merely a nominal fine. Dr. Ward Cousins subsequently denied the accuracy of the father's statement, and finally Rear-Admiral Field, who presided at the petty sessions, Gosport, where the case was heard, requested the Local Government Board to inquire into the allegation of the father. This inquiry has now been made by Dr. Bruce Low, one of the medical inspectors of the Board, and the result has been communicated to Rear-Admiral Field, to the effect that, after a careful investigation of all the circumstances of the case, and from the medical and other evidence submitted to him, Dr. Low was able to satisfy himself that the vaccination could be absolved from all concern in the ailments from which the child has suffered since the performance of the operation in June, 1886. It appears that in the second week after her vaccination the child was attacked by diarrhoea, and that she subsequently suffered from a disease which was undoubtedly of a strumous character, and which the family history showed

to be hereditary. The four medical practitioners who have, at one time or another, had the child under their care unanimously concur in this view, and state that no single symptom of syphilis has appeared in her case from first to last. The letter of the Local Government Board, from which we have extracted the above, adds that much unnecessary trouble in connexion with the case might have been saved had the father of the child consulted her medical attendants before putting forward the allegation of syphilis, which he now regrets having made. Rear-Admiral Field, in communicating these facts to the *Portsmouth Times*, says that he has perused all the papers which accompanied the report of the inspector, and in his judgment the case against vaccination, so far as regards the poor child in question, wholly fails. In reference to this case, we may note the necessity for magistrates to have skilled medical assistance before deciding on a question which requires technical knowledge. The magistrates, in the absence of such aid, practically accepted the father's statement, and thereby unintentionally fostered the anxiety which other parents might feel as to the effects of vaccination. In the same manner, Mr. Bushby, at Bethnal-green recently adopted a similar course, and although we trust his decision will be reversed, the effect cannot be entirely undone. It is due to Rear-Admiral Field to say that the alleged injury at Portsmouth has not been allowed to remain without proper investigation and authoritative contradiction.

SIR WILLIAM JENNER.

WE regret to state that Sir William Jenner has been indisposed for some days past, and is recommended by his medical attendants to take a few weeks' rest.

MEASLES IN LIVERPOOL.

THE measles epidemic in Liverpool is still maintained, but Dr. Stopford Taylor has expressed a hope that after the end of the year it may begin to decline. At the two infectious hospitals belonging to the corporation no accommodation for cases of measles is available, and hence resort to the Poor-law hospital has been the only course open to the corporation. Besides its illegality, such a proceeding is objectionable from the social point of view, and if the isolation of measles is to form part of the Town Council's future sanitary proceedings, extension of hospital accommodation should be made.

THE HANGCHOW MEDICAL MISSION.

THE annual report of the hospital in connexion with the Hangchow Medical Mission for 1887 has just been published, and affords most satisfactory reading, inasmuch as it is stated that the double mission of healing the sick and preaching the gospel was carried on during the year without any interruption, and with considerable encouragement and success. The total number of out-patients treated during the year was, it appears, 10,277, and of in-patients 502. Of the former, 4282, and of the latter 69, were females. Cleanliness not being a prominent feature in the Chinese character, it is not a matter for wonder that skin diseases abound, especially among the lower classes, and at this institution 1213 such cases were treated during the twelve months over which the report extends. Typhoid fever, too, is common in many parts of the city and surrounding country, malarious fever daily calls for treatment, and tumours, chiefly of a malignant character, are often met with. An important branch of the hospital is that relating to the education of native students. The value of a well-trained native medical mission agency cannot be over-estimated. In China it is specially called for, and it is

satisfactory to learn that there are at the Hanchow Hospital now twelve students, to whom instruction is daily given by Dr. D. D. Main.

FOREIGN UNIVERSITY INTELLIGENCE.

Barcelona, Granada, and Santiago.—The chairs of Analytical Chemistry in these three faculties have been filled, after competition, by the appointment of Señores Casares, Dovronso, and Sojo respectively.

Berlin.—Dr. Langaard has obtained recognition as *privat-docent* in Pharmacology.

Buda Pesth.—The lectures on Anatomy are to be given by Dr. Michael Lenhossák, son of the deceased professor.

Jena.—The names selected for the chair of Medicine and Children's Diseases, vacant by the translation of Professor Unverricht to Dorpat, are Drs. Vierordt of Leipzig, Fr. Müller of Berlin, and Stintzing of Munich.

Madrid.—Señor Don Juan Creus y Manso, Professor of Surgery and formerly Rector of the Central University, has been appointed Surgeon to the Hospital of San Pedro de los Naturales.

Modena.—Dr. Tansini of Lodi has been appointed to the chair of Surgery.

Montpellier.—M. Mairat has been appointed to the chair of Mental and Nervous Diseases.

Nancy.—M. Bernheim, Professor of Clinical Medicine, has been appointed Assessor to the Dean.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

The deaths of the following eminent foreign medical men are announced:—Dr. C. Cavalier, formerly Professor of Mental Diseases in Montpellier.—Dr. Silvestrini, Professor of Clinical Medicine in Palermo; Dr. P. Blasco of Madrid; Dr. Löwensohn of Moscow.

TYPHOID FEVER is stated to be increasingly prevalent in Vienna. The water is suspected, and measures are being taken to prevent the use of any that is regarded as of doubtful purity.

THE MEMORIAL TO THE PRESIDENT AND COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

A MEETING of the signatories to the above memorial was held at the Marlborough Rooms on Wednesday, Dec. 12th, under the presidency of Sir Joseph Lister, to consider the reply of the Council. The two following resolutions were moved by the chairman, and seconded by Mr. Bryant:—

"1. The memorialists assembled in this meeting have read with satisfaction the statement made by the Council of the Association in their reply that they 'strongly deprecate the publication of any details in violation of professional confidence,' and 'regret that under any circumstances the document' objected to in the memorial 'was published.'"

The memorialists regret, however, that the reply does not, in their opinion, express sufficiently strongly a sense of the gravity of the offence, or afford any guarantee against similar occurrences in the future.

"2. The memorialists feel that some reparation is due to Professor von Bergmann for the injury he has received by the publication in question, and they urgently request the Council to tender him an adequate apology."

The first of these resolutions was carried with but two dissentients, one of whom thought that the resolution was not sufficiently strong, while the other was of opinion that the reply of the Council should be considered as satisfactory. The second resolution was carried unanimously. It is understood that the resolutions will be considered by the Council at their quarterly meeting on January 16th.

The following are the names of those who were present at the meeting:—

Sir Andrew Clark, Bart.	Dr. Hollings.
Sir Prescott Hewett, Bart.	Dr. Donald Hood.
Sir Joseph Lister, Bart.	Mr. Victor Horsley.
Sir Risdon Bennett.	Mr. Howse.
Sir Dyce Duckworth.	Mr. W. H. Jessop.
Sir Joseph Fayrer.	Dr. George Johnson.
Sir Alfred Garrod.	Mr. Langton.
Sir William MacCormac.	Dr. W. T. Law.
Dr. Theodore Acland.	Mr. H. C. Lawrence.
Mr. C. A. Aikin.	Mr. Lewis Lewis.
Dr. Allchin.	Dr. Robert Liveing.
Dr. Andrew.	Dr. MacLagan.
Mr. Morrant Baker.	Mr. Howard Marsh.
Mr. Ballance.	Dr. Hooper May.
Dr. Barlow.	Mr. Meredith.
Mr. A. B. Barrow.	Dr. Monro.
Dr. Beddoe.	Dr. Ord.
Dr. Beever.	Mr. Edmund Owen.
Mr. W. H. Bennett.	Mr. R. W. Parker.
Mr. Samuel Benton.	Mr. Pickering Pick.
Dr. Black.	Mr. Bernard Pitts.
Dr. W. H. Brace.	Dr. W. S. Playfair.
Dr. Broadbent.	Dr. Potter.
Mr. B. E. Brodhurst.	Dr. Douglas Powell.
Mr. Thomas Bryant.	Dr. J. T. Powell.
Mr. A. C. Butler-Smythe.	Dr. Pye-Smith.
Mr. Brudenell Carter.	Dr. T. L. Read.
Mr. C. W. Chapman.	Dr. Russell Reynolds.
Mr. Davies-Colley.	Mr. George Rice.
Dr. Sidney Coupland.	Mr. Arnold Royle, C.B.
Mr. Cowell.	Mr. Henry Sewill.
Dr. Drage.	Dr. Sharkey.
Dr. Matthews Duncan.	Dr. James E. Sinclair.
Dr. Easton.	Mr. Henry Smith.
Mr. Erichsen.	Mr. Thomas Smith.
Dr. Hingston Fox.	Dr. T. Gilbert Smith.
Dr. A. E. Garrod.	Dr. Scanes Spicer.
Dr. Gervis.	Mr. W. R. H. Stewart.
Mr. Pearce Gould.	Dr. E. S. Tait.
Dr. Mortimer Granville.	Mr. J. A. Tapson.
Dr. W. S. A. Griffith.	Mr. Edward Tegart.
Dr. Hadden.	Mr. Pugin Thornton.
Mr. C. D. B. Hale.	Dr. W. J. Treutler.
Dr. de Havilland Hall.	Mr. Edgecombe Venning.
Mr. Nelson Hardy.	Dr. Hermann Weber.
Mr. Warrington Haward.	Dr. Whipham.
Dr. Francis Hawkins.	Dr. Whistler.
Mr. Christopher Heath.	Mr. Joseph White.
Dr. Heron.	Dr. John Williams.
Dr. Herringham.	Dr. Wyatt.
Mr. Berkeley Hill.	

HEALTH OF THE IMPERIAL NAVY OF JAPAN.

THE annual report for 1887 of the Director-General of the Medical Department shows that the marked improvement in the health of the navy which followed the adoption of an improved dietary in 1884 has been progressive. In an average force of 9106 the cases amounted to 437 per 1000, the deaths to 6.04, the discharges by invaliding to 6.15, and the constantly sick to 32.80. These ratios are all lower than in the preceding year. Of the 55 deaths during the year, 12 were from wounds and injuries, 4 by drowning, and 3 by hanging, leaving only 36 by disease, or 3.95 per 1000 of the strength. One cause of reduction in the deaths was the absence of epidemic cholera, of which 19 cases with 10 deaths had occurred in the preceding year. The most prevalent diseases were syphilis and gonorrhoea (which furnished nearly one-fourth of all the cases), wounds and injuries, conjunctivitis, and parasites. The most fatal were phthisis, by which 16 deaths occurred; pneumonia and pleurisy, 7; and enteric fever, 4. The cases of enteric fever were 40, but only 4 died; the months in which it was most prevalent were March and April, when 7 and 12 cases were admitted. There was not a single case of kak'ke (beri-beri), a disease the admissions by which, prior to 1884, amounted to 324 and the deaths to 8.39 per 1000 of the strength. Considerable alterations have been introduced during the year into the dietary. Rice and barley have been reduced

by one-half, while the amount of bread has been doubled. Meat has been increased, while fish and vegetables have been diminished. The amount of milk has been doubled, and alcoholic liquors reduced to one-half. If we may judge by the results on the sickness and mortality, the changes appear to have acted beneficially.

The number of applicants for admission into the navy was 4728, and of these 4133 were rejected, or 874 per 1000 examined. The cause of rejection of 1368 was deficient physical condition, and of 2765 various morbid conditions, of which diseases of the genito-urinary system were the most frequent, then those of the digestive system, the eye, and the lymphatic glands. A table is given showing the average height, weight, chest measurement, and vital capacity of the lungs of the accepted candidates. The sanitary condition of the men, and the remarkable improvement in health which has taken place in the last four years, is most creditable to Mr. Takaki Kanehiro, who so ably fills the appointment of Director General, and to whose judicious measures the satisfactory condition of the force must be attributed.

ANNUAL DINNER OF THE COLLEGE OF PHYSICIANS IN EDINBURGH.

THE annual dinner of the College of Physicians of Edinburgh took place on Thursday last, the 27th inst. This was done in accordance with an old custom, and would require little more notice on our part but for the unprecedented and significant presence of the President and Treasurer of the College of Physicians of London among the guests.

About a month ago Sir Andrew Clark and Sir Dyce Duckworth had from the President of the Edinburgh College a very courteous invitation to come to the annual dinner. This invitation was received by both these gentlemen in the same spirit as that in which it had been given; they both saw in it a desire to show the union of feeling that exists between the two Colleges, and, although to dine so far implied a serious sacrifice of time, they both cordially accepted.

Both Sir Andrew Clark and Sir Dyce Duckworth were received by Dr. Peel Ritchie, the President, and Sir Douglas MacLagan, the Vice-president of the College, as well as by the other officers, who wore their robes for the occasion, the other members of the College taking part in the reception by cheering enthusiastically. Among other guests were Lord Rosebery, the Lord Advocate, Lord Wagner, various representatives of the Army and Navy, the Moderator of the General Assembly, Mr. T. Bell, President of the College of Surgeons, Dr. Argyll Robertson, Professor Grainger Stewart, Professor Simpson, Professor Greenfield, Dr. Byrom Bramwell, Mr. John Duncan, and others.

After the usual loyal toasts, Dr. G. W. Balfour proposed the toast of the evening—viz., "The Royal College of Physicians of London."

Sir Andrew Clark, in a remarkably felicitous reply, pointed out strongly the advisability of the corporations drawing closer together. He believed them to have more power than the Universities had in maintaining the honour and dignity of the profession. He strongly urged that when the power of any of the corporations was inadequate to cope with this task the corporation should seek for more power. Nothing could increase that power so much as union with other corporations. Sir Andrew's remarks were received with great enthusiasm. Lord Rosebery and the Lord Advocate also made very good speeches.

Nothing need be added to this simple narrative. We cannot help, however, regretting that reporters were not in the hall on such an occasion, as this dinner may prove to have a greater significance than it may at first sight seem to bear.

WARRINGTON INFIRMARY AND DISPENSARY.—The accounts submitted to the annual meeting of the Hospital Sunday and Saturday Committee of this institution, held a few days ago, showed that the total collections during the year, including the sum realised by the recent concert on behalf of these institutions, amounted to £544 15s., exclusive of £65 subscribed at two works in the town, not yet paid over.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5677 births and 3996 deaths were registered during the week ending Dec. 22nd. The annual rate of mortality in these towns, which had been 17·8, 18·6, and 18·9 per 1000 in the preceding three weeks, further rose last week to 22·2. During the first twelve weeks of the current quarter the death-rate in these towns averaged 19·7 per 1000, and was 2·0 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 13·6 in Derby, 15·0 in Halifax, 17·0 in Brighton, and 17·2 in Portsmouth. The rates ranged upwards in the other towns to 26·5 in Sunderland, 28·9 in Blackburn, 32·2 in Cardiff, and 33·8 in Wolverhampton. The deaths referred to the principal zymotic diseases, which had been 526 and 539 in the previous two weeks, further rose last week to 621; they included 316 from measles, 108 from whooping-cough, 62 from diphtheria, 57 from scarlet fever, 42 from "fever" (principally enteric), 36 from diarrhoea, and not one from small-pox. No death from any of these zymotic diseases was registered during last week in Halifax, while they caused the highest death-rates in Salford, Cardiff, and Blackburn. The greatest mortality from measles occurred in Manchester, Bristol, London, Oldham, Salford, Blackburn, and Cardiff; from whooping-cough in Preston, Blackburn, Birmingham, and Cardiff; from scarlet fever in Derby, Sheffield, and Blackburn; and from "fever" in Birkenhead, Sunderland, and Plymouth. Of the 62 deaths from diphtheria in the twenty-eight towns, 39 occurred in London, 8 in Manchester, 4 in Salford, and 2 in Nottingham. Small-pox caused no death in London or in any of the twenty-seven other great towns. No small-pox patient was under treatment during the week in the Metropolitan Asylum Hospitals, and only one in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 739, against numbers declining in the five preceding weeks from 980 to 880; 47 cases were admitted to these hospitals during the week, against 96, 79, and 76 in the previous three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 258, 277, and 330 in the preceding three weeks, further rose last week to 440, but were 86 below the corrected average. The causes of 94, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Sunderland, Portsmouth, Blackburn, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Hull, Oldham, Bradford, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·3 per 1000 in each of the preceding two weeks, rose to 20·1 in the week ending Dec. 22nd; this rate was 2·1 below the mean rate in the twenty-eight large English towns. The rates in these Scotch towns ranged from 11·2 and 16·2 in Leith and Edinburgh to 22·6 in Glasgow and 27·8 in Paisley. The 507 deaths in the eight towns showed a further increase of 49 upon the numbers returned in recent weeks, and included 14 which were referred to measles, 10 to whooping-cough, 8 to diarrhoea, 7 to diphtheria, 4 to scarlet fever, 4 to "fever," and not one to small-pox; in all, 47 deaths resulted from these principal zymotic diseases, against 40 in each of the preceding two weeks. These 47 deaths were equal to an annual rate of 1·9 per 1000, which was 1·5 below the mean rate from the same diseases in the twenty-eight English towns. The 14 fatal cases of measles corresponded with the number in the previous week, and included 5 in Glasgow, 5 in Greenock, and 4 in Paisley. The fatal cases of whooping-cough rose from 7 and 4 in the previous two weeks to 10, of which 9 occurred in Glasgow. The 7 deaths from diphtheria were within one of the number in the previous week; 4 were returned in Glasgow and 2 in Dundee. All the 4 fatal cases of scarlet fever, and 2 of the 4 deaths from "fever," also occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 113 and 97 in the preceding two weeks, rose again last week to 110, but were 22 below

the number in the corresponding week of last year. The causes of 44, or 9 per cent., of the deaths registered during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 27.0 and 26.6 per 1000 in the preceding two weeks, rose to 30.9 in the week ending Dec. 22nd, and exceeded the rate in any week since the end of April last. During the first twelve weeks of the current quarter the death-rate in the city averaged 25.2 per 1000, the mean rate during the same period being 18.8 in London. The 209 deaths in Dublin showed an increase of 29 upon the number in the previous week; they included 7 which were referred to whooping-cough, 5 to "fever" (typhus, enteric, or ill-defined), 3 to measles, 1 to scarlet fever, 1 to diphtheria, 1 to diarrhoea, and not one to small-pox. Thus the deaths from these principal zymotic diseases, which had been 11, 13, and 19 in the previous three weeks, were last week 18; they were equal to an annual rate of 2.7 per 1000, the rate from the same diseases being 3.7 in London and 0.6 in Edinburgh. The fatal cases of whooping-cough, which had been but 1 and 2 in the preceding two weeks, rose last week to 7, whereas the deaths from "fever," measles, and scarlet fever showed a considerable decline from the numbers in the previous week. Thirteen inquest cases and as many as 12 deaths from violence were registered; and 54, or more than a quarter, of the deaths occurred in public institutions. The causes of 26, or more than 14 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

THE BIRMINGHAM WORKHOUSE INFIRMARY.

To the Editors of THE LANCET.

SIRS,—It was with much surprise that I read the article in your issue of last week upon the new Workhouse Infirmary in Birmingham, for I am sure it would never have been written had the writer possessed any knowledge of the way in which the Birmingham Infirmary is managed. In the first place the infirmary, though providing room for 1700 beds, will not for some time contain more than 1400 patients. Again, in addition to the visiting physician and visiting surgeon and two resident assistants, there are to be two qualified resident clinical clerks, making a total of six medical officers—not four, as stated by you. It is utterly absurd to suppose that every case in a workhouse infirmary requires to be examined every day. I venture to say there is no workhouse infirmary in the kingdom where every inmate is examined every day; it would be sheer waste of time and energy. Among the 1400 inmates of the Birmingham Infirmary there are upwards of 300 epileptics able to be about and to work. Again, five-sixths of the cases admitted are chronic cases of phthisis, bronchitis, heart disease, rheumatism, brain and spinal cord disease, &c., not requiring daily examination. For the past six years I have been visiting physician to the Birmingham Workhouse Infirmary. I pay a daily visit to the infirmary, and my stay there averages two hours a day. I physically examine every fresh case admitted on the medical side, and record notes of the case, making the diagnosis as soon as possible, and originating the treatment. The severe cases I keep under my own supervision; the trivial and chronic incurable cases are looked after by my assistant. In addition to seeing all fresh cases, I see every case in which the resident medical officers require my help, and I visit the epileptic wards daily. During the past six years I venture to say there have been more clinical reports of cases published in the medical journals and more cases shown at the medical societies from the Birmingham Workhouse Infirmary than from any other infirmary in the kingdom, showing that the cases there are gone into properly, although you declare it to be impossible. As to possessing administrative functions, I am glad I have none. Few medical men have time to be both good administrators and good doctors. I have absolute control over the management of the patients under my charge, and that is all I wish for. I consider, after the article in your journal, that,

in justice to the Birmingham guardians and their medical officers, you can do nothing less than appoint a representative to visit and report upon the medical administration of the infirmary, and, personally, I shall be delighted to give full information and assistance to make such a report full and complete. I am, Sirs, yours obediently,

C. W. SUCKLING, M.D. Lond., M.R.C.P.

Dec. 24th, 1888. Visiting Phys. to the Birm. Workhouse Infirmary.

* * We shall be glad to learn Dr. Suckling's opinion of the new Birmingham Workhouse Infirmary when his experience of its administration enables him to arrive at some conclusion; in the meantime we note his observations. Of course we do not suppose that every case will be required to be medically examined every day, but we have it on the authority of the clerk that "lock cases and bedridden cases, not, or but seldom, requiring medicine will not be treated in the infirmary," therefore we are bound to assume that the patients the infirmary will contain are those which need more or less constant medical supervision and treatment. The fact that there are now only 1400 cases in the institution does not touch our argument. Accommodation has been provided for 1700, and we do not believe this expense would have been incurred by the guardians if it had not been their intention that it should be utilised. Dr. Suckling now tells us that the medical staff is to consist of a visiting physician, a visiting surgeon, two resident assistants, and two qualified resident clinical clerks, making a total of six medical officers. Upon this, we have only to observe that these officers, so far as treatment is concerned, are not in substitution of each other. The visiting physician and surgeon, and we presume the clinical clerk in regard to treatment, in no way replace the resident assistants; indeed, the former will make further demands on their time. The advantage to be gained from the employment of the visiting staff and clinical clerks is mainly the introduction of a higher medical thought into the treatment and study of those cases which come under observation, and not the reduction of the work of the resident assistants. But the number of patients to be treated is, we feel sure, much too large for substantial justice to be done to the great body of those who are within the institution. Altogether, the infirmary is far too large for proper administrative purposes. The recorded opinion of the Local Government Board is in every sense a proper one—viz., that these institutions should not, as a rule, contain more than 500 or 600 patients.—ED. L.

THE FELLOWSHIP EXAMINATION.

To the Editors of THE LANCET.

SIRS,—Mr. Lawson Tait's letter on the above subject comments on one only of the several abuses which exist thereat, but, coming with the weight of his authority, might, it would be hoped, induce the Council to make some amendment in this examination. The details of it have been repeatedly the subject of adverse comment in the columns of the medical press. Teachers of eminence have repeatedly denounced the examination as bad in many details, and its issues to be so uncertain as to result, in many instances, in plucking able and well-prepared men, and in passing others by no means their equal in knowledge. The Council take no notice whatever of these complaints, but pursue the even tenour of their way, making no attempt to remedy very patent abuses. Still, as Mr. Tait has "set the ball a rolling," it may be a convenient opportunity for commenting on other absurdities of the examination, as well as that which he so ably exposes. The setting of questions of the greatest vagueness as to the scope of the answer required is often seen in the papers. Questions also are set involving answers of such length that the time allowed for the whole paper would not be sufficient for the proper treatment of one single question. Consequently a candidate is quite at sea as to the extent of answer needed, and a man of inferior ability may possibly

be marked higher than one of more complete knowledge. There seems to be no supervision by the Court of Examiners as to the questions set, and any individual examiner seems to be at liberty to set for a question some fad of his own, the same being of no value whatever as a test of the relative ability of the candidates. Another abuse complained of is the ridiculously low standard of marks given for the whole examination, which is believed to be such as to entirely prevent the possibility of fairly marking candidates, the range of marks being quite insufficient. This is the grosser, as it is reported that the loss or gain of a single mark may mean the difference between a pluck or a pass. The bearing of this is especially seen with regard to another great abuse—viz., the fact that the whole of the examiners are all engaged at once in each branch of the examination; consequently different candidates are examined by different men in the same subject. It is hardly necessary to point out the element of unfairness which prevails here. It is notorious that doctors (especially when examiners) "differ," and the answer which would satisfy one man would only half satisfy a second, and entirely dissatisfy a third; and let them endeavour as they may to be unbiased, the candidate who answers according to the particular view of his examiner will create a more favourable impression and influence the giving or withholding of one of the scanty marks. Also the difference in demeanour of different examiners may be a distinct item with a nervous candidate. When, too, we consider the very great degree of difference there is in the aptitude of different examiners for their work, it becomes apparent how very fluky the results must be. Radical changes are needed. The time allotted for the written paper (four hours) is too long. Few men can write at examination pressure for that length of time and do their knowledge justice. The fees are high enough to allow far greater completeness of detail, and it would be much more satisfactory to set two papers, say, of three hours each, with an interval between them. Also each candidate should go before the same examiners in each branch of the examination, and then the standard, be it fair or unfair, would be the same for all. Examiners should be selected with special view to their capacity as such, and not, as is apparently the case, to further the views of the different metropolitan schools. Eminent surgeons they may possibly be; good examiners they very frequently are not. The standard of marks should be high enough to allow ample scope for properly representing the value of a candidate's answers; and the Court of Examiners should rigorously exclude the setting of such questions as those animadverted upon by Mr. Lawson Tait.

Compared with the University of London examinations, those of the College of Surgeons seem clumsy and bungling to a degree; and until some such alterations as have been already indicated are made, the Fellowship examination will remain the unfair and uncertain test it is avowed to be by eminent authorities whose connexion with the preparation of candidates renders them the most competent to judge of such matters.

I am, Sirs, yours &c.,

A FELLOW.

Dec. 24th, 1888.

THE PROTECTION OF THE MEDICAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—A short time ago I wrote to you proposing the establishment of an association for the protection of medical practitioners. As yet I have had but scant support. Many, no doubt, take my letter as a mere flash in the pan, and not intended to be followed by action. It is not so. If I can get only a reasonable amount of support, I intend to proceed with a scheme, and I hope to be able shortly to command the support and help of some men of standing and influence in our profession. The present state of matters is simply deplorable. To begin with, we are totally disunited—a result the outside world take full advantage of. So far that is solely our own fault. Each man believes his neighbour to be no better than he should be, and fully expects that if he has only the chance he will take any advantage to further his own interests. We see at present hundreds of good men who have drifted, unconsciously perhaps, into positions from which they would be only too glad to retire. Now had we such an association as is proposed we might

help these men, and gradually raise the fallen tone of our profession. The young aspirant to medical fame is no sooner qualified than he is taken with an insane idea that he is likely to become a failure, and that in the struggle for existence he is not likely to represent or become a specimen of the survival of the fittest. Possibly newly-fledged Edwin dreams that marriage is not always a failure. Probably he has some Angelina in view, with whom he yearns to share, if not the fat of the land, at least his modest bread and cheese. By-and-by he hears of a vacant appointment—probably a club one of some amount,—the temptation is too strong to resist, he yields and accepts terms, and does acts which when his day of success comes he bitterly regrets, and more likely himself feels the sting of. In trying to bring about a remedy we must look matters fairly in the face. It is needless to aim at the impossible. I hardly see how we can limit the entrance to the profession, or altogether control the conduct of every member. We cannot shut our eyes to the fact that there are black sheep in our midst (what calling or profession is without them?), but we can at least do this: we can take our stand and protest against being any longer dragged down and kept in the gutter by these black sheep; if the public or a section of them want cheap doctoring, by all means let them have it, but at the proper hands. Let them go to the sixpenny or, as it now appears, the fourpenny doctor. Roughly speaking we may divide our profession into two classes. 1. The men who are content to lower themselves and to drag the profession to any point of degradation. 2. The men who honestly wish to act fairly and to keep up a high standard of professional honour. To try to reclaim the first class would be, I fear, an almost hopeless task. The men who are content to puff their merits on the cheap handbill, distributed with a free hand from door to door, who illuminate their windows with the announcement that they draw teeth on what may be called cheap terms, who offer medicine on terms that look like the impossible, and altogether act in a manner that would bring the blush of shame to the face of a third-class dispensing chemist, will always be with us. Why should we attempt to meet them even on boundary lines? Rather let us, in return for better terms, offer something more than mere slipshod service and sham medicine. I firmly believe that, more than is suspected, the thoughtful working man is fully alive to the folly and danger of the present system of cheap doctoring, and would be only too glad to co-operate with the profession to introduce a better state of things. To me it seems almost incredible that people gifted with ordinary sense are content to risk health or even life itself to effect a paltry saving in money. Figs do not grow on thistles nor grapes on thorns; neither can a fully satisfactory result be expected from the medical practitioner when he is offered for his services a nominal amount. Even a doctor can sometimes be selfish and look after number one. I do not wish to be misunderstood. Far be it from me to put a clog on the man who unselfishly gives himself up to help his fellow men and tries to make this world a little better and brighter. Thank God, our profession is a noble one, and the opportunities are endless in which we may do good; but, at the same time, I fail to see the necessity or the benefit of wilfully dragging our profession through the gutter; that is not the way either to raise ourselves or our patients. It must at least be conceded that medical men must live, and I am sure, in these days of competition, there is little danger of medical men being overpaid. By all means let us encourage the working man in habits of thrift, and give him the means whereby he may ensure his doctor on moderate terms; but let the advantages on both sides be mutual, then both will be satisfied. But, by all means, let us put an end to this mongrel state of sweating the doctor to starvation point.

I have shown but one phase of our grievances, as I cannot ask for more space, but our association would not be limited to the deciding of a mere question of remuneration. On other points it could act and be equally useful. It might act as an authority in medical matters generally and that of ethics in particular, where matters in dispute might be referred to friendly arbitration and, if possible, settled in a friendly way. It could establish a bond of good fellowship, act as an authority in fixing something like a minimum of professional remuneration, perhaps take action in prosecuting notorious offenders. This is but a crude outline, which would require filling up and elaborating. I again ask, Will my brethren help me in the effort? If so, I shall be glad to receive offers of help and to arrange for a

preliminary meeting in town. The matter is now in the hands of the profession. I ask, Are they content or not to let matters remain as they are? Yes or No. I must leave the decision to them.—I am, Sirs, yours truly,

Nov. 6th, 1888.

J. H.

To the Editors of THE LANCET.

SIRS,—I am glad to see the suggestion that a medical defence league should be formed is bearing fruit in your correspondence columns. Is it not almost time that some practical action should be taken? The "British Medical," which, as the "Provincial Association," was, I believe, started for the consideration of matters affecting general practice, socially and ethically as well as scientifically, has become a huge debating society, and the proprietor of a medical journal, with a picnic thrown in now and again. The guineas which were originally subscribed to it, under the impression that it would take up such questions as "medical defence," have been thrown away. I do not say that in other directions it has not justified its existence, but in this matter it has signally failed. I fear it has become too fixed in its character to regain the confidence of general practitioners as to this question. Co-operation is the word in everyone's mouth. The public band themselves together to obtain medical service upon inadequate and ridiculous terms, and unfortunately there are medical men always ready to serve them at any price. Such co-operation can only be met by union. We must have a society strong enough to impose its just demands upon the corporations, upon the Council, and upon Parliament. They will do nothing for us without the pressure of the great bulk of the profession—that is, the general practitioners—being brought to bear upon them. Let us hold a mass meeting in such a centre as Birmingham to initiate the movement, and the thing will be done. All the private resentments at the encroachment upon our legitimate livelihood of clubs, medical aid associations, provident dispensaries, dangerous quack remedies, inadequate public salaries, and gratuitous service would blend themselves into a forceful and adequate energy. It would be like the old nursery tale of the "pig that would not get over the stile." The League would begin to badger the Council, the Council begin to worry the corporations, the Council and the corporations would begin to represent our case to Parliament, and our work would be put upon a better, a more remunerative, and a more respectable and respected level than it has been since the Medical Act was passed.

I am, Sirs, your obedient servant,

Loughborough, Nov. 3rd, 1888.

J. B. PIKE.

"HOW SMALL-POX SPREADS."

To the Editors of THE LANCET.

SIRS,—The paragraph in the *Maidstone Journal* on which the annotation in this week's LANCET headed "How Small-pox Spreads" is based is inaccurate. No case of small-pox was sent from Maidstone to Yalding.

The case alluded to was one of scarlet fever in the person of a girl, a native of Yalding, who had been on a visit to relatives in Maidstone. While there one of the family was attacked with scarlet fever and removed to the hospital for infectious diseases. Eight days after this event the girl returned to Yalding with sore throat, but no rash was observed, nor was there much constitutional disturbance. The case was considered to be one of mild scarlet fever, with probably an evanescent rash, which had escaped detection, and was treated accordingly by isolation in an upper room and the usual disinfection. As no one (not even the patient) had any suspicion that she was infected, there was no "wilful" exposure, and therefore no case for a prosecution. Cases of almost imperceptible scarlet fever are not uncommon, and have been the starting point of several outbreaks in elementary schools. Dropsical effusion is often the first symptom for which advice is sought, and then it is remembered that a few weeks ago the child had a slight sore throat and was rather feverish. In the meantime he has been attending school, and cases of scarlet fever begin to crop up in the neighbourhood. It is only possible to prevent this source of danger in one way. The very mild and unrecognised cases were probably infected by less mild cases which were recognised. If all known cases were reported

and isolated for a prolonged period, scarlet fever (except of bovine origin), would cease to exist in an epidemic form. But to effect this, compulsory notification must be universal, and the provision of isolation hospitals must be made compulsory on all sanitary authorities.

I am, Sirs, yours faithfully,

HARRIS BUTTERFIELD,

Medical Officer of Health for West Kent.
Sevenoaks, Dec. 22nd, 1888.

LIVERPOOL.

(From our own Correspondent.)

CHRISTMAS DINNERS FOR THE POOR.

THE Mayor (Mr. Cookson), following the example of his predecessors, has given his influence and assistance to the Hot Pot Fund, which was suggested by Sir David Radcliffe when mayor some years ago, has been kept up since, and now promises to be an annual custom. Yesterday 3350 hot pots were given away, and involved the consumption of 14,000 lb. of beef, fifteen tons of potatoes, a ton and a half of onions, 250 lb. of salt, and 80 lb. of pepper. Each hot pot contained 7 lb. of the best quality, hence some idea may be gained of the large number of human beings who were fed by these means, and of the immense amount of good which may be done by kindly disposed persons at a moderate cost, the amount contributed being £800. In addition to this a similar sum was subscribed for the Christmas breakfasts, of which a very large number partook.

THE LOCAL HOSPITALS.

Christmas fare was provided in the hospitals for those patients who could be permitted to have it, and there were carol singing and other entertainments. All were prettily decorated, and, at the Royal Southern Hospital, a magic lantern was exhibited by Mr. Paul, one of the honorary surgeons.

THE ASSIZES.

At the recent assizes a bookseller was fined £20 for selling translations of Zola's works. Mr. Justice Wills at first fixed the fine at £250, but reduced it on hearing that the prisoner was wholly unable to pay it, and in very reduced circumstances. But he wished it to be understood that he regarded the circulation of such literature as a very grave offence. A man and his wife were sentenced to long terms of penal servitude for cruelly neglecting two children, by which one died and the other was found in a most dangerous state. It was made perfectly clear from the evidence that the children were suffering from deprivation of food, and not from any disease, and the mother was a confirmed drunkard.

THE MEDICAL INSTITUTION.

Formerly it was the custom for members of the Medical Institution to dine together once a year, but it had some years ago fallen into desuetude. This year it has been revived with the happiest results. Upwards of 120 members and guests dined together at the Adelphi Hotel on the evening of Saturday, the 15th inst., Dr. Carter, the president of the Medical Institution, being the chairman. Among the guests present were Mr. Clarke Aspinall, J.P., the city coroner; Mr. William Potter, Q.C., of the northern circuit; and Dr. Stopford Taylor, medical officer of health. A most agreeable evening was spent, and there is every prospect of this reunion being an annual one.

THE NEW BUILDINGS OF THE ROYAL INFIRMARY.

Sufficient progress has now been made with the new buildings of the Royal Infirmary to enable visitors to form some idea of what it will be when complete. Hospital construction is undergoing such frequent, almost daily, improvement, that it requires constant watchfulness to be abreast of the most recent improvements. But the plans of the new infirmary were so carefully drawn up, chiefly by Mr. Mitchell Banks and Dr. A. Davidson, and followed by the architect and builders, that there is little to regret or to wish different from what has been done. The main corridor has reached a very forward stage, and from it can be gained a very good view of the wards, the sanitary arrangements, &c. Not the least important part of the

new infirmary will be the hall for concerts &c., which was suggested by Mr. Banks, and which will be of great value, obviating the necessity of turning out a ward, as had formerly to be done, whenever a concert was given.

Dec. 20th, 1888.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

ROYAL ALBERT ASYLUM, LANCASTER.

AT the general annual meeting of the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties held last week, it was stated that the total number in the asylum is 553—viz., 250 from Lancashire, 179 from Yorkshire, 40 from Cheshire, 37 from Durham, 20 from Cumberland, 15 from Northumberland, 7 from Westmoreland, and 5 from other counties. There had been a falling off in the subscriptions from Yorkshire, Cumberland, Durham, and Northumberland, and a counterbalancing increase from Lancashire, Cheshire, and Westmoreland, but the committee remark that the sum of £4500 is a very inadequate contribution from so wealthy a district as the seven northern counties of England. In his report Dr. Shuttleworth, the medical superintendent, stated that during the year 89 patients had been admitted, 64 had been discharged, and 24 had died. Respecting the discharged patients, 35 were elected cases who had completed their seven years' training. In every one of these some amelioration was noted, and nearly half previously to their discharge were employed in some form of industrial work calculated to fit them to help their friends, if not to contribute to their own maintenance. The mortality had been at the rate of 4·4 per cent.

SAILORS' COOKERY.

The Sailors' Union have made a request to the Sunderland Shipowners' Society that a school of cookery might be established for stewards and cooks. It is not wonderful that in these days of schools and certificates Jack should wish to have a "certificated" cook. The shipowners, however, did not fall in with the idea, but considered it impracticable, otherwise too advanced. So Jack must be content for awhile to put up with a cook who has "graduated" in the galley; but it is a comfort for him to know that if the cook is given good food he will, as a rule, present it in a palatable form.

THE CARRIAGE TAX AND MEDICAL PRACTITIONERS.

Great satisfaction is felt here by practitioners as regards the modification of the carriage tax, which is about to take practical effect. Mr. John Philipson, of this city, has for many years urged this concession, and he is to be congratulated on now seeing it take effect. The great relief to surgeons is that they can keep a close carriage for winter and an open one for summer, both on four wheels, at one guinea each, or two guineas for both vehicles, being the sum charged at present for one. There is no doubt that a four-wheeler is much safer, and for the hilly roads of the north one can go up and down hill much quicker. It will no doubt be an advantage to have the revenue from the carriage tax handed over to the County Councils, who are required, in return, to keep the roads in repair and to abolish all toll gates.

MUNIFICENT BEQUESTS TO NORTHERN CHARITIES.

The late Mr. William Hedley, of Burnhopeside, county Durham, and of Newcastle-on-Tyne, coalowner, has left a large amount to various charities, including £1000 to the Royal National Lifeboat Institution, to provide and maintain a lifeboat in Northumberland or Durham, £1000 to the Newcastle Infirmary, £500 to the Convalescent Home, £500 to the Newcastle Blind Asylum, and £500 to the Newcastle Eye Infirmary. Mr. Hedley was brother of the late Mr. Thomas Hedley, whose munificent bequest a few years ago founded the sec of Newcastle.

Newcastle-on-Tyne, Dec. 24th.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Mr. Michael Francis Macnamara, F.R.C.S.I., Surgeon, Medical Staff, having been examined on three separate days, has received the Diploma in Public Health of the College.

EDINBURGH.

(From our own Correspondent.)

EDINBURGH HEALTH LECTURES.

THE last of the course of health lectures was given on Saturday last by Dr. McGregor-Robertson, assistant to the professor of physiology in the University of Glasgow, who took for his subject "Food and Drink, and their relation to the well-being of the People." Speaking of the latter part of the subject, Dr. Robertson insisted on the fact that the tendency to drinking among the working classes at least was largely the effect of insufficient and improper diet, and by disseminating among the people particulars as to proper diet and the proper proportion of diet, he thought much might be done to deal with the problem of intemperance. Dr. Byrom Bramwell, who was in the chair, thought that this view would not altogether meet the difficulty. He believed that much of the intemperance of the present time was due to ignorance in the people not always recognising that the effect, if anything beyond the very small minimum was taken, was actually injurious. It is a matter for some regret that such lectures should be so poorly attended; but so few have been present that, small as are the expenses connected with the course, there is a balance on the wrong side of the sheet, and there is at least a suggestion that next year the course should be allowed to lapse for a time. Many read the report of the lectures who do not find time to attend the lectures themselves, and it would be a great pity that such an important educational factor should be allowed to drop out from the Edinburgh city life simply for lack of financial support.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

This year, at the annual dinner of the College, a new departure was, I believe, made, and a departure in the right direction. Amongst the guests entertained were two high officials of the London College of Physicians, the President and the Treasurer. May the bonds between the two Colleges be strengthened by the fellowship, and may they continue to be drawn still closer.

Edinburgh, Dec. 26th.

Obituary.

WILHELM ROSER.

ONE of Germany's most brilliant surgeons, whether as teacher or as operator, died at Marburg, in Dr. Wilhelm Roser. He was born at Stuttgart, on March 28th, 1817; the second son of Privy Councillor Roser, some time Minister of Foreign Affairs in the Württemberg Government. The father, in spite of political pre-occupation, found time to perfect himself in various branches of natural history, particularly entomology, and carefully fostered in young Wilhelm a taste for kindred pursuits. Medicine in general and surgery in particular proved, however, the son's favourite study, and in 1841, after graduation, he became surgical *privat-docent* in Tübingen. Jointly with Wunderlich, he founded the "Archiv für Physiologische Heilkunde," and soon attracted to its pages many able and independent contributors, Griesinger among the number. Roser never received at home the appreciation he deserved; and after some years' practice at Rentlingen as physician and surgeon in chief to the school, he removed to Marburg as surgical professor in ordinary. Marburg thenceforth remained his adopted city, and he did more for its fame and prosperity than almost any of its sons. His reputation as a teacher and operator drew from North and Central Germany pupils and patients in ever-increasing number; and, though often invited to fill higher posts in other schools throughout the Fatherland, he declined them all, while making each declination the occasion of securing from the local authorities improvements and additions to the teaching and clinical resources of Marburg, which raised it to a position it had never before enjoyed. To its University he was at once an honour and a benefactor, and the townsfolk showed their

gratitude for his services by making him an honorary citizen, and by calling after his name the street in which he resided. When, on March 26th, 1887, he celebrated his seventieth birthday, the people of Marburg conferred on him every mark of appreciation it was in their power to bestow, and he then took occasion, after four decades of distinguished work, first under Kur-Hessian and subsequently under Prussian government, to withdraw to well-earned repose. This he did not long live to enjoy, and, after a short illness, he died on the 16th inst. He left publications of great merit and extraordinary popularity behind him, while a considerable number of surgical instruments invented or modified by himself bear his name.

THE SERVICES.

BENGAL MEDICAL ESTABLISHMENT.—Surgeons James Moorehead, M.D., Charles William Owen, C.M.G., C.I.E., and Gilbert Saunders Griffiths to be Surgeons-Major (dated Sept. 30th, 1888).

MADRAS MEDICAL ESTABLISHMENT.—Surgeon William Alexander Lee and Surgeon Montague Stokes Eyre to be Surgeons-Major (dated Sept. 30th, 1888).

BOMBAY MEDICAL ESTABLISHMENT.—Surgeon-Major Wellington Gray to be Brigade Surgeon (dated Sept. 1st, 1888). Surgeons to be Surgeons-Major (dated Sept. 30th, 1888):—James Bird Eaton, Osborne Henry Channer, Edwd. William Young, Hugh McCalman, M.D., and David Robt. Ross, M.D.

ADMIRALTY.—The following appointments have been made:—Surgeon Daniel J. P. McNabb to the *Dart*; Surgeon Samuel Keays to the *Banterer*; Thomas M. Cann to be Master and Agent at Newhaven and Portobello; and Wm. P. Morgan to be Surgeon and Agent at Blatchington.

YEOMANRY CAVALRY.—Nottinghamshire (Southern Nottinghamshire): James Frederick Digby Willoughby, Gent., to be Surgeon (dated Dec. 22nd, 1888).

VOLUNTEER CORPS.—*Rifle*: 1st Volunteer Battalion, the Prince of Wales's Own (West Yorkshire Regiment): Acting Surgeon N. Williams, M.B., resigns his appointment (dated Dec. 22nd, 1888).

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent B.S. Examination:—

Surgery.

First Class.

Dean, H. F., B.Sc., Scholarship and Gold Medal, Univ. College.
Parkin, A., Gold Medal, Guy's Hospital.
Sturling, E. Henry, Guy's Hospital.
Kanthack, A. A., B.A., B.Sc., Univ. Coll. Liverp'l & St. Barth's.
Ashworth, P., B.Sc., Owens Coll. and Manchester Royal Infirmary.

Second Class.

Eq. { Crook, Herbert Evelyn, Guy's Hospital.
Thompson, James Edwin, Owen's College.
Goodall, Edward Wilberforce, M.D., Guy's Hospital.

UNIVERSITY OF CAMBRIDGE.—The following candidates have been approved at the examinations for the degree of M.B. in the subjects indicated:—

First Examination.—Part I., Chemistry and Physics: Allen, Christ's; Appleyard, Emman.; Bird, Emman.; Bond, Borchards, Caius; Burton, F. W., Joh.; Cayley, F. P., Trin.; Christopherson, Caius; Colby, Cowie, Joh.; Cuff, Joh.; Ds. Davis, H. J., Trin.; Day, Caius; Eichholz, Emman.; Fothergill, Queen's; Gardner, Caius; Glover, F. B., Joh.; Guinness, Caius; Harding, L. N., H. Selw.; Harris, Caius; Harrison, T. L., Joh.; Hedges, Sidney; Heppell, Caius; Hewitt, Cla.; Hunter, H. Cav.; Hyde, Cla.; Kent, Trin.; Latham, Caius; Moyssey, Caius; Ds. Nachbar, Cla.; Noble, Caius; Norbury, Trin.; Ds. Nowell, Cath.; Richards, Christ's; Roughton, Joh.; Russell, H. Selw.; Mag. Samways, Joh.; Sell, Caius; Slater, Caius; Ds. Smith, H., Trin.; Smith, G. G., H. Cav.; Tatham, Caius; Taylor, G. C., Christ's; Todd, C. C., Cla.; Trethewey, Caius; Verdoe, Jesus; Weaver, Trin.; Webb, J. C., Cla.; Webster, Caius; Windsor; Woodrooffe, Caius; Woodward, H. Selw.—Part II., Elementary Biology: Alston, Cla.; Appleyard, Emman.; Barton, P. F., Joh.; Beauchamp, Joh.; Blumfield, Caius; Bowes, Caius; Bradshaw, Davis, Caius; Dawes, Christ's; Duncan, Down.; Mag. Fenoulhet, Corpus; Fletcher, H. Cav.; Harratt, Jesus; Harris, Caius; Ds. Holt, H. S., Cla.; Hunter, H. Cav.; Irving, Caius; Kingdon, Caius; Ds. Nix, R. E., Caius; Norbury, Trin.; Ds. Nowell, Cath.; Ormerod, Trin.; Peatling, Magd.; Ray, Joh.; Ds. Rogers, Caius; Rollason, Caius; Mag. Samways, Joh.; Ds. Shillitoe, A., Trin. H.; Ds. Smith, H., Trin.; Ds. Stephens, Caius; Ds. Still, Caius; Swarder, King's; Christ's; Burton, F. W., Joh.; Christopherson, Caius; Cuff, Joh.;

Thorman, Caius; Trevellick, Caius; Ds. Webb, C. C., Cla.; Webb, J. C., Cla.; Wicks, Caius; Williams, H. F. B., Caius; Woodrooffe, Caius.

Second Examination.—Part I., Pharmaceutical Chemistry: Mag. Ansoorge, Pemb.; Atkinson, Clare; Beedham, Christ's; Beggs, Sidney; Carver, Christ's; Collis, H. Selw.; Ds. Cregeen, Caius; Ds. Davis, H. J., Trin.; Mag. Dumbleton, Pet.; Eichholz, Emman.; Ds. Evans, T. H., Joh.; Fenton, Caius; Field, G. H., Clare; Garratt, Trin.; Gooding, Caius; Grove, Sidney; Harris, W. J., Christ's; Hollis, Sidney; Hunter, H. Cav.; Ds. Kellock, T. H., Emman.; Kirby, Trin.; Lewis, C. E. M., Joh.; Ds. Lloyd, W. F., Clare; Macdonald, G. M., Christ's; Macdonald, Emman.; Major, Trin.; Master, Caius; Ds. Maw, H. T., Christ's; Ds. Maxwell, Joh.; Newstead, Christ's; Peck, Trin.; Pellow, Trin.; Penny, Pet.; Ds. Ransome, Clare; Robinson, H. J., Down.; Ds. Roper, Clare; Shuter, H. Cav.; Smith, G. G., H. Cav.; Stewart, Christ's; Swainson, Christ's; Tatham, Caius; Taylor, G. C., Christ's; Thompson, G. W., Christ's; Treadgold, Down.; Walker, W. W., Trin.; Whicheho, Sidney; Willson, H. S., Emman.—Part II., Human Anatomy and Physiology: Ds. Abram, Caius; Attlee, J., Joh.; Ds. Baines, R., Caius; Ds. Barclay-Smith, Down.; Ds. Bardsley, P. C., Caius; Ds. Bennetts, Caius; Buss, Sidney; Coulson, Emman.; Ds. Craig, Caius; Ds. Drake, Clare; Ds. Durham, King's; Ds. Eccles, Down.; Ds. Fisher, Caius; Ds. Fisher, H. Cav.; Ds. Frith, Trin.; Gardner, Emman.; Ds. Gillett, Sidney; Glover, L. G., Joh.; Ds. Grimsdale, Caius; Ds. Herbert, Caius; Ds. Halbert, Trin.; Ds. Kellock, T. H., Emman.; Ds. Langdon-Down, R., Trin.; Ds. Latier, Pemb.; Ds. Lewis, S., Joh.; Ds. Manby, Christ's; Mercer, Caius; Ds. Ord, Caius; Ds. Peck, E. S., Christ's; Ds. Phear, Trin.; Ds. Pryce, Pemb.; Mag. Remfry, Christ's; Ds. Roberts, H. Cav.; Senior, Queen's; Ds. Shillitoe, A. A., Trin. H.; Ds. Simpson, H., Joh.; Ds. Stack, Pemb.; Ds. Thomas, C. N., Trin.; Ds. Tickell, Trin.; Treadgold, Down.; Turner, F. M., Trin.; Ds. Vigurs, H. Cav.; Ds. Wallace; Mag. Williamson, H., Trin.; Ds. Young, Caius.

Third Examination.—Part I.: Ds. Arkwright, Trin.; Ds. Baker, Trin.; Boxall, Down.; Cooper-Pattin, Jesus; Ds. Copeland, King's; Ds. Court, H. Cav.; Ds. Crosse, H. Cav.; Ds. Curwen, Joh.; Ds. de Jersey, W. P., Pemb.; Ds. Dickson, Caius; Dickinson, W. L., Caius; Ds. Drabble, Caius; Ds. Drysdale, Joh.; Ds. Duigan, Christ's; Ds. Edgeworth, Caius; Ds. Evans, F. P., Joh.; Ds. Hall, A. J., Caius; Ds. Kelsey, Trin.; Ds. Lambert, Pemb.; Ds. Olive, Joh.; Ds. Scott, T. W., Caius; Ds. Sortain, K. L., Christ's; Ds. Stabb, Caius; Ds. Stephens, H. Selw.; Ds. Stokes, W. G. G., Pemb.; Street, Down.; Wadeson, Joh.; Ds. Wait, Joh.; Ds. Welsford, Caius; Ds. Wessels, King's.—Part II.: Mag. Adams, Christ's; Ds. Blaikie, Caius; Ds. Bowen, King's; Boxall, Down.; Ds. Castle, Pemb.; Ds. Chaplin, Joh.; Mag. Cocksedge, Caius; Mag. Courtney, Pemb.; Dickinson, W. L., Caius; Ds. Dickinson, Down.; Mag. Douty, King's; Ds. Fox, Trin.; Mag. Gervis, Trin.; Ds. Haviland, F. P., Pemb.; Ds. Hawkins, Caius; Ds. Hewer, Ds. Holden, Caius; Ds. Lazarus-Barlow, Down.; Ds. Lipscomb, Caius; Ds. McConkey, Caius; Ds. Maclure, H. W., Pemb.; Ds. Mitchell, Trin.; Ds. Musson, King's; Ds. Nuttall, Trin.; Ds. Roberts; Ds. Rutherford, Sidney; Ds. Sortain, B. V., Caius; Ds. Stevenson, Christ's; Street, Down.; Ds. Veale, Christ's; Ds. Weber, Trin.; Ds. Wilde, R. G., Clare.

UNIVERSITY OF DUBLIN.—The following degrees were conferred last week by Lord Rosse, Chancellor of the University:—

Bachelor in Obstetrics.—Leonard Kidd.

Bachelor in Medicine.—Stafford Monritz Cox, Leonard Kidd.

Bachelor in Medicine, Surgery, and Obstetrics.—Arthur Ebenezer Barrington, John Henry Clarke, George Edwd. Crowe, John Joseph Gerrard, John Beatty Hopkins, William Archer Isaac, Maxwell Scott, M'Intosh, Cecil Maunsell McLaughlin, John Agar Matson, William Andrews Morton, Alex. Ogilvy, Alfred Robert Parsons, Nicholas Alexander Reid, Horace Francis Scott, Townsend Wharton Shaw, Francis Sydney Swiney, Alfred Tuthill, John Gibson Walker.

Doctor in Medicine.—John Henry Clarke, Marcus John Eustace, Arthur Wellington Fenton (*in absentia*), Leonard Kidd, Harman Fitzmaurice Lawrenson, George Lane Mallins, Thomas Myles (*atq. cond.*), Henry Fitzmaurice Phillips (*in absentia*), Henry George Smeeth.

THE ENTRIES AT THE DUBLIN MEDICAL SCHOOLS.—

The number of anatomical students for the present session amounts to 774. The School of Physic shows the greatest increase, and the Carmichael College the greatest falling off of the five medical institutions in Dublin.

ASSOCIATION OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS.—The general meeting of the Association is arranged to be held on Thursday, Jan. 31st prox., at the Holborn Restaurant, at 6 P.M.

TERRIBLE ACCIDENT AT A FOOTBALL MATCH.—On Tuesday a serious accident occurred at a football match between the Manningham and Heckmondwike teams. While several boys were sitting beneath the railing that surrounded the field, the barrier gave way to the pressure of the crowd, and one youth was killed and several others injured, two of whom were taken to the infirmary. The match was in consequence postponed.

KILMARNOCK FEVER HOSPITAL AND INFIRMARY.—The annual report just issued of this institution shows that 591 patients had been treated—the largest number since the hospital was opened. The income of the maintenance fund for the year was £2342, and a balance of £638 remained, besides nearly £1800 added to capital account. Important improvements had been made in the wards during the year at a cost of £450.

CITY OF DUBLIN HOSPITAL.—An amateur dramatic entertainment in aid of the funds took place last week in the Gaiety Theatre. The performance was an unqualified success; and as the house was crowded almost to inconvenience, a very considerable sum must have been obtained for a very deserving charity.

FATAL ACCIDENT TO A SURGEON.—A sad account comes from Kingskerswell. Mr. G. F. Symons, M.R.C.S., when out driving on the 23rd inst., was thrown from his trap in consequence of his horse taking fright at the opening of an umbrella, and died next day from the injuries he received.

LITERARY INTELLIGENCE.A—new journal is about to appear, dealing with the genito-urinary organs, both from a physiological and from a pathological point of view. Amongst the members of the staff the names of Professors Preyer and Zülzer of Berlin are mentioned. The title of the new journal is the *Internationales Centralblatt für die Physiologie und Pathologie des Urogenitalsystems*.

THE ATTACK ON DR. BARR IN KIRKDALE GAOL.—At the recent Liverpool Assizes, James Henry Gray, a prisoner, was tried for grievously wounding, in October last, Dr. Barr, the medical officer at the gaol. The attack was noticed in these columns at the time. On the evidence adduced the jury found the prisoner guilty of the charge, and he was sentenced to six months' imprisonment, with hard labour.

THE COLLEGE OF STATE MEDICINE.—The following gentlemen have been duly elected by the Council as Associates of the College:—Surgeon-Major W. G. King, M.B., Dip. P. H. Aber., Madras Army; Thomas Lane, Esq., Dip. Stat. Med. Dub., Inverell, New South Wales; C. W. Low, Esq., M.D., D.P.H., R. Coll. P. and S. Lond., Clapham Common; A. S. Underhill, Esq., M.D., D.P.H. Camb., Great Bridge, Tipton; Herbert Goude, Esq., M.D., Dip. San. Sc. Durham, Highgate Hill; J. Lane Notter, Esq., M.D., Dip. Stat. Med. Dub., Surgeon-Major A.M.S., Netley; Henry Edward Waddy, Esq., D.P.H. Camb., Gloucester; J. Warnock, Esq., M.B., B.Sc. Edin., Peckham.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Miss Allison H. Dunlop has bequeathed £100 to the Fever Hospital, Edinburgh, as the nucleus of a Samaritan Fund.—The late Mr. P. T. Fish, of Phillip-lane, London, has left by his will £50 each to the Hospital for Paralysis and Epilepsy (Queen-square), the Royal Hospital for Incurables (Putney), the Cancer Hospital (Brompton), and the Sea Bathing Infirmary at Margate.—A donation of £50 has been granted by the Grocers' Company to the Royal Hospital for Children and Women, Waterloo-bridge-road.—The Goldsmiths' Company has made a grant of £50 to the Tottenham Hospital.—Mr. Joshua Fennell has left £100 to the Monkstown Hospital.—Sir Edward Cecil Guinness, Bart., has given £100 to the Adelaide Hospital, Dublin.

HOSPITAL SATURDAY FUND.—At a meeting of the delegates of this fund, held at the Board-room, 41, Fleet-street, on Saturday last, under the presidency of Mr. W. G. Bunn, it was unanimously resolved to distribute the sum of £10,000 among 78 hospitals, 38 dispensaries, and 23 convalescent homes and surgical aid societies. The largest awards to hospitals were:—London, £578 6s.; Brompton, £542 11s.; Guy's, £395 19s.; City of London, for Diseases of the Chest, £263; St. George's, £250 5s.; University College, £246 15s.; St. Mary's, £242 1s.; Westminster, £183 2s.; Middlesex, £201 6s.; Royal London Ophthalmic, £181; Royal Free, £174 19s. 4d.; Charing Cross, £151 10s.; King's College, £144 3s.; North London for Consumption, £132 14s.; Hospital for Sick Children, £132 8s.; Seamen's, £128 10s.; German, £110 14s.

EAST LONDON HOSPITAL FOR CHILDREN.—On the 20th inst. the tenth annual dinner of this hospital, with which is combined a dispensary for women, was held at Willis's Rooms, Mr. Charles A. Prescott, Vice-President of the Board of Management, occupied the chair. The Chairman, in proposing the toast of the evening, remarked on the growth of hospitals during the Victorian era. That instances might be pointed out in which there had been mistakes in management he would not contest, but on the whole he was certain that the hospital management of this metropolis was one of which the people might very well be

proud. As regarded the East London Hospital the accommodation for in-patients was perfect, but a large building was required for out-patients, and he hoped the necessary funds for it would be forthcoming. During the year 20,000 cases had been treated. That total included upwards of 1000 little children. The contributions connected with this festival amounted to £2000.

LONDON VOLUNTEER MEDICAL STAFF CORPS.—On the 15th instant, a parade of some interest took place on Hampstead Heath. The night was dark, and a dense fog hung over the heath. The corps mustered sufficient men to form a complete bearer company and dressing station party, the whole being under the command of the surgeon commandant. The general idea was that an action had been fought, ending with the daylight, and that it was necessary to go out in the darkness to search for, attend, and bring into safety the wounded lying on the field. The dressing and collecting stations being formed and ambulances posted, the bearer company advanced to the field and searched for the wounded. These were represented by the band sent out in advance and hidden. Electric lamps were used, and rendered the search far easier than it usually is (in the army oil lamps are used for this purpose), lighting up the field and enabling the bearer to see quite thirty yards ahead in a dense fog. The light was visible for over a quarter of a mile. The electric lamps were kindly lent to the adjutant by Messrs. Watson, of the Haymarket.

MEDICAL NOTES IN PARLIAMENT.

The Sweating System.

In the House of Lords on the 20th inst., the Earl of Dunraven moved that the Select Committee on the Sweating System have power to employ a gentleman for the purpose of visiting the various districts in the United Kingdom where it had been alleged that the sweating system existed, and examining into the evidence proposed to be submitted to the Select Committee. The noble earl said the Home Office was ready to place at the disposal of the Committee a gentleman who was well capable of doing that work. But there was a technical difficulty in the way which it was the object of that motion to remove.—After some remarks by Lord Knutsford, who stated that the Government were quite ready to assist in the removal of any difficulty that might exist, the motion was agreed to.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BIDDLECOMBE, EDWARD H., M.R.C.S., L.R.C.P., has been appointed Senior Resident Medical Officer to the Miller Hospital and Royal Kent Dispensary, Greenwich-road, S.E., vice Mr. Ernest H. Brock, M.B., B.S., resigned.

BROOKS, J. H., M.B., C.M. Aberd., has been appointed Assistant Medical Officer to the Mile-end Old Town Infirmary, Workhouse and Schools, London.

BURROWS, H. C., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Foston District, Newark Union.

ECCLES, J. H., M.R.C.S., L.S.A. Lond., has been appointed Consulting Surgeon to the Plymouth Royal Eye Infirmary.

HEMMING, C. W., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Glyncoereog District of the Neath Union.

HILL, H. GARDINER, M.R.C.S., L.S.A. Lond., has been appointed Medical Superintendent of the Surrey County Asylum, Wandsworth, vice J. Strange Biggs, M.D., M.R.C.P., resigned.

HONEYBURN, RICH'D., M.B. Lond., M.R.C.S., has been reappointed Medical Officer of Health of the Idle Union District, Yorks.

JOHNSTON, A. R., M.B., has been appointed Medical Officer of the Infirmary, St. Olave's Union, Rotherhithe.

JOHNSTON, E., F.R.C.S., has been appointed Admiralty Surgeon and Agent to Sutton Bridge and Drove End, Lincolnshire.

LITTLE, ARTHUR N., M.B. Lond., M.R.C.S., has been appointed Senior Assistant Medical Officer to the Holloway Sanatorium Hospital for the Insane, Virginia Water.

MESQUITA, N. BUENO DE, M.R.C.S., L.R.C.P., has been appointed Junior Resident Medical Officer to the Miller Hospital and Royal Kent Dispensary, Greenwich-road, S.E., vice W. H. Hillyer, M.R.C.S., L.R.C.P., resigned.

NESBIT, ROBERT, L.K.Q.C.P., L.M., L.R.C.S. Ire., has been appointed Medical Officer to the Fourth District of the Mansfield Union.

PRESTON, F. H., M.A. Camb., L.S.A. Lond., has been appointed Medical Officer of the Workhouse for the Parish of Bethnal-green.

SQUARE, J. ELLIOT, F.R.C.S., L.R.C.P., has been appointed Surgeon to the Royal Eye Infirmary, Plymouth, vice J. H. Eccles, resigned.

TODD, A. H. S., B.A., M.B., and B.Ch. Dub., has been appointed House Surgeon to the Monkstown Hospital, co. Dublin.

VAUGHAN, W. E. W., M.R.C.S., L.S.A. Lond., has been appointed Medical Officer of Health of the Haslington District, Nantwich Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

- CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, N.E.—Resident Clinical Assistant.
- COUNTY OF CLARE INFIRMARY.—Surgeon. Salary not exceeding £294 a year, with a residence attached.
- DERBYSHIRE GENERAL INFIRMARY.—Resident Assistant House Surgeon. Board and washing provided. No salary, but a bonus of £10 is given.
- DURHAM COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £150, with apartments, board, &c.
- EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Physician to Out-patients.—Registrar and Chloroformist. Non-resident. Salary £30 per annum. Additional £20 if the post is held for twelve months.
- GENERAL HOSPITAL FOR SICK CHILDREN, Pandlebury, Manchester.—Junior Resident Medical Officer. Salary £80 per annum, with apartments and board.
- GUY'S HOSPITAL, London.—Six Assistant Dental Surgeons; Lecturers on Dental Anatomy and Physiology and Dental Mechanics.—An Anesthetist and a Tutor for the Dental Students.
- HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Resident Medical Officer as House Surgeon. Salary £50 per annum, with board and residence in the hospital.
- METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Darenth Schools for Imbecile Children, near Dartford, Kent. Salary £120 per annum, rising £10 annually to £150, with board, furnished apartments, and washing.
- NOTTINGHAM GENERAL DISPENSARY.—Senior Resident Surgeon. Salary £180 per annum, with furnished apartments in the institution, and coal and gas provided.
- RADCLIFFE INFIRMARY, Oxford.—House Surgeon. Salary £80, with board, lodging, and washing.
- SALFORD ROYAL HOSPITAL.—Honorary Medical Officer for the Pendleton Branch Dispensary.
- WORCESTER COUNTY AND CITY LUNATIC ASYLUM, Powick, near Worcester.—Third Assistant Medical Officer. Salary £100 per annum, with board, lodging, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

- GODSON.—On the 20th inst., at Grosvenor-street, W., the wife of Clement Godson, M.D., of a daughter.
- WARNER.—On the 23rd inst., at 10, Brechin-place, South Kensington, the wife of Frederick Ashton Warner, F.R.C.S.E., of a son.

MARRIAGES.

- KER—KER.—On the 24th inst., at Queen's-cross Free Church, Aberdeen, by the Rev. Prof. Salmond, D.D., Edward Stewart Ker, of Liverpool and Birkenhead, to Alice J. S. Ker, M.D., L.R.C.P.L., L.R.C.P. & S.E., and F.P. & S.G.
- PINNINGER—BAILLIE.—On the 12th inst., at Christ Church, Lee, Kent, Charles Lever Pinniger, L.R.C.P., L.S.A. Lond., of Queen's-road, Finsbury-park, N., only son of Broome Pinniger, Esq., M.R.C.S., L.S.A. Lond. (formerly of Ryde, I.W.), to Emma, second daughter of Robert Baillie, Esq., M.Inst. C.E., of the Manor Way, Blackheath-park.
- SCOFFIELD—BANNISTER.—On the 20th inst., at St. George's, Bloomsbury, Harold Scofield, M.B., B.Sc., only son of the late W. J. Scofield, of Birmingham, to Annie Louisa, youngest daughter of the late George Bannister, of Accrington, Lancashire.
- WALLER—KEMPSON.—On the 18th inst., at the Parish Church, Ilkley, Theodore Harry Waller, M.R.C.S., L.R.C.P. Lond., of Chelmsford, youngest son of the late Rev. Stephen Richard Waller, Rector of St. Cuthbert's, Bedford, to Maud, third daughter of the Rev. Howard Kempson, Vicar of Ilkley, and formerly Rector of St. Cuthbert's, Bedford.

DEATHS.

- BRADEN.—On the 15th inst., at Castle-place, Lewes, Louisa, wife of J. G. Braden, M.R.C.S. &c., and third daughter of the late Angus Kennedy, of Stratford Hall, Stratford, E., Surgeon.
- JULYAN.—On the 24th inst., at the Royal Naval Hospital, Plymouth, Francis Harvey Julyan, Surgeon R.N., only surviving son of W. Harvey Julyan and Mary, his wife, of Penzance, Cornwall, aged 26.
- MAXWELL.—On the 15th inst., at St. James's-square, Bath, Charles Robbins Maxwell, M.D., formerly 38th Regiment, only son of the late Colonel Maxwell, 67th Regiment.
- MORTON.—On the 19th inst., at Kingsley Villa, Bideford, John Simon Morton, M.D., Retired Surgeon-Major, Madras Medical Service, aged 57.
- THORP.—On the 20th inst., at his residence, Lyppitt Lodge, Cheltenham, Disney Lauder Thorp, M.D., Senior Fellow of Caius College, Cambridge, youngest son of the late Dr. Thorp, of Leeds, in his 54th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, December 27th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Maximum Temp. Shade.	Min. Temp.	Rain-fall.	Remarks at 8.30 a.m.
Dec. 21	29.34	S.W.	48	46	70	52	44	.03	Cloudy
" 22	29.10	S.W.	49	47	58	52	47	.11	Cloudy
" 23	29.52	S.W.	45	43	..	49	42	..	Cloudy
" 24	29.54	S.W.	47	46	..	52	43	..	Raining
" 25	29.51	S.W.	39	38	..	50	36	.36	Cloudy
" 26	29.79	S.W.	42	41	70	47	38	.12	Cloudy
" 27	29.95	S.W.	42	40	..	47	35	.07	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

ERRORS OF REFRACTION.

To the Editors of THE LANCET.

SIRS,—I read with pleasure Dr. Bell Taylor's able and instructive lecture on the estimation and diagnosis of errors of refraction reported by you in last week's LANCET. In a footnote (referring to the estimation of refractive errors by "direct" ophthalmoscopic examination) he says that the surgeon himself should be emmetropic or have his ametropia corrected by glasses. It occurred to me that he might with advantage also have pointed out another source of error in using this method. I refer to the difficulty one has in controlling one's own ciliary muscles in trying to make out details of the fundus oculi at a close range. I expect Dr. Bell Taylor will agree with me that it is not difficult (especially to those not frequently engaged in practice of retinoscopy) to get errors of 1, 2, or 3 D from this cause. I have an ophthalmoscope containing a whole magazine of lens, but which to me is useless for purpose of estimation of errors of refraction, because I also possess a pair of ciliary muscles which I think I may appropriately term "officious"; and having known others troubled in the same way, I trespass on your space with these few lines. I am, Sirs, yours faithfully,

Cheshire, Dec. 19th, 1888

HERBERT TANNER.

T. H. A.—The article on inflammation referred to by Prof. Leber of Göttingen is in the *Fortschritte der Medicin*, vi., 12, 1888. There is an abstract also in the *Allgemeine Medicinische Central Zeitung*, No. 95.

PEPPERMINT WATER.

To the Editors of THE LANCET.

SIRS,—In Mr. Plimmer's case of abdominal section given in your last issue, it is stated that prior to the operation "the room was cleansed and washed with peppermint water (one ounce to the gallon)." This appears somewhat vague. As so small a quantity of the water B.P. strength could not be detected in a gallon of water, probably peppermint oil (which is about 1440 times stronger than the water) was intended and used. Again, was the peppermint water used for injecting the wound the same strength as that used for cleansing the room? One gallon of water will not absorb more than one-eighth of an ounce of oil of peppermint, so that if mixed in the proportion of one ounce to the gallon, there would be seven-eighths of an ounce of super-saturated oil, to inject a definite quantity of which would be a difficult matter.

Is peppermint antiseptic? There is a popular belief (a fallacy) that camphor is both antiseptic and prophylactic. Now peppermint, lavender, rosemary, and many other labiate plants contain a camphoraceous principle (stearoptene). Is it from the existence of this principle that the antiseptic idea as regards peppermint originates?

I am, Sirs, yours faithfully,

E. WHITE, L.S.A. &c.

Park-terrace, Regent's Park, Dec. 26th 1888.

PATHOLOGICAL LESIONS OF CHRONIC ALCOHOLISM.

IN behalf of the American Association for the Study and Cure of Inebriety the sum of one hundred dollars is offered by Dr. L. D. Mason, Vice-president of the Society, for the best original essay on the "Pathological Lesions of Chronic Alcoholism capable of Microscopic Demonstration." The essay is to be accompanied by carefully prepared microscopic slides, which are to demonstrate clearly and satisfactorily the pathological conditions which the essay considers. Conclusions resulting from experiments on animals will be admissible. Accurate drawings or micro-photographs of the slides are desired. The essay, microscopic slides, drawings or micro-photographs are to be marked with a private motto or legend and sent to the chairman of the committee on or before Oct. 1st, 1890. The object of the essay will be to demonstrate: (1) Are there pathological lesions due to chronic alcoholism? (2) Are these lesions peculiar or not to chronic alcoholism? The microscopic specimens should be accompanied by an authentic alcoholic history, and other complications, as syphilis, should be excluded. The successful author will be promptly notified of his success, and asked to read or demonstrate his essay personally or by proxy, at a regular or special meeting of the Medical Microscopical Society of Brooklyn. The essay will then be published in the ensuing number of *The Journal of Inebriety* (T. D. Crothers, Hartford, Conn.) as the prize essay, and then returned to the author for further publication or such use as he may desire.

Mr. William Webster.—Winckel's is a good book, and can be safely recommended. For a busy English practitioner a manual founded on English practice might be more useful, such as that by Thorburn, or Hart and Barbour.

"THE METROPOLITAN HOSPITAL."

To the Editors of THE LANCET.

SIRS,—While I do not admit that the cases quoted by Mr. Locke in your last issue possess any considerable value as bearing upon the discussion between us, I must thank him for his statement of them. I shall also take it upon me to say that in exposing any authentic instances of the abuse of charity he will do the hospital authorities a service, and will aid the development of the principle which they have at heart. Let us now consider the cases.

1. Two lads who do not belong to the Provident Department say that they have been treated at intervals since June last by the medical men in charge of it. Let us accept their statement as true, and what does it prove? Nothing to the discredit of the provident system, but merely that evasion such as must occasionally occur under any method of supervision is possible at the hospital also. Nevertheless the means employed for its prevention are neither clumsy nor usually inefficient. Every patient must possess a numbered pass-book bearing his name and address, and another for his prescriptions, which is left at the hospital. Without this latter he is not entitled to receive medical treatment. The lads mentioned by Mr. Locke could only have received such aid by passing off as their own some other patient's book. Such a practice would not be likely to spread far without being detected.

2. Four persons have "higgled" over the midwifery fee with local practitioners. The results are not stated. As regards the 15s. fee, however, I will say this much, that when we find many respectable general practitioners accepting this fee, when teaching hospitals allow their students, under the supervision of a medical man, to attend such cases free, and this without imposing any wage limit, when Church societies obtain the services of qualified men at a less rate than the above, or even for nothing, it is to my mind somewhat odd that the Metropolitan Hospital, which professes to be a charity, and in consideration of other payments regularly made, and affords the like aid for the fee above named, should be rated for injustice because its charge is somewhat less than that of the practitioner who makes no profession of any charitable motive. The Hospital Committee, however, understand the advantage of maintaining as far as possible the spirit of professional brotherhood between its own officers and their medical neighbours, and it will please objectors to learn that, in deference to this feeling, its outside midwifery practice will in future be conducted by midwives, assisted, in case of emergency, by the gratuitous aid of the provident medical officers.

3. A well-to-do tradesman smuggles in his child, and receives treatment for her at the hospital under cover of his servant, who is a provident member. An old evil this, which has often before now wasted the poor man's portion in numerous hospitals. Its detection as an argument against the particular system adopted at the Metropolitan Hospital is quite worthless. It is simply conduct which, if discovered, should be treated by summary ejection of the offending persons.

4. A patient, who last year paid a bill of £5, afterwards joined the provident department &c. This case has certainly a suspicious look, and Mr. Locke, if he regards it as an instance of abuse, cannot do better than bring it to the notice of the hospital authorities. I think, however, that I know something of the case, and, unless I am greatly mistaken, there had occurred between its earlier and later stage a change in circumstances which quite justified the patient's position as an applicant for hospital relief.

5. The wife of a public-house manager joined. We have no information to guide us as to the means of this patient. If within the wage limit

she was eligible; otherwise there is a case for inquiry. Her statement, that there is practically no restriction on candidates for membership &c., I emphatically deny.

6. The daughter of parents in comfortable circumstances, and presumably living with them. This is apparently one of those cases in which even a low limit of income would in one case mean comparative ease and comfort, in another straitened means. If a woman pays a reasonable board she is clearly in a different position from one who is permitted to live upon her parents. In order to meet exactly the peculiarities of every case the hospital rules would require to fit like a collar the fiscal state of individual patients. This is obviously out of the question. If needful, further elaboration of its plan will certainly arise with the necessity for it. Meanwhile, it is enough that as much, if not more, is done in this direction by the Metropolitan Hospital as by the majority of other provident or free associations of a like character.

I am, Sirs, yours faithfully,

Marquess-road, N., Dec. 27th, 1888.

B. G. MORISON.

MATTHEWS' SURGICAL BANDAGES.

IN our notice of these appliances last week we inadvertently omitted to mention that the bandages may be obtained of the manufacturers, Matthews Brothers, 10, New Oxford-street, London.

Dr. F. Houston.—We shall be happy to take notice of the services referred to on the issue of the official despatches, wherein doubtless they will be mentioned.

SMALL-POX IN MOROCCO.

To the Editors of THE LANCET.

SIRS,—I was interested some weeks ago to see a letter in your columns in which reference was made to the ravages of small-pox in Morocco. Having lived here three years now, I can testify that next to syphilis it is one of the greatest scourges of the country.

I was staying for a time at Rabat this last summer, and in a town of about 30,000 people, about twenty deaths per day were taking place from small-pox alone. To show how it permeates the people, I may mention that when at another time, in the town of Tetuan, I counted the people standing around the shop-door where I was seated, and out of a group of about twenty, more than three-fourths of them were pock-marked, and several had lost an eye through the same disease. Sometimes they hardly try to avoid it, but hope to get it only lightly. This afternoon a Moorish mother, mourning over her child of three years, who had died of small-pox, said: "When he was a year old small-pox was very bad in our village, and I said he had better have it now. So I borrowed the garment of a child who had died of small-pox and wrapped him in it, but he did not take the disease. Next year the small-pox was bad again, and I borrowed the garment of a woman who had died of small-pox, and wrapped my baby in it, but he did not take it. This year I did the same. Alas! He has taken it, and is dead." In their own rude way the people themselves try to modify its virulence. A lady missionary the other day found a native woman busily engaged picking small-pox pustules off a child, and having put each pustule into a basin she administered these to healthy children, in order that they might have the disease lightly.

In the hope that these facts may induce someone to value more highly the boon of vaccination,

I am, Sirs, yours faithfully,

Tangier, Morocco, Dec. 1st, 1888.

T. GILLARD CHURCHER, M.R.

"SHIP SURGEONS."

To the Editors of THE LANCET.

SIRS,—I read in your issue of Oct. 20th a letter from "Not a Ship Surgeon," that steamship companies are actually taking surgeons for their ships without salary.

I was two years surgeon in a line of steamers to the Cape, and the official in the department for engaging medical men for the outgoing steamers assured me that frequent applications were made by youngsters just qualified to be engaged for nothing. But these offers were declined, as the firm very naturally thought that a man who was paid nothing, and had virtually shipped either for pleasure or ill-health, would not care much what became of the patients under his charge, as he can afford to laugh at the threat of dismissal from the service. Such unpaid men would certainly not go for more than one long voyage; therefore it would follow that a new surgeon is appointed every time. Now there are many cases of phthisis annually wintering at Madeira, and oftentimes I have been called to a case of serious hæmoptysis in the Bay of Biscay. An unseasoned man, if so called upon, is as a rule prostrated by *mal de mer-eris*, what becomes of the unhappy patient? Passengers frequently object to travel by a steamer commanded by an objectionable captain. Why do not they object also to trust their lives to a greenhorn who, probably from sea-sickness, will be utterly unable to attend to them?

This is a very serious subject for the travelling public, and it lies to a great extent in their hands that every large passenger steamer carries surgeon who is able and willing to attend to their medical comfort.

I am certain that this subject requires attention from the public, especially those who have travelled much, and therefore have had a general experience of "ship doctors."

I am, Sirs, yours obediently,

December, 1888.

E. M. H.

EXTRACTION OF FISHING HOOKS.

To the Editors of THE LANCET.

SIRS,—In reference to Mr. Barnard's letter in your issue of Oct. 20th (p. 799) re the extraction of fishing hooks, allow me to state that I myself, coming from a well-known fishing county, have known the practice adopted universally for many years past—in fact, mostly all fishermen carry a pair of pliers in their pocket in case of accident. The old adage still holds good—that there is nothing new under the sun.

I am, Sirs, yours faithfully,

South Africa, Nov. 28th, 1888.

FISHERMAN.

Mr. Wm. Rendle.—We are unable to identify our correspondent's reference. Will he kindly give particulars?

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. S. Fenwick, London; Mr. Bridgman, Burton-on-Trent; Mr. W. Blake, London; Dr. Morison, London; Mr. Lumsden, Gateshead; Dr. Saul, Lancaster; Mr. Walker, Aberdeen; Mr. Webster, Bootle; Mr. Smith, Ferryhill; Messrs. Oliver and Boyd, Edinburgh; Mrs. Virgo, Oxford; Mr. R. Harrison, Liverpool; Mr. Bryant, London; Messrs. Christy and Co., London; Dr. F. J. Smith, London; Messrs. Maythorn and Son, Biggleswade; Mr. Rendle, London; Messrs. Beare, Gosnell, and Co., London; Mr. J. H. Morgan, London; Messrs. Woolley, Sons, and Co., Manchester; Mr. W. A. Ellis, London; Mrs. Jefferson, New Brompton; Dr. Suckling, Birmingham; Dr. Lee; Messrs. Dawson Bros., Montreal; Mr. Clifford, London; Dr. Stansby, Derby; Dr. Lyon Mackenzie, Edinburgh; Mr. R. F. Benham, London; Dr. A. Vander Veer, Albany, N.Y.; Mr. B. B. Rawlings, London; Messrs. Loeflund and Co., London; Mr. Stoney, Milom; Mr. Hambleton; Mr. Clement Lucas, London; Mr. H. Butterfield, Sevenoaks; Messrs. Hooper and Co., London; Mr. Gubb, London; Mr. H. F. U. Pope; Messrs. Ferris and Co., Bristol; Mr. W. A. Morris, London; Messrs. Burgoyne and Co., London; Mr. J. Vivian, Nice; Dr. Allerhand, Vienna; Mr. E. White, London; Mr. Haslam, Birmingham; Messrs. Leggett, Bradford; Mr. R. D. Pedley, London; Mr. J. K. Rat, Accra; Mr. H. S. Walker, Leeds; Dr. Heuston, Dublin; Mr. H. B. Allingham, London; Mr. Whitley, London; Mr. Hollander, London; Dr. Vaughan, Edinburgh; Surg.-General Cornish, London; Mr. Astier, Paris; Mr. A. B. Kelly, London; Mr. Morice, Agra; Dr. Dowse, London; Mr. Cooke, Worcester; Mr. Cheyne, London; Dr. Adam, London; Dr. Harley, London; Mr. Wardley, Derby; Mr. Lakeman, London; Mr. A. Gothard, Alcester; Swansea Hospital; London District; Another Candidate; A Fellow; T. H. B.; H. E.; F.R.C.S.; M.B. Cantab.; Medical Officer of Health; Zimmals, Andoni; Cœlebs, London; X. Y., Lancs; Maltine Co., London; Lithia, London; Salford Royal Hospital; Medicus, Sheffield; Clare Infirmary; D.P.H. Lond.

LETTERS, each with enclosure, are also acknowledged from—Dr. Cresswell Hewitt, Hampton Wick; Dr. Campbell, London; Messrs. Lyal and Co., Canada; Dr. V. De Laprade, Lyons; Mr. Stevens, Cape of Good Hope; Dr. Warburton, India; Mr. Purnaiah, India; Mr. Stewart, Cornwall; Mr. Halter, Germany; Mr. Taylor, Airdrie; Mr. Casson, Ulverston; Mr. Branthwaite, Twickenham; Mr. Hocken, Dunedin, N.Z.; Mr. Davies, Staffs; Mr. Warner, London; Rev. Ford, Alcester; Mr. C. Ricker, St. Petersburg; Dr. Hutchinson, Worcester; Dr. Foulds, Lancs; Locum, Newcastle; L. A., London; P., Manchester; D. Y., London.

Wellington Weekly News, Denbighshire Free Press, Herald and Weekly Free Press, Portsmouth Times and Naval Gazette, Evening Mail (Portsmouth), Lancaster Guardian, Hertfordshire Mercury, Kidderminster Sun, Lincolnshire Chronicle, Reading Mercury, West Coast Times (Hokitika), Otago Witness (Dunedin), Surrey Advertiser, Labour Elector, &c., have been received.

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Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

Medical Diary for the ensuing Week.

Monday, December 31.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
 CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
 ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
 HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
 METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
 ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, January 1.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour.
 Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
 ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
 CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
 WESTMINSTER HOSPITAL.—Operations, 2 P.M.
 WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
 ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M.
 PATHOLOGICAL SOCIETY OF LONDON.—General Meeting for Election of Officers.
 ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Clouds and Cloudland. (Adapted to a juvenile auditory.)
 SOCIETY FOR THE STUDY OF INEBRIETY.—4 P.M. Dr. James Stewart: Inebriety among the Higher and Educated Classes.

Wednesday, January 2.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
 MIDDLESEX HOSPITAL.—Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
 ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
 LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
 GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
 UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
 ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
 KING'S COLLEGE HOSPITAL.—Operations, 8 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.
 CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
 SOCIETY OF ARTS.—7 P.M. Mr. Henry E. Armstrong: How Chemists Work—an example to Boys and Girls. (Juvenile Lecture.)
 OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. Doran for Mr. Trestrail, and others.—Dr. Archibald Donald: Methods of Craniotomy.—Dr. Stephenson: On the Relation between Chlorosis and Menstruation.

Thursday, January 3.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
 CHABING-CROSS HOSPITAL.—Operations, 2 P.M.
 ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Clouds and Cloudland. (Adapted to a juvenile auditory.)

Friday, January 4.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, January 5.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
 ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Clouds and Cloudland. (Adapted to a juvenile auditory.)

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NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

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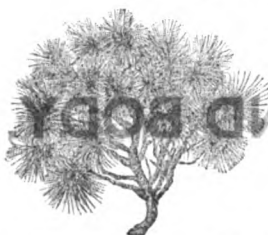
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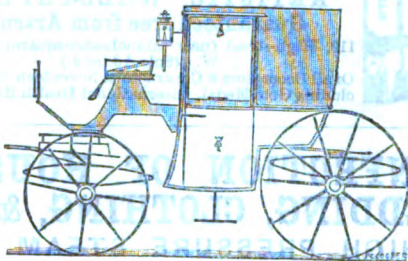
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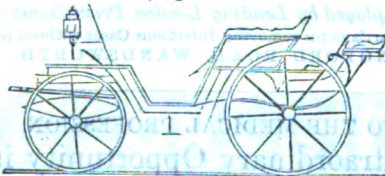
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(MIDWAY BETWEEN THE CHARING-CROSS HOTEL AND TRAFALGAR-SQUARE),

have been noted for sixty-three years for the excellence and peculiar comfort of their **BOOTS and SHOES.**

They are made so that the toes (the great toe especially) have their full play and liberty of extension under the weight of the body, room for the great toe being provided quite straight at the inside, as Fig. 1, instead of being curved off to the centre of the foot, as Fig. 2.

FIG. 1.

FIG. 2.



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The heels are made low and broad. Gentlemen's, Ladies' and Children's Boots and Shoes are made, and special attention is given to cases of weakness and distortion, the suggestions of the Profession being strictly carried out.

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Gentlemen's Oxford Shoes	17s.
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THE BEST NATURAL RESTORATIVE.
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"DOUGLAS & MASON'S Whiskey is excellent in every respect, smooth in taste and delicate in flavour, the advantage of skilful blending."

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ESTABLISHED 1839.

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MINERAL ACID WATER.
(Containing Nitro-hydrochloric Acid.)

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To ensure the remedial effect of the above Alkaline Waters, it is necessary that they should be of the full official strength as guaranteed by the original makers.

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"Safest Drink in any Weather."
ROSS'S ROYAL
"BELFAST"
GINGER ALE.

HOGG & SON, Pharmaceutical Chemists,
MANUFACTURERS OF MINERAL WATERS,
LITHIA WATERS, SODA, AND POTASH
(Pharmacopoeia strength).
AERATED LIME WATER (Stevenson's Process).
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FORMULA:—Its analysis shows that each fluid drachm contains 5 1-2 grains free Phosphoric Acid (P_2O_5), and nearly 4 grains Phosphate of Lime, Magnesia, Iron, and Potash.

Horsford's Acid Phosphate has been in use by the medical fraternity of America, and elsewhere, for many years, with the most satisfactory results, in

Dyspepsia, Indigestion, Mental and Physical Exhaustion, Insomnia, Nervousness, Diminished Vitality, &c.

It is a colourless liquid, acid to the taste, and contains no pyro-phosphate or meta-phosphate of any base whatever.

Among the numerous forms of phosphorus in combination, Horsford's Acid Phosphate seems best adapted for use as a medicinal remedy.

Especially serviceable as a menstruum for the administration of such alkaloids as strychnia, morphia, quinia, and other organic bases which are usually exhibited in acid combination.

IT MAKES A REFRESHING AND NUTRITIOUS DRINK IN FEVERS,

and with water and sugar a delicious beverage.

Cable Address—"RUMFORD, PROVIDENCE."

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☞ **PHYSICIANS** who have not used Horsford's Acid Phosphate, and who wish to test it, will be furnished a sample on application to Corbyn, Stacey, & Co., Francis Newbery & Sons, Barclay & Sons, London, James Woolley, Sons, & Co., Manchester, or John Thompson, Liverpool; and sample will be furnished free of charge, except the expense of packing and postage (7d.), which amount should accompany the application.

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Dr. Richardson says: "Oatmeal is too heating. Wheat is not a standard food in itself." Cook's Patent Meal is a granular cereal combination, thoroughly tested. It is confidently recommended for children, brain workers, and dyspeptics as a nutritious aperient breakfast food. Of Grocers, 4d. per pound packet; calico bags, 1s.; 3½ lb. bags, 1s. 6d., post free.—C. A. COOK, Manufacturer, Pewsey, Wilts.

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**** ASK for the COMPANY'S EXTRACT,**
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METHYLENE.
Obtained by the action of Metallic Zinc on Chloroform and Alcohol.
Discovered to be a general Anæsthetic by Dr. RICHARDSON in 1867.
In 1-lb. Bottles, 16/-; 8-oz., 8/6; 4-oz., 4/6; 2-oz., 2/6.

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For producing Local Anæsthesia.
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For promoting the Healing of Wounds by the first intention.
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CHARCOAL CAPSULES.
Containing Pure Vegetable Ivory Charcoal. In Boxes, 2/6 each.

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"Hydrobromates" give the best
results. Trial samples free from
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A Perfect blending of the CHOICEST BRANDS of the Highest Classes of Fine Old Whiskies, in their native purity, as produced in Scotland, absolutely untampered with.

Matured in
Sherry Casks.

TWELVE YEARS OLD. (Age positively guaranteed.)

A LUXURY IN PURE SCOTCH WHISKIES.

The letters B.O.S. are the Name, Brand, and Registered Trade Mark of this MATCHLESS OLD SCOTCH WHISKY.

B. O. S.

BLENDED

OLD

SCOTCH.

An exquisite Blending—so harmonious in combination—so evenly balanced—so delicately toned—a flavour so rare—so tantalisingly pleasant on the palate—possessing character so novel and so entirely its own, that it may fairly claim the very first place among high-class stimulants. Clever judges pronounce it "unique and unrivalled."

B.O.S. is remarkable for its "delicious individuality of flavour," mellowness and softness on the palate—"a very nectar"—in marked contrast to ordinary blended whiskies, which are more or less dominated by one or other of the whiskies used in blending.

To sum up the merits of B.O.S.—it is a pure Whisky of choice quality—a Blend of the highest class of Whiskies produced in Scotland—of guaranteed age—unquestionably the happiest combination of the most famous types of Scotch Whiskies ever offered to the Public.



Twelve Years Old ... 50s. per dozen.

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B.O.S. is sold in Square White Bottles, six to the gallon, labelled and capsuled, the age being notified by a small Label on each Bottle. Cases charged 2s. per Dozen, allowed for when returned, and 1s. per Dozen allowed for empty B.O.S. Bottles.

The Proprietors are skilled blenders of Scotch Whiskies; but in all the experience of their Firm, extending nearly over the present century, they have never been able to accomplish anything so fully complying with the most exacting tests as is now presented in this special blend of B.O.S. They are so confident of its appreciation by Connoisseurs that they will send a single Sample Bottle, carriage paid, anywhere in the United Kingdom for 4s. 2d., 3s. 9d., and 3s. 6d. respectively.

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DARLINGTON, DURHAM. ENGLAND. [Estbd. 1808.]

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B R O M I D I A.

THE HYPNOTIC.

Formula.—

Every Fluid Drachm contains 15 grs. EACH of pure Chloral Hydrat. and Purified Brom. Pot., and $\frac{1}{2}$ gr. EACH of gen. imp. ext. Cannabis Ind. and Hyoscyam.

Dose.— One-half to One Fluid Drachm in WATER or SYRUP every hour until sleep is produced.

Indications.—

Sleeplessness, Nervousness, Neuralgia, Headache, Convulsions, Colic, Mania, Epilepsy, Irritability, &c. In the restlessness and delirium of Fevers it is absolutely invaluable.

IT DOES NOT LOCK UP THE SECRETIONS

I O D I A.

THE ALTERATIVE AND UTERINE TONIC.

Formula.—

Iodia is a combination of Active Principles obtained from the Green Roots of STILLINGIA, HELONIA, SANTI-FRAGA, Menispermum, and Aromatics. Each Fluid Drachm also contains 5 grs. Iod. POTAS. and 3 grs. PHOS. IRON.

Dose.— One or two Fluid Drachms (more or less as indicated) three times a day, before meals.

Indications.—

Syphilitic, Scrofulous, and Cutaneous Diseases, Dysmenorrhoea, Menorrhagia, Leucorrhoea, Amenorrhoea, Impaired Vitality, Habitual Abortion, and General Uterine Debility.

FOR SALE BY ALL CHEMISTS.

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"THE PATENT UNBREAKABLE EYE."

By this patent a metal eye is inserted into every Catheter, thus doing away with all danger of breaking, and giving the Catheter a firmness unobtainable with any other Gum Elastic Instrument. The Catheters are perfectly soft and pliable, and will stand any heat. It will also be found that these Catheters can be kept clean most easily, as the part beyond the eye is solid.

SOFT BELFAST LINEN PLIABLE CATHETERS

With Guaranteed Machine Eyes. (Registered.)

These New Catheters and Bougies are made of strong Belfast Linen Thread, carefully woven and covered by a new method with extremely elastic gum. The process of manufacturing occupies many weeks, and the goods are so thoroughly prepared that they are flexible and durable to an extent hitherto unknown.

Prices: Patent Metal Eye Cylindrical and Olive Catheters, 3/- each (sizes 4 to 12); Belfast Linen Cylindrical Bougies and Catheters, 1/- each; Olive Bougies, 1/2 each; Catheters, 1/3 each; Specula (4 sizes), 3/- each. Cash with order.

SOLE AGENTS, WHOLESALE & RETAIL:

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NOTES ON THE THERAPEUTICS OF NEW AND RARE DRUGS.

FLUID EXTRACT OF PICHÉ (*Fabiana imbricata*).

Under the name of Piché the *Fabiana imbricata* is known in Chili, Peru, and the Argentine Republic for its prompt and decisive action in diseases of the liver and in the urinary passages. This shrub, which might from its appearance be taken for a Conifer, belongs to the *Solanacea*, and grows on dry elevated slopes. It is remarkable for its light bluish-green branches, which contrast very much with the surrounding vegetation.

In commerce Piché consists of the stem, branches, and leafy branches; the large branches are from $\frac{3}{4}$ to $1\frac{1}{2}$ inch in diameter, covered with a thin, smooth bark, slightly wrinkled longitudinally, ash-grey in colour, and having tuberculous protuberances. The smaller branches are from $\frac{1}{4}$ to $\frac{1}{2}$ inch in diameter, of a darker colour than the preceding, and present at regular intervals distinct evidence of the place where the small leaves are inserted. The wood is of a yellowish-white colour. All these parts of the plant are covered with a greenish or greenish-grey resin, which would appear to protect the surfaces of the plant, and so prevent the too rapid evaporation of its moisture during the very long dry seasons to which it is subject.

Piché is specially indicated in catarrhal inflammation, renal colic, prostatitis, cystitis, musky residual urine, renal calculi, and inflammation of the ureters, &c.

By kind permission, our shorthand writer was enabled to take down the following notes of a lecture delivered at St. Peter's Hospital for Urinary Diseases, March 21st, 1888, on "Therapeutical Innovations," and which especially refer to Fluid Extract of Piché:—

"It is true that in a few instances of subacute cystitis and in murky residual urine from atony I have found Piché to be of some use in clearing the urine and relieving frequency, but I have not noticed the very rapid and marked relief which others ascribe to it. I now restrict its use to treating renal calculi and inflamed conditions of the ureter, and find it has greater influence over those cases in which Sulphocyanide is observed to be in excess in the saliva—i.e., in the uric-acid diathesis. I usually administer 3ss. to 3j in water thrice daily. Stigmata maidis I usually reserve for cases of *scrophulous pyelitis*."

Dr. J. H. TRESSEL, of Alliance, Ohio, U.S.A., in the *Therapeutic Gazette*, p. 240, 1888, has published some clinical notes on the action of Fluid Extract of Piché, from which we take the following particulars:—

"CASE 2.—Had been afflicted with intense pain in passing urine for two days, when she called at my office for treatment. There was an abnormal quantity of uric acid deposited when the urine was allowed to stand a short time, and the urine was very acrid, severely excoriating the parts with which it came in contact. I then gave her Fluid Extract of Piché in ten-drop doses every two hours. After the fifth dose she began to experience relief. When the eighth dose had been taken she expressed herself as being so much better that the interval between doses was lengthened to four hours. The treatment was continued for two days longer, at the end of which time the remedy was withdrawn, there being no reason for its further use."

In the *Therapeutic Gazette* (Sept. 15th, 1888, p. 594), Dr. F. GUNDRUM relates at considerable length his experience with Fluid Extract of Piché in a severe case of gonorrhoea extending into the prostate and bladder. After describing fully the symptoms and the mode of treatment first adopted, he concludes by saying:—

"I have related this case at considerable length to show how severely gonorrhoea may attack the prostate and bladder, and what an efficient and prompt remedy we have in the Fluid Extract of Piché."

In the same journal (p. 368, 1888), Dr. PEYTON GREEN reports upon several cases in which he used Fluid Extract of Piché, and speaks as follows of its value:—

"If given a fair and conscientious trial it will be found to have a wide range of usefulness, being especially beneficial in cases of uric-acid diathesis, renal and vesical calculi, excess of the phosphates, and catarrhal conditions of the urinary tract. Its use seems to be contra-indicated in renal disease where destruction of tissue and degenerative changes have taken place; hence it should not be given in albuminuria, in which morbid condition it is said to be not without harmful effects."

Full reports are given in "New Commercial Plants and Drugs," No. 11, price 2s. 9d. post free.

FLUID EXTRACT OF PICHÉ (Christy) is manufactured from our own imported herb, and finds great favour with the Profession.

SAMPLES SENT ON APPLICATION.

THOMAS CHRISTY & CO., 25, Lime Street, London,
IMPORTERS AND INTRODUCERS OF NEW AND RARE DRUGS.

HUNGARIAN NATURAL APERIENT WATER.

HIGHEST AWARD AT THE INTERNATIONAL MEDICAL EXHIBITION, LONDON, 1881.

USES:—

- 1.—Against OBSTINATE CONSTIPATION.
- 2.—As a corrector of INDIGESTION.
- 3.—In cases of CONGESTION & INFLAMMATION of the BOWELS.
- 4.—In BILIOUS ATTACKS.
- 5.—As a preventive of GRAVEL and STONE in the Bladder.
- 6.—As a LAXATIVE in the early stages of FEVER.
- 7.—In DISORDERS of the LIVER.
- 8.—In many FEMALE DISORDERS and during PREGNANCY.

ÆSCULAP SPRING, Buda Pesth.

ANALYSIS.

Sulphate of Potassium	0.104
Sulphate of Ammonia	0.061
Sulphate of Sodium	139.063
Sulphate of Magnesium	172.805
Sulphate of Calcium	20.788
Chloride of Sodium	29.047
Carbonate of Sodium	9.989
Carbonate of Iron	0.097
Carbonate of Manganese	0.429
Alumina	0.349
Silicic Acid	0.092

Total ... 372.834

The Salts of Æsculap contain 90 per cent. of Purgatives.

OF ALL CHEMISTS AND MINERAL WATER DEALERS.

Sole Consignees for Great Britain, India, and the Colonies: **INGRAM & ROYLE**, London.

"SANITAS" AS A LOCAL ANTISEPTIC.

Ten years' experience with "SANITAS" Disinfecting Fluid in our largest hospitals and general practice has satisfactorily established the following facts:—

1. "SANITAS" FLUID is an efficient antiseptic and oxidising agent, non-poisonous in character, and colourless.
2. "SANITAS" FLUID diluted with nine times its own quantity of water is quite strong enough for ordinary purposes, and is unirritating.
3. "SANITAS" FLUID may be used without dilution when required, and its use presents no danger of any kind.
4. For general purposes it may be stated that "SANITAS" FLUID is of just one-half the antiseptic strength of a 5 per cent. solution of Perchloride of Mercury. In other words, the antiseptic influence of 10 cubic centimetres of "Sanitas" is equal to that of 5 cubic centimetres of a 5 per cent. solution of corrosive sublimate.
5. "SANITAS" FLUID is unirritating to the hands; is without effect on the glaze of porcelain, and when diluted (1—9) does not corrode steel instruments. Sponges are also unaffected by it.
6. A convenient, comfortable, and safe antiseptic poultice may be made by soaking Gangee tissue or absorbent wool in the undiluted "Sanitas" Fluid, wringing it out, applying it to wounds, and covering with gutta-percha tissue.
7. "SANITAS" FLUID acts instantly as an efficient deodoriser to the hands, for all odours, irrespective of source. Similarly, it may be used with the greatest advantage in all post-mortem cases.
8. For dressing raw surfaces, burns, wounds; washing out sinuses and cavities; in general obstetric practice; and as a gargle for diphtheritic and putrid sore throat, &c., "Sanitas" Fluid may be used with a perfect assurance that it will do all that is required of it, thoroughly, safely, and pleasantly.
9. "SANITAS" FLUID not merely prevents the formation of all toxic products of putrefaction; it also destroys by oxidation all existing toxic products.

We will gladly send a pint bottle and Scientific Reports on the "SANITAS" Preparations to any Medical Gentleman who may be unacquainted with their use and desires to test the accuracy of the foregoing statements.

As a sanitary reagent and disinfectant for general use "Sanitas" Fluid ranks first in order of merit.

"SANITAS" FLUID is supplied in Pint Bottles at 12s. per doz., or in any bulk at 5s. per Gallon.

Hospitals are Supplied at Reduced Rates.

"SANITAS" Disinfecting Fluids, Powder, Soaps, Jelly, Gauze, Wool, Lozenges, Fumigators, &c.

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THE SANITAS COMPANY, Limited, Letchford Buildings, Bethnal Green, E.

C. T. KINGZETT, F.I.C., F.C.S., Author of "Animal Chemistry," "Nature's Hygiene," &c., Managing Director.

THE EXPERIENCE of PHYSICIANS in CANADA,
ENGLAND, and the UNITED STATES

PROVES

MALTOPEPSYN

to be pre-eminently the finest digestive ever offered to the Profession.

We, the undersigned Physicians of the Dominion of Canada,

Knowing the unreliability and poor quality of many of the numerous *Aspic Compounds* now in the Market, after thoroughly testing the following Formula introduced here by *Hazen Morse*, under the distinctive name of *Maltopepsyn*, do cordially recommend it to our Medical brethren in all cases where the use of such is remotely indicated, as we believe it to be one of the best, if not the best, remedy we have ever prescribed, when artificial aid is required for digestion:

SACCHARATED PEPSINE	10 GRAINS
PANCREATINE	5 "
ACID LACTOPHOSPHATE OF LIME	5 "
EXSICCATED EXTRACT OF MALT	10 "
EQUAL TO ONE TEASPOONFUL OF LIQUID EXTRACT OF MALT	

MALTOPEPSYN

Combines all the digestive principles that act upon food, with the nutritive qualities of Extract of Canada Malt and the brain food of the Acid Phosphates.

Formula.

Saccharated Pepsine	...	10 grs.
Pancreatine	...	5 "
Acid Lactophosphate of Lime	...	5 "
Exsiccated Extract of Malt,	...	10 "
equal to one teaspoonful of	...	
Liquid Extract of Malt	...	10 "

If you prefer MALTOPEPSYN in a liquid form, put a dose in a wineglass of water or good native wine, stir thoroughly, and take just before each meal.

The 2/9 size is now discontinued, and Maltopepsyn will be sold only in 24-oz. Bottles, 4/6 retail.

NOTE.—Pamphlet and Sample Vial MALTOPEPSYN sent to Medical Men on request.

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N.B.—The above names represent all the leading Toronto Physicians.

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(OPPENHEIMER'S.)

From the **BRITISH MEDICAL JOURNAL**, February 14th, 1885.—“This is an exceedingly well-devised and valuable preparation, combining, in a very useful and palatable form, a valuable hepatic and digestive agent. *It meets a want very often felt by prescribers* in the treatment of the forms of indigestion and flatulence due to deficient secretion of bile, as well as atony of the stomach and insufficient secretion of gastric juice. The preparation is likely to be found exceedingly useful, and in practice we found it very convenient and valuable.”

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This preparation possesses, in addition to the aperient, diuretic, and expectorant properties of the hepatic stimulant Euonymin, the sedative, astringent, and antacid action of Bismuth, which clinical experience proves beyond doubt acts mechanically on the gastric nerves, shielding them from irritating secretion; therefore this combination of Euonymin and Bismuth will be found invaluable in all PAINFUL GASTRIC AFFECTIONS, and in the cure of DYSPEPSIA, ULCER of the STOMACH, and VOMITING from various causes. In BILIOUS DIARRHŒA it has almost a specific action.

LIQ. EUONYMIN ET CASCARÆ SAGRADÆ CO.

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This combination of our Euonymin with Cascara Sagrada possesses the following therapeutic action, in addition to the cholagogic action of Euonymin: It stimulates mildly the entire glandular apparatus of the large and small intestines, increasing muscular power and regulating the propelling force, the bowels continuing to act naturally and regularly after the preparation is discontinued, and therefore Liq. Euonymin et Cascaræ Sagradæ Co. will be found most useful in the treatment of CHRONIC CONSTIPATION WITH HEPATIC DERANGEMENTS.

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SQUIRE'S PREPARATIONS.

SQUIRE'S CHEMICAL FOOD.

The *original* preparation of the late EDWARD PARRIS I, for which SQUIRE & SONS were for twenty years the sole agents, and for the last thirteen years have been the authorised manufacturers.

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COLCHICUM, DIGITALIS, GELSEMIUM, HYOSCYAMUS, IPECACUANHA, NUX
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SQUIRE'S SOLUTION OF BIMECONATE OF MORPHIA.

A Purified Solution of Opium, standardised to contain 1 per cent. of Morphine. The Solution of the British Pharmacopœia is very different from this, and must not be substituted when *Squire's* is ordered.

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The New Palatable Laxative.

This preparation is composed of one of the simplest and most efficient laxatives known, combined with other ingredients which completely mask the nauseous taste of the Cascara. Not exciting by its action the peristaltic movement of the bowel, it does not leave behind it that tendency to constipation which follows the use of most aperients.

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Sanitary Towels
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For Ladies!



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FOR LADIES.

The application of absorbent and antiseptic Wool, Gauze, &c., to the manufacture of a substitute for the old-fashioned Diaper which, even in this age of invention, had not been improved upon from the time of the Pharaohs, was heartily welcomed by the leading Obstetric Physicians and the whole of the Medical Press in 1880.

Their introduction to the Public has been equally successful, and it may now be said of the SANITARY TOWELS that they are more or less in use in every part of the civilized world.

Although all rights have been secured by Royal Patents, the almost universal adoption of SOUTHALL'S SANITARY TOWELS by Ladies has led to unscrupulous copying, in some cases not only of the Advertisements and Labels, but the style of the Packets, these counterfeit packets covering dangerous and disappointing imitations of the genuine Towels.

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A WHOLESALF DISCOUNT IS ALLOWED TO THE PROFESSION.

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SOUTHALL'S SANITARY SHEET, 1/- EACH

For use in Accouchement, recommended for Comfort and Cleanliness.

These Sheets, 24 by 18 inches, are made of Absorbent Wool and Gauze, which have been rendered Antiseptic. They are very absorbent, of downy softness, and great elasticity. If placed under the patient they will be found most comfortable; they can be readily removed, and after use they are simply burned. They are thus in every way superior to the ordinary materials used both for cleanliness, comfort, and safety.

They are highly recommended by the Medical Profession, Nurses, and Others.

THE FOLLOWING TESTIMONIAL ILLUSTRATES THEIR VALUE

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Gentlemen,—I saw your Absorbent Sheets for child-bed in use some time ago, and they were pronounced by the lady who used them "The very grandest things ever invented."

Yours faithfully, J. HILTON JOHNSON, M.B., &c.

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SOUTHALL BROS. & BARNES, Birmingham,

Manufacturers of Surgical Dressings, Tapes, Willboard Splints, Hospital Strapping, &c.

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SOUTHALLS' "STANDARD TINCTURES."

A NEW DEPARTURE IN THERAPEUTICS.

A SERIES OF STANDARDISED TINCTURES, each of which contains a definite amount of the active principle or principles. In some cases the quantity of alkaloid is determined, in others resin, in others volatile oil, &c.; while in some, whose active principles are as yet imperfectly known—e.g., Valerian—a uniform quantity of total solid matter is ensured.

The standards adopted for these Tinctures have been arrived at as the result of experiments upon the various crude drugs, and are adjusted to represent the drugs of good quality as found in the London market.

Each batch of Tincture is adjusted to the same strength of active principle by the use of a larger proportion of drug or menstruum as the case may be, every Tincture being itself standardised *after preparation*; the danger of slight variations due to trifling differences in the conditions during preparation (temperature of atmosphere, &c.), even though the same strength drug is used, are thus avoided.

THE FOLLOWING IS THE FULL LIST OF "SOUTHALLS' STANDARD TINCTURES," B.P. AND CONCENTRATED, WITH PRICES:—

B.P.				B.P.			
Percentage of Active Ingredient in the Concentrated Tincture (4 times the strength).		Conc. strength.		Percentage of Active Ingredient in the Concentrated Tincture (4 times the strength).		Conc. strength.	
Name of Tincture.	Tincture (4 times the strength).	Conc.	strength.	Name of Tincture.	Tincture (4 times the strength).	Conc.	strength.
Aconiti ...	0.2 Ether soluble alkaloids ...	6/6	3/6	Lobelia ...	0.13 Lobeline ...	7/2	3/-
Arnica ...	2.0 Total solids ...	5/10	3/4	Lupuli ...	10.0 Total solids ...	5/10	2/8
Asafoetida ...	20.0 Resin ...	6/6	3/6	Myrrha ...	14.0 Resin ...	5/10	3/4
Aurantii ...	14.0 Total solids ...	5/3	2/8	Nucis Vomica ...	0.9 Alkaloids ...	7/4	3/4
Belladonna ...	0.1 Hyoscyamine (Will) ...	5/2	2/6	Opit ...	3.0 Morphine ...	10/7	3/10
Benzoïn Comp. ...	10.0 Benzoic & Cinnamic Acids ...	6/6	3/6	Ammonia ...	0.45 ...	14/11	5/-
Buchina ...	10.0 Total solids ...	5/2	2/6	Podophyllin ...	4.5 Resin ...	6/6	2/6
Calumba ...	4.0 Total solids ...	4/6	2/4	Quassia ...	0.05 Quassia ...	3/10	2/2
Camphor Comp. ...	0.2 Morphine ...	4/6	2/4	Rhei ...	16.0 Total solids ...	7/2	3/-
Cannabis Ind. ...	15.0 Total solids ...	9/4	4/2	Sabina ...	1.2 Total solids ...	6/8	2/8
Capici ...	8.0 Total solids ...	6/6	3/6	Scilla ...	25.0 Total solids ...	4/8	2/4
Cassia ...	4.0 Resin ...	4/7	2/8	Senega ...	12.0 Total solids ...	8/6	3/4
Catechu ...	10.0 Catechu-tannic Acid ...	4/6	2/4	Serpentaria ...	6.0 Total solids ...	7/3	W3/-
Chirata ...	2.75 Total solids ...	5/2	2/6	Stramonii ...	0.075 Daturine ...	6/-	H 2/8
Cimicifuga ...	10.0 Total solids ...	6/-	2/8	Sumbul ...	12.0 Total solids ...	6/6	3/6
Cinchona ...	2.4 Total alkaloids ...	8/6	3/4	Toluana ...	6.0 Benzoic & Cinnamic Acids ...	7/8	3/10
Comp. ...	1.6 Total alkaloids ...	8/6	3/4	Valeriana ...	8.5 Total solids ...	4/8	2/4
Cinnamoni ...	6.0 Total solids ...	5/10	3/4	Ammon. ...	7.0 Total solids ...	5/4	3/4
Colchici Semen. ...	0.16 Colchicine ...	4/6	2/4	Veratri Viridis ...	0.3 Veratridin ...	8/6	4/-
Conii ...	0.25 Coniine & other alkaloids ...	5/4	2/6	Zingiberis ...	2.0 Total solids ...	4/4	3/4
Cubebe ...	5.0 Volatile oil ...	9/8	4/4	TINCTURES STANDARDISED BUT NOT CONCENTRATED.			
Digitalis ...	0.13 Digitalin and Digitalin ...	5/3	2/6	Aloes ...	7.0 Total solids ...	—	2/4
Ergota ...	8.0 Total solids ...	9/8	3/6	Cardam. Comp. ...	6.5 Total solids ...	—	2/6
Gallia ...	30.0 Tannic Acid ...	4/6	2/4	Ferri Perchlor. ...	14.0 Ferric Chloride ...	—	1/8
Gelsemii ...	0.10 Gelsemine (alkaloid) ...	7/4	3/-	Guaiaci Ammon. ...	18.0 Guaiacum Resins ...	—	3/4
Gentiana Comp. ...	18.0 Total solids ...	5/2	2/6	Kino ...	5.0 Kino-tannic Acid ...	—	2/8
Hyoscyami ...	0.04 Hyoscyamine ...	8/-	3/2	Lobelia ...	0.033 Lobeline ...	—	3/-
Jaborandi ...	0.25 Pilocarpine ...	8/6	3/4	Quina ...	1.8 Hydrochlorate of Quinine ...	—	3/6
Jalapa ...	5.0 Resin ...	5/3	2/6	Ammon. ...	1.3 Quinine (Alkaloid) ...	—	3/2
Krameria ...	2.4 Rhatania-tannic Acid ...	5/10	2/8	Senna ...	10.0 Total solids ...	—	2/8
Larici ...	8.0 Total solids ...	5/10	3/4				
Lavandula Comp. ...	2.5 Total solids ...	7/-	3/8				

SOUTHALL BROS. & BARCLAY, BIRMINGHAM.

Samples of any two of the commoner Tinctures will be forwarded to Medical Practitioners and Chemists free on application.

Physicians when prescribing these Tinctures can rely upon their fully representing the Pharmacopœial preparations, and to ensure their being used they should be ordered as follows:—"Tinct. Aconiti (Southall)." SS

ALETTRIS CORDIAL

Uterine Tonic and Restorative.

PREPARED FROM THE ALETTRIS FARINOSA OR TRUE UNICORN.

INDICATIONS.—Amenorrhœa, Dysmenorrhœa, Leucorrhœa, Prolapsus Uteri, Sterility, to PREVENT Miscarriage, &c.

DOSE.—One teaspoonful three or four times a day.

UNRIVALLED AS A UTERINE TONIC IN IRREGULAR, PAINFUL, SUPPRESSED AND EXCESSIVE MENSTRUATION.

It restores normal action to the uterus, and imparts vigour to the entire uterine system.

Where Women have aborted during previous Pregnancies, or in any case where abortion is feared, the Aletris Cordial is indicated, and should be continuously administered during entire gestation.

A. W. HAWTHORN, M.D., Rath House, Dromore, co. Down, Ireland, says:—"Aletris Cordial proved effectual in three cases of obstinate amenorrhœa after the usual remedies had failed."

HAYGARTH M. ADDISON, L.R.C.P., London, N., says:—"Aletris Cordial is simply marvellous in its action. A splendid uterine tonic."

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Dr. W. BERTHELOT, Santander, Spain, says:—"Have found Aletris Cordial very useful in dysmenorrhœa."

Dr. DEPREZ, Monteray, Belgium, says:—"Used Aletris Cordial in threatened miscarriage with perfect success."

Price per bottle, 4s. 6d.

S. H. KENNEDY'S CONCENTRATED EXTRACT OF PINUS CANADENSIS A NON-ALCOHOLIC LIQUID.

A MOST VALUABLE NON-IRRITATING MUCOUS ASTRINGENT.

INDICATIONS.—Albuminuria, Diarrhœa, Dysentery, Night-Sweats, Hemorrhages, Profuse Expectorations, Catarrh, Sore Throat, Leucorrhœa and other Vaginal Discharges, Piles, Sores, Ulcers, Burns, Scalds, Gonorrhœa, Gleet, &c.

When Used as an Injection, to Avoid Staining of Linen, the WHITE Pinus should be Used.

J. MARION SIMS, M.D., New York, says:—"I have used S. H. Kennedy's Ext. Pinus Canadensis with great success in affections of the vagina, cervix uteri, and rectum."

G. T. SWAIL, M.D., Macleesfield, England, says:—"I have used S. H. Kennedy's Ext. Pinus Canadensis in a number of cases of gastro-enteric catarrh, and it has invariably proved effective, even where old stock remedies have failed."

W. R. T. IVES, L.R.C.P., Southampton, England, says:—"I have used S. H. Kennedy's Ext. Pinus Canadensis with great and speedy success in gleet."

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A. D. WESSER, M.D., Edinburgh, Scotland, says:—"I have used S. H. Kennedy's Ext. Pinus Canadensis with much success in catarrhal pharyngitis, also in diphtheria."

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NERVE-TONIC, STIMULANT, AND ANTISPASMODIC.

FORMULA.—Every Fluid Drachm represents FIVE grains EACH Celsy, Coca, Kola, Viburnum, and Aromatic.

INDICATIONS.—Impotency, Spermatophora, Loss of Nerve-Power (so usual with Lawyers, Preachers, Writers, and Business Men), Nervous Headaches, Neuralgia, Paralysis, Dysmenorrhœa, Hysteria, Opium-Habit, Inebriety, Prostatitis, Dyspepsia, and ALL LAGUID or DEBILITATED conditions of the System.—Indispensable to restore a patient after alcoholic excess.

DOSE.—One or two teaspoonfuls three or more times a day, as directed by the Physician.

G. A. SUTLER, M.D., Pomona, S.C., says:—"Having a case of nervous dyspepsia under treatment with the usual remedies without any benefit, I concluded to try Celerina, and am happy to inform you with the best results; I am satisfied it is one of the best nerve-tonics that we possess."

C. M. LITTLE, M.D., Washington, says:—"I have prescribed Celerina for nervous complaints—viz., fits, hysteria, epilepsy, headache from alcoholic excess, with successful results. As a remedy for impotency it has no equal."

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WYLEYS' GELATINE - COATED OVAL PILLS.

(ENGLISH MANUFACTURE.)

Manufactured from selected drugs in our own laboratories, and placed before the medical profession at a moderate price.

SPECIAL COMBINATIONS.

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	Gross Bots.		Gross Bots.		Gross Bots.
Aloin, Belladon., et Strychnin.		Ergotin. Comp.		Ferruginous (Blaud's), 3 and 5 gr.	1s. 8d.
R Aloin $\frac{1}{2}$ gr., Ext. Belladon.		R Ergotin, 1 gr.; Ferri Sulph.			
Rad. Alch. $\frac{1}{4}$ gr., Strychnin.		Exsic., 1 gr.; Ext. Hellebor.,		Hydrarg. et Arsenic. Iodid.	
$\frac{1}{4}$ gr.	3s. 0d.	1 gr.; Ol. Sabinæ, $\frac{1}{2}$ m.; Ext.		(Wyleys'). Each pill equivalent to 5 minims of Donovan's	
		Aloes Soc., 1 gr.	3s. 0d.	Solution	1s. 8d.
Bismuth. Pepsin. Co.		Euonymin et Cascara.		Leptandrin et Podophyllin.	
(Wyleys'). R Bismuth. Nit., 2		R Euonymin 1 gr., Ext. Cas-		R Leptandrin 2 gr., Podo-	
gr.; Pepsin. Porci, 1 gr.; Ferr.		cara $\frac{1}{2}$ gr.	4s. 0d.	phyllin $\frac{1}{2}$ gr.	3s. 0d.
Redact., 1 gr.; Strychnin, $\frac{1}{4}$ gr.	3s. 6d.	Euonymin et Iridin.		Morphinæ Mur., $\frac{1}{2}$ gr.; Atro-	
Cascara Sagrada (Ext.), 2 gr.	2s. 0d.	R Euonymin 1 gr., Iridin 3 gr.	8s. 0d.	pina Sulph., $\frac{1}{4}$ gr.	2s. 0d.
Cascara et Nux Vomica.		Euonymin et Pepsin.		Phosphorus $\frac{1}{2}$ gr., Quininæ	
R Ext. Cascara $\frac{1}{2}$ gr., Ext.		R Euonymin 2 gr., Pepsin 2 gr.	7s. 6d.	Sulph., 1 gr.; Ext. Nuc.	
Nuc. Vomicae $\frac{1}{2}$ gr., Gingerin		Ferri Hypophosph. Comp.		Vom., $\frac{1}{2}$ gr.	3s. 0d.
$\frac{1}{4}$ gr.	2s. 6d.	(Wyleys'). Each pill represents one fluid drachm of		Podophyllin, Belladon., et	
Cascara, Podophyllin et Nux		Syrup of the Hypophosphites,		Strychnin.	
Vomica.		and contains iron, lime, soda,		R Podophyllin Resin $\frac{1}{2}$ gr.,	
R Ext. Cascara 2 gr., Podo-		potash, manganese, quinine,		Ext. Belladon. Rad. Alch.	
phyllin $\frac{1}{2}$ gr., Ext. Nuc.		and strychnine in combination		$\frac{1}{4}$ gr., Strychnin. $\frac{1}{4}$ gr. ...	3s. 0d.
Vomicae $\frac{1}{2}$ gr.	3s. 0d.	with hypophosphorous		Podophyllin et Pepsin.	
Caulophyllin et Pulsatilla.		acid	2s. 6d.	R Podophyllin $\frac{1}{2}$ gr., Pepsin	
R Caulophyllin 2 gr., Ext.		Ferri Quininæ et Strychninæ		2 gr.	5s. 0d.
Pulsatillæ Alch. (Wyleys')		Phosph. (Wyleys').		Potass. Permang., 1 gr., 2 gr.	2s. 0d.
$\frac{1}{2}$ gr.	5s. 0d.	Representing Easton's Syrup,		Zinci Valer. et Asafœtidæ,	
Digitalis (Pulv.), 1 gr.; Pil.		each pill being equivalent to		aa 2 gr.	2s. 6d.
Hydrarg., 2 gr.; P. Scillæ,		phosphate of iron, 1 gr.; phosphate of quinine, 1 gr.; phosphate of strychnine, $\frac{1}{2}$ gr. ...	3s. 0d.		
2 gr.	1s. 8d.				
Ergotin. (Bonjean's), 3 gr.	3s. 0d.				

MEDICAL OPINIONS.

TALFOURD JONES, Esq., M.B. Lond., &c., Honorary Consulting Physician (late Physician) to the Brecon County and Borough General Infirmary: "During the past two years I have frequently prescribed your gelatine-coated oval pills, and I have formed a high opinion of them. I believe them to possess every good quality, and I am not acquainted with any made in England that are in form, appearance, and efficacy equal to yours."

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J. FARMER, Esq., M.R.C.S.E., L.S.A., &c., BRACKLEY, writes: "I consider them to be a great boon to the profession who have to prescribe and the patients who have to swallow them. I have prescribed them for more than a year and a half, and have had every reason to be satisfied with the accuracy and speediness of their action. Your list of formulae is comprehensive and well selected, and I firmly believe the ingredients used are of the best in quality and strictly reliable."

W. CALWELL, Esq., L.R.C.P. Edin., L.R.C.S. Edin., &c., WELLINGTON, says: "Having used your gelatine-coated pills for some years, I cannot speak too highly of their effective qualities and beautiful appearance."

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BENGER'S PREPARATIONS OF THE NATURAL DIGESTIVE FERMENTS AND SPECIAL FOODS FOR INFANTS AND INVALIDS.

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THE LANCET, March 25th, 1882.—"Mr. Benger's admirable Preparations."

THE MEDICAL PRIMER, June 14th, 1882, says: "Few modern improvements in Pharmacy have done so much as Benger's Preparations to assist the physician in his treatment of the sick."

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1. LIQUOR PANCREATICUS (BENGER).

In 4, 8, and 16 oz. Bottles.

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Containing the digestive principles (proteolytic and amylolytic) of the pancreas in a state of great activity. It is used—
(1)—For the preparation of peptonised or partially digested foods, such as milk, soups, beef-tea, &c., the administration of which has been attended with such great success in the treatment of various diseases. *Simple directions for preparing these accompany each bottle.*

(2)—As an addition to various articles of invalids' diet, such as gruels, bread-and-milk, soups, &c., rendering them much more easy of digestion.

"It is of this preparation that I must be understood to speak in what I have now to say on the production of artificially digested food."—Lumleian Lectures, by Sir Wm. Roberts, M.D., F.R.S.

2. BENGER'S PEPTONISING POWDERS.

{(Pulvis Pancreaticus Alkalinus—Benger.)}

One powder will peptonise a pint of milk, gruel, soup, &c., in 10 to 15 minutes. In Boxes of 12 Powders. Retail, 2s. 6d.

3. LIQUOR PEPTICUS (BENGER).

In 4, 8, and 16 oz. Bottles.

AN EXCEEDINGLY ACTIVE FLUID PEPSINE. Dose: One or two teaspoonfuls in a wineglass of water, wine, or weak spirit-and-water, with meals. It is without disagreeable taste, and is best taken during the meal.

"Those of you who from past experience have lost faith in Pepsine may be encouraged to try again the more active preparations which are now within our reach. The Liquor Pepticus prepared by Mr. Benger is a digestive agent of extraordinary power."—Sir Wm. Roberts, M.D., F.R.S., at the Northwich Meeting of the British Medical Association.

4. BENGER'S PEPTONISED BEEF JELLY

Sealed Tins, 2s. Will keep in any climate.

A DELICATELY FLAVOURED, CONCENTRATED, PARTIALLY DIGESTED, AND SOLIDIFIED BEEF-TEA, containing, besides the salts and flavouring principles, much of the fibrin or flesh-forming elements of the beef in a soluble form, fit for immediate absorption. On this account it constitutes an exceedingly valuable and delicious quick restorative. It can be taken by teaspoonfuls, cold as a jelly, or dissolved in a little hot water, as a concentrated beef-tea. It is also used to fortify or enrich ordinary beef-tea, soups, &c. It affords to invalids, when travelling, a ready and convenient form of concentrated nutriment.

"It is a most valuable form of concentrated food."—THE LANCET, March 25th, 1882.

"We have found it invaluable for old people whose digestive powers are feeble, and also in convalescence from acute diseases."—LONDON MEDICAL RECORD, March 15th, 1882.

BENGER'S PEPTONISED CHICKEN JELLY, in similar tins, 2s. each.

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(FOR INFANTS AND INVALIDS). Tins, 1s. 6d., 2s. 6d., 5s.

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(PANCREATISED FARINACEOUS.)

A great improvement on the various forms of Liebig's Food. When mixed with warm milk the pancreatic ferments render the farinaceous matter soluble, and reduce the caseine to the same digestible condition in which it exists in human milk, so that hard masses of curd cannot be formed in the stomach. Experience has shown that delicate children and adults with weak digestions can enjoy and retain this food when all others disagree.

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Tins, 1s. 6d., 2s. 6d., and 5s. each.

N.B.—To guard against imitations, Physicians should specify **BENGER'S PREPARATIONS**.

Benger's Preparations may be obtained through all the leading Wholesale and Retail Houses, or of the Manufacturers:

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With the compliments of
THE MALTINE MANUFACTURING COMPANY, LIMITED.



**MALTED
 BARLEY,
 WHEAT,
 and OATS.**

**30 PER CENT.
 PURE**

**NORWEGIAN
 COD-LIVER
 OIL.**

MALTINE WITH COD-LIVER OIL.

Rationale of the Combination.

The great success which has attended the use of this preparation is due to the observance of a well-known principle of dietetics in the choice of Maltine as a menstruum for the oil.

The Digestion of Fats, it has been demonstrated, is greatly promoted by their incorporation with another food, which then acts as an attenuant of the fat, facilitating its digestion and absorption. Obviously this principle is utilised to the fullest extent when cod-liver oil is combined with a food so well adapted for this purpose as Maltine.

Advantages of Maltine as a Menstruum for the Oil.

Its consistence is very convenient, as it is of almost the same specific gravity as the oil, and makes a more perfect combination than the thick, molasses-like extracts, besides being more pleasant to take. We may say we were the first to appreciate the importance of combining Cod-Liver Oil with Malt Extract; and by virtue of elaborate machinery and perfected processes the combination is more intimate than in any other preparation of oil and malt.

THE RESULT.

Maltine with Cod-Liver Oil is—

Digestible.

"Patients who are unable to tolerate the purest and most carefully prepared cod-liver oil can readily digest and assimilate it when mixed or combined with Maltine."—**BRITISH MEDICAL JOURNAL.**

"Fulfills all the conditions necessary for perfect digestion."—**MEDICAL PRESS AND CIRCULAR.**

Palatable.

Combined with Maltine, cod-liver oil is no more objectionable to the palate than butter is when spread on bread.

"As regards taste, that of the cod-liver oil is almost entirely concealed, and what suspicion there is of it is not at all unpleasant."—**BRIT. MED. JOUR.**

"An elegant and palatable preparation."—**MED. PRESS AND CIRC.**

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Maltine with Cod-Liver Oil never separates—in this respect differing from emulsions that are made with water, gums, &c., or extract of malt of inappropriate consistence.

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There is an obvious economy in prescribing a preparation in which the attenuant of the oil is a food "rich in nutritive matters," rather than the plain, indigestible oil or a mixture of oil, water, and chemicals.

Highly Nutritive.

The nutritive value of this combination is far in excess of any other preparation of cod-liver oil; as it contains, besides the fat-forming principles of the oil, the abundant phosphates, albuminoids, and carbohydrates extracted from Wheat, Oats, and Barley.

The word "**MALTINE**" is our Registered Trade Mark. In prescribing please write, "**MALTINE with COD-LIVER OIL (The Maltine Manufacturing Co.)**"

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PROFESSIONAL OPINIONS ON CREAM OF MALT

(OPPENHEIMER'S).

From M.R.C.S., L.S.A., Dudley:—"For some years past I have been on the look out to find some really palatable form of Cod Liver Oil, and have tried the numerous emulsions *with which the medical papers swarm*, hitherto without success. I have tried your Cream of Malt with Cod Liver Oil, Hypophosphites of Lime, &c., with the greatest success, and find that it answers all the requirements of the best Cod Liver Oil, with this important difference, that it causes no nausea and disgust to the most delicate stomach."

From L.R.C.P., L.M., L.R.C.S., Fell. Brit. Gynæ. Soc., Devonport:—"I gave your Cream of Malt to a very delicate girl whose appetite had completely failed, and found that her stomach retained it easily and her languished and low-spirited disposition gave way to a brighter countenance and more cheerful disposition. She continued taking it for some time, and is now able to take meat food and walk out a little. I attribute this speedy improvement in the activity of the digestive organs to the stimulating and feeding effect of the Cream. The Cream is a great improvement on the simple mixtures of Malt with Cod Liver Oil, which are glutinous, and therefore swallowed with difficulty and nausea, and when mixed with the liquid allows the Oil to separate in globules."

From M.D., M.R.C.S.:—"Your Cream of Malt and Cod Liver Oil supplies a standing want. I prescribed it in a very severe case of eczema in a young child with best results, the mother saying he took it greedily. Also in the case of a young man, in a case of pleuro-pneumonia, who could never take Cod Liver Oil in any form before now. He says yours has done him so much good; he would not be without it on any account."

From M.R.C.S., L.R.C.P., &c.:—"I gave your Cream of Malt to a patient of mine, who has hitherto been unable to take Cod Liver Oil in any form whatever. I am happy to say she has been able to take your preparation without the slightest inconvenience."

From M.D., M.R.C.S., Kilmarnock:—"I have used your Cream of Malt with marked success, it being pleasant to take and more easily assimilated than any other preparation I have seen."

From M.D., Minehead, Somerset:—"I gave your Cream of Malt with Hypophosphites to a phthisical case, and I consider it a beautiful sample of pharmacy."

From M.R.C.S., Plymouth:—"I have formed a very favourable opinion of your Cod Liver Oil Cream. Patients seem to take it better than all similar preparations in the market."

From M.D., Maidstone:—"I have used your Cream of Malt with great success, my patient being able to take it without the least nausea or digestive derangement, although he cannot take ordinary Cod Liver Oil preparations. He has very much improved under its use."

From M.D., L.R.C.P., &c., Midhurst:—"I have tried your Cream of Malt in a case of chronic dyspepsia, aged fifty-six. The man's distaste for food and intolerance for solids kept him in a state of inanition. He took your preparation in divided doses at first, and after three days one tablespoonful twice a day. The sickness was soon overcome, and he returned to his occupation. The Cream of Malt has effected what no other medical condiment or diet had hitherto accomplished, and will prove of great value in cases where the powers of assimilation have become either temporarily or chronically impaired."

From M.R.C.S., &c., Dudley:—"Since writing you I have used your Cream of Malt and Cod Liver Oil in a case of recovery from pleurisy with effusion. The patient was greatly emaciated and had a consumptive tendency. The ordinary Cod Liver Oil could not be kept down. Other compounds of Cod Liver Oil and Malt were tried, together with different emulsions, but with like result. Your Cream was tried and was found to be easily digested and assimilated, very palatable, and gave perfect satisfaction, the patient gaining weight rapidly, which is the true test as regards its efficacy. I shall prescribe no other."

From M.B., M.D., L.R.C.S., &c., Bournemouth:—"I have given your Cream of Malt in my own nursery with good effect, and the younger children take it readily. Its composition is invaluable as containing the phosphites in intimate combination with Cod Liver Oil and Malt."

From M.R.C.S., L.S.A., Turner's Hill, Sussex:—"I consider your Cream of Malt very valuable, as it leaves no nausea or unpleasant taste, showing that it is easily assimilated. It is a great advantage that it should form such a perfect emulsion with water."

From L.R.C.S., L.R.C.P., Uttroter:—"I gave your Cream of Malt to a little girl aged nine, who was suffering from acute inflammation of the brain, and found it to be of great benefit."

From M.D., L.R.C.P., Folkestone:—"I am convinced your Cream is a very valuable preparation, and I can say generally that I have found all your preparations to be most excellent."

From L.R.C.P., L.R.C.S., Worcester:—"I believe your preparation to be of very great value. I gave it to several patients, and found they gained rapidly in weight, with the accompanying general improvement. I may add it is unusually palatable and pleasant to take."

From M.B., C.M., M.D., Harrogate:—"Your Cream of Malt is an excellent preparation. It is at once palatable and easily digested, and it is sure to become much used."

From M.D., M.B., C.M., L.S.A., Liverpool:—"I used your Cream of Malt in a case of chronic bronchitis in a lady of seventy, where the growing general debility and wasting seemed due to a case of bronchitis; after taking about one pound of your Cream of Malt the lady's strength increased and the wasting ceased."

From M.D., M.R.C.S., L.M., &c., Plymouth:—"Your Cream of Malt has done much good as a restorative in the case of a patient exhausted by night watching and bronchial irritation."

From J.P., L.R.C.P., L.R.C.S., L.M., &c., Haras:—"You have succeeded in giving the Profession a very elegant and valuable preparation of Cod Liver Oil and Malt. I have tried it in cases of long-exhaustive illnesses with excellent effect. I consider your Cream of Malt a first-rate preparation."

From L.R.C.P., M.D., &c., St. Leonards:—"I gave your Cream of Malt to a weakly child recovering from porridge, with considerable success. The child took it well, and has since become quite convalescent."

From J.P., F.R.C.S., &c., Rothes, Elgin, N.B.:—"I have formed a very favourable impression of your Cream of Malt and Cod Liver Oil. I tried it in a case of wasting in a child, and one bottle had considerable effect. The child liked it, and even cried for it. I shall use it extensively in future."

Prepared only by **OPPENHEIMER BROS. & CO.,** Manufacturing Chemists,
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Suitable Presents for Medical Men.

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B. W. & Co.'s Hypodermic and Medical Pocket Cases and Medical Diaries supplied with Tabloids at Special Christmas Prices.

To those who wish to make Christmas Presents to Medical Men we offer to supply until January, 1889—

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AT HALF PRICE—VIZ., 2s. POST FREE.

"And as good as the best."

This year's diary is a great improvement on that of 1888, of which the Medical Journals report most favourably.

The MEDICAL PRESS AND CIRCULAR, Dec. 28th, 1887, says:—"A new form of Medical Diary.—We have received a copy of the new style of medical diary published by Messrs. Burroughs, Wellcome, & Co. It is an improvement in many respects upon the usual model, & liberal space being allotted to "cash, accounts," patients' and nurses' addresses, memoranda of wants, loans, &c., together with obstetrical and other engagements. It is printed on excellent paper, and is altogether a very convenient and useful publication."

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B. W. & Co.'s Hypodermic Pocket Cases, fitted complete with syringe, needles, mortar and pestle, and 6 tubes of Tabloids, selected from list appended, for 10s. Case as annexed, with 12 tubes, 15s.



The Complete (B. W. & Co.) Hypodermic Pocket Case can be carried in the vest pocket, and contains space for syringe, needles, mortar and pestle, or tiny spoon (for crushing the Tabloids), also with room for from one to twenty tubes of the Hypodermic Tabloids.

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Aconitin ...	1-260 gr.	Homatropin (unirritating) 1-250 gr.
Aloin ...	1-2 gr.	Hydrag. Feroblor. 1-60 & 1-30 gr.
Apomorphine ...	1-15 & 1-10 gr.	Hyoscyamin ... 1-80 & 1-10 gr.
Atropin Sulph. ...	1-150, 1-100, & 1-60 gr.	Hyoschine ... 1-800 & 1-75 gr.
Caffein Sodio-Salicylate ...	1-2 gr.	Morphine Bi-Meconate 1-8, 1-6, 1-4, & 1-3 gr.
Cocaine ...	1-4 gr.	Morphine Sulphate 1-12, 1-8, 1-6, 1-4, 1-3, & 1-2 gr.
Colchicin ...	1-6 & 1-2 gr.	Morphine & Atropin combinations.
Cornutin ...	1-100 gr.	Pilocarpin ... 1-10, 1-3, & 1-2 gr.
Curare ...	1-60 gr.	Quinine Hydrobromate 1-2 gr.
Digitalin ...	1-100 gr.	Sclerotinic Acid ... 1-2 & 1 gr.
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Eserin ...	1-100 gr.	Strychnine 1-150, 1-100, & 1-50 gr.

Hypodermic "Tabloids" of the principal drugs and alkaloids supplied to the Medical Profession in tubes, containing from 12 to 20 Tabloids, at 12s. per doz. tubes. Send for list of B. W. & Co.'s Hypodermic Pocket Cases.

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The "Tabloids" furnish all the advantages of pills, with none of their disadvantages. They contain no admixture whatever, and do not crumble or harden with time. They are made with the purest of drugs, and their action can always be relied upon with absolute certainty. We also offer on the same basis the following

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These Tabloids are made by compressing a small uniform and appreciable dose of medicine, triturated with sugar of milk, into lenticular form. Brunton has pointed out that this method of giving medicine has "the very great advantage that the desired effect can be produced with greater certainty, and with less risk of an overdose being taken." The Tabloids of Triturated Drugs are easier to swallow than pills, and as the sugar of milk will dissolve as soon as it enters the stomach they are certain to be disintegrated at once. They are pleasant to take.



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Price to the medical profession, 8d. per bottle of 100 of the following Tabloids. Retail price, 1s.

Aconite Tinct. ...	1 min.
Arsenious Acid ...	1-100 & 1-50 gr.
Belladonna Tinct. ...	1 min.
Calcium Sulphide ...	1-10 gr.
Opium Tinct. ...	1 min.
Digitalis Tinct. ...	1 min.
Hydrag. Feroblor. ...	1-100 gr.
Hydrag. cam. Crete (Grey Powder) ...	1-3 gr.
Hydrag. Subchlor (Calomel) ...	1-10 gr.
Hyoscyamus Tinct. ...	1 min.
Nux Vomica Tinct. ...	1 min.
Tinct. Camp. Co. (Paragoric) ...	2 min.

Price to the medical profession, 8d. per bottle of 50 of the following Tabloids. Retail price, 1s.

Anti-Constipation—Aloin 1-5 gr., Strych. 1-80 gr., Belladonna. 1- 8 gr., Ipecac. 1-16 gr.	
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Atropin Sulph.....	1-100 gr.
Digitalis	1-100 gr.
Hyoscyamin Resin.....	1-8 gr.
Hydragr. Iod. Bah.	1-20 gr.
Hydragr. Iod. Vir.	1-8 gr.
Morphine Sulph.....	1-20 & 1-8 gr.
Opium Tinct. (Laudanum) ..	2 min.
Pilocarpin Mur.	1-20 gr.
Podophyllin Resin	1-4 gr.
Santonin	1-2 gr.
Strophanthus Tinct.	2 min.

B. W. & Co.'s Leather Pocket Case, arranged to contain 10 Tubes of above Tabloids, 1s. 6d. empty; filled 5s., Christmas price 4s.

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The innumerable reports from Physicians of the brilliant results obtained justifies the statement that in almost every case where Cod-liver Oil is indicated, the combination of Cod-liver Oil with the Hypophosphites as prepared in Scott's Emulsion is infinitely superior.

Physicians who have never tried this Emulsion, or who have been induced to try something else in its stead, are asked to favour us by sending for a sample, which we will send free and carriage paid, and we know they will always use it in preference to plain Cod-liver Oil or other any preparation.

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Containing 3 PER CENT. of PURE NITRITE of ETHYL, in absolute Alcohol and Glycerine.

A solution of this character is strongly advocated by Dr. Leech, Professor of Therapeutics, Victoria University, in an article to the *Manchester Medical Chronicle*, December, 1888; its advantages over the *Spiritus Etheris Nitrosi* being that it is of definite strength, stable, and less disagreeable. As to its pharmacological properties, Dr. Leech observes that they are of the "highest therapeutic value." "Like other nitrites," he says, "it causes dilatation of the vessels, and decreases arterial tension. In cases of *dyspnoea*, where with high tension the heart's power is beginning to fail, nitrite of ethyl often acts like a charm, and this is especially the case if, as not unfrequently happens, bronchial spasm complicates the cardiac condition."

DOSE:—20 to 80 minims, added to water immediately before administration.

It is important to bear this in mind, as solution of nitrite of ethyl decomposes quickly when in contact with water, and should not, therefore, be dispensed mixed with water, but separately.

Supplied in 2 oz. & 4 oz. Stopped Bottles. Price to the Medical Profession, 1/3 & 2/-; by post, 1/6 & 2/3.

JAMES WOOLLEY, SONS, & CO., Manufacturing Pharmaceutical Chemists,
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The great value of Cascara Sagrada Bark as a tonic laxative in cases of habitual or obstinate constipation is now almost universally recognised by the medical world, and there is perhaps no remedy of recent introduction which has grown so rapidly in favour with the profession. The nauseous and persistent bitter so characteristic of the ordinary preparations of Cascara is, however, a great drawback to its use, and we have therefore introduced our PATENT CASCARA CHOCOLATE BONBONS, in which by a delicate patented process an almost tasteless extract of the drug is produced in such a form that it can be combined with chocolate and sugar, the development of the bitter taste alluded to above being almost entirely prevented without interfering with the efficacy of the remedy. These Bonbons are by far the most palatable and elegant form for administering Cascara yet introduced. Each tablet or bonbon contains a dose equal to twenty minims of the fluid extract, and they are of such a shape that they can be easily divided if a smaller dose be desired. For children and invalids they will be found invaluable. In Boxes, 1s. 9d. each; 18s. per dozen.

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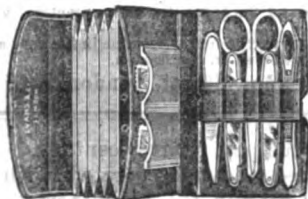
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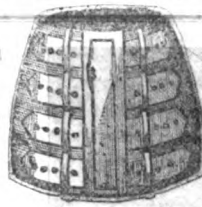
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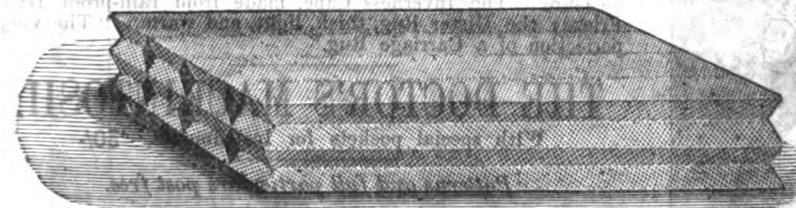
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6. By the addition of tubes it will raise one part of the body higher than the rest.
7. By the temporary removal of one or two tubes it affords room for the introduction of a bed-pan.

8. It can be inclined to any angle (even when filled with water) to suit the condition of the patient.
9. It is free from noise and surging, so disagreeable to the invalid on changing his position on a water-bed.
10. In case of injury to a tube it can be withdrawn, and a fresh one substituted at a trifling cost, and without loss of time; whereas the ordinary water-bed, if injured in any part (from being in one compartment), is rendered useless.
11. In the treatment of invalids, especially the insane, who are paralysed, and have no control over their evacuations, they cannot lie in a pool of wet, the fluid passing away between the tubes.

ITS ADVANTAGES OVER ORDINARY WATER OR AIR BEDS ARE AS ABOVE.



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"Consulting Surgeon to the Royal Sea Baths Infirmary, Margate."

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"DEAR SIRS,—I am very pleased with the 'Ranelagh' sent yesterday, and should like you to send a No. 3 as well.—Yours very truly,

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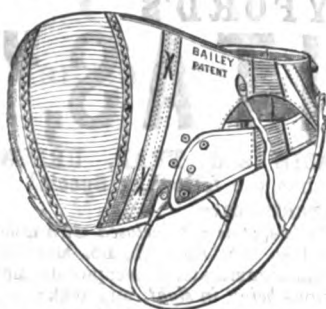
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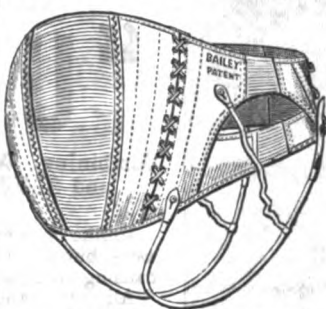
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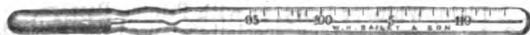
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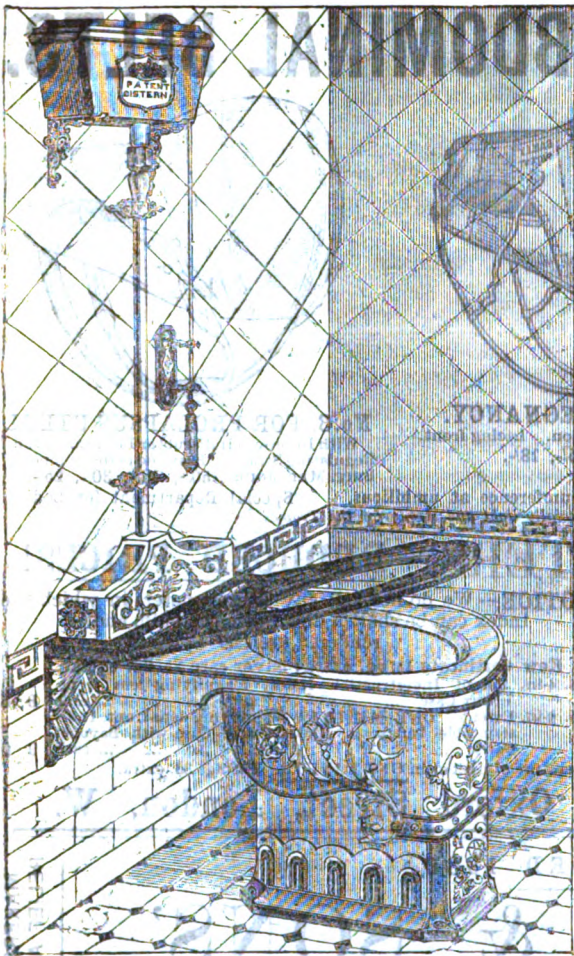
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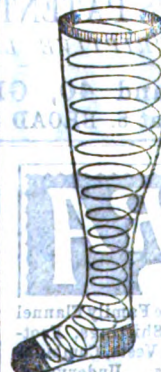
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Chest Protectors, Vests, Kneecaps, Sleeping Socks, Gout Gloves, &c., made from Pure Natural Wools, Fine Wool, and Scarlet Wool, in its natural state, not woven but enclosed in a Reticulated or Net-shaped Tissue, combining Warmth, Purity, Lightness, and Ventilation.

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Messrs. CLAYTON BROS. beg to inform the public that their celebrated Waters, which have been so largely appreciated on account of their great superiority, are supplied at the lowest possible prices, consistent with the finest quality.

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Made from pure Jamaica ginger. A sparkling non-alcoholic stimulant. Warming and exhilarating. An elegant and delicious beverage adapted for use at all times. Good tonic. Excellent restorative. Unique in flavour and aroma. In appearance resembling champagne. An unrivalled summer and winter drink. Supplies something of the needful to those who find the change from intoxicants to non-intoxicants rather a trying ordeal, and makes the invitation to "take drink" still agreeable.

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Deliciously refreshing. Prepared in a manner which preserves all the peculiar delicate flavour of the fruit.

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Bright and sparkling. An excellent digestive. Has all the flavour and aroma of the finest Jamaica ginger.

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Pleasant refreshing dinner drink. Equals the imported natural Nassau. An admirable table water. Corrects acidity, promotes digestion, slightly aperient.

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Antacid, Alterative. Good for dyspepsia. Each bottle contains five grains of anhydrous carbonate of soda, which is the proper quantity for ordinary use, but can be increased if desired.

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Antacid and diuretic. Each bottle contains eight grains of carbonate of potass. It is now being largely prescribed by the Medical Profession for rheumatic and gouty affections, also for dyspepsia.

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Powerful diuretic. Each bottle contains three grains of carbonate of lithia. Particularly recommended for chronic cases of rheumatism and gout.

All ingredients, chemical and essences, used in the preparation of the above are of the finest quality obtainable. One trial will ensure perpetual usage.

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MESSRS. BENNETT & CO., late of 35, Theobald's-road, W.C., beg to inform their customers that owing to the great increase in their business they have been obliged to move into more commodious premises—viz., to the above address—where a large assortment of all kinds of Medical Bottles and Druggists' Sundries will be kept in Stock. Please note the reduction in price.

Including Corks.

	Per gross.		Per gross.
3 and 4 oz., at 7s. 6d.		1 1/2 oz., at 4s. 0d.	
6 " 8 " " 8s. 6d.		1 " 4s. 6d.	
10 " 12s. 6d.		1 1/2 " 5s. 6d.	
12 " 14s. 0d.		2 " 6s. 0d.	

Reduction without Corks.

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COMPANY (I. ISAACS & CO., Proprietors, London Warehouse: 25, Francis-street, Tottenham-court-road, London, W.C. Stores: Great Northern Railway, King's-cross) have REDUCED their PRICES for Dispensing Bottles and Phials as follows:—

3 and 4 oz., any shape, plain or graduated...	7s. 0d. per gross.
6 and 8 oz. " " " " " " " "	8s. 0d. " "
1 oz. White Moulded Phials (Ordinary) ...	3s. 0d. " "
1 oz. " " " " " " " "	3s. 6d. " "
1 1/2 oz. " " " " " " " "	4s. 3d. " "
2 oz. " " " " " " " "	4s. 9d. " "
1/2 oz. White Moulded Phials (Best) ...	4s. 0d. " "
1 oz. " " " " " " " "	4s. 6d. " "
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2 oz. " " " " " " " "	6s. 0d. " "

Our New CRYSTAL BLUE-TINTED BOTTLES are the HANDSOMEST made, being SPLENDID COLOUR and CLEAR GLASS.

We supply them:—

3 and 4 oz., any shape, plain or graduated... 8s. 0d. per gross.

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Established 50 Years.

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No. 8, Great
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BROTHERS,
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GREEN FLINT.
(Flat, Direct Square, and
other Shapes.)

3 oz. ...	7/-
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NET FREE ON

WHITE VIALS
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1/2 oz. ...	3/6
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RAILS IN LONDON.

DISPENSING BOTTLES.

DISPENSING BOTTLES AND PHIALS.

The Islington Glass Bottle Company

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3 and 4 oz., plain or graduated ...	7s. 0d. per gross.
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1 oz. White Phials (Ordinary) ...	3s. 0d. " "
1 1/2 oz. " " " " " " " "	3s. 6d. " "
2 oz. " " " " " " " "	4s. 3d. " "
2 1/2 oz. " " " " " " " "	4s. 9d. " "

6 and 8 oz. patent bottles requiring no labels 9s. per gross.

Prompt attention to all orders, town or country.

Please note our only address is

153 Upper Thames Street, City, London.

Established upwards of fifty years.

Bankers: London and Westminster Bank.

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For Asthma, &c.; Cubes in Savar's Cigarettes.

These Capsules, of Membrane, contain each 15 drops Maranhaz Copaiba Balsam, or 10 drops Purest Yellow English Sandal Wood Oil. The efficacy of these valuable medicines is due to the ABSOLUTE Purity of the Balsam or Oil, and to the very GRADUAL solvability of the Membrane as compared with Gelatine. Copaiba 18s. doz., Sandal 36s. doz. EVANS, LEBCHER, & WEBB, London, EVANS, SONS, & CO., Liverpool.

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Dr. Alexander's celebrated American Calf Vaccine. Tubes, 1s. and 2s.; Points, 6d. each. Fresh Lymph sent free for failures on receipt of stamped addressed envelope.

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COLLECTED FROM RELIABLE SOURCES AND FRESH

EVERY WEEK.

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Dr. Husband's Selected Capillary Tubes

for VACCINE LYMPH.

"We have no hesitation in strongly recommending them. The tubes are excellent in calibre and strength, most reasonable in price, and well adapted for practical employment."—THE LANCET, February 3rd, 1872.

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Trade Mark.



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Sole Agents for

DR. WARLWORTH'S CALF VACCINE.

Tubes, 2s. each. Half Tubes, 1s. each. Pomade in Vials, 5s.

HUMAN VACCINE (from healthy children only, microscopically examined and source quoted).—Three tubes, two-thirds full, 5s. Tubes, one-third full and Lancet Charged Points, 1s. each; Pin Points, 1s. 1d. each. Eighteen Charged Small Points, 5s.

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Vaccination from the Calf daily from 11 to 12 o'clock.

Reduced price of Calf Lymph (daily fresh).

Tubes { Large ...	2s. each or 3 for 5s. 6d.
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**PRICE'S PATENT CANDLE COMPANY,
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NOTTINGHAM PATENT STEAM DISINFECTING APPARATUS.

Patentees and Sole Manufacturers—

**GODDARD, MASSEY, & WARNER,
ENGINEERS, NOTTINGHAM.**

The advantages of our New Steam Disinfecting Apparatus are:—

- 1st.—Its simplicity. A labourer can work it after a few trials.
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- 3rd.—Condensation on the sides is impossible, because they form part of the boiler.
- 4th.—Condensation on the doors is also impossible, because they are made hollow and connected to the boiler.
- 5th.—Condensation on the articles is impossible, because they are heated by a current of hot air.
- 6th.—Hot air replaces the steam before the doors are open, so no steam escapes into the room.
- 7th.—The cost of working is very small.
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Further Particulars and Testimonials upon application.

The NOTTINGHAM SELF-REGULATING DISINFECTING APPARATUS by GAS.

THE BEST STOVE EVER INTRODUCED FOR DISINFECTING BY HOT AIR.

Book of Testimonials, with Prices, on application.

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The Association has no Share Capital and cannot be used for purpose of profit.

The Members of Council give their services gratuitously.

PRESIDENT:

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THE OBJECTS OF THE ASSOCIATION ARE:—

To provide its Members, at moderate cost, with such advice and supervision as shall ensure the proper sanitary condition of their own dwellings. Apply to the Secretary,

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*THE MOST POWERFUL OXIDANT
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INODOROUS: ITS EFFECTS CAN BE VERIFIED.

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INJECTION IN MIDWIFERY.**

**A CLEANSING AND STIMULATING GARGLE
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**AN ANTISEPTIC LOTION TO FOUL SURFACES AND
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**ITS CHANGE OF COLOUR INDICATES ITS ACTIVITY
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**LEAVING NO TASTE, CONDY'S FLUID IS INVALUABLE
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Entries may be made to Lectures or to Hospital Practice, and special arrangements are made for students entering in their second or subsequent years; also for Dental Students and for qualified Practitioners.

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The SEVENTH COURSE will commence on THURSDAY, JAN. 10th, 1889.

The LECTURES will be delivered on THURSDAYS, at 4 o'clock as under:—

Jan. 10	On the Materia Medica and Therapeutics of agents employed in the treatment of Diseases of the Skin.	Dr. Dow.
" 17	Ditto	Dr. Dow.
" 24	Ditto	Dr. Dow.
" 31	On Herpes, Pemphigus, and Roseola.	Dr. Bowie.
Feb. 7	On Eczema and Lichen.	Dr. Bowie.
" 14	On Psoriasis, Acne, and Rosacea.	Dr. Bowie.
" 21	On Dermato-Syphilis and Leprosy.	Dr. Bowie.
" 28	On the Erythema.	Mr. Milton.
Mar. 7	On the Atrophie.	Mr. Milton.
" 14	On Lupus: I. Lupus Erythematosus. II. Lupus Vulgaris. III. Lupus Verrucosus.	Dr. Dockrell.
" 21	On Tinea: I. Trichophytina. II. Tinea Favosa. III. Tinea Versicolor.	Dr. Dockrell.
" 28	On Pustular Diseases: I. Folliculitis Barbae. II. Impetigo. III. Impetigo Contagiosa.	Dr. Dockrell.
April 4	On Functional Disorders of Cutaneous Glands.	Dr. Dockrell.

The Lectures will be practical, and illustrated by cases. Clinical Instruction will be given, in the Out-patient Department, every afternoon at 2.

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1st December, 1888.

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Established 1867. 48,000 families have been provided by Mr. Wilson with his own Resident Nurses, recommended by the most eminent of the Medical Profession, continually Nursing under their instructions, guarantees of Efficiency and Respectability.

Queen Charlotte's Lying-in Hospital

and MIDWIFERY TRAINING SCHOOL, Marylebone, N.W.—Medical Pupils admitted to the Practice of this Hospital. Midwives and Monthly Nurses trained. The Midwives are specially prepared for the Examination of the Obstetrical Society, and the fees are paid by the hospital for those who obtain the Society's diploma. Certificated Midwives and Monthly Nurses, also Wet Nurses, supplied on application to the Matron.—For rules, fees, &c., apply to G. OWEN RYAN, Secretary.

The London Association of Nurses.

Chief Office—123, New Bond-street, W. Branch Office—86, Kensington-park-road, S.E. Supplies superior Hospital-trained Monthly, Mental, Medical, Surgical, Fever, and Small-pox Nurses. Also Male Attendants and Medical Rubbers. Rooms are provided for Invalids where patients can be received under the care of their own physicians.—Telegraphic address, Firth's Association, London.

General Nursing Institute,

5 and 4, Henrietta-street, Covent-garden, W.C.

Established 1862. Solely under Medical Direction.

HOSPITAL-TRAINED NURSES for every description of Medical, Surgical, Mental, and Midwifery—can be obtained at this Institute, on application to the Secretary or Lady Superintendent, at a moment's notice, being resident in the Home.

MALE ATTENDANTS and NURSES specially for Fever cases sent to all parts. Telegraphic address, "Nursing Institute, London."

Grimsby and District Hospital Nursing

HOME.—Medical, Surgical, Mental, and Monthly NURSES can be obtained at this Institute, on application to the Lady Superintendent at the shortest notice, and for any distance, at charges as low as possible, consistent with thorough efficiency.

ROYAL FREE HOSPITAL.

TRAINED NURSES' INSTITUTE.

Gray's-inn-road, London, W.C.

The Royal Free Hospital supplies on the shortest possible notice thoroughly Efficient MEDICAL and SURGICAL NURSES. Applications to be made to the Lady Superintendent.

Argyll Baths, 10A, Argyll-place,

Regent-street.

Warm Baths, Electric, Sulphur, Medicated, and Douche Baths.—Forms on application to Manager.

DROITWICH.**St. Andrew's Brine Baths. The world-**

renowned cure for Rheumatism, Rheumatic Gout, Sciatica, Lumbago, Paralysis, Kidney Diseases, Nervous Complaints.—For particulars, apply Secretary.

HYDROPATHY.**BEN RHYDDING, YORKSHIRE.**

Resident Physician—Dr. TOWNART (late of Smedley's).

New Turkish, Russian, and Plunge Baths. Compressed Air Bath. Massage and Electricity. Full-sized covered Tennis and Racquet Court. Terms 2s to 4 guineas a week. For prospectus, apply to Manager.

HYDROPATHY.**S MEDLEY'S—MATLOCK.**

Railway Station—MATLOCK BRIDGE.

Telegraph Office—MATLOCK BANK.

Drs. HUNTER and CORKHILL.

TURKISH, RUSSIAN, and other BATHS. WEIR MITCHELL METHOD and ELECTRIC TREATMENT.

TREATMENT OF INEBRIETY.**DALRYMPLE HOME.**

THE OHDARS, BICKMANSWORTH, HERTS.

For Gentlemen under the Act and privately. Two to five guineas. Apply to R. W. BRANTHWAITE, L.R.C.P., Medical Superintendent.

INTEMPERANCE.**Buxton House, Earl's Colne, Essex.—**

PRIVATE HOME for six Ladies. Thirteen years' experience. Highly satisfactory results. Excellent professional references. Terms 2 and 3 guineas weekly.—Address: Miss Padney.

INTEMPERANCE.**Colman Hill House, Halesowen,**

WORCESTERSHIRE.—Licensed under the Act of 1878. LADIES only received privately or under the Act. Charming Country Residence, with kind and considerate treatment. Medical Attendants—H. R. KERR, F.R.C.S.E., and T. V. DE DENNE, L.R.C.P. Terms from 2s 2s. per Week.—Apply, Dr. KERR, HALESOWEN.

Intemperance.—Ladies suffering from

the effects of Intemperance or from the excessive use of Drugs are provided for with security and every necessary comfort at St. Raphael's, Woodside, Croydon. 200 patients have been under treatment.—Apply to the Secretary.

**Intemperance and Narcotics.—Private**

Home, established 1862, for the treatment and Cure of Gentlemen. Extensive grounds, billiards, tennis, &c. Hy. Grace, L.R.C.P. (London), M.R.C.S., Medical Adviser. Postal or Telegraphic address, "Proprietor, Kingswood-park, near Bristol; or Dr. FAIRCHILD, 37, Southwick-street, London, W."

Barnwood House Hospital for the INSANE of the MIDDLE and UPPER CLASSES. Barnwood, near Gloucester.—An Institution for the care and treatment of Patients of both sexes, who can have private rooms and special attendants, as well as the use of general sitting-rooms, at moderate rates of payment. Patients can also be accommodated in detached villas, and in the Branch Convalescent Establishment on the hills. Information as to terms, &c., may be obtained on application to Dr. NEEDHAM, the Medical Superintendent.

SPRINGFIELD HOUSE ASYLUM, BEDFORD.

One hour from London by Midland. Elevated and healthy situation. Extensive grounds (30 acres). "Employment system." Carriage drives. Billiards, Tennis, Boating, &c.

For forms of admission, address DAVID BOWER, M.D., as above.

(Dr. B. attends at 5, Bloomsbury-square, W.C., on Thursdays, from 12 to 2.)

Terms, 2 guineas. No extras. In villas from £300 to £400.

N.B.—Two new wings having been erected on plans approved by the Commissioners in Lunacy, there are now Vacancies for both Ladies and Gentlemen.

Wye House Asylum, Buxton, Derbyshire,

for the Middle and Upper Classes of BOTH SEXES, is beautifully situated in the healthy and bracing climate of the Derbyshire hills, and is directly accessible by the Midland and the London and North-Western Railways.—For terms and other particulars address the Resident Physician and Proprietor, Dr. F. K. DICKSON.

Harpenden Hall, Herts.—Twenty-five

miles from London, on the Midland Railway. Established 1846 for the treatment and cure of Ladies mentally afflicted. Carriage exercise, lawn tennis, and other amusements are provided. Terms very moderate.—Apply to A. MACLEAN, Proprietor and Medical Superintendent.

Tue Brook Villa, West Derby, Liverpool.

pool.—Private Asylum for Ladies and Gentlemen. Beautifully situated in extensive grounds. The house is arranged and furnished with all the most approved appliances for the treatment, comfort, and amusement of the inmates.—For terms and particulars, apply to Dr. B. HALL, Resident Superintendent.

Stretton House Private Asylum, Church

Stretton, Salop. (For Gentlemen only.)—This Asylum possesses many natural advantages: beautiful scenery, bracing atmosphere, extensive grounds, and facilities for every sort of recreation.

Special care and treatment of Insanity arising from or complicated with Inebriety. Apply to CAMPBELL HYNOR, Supt.

Dr. ORCIL A. P. OSBURN, Medical Consultant.

Hendon Grove Asylum for Ladies,

Hendon, Middlesex.—This Asylum, half a mile from Hendon Station, Midland Railway, is specially adapted for the care and treatment of a limited number of Ladies mentally afflicted. The mansion is surrounded by extensive pleasure grounds and park land. The country around is rural and salubrious, and carriage exercise is provided. The patients are under the immediate care of Mrs. H. Hicks.—Apply to Dr. H. HICKS, Resident Physician and Proprietor.

Haydock Lodge, Ashton, near Newton-

le-Willows, Lancashire, is charmingly situated in a healthy and retired neighbourhood, midway between Liverpool and Manchester, about two miles from Newton-le-Willows station, on the London and North-Western Railway. It is a comfortably furnished country mansion, especially adapted for the care and treatment of persons of unsound mind, where patients of both sexes can have private rooms and special attendants, as well as the use of general sitting-rooms &c., at moderate rates of payment.—Information as to terms &c. may be obtained on application to CHARLES T. STREET, M.R.C.S. Eng., L.R.C.P. Lond., Resident Medical Superintendent.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR THE INSANE OF THE MIDDLE AND UPPER CLASSES.

President—The Right Hon. the Earl Manners.

This Institution having been considerably enlarged, there are now Vacancies for Patients of both sexes, at moderate rates of payment. Particulars as to terms, &c., may be obtained from Dr. TATZ, Medical Superintendent.

Royal Lunatic Asylum, Dundee, N.B.—

This new and commodious building, recently erected about four miles from Dundee, in a healthy situation, and commanding extensive and beautiful views of the Valley of the Tay, affords superior accommodation for Private Patients, at low rates of board.

Dr. Mitchell, H.M. Commissioner in Lunacy, reports "the accommodation provided for Private Patients is excellent, both as regards those who pay from 18s. to 21s. per week and as regards those who pay higher rates, and the amusements are frequent and varied."

For further information, apply to Dr. ROXIE, West-green House, Dundee, N.B.

Grove House, All Stretton, Church

STRETTON, SHROPSHIRE.

A Private Asylum for the Care and Treatment of a limited number of LADIES of the Middle and Upper Classes.

For terms and particulars apply to Mrs. McLINTOCK (widow of the late Dr. McLintock), the Resident Proprietress, or to the Medical Superintendent.



MAVISBANK HOUSE, near Edinburgh.

A Hospital for the Insane, and a Home for Mental and Nervous Invalids.

Chairman of the Board of Direction—The Right Honourable Sir Thomas Clark, Bart., Lord Provost of the City of Edinburgh.

Mavisbank House is about six miles from Edinburgh, in the beautiful neighbourhood of Roslin. It is a comfortably furnished old mansion, containing large and handsome dining- and drawing-rooms, billiard-room, library, conservatory, and private parlours.

The estate is upwards of 120 acres in extent, with stabling, large flower and fruit gardens, hot houses, and vinerias.

The Directors have arranged to receive a limited number of patients at ONE GUINEA A WEEK, who will reside in the comfortable farm house on the estate. They will receive careful supervision and every comfort.

The terms are inclusive, clothing only excepted.

Mavisbank House is five minutes' walk from Polton Station, on the North British Railway.

For further information apply to the Resident Medical Superintendent, Dr. KEAY, Mavisbank House, Polton, Midlothian.



INEBRIETY, THE MORPHIA HABIT, AND THE ABUSE OF DRUGS.

A Private Home, established 1864,

for the Treatment and Cure of Ladies of the Upper and Higher Middle Classes suffering from the above. Highly successful results. Carriage kept. Private sitting-rooms if required. Medical Attendant—DR. J. ST. T. CLARKE, Leicester.—For terms, &c., apply to the Principal, Mrs. THEOBALD, Tower House, Leicester.

WEST MALLING PLACE, KENT.

A Private Establishment, successfully and liberally conducted between one and two centuries for individual and homelike treatment of Mental disorders under skilled and trained care. Easy of access from London and all parts, by road or L.C.D. North Kent, and S.E. Railways. Beautifully and healthfully situated in the garden of Kent, in Tunbridge and Sevenoaks vicinity. (See page 1709, "Medical Directory.") Terms strictly moderate.—Application to Dr. ADAM, as above, or at 26, Harley-street, W., Wednesday mornings.

Private Home for the Treatment of

INSANE LADIES,

ASHBROOK HALL, HOLLINGTON.

within half an hour's walk of St. Leonards-on-Sea, conducted by the Widow of the late Samuel Hitch, M.D., formerly of Sandywell-park, near Cheltenham, for many years Physician to the General Lunatic Asylum for the County of Gloucester.

Station: Warrior-square, St. Leonards. Telegraph Office: Silverhill.

For particulars and terms, apply to

Mrs. LETITIA A. HITCH.

St. Andrew's Hospital for Mental

DISEASES, NORTHAMPTON.

For the Middle and Upper Classes only.

President—The Right Honourable the Earl Spencer, K.G.

Chairman of the Committee of Management—The Most Honourable the Marquis of NORTHAMPTON, K.G.

The main object of this Institution is to provide accommodation and comforts suitable to the former social and present mental condition of persons belonging to the Upper and Middle Classes at moderate rates of payment.

The terms of admission vary from £1 5s. to £3 3s. per week, according to the requirements of the case.

Patients may be admitted at lower rates, or the terms may be reduced, if their friends can satisfy the Committee of Management that so much cannot be afforded.

Patients paying higher rates can have private rooms; and special attendants, carriages, horses, &c.

There are also houses at Moulton-park, a branch establishment, two miles from the Hospital, but in telephonic communication; and a seaside house, to which Patients can be sent.

For further information apply to the Medical Superintendent.

Fitzroy House, Fitzroy-square, London, W., is provided with every comfort for the reception of MEDICAL and SURGICAL CASES of both Sexes. Patients are attended by their own Medical Advisers. Trained and experienced Nurses sent out on the shortest notice.—Address, the Lady Superintendent, as above.

HOLLOWAY SANATORIUM, VIRGINIA WATER.—A Registered Hospital for the CURE and CARE of the INSANE of the MIDDLE and UPPER CLASSES.—This Institution is situated in a beautiful and healthy locality, within easy reach of London. It is fitted with every comfort. Patients can have Private Rooms and Special Attendants, as well as the use of General Sitting Rooms, at moderate rates of payment. Voluntary Boarders not under certificates can be admitted. Accommodation for friends who wish to reside with or near patients for short or long periods is also provided.—For terms, apply to the Resident Medical Superintendent, S. REES PHILIPPS, M.D., St. Ann's Heath, Virginia Water, Egham.

TUNBRIDGE WELLS, THE SPA, HYDRO-THERAPEUTIC INSTITUTION and SANATORIUM for INVALIDS and VISITORS. Beautifully situated on sandy soil, in its own grounds of sixty acres. TURKISH, VAPOUR, KREUTZNAOH, BRINE, MEDICATED, and all forms of BATHS, DOUCHES, and HYDRO-THERAPEUTIC APPLICATIONS. Trained MASSEURS and MASSEUSES for MASSAGE treatment. Under direct medical supervision.

For terms and prospectus, apply to the Secretary.



NORTHWOODS HOUSE, WINTERBOURNE, near Bristol.

PRIVATE ASYLUM for LADIES and GENTLEMEN. Situated in a large park in a healthy and picturesque locality, easily accessible by rail via Bristol, Patchway, or Yate stations.

The building is FIREPROOF.—For further information, see Medical Directory, page 1659; and for terms, &c., apply to Dr. EAGER, Resident Physician.



MENTAL AFFECTIONS.

HALLIFORD HOUSE, SUNBURY-ON-THAMES.

SIXTEEN MILES FROM LONDON.
(Established 1846.)

This beautiful residence, surrounded by extensive and finely-wooded grounds, is appropriated to the reception of a limited number of Mental Invalids, those especially who, under care and treatment, may reasonably be deemed curable. They are under the personal care of Dr. Seaton and his family, assisted by a duly qualified Medical Superintendent, and the non-restraint system is carried out to the fullest extent. Terms can be learned upon application to Dr. SEATON.



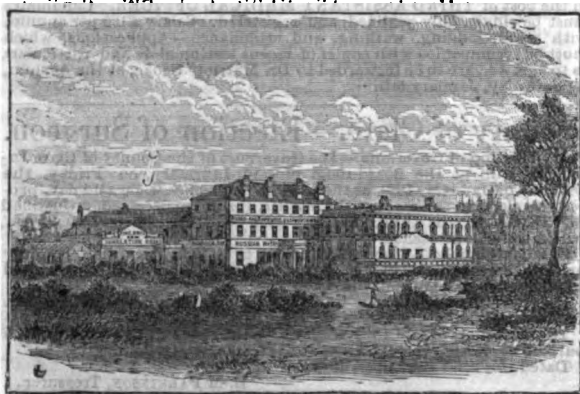
INTEMPERANCE. TOWER HOUSE RETREAT AND SANATORIUM, WESTGATE-ON-SEA, KENT.

Licensed under the Habitual Drunkards Act, 1879. The only Establishment in the United Kingdom specially erected for the Reception and Treatment of Ladies and Gentlemen desirous of overcoming habits of intemperance.

The house stands in its own grounds of nearly three acres, and is replete with every convenience, containing a large Billiard-room, spacious Drawing-rooms, Smoking-rooms, Bath-rooms, &c.

Patients can be received under the H. D. Act or privately. Terms—from 2 to 5 guineas per week. All servants and attendants total abstainers. For prospectus and further particulars, address, J. H. BROWN.

Telegraphic address, Brown, Westgate-on-Sea. Visiting Physician—Alfred F. Street, M.A., M.D., B.S. Cantab.



PINE TREATMENT. THE HYDRO-THERAPEUTIC ESTABLISHMENT, FARNBOROUGH, HANTS, is NOW OPEN.

One hour from Waterloo by S.W.R.

Pine treatment for Gout, Rheumatism, and Affections of the Throat and Chest, as carried on in the principal Baths on the Continent, is provided (for the first time in the United Kingdom) at this Establishment. Pine Baths and Pine Inhalation Rooms on a very elaborate and perfect system.

Stern's FUMILINE used. Russian, Turkish, Electric, and Medicated Baths, Massage, &c. A Physician in attendance for Consultation. Home comforts.

The House has been newly and handsomely decorated and furnished, and is warmed throughout by means of hot water.

The Establishment and Treatment are highly recommended by Eminent London and Provincial Medical Men. Moderate terms. Prospectus free on application to the Secretary.

A HOME FOR THE CURE OF INTEMPERANCE Old Park Hall, near Walsall, Staff.

(Licensed under the Habitual Drunkards Act.)
for reception of Male and Female Patients, is a beautiful mansion situated in a park of thirty-six acres, in the centre of which is a lake well stocked with fish, and on which is a boat. There are lawns for Bowls, Cricket, and Tennis, a splendid Billiard-room and Smoking-room. Arrangements for several patients of the labouring class, can be made.—Apply to Mr. FRANK JOHN GRAY, Medical Licentiate.

HIGH SHOT HOUSE, Twickenham, S.W.

FOR THE TREATMENT AND CURE OF INEBRIETY
AND THE MORPHIA HABIT.

(Licensed under the Act.)

A good library, large billiard-room, lawn-tennis court, bowls, &c.
The staff, male servants only, pledged abstainers.
Terms, 3 to 6 guineas.

For papers required for admission, address,

H. BRANTHWAITE, F.R.C.S. Ed., Medical Superintendent.

Deaconesses' Institution and Hospital,

TOTTENHAM.—Private Rooms and Cubicle Wards, to accommodate ladies and gentlemen requiring Medical and Surgical treatment, have been recently added to this Hospital, and are furnished with every modern convenience and comfort. Terms, including attendance of Resident Medical Officer of Institution, from 2s. to 25s. per week. Patients are at liberty to consult any doctor in addition at their own cost, whether a member of the Medical Staff or otherwise.

For further particulars, apply to Director or Lady Superintendent of above Institution.

Ladies' Hot Baths, Buxton.—Wanted,

a HEAD ATTENDANT. Must understand the Massage Treatment.—Applications, with testimonials, to be sent to Devonshire Offices, Buxton.

Dec. 26th, 1888.

Matron.—Wanted, by the Committee

of GATESHEAD CHILDREN'S HOSPITAL, a MATRON, subject to the House Committee, to have active management of the domestic arrangements and nursing. Must be qualified to train probationers and give lessons in practical nursing. Salary £35 per annum.—Applications, stating age and full particulars (with copies only of recent testimonials, which will not be returned), to be sent, not later than Jan. 7th, to Mr. T. Lumden, Hon. Secretary, 12, West-street, Gateshead.

Paying Probationers, National Hospital

for the PARALYSED and EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—A limited number of Probationers are received for Training, at a weekly payment of 21s. They are required to stay three months.—Apply for particulars to the Lady Superintendent as above between 10 and 12 noon.

Hartlepool Hospital.—Wanted, a

trained NURSE for night duty, at a salary of £25 per annum.—Applications, with testimonials, to be sent to the Secretary, on or before Dec. 31st.

Wanted immediately, a trained and

duly qualified NURSE, to share with another Nurse the Private and District Nursing of the town of Bicester.—Apply to Mrs. Tubb, Bicester House, Bicester. Testimonials and references required.

Southend Victoria Hospital.—Nurse-

MATRON (qualified and trained) wanted in January for the above Cottage Hospital (3 beds). Salary £20 and laundry. Must be unmarried, or a widow without children.—Written applications, stating age and qualifications, with recent testimonials, not later than Thursday morning, January 10th, to Mr. Gregson, Hon. Sec., Southend, Essex.

Wanted, for the Swansea Hospital,

CHARGE NURSE, for Female Wards. She must be thoroughly trained both Medically and Surgically, and also have some knowledge in Obstetrical work. Salary £22 per annum, rising to £26, with uniform and laundry.—Application, enclosing copies of testimonials, to be sent to the Matron.

Kensington District Nursing Associa-

TION.—A Trained NURSE required for District work; must be a gentlewoman. Salary £35, rising to £40 per annum to £50. Board, uniform, and laundry.—Applications, with copies of testimonials, to the Superintendent, 1, Bedford-gardens, Kensington, W.

Bootle Borough Hospital, Bootle-cum-

Linea.—Wanted, an experienced MATRON, with a knowledge of housekeeping, for the above Hospital, which has an average of 50 occupied beds. Salary £24 per annum, with board, washing, &c.—Application, with testimonials, age, and age, to be sent to the Hon. Secretary, not later than the 14th January, 1889.

South Shields Union.—Assistant Nurse.

The Guardians of the above Union will, at their meeting to be held on Thursday, the 3rd January, proceed to the appointment of an Assistant Nurse for the female wards of the workhouse hospital (a competent midwife preferred).

Salary, £25, and £2 per annum allowed for uniform, with officer's rations, washing, and apartments in the workhouse.

Applications, stating age, qualifications, &c., accompanied with not more than three testimonials of recent date, must be forwarded to me, the undersigned, not later than 12 o'clock noon on Wednesday, January 2nd. The appointment will be made subject to the approval of the Local Government Board.

By order.

Union Offices, South Shields,
Dec. 24th, 1888.

GEO. W. MITCHELL,
Clerk to the Guardians.

Wallasey Fever Hospital.—The

Wallasey Local Board require the services of a competent FEMALE NURSE, between twenty-five and forty years of age, for their hospital in Mill-lane, Liscard, to enter upon the office on the earliest possible date. Salary £25 per annum, with furnished apartments, rations, washing, and attendance.

The Local Board also require the services of a PROBATIONER NURSE, not under twenty years of age, who will be appointed at the same time as the above. Salary £15 per annum, with furnished apartments, rations, washing, and attendance.

Applications, stating age, qualifications, and previous engagements, whether single or widow, without encumbrance, and accompanied by copies only of not more than three testimonials of recent date (not returnable), and endorsed "Nurse" or "Probationer Nurse" as the case may be, to be sent to me, not later than 5 o'clock in the afternoon of Thursday, the 22nd of January, next.

W. J. JENKINS, Clerk to the Board.
Public Office, Brompton, Cheshire, Dec. 19th, 1888.

Appointment of Matron.—The Metro-

politan Asylums Board require the services of a Matron at the DARENT ASYLUM for IMBECILES, near Dartford, Kent. Salary £100 per annum, with board, furnished apartments, and washing. The appointment will be upon probation for three months, and will be subject to the approval of the Local Government Board. Applicants must not exceed forty years of age, and preference will be given to those candidates who have had hospital training or asylum experience. Printed forms, upon which only applications will be received, may be obtained at the chief offices of the Board, Norfolk House, Norfolk-street, Strand, W.C., where such forms, accompanied by copies of recent testimonials, are to be delivered by or before 4 o'clock P.M., on Monday, January 14th, 1889. Selected candidates will be written to.

By order.

W. F. JENKINS, Clerk.
Office: Norfolk House, Norfolk-street, Strand, W.C.
December 30th, 1888.

Alcester Union.—Appointment of

Female NURSE.—The Guardians of this Union require the services of a duly qualified Nurse to the Infirmary Wards of the Workhouse. Average number of patients twenty. Candidates must be single, or widows without children, between the ages of thirty and forty-five years, and fully competent to perform the duties; and the person appointed will also be required to obey all the orders and regulations of the Local Government Board, and of the guardians applicable to her office.

The salary will be £25 per annum, with rations and apartments in the infirmary, together with an additional sum of £2 10s. per annum in lieu of beer.

Applications in candidates' own handwriting, accompanied by no more than three testimonials of recent date, to be sent to me on or before the morning of Monday, January 14th.

Selected candidates will have notice to attend the meeting of the guardians when the appointment is made.

By order.

Alcester, Dec. 18th, 1888. S. A. GOTHARD, Clerk to the Guardians.

Worcester County and City Lunatic

ASYLUM, Powick, near Worcester.—A Vacancy has occurred in the post of THIRD ASSISTANT MEDICAL OFFICER. Candidates must be single, duly qualified, and registered. Salary £100 per annum, with board, lodging, washing, and attendance.—Applications, which must be accompanied with copies of recent testimonials and particulars as to age, &c., are to be forwarded to Dr. Marriott Cooke, at the Asylum, by Saturday, January 6th.

County of Clare.—Election of Surgeon.

Meeting of Governors.—The Governors of the County of Clare Infirmary will, at the Board-room of said Infirmary, on Friday, the 18th day of January, 1889, at the hour of 1 o'clock P.M. on said day, proceed to elect, in the room of the late Dr. Cullinan, deceased, a Qualified SURGEON for the Infirmary, at a salary not exceeding £94 a year, with a residence attached.

Candidates, who are expected to be in attendance, shall be duly qualified according to law for such appointment, and will be required to produce their qualifications.

Copies of applications can be had on application to the clerk, Mr. Richard Coppard, Infirmary, Ennis.

The Governors of said Infirmary are hereby required to attend for the purpose of electing such surgeon at the time and place aforesaid.

Dated this 22nd December, 1888.

H. M. PARKINSON, Treasurer.

Board-room, Ennis, County of Clare Infirmary.

Durham County Asylum.—Second ASSISTANT MEDICAL OFFICER wanted. Salary £150, with apartments, board, &c.—Apply, by January 8th, to Medical Superintendent, Dr. Smith.

Salford Royal Hospital.—There is a VACANCY for an HONORARY MEDICAL OFFICER for the PENDLETON BRANCH DISPENSARY. Candidates for the office shall possess a Medical and Surgical qualification, and shall be registered under the Medical Act.

Applications, accompanied by testimonials and a certificate of age and of registration, to be delivered to the Secretary, at the Hospital, on or before the 7th of January, 1889.

By order of the Board.

Board-room, Dec. 18th, 1888.

ALEXANDER HAY, Secretary.

City of London Hospital for Diseases OF THE ORIST, Victoria-park, N.E.—Applications, with testimonials, for the office of RESIDENT CLINICAL ASSISTANT are invited to be sent to the Secretary, at the Office, 24, Finsbury-circus, E.C., not later than January 10th, 1889. The appointment will be for a period of six months, commencing April 1st, 1889.

Candidates must be qualified.

December 21st, 1888.

T. STORRAB-SMITH, Secretary.

General Hospital for Sick Children, Pendlebury, Manchester.—Wanted, for the above Institution, a JUNIOR RESIDENT MEDICAL OFFICER. Candidates must be doubly qualified, and on the Medical Register. Salary £80 per annum, with apartments and board. Applications, stating age, and accompanied by copies of not more than six recent testimonials, to be forwarded to the Chairman of the Medical Board, on or before January 3rd, 1889.

Evelina Hospital for Sick Children, Southwark-bridge-road, S.E.—The office of REGISTRAR and CHLOROFORMIST will shortly be vacant. Candidates, who must possess a recognised qualification, are requested to send in their applications and testimonials on or before Monday, 31st instant, addressed to the Committee of Management at the Hospital. Non-resident. Salary £20 per annum. Additional £20 if the post is held for twelve months.—Any further particulars on personal application to Resident Medical Officer.

Derbyshire General Infirmary.—There is a vacancy for a RESIDENT ASSISTANT HOUSE SURGEON in this Infirmary (175 beds). Candidates must possess a qualification. Appointment tenable for six months. Candidates will be eligible for re-election.

Board and washing. No salary, but a bonus of £10 is given. Applications, with testimonials, to be sent to the House Surgeon not later than Jan. 5th, 1889. The duties will commence on Jan. 24th.

J. ACTON SOUTHERN, House Surgeon.

Guy's Hospital.—The Governors of Guy's Hospital having decided to open a complete Dental School, as an extension of the Dental Department of the Hospital, invite applications for the following appointments:—Six Assistant Dental Surgeons; Lecturers on Dental Anatomy and Physiology, and Dental Mechanics; an Anesthetist; and a Tutor for the Dental Students. The Assistant Dental Surgeons, who must possess the diploma in Dental Surgery of the Royal College of Surgeons of England, will be required to attend in the Department each one morning a week.

Applications, with testimonials, should be sent to the Clerk to the Governors, the Counting-house, Guy's Hospital, on or before 25th March, 1889. Further information can be obtained from the Dean of the Medical School.

Metropolitan Asylums Board.—An ASSISTANT MEDICAL OFFICER is required at once at the Darente Schools for Imbecile Children, near Dartford, Kent. Salary £120 per annum, rising £10 annually to £160, with board, furnished apartments, and washing. Candidates, who should not exceed thirty years of age, must be duly registered and qualified to practise both Medicine and Surgery in England. Preference will be given to those who have had experience at similar institutions, and who are graduates of recognised universities. Forms of application may be obtained at the offices of the Board, Norfolk House, Norfolk-street, Strand, W.C., where such forms, duly filled up and accompanied by copies of not more than three testimonials, are to be delivered by or before 4 o'clock P.M. on Monday, Jan. 14th, 1889. Selected candidates will be written to.

By order.

Offices: Norfolk House, Norfolk-street, Strand, W. F. JENN, Clerk. W.C., Dec. 20th, 1888.

The Hospital for Sick Children, Great Ormond-street, London, W.C., will require a Resident Medical Officer as HOUSE-SURGEON, on Jan. 14th, 1889. Candidates are invited to send in their applications, with three testimonials, specially given, on or before Tuesday, Jan. 8th, 1889, not later than 12 o'clock. The appointment is made for one year. Salary £50 per annum, with board and residence in the hospital. Candidates must be unmarried, and possess a legal qualification to practise. They will be required to attend before the joint committees at their meeting on Wednesday January 9th, 1889, at 4.30 P.M. precisely.

By order of the Managing Committee.

Dec. 19th, 1888.

ADRIAN HOPKINS, Secretary.

Radcliffe Infirmary, Oxford.—House SURGEON required. Salary £20, with board, lodging, and washing. Tenable for two years. Candidates must have both a Medical and Surgical qualification under the Medical Act. Printed forms of application may be obtained from the Secretary.—Applications, with testimonials, to be sent in on or before the 12th January, 1889.

Nottingham General Dispensary.—

Notice is hereby given, the Committee will, at their weekly meeting to be held at 12 o'clock at noon on Monday, 21st January, 1889, at the Dispensary, Broad-street, Nottingham, proceed to the election of a SENIOR RESIDENT SURGEON. Salary £180 per annum, with furnished apartments in the Institution, and coal and gas provided by the Committee.

Candidates must be on the Medical Register as possessing double qualification, one entitling them to practise Medicine, the other Surgery, in the United Kingdom, and sign an undertaking to remain in office for three years, if required.

Candidates must forward their applications, together with testimonials of recent date, to me, on or before Monday, 7th January, 1889.

By order.

CHARLES H. PRESTON, Secretary.

Victoria-street, Nottingham, 17th December, 1888.

YORKSHIRE MEDICAL AGENCY.

J. N. O. LEE,
3, UPPER FOUNTAINE STREET, LEEDS.
PARTNERSHIPS AND TRANSFERS OF PRACTICES
ARRANGED.
LOCUM TENENS introduced.
ASSISTANTS free of charge to principals.
Telegraphic address—"Transfer, Leeds."

6, DUKE-STREET, ADELPHI, W.C.

Mr. W. D. Johnson, of the late firm of SLADDEN, SON, & JOHNSON.

Has for Disposal, on fair terms, many Town, Country (unopposed), Seaside and Suburban PRACTICES and PARTNERSHIPS of from £300 to £2000 a year. ASSISTANTS provided.

Established 1875.

Mr. Percival Turner

(Son of a well-known Practitioner).

Telegraphic Address—4, ADAM-STREET, ADELPHI, LONDON, W.C.
"EPICURIAN, LONDON." (close to THE LANCET Office).

Practitioners seeking Partners or Successors

can be immediately introduced to suitable candidates by Mr. Turner, he having always very many more purchasers than vendors on his books, thereby enabling him to carry out the arrangements, if desired, without the delay and publicity of advertising. PURCHASERS supplied with details of Practices for Disposal free of charge on application.

LOCUM TENENS or ASSISTANTS free of expense to Principal. Only those known to be reliable introduced. BOOKKEEPING, DEBT COLLECTING, ARBITRATIONS, INVESTIGATIONS of PRACTICES for Purchasers, &c.

Practice or Partnership wanted, immediately.—Mr. Percival Turner has at present an unusual

number of applications for Practices and Partnerships in London and Country, with incomes varying from £300 to £2000. Many of the applicants are University Graduates, and prepared to invest any reasonable amount in a really bona-fide Practice, and Mr. Turner will be pleased to submit particulars of suitable candidates to Practitioners having a bona-fide Practice or Partnership for Disposal. All communications are confidentially received, and particulars of Practices not advertised.—4, Adam-street, Adelphi, London, W.C.

For Disposal, a few good Partnerships and PRACTICES.—Details on application.

USUAL LIST WILL APPEAR NEXT WEEK.

MEDICAL PARTNERSHIP AND CONVEYANCING AGENCY.

1, ADAM-STREET, ADELPHI, W.C.

Mr. J. C. Needes begs to inform

members of the Profession desirous of Disposing of their Practices that they can on application to him be promptly introduced to Successors. All matters connected with the Transfer of Practices and Partnerships, Medical Arbitrations, Valuations, &c., receive Mr. Needes' immediate personal attention, and negotiations are conducted by him in the strictest confidence.

Trustworthy LOCUM TENENS and ASSISTANTS can be had at a few hours' notice.

N.B.—No charge made to Purchasers or to gentlemen seeking information.

Notice.—Mr. J. C. Needes' usual List of PRACTICES and PARTNERSHIPS for negotiation will appear next week.

Messrs. H. Wilson and Son,

26, CHARLES-STREET, ST. JAMES'S-SQUARE, S.W.

Established half a century.

QUALIFIED ASSISTANTS PROVIDED.

LOCUM TENENS.—Suitable qualified Gentlemen can be engaged at a moment's notice.

1. London Suburbs.—A well-established and good-class Family PRACTICE, yielding from £1000 to £1200 per annum, situate in a good and improving residential district, S.W. A detached house, with garden and stabling. It is proposed to give six months' partnership introduction. Visiting from 5s. to 10s. 6d.; a few cases under. Very little Midwifery; no fee less than £2 2s. One horse and brougham ample. The present incumbent is retiring from the profession.
2. Partnership.—The Third-share of a PRACTICE, established over a century, and situate within ten miles, is offered to a doubly qualified Practitioner thoroughly accustomed to private work. Income about £1500, including about £700 from appointments. By the assistance of a suitable partner the income can be increased. Messrs. Wilson have known the Practice nearly forty years. Opposition very slight.
3. Non-dispensing Practice in a good neighbourhood, near Hyde-Park. Income about £500 per annum. Convenient residence, held on lease. The Practice is suitable for any middle-aged practitioner having private means and wishing a good-class Practice in an agreeable locality.
4. Cash Practice, N.W. district, producing £500 per annum. A well-fitted Surgery; a convenient house held on lease. Is well situate in a main thoroughfare.
5. Ready money fee Practice. Southern district within eight miles. Income about £750. Working expenses light. A good house, with garden half an acre.
6. Partnership.—London.—The Half-share of a very old established PRACTICE, situate in a leading thoroughfare near the Bank. Income about £1100, including £300 per annum from appointments.
7. Cash Practice (S.E. District), £200 per annum. A well-fitted and stocked Surgery; a convenient house, in a leading thoroughfare. Premium £130.
8. Partnership, North of England, in consequence of the retirement of the senior partner. Present amount of Practice about £1400 per annum, including £350 to £300 per annum from appointments. The town is quite agricultural. The incoming partner should be well up in Private Practice, and have from £1000 to £1500 at command. A suitable gentleman can act pro tem. In the Practice in consequence of the ill-health of the senior partner.
9. The Half-share of an old-established PRACTICE in a Manufacturing Town is offered to a suitable gentleman. Income, including appointments, about £1500 per annum.
10. An old-established General Practice, in a town within forty miles, situate in an agreeable locality. Income about £800 per annum, including appointments. Convenient house, with stabling, garden, and greenhouse; rent £99. Three months' introduction. Premium one year's purchase.
11. Near a large Town in the Midland Counties, a good-class PRACTICE, situate in a residential and improving district, held by the present practitioner about six years. Average cash receipts for last three years £235, exclusive of appointments of £140. Capital house, with garden, stabling, &c. Patients consist chiefly of good private families.
12. Seaport Town.—An increasing Practice, about £1500 per annum. A small but convenient house. Suitable for an active practitioner seeking a mixed-class connexion where money can be saved.

PRACTICES REQUIRED.

1. Wanted, a ready money Practice, on the South side of the Thames, producing from £400 to £700. An immediate arrangement can be carried out.—Apply, Dr. J.
2. Practice required, by a gentleman, M.D. Lond., M.R.C.S., aged thirty-six, who is seeking a good-class Family Practice in a County Town or a good Suburban District. Income from £600 to £700 per annum. Prepared to carry out an immediate arrangement, and has the necessary means at command.—Apply, M.D.
3. Practice required by a gentleman, M.D. and C.M., aged forty, who is seeking a Practice in a Town. Is in a position to invest from £1500 to £2000 in a suitable Practice, and pay the premium down.—Apply, Edinburgh.

MEDICAL VACANCIES.

Several Qualified Gentlemen will shortly be required.

Qual. Non. Res.—S. Wales, £100, with percentage, rooms, coal, gas, and attendance.

54

MEDICAL DEPARTMENT.

Scholastic, Clerical, and Medical ASSOCIATION, LIMITED.

Transfer of PRACTICES and PARTNERSHIPS arranged.

MEDICAL ACCOUNTANCY in all its branches. PRACTICES carefully investigated on behalf of Purchasers by the Association's Competent Accountants. Valuations of PRACTICES and PARTNERSHIPS. Books posted and Bills sent out. A clear statement of terms sent on application.

LOCUM TENENS and ASSISTANTS introduced.

Pamphlet relating to the Medical Department, with names of the Directors, and those of the Gentlemen forming the "Medical Advising Board," will be sent on application.

Managing Director: G. B. STOCKER, Esq.

- (No. 1.) MIDLANDS.—Good-class PRACTICE of over £800 per annum, in a small but most interesting and agreeably situated country town. Exceptionally good residence (nine bedrooms), with large garden; rent £110. One year's purchase will be taken from a prompt purchaser.
- (No. 2.) HOME COUNTIES.—PARTNERSHIP in a large Country PRACTICE of over £3000 per annum. One-fourth share would be sold at first at two years' purchase.
- (No. 3.) PRACTICE in a small Manufacturing Town in Yorkshire. Income over £900. Visiting fees 3s. upwards. Expenses very light. Rent £38. Premium £70.
- (No. 4.) MIDLANDS.—Country Town PRACTICE of over £800 per annum, including all grades of society. Commodious house; rent £85. Premium 550 guineas. One and a half hours by rail from London.
- (No. 5.) MIDLANDS.—Old-established PRACTICE of over £800, in a large and pleasant manufacturing town (population 150,000). No clubs or appointments. Patients chiefly shopkeepers and trade classes. Good house with eight bedrooms; rent £25. Good introduction.
- (No. 6.) GOOD MIDLAND TOWN.—Mixed PRACTICE of £700 to £800. Midwifery £1 1s. upwards; about forty cases; transferable. Rent £25. Price £500; or with furniture, drugs, &c., £735.
- (No. 7.) HEREFORDSHIRE.—Country town PRACTICE of £500 per annum. No clubs; very little night work. Purchaser should be married. Patients chiefly high class. Good fees.
- (No. 8.) SOUTH AFRICA.—Good-class Town PRACTICE of £1500, established many years. Excellent large house. Purchaser must have capital.
- (No. 9.) PARTNERSHIP in a Practice of £350 per annum in a pleasant Midland town, with scope for increase. Rent of house £40. Price for Half-share £500.
- (No. 10.) IN A TOWN about forty miles from London. Receipts about £300. Fees 2s. 6d. upwards, without medicine. No Midwifery under a guinea. One horse sufficient. Large house; rent £25. Stabling, but no garden. Premium £300.
- (No. 11.) SMALL SEASIDE RESORT, ten miles from large northern city. PRACTICE of £448. No clubs. Expenses very light. House rent £25 to £35 per annum. Premium £400, drugs included.
- (No. 12.) LONDON.—In a good and central residential part (improving), an increasing PRACTICE, with valuable appointment. At present, during slack season, doing at rate of over £900. Rooms suitable for a bachelor, but residence not essential. Premium 1000 guineas cash.
- (No. 13.) MIDLAND TOWN.—Cash PRACTICE of £300 per annum. Expenses small. Only part time occupied. No Midwifery or Sunday work. Premium £450 cash.
- (No. 14.) LARGE and increasing Seaport Town.—PARTNERSHIP in a good Practice of £1000 per annum, without appointments. Succession to the whole after a year or two years, as desired. Vendor is retiring. A graduate preferred. Premium £1500.
- (No. 15.) PARTNERSHIP.—One-fourth or one-third Share in a PRACTICE of £1500 per annum, capable of increase, in a seaside village. Expenses of living small. Two years' purchase required. 100 miles from London.
- (No. 16.) HOME COUNTIES.—Unopposed Country PRACTICE of nearly £400 per annum, with over £300 from appointments. Rent of house £85. One year's purchase.
- (No. 17.) UNOPPOSED COUNTRY PRACTICE in the North of England. Income £250, increasing, including appointments of £110, transferable. Some distance from a station. Premium £500. Small house.
- (No. 18.) SOUTH-WESTERN COUNTY.—Unopposed Country PRACTICE of about £450 per annum, including nearly £100 from appointments. Old-fashioned house, with good garden and field; rent £35. Premium £525.
- (No. 19.) LANOS.—PRACTICE in a town of over 10,000 population, of over £700 per annum. No Midwifery under a guinea. One horse sufficient. Commodious house; rent £35. Premium £700.
- (No. 20.) LONDON, S.E.—SUBURBAN PRIVATE and DISPENSARY PRACTICE. Cash receipts over £300. No fee under 1s. Midwifery £1 1s. upwards. Premium £800.
- (No. 21.) LAKE DISTRICT.—Unopposed Country PRACTICE, of nearly £300 per annum. Good and large house (furnished), garden, stabling, &c.; rent £100. Premium £300.
- (No. 22.) DISPENSARY PRACTICE, London, S.W.—Not yet a year old. Receipts £4 a week. No Midwifery. Rent £35. ASSISTANTS and LOCUM TENENS PROVIDED. Telegraph address: "Triform, London."

Apply Sec., Med., &c., Assn., Ltd., 8, Lancaster-place, Strand.

Mrs. Needes' Medical Agency Offices,

27, Euston-road, N.W.
THE USUAL LIST WILL APPEAR NEXT WEEK.

MEDICAL TRANSFER AND PARTNERSHIP.
32, Ludgate-hill.

Messrs. Orridge and Co., Medical

Transfer Agents, Referees, and Valuers, in offering their services to the Profession have pleasure of referring to the fact that for ABOUT HALF A CENTURY the name of Mr. ORRIDGE has been known in the advertising columns of the leading medical journals as that of one to whom a very large proportion of the Medical Men throughout the kingdom have confided their interests in the adjustment of PARTNERSHIPS and TRANSFERS.

Purchasers who will communicate (confidentially) the NATURE and EXTENT of their wishes regarding investment can be apprised of appropriate opportunities as they occur.

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Medical and Professional Agency,

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Mr. WM. HORNIBROOK

Has special facilities for introducing successors and arranging Partnerships.

Gentlemen requiring Practices or Partnerships, and Gentlemen wishing to dispose of their practices, are requested to communicate at once, in confidence, what they require.

No charge to purchasers or to gentlemen making inquiries.
Locum Tenens and Assistants introduced to Principals on the shortest notice. Reliable and experienced gentlemen, with unexceptionable testimonials, on the list.

Suburban Partnership.—Half-share in

a good middle-class Practice. Price £250.

Wanted to Purchase, a Practice of from

£500 to £1000 a year, in the Home or Midland Counties, by Gentleman of large experience. Arrangements can be made at once.

Wanted to Purchase, a good-class

PRACTICE or PARTNERSHIP, of about £1500 or £2000 a year, by a well-qualified gentleman, with ample means to arrange at once.

BIRMINGHAM MEDICAL AGENCY.

LEE & MARTIN,
LINCOLN'S INN, CORPORATION STREET.
ESTABLISHED 1877.

TO PURCHASERS.

Particulars of PRACTICES on the books will be sent free of charge on receipt of letters stating requirements.

TO VENDORS.

PRACTICES of upwards of £400 are readily disposed of through the Agency, without advertisement, Lee & Martin having many purchasers on their books anxious to settle, and prepared to invest the necessary cash.

LOCUM TENENS and ASSISTANTS at short notice.

Telegraphic Address: "Locum, Birmingham."

OFFICES CLOSED DECEMBER 24TH, 25TH, and 26TH.

MEDICAL TRANSFER OFFICES,
19, Craven-street, Strand, W.C.

Established 1868.

Messrs. Peacock & Fraser, Medical

TRANSFER and PARTNERSHIP AGENTS, inform the Profession that they have special facilities for introducing Successors and arranging Partnerships, that if Members who are desirous of Disposing of their Practices will forward them full particulars (and which will be received in strict confidence) an immediate Transfer will probably be effected.

Gentlemen requiring Practices or Partnerships can, on application, select and obtain full particulars of those on Messrs. Peacock & Fraser's books which are open for negotiation.

ASSISTANTS and LOCUM TENENS, with satisfactory testimonials as to sobriety and general abilities, can be engaged at very short notice.

No charge made to purchasers or for inquiries.

Office hours from 10 to 5; Saturdays 10 to 2.

MEDICAL BOOKKEEPING AND ACCOUNTS.

Messrs. Peacock & Fraser also make

this a special branch of their business, and are prepared to undertake the posting and balancing of Books annually or otherwise by thoroughly efficient Clerks at their own Offices, or if preferred, at the Residence of Medical Gentlemen (in Town or Country), and, when desired, will likewise make and send out the accounts.

NOTE.—Outstanding accounts in Town or Country also promptly collected.

Prospectus of Terms &c., which are strictly moderate, will be sent, post free, or can be obtained on application at Messrs. Peacock & Fraser's Offices, 19, Craven-street, Strand, W.C.

Consulting-room, with joint use of

Waiting-room and Bedroom if required, in one of the best houses in Wimpole-street. Fine entrance hall. Man servant, &c.—Apply at 68, Wimpole-street.

Wanted, use of Waiting-room and

Consulting-room, only from 2 till 4 daily, in a first-rate West-end street.—Apply, G. B. Stocker, Esq., Managing Director, Medical, &c., Assn., Ltd., 8, Lancaster-place, Strand, W.C.

Superior Chambers, ground floor, suit-

able for a Medical Practitioner. Patients' waiting-room, consulting-room (not overlooked), lavatory, and bedroom adjoining; now occupied by an M.B. Will be vacant at the end of January.—Apply, 97, Mortimer-street, Cavendish-square, W.

Partner wanted, with view to succession,

in an old-established London Practice of about £800 a year. Half-share for Disposal. All increase in Practice to go to Incoming Partner. Middle class. Good house available.—Address, Immediate, THE LANCET Office, 423, Strand, W.C.

Partnership.—South Africa.—An old-

established PRACTICE. Receipts £1200, but with a suitable Partner £3000 a year certain. A gentleman who has specially devoted himself to ophthalmic surgery, and can operate with success for cataract, will receive half share without premium. Full particulars will be given. Beautiful climate and very inexpensive.—Apply to Wm. Hornibrook, Medical and Professional Agency, 17, Bloomsbury-street, Oxford-street, W.C.

For Disposal, Medical and Hydropathic

ESTABLISHMENT. Situation charming. Excellent returns. Most easily directed. Suitable to a doctor retiring from active practice. Apply, by letter, A. J. H., 6, King-street, Kensington-square, W.

Surgeon's Retail in the main Com-

mercial-road, London, East. Same hands eighteen years. Of recent years neglected and receipts average £250, formerly £300. Full fees maintained. Splendid chance for starting cheap practice. Price £225, of which £160 can remain. Stock and fittings worth the money asked.—For further particulars, apply to Surgeon, Deacon's Advertising Offices, Leadenhall-street, London, E.C.

Branch Practice. — Wanted imme-

diately, the Management of a Branch Practice by a registered L.S.A., many years' practical experience. Married, no family. Undeniable testimonials. Fair salary, with furnished apartments, required. Dispensary Practice not entertained.—Address, Medicus, 52, Queen's-place, Wade-lane, Leeds.

Wanted to Purchase, a Country Prac-

TICE of £800 per annum or more (West of England preferred, but not essential). Purchaser is an M.B.O.S., L.S.A., and has the necessary capital.—Apply, G. B. Stocker, Esq., Managing Director, Medical, &c., Assn., Ltd., 8, Lancaster-place, Strand, W.C.

Wanted to Purchase, a Town Practice

(Midlands or South), by an M.D., age over thirty. Income £500 upwards.—Apply, G. B. Stocker, Esq., Managing Director, Med., &c., Assn., Ltd., 8, Lancaster-place, Strand, W.C.

For disposal, over £600 a year, with

ample scope for increase, in a favourite watering place in north of England. Railway in place: small house. Appointments £150; premium £350, with efficient introduction.—Address, Lake, THE LANCET Office, 423, Strand, W.C.

Half Share of an old-established Prac-

TICE of £800 a year in a middle-class neighbourhood near London for immediate Sale. A married man preferred. For particulars apply to S. A., THE LANCET Office, 423, Strand, W.C.

Wanted to Purchase, an unopposed

Country PRACTICE or a PARTNERSHIP, yielding an income of £300 to £500 per annum, by a doubly qualified, experienced man, aged over thirty. Capital ready for suitable opening.—Apply, G. B. Stocker, Esq., Managing Director, Med., &c., Assn., Ltd., 8, Lancaster-place, Strand, W.C.

Splendid Nucleus in nice suburb of

large city, doing about £300, private; good fees, Midwifery 1 to 5 guineas; also 240 Clubs. Could be worked up to any extent. Opposition weak. For short but thorough partnership introduction £150, cash down, will be accepted.—Address, P. 101, "The Manchester Guardian," Manchester.

Immediate Sale at Stepney. — Cash

PRACTICE, realising £8 per week. Established three years. Illness cause of leaving. Well-stocked surgery (and household furniture), optional, will be sold cheap to a prompt purchaser.—Apply, 308, Oxford-street, Stepney: morning at 11, evening at 8.

Money-making Opportunity for ready-

money PRACTICE. Good-class Retail, in superior neighbourhood, established twenty years. Good house, easy rent. Also Dispensary in densely populated locality within easy distance. Together, 325 guineas; Dispensary alone, 80 guineas. Partnership in Retail and Dispensary entertained.—M.D., 57, New Kent-road.

Partnership wanted by M.R.C.S.
L.R.C.P. married, experienced, aged thirty-four (who has just relinquished his own Practice), between £500 and £1000 a year. Capital ready. Principals or Solicitors only.—Address, H., care of Mrs. Brooker, 62, St. Augustine's-road, Camden-square, London.

For Disposal.—An old-established
unopposed Country PRACTICE, of £500 a year, including £55 from appointments. Price £425. Good introduction. Rent of good house, garden, and stabling, £30 a year. Very pleasant neighbourhood.—Apply to Wm. Hornbrook, Medical and Professional Agency, 17, Bloomsbury-street, Oxford-street.

Kent.—For Disposal, in a town of over
14,000 inhabitants, a PRACTICE of nearly £500 a year, including a valuable appointment. Rent of good house £32 a year. Price £250. An assistant kept, but no horse required.—Applications to Wm. Hornbrook, Medical and Professional Agency, 17, Bloomsbury-street, Oxford-street, W.C.

Midlands.—Wanted, Assistant, not
over twenty-five, and no diploma required. Work light. Salary £30, in-door. Suit reading man. Appointment to meet in London.—Address, Lithia, THE LANCET Office, 423, Strand, W.C.

An Assistant (qualified) wanted in a
pleasant seaside town, to Visit, Dispense, and attend Midwifery when required. He must be experienced and not under twenty-three years of age, and a neat and accurate Dispenser. Salary £130 out-door, or £75 in.—Address, B. Practitioner, THE LANCET Office, 423, Strand, W.C.

Experientia desires an Assistantship.
A man who has had a great deal of experience in and out of Hospital. Well informed in all branches of the profession. Highest references &c.—Address, Experientia, 25, Trinity-square, Guy's Hospital, London, S.E.

Assistants and Locum Tenens supplied
on the shortest notice. Apply to G. B. Stocker, Esq., Secretary, Medical, &c., Assn., Ltd., 8, Lancaster-place, Strand, W.C. The rule of the Association is that no Assistant shall be recommended till direct inquiries have been made to his antecedents. Names of the Committee of Management and descriptive pamphlet on application.—Telegraphic address, "Triform, London."

Surgeon's Assistant, unqualified, seeks
Re-engagement as DISPENSER. Town or country. Can Visit, Extract Teeth, and attend Minor Surgery. Age forty. Height, 5ft. 10in. Married; no family. Good references. Moderate terms.—Address, B. M. T., 67, Gromwell-road, Upper Holloway, London, N.

Treble qualified Man (English), aged 32,
experienced, reliable, and sober, seeks an out-door ASSISTANCY or Management of a Branch. Partnership or succession might ultimately be arranged. Recent and good references.—Address, C. M., THE LANCET Office, 423, Strand, W.C.

Dispenser and Bookkeeper.—A Gentle-
man, qualified in Dispensing, requires Situation as above. Three years' experience in large Practice (Club and Private). Thoroughly well up in Surgery, Routine and Medical Bookkeeping. Accustomed to Visit in emergencies. Aged twenty-one. In- or out-door. Town or country. Permanency desired. Excellent references. Please state salary, and address Undergraduate, THE LANCET Office, 423, Strand, W.C.

Fourth-year's Student required imme-
diately, to reside at a small and select Dispensary, and to Dispense Medicines. Must be able to take Midwifery case and Visit occasionally. Duties light, and plenty of time for reading. Furnished rooms and small salary. Good references expected.—Address, Physician, 48, Bridport-place, New North-road, N.

Wanted, Situation as qualified Assist-
ANT, out-door; married, no family.—Address, stating terms, Locum, 62, Westmoreland-road, Newcastle-on-Tyne.

Wanted, an Assistant, to Visit, Dis-
pense, and attend ordinary Midwifery. Work light, abundance of time for reading. Hospital and Medical School within easy walk or drive. Only a nominal salary given. Would suit a man with full curriculum anxious to read up.—Address, Medicus, care of Mr. Bennett, 7, Corn Exchange, Sheffield.

Wanted, an Assistancy (with view to
Partnership preferred), in a good-class London Practice. Two years' hospital residence; four years' general practice; capital at command.—Address, R. M. O., THE LANCET Office, 423, Strand, W.C.

Wanted, well qualified (English
diplomas), experienced married ASSISTANT, energetic and well received by the working class, with a view to ultimate Partnership, in a Colliery Practice, established fifty years. Age twenty-five to thirty. Required to have means at command. Distal bond to be signed. Not much society. Must be English or Welsh, of unimpeachable character. Begin duties in February. Salary £100 per annum and house.—Send cards, with two last references and other particulars, to Conchita, THE LANCET Office, 423, Strand, W.C.

Wanted, by an L.R.C.P. & S., L.F.P.S.,
L.M., a post as ASSISTANT. Country preferred. Age twenty-five. Height 6ft.; weight 114lb. Can ride and drive.—Apply to A. N., 62, Clarendon-road, Notting-hill, London.

Wanted, Situation as Visiting and Dis-
pensing ASSISTANT, by son of a surgeon. Five years' experience. Aged twenty-one; abstainer. Can attend ordinary Midwifery and Visit. Excellent testimonials, &c.—Address, case of Dr. Foulds, 44, Friargate, Derby.

Wanted, Assistancy or Locum Tenency,
by qualified Gentleman just relinquished practice. Over sixteen years with one principal. No objection to dispensary. Would prefer out-door, or Management of Branch. Married. Good references. Permanency desired.—X. Y., Richmond Cottage, Richmond-street, Bury, Lanc.

Wanted, an Assistantship, by a Guy's
man, aged twenty-five, who has passed his First L.R.C.P. Good references given if required.—Address, L. A., THE LANCET Office, 423, Strand, W.C.

Dr. Martin's Pure Rubber Bandages
(Registered Trade Mark) for the Radical Cure of Varicose Veins, Ulcers, Eczema, and other Diseases of the Leg (GENUINE), by far superior to any of the numerous imitations, are now being sold at less cost than those of other manufacture.
No. 1 B, 10½ feet by 3 inches, No. 28 Wire Gauge, price 4s. 3d.
No. 8, 14 feet by 3 inches, No. 28 Wire Gauge, .. 6s.
No. 9 B, 21 feet by 3 inches, No. 28 Wire Gauge, .. 8s. 3d.
No. 1 A, 10½ feet by 8 inches, No. 24 Wire Gauge, .. 6s.
No. 7, 14 feet by 3 inches, No. 24 Wire Gauge, .. 7s. 6d.

CAUTION.—Please order the Genuine Martin's Bandages, each being stamped with Dr. Henry A. Martin's signature. All others are spurious imitations.

Complete Price List, also Dr. H. A. Martin's Pamphlet describing Method of Treatment, post free on application to the Sole Agents—**KROHNE & SESEMANN**, Surgical Instrument Makers, 8, Duke-street, Manchester-square, London.

Huxley's Spiral Elastic
STOCKINGS, KNEE-CAPS, ANKLETS, THIGH PIECES, &c., for Varicose Veins, Eczema, Weakness, Sprains, &c., are made with the attention to fitting, the neglect of which so often leads to disappointment in surgical appliances.
HUXLEY'S ELASTIC BINDER, 3s. 6d. each.
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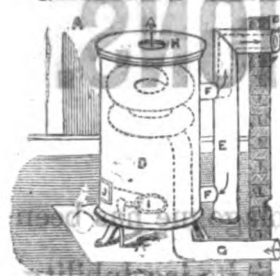
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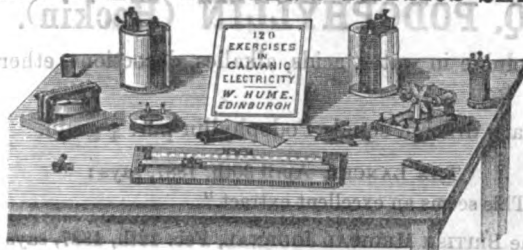


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